# **Slimline pencil**

#### Needed:

Mandrel A, drill 7 mm, bushing 1A

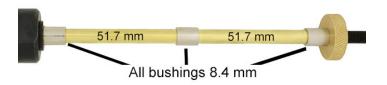
### Preparing the blanks

- Cut the blanks 1/4" longer than each brass tube so you can square off the blanks after the tubes have been glued in.
- Drill lengthwise through each blank using a 7 mm drill bit.
- Scuff the brass tubes with sand paper to clean off oxidation and give the glue a better adhesion surface.
- 4. 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. Push the tube ends 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.
- Roll one of the tubes in glue and insert it into the blank with a twisting motion until it is equidistant between both ends of the blank. Repeat with the other tube.
- 6. Set aside until the glue has had time to reach its maximum strength.
- When the glue has cured, use a hobby knife to remove the plugs from the ends.



8. 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. *Improper tube length is another common cause of pen failure.* 

## **Turning the blanks**



- Assemble the bushings and barrels onto the mandrel referring to the image above.
- 2. Tighten the tailstock before tightening the blanks on the mandrel. Then tighten the nut that holds the blanks. Do not over tighten or you may bend your mandrel, which will cause your pens to come out oval.
- 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.
- Sand to 400 or 600 grit. For a smooth finish, continue sanding with Micro Mesh through to 12,000 grit.

**5.** Apply a finish of your choice and remove the blanks from the mandrel.

#### Assembling the pen

- **1.** Remove the writing tip and silver insert.
- 2. Press the silver insert, stepped end first, into the end of the lower tube.
- **3.** Slide the clip onto the cap.
- **4.** Press the cap/clip assembly into the end of the top tube.
- Press the coupler into the opposite end of the top tube.
- 6. Press the remaining barrel onto the coupler. Apply only enough pressure to properly seat the parts. Excessive force will cause the pencil to buckle in the middle.

- Slide the pencil transmission through the hole in the end of the cap until it protrudes out of the opposite end.
- 8. Rotate the transmission back and forth slightly to make sure it properly seats in the silver insert. Screw the tip onto the threaded end of the transmission until tight.
- **9.** Push the plunger down and release it to advance the lead.

