

# CUE STICK ROLLERBALL PEN KIT

## Kit Features:

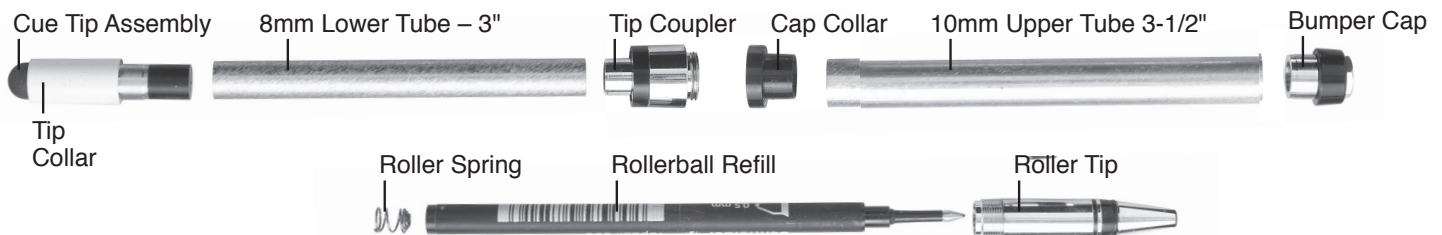
- Designed to replicate a Real Cue Stick.
- "Cue Tip" can be used as a smartphone stylus
- Minimal Parts—easy to assemble
- Available in multiple finishes
- Overall Length: 8-1/4"
- Uses Rollerball Refill: #PK10-RPR



## Required Accessories:

- 7mm Pen Mandrel
- Drill Bit: #PK-10MMSG & #PK-8MMSG for Plastic; #PK10-10 & PKPARK-8MM for Wood
- Bushing Set (4 pc): #PKPCUBU
- Barrel Trimming set: #PKTRIM10 & #PKTRIM8 or 10mm & 8mm sleeve from PKTRIMSET.
- Live Tailstock or Mandrel Saver
- 2 part Epoxy or Thick CA (Cyanoacrylate) Glue
- Pen Blank Minimum Size: Lower- 3/4" x 3/4" x 3-1/16" Upper – 3/4" x 3/4" x 3-9/16"

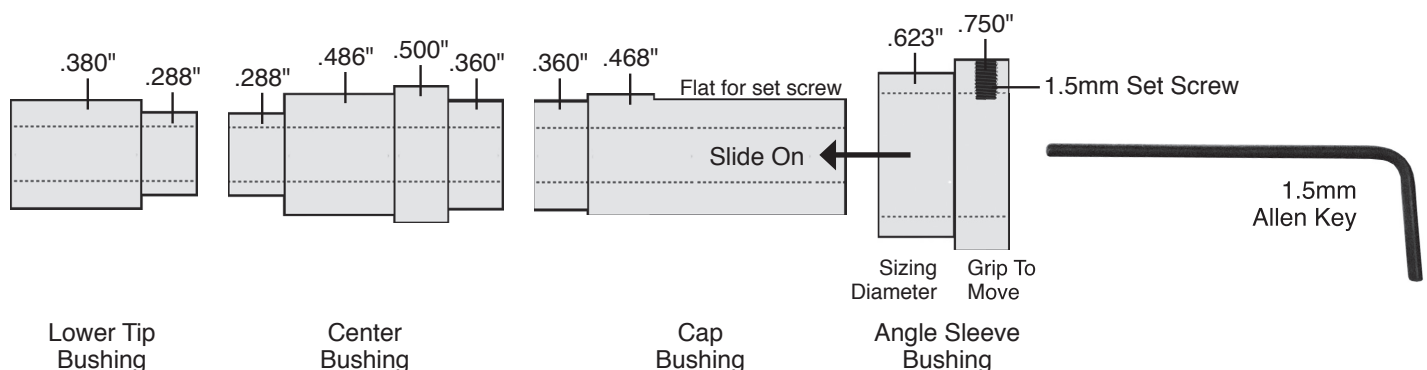
## DIAGRAM A / PARTS LAYOUT



## Preparing the Blank:

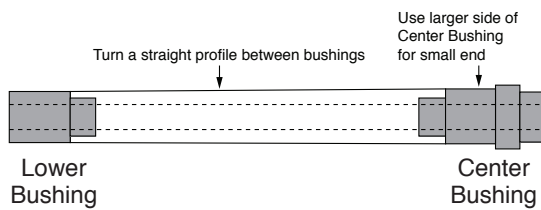
- Cut blanks to the length of the tubes, adding 1/16" for squaring off.
- Drill a 10mm hole lengthwise through the longer blank and an 8mm hole lengthwise through the shorter blank.
- Spread glue over tubes, insert the tube into the blanks with a twisting motion to spread the glue evenly inside.
- Center the tubes lengthwise inside the blanks. When the glue is dry, square the ends of the blanks, making sure the trimmed ends are 90° to the tube. Use 10mm and 8mm barrel trimmers, or a pen blank squaring jig with 10mm and 8mm sleeves 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. Use a barrel trimmer to clean the inside of the tube.

## DIAGRAM B / BUSHINGS #PKPCUBU

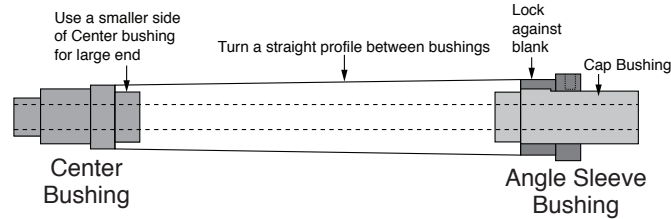


**DIAGRAM C1**

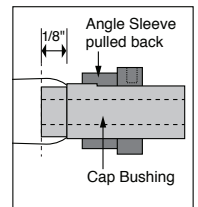
## Turning the Lower Barrel

**DIAGRAM C2**

## Turning the Upper Barrel

**DIAGRAM C3**

## Upper Barrel Cap

**Turning the Blank**

- Note that both blanks will not fit together on a standard length mandrel – they must be turned separately. See Instructions below under Lower and Upper Barrel for differences when mounting and turning the two different sections. Cut straight profile between bushings to maintain the angle between both barrels.
- Once Bushings and Blanks are mounted, 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.
- Hand tighten the quill adjustment on the tailstock to steady the mandrel. Do not over-tighten, it could damage the mandrel.
- When using Mandrel Saver, there is no need for extra spacer bushings or the knurled nut. Slide tailstock directly against bushings and tighten until blank and bushings are secure.

**Lower Barrel: Diagram C1**

- Center Bushing has two extensions, the narrower (8mm) one fits the lower tube. This side is the wider end of the Lower Barrel.
- Using sharp tools, turn the blank down close to the bushing diameter. Proceed to the finishing steps below and then return to the instructions for the Upper Barrel.

**Upper Barrel: Diagram C2**

- Mount the Center Bushing with wider (10mm) extension in one end of Upper Tube.
- Upper Bushing have two parts – the cap bushing to match the pen cap, and an angle sleeve bushing to turn the taper to the correct wide diameter.
- Mount the Upper Bushing and slide the sleeve so the smaller side of the sleeve bushing is against the blank and lock with set screw. (C2)
- Turn a straight profile from the center bushing to the angle sleeve, then loosen set screw and slide sleeve away from the blank. (C3)

**Upper Barrel Cap: Diagram C3**

- Mark 1/8" away from Cap Bushing and round the corner from mark to the bushing to achieve a classic butt profile (C3)
- Proceed to the finishing steps below.

**Finishing (Both Barrels):**

- 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 instructions.

**Assembly**

- Press Bumper Cap into larger end of Upper Barrel
- Press Cap Collar into smaller end of Upper Barrel
- Press the Tip Coupler into the larger end of the Lower Barrel.
- Unthread the tip collar from the Cue Tip Assembly and remove the rubber tip bushing. Slide a bushing over the metal stylus tip to press into smaller end of Lower Barrel (See diagram D).
- Drop spring into opening in Tip Coupler followed by the Refill, flat side first.
- Thread Roller Tip into Tip Coupler, over the refill.
- Thread Upper Barrel over Roller Tip when pen is not in use. Remove to write.

**DIAGRAM D**