

### Kit Features

- Mini-style Ink refills and 7mm Pencil refill
- Overall length: 5-1/2"

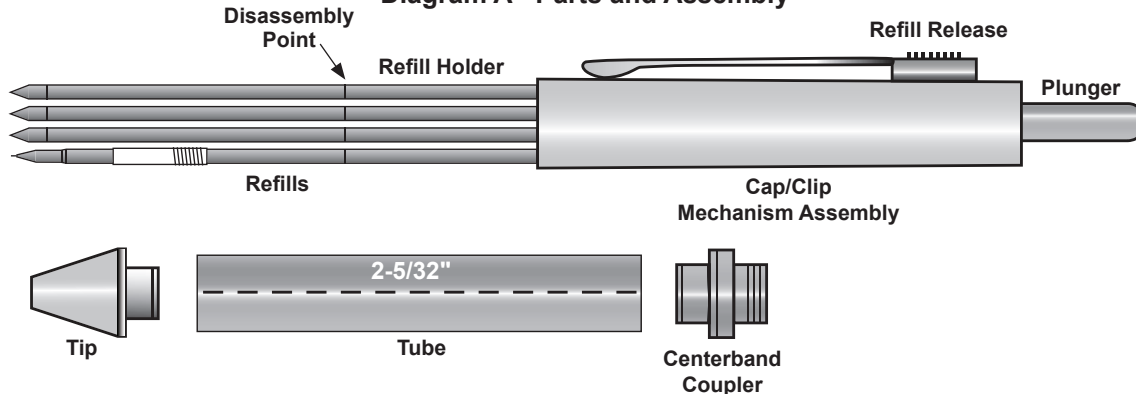
### Pen/Pencil Refills

- Mini-style refills (RE-MINI, RE-MINIB, RE-MINIR, RE-MINIG)
- Pencil refill (RE-PCL7MM)

### Required Accessories & Materials

- 7mm mandrel
- 2-pc. bushing set (PKCALYPBU)
- 10mm drill bit (DB10MM or DB10MMCT)
- Universal trimming kit (BTRIMKIT9)
- Glue (We recommend the thick "gel" CA glue—GTHICK2)
- Sanding and finishing supplies

### Diagram A - Parts and Assembly



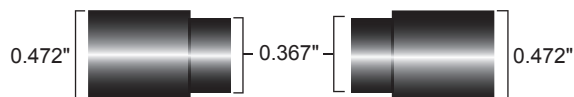
### BLANK PREPARATION

The 4-Way Tech Pen/Pencil has a single tube measuring 2-5/32". **Cut** your blank approximately 1/16" longer than the tube to allow for squaring with the barrel trimmer. Use a medium drill speed to **drill** the blank. Raise the bit from the blank every 1/4" to 1/2" to allow the chips to clear from the flutes of the drill bit. Don't force the drill bit; use an even pressure and let the bit do the work. After drilling the blank, **sand** the exterior of the brass tube to roughen its surface and use CA **glue** to glue the tube inside the blank. Sand or barrel trim to **square** the ends of the blank.

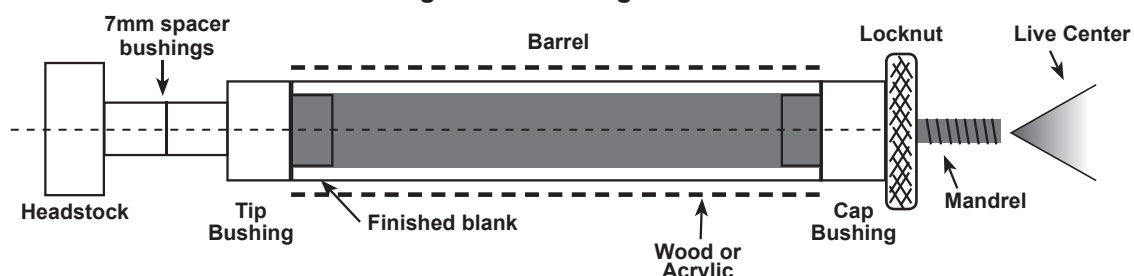
### TURNING THE PEN

**Set up** the mandrel as shown in Diagram C. The pen's upper and lower bushings both have an outside diameter of .472" (see Diagram B). **Turn** the pen blank to the bushing diameter at the ends. **Sand** with abrasives and **finish** with your choice of polish.

### Diagram B - Bushings



### Diagram C - Turning the Pen



### ASSEMBLY

(Line up finished parts according to Diagram A)  
*To avoid damage to components when assembling, use a vise with covered jaws or one of WoodTurningz' pen presses.*

1. Slide Coupler over refills and screw into the Cap/Clip Mechanism Assembly
2. Press Tip into the lower end of the barrel and press the upper end into the coupler.
3. The pen is now ready to operate. When Pen is laying horizontally, rotate to the preferred pencil or ink color. Press plunger and that will activate that refill.

### Refill Replacement

1. Refills remove from the Refill Holder at the Disassembly point.
2. Insert Pencil lead at the open end of the pencil mechanism. Reinstall into the Refill Holder. Use Plunger multiple times to push lead to desired length.