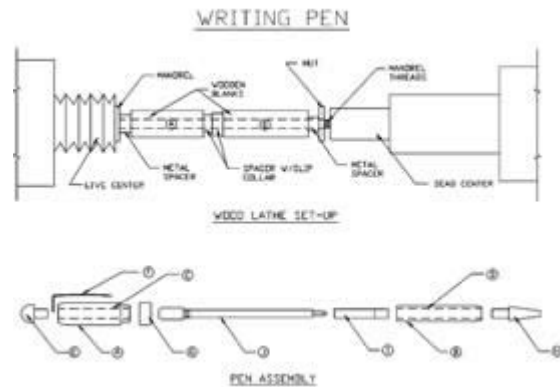


Turning wooden writing pens on a lathe is a quick and easy project that even the novice can master with a little practice. As you perfect your turning skills, you may want to vary the designs of each pen. One pen can easily be turned, finish applied, and assembled in less than an hour. These pens can be made from beautiful, exotic woods that are perfect gifts for birthdays, Christmas, or any other special occasion.



A. Materials List:

QUANTITY	LETTER	NAME	SIZE	MATERIAL
1	A	Pen Blank	3/4" x 3/4" x 2"	Hardwood
1	B	Pen Blank	3/4" x 3/4" x 2 1/2"	Hardwood
1	C	Tube	7mm Dia. x 2"	Metal
1	D	Tube	7mm Dia. x 2 1/2"	Metal
1	E	Top Assembly		Metal
1	F	Clip		Metal
1	G	Decorative Ring		Metal
1	H	Tip assembly		Metal
1	I	Ink Cartridge Holder		Metal
1	J	Ink Cartridge		Plastic/Metal

Notes:

1. The above parts (C-J) are purchased as a pen set.
2. Exotic hardwoods are best used for this project because of their beauty, coloring and interesting grain patterns.
3. Wood species that have a closed wood grain work best for this project.
4. Exotic woods can be purchased at your local hardwood dealer.

B. Cutting and Finishing Procedures:

1. Set table saw fence 3/4" from the saw blade and rip the pen blanks (A) and (B).
2. Cut pen blanks (A) and (B) to 2" and 2 1/2" lengths respectively using a [radial arm saw](#) or a power [miter saw](#).
3. Position pen blanks vertically on a [drill press](#) and clamp in position. Drill a 7mm hole through the center of each pen blank.
4. Place a bead of Kwik Bond 3 super glue the length of each tube and then force tubes (C) and (D) into the pen blanks. This can be accomplished by the use of a vice or a bench clamp. Spray the end of each wooden blank with Zip Kicker glue accelerator.
5. Place a mandrel in the lathe headstock. Slip a metal spacer onto the mandrel and then, in turn, slip on pen blank (A), spacer with slip collar, pen blank (B), second spacer, and then screw on the mandrel nut hand tight.
6. Insert the tailstock spindle into the end of the mandrel and tighten the tailstock clamp and the spindle lock.
7. Position the tool rest parallel with the work and approximately 1/4" from any moving parts, and slightly below center. Rotate by hand before turning on the power.
8. Use a gouge to rough cut the pen blanks to round shapes.

1. Use a parting tool to cut the right end of pen blank (A) to proper diameter so that the slip collar will fit onto it. Also use parting tool to cut the left end of pen blank (B) to the diameter of the metal spacer.
2. Use a small flat head tool to taper the left end of pen blank (A) and the right end of pen blank (B) to the diameter of the respective metal spacers.
3. Use a flat head tool to continue cutting the pen blanks (A) and (B) to a diameter slightly larger than the spacer diameters. The pen blank (A) should have a greater diameter than pen blank (B).
4. Use a small skew to round the left end of pen blank (A) and the right end of pen blank (B).
5. Remove the tool rest, turn on the lathe and sand the pen blanks (A) and (B) thoroughly with 120 grit sandpaper. Next repeat the sanding process using 220 grit sandpaper. Finish the sanding process with 400 grit sand paper.
6. Apply Mylands high build friction polish to a rag, and with the lathe running, polish both pen blanks. Apply pressure to the pen blanks with the rag for approximately two minutes or until a high sheen appears.

C. Assembly Procedure:

1. Remove pen blanks (A) and (B) from the lathe.
2. With a vise or bench clamp force the top cap assembly (E) into the left end of the pen blank (A).
3. Unscrew the cap portion of the top cap assembly (E) and position the clip (F) on the top and tightly screw the cap portion back into the top cap assembly.
4. Place a few drops of Kwik Bond 1 quick penetrating super glue onto the right end of pen blank (A) and twist on the decorative ring (G).
5. With a vise or bench clamp force the tip assembly (H) into the right end of pen blank (B).
6. With a vise or bench clamp force the ink cartridge holder (I) into the left end of pen blank (B).
7. Screw the ink cartridge (J) into the ink cartridge holder (I) and check the tip (H) for the proper ink cartridge exposure. The ink cartridge should protrude approximately 1/8" from the tip. If the ink cartridge exposure is not correct, remove the ink cartridge and continue forcing the ink cartridge holder (I) into the pen blank (B) until the correct exposure is achieved.
8. Slip the pen blank assembly (A) onto the pen blank assembly (B). Rotate the top of the pen to expose or retract the pen cartridge.