

Legacy “Victoria” Pen Kit

Assembly Instructions

Available at www.thewoodturningstore.com

Description:

The “Victoria” model is considered a step up from the basic kits and is great for new and experienced pen turners. It is reminiscent of the Victorian era. The Victoria pen is a highly figured two piece twist pen with a heavy weight feel. The center band is almost 1 3/8” long and gives the pen its heavy feel.

The Victoria pen is unusual in that it uses a 7mm brass tube and an 8mm brass tube of different lengths. The upper part is about 31/32” long and uses the 8mm tube. The lower part is about 2 1/4” long and uses the 7mm tube. Both sections are usually turned in a slight arc.

The Victoria model is available in several antique finishes (Antique Bronze, Copper and Gun Polish).

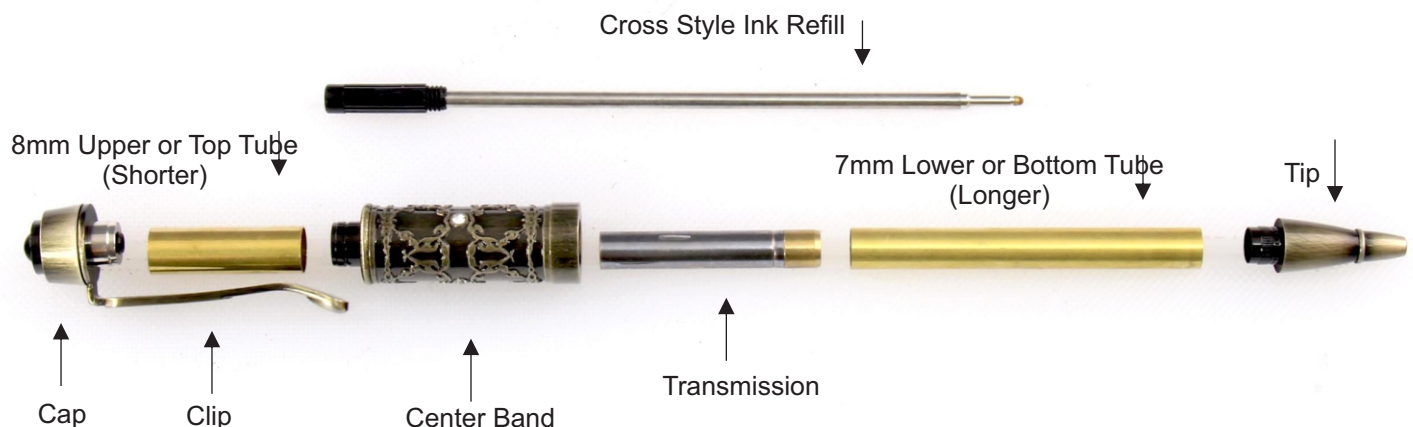
Getting Started:

You will need the following accessories to make a Victoria pen. Many of these accessories can be used with other pen kits. (All accessories are available at www.thewoodturningstore.com)

- 1 wood or acrylic blank, approximately 4 inches long x 5/8” x 5/8”
- 7mm and 8mm drill bit
- Woodturning pen mandrel with 7mm rod
- Victoria pen bushing set
- Pen barrel trimmer (7mm and 8mm)
- Glue (CA, epoxy or polyurethane [Gorilla])
- Lathe, turning tools, sandpaper, pen finish
- Other items may be needed as desired



Parts of the Victoria Pen Kit:



Preparing the Blank for Turning:

- Start with your wood or acrylic blank and cut it so you have 2 pieces, one about 2 1/2” and the other about 1 1/2” in length. Mark the blank with “hash marks” at the cut line so you can keep the grain matched when you mount the blanks on the pen mandrel.
- **Using a 7mm twist drill, drill a hole through LONG or lower blank. Using an 8mm twist drill, drill a hole through SHORT or upper blank.** Be careful to drill slowly to avoid chipping and tearing the material. Also, it is highly recommended that you clamp the blank in a vise and use a drill press for the most accurate and straight hole. You could also mount each blank in a lathe chuck and drill the hole using your lathe.
- Roughen the surface of each brass tube with steel wool or fine sandpaper. Using one of the glues mentioned previously, glue the brass tube into the blank. Twist the tube when inserting it into the blank to insure good glue coverage. Center the tube in the blank, make sure the tube is at least 1/16” - 1/8” inside the blank so you can trim the blank end cleanly.
- Use a pen barrel trimmer (7mm for lower blank and 8mm for upper blank) to square the ends of the blank to the brass tube. This is an important step which will create a clean line between the turned blank and the metal components of the pen kit.
- Your blanks are now ready to be mounted on the lathe.

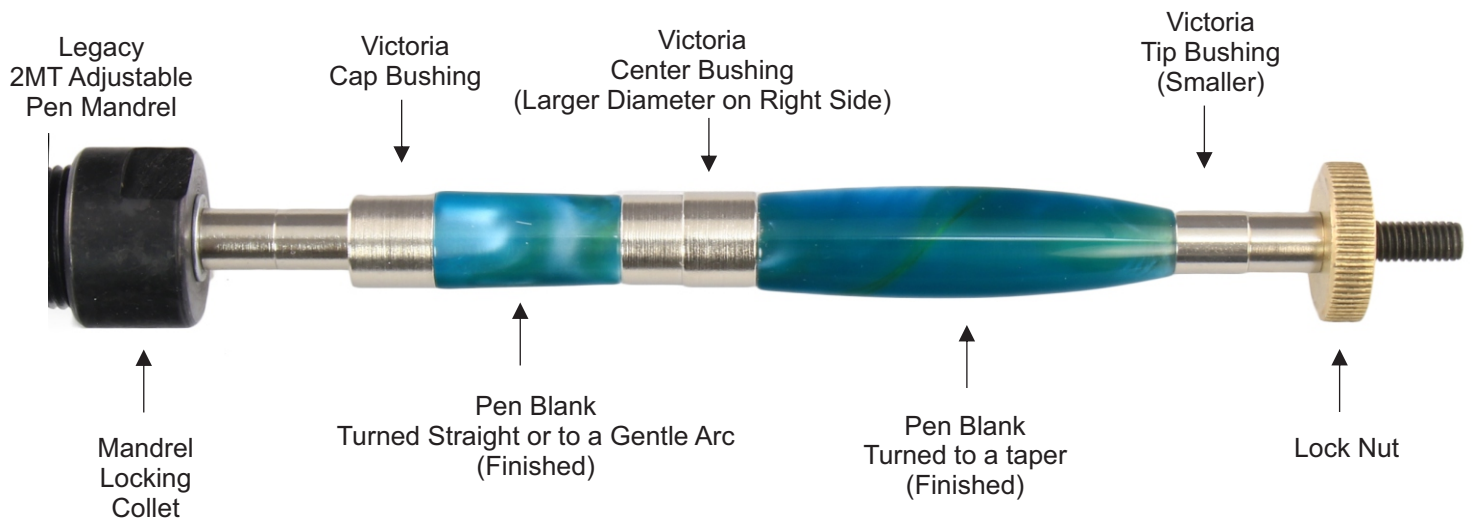
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Turning the blanks on the lathe

- Use a pen turning mandrel with a 7mm shaft and Victoria pen bushings (available at our store). The Victoria bushing set has three bushings which can be seen in the diagram below.
- Mount the pen blanks on the mandrel as shown in the diagram below. Make sure that your “hash marks” are in the center which assures that the grain of your blank will match that of the original single piece blank. Adjust the mandrel shaft so that the lock nut will tighten down on the assembly of pen blanks and bushings. Hand tighten the nut.
- Note that you must place the center band on the center bushing before you start turning. (You might want to keep a spare center band for this purpose because you may scratch it with your turning tools). See photo on the next page.
- Put a live center in your lathe’s tailstock and bring it in to support the mandrel shaft and keep it stable while turning.



Sanding, Polishing and Finishing the blank

- Most pens are finished to a high luster and finished with a durable coating of protective finish. Depending on your skill level and the material being used, you will need to sand with aluminum oxide paper of progressively finer grits, starting with a grit coarse enough to remove all tool marks and possibly shape the blank.
- If you have turned your piece oversize or if it is rough, you can smooth and even shape your blank with 80-100 grit sandpaper. Use a high lathe speed (2000+ RPM) but be careful not to overheat your piece which could cause heat checking.
- Progress through finer and finer grits 120, 180, 240, 320, 400, 600, etc.
- For acrylic materials you can use sandpaper up to 1000 grit then switch to micro mesh pads (up to 12000) and polishing cream to get a superior glossy finish.
- There are many finishes available for pens and you can experiment with what works best for you and the materials you use. Try to use a finish which will be durable and long lasting because the pen will be handled thousands of times and you want the finish to stay on and not be worn away (especially if you have sold the pen!).
- Remove the blanks from the pen mandrel and you are ready to assemble your pen.

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Assembly of the Finished Pen:



- Now that you have turned and finished the blanks into the upper and lower halves, you are ready to assemble your pen.
- It is highly recommended that you use a vise or clamp to assemble the pen. It is essential that you press the parts together “straight”. If you press the parts together and they are not straight, they will not straighten as you continue to press. There are many commercially available pen presses which make the process simple and easy.
- Before you press the parts together, lay out your blanks so that you recall how the grain originally matched.
- Press the cap and clip into the upper tube.
- Press the coupler end of the Center Band into the lower end of the upper tube.
- For the lower tube, press the tip into tip end of the bottom tube.
- Next, press the twist mechanism into the other end of the lower tube, brass end first. This step is the most critical part of the assembly. Press the mechanism in slowly until you leave about 3/4” to 13/16” of the chrome part exposed. Then install the pen refill and test the pen. It should extend properly through the tip while still retracting fully. If it does not extend fully, remove the pen refill and press the mechanism a little further, just a little!! If you press too far, the pen will not retract back in to the pen body and you will have to disassemble the pen, which is not easy. BE CAREFUL on this step. The lower assembly is now finished.
- Push the two halves of the pen assembly together and your pen is complete!