

william wood-write

Bowtie pen instructions



Needed:

Mandrel A; drill 10 mm; bushing 22A; wood size 3/4" x 3/4"

Preparing the blanks

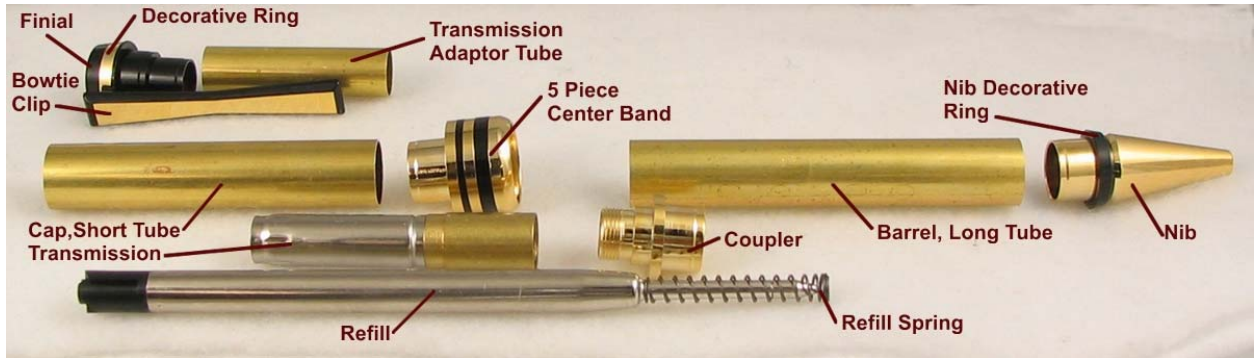
1. Cut the blanks approximately 1/4" longer than the length of each brass tube.
2. Drill each blank lengthwise through the center with the 10 mm drill bit.
3. Polish the brass tubes with sandpaper to clean off the oxidation and give the glue a better adhesion surface.
4. Plug the ends of the tubes with a material of your choice – we recommend 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 very important: glue inside the tubes is a common cause of kit failure.*
5. 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.
6. Roll one of the tubes in the epoxy.
7. 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.
8. Set aside until the epoxy has had time to reach its maximum strength.
9. When the glue has cured, use a hobby knife to remove the plugs from the ends. 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 as follows and as per the diagram: finial bushing (0.4720), cap/short tube, center band bushing, coupler bushing, barrel/long tube, nib bushing. You can also match bushings to the parts to get them in the right spot.
2. Lightly tighten the mandrel and secure. Do not over-tighten or apply excessive force or you risk bending the mandrel, which will cause your pen to come out oval. A spacer may be installed to give you more room between the thumbnut and the last bushing.
3. Turn the pen blanks to the desired shape using the bushings as a sizing guide.
4. After turning the blanks, sand the surface in progressive steps until you get to 400 or 500 grit.
5. For a smooth finish, sand with Micro Mesh to 12,000 grit and use a finish of your choice.
6. Remove the blanks from the mandrel.

Assembling the pen



Another common cause of pen failure is the misalignment of parts when pressing them into place. We recommend using a pen press or small arbor press, but you can also use a good “C” clamp and much care. Be sure that parts are straight and in line with the blanks when pressing in the various parts – if not, you’ll end up with a poor-fitting pen or one that doesn’t work at all.

1. Assemble the nib assembly. Slide the black decorative ring onto the nib adapter. Be sure the taper on the ring matches the taper on the nib. Press the nib assembly into the small end of the lower barrel (long tube).
2. Press the twist holder into the other end of this tube.
3. Insert the refill. Make sure that the spring is in place on the tip end of the refill.
4. Screw the twist mechanism onto the twist holder. Check for proper operation.
5. Slide the decorative rings onto the black center band using the picture as a guide to orient them correctly.
6. Press this assembly into the cap blank (short tube) in the end with the largest diameter.
7. Press the transmission adaptor tube onto the finial.
8. Assemble the clip parts over the tube and finial assembly, again using the picture as a reference.
9. Press the finial assembly into the smaller end of the cap barrel orienting the clip to your preference.
10. Slide the cap onto the twist mechanism.

To change the refill, simply screw off the cap. Do not pull.