

# Rifle Bolt Pen Kit INSTRUCTIONS



## REQUIRED ACCESSORIES

- 7 mm pen mandrel bush
- 2 piece bushing set, BUSH-8000
- $\frac{3}{8}$ " drill bit, PK-38BP
- Universal barrel trimmer
- 2 part epoxy glue or CA super glue (cyanoacrylate)
- Wood or acrylic blank, minimum size  $\frac{5}{8}$ " x 2  $\frac{1}{4}$ "
- Sanding and finishing supplies



Fig. 1

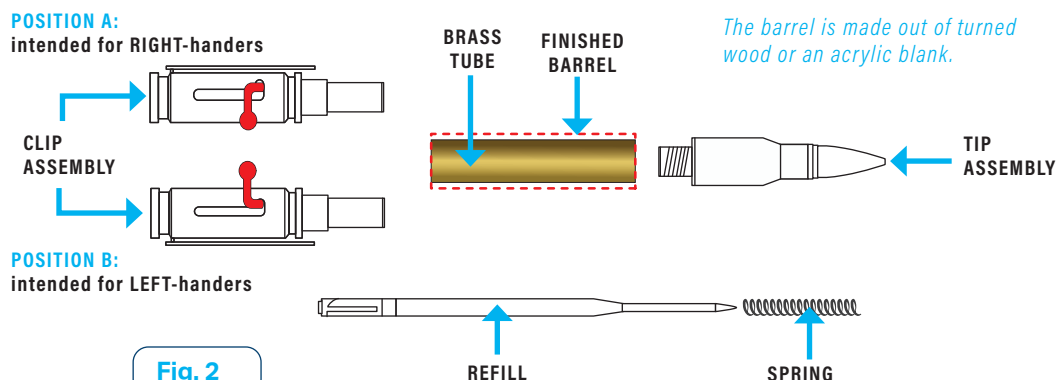


Fig. 2

## A. PREPARING AND TURNING THE BLANK

### 1. Cutting the wood or acrylic blank

Cut one blanks to the length of the metal tube plus approximately 2 mm. Grain should run lengthwise.

### 2. Drilling the blank

Drill a  $\frac{3}{8}$ " 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

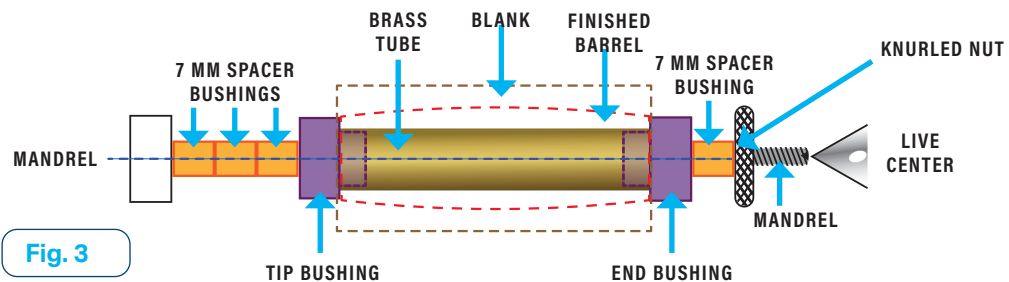
Use epoxy or a gap filling cyanoacrylate. Spread the glue on the tube. Insert into the blank with a twisting motion to spread the glue evenly inside. Centre the tube lengthwise in the blank. Allow the glue to dry. Remove all glue residue from the tube.

### 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.

**5. Turning the blanks**

- Mount the bushings and the blanks on the mandrel as shown in figure 3.
- Thread on the knurled nut and hand tighten to hold all 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.



**Fig. 3**

**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.

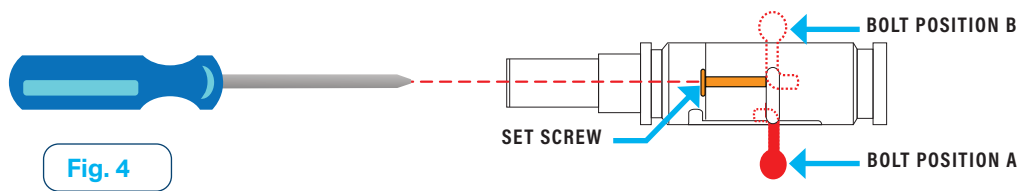
**7. Finishing**

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

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**B. PEN ASSEMBLY**

The kit is factory set to position A, which should suit right-handers. Position B is intended for left-handers. To reverse the bolt position, loosen the set screw as shown in figure 4.



**Fig. 4**

1. Unscrew the end cap and rotate the clip if necessary.
2. Re-attach the cap.
3. Lay out the kit parts and finished barrel as shown in figure 2.
4. Press the tip assembly into the end of the barrel.
5. Press the clip assembly into the opposite end of the barrel.
6. Unscrew the tip and insert the refill into the opening at the tip assembly.
7. Insert the spring over the refill and replace the tip.
8. Lock or unlock the bolt to extend or retract the refill tip.

*NOTE: Please do not press the front end of this kit with the tip removed. If you do so the parts will not assemble properly and you will void our warranty.*