

Osprey Ball Point Pen Kit Instructions

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Supplies:

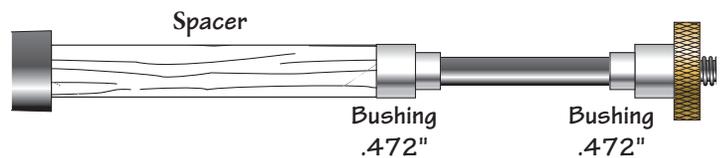
- 27/64" Drill Bit
- 3/4" x 3/4" x 2.5" Pen Blank
- Pen Mandrel
- Sandpaper
- Drill or Drill Press
- Barrel Trimmer
- Osprey bushings
- Glue (CA or Epoxy)
- Pen Press
- Eye and Ear Protection

Preparing the Pen Blank for Turning

1. Cut a blank out of your desired material approximately 3/4" square x 2.5" long.
2. Using either a drill press or a lathe with drill/chuck attachment, drill a 27/64" hole lengthways through the center of the blank. My personal preference is using a lathe with the drill mounted in the tail stock and the blank secured in my Nova chuck attached to the headstock. Either way you choose, be sure your material is securely mounted and take small depth cuts with the drill clearing chips out between each advancement of the drill bit.
3. Once you have finished drilling the hole, you are ready to glue in the brass tube. Lightly sand the outside of the tube to create a better surface for your adhesive to attach to. (Optional - If you are using translucent materials like Tortoise Shell or Mother of Pearl Tru-Stone for example, I would recommend painting the tubes and/or the inside walls of the pen blank after lightly sanding them. Paint them a color that compliments your blank as you will be able to see the color through the turned blank.)
4. If you went with the option of painting the tubes in step 3, make sure your paint is completely dry before continuing. Most adhesives like 2-part epoxy, super glue, Gorilla Glue, etc will work for installing the tubes, however my personal preference is a 5-minute 2-part epoxy. It sets quick and I have never had a problem with it. With a disposable brush, apply a thin layer of glue to the tube as well as on the inside walls of the pen blank. Insert the tube into the blank rotating it as you go to spread the glue evenly. (I usually leave the very end of the tube clear of glue until it is up to the point of going into the blank. Then at the last second, wipe any excess glue off from around the edges and wipe on the clear portion. This keeps the glue from getting on my hands while pushing the tube into the blank.) Make sure the tube is all the way in side the blank with a little bit of material on each end of the tube to allow for trimming to size.
5. Once the glue has fully set it's time to square up the ends of the blank. Make sure all excess glue has been removed from inside the tube. If there is extra, you may have difficulty inserting the bushings and the pen components. My preferred method is using a disc sander, sand each end of the blank square to as close as you can get to the brass tube without actually sanding it. Then using a barrel trimmer, trim the ends up to the brass tube. It's important to have a clean edge here in order for your components to fit properly. Do not trim past the edge of the brass tube as it could result in improper fit when you assemble your pen.

Turning and Finishing the Pen

1. Now that your blank is trimmed you are ready to assemble the pen on the mandrel and begin turning. To the right is a diagram of the assembly on the mandrel. The pen blank is not shown but it would obviously fall between the two bushings. The mandrels are typically long enough to accomodate two tubes, so you can either put a scrap piece of material as a spacer or you can turn two sierra pens at one time. Once all of the parts are lined up, snugly tighten the knurled nut at the end of the mandrel.



2. Advance a 60° revolving cone center into the dimpled end of the mandrel and tighten using light pressure. **Do Not** over tighten the tailstock or mandrel nut as this may cause the mandrel to flex resulting in an off-center barrel.
3. Turn the blank to the desired shape. Sand your blank using progressively finer grits of sand paper and apply your preferred finish. The ends of your finished blank should sit flush with the bushings after all sanding and finishing are complete.

Assembly

1. Slide the spring onto the end of the ink refill and insert it spring end first into the writing tip.
2. Slide the twist mechanism threaded end first over the ink refill, and screw the twist mechanism into the writing tip.
3. Press the Cap/Clip assembly into the top of the turned blank.
4. Slide the open end of the pen body over the Twist Mechanism and onto the shoulder of the writing tip assembly.
5. To advance the ink refill turn the body clockwise, to retract the ink refill turn the body counter clockwise.

