

# **BP310** Gradu Twist Pen Kits Assembly Instructions

#### **Required Accessories**

- 7mm pen mandrel
- Bushing BU310
- Drill Bit 7mm



### **Preparing the Blank**

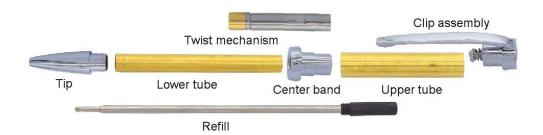
- Cut 5/8" or larger pen blanks to the length of the brass tube (add 1/16" for trimming). Drill a 7mm hole lengthwise through the longer blank.
- Drill a 3/8" hole lengthwise through the shorter blank.
- Spread the glue over the tube. Insert the tube into the blank with a twisting motion to spread the glue evenly inside. Center 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" barrell trimmer for the shorter blank. Take the wood down to the brass tube.



#### **Turning the Blank**

- Mount the bushings and blanks according 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.



## **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 center 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.