

# Sierra Twist Pen Kit

## INSTRUCTIONS



### REQUIRED ACCESSORIES

- 7 mm pen mandrel
- Sierra bushing set BUSH-SIE
- $2\frac{7}{64}$ " drill bit PK-2764
- Barrel trimmer
- 2 part epoxy glue or CA super glue (cyanoacrylate)
- Wood or acrylic blank, minimum size  $\frac{5}{8}$ " x 2  $\frac{1}{2}$ "
- Sanding and finishing supplies

Fig. 1

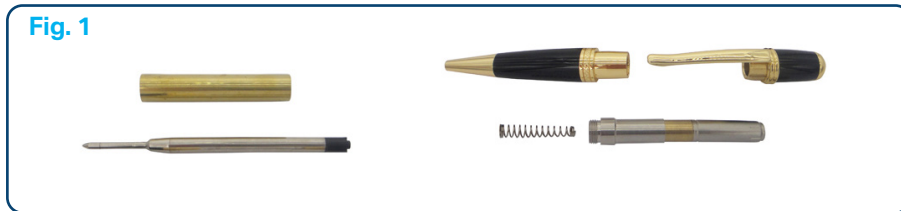
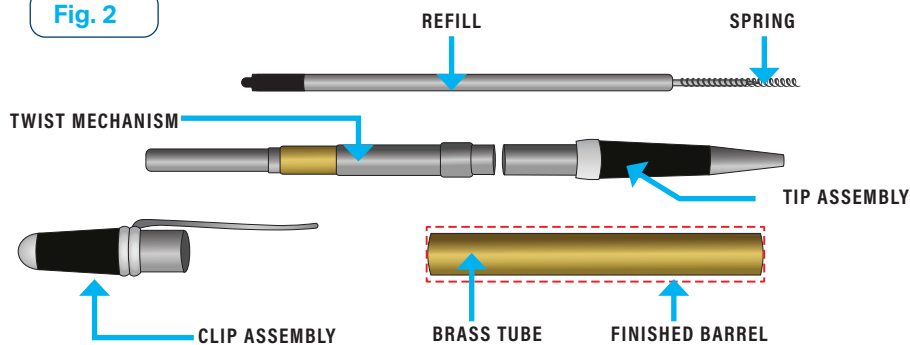


Fig. 2



## A. PREPARING AND TURNING THE BLANK

### 1. Cutting the wood or acrylic blank

Cut one blank to the length of the brass tube plus approximately 2 mm. (Approx. 63.5 + 2 mm). Grain should run lengthwise.

### 2. Drilling the blank

Drill a  $2\frac{7}{64}$ " diameter centered hole lengthwise through the blank. Excessive pressure will cause the drill bit to wander and/or split the blank. Slow the feed rate and back the bit out repeatedly for chip removal.

### 3. Gluing the brass tube into the blank

Use epoxy or a gap filling cyanoacrylate. Spread the glue on the tube. Insert into the blank with a twisting motion to spread the glue evenly inside. Centre the tube lengthwise in the blank. Allow the glue to dry. Remove all glue residue from the tube.

### 4. Squaring the ends of the blank

Use a barrel trimmer to turn away the excess wood to finish flush with the ends of the brass tube.

carbatec®

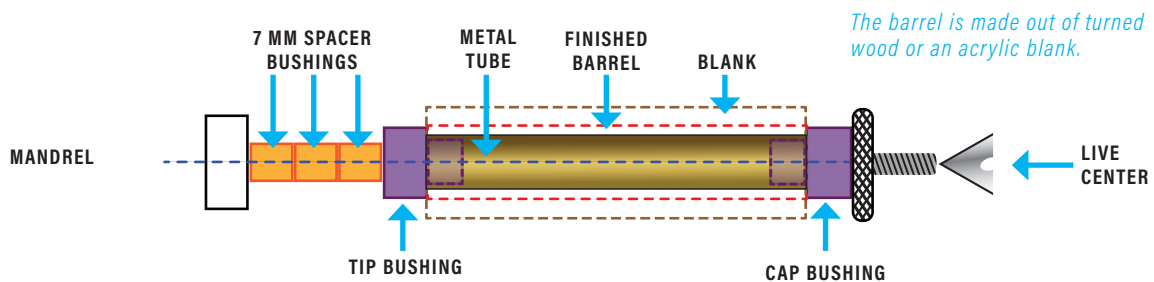


Fig. 3

### 5. Turning the blanks

- Mount the bushings and the blank on the mandrel as shown in figure 3.
- Thread on the knurled nut and hand tighten to hold all the components in place.
- Slide the tailstock up snugly against the mandrel shaft inserting the live center point into the mandrel dimple, lock in place.
- Hand tighten the quill adjustment to firm up the mandrel. (DO NOT overtighten, it could damage or bend the mandrel).
- Using sharp tools, turn the blank down close to the bushing diameter. Turn the blanks down to a diameter slightly larger than the bushings. As you approach the final size be careful since the wood is only about 1 mm thick above the brass tube.

### 6. Sanding the blanks

As with any sanding, progress through a range of lower to higher grits of sand paper. Sand with blank spinning. Progress from 150 through to 600 grit paper.

### 7. Finishing

Try a finish of your choice but be careful with finishes such as polyurethane as there is a risk of the pen and mandrel parts sticking together. Some finishes can be applied with a rag whilst turning the barrel on the lathe.

## B. PEN ASSEMBLY

1. Line up finished parts according to figure 2.
2. Slide the spring onto the refill and place inside the tip assembly. Screw the pen mechanism into the tip assembly.
3. Press the clip assembly into the upper end of the barrel.
4. Push the pen tube with cap assembly onto completed lower part.
5. The pen is now ready to operate. Twist clockwise to open.