## **Required Accessories:**

- 7mm pen mandrel
- 3piece Bushing Set
- 10mm & 25/64" Drill bit
- Universal Barrel Trimmer
- Live Tailstock Center
- 2-part epoxy glue or instacure glue
- Minimum Blank size: 3/4" x 3/4" x 2-5/32"

## **Preparing the Blanks:**

- Prepare a master blank of at least 3/4" square. Cut two sections to the length of each tube. (Add 1/16" for trimming) Mark the center of each blank.
- Drill a centred hole lengthwise through each blank.
  Upper blank (shorter tube)—drill a 10mm hole through.
  Lower blank (longer tube)—drill a 25/64" hole through.
- Glue each tube in the proper blank. Spread the glue over each tube. Insert the tube into the blank with a twisting motion to spread the glue evenly inside. Center each tube lengthwise inside the blank.
- When glue dries, square the ends of each blank.



## **Turning the Blanks:**

- Mount the bushings and blanks on the mandrel according to the Diagram above.
- 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 the mandrel.
- 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 the sandpaper grits.
- Finish the barrel with your choice of polish. Allow sufficient time for the polish to cure.



## **Pen Assembly**

NOTE: Line up the components according to the above picture.

- Press the tip into one end of the lower tube (longer tube)
- Press the center band coupler into the opposite end of the lower tube.
- Remove the protector off the refill, insert the spring over and drop into the opening at the center band coupler.
- Screw the twist mechanism over the refill end.
- Press the center band into the end of the upper tube(shorter tube)
- Press the clip& cap assembly into the opposite end of the upper tube.
- Engage both ends to close the gap in the center.
- The pen operates by twisting the ends to extend or retract the refill.