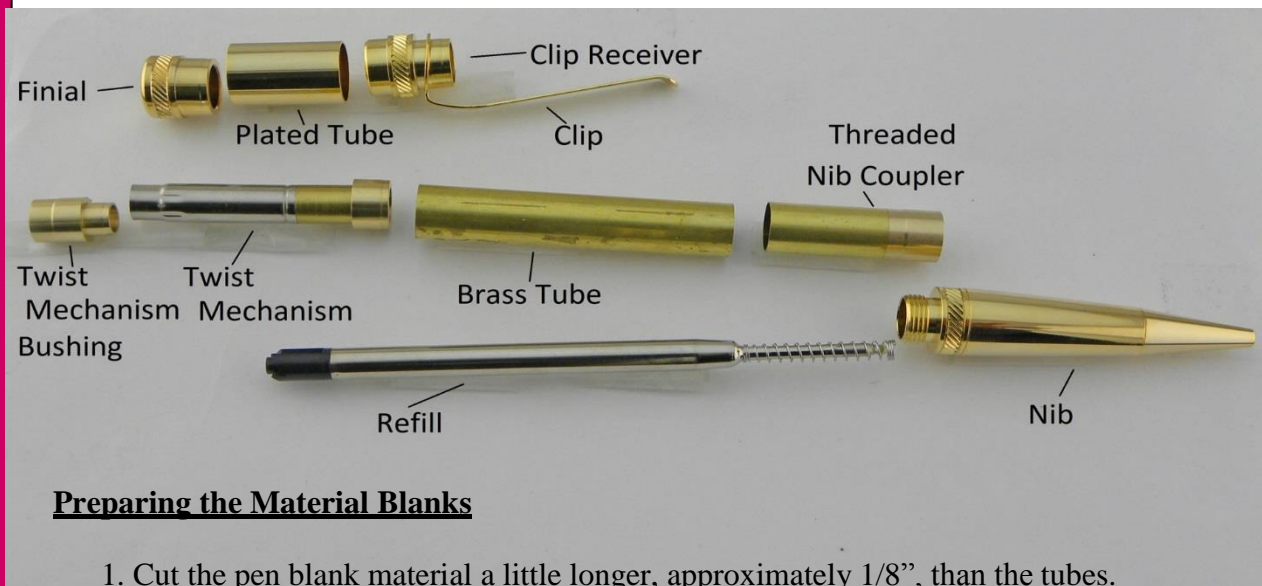


Berea Hardwoods Sierra Diverse Ballpoint Pen (Berea #187502/B-xxx-1)



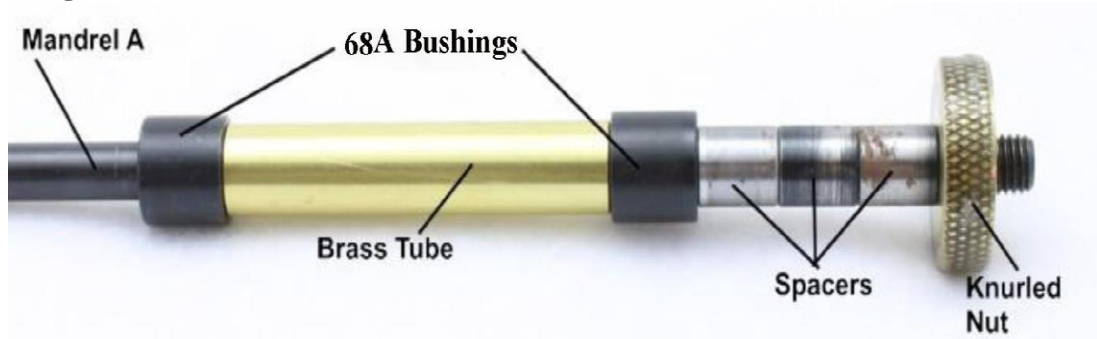
Needed: Mandrel-A
 Bushings-68A Drill-
 13/32
 Wood Size- $\frac{3}{4}$ " x $\frac{3}{4}$ "



Preparing the Material Blanks

1. Cut the pen blank material a little longer, approximately $\frac{1}{8}$ ", than the tubes.
2. Drill pen blank through the center with a 13/32 bit, (NM1332)
3. Sand the brass tubes with sandpaper to clean off the oxidation and roughen the tube so that the glue will have a better adhesion surface.
4. Plug the ends of the tubes with base wax (BG138). This will form a plug to keep the glue from getting into the tube.
5. Use a two-part epoxy glue (BG 118) or a medium CA glue (BG052) and roll the tube in the glue. Insert the tube with a twisting motion into one end the pen blank. Remove the tube and insert it into the other end of the blank using a twisting motion and set the tube equidistant between both ends of the blank.
6. Using a barrel trimmer or a squaring jig (psi 156) square the ends of the blanks until you just see the brass tube. **DO NOT** take off too much of the brass tube or your pens proper operation is dependent on having the correct length tube!

Turning the Material Blanks



1. Assemble the blanks on the mandrel using the 68A bushings, if you are using a mandrel saver (psi 132) you will not need extra bushings to take up space on your mandrel.
2. 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.
3. Sand as you normally do and apply a finish of your choice. I use a CA glue finish for a spectacular shine. (BG 161).
4. Remove your blank for your mandrel and assembly as shown below.

Assemble the Pen (see the parts diagram on the first page)

1. Press the Twist Mechanism Bushing into the Finial.
2. Press the Finial into Plated Tube.
3. Slide Clip Receiver into other end of Plated Tube. This will NOT be a press fit.
4. Slide Clip onto Clip Receiver and set this aside.
5. Press the Threaded Nib Coupler into one end of pen blank till flush-Threads will face outward.
6. Press Twist Mechanism into other end of pen blank until it stops-silver portion will face out. **BE CAREFUL NOT TO FORCE IT OR PRESS TOO HARD!**
7. Press the Cap Assembly with clip onto the Twist Mechanism **BE CAREFUL NOT TO FORCE IT OR PRESS TOO HARD!**
8. Slide refill into other end of pen blank.
9. Slide the nib over refill and thread onto pen blank.
10. Please Note: To Change the refill, simply screw off the nib. **Do Not Pull** as you would with any other Sierra!

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