



# Birdhouse Spindles

By John Lucas

I was at the world's longest-running flea market the other day and saw a birdhouse made from a stair baluster. It was cute, but the baluster was too long, the base was too big, and the roof was really ugly. I liked the idea and thought a little redesigning would make this a good spindle project for my workshops. At the same flea market, I also picked up some crackle paint for a dollar, the perfect companion for the birdhouses.

What I like about this project is the opportunity to play. I can practice all my spindle-turning techniques and explore some that I have either forgotten or have never tried. It is a perfect project for skew practice because the whole spindle can be turned with just that one tool. It is also the perfect project to experiment with paint, stain, dyes, pyrography, texturing, carving, fluting, or any other surface decoration technique that comes to mind. I designed this project so it can be turned using scrap wood—even construction lumber will do. That allows freedom to muck around without worrying about those “redesign opportunities” that might slip in. The idea is to play, learn new skills, relax, and enjoy the turning. There is no right or wrong, only exploration and experimentation.

## Stock preparation

I make these from 1-1/2" (4cm) square stock ripped from a 2×4. Start with a piece about 16" (41cm) long. Pine will really flex when turned down to an inch or less, so this is good practice for learning to deal with chatter. These birdhouses look good with square tops and bottoms, so it's important to mark the centers accurately. The project also offers good practice for turning the transition from square-to-round.



## Turn tenons on the ends

Mark a line 1/4" (6mm) from the top end, then mark another line 1/2" (13mm) from the bottom. These will become 3/4"- (19mm-) diameter tenons. After mounting the blank between centers, I use the toe of the skew (that's the long point) to start a tenon 1/4" from the top. Arc the skew down from the corner of the wood to create a square shoulder. You need to aim the bevel of the skew straight down for the shoulder of the tenon (**Photo 1**).



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Cut the vee on the waste side, then use either the skew presented flat or a parting tool to create the round tenon with a peeling cut. When that's finished go to the other end of the piece and turn a 3/4" tenon, 1/2" long. Then round over the top of the birdhouse blending it into the tenon (**Photo 2**). This will give the roof a place to sit.

### Define the square ends

Mark out the bottom square section and the square bird house section. I make the bottom square portion 3" – (8cm–) long. Use the toe of the skew to make two vee cuts at these marks and start shaping the transition from the square ends to the round middle. Use the skew (or a spindle gouge) to round over the squares to blend with the center section of the spindle. I like to turn a lamb's tongue to transition from square-to-round (**Photo 3**). This is basically an ogee, starting with a cove at the square corners and merging into a rounded over section.



**Photo 1.** Cut the tenon shoulder with the toe of the skew, following an arc towards the center of the spindle.

### Add details

On this design I have two beads at the bottom, one on top with a cove below, and a long ogee in the middle. After marking the locations with a pencil, I make vee cuts with the skew to clearly locate these details and to waste away a little wood to make the beads easier to round over.

On hard woods I use the toe of the skew to tuck the joint between the beads. This makes the sides of the beads clean and the area between, crisp. On wood that will be painted, I leave the bottom of the beads rounded to make it easier to paint between the beads. To do this I use the toe of the skew to clean up the side of the bead, but when I get to the bottom, I slightly twist the skew. This leaves a mini-cove that easily takes paint (**Photo 4**). Sharp edges also need addressing to receive paint, so I knock them down slightly with 220-grit sandpaper.



**Photo 2.** Round over the top of the bird house to meet the tenon using the heel of the skew.



**Photos 3-4.** Subtle details grace these forms, including a lamb's tongue transition from round-to-square features (left). If the beads will be painted, a small cove (or flat) between them will make decoration easier.





**Photo 5.** Chatter appears as the stock becomes thinner and the cut is farthest from tail- and headstock support.

Next, I move to the ogee shape in the middle. I round over the bottom of the ogee with a spindle gouge or skew before turning the middle portion down. I approach this feature like a long, large cove, turning from large-to-small diameter. Make one pass from the bottom end towards the middle, and then from the top end to the middle. I use the skew for this task. This is usually where the chatter starts (**Photo 5**).

## Sand

I sand pieces to be painted to 220 grit. Be careful to preserve crisp features when sanding the square-to-round transition. I use either stiff paper held underneath the piece or fold a sheet of paper and stretch it between my fingers to push against these areas. This keeps from tearing the corners or damaging your fingers, neither one of which is any fun.

## Seal

When I've finished sanding, I apply a coat of either sanding sealer or lacquer thinned 50 percent with lacquer thinner. This keeps the paint from soaking into the wood and reduces the number of coats needed to cover the work.

## The perch

Drill a 3/4" hole in one side of the top for the birdhouse opening using a Forstner-style bit. Then drill a 1/8" (3mm) hole below this for the perch. To turn the perch, drill a 3/8" (9mm) hole in the waste block. If you have a 3/8" dowel of the right wood, glue this in place. If you want

## Put a lid on the chatter

To keep chatter to a minimum, reduce the pressure on the tailstock and use your hand on the opposite side of the spindle to counteract the force of the bevel of the tool. My thumb pushes the tool down on the toolrest, not into the turning.



How much pressure do you use with your fingers? You'll figure it out with practice. Too much and you burn your fingers. Too little and you get chatter. Try to keep the pressure on the bevel of the tool as light as possible. Turn the lathe speed down. Make light cuts with a well-sharpened tool. If you experience chatter, change the angle of the skew very slightly so you're cutting the tops off the chatter spirals instead of just following the valleys of the spiral. These techniques help reduce chatter but may not stop it entirely. The more you practice, the better you will get at reducing chatter. Sanding will usually take these marks out easily, so it's not a big deal—it's just a goal to shoot for. This is good practice if you ever want to do long, thin spindles, which chatter badly and require a practiced touch.

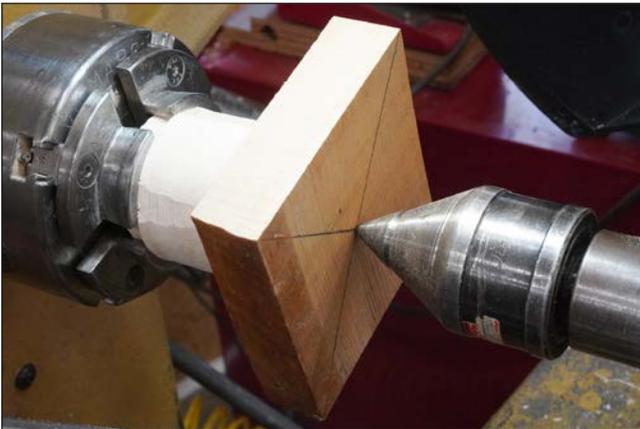
a special piece of wood, mount a short piece between centers and turn a 3/8" tenon on one end. Glue this in the waste block and turn the perch (**Photo 6**). Sand and apply finish before cutting the 1/8" tenon.



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**Photo 6.** Turn the perch either from a dowel or a prepared blank with a 3/8" tenon glued into a waste block.



**Photo 7.** Attach a 3" x 3" blank to a long-grain waste block held by a tenon to turn the base.

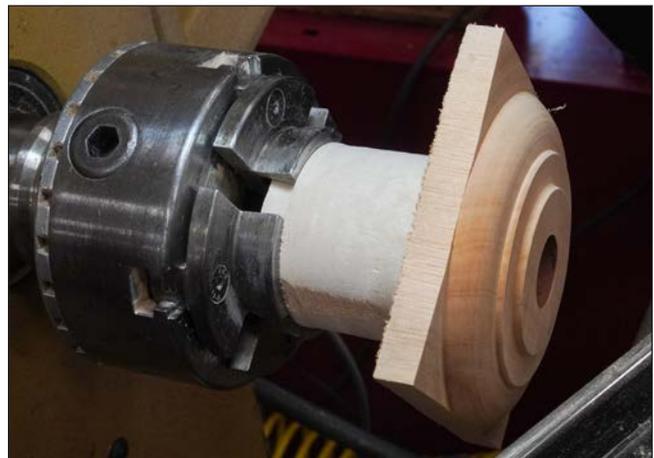


**Photo 8.** To maintain a flat mounting surface for the spindle, mark the perimeter of the spindle on the base.

### *The base*

I place a waste block in the four-jaw chuck in endgrain orientation. I use scrap or a piece of a limb and face it off. Cut a 3" x 3" piece of wood for the base and mark the center. Put CA glue or hot-melt glue on the piece and push it onto the waste block using the tailstock with the point in the center mark (**Photo 7**). Drill or turn a 1/2"-deep, 3/4" hole for the tenon using a Forstner-style bit, or turn the hole with a parting tool. Remember, this is the top side of the base. Test fit the tenon and make the hole deeper if necessary. I mark an area equal to the diameter of the spindle base with a pencil line where I will leave a level platform for the spindle base (**Photo 8**).

Ideally you should turn the base from the center out so that you are cutting downhill on the grain. Depending on the design, this can be difficult. Light cuts with a sharp tool will minimize tearout when cutting from the outside in. I rotate the gouge so the tip is cutting at a shear angle. I describe this as gliding the bevel rather than riding the bevel. I would not recommend a scraper for turning the wings; it will tear the outer edge and leave a poor surface. I do use a scraper held at a 45-degree angle to flatten the top surface for the spindle. Be sure to check this area for flatness. When you finish turning this side, sand and apply sanding sealer (**Photo 9**).



**Photo 9.** Sand and seal the base after shaping, while access to these surfaces is at its best.



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I remove the base from the waste block with a chisel. If you place the chisel tip at the glue line and hit the handle sharply it will usually break the CA glue bond without damaging the wood. If you want to turn the bottom of the base, turn a 3/4" tenon on the waste block. This should be a jam fit so leave a slight taper on the bottom of the tenon. Fit the base onto the tenon and capture it there with the tailstock. If it doesn't fit snugly enough, try draping a piece of tissue or paper towel over the tenon. Holding it in place with the tailstock reduces vibration and keeps the blank from popping off the jam chuck. Turn most of the base and then pull the tailstock away to finish the last little center section. Be sure to sand and put a layer of sealer on the underside. When sanding the wings, it's very easy to inadvertently round over the edges. I often sand with the lathe off on square turnings. On this piece I added some texture because the bottom won't be painted, and I like that surprise when a curious viewer examines the base (**Photo 10**).

### The roof

I like having a roof with square edges, so here is another opportunity to turn air. I used 2" - square x 3-1/2" blanks. If you want to stay with the 2x4 theme, you could simply glue up two pieces and mill them to square dimensions.

Mount the roof blank in the chuck jaws in a spindle orientation and turn the underside of the roof (**Photo 11**). I use a bowl gouge and turn a shallow depression from the center out. Drill the center of the roof with a 3/4" bit. Test fit the birdhouse to see how deep to drill the hole and re-shape the underside of the roof if necessary. Sand and seal this area.

Place a waste block in the chuck and turn a 3/4" tenon on the end for a jam chuck and mount the roof. Turn the top of the roof (**Photo 12**). Don't forget about the 3/4" hole you drilled in the bottom of the roof or you'll end up cutting through and have a very short leaky roof. Keep the tailstock in place as long as possible, leaving just the tiniest area to be removed later. If your jam chuck is good and you have a light touch



**Photo 10.** Adding details to the bottom of the base creates surprises for viewers to discover.



**Photo 11.** Undercut the bottom of the roof and drill a 3/4" hole for a tenon.



**Photo 12.** After remounting the roof blank, turn the roof details, taking care not to cut into the 3/4" hole drilled in the previous step.



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with your tools you can turn this last very tip of the roof. You may need to support the top with your fingers while shaping the top of the roof. Sand and seal this area. Now you can glue everything together and start your finishing.

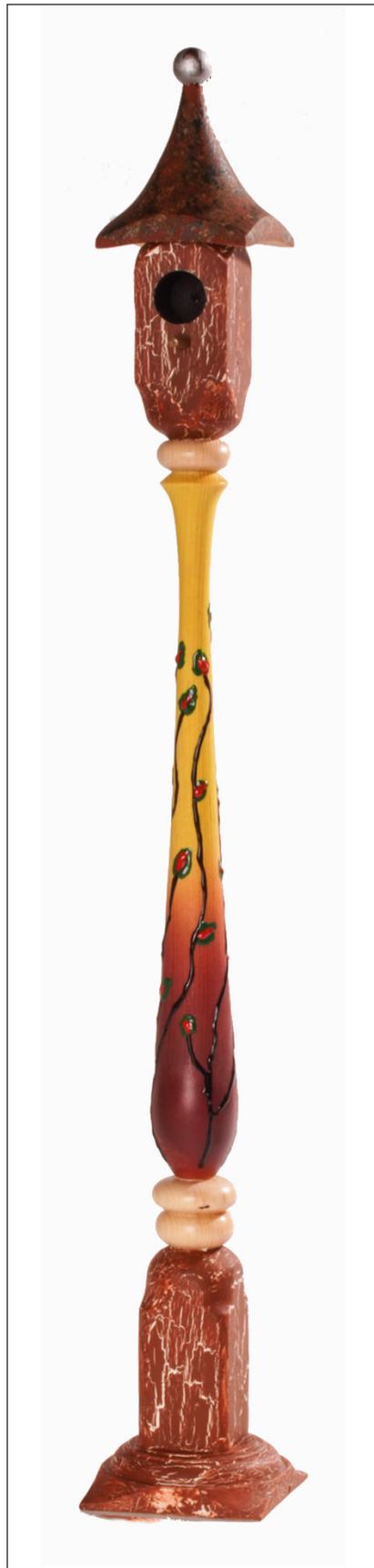
### Finishing

If you buy a book on faux finishes there are a ton of options to achieve a variety of appearances. The crackle finish I cover here is only one of many options.

The simplest way to get a crackle finish is to use crackle medium. This product is readily available in art supply stores and online. To get a predictable outcome, you should use the paints recommended on the crackle medium you purchase. I like to use milk paint, but I have used lots of inexpensive acrylics and they also work well.

Paint on the base coat and let it dry. Follow this with a coat of the crackle medium, also applied like paint. Let the applied medium rest for the length of time recommended on the container.

The paint should be applied over the crackle finish with a full brush. One good stroke, and don't go back over the same area. Another attempt at coating the same area will drag paint and crackle medium together, ruining the effect. Fill the brush, do a stroke, and then fill the brush and apply



the next stroke in the adjacent area. The surface will start crackling fairly quickly.

A thick topcoat of paint makes large cracks, a thin coat makes small cracks, but the temperature and humidity of your shop will determine the perfect time to apply paint over the crackle medium. This is one of the reasons working with a test board (and keeping notes) before committing to your turned piece is so important.

The crackled paint finish is a perfectly acceptable surface by itself. However, if I want a glossier look, I will apply wipe-on polyurethane over the dried paint.

When the paint (and possibly polyurethane) is dry, you are ready to glue in the perch and glue the roof to the house. I like to paint the hole in the top black so that it appears to be hollow.

*Retired photographer John Lucas has been working in wood for more than 35 years and also dabbles in metalworking. He enjoys modifying machines, making tools, and sharing his knowledge through written articles and videos. He has taught classes at John C. Campbell Folk School, Arrowmont, and The Appalachian Center for Craft.*

