# **Lighthouse Pen Kits Assembly Instructions**

### **Required Accessories:**

- 7mm pen mandrel
- 2piece Bushing SAIL-BU
- 3/8"Drill bit
- 23/64" Barrel Trimmer
- Live Tailstock Center
- 2 part epoxy glue or instacure glue



### **Preparing the Blanks:**

- Cut one pen blank to the length of the brass tube (add 1/16" for trimming).
- Drill a 3/8" hole lengthwise through the 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 the glue dries, square the end of each blank. Use a 23/64" Barrel trimmer with or a universal pen blank squaring jig with a power disc sander.

Take the wood down to the brass tube. Do not trim beyond the length of the tube since this may interfere with operation of the mechanism and assembly.

Use the barrel trimmer shaft to clean the inside of the tube.



#### **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.

- Screw the Refill into the twist mechanism, push the tip and twist mechanism into the tip holder assembly.
- Press the cap coupler assembly with pen clip into the large end of the barrel.
- Push the whole tip assembly into the small end of the barrel.
- In order to screw the light cap RIGHTLY, please be sure to screw the metal part to

the lowest point in advance through the tip holder, see the above picture.

- Everything is ok, you could insert the batteries now (flat end of batteries facing down) and screw the light cap. Rotating the tip holder to control the light, you could see the flashing lights.
- The pen operates by twisting the tip to advance or retract the refill for writing.
- Note: The led light came on or go off is base on the tip holder (not the tip), only hold the tip holder and rotate it to control the light. The tip is used to control the refill.