

TECHNICAL NOTES ON
CARVING A BIRD ON YOUR OWN

1. Decide what bird you want to carve and if you are going to reduce the size. Collect all the data you can on the subject, including pictures, drawings, and patterns.
2. Tupelo is the best wood to use for detailing. Square up the wood, draw on your centre lines and then lay out your pattern side view and top view and make sure they line up. Cut the blank out on a band saw.
3. Maintain your center lines top and bottom; also mark the widest part of the body. These lines should remain on the cut out throughout most of the carving.
4. Start with the head specifically the beak or bill, from the tip to the forehead; draw the width lines for the beak, head and eyes , remove the wood on both sides do not point the beak yet. Measure from the center line out to $\frac{1}{2}$ the width each side, as this will keep the beak balanced.
5. Draw the head width first then find the location of the eyes, if you are using a pattern and have extra copies. Cut out the head and use it as a template, lay it on the wood and trace. Use a sharp object and mark the eye locations deep enough to ensure you don't carve off the location. Double check with calipers that both eyes are the same, if you are sure they are correct, drill a small hole $\frac{1}{2}$ the size of the eye and deep enough that you won't lose it. Note: some carvers like to drill $\frac{1}{2}$ way from each side and the hole will meet in the middle if it is correct.
6. Now it is time to start to round the head. Start at either the bottom or the top. Check the front profile before you start and maintain symmetry on both sides, we will refine later.
7. Draw on the widest part of the body and the highest part of the body on the top (back). Mark with an (X) and maintain that width and height throughout the carving process.
8. Roughly round the body top and bottom using a larger rougher bit. Only carve the front the body of the bird, do not go near the tail or the primaries, and blend the shoulder into the head. Again maintain symmetry.
9. Now we will return to the beak/bill. Refine the beak/bill very close in length and width, leave it slightly heavy i.e.: 1-2mm oversize.
10. Now we want to set the eye width. From your pattern, measure the eye width (the narrowest part inside of one eye to inside of the other eye) and mark two lines on the forehead. On most birds the width will be close to the width of the bill. Then measure the pattern from the top of the head down to the center of the

eye and mark a line on both sides of the head to establish the height of the eye. Measure from the tip of the bill/beak to the center of the eye and mark a line. This is where the eye should be set. Draw a circle the diameter of the eye in the appropriate spot. In the center of the eye, drill a small pilot hole half way through the head. If your layout is correct, the pilot holes will meet in the center of the head, if not recheck the layout. TIP: When measuring width, divide by two and measure from your center line, this will keep the bird balanced.

11. From the eye pilot holes to the top of the beak, draw a horizontal line. This is the eye channel; grind a small channel on this line and blend it out to the cheek and the top of the head. (Generally the eye is located between the top of the bill and the gape of the bill or mouth). Grind the channel evenly from both sides until it is the same as the width as measured from the pattern as per #10 (Eye width). Extend the line slightly behind the eye as well.
12. If you are sure the eye is located correctly you may now drill it to size.
13. Measure the width of the head from your pattern and mark the widest part of the head. Remove any excess wood from the cheek area, then measure from the pattern the width of the head above the eye and remove the excess wood.
14. Now blend the wood from the eye channel to the top of the head and to create the top of the lower cheek.
15. Mark the neck line approximately and carve the lower cheek down the neck line.
16. Blend the wood on the head from the beak/bill to the cheek and from the cheek roll the wood to the back of the head. You need to look closely at the pattern and reference picture to capture the character (or uniqueness of the species.).
17. Layout and refine the upper and lower mandible, the notch on the forehead, put in the nostrils and refine the whole head, bring the dimensions to exactly as specified. (Up to this point we have been measuring from the tip of the beak/bill.)
18. Now we are going to work on the body. Remember: You will now take the all of your measurements from the end of the tail not the beak. The blank should be the exact length of the bird so you don't have to worry that the tail has not been carved yet.
19. Mark your centerlines, top, bottom and sides. Layout the tail length and width cut it square. Don't round anything off yet.
20. From the end of the tail, measure and mark the end of the body, location of the end of the primaries, secondary's, upper wing coverts, and the cape. On the underside of the tail, layout the location of the rump and any other identifiable feathers or details e.g. Body, legs.

21. Refer to your pattern for this next step. Draw a line from the end of the primaries towards the front of the bird to establish the angle and shape of the wings, rough grind them in. Take care where the wings meet with the tail leave extra wood and exercise caution in this area.
22. On the underside, create the rump area by carving a dome shape for the rump and define the underside of the tail.
23. Draw on the belly and mark the feather groups you want, and continue to layout the feather groups you want on the entire bird.
24. Finish the tail by drawing the individual feathers making sure they make sense you. You should be able to follow an individual feather on top to the underside of the tail. Check your reference to ensure you have the correct shape and numbers of feathers.
25. Draw the cheek patches and individual feathers on the head and body. Check all your measurements prior to the next step. Now is the time to check for symmetry and balance
25. You are now ready to start detail your bird. Stone or burn this area before you install the eyes.
26. Install the eyes. Make sure they are in the correct location, apply putty and push the eye into the eye holes, making sure they are in far enough so they don't look bug-eyed. While putty is still wet you can put in the eye lids. Some people like to set the eyes hard and then install the lids; others do it all at one time. If you want to set them hard let the putty set overnight, and then put the eyelids on.
27. You can relieve individual feathers and then, stone and or burn the rest of the feathers.
28. The tail and primaries are not stoned they are only burned to create detail.