

## Turning 7mm pens

By Chris Wright

### Introduction:

Turning pens is a good way to practice your turning skills and various finishing techniques. The 7mm pens come in many styles such as the slimline and streamline kits. You can modify the barrel designs to create your own unique version of a pen. In this tutorial you'll notice I am turning a pen which has a larger center however, the techniques are the same regardless of the kit. As with turning any item, remember to wear eye protection at all times.

### Wood blank:

5/8" square x 5 1/2" - This size gives you a few options and more wood to work with

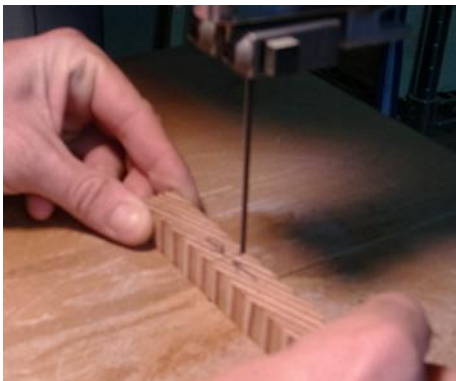
### Tools & materials:

Face Shield  
7mm pen kit  
pen mandrel  
pen bushings  
barrel trimmer

roughing gouge  
spindle gouge or skew chisel  
sandpaper (120-600 grits)  
finishing supplies

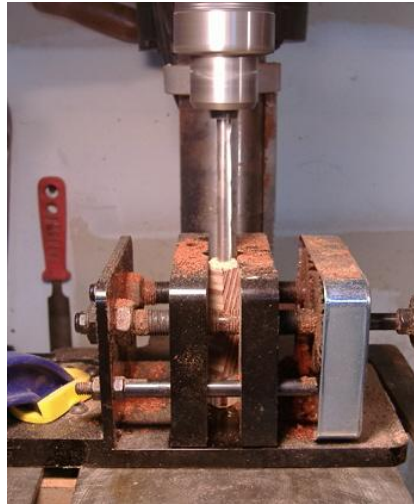
### Process:

Begin by drawing the cut lines on your wood blank. I use the pen tubes to do this as kits may vary slightly. Place the tubes on the blank, one at a time and draw a line where they end.



Using a saw to cut the wood blank, saw the wood to the size required for the tubes. Notice I drew two arrows pointing to the cut line. These arrows will help later when putting the pen on the mandrel the right directions to keep the grain matched.

The next step is to drill the wood with a 7mm drill bit. Use a clamping system or a drill bit vise to hold the wood securely. If possible, clamp the vise or pen clamp to the drill press for safety. If you are drilling by hand, clamp the wood blank to a counter or table while you drill. If you try to hold it and the drill bit goes through the side, you can hurt yourself.



With the wood blanks drilled, it's time to glue in the tubes. Spread some thin or "flexible" CA glue on the pen tube and push it quickly into the wood blank. Make sure it ends up in the blank and not sticking out of the other side. One cheap tool that works great for inserting pen tubes is a pencil. **NOTE:** Other glues with longer drying time may be used. This might be a good break time to demonstrate the next few steps

Let the glue dry and a few minutes and then use a barrel trimmer to square the ends of the wood to the tube. Notice I have the pen blank clamped to the counter for safety.



Now for the turning part! Mount the pen blanks on your pen mandrel. Remember those little arrows we drew? Make sure those are pointing towards each other in the middle. The wood grain should line up, how easy was that? You should have one bushing on each end and one in the middle between the pen blanks.



Set your tool rest as close to the work as possible without hitting it. Spin the wood by hand to make sure it clears. If everything is OK, turn the lathe on. Using a roughing gouge, work the pen blanks down to small cylinders. Leaving the pen blank a bit bigger than the bushings will give you room to make decorative design decisions if you want.

Now with your spindle gouge or skew chisel, turn the blanks to their final size and design. Try not to turn away any material from your bushings or you'll have to get new ones to turn your next pen.



Once you have finished turning the pen, it's time to sand it. Move the tool rest out of the way and sand from the bottom of the pen. Start with 120 grit and work your way up to 600 grit. If you notice deep sanding marks, stop the lathe and sand by hand along the length of the pen. This should get rid of them. Once the marks are gone, finish going through the grits.

When the pen is sanded, apply the finish of your choice to make it nice and shiny. Your mentor may have a few options for you to use. Some suggestions are friction polish or woodturner's wax. Explore each of them to find your personal favorite. On my pen, I used friction polish. To use it, stop the lathe, put a few drops of polish on a paper towel and rub it on the pen. Turn the lathe on and lightly rub again from the bottom to polish the finish to a high shine.



With the pen turned and finished remove it from the mandrel and arrange the parts to be pressed into the pen blanks. A drill press is the easiest way to do this, but if you don't have access to one a hand clamp can be used as well. Press the tip and the back/clip into the body first then press the transmission in. You'll need to test the fit of the transmission and pen refill a time or two to make sure you have them right. Insert the transmission in with the brass end first. Usually pressing the transmission in to the line above the brass end will be just about right.



With the parts pressed together, insert the pen refill and then press the two halves of the body together. Twist them until the grain lines up and you're finished!

