

Basic Boxes with Ralph Watts

Before starting: Select wood that is totally dry. If you will be using a traditional slip fit, select wood with a relatively straight grain to better achieve a “matched” fit. Both traditional and ring insert methods are described.

1. Turn your blank round between centers and cut a chuck tenon on each end.
2. Select the location for your bottom to top joint. Using the golden ratio is a place to start. For a traditional slip fit, cut a joint groove about $3/16$ ” to $1/4$ ” deep (deeper if you plan to carve) and about $5/16$ ” to $3/8$ ” wide. Make sure this cut leaves a parallel and smooth surface.

If a slip ring is used, the cut only needs to be about $1/16$ ” wider than your parting tool. By leaving a slight lip on both ends it will be easier to establish the seats for the ring. See step 4.

3. Part the blank with a narrow parting tool near the top. Leave about $1/64$ ” protruding on the top side for use later as a guide and leave about a $1/2$ ” diameter interior dowel holding the halves together. A Japanese pull saw is great for finishing the cut. Cutting completely through the blank may leave a scar on the mating surfaces as they disengage if the halves grab the parting tool.

4. For the ring insert method: Use a narrow parting tool to cleave the blank at your selected joint location being careful to not mar the surfaces and to leave an interior dowel. Alternating the parting tool plunge cuts a few degrees to either side will keep the tool from binding. Use the alternating angles till you are past the depth of the future ring. Then make a new center cut in the widened groove to finish the cut to the center dowel. Use the back saw to finish the cut.

5. Remove from between centers and chuck the top. Use a parting tool to make a shallow plunge cut at exactly the $1/64$ ” mark left previously. If the mating face is marred, smooth now and slightly slope from the outer edge to the lip assuring a tight fit later. A negative rake scraper or a freshly sharpened $1/4$ ” cut off tool is great for this.

- Traditional: Use the point of your bowl gouge held with the face vertical or a parting tool and make a small starting groove exactly where the $1/64$ ” bump begins on the outside. Finish making this cut square (or parallel to the ways) and you will be assured that the lip on the bottom matches the hole in the top. Use the bottom to do trial fits until you get the fit you want.

- Ring: You may make this cut with a parting tool but be careful to hold the tool parallel to the ways. Removing some center material will make this cut easier if you are using a parting tool. A better way to make the cut is to use a Fly Cutter (FC). Chuck the FC into your tail stock with a drill chuck. Adjust the FC bit point to the desired width and slowly screw the bit in about 1/4". The bit can be square on the end but grinding the tip with a taper will leave a small void for excess glue.

6. Use an appropriate tool or a drill to start and finish the hollowing process for the top.

7. Use a scraper or the edge of your bowl gouge to square and smooth about 5/16" in from the outside.

8. Sand the inside being careful not to sand the joint area out of square.

9. Remove from the chuck and reverse the top. Expand the jaws to lightly grip the top and bring the tail stock up to secure the top in place. Finish turning the top but leave the nub for the tailstock point. Sanding will come later.

10. Chuck the bottom. Reduce the tenon to match the top. Put a slight taper on the outside edge of the lip to help put the lid in place. For a traditional slip joint use the top to check the fit. Loose fit for a "ladies" box and a pop fit for a "mans" fit.

11. Use a drill or otherwise hollow the inside leaving the joint lip about 1/8" thick.

12. Sand the inside.

13. Place the top on the base and bring up the tail stock to hold it in place.

14. Finish turning the outside of top using the base as a jam chuck leave just enough wood to sand without worry. Turn the nub to a point that it can be removed easily, finish sanding then back off the tail stock and remove the lid.

15. Unchuck the bottom and reverse it over the chucks jaws. Bring up the tail stock and finish turning and sanding.

16. Part off the nub on the bottom. Sand to finish and burn in your data.

17. Add your favorite finish. Done!!