

## Graduate Twist Pen Kits Assembly Instructions

### Required Accessories

- 7mm pen mandrel
- 4-piece Bushing Set
- Drill Bit 7mm and 3/8"
- Universal Barrel Trimmer
- Live Tailstock Centre
- Glue (Thick CA or Epoxy)
- Overall length: 5-3/8"

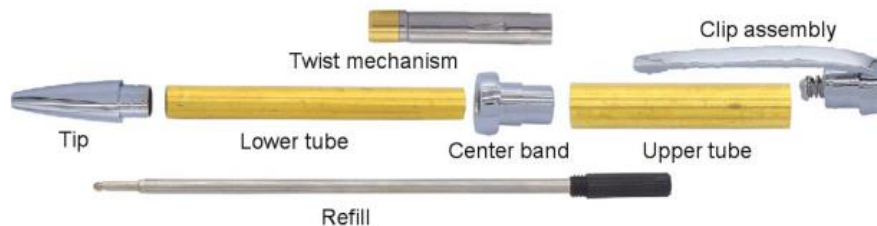
### Preparing the Blank

- Cut 5/8" or larger pen blanks to the length of the brass tube (add 1/16" for trimming).
- Drill a 7mm hole lengthwise through the longer blank.
- Drill a 3/8" hole lengthwise through the shorter blank.
- Spread the glue over the tube. Insert the tube into the blank with a twisting motion to spread the glue evenly inside. Centre the tube lengthwise in the blank.
- When glue dries, square the end of each blank. Use a 7mm Barrel trimmer for the longer blank and use a 3/8" barrel trimmer for the shorter blank. Take the wood down to the brass tube.



### Turning the Blank

- Mount the bushings and blanks 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 centre 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.



### Assembly

- Layout parts according to diagram above.
- Press the tip into the smaller diameter of the lower barrel.
- Press the twist mechanism into the opposite end of the barrel. Continue passed the I.D. line until only 3/4" of the chrome is showing.
- Insert and screw in the refill through the mechanism hole.
- Press the centre band into the wide end of the upper barrel.
- Press the clip assembly into the opposite end of the barrel.
- Engage the two halves of the pen. The pen operates by twisting the ends to advance or retract the refill for writing.