

Toy Top

Materials:

- | | | | |
|----|----------------------------|----|---------------------------|
| 1- | 2.5" x 7.00" piece of wood | 1- | 5.5" x 5.5" piece of wood |
| 1- | 3/8" x 6" dowel | 2- | brad nails |
| 1- | piece of string | 1- | 1/4" x 2" dowel |

Directions for the Handle

- Step 1** Place the 2.5" x 7.00" piece of wood in the tracing jig and **trace the outline** of the pattern onto the wood.



- Step 2** Measure back 3/4" from the right side along the top edge. Use a square to draw a line at this measurement. **See figure B.**



- Step 3** Align the dowel centering jig at the line drawn in step 4, place in a vice and drill a 7/16" hole through the wood.



Step 4

Layout hole A. (1) Measure the width of the wood and find the center (the width will be approximately 2 ½ inches but yours may vary). (2) Draw a straight line, using a square, at this point parallel to the length of the wood.



1



2

Step 5

(1) Measure in 1-1/4" from the right side as indicated in **figure A**. Use a square and cross the previously drawn line to create a center mark. Center punch with an awl where these two lines cross. See **figure A**.



Step 6

Drill a 1-1/4" hole through the wood on the drill press at the mark made in step 4. **Make sure to clamp the wood down in the jig to hold it or it may spin out of control. Hold onto the jig firmly.**



Step 7

Draw a straight line using a square and stamp your name along the line as indicated in **figure A**.



Step 8

Draw two lines tangent to the top and bottom of hole **A** that continue out to the front of the wood. See **figure A**.



Figure A

Step 9

Use the bandsaw to cut the two lines in step 6 as well as the outside contour of the piece. Remember to cut on the scrap side of the line and leave the line showing so you have room to sand.



Step 10

Sand the rounded end of the handle with the disc sander. **Remember** to only sand on the left side of the disc and hold the part tightly down on the table.



Step 11

Sand with 50, 80, 120, 220 sandpaper.

Step 12

Stain and vanish the project.

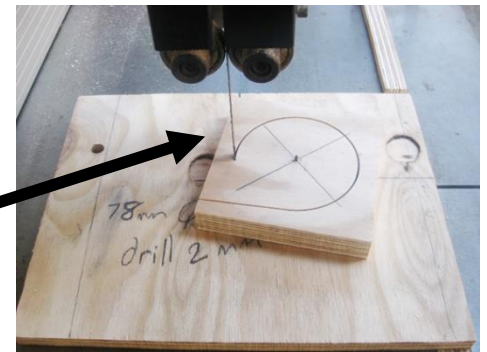
Directions for the Disc and Dowel

- Step 1**
- (a) Lightly draw an **X** from corner to corner on the wood, this should give you the center where the two lines cross. Center punch the spot where the lines cross with an awl.
 - (b) Sand the top and bottom of the wood.
 - (c) Use a compass to draw a 5" circle.



- Step 2**
- Use the bandsaw to cut a 5" circle from the 5 1/2" x 5 1/2" piece of wood. Remember to stay outside of the lines. Clean up the edges on the disc sander by sanding down to the lines.

UNSAFE WHY????



- Step 3**
- Drill a 3/8" test hole in a piece of **scrap wood you just cut the circle out of**. If the dowel fits snugly in the hole then you have the correct size drill bit. If it does not fit repeat the practice hole in the scrap wood with a larger or smaller bit until the dowel fits snugly. If the dowel does not fit try hand sanding it. It should be a tight fit. *(The reason for the test holes is that when they produce the dowels they are given a **tolerance** (fudge room) and the dowels may not be exactly 3/8" in diameter, they could be slightly bigger or slightly smaller than 3/8".* Once you have the correct size dowel find the center punch mark in the circle made with the awl. **Drill a hole with the drill press.**

- Step 4**
- Draw a straight line and stamp your name in the disc.
- Step 5**
- Round over the edges of the newly cut circle using sandpaper.
- Step 6**
- Sand with 50, 80, 120, 220 sandpaper.

Step 7 Cut a piece of 3/8" dowel 6" long using the bandsaw .

Step 8 Find the center of the end of the dowel and center punch it *lightly* using an awl..



Step 9 Drill a hole slightly smaller than the brad nail to be inserted into it (Use a cut off 3/4" silver brad nail). Nail the brass brad into the hole.



Step 10 Use the disc sander (2 hands on the dowel) to taper the end of the dowel almost to the brad nail. **DO NOT SAND THE NAIL.** See figure E.



Step 11 Drill an 1/8" hole 1-3/4" from the top (un-tapered) side of the dowel. See figure E.

Step 12 Insert the dowel into the disc so that 2" of dowel protrudes from the bottom of the disc. See figure E. Drill a pilot hole using a cut of brad nail and insert the nail using a hammer and nail set.

Step 13 Stain and vanish the project.

Step 14 Cut a 2" piece of 1/4" dowel . Center punch it in the middle. Place it in the vice and drill a 1/8" hole.

Step 15 Slip the string through the 2" long dowel and tie a knot.