

"Slimline" Pen & Pencil Kit Assembly Instructions

KIT FEATURES

- Both products are designed to match as a set.
- Simplified construction, uses same tube lengths for both kits. (2-1/32" long).
- Pen Features a New Locking Mechanism.
- Pencil Features a New Trouble Free 0.7mm Lead Mechanism
- A Variety of Clip and Band Styles are Available (see *PSI catalog*).
- Overall Length: Pen= 5-1/8", Pencil= 5-5/8"

Step 1 - Cut Wood Blanks

From 1/2" to 5/8" square stock, cut blanks to the length of the tube plus 1/16". Grain should run lengthwise.

Step 2 - Drill The Wood Blanks

Drill a 7mm centered hole lengthwise through each 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.

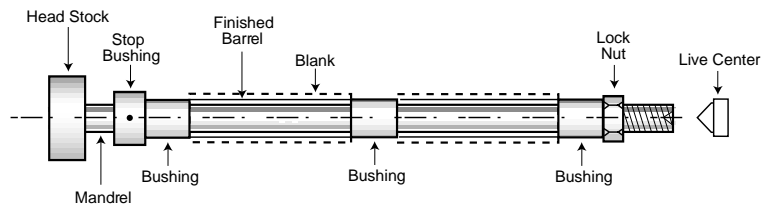
Step 3 - Glue The Tubes Into The Blanks

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. Center each tube lengthwise in the blank. Allow it to dry.

Step 4 - Square The Ends

With a 7mm barrel trimmer #PK-TRIM or other sanding device, square the ends of the blanks 90 degrees flush to the ends of the brass tubes.

Diagram A - Turning The Blanks



Step 5 - Turning The Blanks

Place the stop bushing onto the mandrel hand tight. Next, place one of the other bushings onto the mandrel. Next, slide on either blank, then another bushing. Follow with the second blank then the last bushing. Thread on the lock nut hand tight. Bring the tail stock snug with the mandrel (do not over tighten, it could damage the mandrel) slide the stop bushing toward the blank. Adjust to remove the space then tighten set screw and lock nut.

REQUIRED ACCESSORIES

- 7mm Long Mandrel.
- 3 Piece Bushing Set #PKM-BUSH3.
- 7mm Drill Bit #PK-7MM.
- 7mm Barrel Trimmer #PK-TRIM (optional)
- 2 Part Epoxy Glue or Insta-Cure (cyanoacrylate).

Turn the blanks down to a diameter slightly larger than the bushings (about 11/32" O.D.). As you approach the final size be careful since the wood is only about 1/32" thick.

Step 6 - Sand

As with any sanding, progress through a range of grits. The type of wood used and the quality of the beginning surface will dictate your selection:

- 80-100 grit if a rough surface or additional shaping is needed (overly thick)
- 120-150 grit if fairly smooth and straight
- 220-240 for final finish with most domestic woods
- 320-400 especially on dense or oily exotic woods
Scotch Brite® is helpful and doesn't tend to scratch.

Sand with blank spinning. Finally sand with the grain (lathe off). For initial shaping, stick some sandpaper on a board 2" wide to remove any hills or valleys. The center ring is 21/64" in dia. The final size for a flush finish is between 5/16" & 11/32". For a little heavier look, just form a little thicker barrel.

Step 7 - Finish

Try a finish of your choice but be careful if brushing on a poly, etc. You can stick the tube, bushings, and mandrel together. PSI Liquid Friction Polish #PKFRICT1 or #PKFRICT2 works well on most woods. Shake before using. Apply with a rag or paper towel to the spinning barrel. Apply two coats. You could also use Hut Perfect Pen Polish #PK-PF1 or #PK-PF2.

Step 8 - Touch Up

With tubes off mandrel, lay them end to end to decide which sets will look best when assembled. Remember, they will be 5/32" apart (due to center ring) so minor differences won't show. If necessary, a light sanding of the ends on a block will square the ends and improve the fit during assembly. Then repeat step 7.

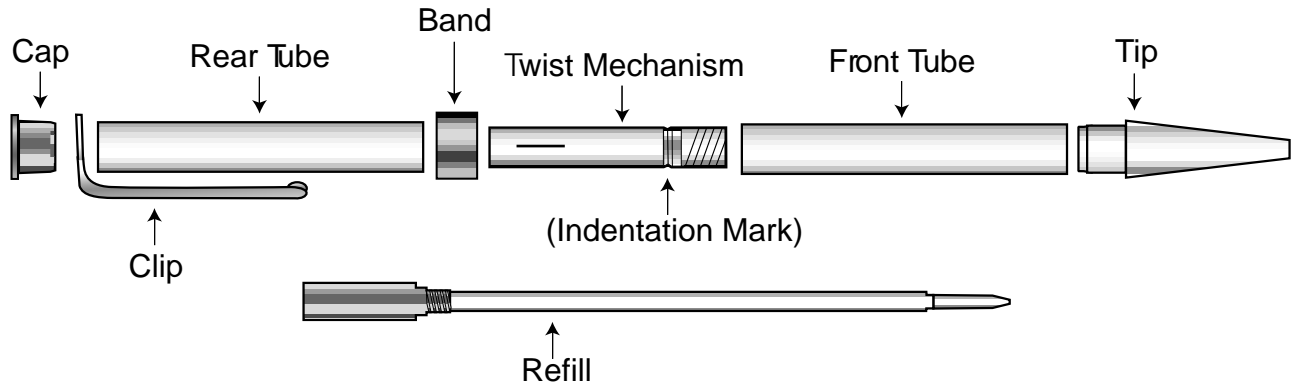
Assembly instructions are on other side.

General Assembly Hints:

- Use a clamp or vise to press parts together.
- Front and rear tubes are identical on both pen and pencil kits and may be mixed and matched.
- 7mm Pen Disassembler Kit, #PKDISPEN is available.

Diagram B - Assembly of Pen

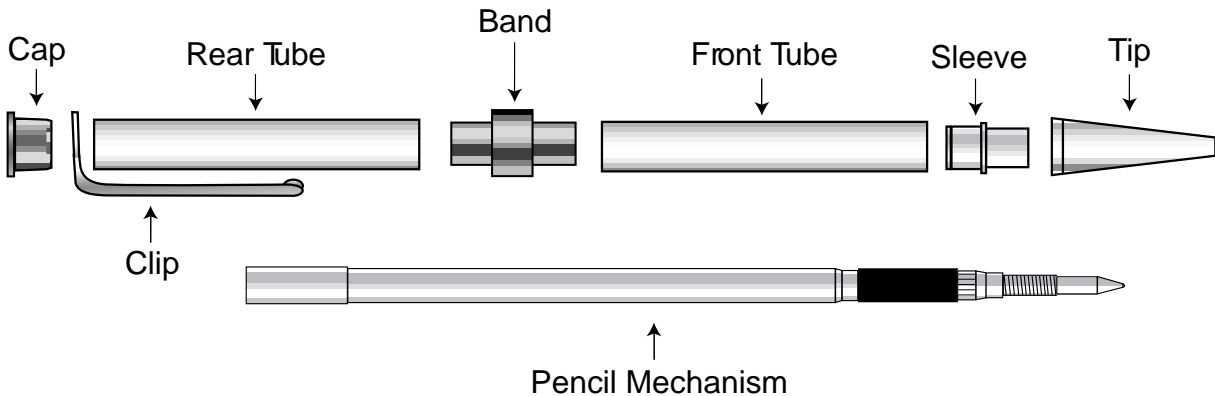
Note: Line up parts according to layout below.



- Press the tip into the front tube.
- Press the twist mechanism (brass end first) into opposite end of same tube (usually to the indentation mark). Don't press too far in!
- Slide band over the exposed mechanism.
- Press cap into the clip then onto the rear tube (clip can be left off if desired).
- Push the two halves together aligning grain as desired. Pen is operated by twisting the halves in opposite directions to extend or retract point. Test the extension with the refill inserted. Uses Cross® type refills.

Diagram C - Assembly of Pencil

Note: Line up parts according to layout below.



- Press the sleeve, recessed end first into the end of the front barrel until it hits the shoulder.
- Press the band into the opposite end of the barrel.
- Press the rear barrel onto the band.
- Press cap into the clip then onto the rear tube (clip can be left off if desired).
- Insert mechanism through the cap and out the opposite end.
- Screw the tip tightly onto the threaded end of the mechanism.
- The pencil operates by pushing down on the plunger. This clicks the lead out. The eraser and extra lead is located under the gold cap on the mechanism. Use 0.7mm lead.

Note: If lead does not advance properly or retracts when writing, gently pull exposed short piece of lead out of mechanism. Continue to pump pencil plunger until a new piece of lead is exposed.