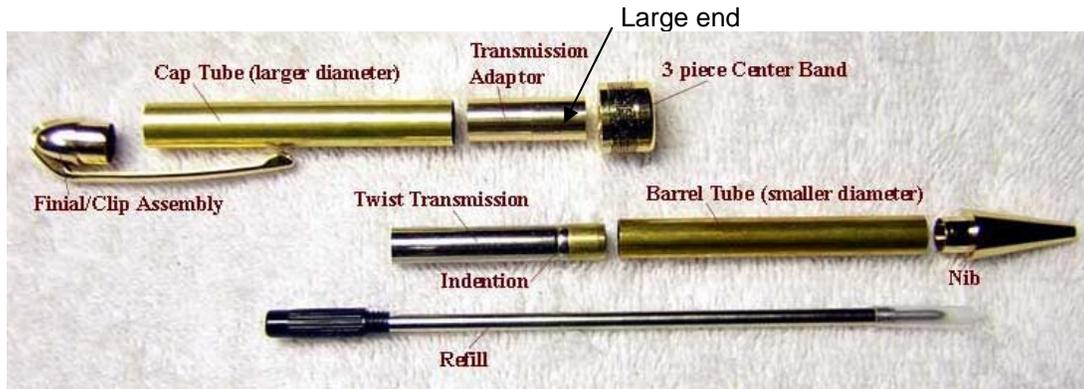


Olympia Ball Point Pen Instructions (BHW-29x)

All photo's by Bob Keyes



Drill Bits: Lower barrel: 'J' or 9/32". Upper barrel: 'O' or 'P' or 8.2mm Bushings 17A



Pen Parts Diagram



Bushing Layout Diagram

Note

This pen allows the turner the option of shortening the upper, lower and/or both of the blanks a maximum of 3/16" (each blank) in order to change the look and/or balance of the pen. You can accomplish this by carefully using a pen mill, disk sander or fine saw. Now is the time to do this if you choose. Chamfer (debur) all the tube openings.

Turning the Blanks

Slide the clip & cap bushing, upper pen blank, centerband bushing, lower barrel bushing, lower pen blank, the second lower barrel bushing and the threaded brass thumb nut onto the mandrel. Lightly tighten the brass thumb nut. Carefully slide the tail stock forward with a 60 degree live center installed up to the dimple in the end of the mandrel. Turn the lathe on, allow the tail stock to align itself with the mandrel and then secure. Do not apply excessive force to the mandrel as damage to the mandrel may result! Do not over tighten the brass thumb nut as this can cause the mandrel to bend thus causing the pen blanks to come out oval in shape. A spacer may be installed between the small diameter lower barrel bushing and the thumb nut to give you more room between that bushing and the thumb nut. Turn the pen blanks to the desired shape using the bushings as a guide. Sand the blanks to the desired grit and apply the finish of your choice.

Cutting the Tenon

On the upper barrel: measure 1/8" from the end that the centerband will go on and mark. Using a sharp parting tool remove the wood all of the way to the brass tube taking care not to remove any of the brass from the tube. You will have created a brass tenon that will be press fit into the centerband. Keep the edge of the wood square to the brass tube.



Assembly

(refer to the pen parts diagram shown on the first page)

Again chamfer (debur) all the tube openings. This will make assembly much smoother and easier. Trust us on this!

Ensure grain orientation; press the NIB into the appropriate end of the lower blank. Press the TRANSMISSION into the other end of this same blank up to the indentation line formed in the transmission. Test extension/retraction with the refill installed. Seat the transmission deeper if required. Remove any lubricant from the exposed end of the transmission.

Apply a minute drop of medium CA glue in two places inside the brass tube where the tenon is located. Press the TRANSMISSION ADAPTER, small end first, flush into the upper barrel – the same end as where the tenon is located. Be careful not to deform the brass tube.

Press fit the CENTERBAND onto the tenon (exposed end of the brass tube). Occasionally this centerband will not fit snugly as some brass may have been removed while forming the tenon. If this is the case remove the centerband, apply two minute drops of CA glue 180 degrees apart and reinstall the CB.

The internal spring on the CLIP/FINIAL assembly is quite strong. If this assembly is simply pressed into the upper tube there is a definite risk of cracking the blank and badly scratching the body of the blank. It is highly recommended that you follow the next steps in order to avoid damaging the blank:

Warning! Over extending the clip can cause the clip spring to break.

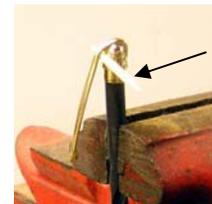
Place a 17/64" drill bit upside down in a sturdy vise. Protect your drill by using jaw protectors.



Place the FINIAL/CLIP ASSEMBLY over the end of the drill bit.



Carefully pull the CLIP outward as far as necessary in order to place a wooden toothpick in the clip's hinge. This will keep the clip away from the blank so it will not form a scratch and allow a straight in press fit.



Remove the finial/clip assembly from the drill bit (with the toothpick in place). Ensure you have the clip in the position that you want it and press this assembly into the end of the upper blank. While carefully holding the clip, remove the toothpick so as not to dent the side of the blank when the clip springs closed.

Slide the cap assembly onto the transmission and align the pattern and/or grain. Wax the entire pen, metal and all, with Renaissance Wax.

Now stand back and admire your work!