Instruction Sheet

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#075

Angel Bowl and Tray Kit

Additional Tools Required:

- 1¾ HP or larger plunge router with variable speed control
- 1¼" diameter bowl & tray bit (Eagle # 144-2005B or Price Cutter # P13-2504B)
- 1½" Forstner bit (Eagle # 310-2410) is suggested. (Note: The inside of the bowl/tray can be bored out using just the router but it takes longer and adds to the wear/tear on the router bit.)
- Drill Press
- Bandsaw, jigsaw or scroll saw to cut the outside profile
- Compass
- Sander and sandpaper

Step 1:

Choose your lumber and make sure it is properly conditioned and acclimated to your environment to prevent twisting and warping. 2" thick stock works the best but you can laminate several layers for your desired look. Prepare your lumber by joining and planing ensuring all four sides are flat and square.

Glue up your bowl/tray blank, alternating the end grains to prevent future warping, twisting and cracking. A 14" x 23" blank works well for the bat bowl.
Note: 2¾" is approximately the maximum depth for most routers. You will need to consider your own routers maximum depth when deciding your stock thickness.

Step 2:

After your blank has cured, remove any glue residue and sand both sides. To lay out your template on your prepared stock, trace the first half of the angel. Flip the template and line up second half as shown in Figure A. You will have an overlap of approximately 1-3/4". Trace the second half of the angel.

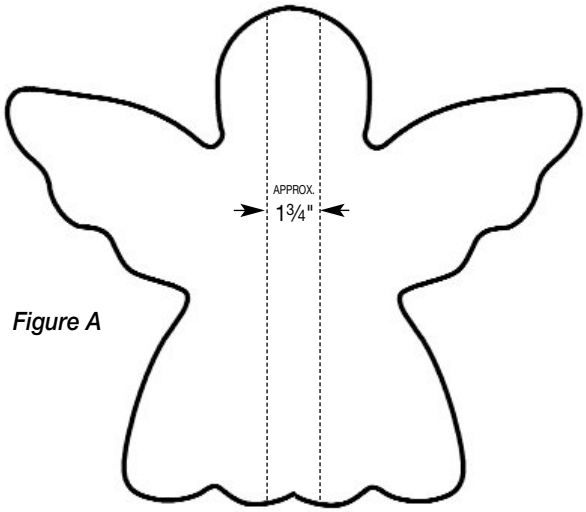


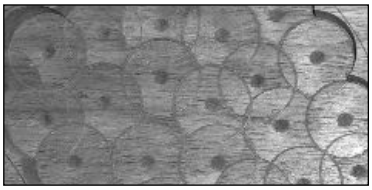
Figure A

Step 3:

Use a 1½" Forstner bit in a drill press to bore out the material inside your pattern. Drill the holes within 3/16" of the pattern.

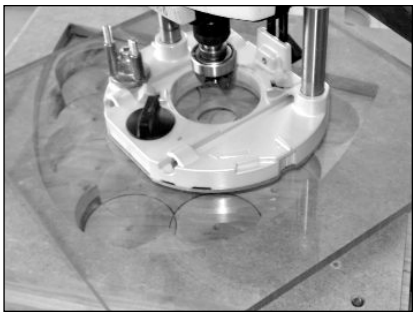
Note: Due to the centering point on the Forstner bit, you will need to set your depth of cut to stop just short of bottom. The final depth of cut and clean-out will be made with the router bit. We recommend leaving at least ½" of material thickness on the bottom of your bowl/tray for strength.

Step 4:



After all interior portions of your bowl/tray have been bored out, move your work piece to a flat surface where it can be secured to prevent movement.

Step 5:

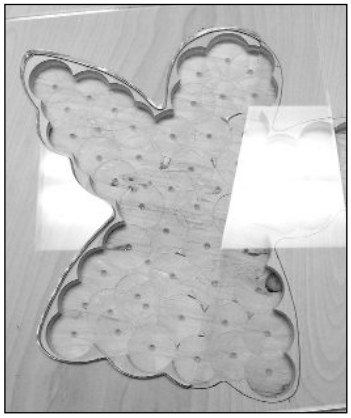


Attach an oversized router base plate to your router which will enlarge the surface area of your router base. This base plate should be large enough to span the opening inside your pattern. You can use ½" sheet stock but we suggest a 3/8" polycarbonate material which is clear and allows you to see your work piece as you are cutting. The center hole in your oversized base will need to be approximately 2". (Eagle plate # 415-0502 was used for this application)

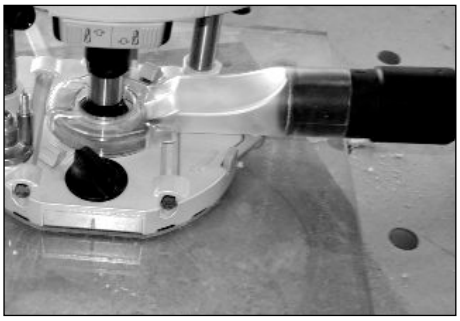
Step 6:

Assemble the collet extension and router bit, making sure the router bit shank is not fully seated into the collet extension.
Warning: Never fully seat your router bit and collet extension into the receiving collet(s), always back them off 1/16" to prevent injury.

Step 7:
Place the template back on your work piece and line up to the first half of the angel to be routed. Drill and counter sink at least two screws though the template and into the waste material of your work piece. It is important that the screw heads do not interfere with the movement of your router base plate as it moves across the template.

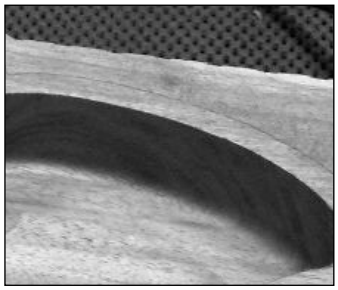


Step 8:
Connect your routers dust collection. Line up the bearing on the router bit so it is riding on the edge of the template. **You will only route one pass in this manner for each half of the angel.** Starting from the center portion of your work piece where the bit is not in contact with any wood, turn your router on and begin cutting in a clockwise rotation to avoid climb cutting. Move toward the edge of your template. Once the bearing of the router bit meets the edge of your template, cut along the perimeter of the template. Turn the router off, making sure the bit comes to a complete stop before removing the router.

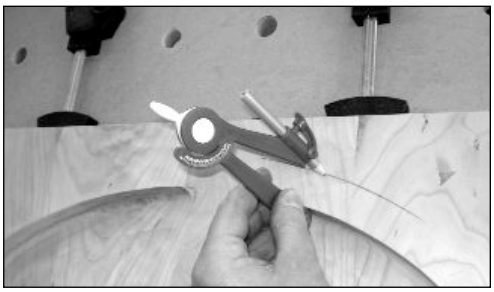


Step 9:
Reposition your template as in step 7 to route the second half of the angel. Again, connect your routers dust collection. Line up the bearing on the router bit so it is riding on the edge of the template. **You will only route one pass in this manner.** Starting from the center portion of your work piece where the bit is not in contact with any wood, turn your router on and begin cutting in a clockwise rotation to avoid climb cutting. Move toward the edge of your template. Once the bearing of the router bit meets the edge of your template, cut along the perimeter of the template. Turn the router off, making sure the bit comes to a complete stop before removing the router.

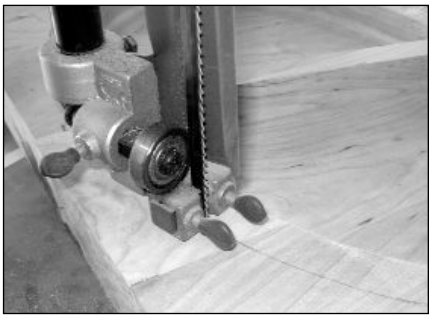
Step 10:
Remove the angel template from your stock. You will proceed to route the angel without a template with the bearing riding against the wood side wall that you just completed. Route to your desired depth assuring at least 1/2" bottom thickness is maintained.



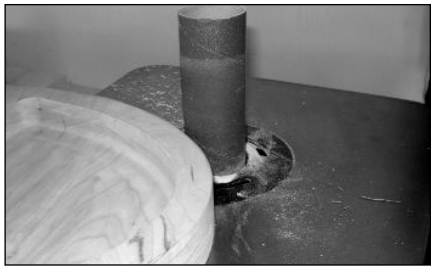
Step 11:
Using your compass set the desired width of your bowl/tray rim and trace around the outside edges.



Step 13:
Using a bandsaw, jigsaw or scroll saw, cut along the outside perimeter line. Remember to stay on the outside of the line, sanding will finish the edge.



Step 14:
Sand the edges of your bowl/tray smooth.



Step 15:
Finish your bowl/tray as you desire. You can soften the edges with sandpaper or use a roundover bit to finish the edges depending on your design. Sand thoroughly, at least up to 220 Grit. Finish with Preserve Oil (Eagle # 443-1000) or any food safe product commonly used for butcher blocks. This includes salad bowl oil or mineral oil.

To see more of our Bowl & Tray Templates visit our website at...

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