

# Instructions

## Sierra/Wall Street Twist Pen Kit

### Tools Required

- Pen Mandrel
- Sierra or Wall Street Bushing Set
- 10.7mm Drill Bit
- 9.15mm Barrel Trimmer (Optional)

### Cutting and drilling the blank

1. Cut the blank 5mm longer than the brass tube.
2. Drill a hole through the centre of the blank.  
Either use a drill press with the blank secured in a vice or clamp or use your lathe with a drill bit mounted into the tailstock chuck.  
Drill at high speed penetrating about 10 mm to 20mm at a time and then clearing the swarf to prevent overheating of the drill bit.  
To prevent cracking or chipping of the wood when the drill bit exits the other end of the blank, stop drilling 3mm before the bit drill reaches the end of the blank and then trim the end of the blank using a saw to expose the hole.

### Glue the brass tube into the blank

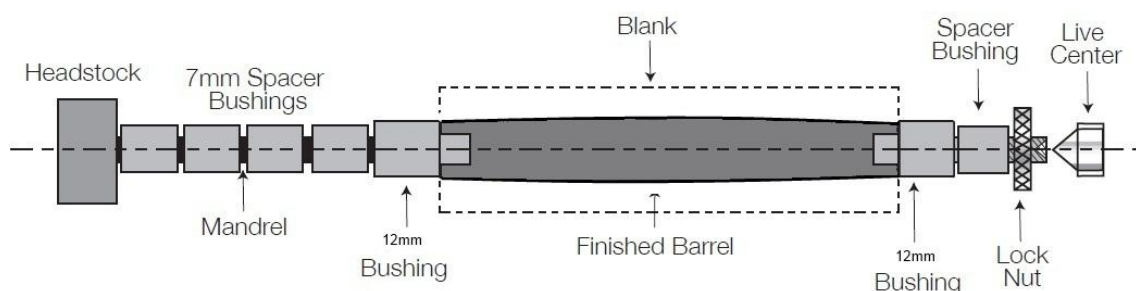
1. Using 200 grit sandpaper, lightly scuff the exterior of the brass tube to prepare it for gluing.
2. Apply a thin layer of superglue or epoxy to the tube and insert the tube into the blank. Rotate the tube as you push it into the blank to spread the glue evenly – this must be done fairly quickly to avoid getting the barrel stuck before it's inside the blank.
3. Position the tube inside the blank so that the wood extends beyond the tube on both ends to allow for trimming.

### Trimming the blank

Square the ends of the wood blank with the tube using either a barrel trimmer or disc sander. Alternatively, fasten the blank into the chuck and trim the barrel carefully using a parting tool.

### Mandrel setup and turning

1. Assemble the bushings and the blank onto the mandrel as shown in the diagram below.
2. Ensure that the mandrel is tight on your lathe using your live centre in the dimpled end of the mandrel. Do not over-tighten the tailstock or mandrel nut as this may cause the mandrel to flex resulting in off-centre barrels.
3. An alternative is to use a mandrel saver tool to tighten the blank into the lathe without putting strain on the mandrel shaft.
4. Turn the blank to the desired shape leaving the blank slightly larger than the bushings.
5. After turning, sand the blank using progressively finer sandpaper until the desired finish is reached.



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### General assembly points

Use a vice or clamp with wood or plastic jaws to prevent damaging the parts during assembly.

### Pen assembly

Layout the parts as shown.

1. Press the finial/clip assembly into one end of your finished blank.
2. Insert the refill into the nib assembly making sure that the spring is in place.
3. Screw the twist mechanism over the refill and into the nib assembly.
4. Slide the blank/finial/clip assembly over the twist mechanism to complete the pen.
5. It should be noted that this is a single twist pen.

