

Legacy “Bullet Click” Pen Kit

Assembly Instructions

Available at www.thewoodturningstore.com

Description:

The “Bullet” Click pen is a step-up kit, with similar features to a Power Click Pen. It has a click mechanism instead of a twist. It uses an 8mm tube and a Parker style gel refill. It is popular with gun / hunting enthusiasts. It uses a single tube for the upper part (2 1/32” long) and a replica 30 caliber bullet for the lower section (1 11/16” long tube inside).

The click mechanism and lower section are tricky to assemble, so please read the following instructions carefully and completely before you start assembling the pen.

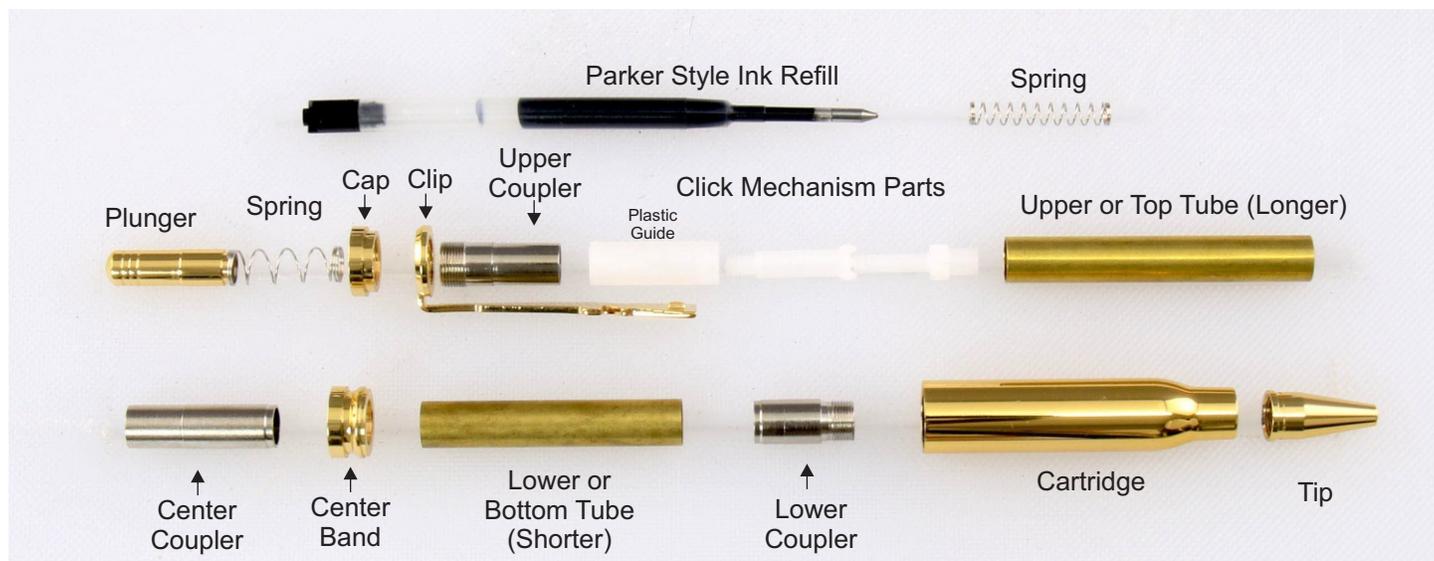
Getting Started:

You will need the following accessories to make a Bullet Click 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 3 inches long x 5/8” x 5/8”
- 8mm drill bit
- Woodturning pen mandrel with 7mm rod
- Bullet Click pen bushing set
- Pen barrel trimmer (8mm)
- Glue (CA, epoxy or polyurethane [Gorilla])
- Lathe, turning tools, sandpaper, pen finish
- Other items may be needed as desired



Parts of the Bullet Click Pen Kit:



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Preparing the Blank for Turning:

- Start with your wood or acrylic blank and cut it to about 2 1/2” in length and mount the blank on the pen mandrel.
- Using a 8mm twist drill, drill a hole through the 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 the 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 (8mm) 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 blank is now ready to be mounted on the lathe.

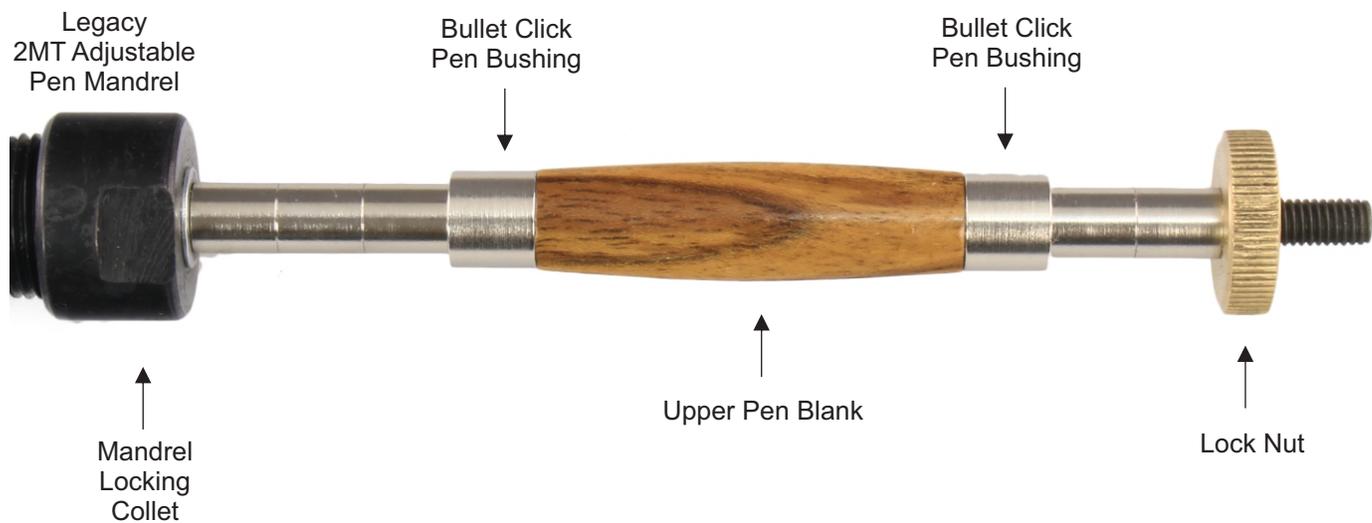
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Turning the blanks on the lathe

- Use a pen turning mandrel with a 7mm shaft and Bullet Click pen bushings (available at our store). There are two bushings in the Bullet Click Pen bushing set. For the Bullet Click Pen kit, the bushings are the same size. You may want to add slimline bushings to give additional clearance around the pen mandrel collet and lock nut.
- Mount the pen blanks on the mandrel as shown in the diagram below. Adjust the mandrel shaft so that the lock nut will tighten down on the assembly of pen blanks and bushings. Hand tighten the nut.
- Put a live center in your lathe’s tailstock and bring it in to support the mandrel shaft and keep it stable while turning.
- Using turning tools, turn the blank to a cylinder which is the diameter of the bushings. You may want to add a gentle curve to the shape of the pen.
- Note: Many turners prefer to turn the blank slightly oversize and then sand and polish the blank down to the exact size of the bushings.



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Sanding, Polishing and Finishing the blank

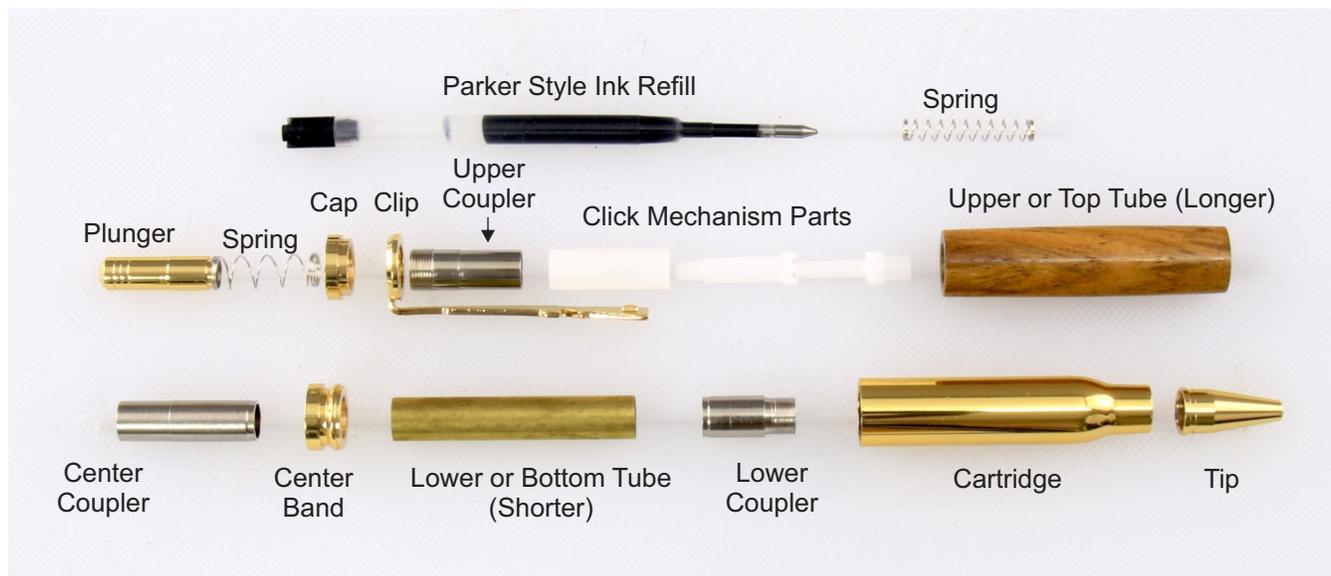
- Most pens are finished to a high luster and finished with a durable coating of protective finish. Depending on your skill level and the material being used, you will need to sand with aluminum oxide paper of progressively finer grits, starting with a grit coarse enough to remove all tool marks and 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:



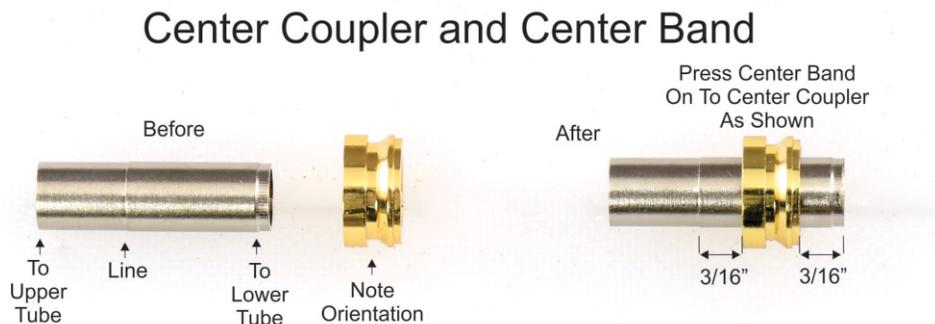
- Now that you have turned and finished the upper blank, you are ready to assemble your pen.
- It is highly recommended that you use a vise or clamp to assemble the pen. It is essential that you press the parts together “straight”. If you press the parts together and they are not straight, they will 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. The first time you assemble this pen, it can be confusing, so lay out the parts as shown above and read each step carefully.
- Start with the upper half of the pen. First, thread the cap onto the threaded end of the upper coupler. Next, put the unthreaded end of the upper coupler through the pen clip. Then, press the unthreaded end of the upper pen coupler (with clip) into the top end of the upper tube.
- Assemble the click mechanism parts next. Follow this section carefully. Start with the three white plastic parts shown above. Start with the lower gear and place it inside the bottom of the upper gear so the two gears mesh. Then take that assembly and pass it through the plastic guide. Look at the plastic guide and one end is very slightly wider. Starting with the threaded end of the gear assembly pass it into the wider end of the plastic guide until the gear assembly comes out of the other end of the plastic guide. It will stop at the end of the guide. You now have a 3 piece plastic assembly in your hand.
- Take that plastic assembly and insert it into the lower end of the upper tube. It may be snug and you might need to push it up into the top end of the tube.
- The top section is completed for now.

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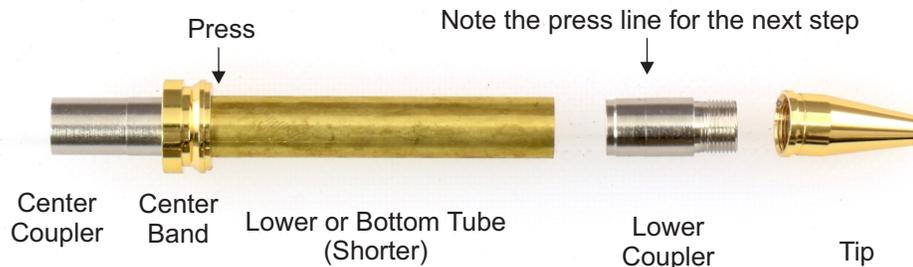
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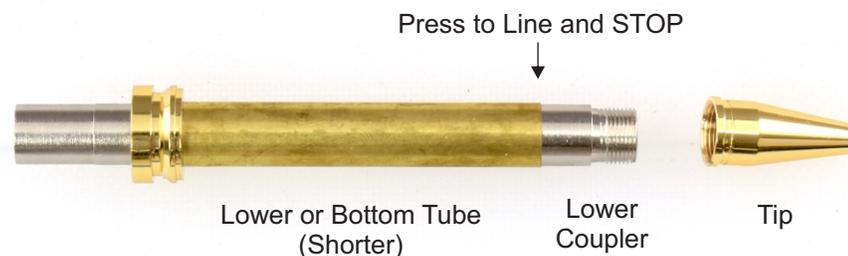
- The lower section can be tricky so please follow the step by step instructions shown next.
- First, install the center band on to the center coupler as shown in the photo below.



- Next, press the lower tube (shorter tube) onto the short end of the center coupler assembly as shown below.



- Press the lower coupler on to the lower end of the lower tube (shorter tube) as shown below. Press the lower tube up to the line in the lower coupler and stop. This is critical.



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- Take the bullet shell cartridge and slide it over the lower assembly as shown below. Screw the tip on the lower assembly.



- The lower assembly is complete.
- Next, press the lower assembly into the top assembly.
- Take the pen ink refill and thin spring and insert them into the pen from the bottom of the pen. You will need to unscrew the pen tip if it is attached. Push the pen refill in so it pushes the plastic gear assembly to the top of the pen. Screw the pen tip on to the threaded coupler.
- Take the large spring and place it into the plunger guide.
- Screw the plunger on to the threaded plastic tip and your pen is done !

