

## Perfect Fit pen



### Needed:

Mandrel A, drills 8 mm and 11/32, bushing 47A

### Preparing the blanks

1. Cut the blanks 1/4" longer than each brass tube so you can square off the blanks after the tubes have been glued in.
2. Drill the upper blank – the shorter one – with the 11/32" drill bit. This will be the larger bit.
3. Drill the lower blank – the longer one – with the 8 mm drill bit. This will be the smaller bit.
4. Scuff the brass tubes with sand paper to give the glue a better adhesion surface.
5. 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 in the tubes is a major cause of kit failure.*
6. Roll one of the tubes in glue. Insert the tube with a twisting motion into the blank. Repeat with the other tube and blank.
7. Set aside until the glue has had time to

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reach its maximum strength.

8. When the glue has cured, use a hobby knife to remove the plugs from the ends.
9. Using a proper jig and a disk sander, square off the ends of the blanks until you can see bright brass tube. Do not shorten the tubes.

### Turning the blanks



1. Assemble the bushings and barrels onto the mandrel referring to the image above.
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. Stop the lathe and measure 1 7/8" from the cap clip end and mark. With a sharp parting tool, remove all the material down to the brass tube from the mark to the centre band end of the tube. This is where the centre band of your pen will fit.
4. Remove the nut, bushing, lower barrel and

upper barrel bushing from the mandrel. Slide the centre band bushing over the tenon on the upper barrel. Put the upper barrel bushing back on the mandrel, followed by the lower barrel, nib end bushing and nut. Bring up the tailstock and tighten.

5. Turn until the upper barrel at the centre band is nearly level with the centre band bushing.
6. Sand in progressive steps until you reach 400 or 600 grit and the upper barrel at the centre band end is level with the centre band bushing.
7. For a high gloss finish, continue sanding with Micro Mesh through 12,000 grit.
8. Apply the finish of your choice and polish, and then remove the blanks from the mandrel.

## Assembling the pen

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1. Press the nib into the smaller end of the longest blank. If the fit is loose, use a very small amount of medium or thick CA glue.
2. Press the twist holder into the other end.
3. Make sure the spring is in place on the refill and place the refill into the barrel.
4. Place the twist mechanism over the refill and screw into place.
5. Check the operation of the mechanism. Lay this piece aside.
6. Press the three piece centre band onto the exposed brass tube of the short blank.
7. Press the brass insert into the other end of the brass tube until it is flush.
8. Place the finial threads through the clip and screw into the brass insert.
9. Slide the upper barrel over the twist mechanism.
10. Check for correct operation again.

