

Pill Box Demonstration Handout

by Mike Peace, mikepeace356@gmail.com
<http://mikepeacewoodturning.com/>

Mike Peace Woodturning channel YouTube video, [Turn a Pill Box](#)



Introduction

Use some of those nice exotic scraps you may have laying around your shop to make an attractive and functional pill box.

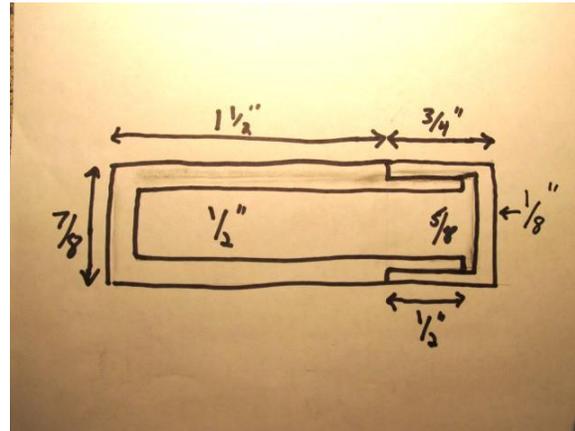
Wood

1" x 1" x 3" blank of most any dried hardwood will make a good size one. Exotics like padauk, purple heart, or zebra wood are all good. You might have a fat pen blank on hand that will work nicely. If you are a segmenter, perhaps you have some laminated scraps.

The walls of the top and flange are 1/16".
 The top and bottom are 1/8" thick.

A ratio of 1:2 top to bottom is generally pleasing.

Design



The walls of the top and flange are 1/16". The top and bottom are 1/8" thick.

Tools

<ul style="list-style-type: none"> Four jaw chuck or Collet chuck capable of holding the blank 	<ul style="list-style-type: none"> 3/8" spindle gouge, 1/2" Square scraper
<ul style="list-style-type: none"> Spindle roughing gouge, spindle gouge and skew 	<ul style="list-style-type: none"> Thin parting tool
<ul style="list-style-type: none"> Burn wire, Texturing tools if desired and a Point tool 	<ul style="list-style-type: none"> Jacobs chuck with 5/8" Forstner and 1/2" twist bits
<ul style="list-style-type: none"> Vernier or dial calipers 	Wood blank, 1/2" and 5/8" MT mandrels; masking tape

Steps

1. Rough blank round between centers. Turn a tenon for the base end to fit your chuck jaws if necessary.
2. Mount in a chuck. Drill end that will be the lid 1/2" deep using 5/8" Forstner bit and drill chuck about 700 RPMs. Sand as needed. Embellish the lid sides as desired: beads, burn rings, texturing etc. If texturing on the side of the lid, do it now with TS support with a 60 degree cone live center. On very hard woods, I use a small spiraling or texturing tool.
3. Part off lid using a thin parting tool. Set aside for finishing the end.

4. What is left in the chuck will be the bottom. Face it off with SG for a finished surface. Create a starting dimple for centering the drill bit with a skew laid on its side. Again, using a Jacobs chuck, but this time with a 1/2" drill bit, drill a hole 1 7/8" deep. Retract the drill to clear chips as often as necessary. A clogged drill bit will overheat the wood and often veers off center. **For safety**, keep a hand on the drill chuck when retracting. If it gets pulled from the TS, bad things happen!
5. Measure the depth of the hole in the lid with a caliper and mark the length of the flange to fit into the top. A 1/2" long flange with a 5/8" diameter will give you a piston fit that will keep the lid on well. The flange must be perfectly straight to get a sort of pneumatic fit. Use a parting tool or skew as a scraper to sneak up on the fit.
6. Trial fit occasionally to ensure a good fit. Before the final fit while it is still snug, put on the lid and finish the very top where you parted it off. A scraper works well on end grain. Sand and texture if desired. The Wagner tool textures well on the top where it is end grain.
7. I polish with an abrasive paste like Yorkshire Grit. For exotics, I rarely use a finish.
8. Finish shaping the base and do final fit on the flange for a smooth fitting lid. Sand and finish. I do not sand or put finish on the flange or walls of the lid. Part off.
9. Reverse the bottom by mounting over a 1/2" mandrel that fits into your spindle with a MT or held in your chuck. If the box bottom is a little loose, tape it in place. Use TS support if needed with a wood or nylon soft touch tip on live center.
10. Remove any tenon or excess. I like to make the bottom flat so the box can stand up.
11. Sand and finish. If the lid is a bit snug consider buffing the flange with carnauba. Too loose? Add some thin CA!



Variations: Needle case blank 5.25" with finished needle case 3." 1 3/4 was needed for waste wood for tenons, parting off and for the overlap of the cap on the body of the needle case. Make it about 3 3/4" long using 1/2" and 3/8" drill sizes for a traditional needle case. For toothpicks (2 1/2"), 19/64" BS 1/2" drill bits with a blank about 7/8" x 3 1/2.