

Turning a Top

by Dan Brandner

Turning a spinning top is primarily a spindle turning operation. It is a great way to use up small pieces of turning wood and get some practice in turning techniques.

When turning small pieces, there are several methods to consider, remembering that at some point you want to support it by just one end. In the figures below, I show several ways to mount small turning pieces.

1. In a chuck, square or round stock. Fig. 1a, 1b
2. Glued to a round stock blank. Fig. 2
3. Glued to a board on a face plate. Fig. 3
4. Tapped into an MT2 taper. Fig. 4
5. In a collet chuck. Fig. 5



Fig. 1 A square blank of a size that can be mounted in a chuck.



Fig. 1b & 2 Glued to a round blank, mounted in a chuck.



Fig.3 Glued to small board, mounted on a faceplate.



Fig. 4 A blank turned between centers to have an MT2 taper and tapped into the headstock.



Fig. 5 A blank turned between centers with a tenon that can be supported in a collet chuck.

Regardless of how you mount your piece, you may want to turn using a tail stock until the final steps. This helps when you are aggressively removing large quantities of material and also prevents any possible vibration or chatter on finer finishing cuts.

You want your wood to be of uniform density so it is nicely balanced around the turning point. I think hardwoods like maple work really well, but it is probably not essential if you can get a nice turning point. Your turning point should be a nice point, but not a needle point, as this can get easily damaged and then cause uneven spinning issues.

You usually want to form the turning point first on the right, supporting the top from the headstock on the left, Fig. 6. This can be reversed, but then you may need to remount the top by the handle to finish the turning point. If you are making a super tiny top, like the ones Alan Lacer makes, you turn the tiny handle on the right and finish the bottom of the top last, making the best point you can, Fig. 7.



Fig. 6 Supported by handle on right side and forming the turning point on the left.



Fig. 7 A top turned with the handle on the free end. Only the turning point remains to be finished.

When supporting a piece on only one end, you don't want to have too long of a blank. If it is too long you can end up with vibration and chatter and have trouble getting a smooth finish.

Start by turning your blank into a cylinder using a spindle roughing gouge, or a skew like Richard Raffan uses in this YouTube video. [Richard Raffan turns a spinning top](#) . I like to do this between centers. I'll also remove some of the wood where the handle will be while I'm between centers. I'll extend my tailstock with an MT2-MT2 extension if I don't have a shorter tool rest.



Turning a cylinder.



Removing the material around the handle with a parting tool.



Starting to form the top's bottom.

Next, I'll remove the tailstock and proceed to turning the bottom of the top including the point, Fig. 8. As you get close to that center point, move your tool more slowly, as the center, with hardly no radius, is moving very slowly past the cutting edge. This is where you can add some embellishment to that bottom such as ridges, shoulders or beads. I'm primarily using a small spindle detail gouge for this. My goal is to make smooth cuts as I don't want to do any sanding.



Fig. 8 Forming the point with the tailstock removed.



Fig. 9 Cleaning up the handle and top surface.

Next I'll clean up the handle of the top and shape the upper surface of the top, Fig. 9. Don't make the handle too thin, before cleaning up the top surface of the top. Clean up all of your edges and corners so you don't need any sanding. If I have a straight handle, or any shoulders, I will use my small skew to give it a nice finish.

Slow the lathe speed down and now decorate with colored permanent felt tip markers.



Decorate with permanent markers.



Part of the top making the best point on the handle that you can, so you can spin the top upside down.

Finally, turn off the top of the handle. You want to make this a possible point to spin the top upside down, so you want to form it cleanly too. After separating and catching your top, you can manually trim the end or sand it if it isn't clean.

After this, it is just a matter of trying different shapes, embellishments and colorings for variety.



An assortment of tops turned in preparation for this presentation.

Turning tops is a great way to practice techniques and is also a good warm-up exercise if you have been away from the lathe for a while. It helps you get back into the swing of turning again.

Note: If you turned your top on a piece of wood glued to a mounting piece (cylinder, block or faceplate), square up the end after separating your top and it will be ready to glue another small piece of wood to for another top.

6/5/2024