

# william wood-write

## Flat Top American pen instructions



**Needed:**  
Mandrel B, bushing  
1B, drill 8 mm,  
wood size 3/4" x 3/4"

### Preparing the blanks

1. Cut the blanks the length of each brass tube, giving a little extra length for the facing of the blank after the tubes have been glued in. Drill each blank length-wise with the 8 mm drill bit.
2. Scuff the brass tubes with sandpaper to clean off the oxidation and give the glue a better adhesion surface.
3. Plug the ends of the tubes with a material of your choice – we recommend base plate 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 pen failure.
4. Prepare your glue. We recommend two part epoxy glue – use a fast drying type, one hour or less. Be sure to mix it thoroughly. Wax or baking paper or even a Post-it notepad all make excellent mixing surfaces. You can also use thick flexible CA glue, but you have to work quickly to get the tube all the way into the blank before the glue dries.
5. Roll one of the tubes in the epoxy.
6. 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.*

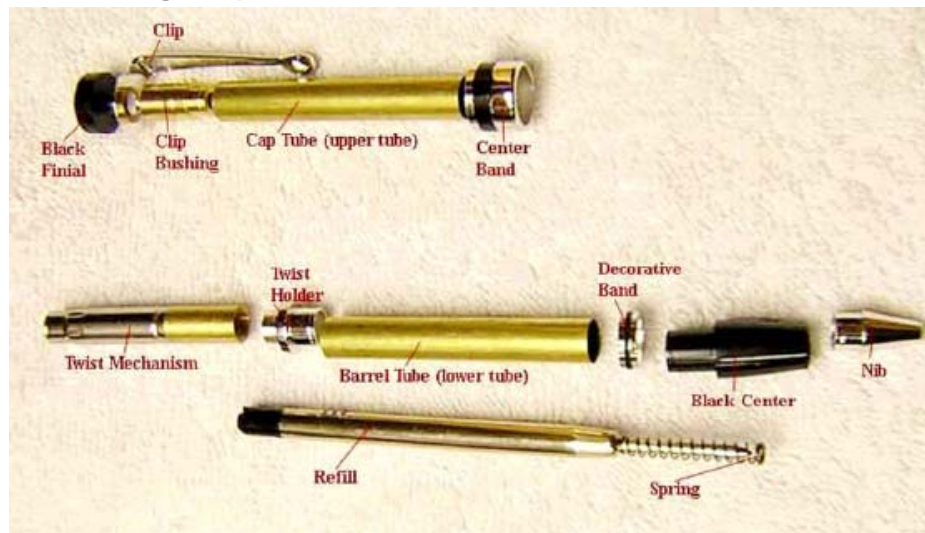
### Turning the blanks



1. Assemble the blanks on the mandrel following the image above.
2. Add spacers as appropriate, followed by the thumb nut.

3. Tighten the tailstock before tightening the blanks on the mandrel. Do not over-tighten as this may damage the mandrel and cause your pen to come out oval.
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. Be sure that the lower barrel is not any higher than the bushing on the twist holder end. The centre bands needs to turn freely over this portion of the lower barrel.
5. After turning the blank, sand the surface in progressive steps until you get to 400 or 500 grit.
6. Sand with Micro Mesh through 12,000 grit for a smooth finish. Use finish of your choice.
7. Measure 1 13/16" from the cap clip end and mark. With a sharp parting tool, remove the wood all the way to the brass tube and all the way to the end of the tube, on the cap center band end. This will receive the center band of your pen. Your cap blank should then have 1 13/16" of finished wood and the rest should be bare brass tube.
8. Remove the blanks from the mandrel.

### Assembling the parts



1. If the nib assembly is not already assembled, push the nib into the black center.
2. Slide on the decorative ring and press this into the barrel tip end of the appropriate blank.
3. Press the twist holder into the other end of this blank.
4. Press the center band onto the exposed tube of the other blank.
5. Do a twist test as follows:
  - Using a rolled up piece of rough sand paper or a file to ream out the inside of the tube (centre band end). Be careful not to scratch the gold centre band.
  - Insert the brass end of the twist mechanism (in the centre band end), and twist it to see it to see if it turns freely. If it doesn't turn freely, more sanding or filing is required.
  - Once you're satisfied that the twist mechanism turns freely, continue to the next step.
6. Press the brass clip bushing into the unthreaded end of the twist mechanism.
7. Press the twist assembly, with the clip bushing attached, into the cap clip end of the cap blank. Press it flush with the end of the blank.
8. Put the black finial threads through the hole in the clip and screw into the brass clip bushing pressed in the blank in step #6.
9. Place the refill in the barrel with the spring attached to the tip.
10. Slide the cap over the refill and screw this cap assembly into place.
11. Check to see that the pen operates properly.
10. Admire your work.