

Acorn Boxes

I have been making boxes since I started turning 16 years ago. There is a certain mystery about the interior of a box that I like. I have read Richard Raffan's book on boxes. I met Chris Stott and was inspired by his boxes. I also met Willard Baxter and got into threaded boxes. All of these wonderful people and others have inspired me to continue my infatuation with box making.

Acorns have been a style of box that I have always been drawn to. I have made acorn boxes, threaded and not threaded since I started turning. I have refined my design with carving to give the boxes a more organic look and I have been making this particular style for about 5 years now. So I would like to share my style of acorn box with you.

My favorite color scheme is a dark top with a lighter color bottom, but I like that by using all kinds of woods that I can get such a great diversity of looks.



Start with two pieces of dry end grain wood approximately 2" square (the wood for the top of the box needs to be 1/2" or so bigger). I make the bottom of the box first.



Mount the piece of wood in a four-jaw chuck so that you can true up one end and make a tenon with a shoulder for a good grip. Re-chuck the piece with the tenon in the chuck so that the shoulder of the tenon is tight against the face of the jaws. This is how I chuck all pieces of wood I use on boxes.



I use a basic set of turning tools for box making. A spindle roughing gouge, a spindle gouge, a 3/8 bedan, a hand held drill, small round nose scraper, parting tools, 1/2 skew and a couple of calipers. Start by truing up the box bottom piece of wood with a spindle roughing gouge and square the end with a parting tool. With a 1/2" skew I make a small divot in the end grain, this is to start my hand held drill bit. I have added a pair of vise



grips to my drill for extra grip.

I mark the depth I want to drill with masking tape and start the drill in the divot and push gently until I get the drill started. I will pull the drill out to clear the chips as needed – if you don't, the drill may get stuck in the hole. By drilling out the slow moving center you make end grain hollowing a lot easier.



I then use a 1/2" spindle gouge to rough hollow the interior of the box. I use the left side of the gouge to cut from the center to the outside. I make multiple passes until I reach the bottom of the box. I am trying to shape the inside of the box like I want the outside to look. I switch to a round nose scraper to refine and finish the inside. Light cuts with a sharp tool will usually produce good results.



Use a pencil as a depth gauge to mark the inside bottom of the box on the outside of the box. This is a reference line to start shaping the outside. Start removing excess wood below this line to get ready to shape the outside of the box.



Cutting from the end toward the chuck, finish shaping the box to final size. This direction will be cutting with the grain and should give a good finish surface on the wood. Check the wall thickness as you go. Strive to have even wall thickness from top to bottom. Leaving it a little heavy in the bottom is not too bad, it will give the box a little gravity.

The box is still attached by a small stem to the chuck so you can sand it. Sand the inside and outside of the box. I like to use quarter sheets of sand paper folded

into thirds. By folding the paper it makes it a little stiffer and you have all kinds of edges and surfaces to use. I stack the folded sandpaper from 120, 150, 180, 220, 240, 320 grits. This way I don't have to keep up with each grit. I just use the next grit in the stack.



The box bottom is ready to part off the chuck. I use both hands to start the parting cut and then I use a parting tool in my right hand and catch the box with my left hand under the tool rest. I don't like reaching over the top of the tool rest. The bottom of the box will be finished turned using the box top as a jam chuck.



Now a make a top to fit the bottom. Same as I made the bottom, mount a piece of wood in the chuck to make a tenon with a shoulder. Re chuck tenon into chuck jaws and true the wood and square the end. I use a caliper to mark the size of the bottom on the end grain of the top blank. This is just a starting point. I try to make the first cuts smaller than this mark and work up to the finished size. I use a 3/8" bedan to rough the top out. I like the top to be pretty deep so that the fit will be fairly secure.



Once the roughing out is done I switch to a round nose scraper to dome the top inside of the box top. I do this to make the top lighter and I like to add a little detail in the top too. I size the opening in the top by cutting a little bit at a time. I switch to my 1/2" skew on its side to make minute cuts to make the final cuts. I check the fit and continue to make cuts until I get it right. I do not bottom out to the top of the box. I leave a small gap and I also put a very slight taper on the sides so that as the box expands and contracts it



will always fit. I use the top as a jam chuck to hold the bottom of the box to finish turn the bottom of the box. Sand the point on the box bottom and then set aside.



Now I mark the inside top of the box on the outside for a reference line, like I did on the bottom. Rough turn the basic shape of top below reference line. Then refine shape of top. I lightly sand the inside of the box top. I run through the stack of sandpaper gently. With sharp tools you will have good surface quality so you need only light sanding. I part the top from the chuck like I did the bottom, catching the piece with my left hand under the tool rest.



The turning is done and it is time to start carving. I want the box to have an organic look and feel to it. It is not exactly a realistic carving but I think it is appropriate. I also want it to be a pretty simple operation. I use only one shape carving burr, but I use two different carvers. I use a flex shaft carver for roughing out, and a micro carver for detailing. The burr is a steel cylinder covered in carbide chips. There is a larger one and a smaller one, but they have the same size scratch pattern.



I lay out the divisions on the top by eye with a pencil so that they don't look too refined. I usually lay out at least five lobes, but I have done as many as 8. I start with the flex shaft carver to rough carve the entire top, pulling the cutter toward me for better control. I switch to the micro carver to clean up and refine the lines. I'm looking to introduce as much depth and shadow lines as possible.

Once you finish carving you will need to sand the fuzz from the edge of the inside of the box top. I use 120, 220, and 320 grit paper for this.



You are done now except for finishing. I put at least two coats of urethane oil on the top and bottom. A sealer and then at least one top coat (satin), more if I feel it needs it. I let the finish dry for several days and then buff the box bottom to a smooth soft gloss finish with a buffing wheel mounted on the lathe and Tripoli compound.

I like this style of Acorn Box and I hope you do too. I encourage you make them all different sizes and different woods. Have fun.

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