

## Bird-Fly House Ornament In a Variety of Styles



The following handout details how I make my version of a bird house ornament. I have borrowed some ideas and tricks from some of the many demonstrators and instructors who I have seen turn their versions of the bird/fly house ornament. Some methods are meant for mass production while others are just an easier way to work through the process of turning an eye catching ornament. Mark St. Ledger was the first person to introduce me to the fly house ornament complete with jokes and stories. Since that first exposure, I have watched Dale Nish, Dick Sing, Bob Rosand and a host of others demonstrate their version of the classic ornament. Everyone whom I have seen turn a bird house ornament has a different approach to the design and to the methods they use to achieve their particular design. I will discuss some of the better methods and tricks especially those that seem to make turning and hollowing the ornaments much easier.

In this workshop we will explore the use of the 3/8" spindle gouge for shaping and hollowing a small ornament. We will also use the spindle gouge to make fine delicate finials for the top and bottom of the birdhouse. To save time and for ease of turning we may use forstner bits to remove some of the material and to provide a mortise for jam chucking the bird house body and roof. By using jigs made expressly for jam chucking the roof and body the process can be speed up a bit. The beauty of using the jam chucking method for turning the bird house parts is that the whole body including the very bottom and the top of the roof can be turned. Drilled for the screw eye and sanded in one step. *In my fundamentals classes I prefer to use a 3/8" spindle gouge and a round nose scraper to hollow out the bird house roof and body as this adds a new skill to the skills and techniques that I am exposing the students too.*

The bird house ornament is a challenging project, in that there are four parts that need to be turned to fit one another both physically and visually. One of the challenges of this project is the turning of small objects such as the tiny perch with a 1/8" tenon, which

all my students find surprisingly easy to turn once they realize how easy it is to turn small tenons and finials. There are many styles of bird house ornaments that can be turned using the methods provided in this handout. Not all birdhouse ornaments need to have a finial on the bottom, as some can be turned to look like acorns. For eye catching appeal one can turn the roof using multi-axis turning techniques. For that matter a multi-axis base can be turned to support the birdhouse as a stand alone art piece. Instead of turning the outside of the body of the bird/fly house, you can go out into the woods or your yard and find a branch approximately 1 1/2" to 2" plus or minus in diameter and about 2" long, particularly one with some Lichens on it, then drill a hole all the way through the center with a 1" forstner bit then attach a multi-axis support base or turn a bottom and add a roof and wa-la there you have a very unique Bird/fly house. If you choose you can glue up layers of wood or veneer to for a more decorative look. Possibly experiment with coloring or dyeing the body or the roof. I prefer to have the body and roof made from contrasting woods or colors. There are a variety of shapes and designs that can be explored when turning the ornaments, which is one of the reasons I like to turn them. So lets get on with the project and have some fun.

### **Materials:**

Birdhouse Body light colored (Maple) 2" x 2" x 3" or slightly smaller in diameter  
Roof contrasting material (Walnut, Mahogany, etc.) 2 1/4" x 2 1/4" x 3 "or larger in diameter. Blank must be larger in diameter than bird house body to provide for roof overhang

Finial for bottom 3/4" x 3/4" x 3" same material as roof

Perch can be turned from left over finial or from a 1" x 1" x 3" piece

Optional: Branch with bark and lichens approximately 2" in diameter and 3" long

Glued up layered blank for roof 2 1/4" x 2 1/4" x 3"

### **Optional Materials for Jigs:**

Maple or Poplar Blank 2" plus square by 3 1/4" long

Maple or Poplar Blank 2" plus square by 2 1/4" long

### **Tools:**

1 1/4" Spindle Roughing Gouge or 3/4" roughing gouge

3/8" Spindle gouge

1/2" or 3/4" Round nose Scraper

3/4" Skew or any size skew

1/16" Parting Tool (Chris Stott Style)

1/4" Parting Tool

1/4" Point Tool

1/4" Skew

1/8" Drill Bit

1/4" Drill Bit

3/16" Drill Bit

\*optional 7/8" or 1" or 1 1/8" or 1 1/4" Forstner Drill Bits Depending upon size of your bird/fly house & roof



### Procedure:

There are two different methods that I am now using to turn my bird/fly house ornaments. One I have adapted from Dale Nish's article titled "Birdhouse Ornament" from *Popular Woodworking* December 2004 and the other method is a combination of techniques used by the many woodturners that I have seen demonstrate turning Bird/fly House Ornaments. **I highly recommend getting your hands on Dale Nish's book "Woodturning Christmas Ornaments" and reading his chapter on turning birdhouse ornaments** published by Fox Chapel Publishing.

### Version 1

My version as adapted from Dale Nish's article:

*\*I like to make the jigs for holding the bodies and the roofs before I start the ornaments. That way I do not interrupt the design process by having to make the jig in between the steps for turning the roofs and bodies. This method is excellent for doing large production runs if you plan on just doing a couple of bird houses at a time it would be easier to use the mortise in the roof as a jam chuck to finish the bottom of the body. One other benefit of using the roof as a jam chuck it makes it easier to visualize the shape of the roof in relation to the bird house body.*

1. Start by turning the 2" square by 3" long blank for the jig to hold the bird house body almost to a cylinder and turning a foot on it for mounting in a four jaw chuck. Depending upon the jaw opening of the chuck you are using you may have to leave the flats on the turned blank so that you have an ample shoulder resting on the tops of the chucks jaws when the blank is mounted in the chuck.
2. Mount the blank in the chuck checking to be sure that there is good contact between the tops of the jaws and the shoulder of the blank. Now start to shape the jig. Turn down the tailstock end of the jig to be slightly larger than the diameter of the drill bit that you

will be using to bore out the inside of the bird house body in this case that would be  $7/8$ " in diameter and approximately  $1\ 5/8$ " long. Later it will be sized to hold the body tight enough to finish turning the bird house body. It is best to leave a tenon on both ends and dish out the area in the middle to provide some relief, so your Bird house body will be easier to get on an off the jig. *Refer to drawing # 1*

3. To make the jig for the roofs prepare the other blank to mount in the chuck. Once in the chuck turn a tenon to fit the size of forstner bit that you will use to bore out the inside of the roof. In this case that would be  $1\ 1/4$ " The tenon should be about  $1/4$ " long and  $1\ 1/4$ " plus in diameter. Later when mounting the roof it will be sized to fit the roof and hold it tightly for turning the roof. Now turn a slight slope down to this shoulder to provide access for turning the roof, say a heavy  $1/8$ " shoulder all the way around. Be sure to leave a flat shoulder for the roof to register against. *Refer to drawing #1*



4. Now that the jigs have been made it is time to turn the bird house body. Start by turning the blank between centers and turn a foot to mount it in a chuck. Remember that it is the shoulder contacting the tops of the chucks jaws that holds the piece in the chuck so be sure to turn a proper shoulder.

5. Mount the body in the chuck, true up the cylinder by turning it close to your finished diameter and face off the top. Using the point of a skew make a dimple in the center of the faced off area as a guide for the leading point of the forstner bit used to drill out the

center of the body. Using a drill chuck with a 7/8" forstner bit mounted in the tail stock drill a hole 1 1/2" deep.

6. At this point Dale Nish removes the blank from the lathe and goes to the drill press and drills the holes for the perch and the door of the birdhouse using a v-block to help support the blank when drilling. I generally drill the holes after I have completed turning and sanding the body. (My method sometimes ends up blowing up the body if I have turned the walls too thin) Another method is to have already drilled the holes in the blank while it was still square before mounting it in the lathe. I have also experimented with using the Oneway Drill Wizard jig to drill the holes while the piece is still on the lathe after I have shaped and sanded the body. There are many ways to drill the holes choose the one that works best for your situation and the equipment you have available.

7. I like to rough shape the outside of the body before I hollow it to get an idea of what my bird house body is going to look like so I that I can hollow the inside to closely match the exterior shape. Be sure to leave enough wood on the bottom so that it can support the stress of hollowing.



8. Hollow out the inside of the bird house but be sure leave the first 1/8" plus at the top opening and the area at the bottom of the drilled hole for about 1/8" untouched as these areas will help hold the body on the tenon of the bird body jig. *See drawing #3*  
When hollowing out the inside of the body there is no need to get it too thin an 1/8" plus wall thickness is fine, the idea is just to remove some of the material to make it feel lighter.

9. Once the body has been hollowed, part it off the lathe. Mount the body jig in the chuck and adjust the tenons to fit the mortises in the bird house body. Now I jam fit the body onto the jig and finish turning the bottom of the body. If adding a finial to the bottom of the body I turn a flat area for the finial to butt up against for a better look and glue joint.



10. If adding a finial to the bottom, now is the time to drill the 3/16" hole to attach the finial to the bird house body. Once that is done go ahead and finish sanding the body.

11. With the bird house body finished it is time to start the roof. As before prepare the roof blank for mounting in a chuck. Once mounted in the chuck, true up the blank, face off the tailstock end of the blank, turn a dimple as a guide for the drill bit, using a 1 1/4" forstner bit, drill a mortise 3/16" deep to accept the tenon on the bird house body.



12. Rough shape the out side of the roof and then do a bit of hollowing on the inside of the roof to minimize the weight of the roof.



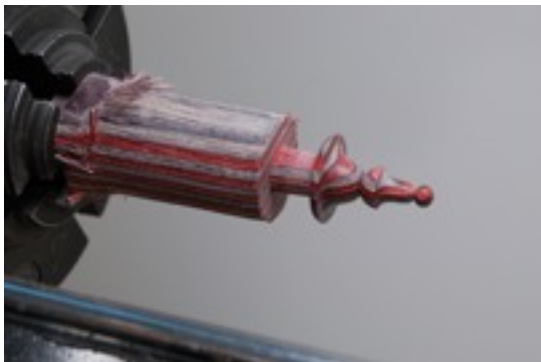
13. Part off the roof leaving enough wood on top to finish shaping the roof and jam chuck it in the jig for the roof.



14. Finish shaping the roof. Put a dimple in the tippy top of the roof for the drill bit that will drill the hole for the screw eye. Drill the screw eye hole and finish sand the roof. Before removing the roof from the jam chuck I like to screw in the screw eye as it is easier to insert it at this point. Now remove the roof.



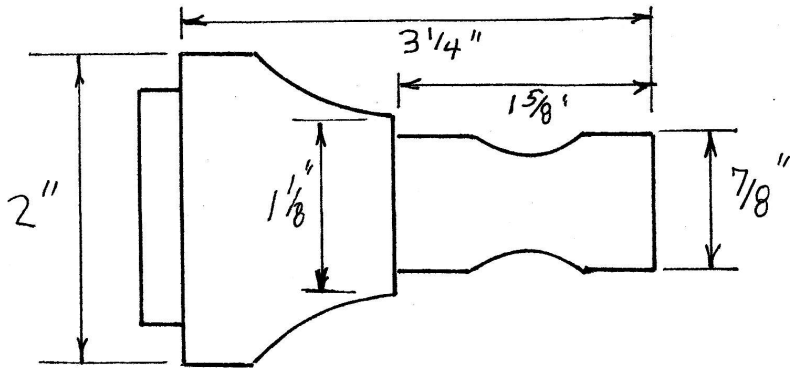
15. Using a piece of wood 1" square by 3" long, usually the same wood as the roof, turn the finial for the bottom and with the left over wood turn a tiny perch with an 1/8" tenon



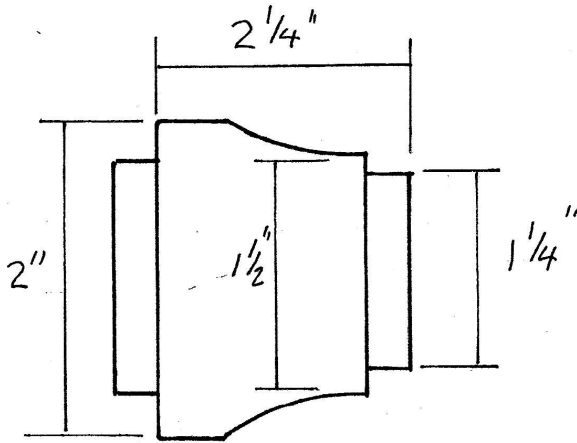
16. At last it is time to glue all the parts together and apply your favorite finish. I use a lazy susan and an old cheap ornament stand and spray my ornaments with Behlens Tone Finish Lacquer or their Pre-catalyzed Lacquer.

*\*Be sure to check out Dale Nish's new Book from Fox Chapel Publishing Titled [Woodturning Christmas Ornaments](#). Alan Leland's ornaments are featured in the gallery section of the book on page 119. The book goes into great detail on how Dale nish and SusanL. Hendricks turn their Ornaments plus it includes a gallery of 10 of Dale's favorite Ornament turners.*

DALE NISH'S JIGS



DRAWING # 1



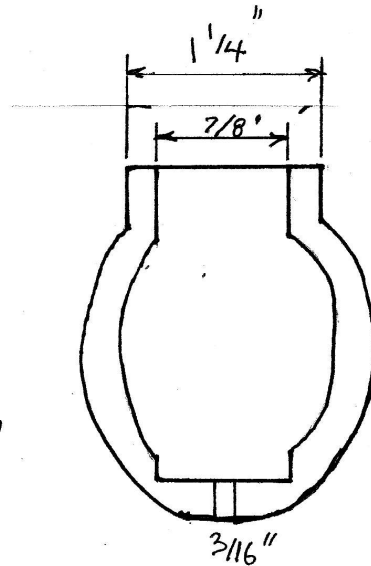
DRAWING # 2

BIRD HOUSE

SHOWING 7/8"

MORTISE FOR

MOUNTING IN JIG IN  
DRAWING # 1





## Version 2

*\*The majority of the steps in this version are similar to version 1. One of the major differences is that instead of making special jigs for jam chucking, the mortise in the roof is used as a jam chuck for the bird house body. Then the roof is just parted off and the hole for the screw eye is drilled using the drill press, although one could make a jam chuck to reverse turn the roof out of the scrap left on the lathe form turning the roof. Also instead of using forstner bits to do the majority of hollowing the hollowing is done by using a 3/8" spindle gouge and a round nosed scraper.*

1. Mount the blank for the bird house body between centers and turn it to a cylinder. Using a parting tool or a skew, turn a foot with a proper shoulder for mounting in a four jaw chuck.
2. Put the body in the chuck, true up the cylinder and face off the tailstock end.
3. Start shaping the outside of the body to get an idea of the shape you wish to turn before hollowing. Be sure to leave enough wood on the bottom to support the stress of hollowing. Also be sure to leave the top end where the tenon is going to be at least 1 1/4" plus in diameter. The tenon will be used to attach the body to the top.

*\* See section at end of Bird House Handout that has been extracted from my handout "Tips and Techniques for Using a Spindle Gouge", for some detailed tips on hollowing with a spindle gouge*

4. Begin hollowing out the body using a 3/8" spindle gouge. Start by setting the height of the tool rest so that when the gouge is held in the horizontal position with the flute fully open in the twelve o'clock position that the tip of the gouge is at dead center of the blank. Now with your arm on top of the gouge handle and the flute fully open push it into the center of the blank to be hollowed, Push it in a bout 1/8" to 1/4" letting it find center on it's own then rotate the flute to the 10 o'clock position and drag it across to the outside stopping short of the outside edge, leaving at least a 1/4" of material as the tenon has not been turned to finished diameter. Enough wood needs to be left on the outside to compensate for the final tenon diameter. The object here is to remove some of the interior wood to relieve the stress and tension in the wood so that the tenon can be sized properly and not change as the stress is relieved in the wood. Once some of the wood has been removed from the inside of the body the 1 1/4" tenon can be sized.



5. Now go back and turn a 1 ¼” diameter tenon approximately 1/8” long, at the top of the body with a parting tool. The tenon will be used for jam fitting the body to the roof so that the bottom of the body can be turned and drilled for the finial while it is held in the roof mortise. Be sure that the tenon is straight and not tapered or your bird house body may either get stuck on the top or it may slip off while turning the bottom of the body while it is jam fitted into the top.



6. Once the tenon is turned go back and finish hollowing out the inside of the bird house body. The finished wall thickness should be at least an 1/8” as there needs to be enough wood to support the stress caused when drilling the holes for the door and the perch. Too thin a wall and the body may shatter. Sometimes I drill the holes for the perch and the door on the drill press while the Blank is still square before even turning the body. Although pre drilling the holes I have found limits my design choices and limits my margin for error.



7. Now that the inside has been hollowed, measure the depth that you have hollowed so that when the body is mounted for finishing the bottom you will have some idea where the bottom is, so that you won't turn through it and ruin your piece. It is okay to have a slightly thick bottom. Finish turning the bottom, if adding a finial to the bottom, make a dimple to lead in the drill bit and drill a 3/16” mortise for the finial to attach to the bottom.

8. Sand the bottom and begin to shape the roof while the bottom is still connected. This method helps you to visualize the relationship of the roof to the body.

9. Once you have rough shaped the roof, remove the body and do a bit of hollowing on the inside of the roof to help reduce its weight.

10. After hollowing out the roof finish shaping the roof, then sand it and part it off the lathe.

11. Now that the roof is off the lathe, you can hand sand the very top where it was parted off and drill an access hole for the screw. Insert the screw eye and the roof is completed.

12. With the body turned it is now time to drill the holes for the door and perch. I generally do this on the drill press with the help of a V-Block to help hold the body. I make a dimple where I want the holes to be with a scratch awl and then very carefully and slowly drill the holes minimizing the pressure of the drill bit so as not to crack my body. I like to place the hole for the perch below the door and off to one side, so that if I later decide to attach a bird to the perch, it does not cover up the door.

13. The last few steps are to turn the finial for the bottom of the body with a 3/16" tenon. If there is enough wood left over from turning the tenon you can turn the perch from the remaining wood. The perch has a 1/8" tenon and is about 3/8" to 1/2" long.

14. Lastly glue all the parts together and apply your favorite finish. You now have an eye catching ornament to keep as a family heirloom or to give away to friends and family.





## Bird/Fly House Quick Guide

1. Mount Bird House body blank between centers and just barely turn off corners and then turn a tenon suitable for mounting in a four jaw chuck.
2. Mount body in chuck turn to a cylinder
3. Face off blank
4. Begin to rough shape the bird house body then drill hole in body with a 7/8" Forstner Bit mounted in a Drill chuck to just past where perch will be mounted.
5. Use hollowing tools to hollow out where bird access hole and perch will be drilled leaving at least an 1/8" of the drilled hole at top and bottom on the inside for mounting in a jam chuck.
6. Use a Parting tool to cut in tenon for mounting the roof blank. Match tenon to the same size as the Forstner drill bit that will be used to drill out the mortise in the roof. 1 1/8" if using a 7/8" bit for drilling out the bird house body.
7. Next drill hole for pendant on bottom of birdhouse if you are going to turn a pendant for the bottom.

*\*Note: I usually drill the hole for the bird entry and the perch off the lathe at the drill press being careful to place a dimple for the drill bit and checking to be sure that the body is held perpendicular to the drill bit and slowly drill the holes so as not to break my bird house body. A friend of mine uses a hand held drill and drills the holes while the body is still mounted in the lathe.*

8. Now finish turning the outside of the birdhouse and sand it.
9. Part off bird house body.
10. Mount roof blank between centers just barely knock off the corners with a spindle roughing gouge and turn a tenon suitable for mounting in a four jaw chuck.
11. Mount roof in chuck, turn to a cylinder and face off blank.
12. Now dish out the face of the roof to create what will be the overhang when the body is attached to the roof.
13. Using a 1 1/8" Forstner bit in a drill chuck to drill a mortise approximately 1/4" deep in the roof blank then hollow it out a bit to reduce its' weight a tad.
14. Use the mortise that you just drilled as a jam chuck to hold the bird house body in the roof so that the bottom of the body can be shaped and sanded.
15. Now shape your roof. You can leave the body attached to the roof to help rough shape the roof to the body.
16. Once the roof has been rough shaped remove the body to complete shaping the roof.

*\*Note: It may help to bring the tailstock in with a cone center or the cup center in the bearing/live center to help steady the roof for final shaping.*

17. Remove the roof and insert it into a jam chuck to finish turning and sanding the top and to drill the hole for the screw eye used to hang the ornament when finished.
18. Slow the lathe speed down and drill the hole for the screw eye.
19. Now mount a small blank between centers to turn a tenon for mounting in the chuck using the #1 jaws and turn a pendant and perch. Lastly glue the parts together and admire your lovely work.