

## Budget Cigar pen



### Needed:

Mandrel A; drill 10 mm; bushing 106A

### Preparing the blanks

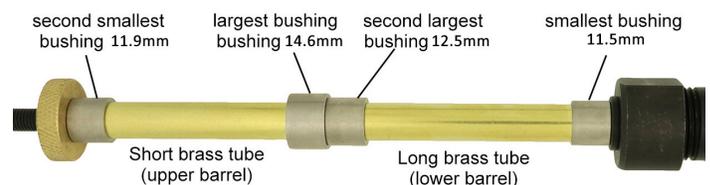
1. Cut the blanks approximately  $\frac{1}{4}$ " longer than the length of each brass tube.
2. Drill each blank lengthwise through the center with the 10 mm drill bit.
3. Scuff the brass tubes with sandpaper to clean off the oxidation and give the glue a better adhesion surface.
4. Plug the ends of the tubes with a material of your choice – we recommend 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. Roll one of the tubes in the glue. Insert the tube 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.
7. When the glue has cured, use a hobby knife to remove the plugs from the ends.

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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. *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 diagram above
2. Lightly tighten the mandrel and secure. 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 600 grit. Use a finish of your choice. For a smooth finish, sand with Micro Mesh to 12,000 grit before applying the finish.
5. Remove the blanks from the mandrel.

## Assembling the pen

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1. Press the tip into the smaller end of the long tube.
2. Press the coupler into the opposite end of that same tube. Use a press block to prevent damaging the threads (see diagram below).
3. Insert the ink refill and spring into the long tube.
4. Screw the twist mechanism onto the coupler.
5. Press the clip/cap into the smaller end of the short tube.
6. Place the trim ring onto the trim cap and press this assembly into the opposite end of the short tube.
7. Press the short tube onto the twist mechanism to join the two halves.

### To make a press block:

Drill a 5/16" hole to a depth of 3/8" into a scrap piece of wood. Place the threaded coupler into the press block when you're pressing the threaded coupler into the turned blank. This will keep the threads from being crushed.

