## TURNING WOOD BIRD HOUSES

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## **Tools needed:**

- 3/8" or 1/2" fingernail ground spindle gouge
- #4 jaw chuck
- 1/8" drill bit
- 1" Forstner drill bit
- Center punch or Awl
- Electric drill
- Arbor Screw Chuck
- 1/8" brass screw eye (optional)

- 3/8" detail gouge
- 1/16"drill bit
- 7/32" drill bit
- 1 1/8" Forstner drill bit
- Chuck for drill bits
- Shop built 1/4" screw chuck
- Shop built 1" jam chuck
- CA glue

**Wood selection:** There are no rules on wood selection. End grain will be stronger for the bottom but is not required. Contrasting woods – dark for the top and light for the bottom - is visually appealing.

**Turning the Roof:** Start with a 3" x 3" x 4" blank. Turn a tenon on one end. Mount in a chuck. Drill a 1 1/8" hole about 1/2" deep. This hole can be deeper for a steeper roof or less for a shallower pitched roof.



Turn the inside of roof so that 1/8"-1/16" of the bored hole remains. This is where the bottom is glued to the roof. After turning the inside, the 1 1/8" bit can be used to clean up the shoulder on the hole.



Drill a 7/32" hole 1/2" deep. This is used for a 1/4" screw chuck later.



Turn the outside of the roof, support with the tailstock. Sand the roof before parting it off.



Using the 7/32" hole, mount the roof on a 1" dowel with a 1/4" lag screw in the end or on a shop built screw chuck with  $\frac{1}{4}$  20 threads for finishing.





If the birdhouse is to be suspended, a fastener, a1/8" brass screw eye or similar item i.e. wire loop, fishing line loop needs to be inserted in the top. See inserting a fastener.

**Inserting a fastener:** To insert a fastener, an Arbor Screw Chuck is used. The screw chuck is available from Craft Supply, part number 155-9201 for a No.1 MT, part number 155-9202 for a No.2 MT.



Mount the roof on the Arbor Screw Chuck. Then mount the chuck in the lathe and slide the tail stock forward to mark the center of the roof as a center punch would.



Drill a 1/16" hole in the finial for a 1/8" brass screw eye, a wire loop, fishing line loop etc. Half inch eye screws can be purchased at Ace Hardware – part #5029160.



**Turning the bottom:** Start with a 1 1/2" x 1 1/2" x 3" diameter blank mounted in a chuck. Bore a 1" hole about 1 3/4" deep. *Note: The hole in the bottom should be 1/8" smaller in diameter than the hole first bored in the roof.* 



Rough turn the outside. Form the top so that it will fit in the shoulder of the 1 1/8" hole you bored in the roof. Support the turning with the tailstock.



Fit the roof to the bottom.



Determine the location for the perch and entrance holes. This will be the front so try to find the best grain (the "face") or the most interesting features. The perch and entrance holes should be about 1/2" apart and the perch hole should be at least 1/4" from the bottom of the 1" hole.



Drill the Entrance and perch holes. The Perch hole is 1/8" and the entrance hole is 1/4" to 7/32". The perch hole should be directly under the entrance hole. The holes will be positioned more accurately if they are started with a hole made by an awl or center punch.



Hollow out the inside. Do not enlarge the first 1/8 to 3/16 of the bored hole. The walls should be 1/16"-1/8" thick. The hollowing should be just past the perch hole and leave about a 1/4" shoulder on the 1" bored hole. Mark the outside 1 3/4" (the bottom of the bored hole) so that when you finish turning the bottom, you won't have occasion to use four letter words like oops etc.



At this point you can part off the bottom or reverse turn the bottom for more elaborate detail.

**Reverse turning the bottom:** Mount the base on a 1" jam chuck. In this example I use a 1" steel rod mounted in a four jaw chuck. This is why we left the hole in the top 1" and left a 1/4" shoulder on the bottom. You can now complete the bottom however you choose. (See picture next page.)



In this case, the original blank was long enough to turn a base for a standing bird house.



Once you have finished the bottom, a short piece of 1/8" dowel is glued in the perch hole and you are done.

The last steps are finishing and assembling. My choice of finish is M.L. Campbell Lacquer Magna Max. Glue the top to the bottom. Miniature birds add a nice touch and can be purchased online.

