

# LIGHTHOUSE PEN

## Kit Features

- Easy to Turn with Straight Tubes
- Minimal Parts--easy to assemble
- Available in multiple finishes
- Pen Refill: #PKLHPENRF (5pk)
- Battery Replacement: #PKLHPENBA
- Overall Length: 5-19/32"

## Required Accessories

- 7mm Pen Mandrel
- Drill Bit: #PK-38BP for Wood, #PKEXEC-38 for Plastic
- Bushing Set(2pc): #PKSCERBU
- Barrel Trimming: #PKTRIM38 or 3/8" sleeve from #PKTRIMSET with squaring jig on disc sander
- Live Tailstock or Mandrel Saver
- 2 part Epoxy or Thick CA (Cyanoacrylate) Glue
- Pen Blank Minimum Size: 3/4" x 3/4" x 2-15/16"L



## Preparing the Blank:

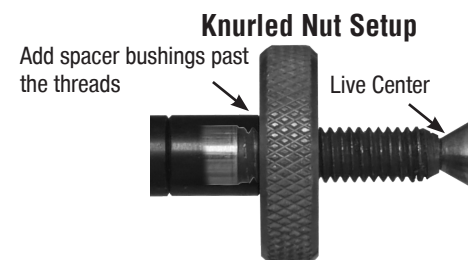
- Prior to cutting and gluing, always verify tube length is correct (see parts diagram on back page)
- Cut blank to the length of the tube, adding 1/16" for squaring off.
- Drill 3/8" hole lengthwise through the blank.
- Spread glue over tube, insert the tube into the blank while twisting to spread the glue evenly inside.
- Center the tube lengthwise inside the blank.
- When the glue is dry, square the ends of the blanks, making sure the trimmed ends are 90° to the tube. Use #PK-TRIM38 or a 3/8" barrel trimming sleeve with a pen blank squaring jig 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 and the operation of the mechanism. Use a barrel trimmer to clean the inside of the tube.

## DIAGRAM B / TURNING THE BLANK

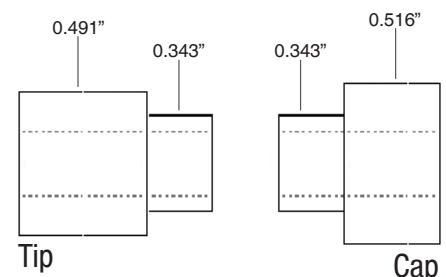


## Turning the Blank:

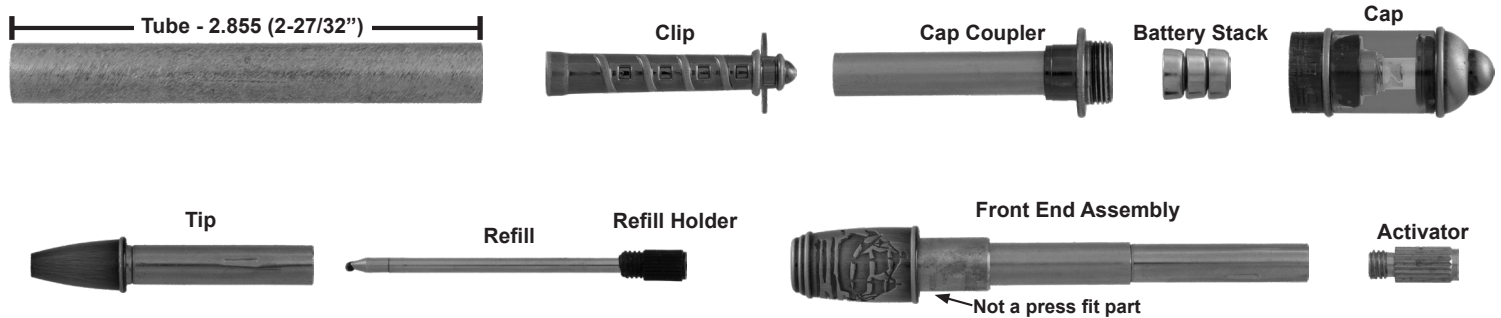
- Mount the bushings and blanks according to diagram B.
- When using Mandrel Saver, there is no need for extra spacer bushings or the knurled nut. Slide and lock tailstock directly against bushings and tighten quill until blank and bushings are secure.
- To use Knurled Nut Setup (right), add spacer bushings until past the threads on the end of the Mandrel Shaft.
- 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 and hand tighten the quill adjustment with wheel to steady the mandrel. Do not over-tighten, it could damage mandrel shaft.
- 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 sandpaper grits.
- Finish the barrel using your choice of polish. Allow sufficient time for the polish to cure—refer to polish manufacturer's instructions.



## Diagram C / Bushing #PKSCERBU



## Diagram D / Parts Layout

**Assembly:**

- Lay out parts according to Diagram D. Some parts will come pre-assembled with other parts. Break down to make sure all parts are correct and accounted for.
- Make sure not to press on Cap directly. Cap should not be attached to Cap Coupler when pressing.
- Note: Batteries should be kept stacked in plastic wrap for best results.
- Slide Clip onto non-threaded sided of Cap Coupler.
- Press Cap Coupler, without Cap, into wider diameter end of Barrel.
- Drop Battery Stack, flat(+) side first, into opening in Cap Coupler. Light will not work if batteries are reversed.
- Thread Cap onto Cap Coupler.
- Make sure Refill is fully threaded into back of Tip.
- Slide Tip into the front of Front End Assembly.
- Make Sure Activator is fully threaded into back of Front End Assembly.
- Slide Front End Assembly into open end of Barrel until full inside.
- To extend and retract Refill, twist the Tip only back and forth.
- To Change Refill (#PKLHPENRF), pull Tip out of Front end Assembly and unscrew Refill from the back of Tip. New Refills should come with new Refill Holder. Install new Refill and replace Tip in Front End Assembly.
- To turn light in Cap on and off, twist Front End Assembly back and forth.
- To Change Batteries, unscrew Cap from Cap Coupler. Tip out old Battery Stack and replace with new Stack in the same orientation. Replace Cap onto Cap Coupler. For best results, use our pre-stacked and wrapped batteries (#PKLHPENBA).

