

HOCKEY PEN

Kit Features

- Easy to Turn with Straight Tubes
- Minimal Parts--easy to assemble
- Available in multiple finishes
- Overall Length: 5-13/16"

Required Accessories

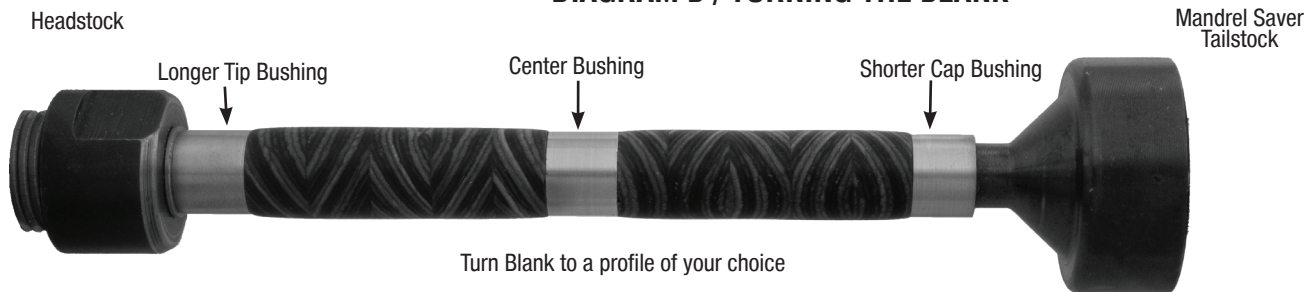
- 7mm Pen Mandrel
- Drill Bit: #PK-38BP for Wood, #PKEXEC-38 for Plastic
- Bushing Set(3pc): #PKHOCKBU
- Barrel Trimming: #PKTRIM38 or 3/8" sleeve from #PKTRIMSET with squaring jig on disc sander
- Live Tailstock or Mandrel Saver
- 2 part Epoxy or Thick CA (Cyanoacrylate) Glue
- Pen Blank Minimum Size: 3/4" x 3/4" x 3-13/16"L



Preparing the Blank:

- Prior to cutting and gluing, always verify tube length is correct (see parts diagram on back page)
- Cut blanks to the length of the tube, adding 1/16" for squaring off.
- Drill 3/8" hole lengthwise through the blank.
- Spread glue over tube, insert the tube into the blank with a twisting motion to spread the glue evenly inside.
- Center the tube lengthwise inside the blank.
- When the glue is dry, square the ends of the blanks, making sure the trimmed ends are 90° to the tube. Use a 3/8" Barrel Trimmer (#PKTRIM38) or 3/8" barrel trimming sleeve with a pen blank squaring jig on a disc sander. Take the excess material down flush to the ends of the tubes. Do not trim past the end of the tube since this may interfere with assembly and the operation of the mechanism. Use a barrel trimmer to clean the inside of the tube.

DIAGRAM B / TURNING THE BLANK



Turning the Blank:

- Mount the bushings and blanks according to Diagram B. Note that Lower Tube (tip side) is slightly longer than the Upper Tube. Make sure not to mix them up.
- When using Mandrel Saver, there is no need for extra spacer bushings or the knurled nut. Slide and lock tailstock directly against bushings and tighten quill until blank and bushings are secure.
- To use Knurled Nut Setup (right), add spacer bushings until past the threads on the end of the Mandrel Shaft.
- 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 Tailstock and hand tighten the quill adjustment with wheel to steady the mandrel. Do not over-tighten, it could damage mandrel shaft.
- Using sharp tools, turn the blank down close to the bushing diameter. Turn the barrel straight or to a profile of your choice.
- Sand the blank down to be flush with the bushings, gradually increasing sandpaper grits.
- Finish the barrel using your choice of polish. Allow sufficient time for the polish to cure—refer to polish manufacturer's instructions.

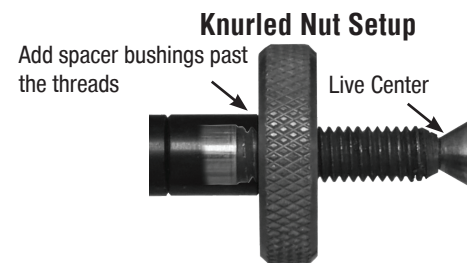


Diagram C / Bushing #PKHOCKBU

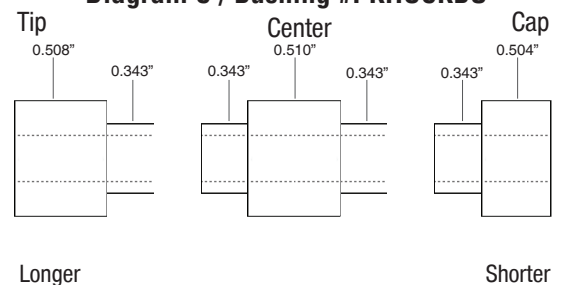
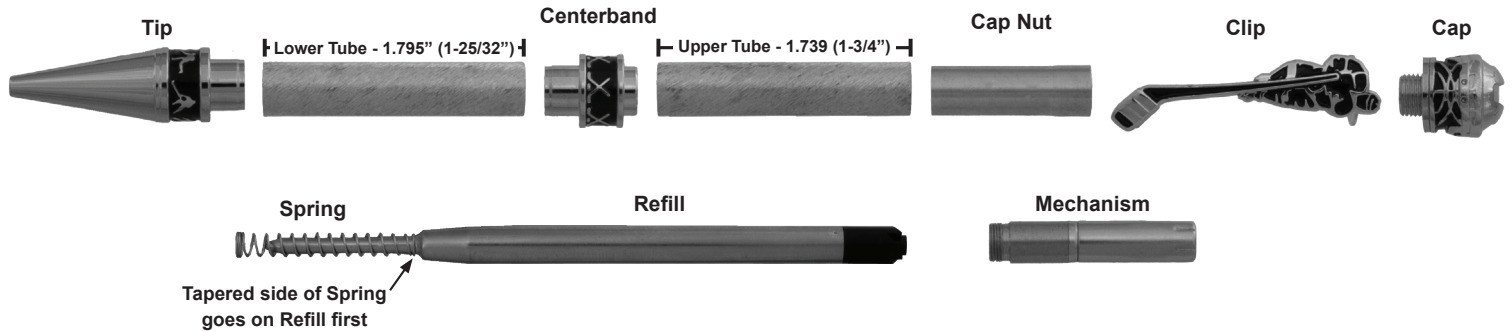


Diagram D / Parts Layout

**Assembly:**

- Press Cap Nut, reduced diameter first, into upper, smaller diameter end of Upper Barrel. Remember that Upper Barrel is slightly shorter.
- Thread Cap, through Clip, into the pressed Cap Nut.
- Press Tip into smaller diameter side of Lower Barrel.
- Press Centerband into remaining, open end of Lower Barrel.
- Make sure Spring is on refill shaft correctly. Spring should grip shaft and not fall off.
- Slide Refill and Spring into Lower Barrel through the Centerband.
- Thread Mechanism over the end of the Refill, into the Centerband.
- Slide Upper Barrel over Mechanism and push until fully against Centerband.
- To extend and retract refill, twist Upper Barrel back and forth.
- To change Refill, unthread Lower Barrel from Mechanism. Remember to switch Spring to new Refill.

