

# william wood-write

## Teacher pen instructions



### Needed:

Mandrel A, bushing 1A, drill 7 mm, wood size 5/8" x 5/8"

### Preparing the blanks

1. Cut three blanks  $\frac{3}{4}$ " x  $\frac{3}{4}$ ", each slightly longer than the three provided brass tubes. One blank is approximately  $2 \frac{3}{16}$ " long (pen centre), the other two approximately  $\frac{13}{16}$ " long (pen ends).
2. Drill each blank lengthwise with the 7 mm drill bit.
3. Scuff the brass tubes with sandpaper to clean off the oxidation and give the glue a better adhesion surface.
4. Plug the ends of the tubes with a material of your choice – we recommend baseplate wax – to keep the glue from getting into the tube. Just push the ends of the tubes into a thin section of the material to form a plug. This is important: glue inside the tubes is a common cause of kit failure.
5. Prepare your glue. We recommend two part epoxy glue. Wax or baking paper or even a Post-it notepad all make excellent mixing surfaces.
6. Roll one of the tubes in the epoxy. Insert the tube with a twisting motion until it is almost entirely inside the blank. Then use a dowel or small stick to push it until the tube is equidistant between both ends of the blank. Repeat with the other tube.
7. Set aside until the epoxy has had time to reach its maximum strength.
8. When the glue has cured, use a hobby knife to remove the plugs from the ends.
9. Using a barrel trimmer of the proper size, square off the ends of the blanks until you can see bright brass tube. **STOP** at this point. This can also be done with the proper jig and a disk sander. *Not having the proper tube length is another common cause of pen failure.*

### Turning the blanks

1. The blanks for this pen can be turned with three bushings but this requires mounting the two smaller blanks and turning them to size before mounting and turning the longer blank.
2. Place a bushing on the mandrel, followed by one of the short blanks, a second bushing, a second short blank and a third bushing
3. Tighten the tailstock before tightening the blanks on the mandrel. This will centre the mandrel first. Then tighten the nut that holds the blanks.
4. Turn the blanks to the desired contour making sure that the area next to the bushing is turned to the size of the adjacent bushing.
5. Sand to 400 grit. If a higher polish finish is desired, continue sanding with Micro Mesh through 12,000 grit. Apply the finish of your choice and polish.
6. Remove the blanks from the mandrel.
7. Place a bushing on the mandrel, followed by the longer blank and another bushing. Repeat the above steps then remove the longer blank from the mandrel.

## **Assembling the pen**

1. Press one of the nibs into either end of one of the shorter barrels.
2. Press one of the twist mechanisms (threaded end out) into the end opposite the nib that you installed in the previous step to the small indentation line.
3. To ensure correct refill tip extension, the twist mechanism must be pressed into the barrel slightly past the beginning of the small indentation line. When doing this, be sure that the twist mechanism is not seated too deeply or the refill tip will not retract fully into the pen body.
4. Insert a refill into one of the refill guides, insert the refill into the nib/barrel/twist mechanism assembly and screw the refill guide into the threaded twist mechanism.
5. Repeat the first three steps to complete the opposite end of the pen.
6. Slide a centre ring over each of the twist mechanisms and push them into the center barrel.