



Retro Pen Kit

General Instructions

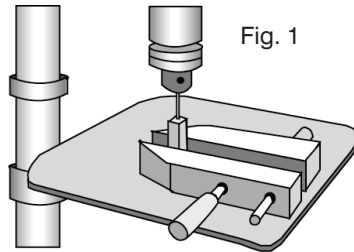
Whether you're a novice turner or a pro, you'll find these projects are all quick and easy to make. Using cut-offs and shorts, the type everyone saves but doesn't know what to do with, you'll find yourself making handsome, custom woodturning projects which are great for gifts or for sale. The following is general in nature, please refer to the instruction sheet on the opposite side for specific dimensions and sizes for your project.

1. Cutting Blanks

Cut wooden blanks to the size specified in the enclosed instructions. For your safety, be sure that the blanks are solid and have no holes, checks or other defects.

2. Drilling Blanks

Center and bore a hole through your stock as specified in the Project Instructions on the opposite side. The center of the blank can be located at the intersection of diagonal lines, drawn from opposite corners. All holes are easily drilled using a clamp and a drill press (FIG. 1). Before you start to drill be sure that your blank is at 90° to the drill press table. You may also chuck and drill the stock on your lathe.



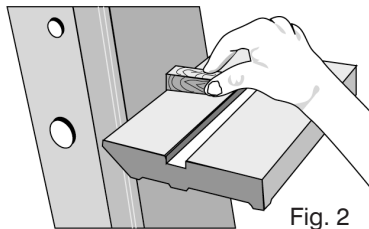
3. Gluing Blanks to Tubes

Rough the brass tube's surface with a fine grit sandpaper and use a quick drying CA type glue to secure the brass tubes into the blanks. Rotate the tube as you insert it to ensure maximum surface coverage of glue. If you find that CA glue is not providing adequate bonding, an alternative is any two part epoxy type glue.

4. Sanding Blanks to Length

Using a belt or disc sander, square the ends of the brass tube/wood blank. The blank should be flush with the brass tube on both ends. Care should be taken to not sand into the tubes (FIG. 2). If any excess glue remains inside the tubes it should be gently scraped out.

Tip: Excess glue can be scraped out using the threaded end of the mandrel when mounting the blanks for turning.



5. Mandrel Preparation

Woodcraft's new Pen and Pencil Maker's Mandrel system allows you to turn a variety of small projects without requiring the purchase of a unique, special mandrel each time. The only item you will need to purchase to turn new projects is the specially designed bushing set for the project of your choice. The mandrel is provided with either a #1 Morse Taper or a #2 Morse Tape. If you prefer to use the mandrel in a three jaw chuck, simply loosen the Morse Taper set screw and slide the Morse Taper off of the shaft. Now the mandrel shaft may be mounted directly in your three jaw chuck. With the bushing sets specified on the project instruction sheet, mount your wood blanks and bushings as depicted for each project. With the mandrel mounted in your lathe, slide a bushing onto the mandrel, followed by a wood blank and a second bushing or spacer as required, followed by the second wood blank if required. With the wood blanks installed on the mandrel secure the wood blank/bushing assembly using the washer and retaining nut provided. Bring up a live center in the tailstock to support the threaded end of the mandrel. Do not over tighten the tailstock or the mandrel will flex and bend causing oval shaped turnings.

6. Turning Blanks

Place your tool rest parallel and as close as possible to the blank. Rotate the blank by hand to ensure it will not touch the tool rest when the lathe is turned on. Using a turning speed of approximately 1,000 RPM begin turning the blank to a diameter slightly larger than the bushings. You can work the stock down to just short of the desired design or diameter by carefully scraping or sanding.

7. Finishing the Blanks

Blanks can be finished like any other wood project. Using a fine grit sandpaper, sand the blank until it is flush with the bushing for parallel sided projects or until the desired profile is obtained for custom projects. Use a wood filler, if desired, to fill any grain openings in the blank. Final sanding with a wet/dry paper will create a blank which is glass smooth. *Tip: We have found that use of Micro Mesh sanding paper after wet/dry sanding creates a perfect, glass smooth finish.*

8. Assembly

All parts should fit together as depicted in the parts diagram for each project. In some cases a machinist vise will be needed to completely press the parts together. Protect all plated parts from scratching by covering them with a cloth or thin pad before placing them in a vise. Proceed carefully, many of the kit components are delicate and uneven or excessive pressure will cause permanent damage.



Retro Pen Kit

Product #148715, 148716

1. Cutting Blanks

Cut two blanks, one 1³/₁₆" long and the other 1¹/₂" long. The long blank will be the pen top, the short blank will be the pen bottom.

2. Drilling Blanks

Using a 9mm brad point drill bit, drill a hole lengthwise through the center of each blank.

3. Gluing Blanks to Tubes

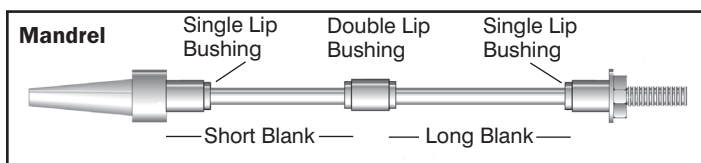
See General Instructions for details.

4. Sanding Blanks to Length

See General Instructions for details.

5. Mandrel Preparation

Place a bushing on the mandrel with a lip facing the tailstock, then slide the short blank onto the mandrel and over the lip of the bushing. Place a double lipped bushing on the mandrel making sure the lip goes into the short blank. Place the long blank on the mandrel, followed by the last bushing. Secure the bushings and blank assembly with the mandrel washer and nut.



6. Turning the Blanks

See General Instructions for details. The diameter of each blank should match the bushing diameter.

7. Finishing the Blanks

See General Instructions for details.

8. Assembly

1. Place the Clip (A) over the stud end of the Knurl Top (B). Press the Knurl Top (B), chamfer end first, into one end of the Tube #2, the pen top. The entire length of the stud of the Knurl Top is pressed into the tube until the clip is firmly seated against the blank.

2. Press either end of the center ring (C) into the opposite end of tube #2, the pen top.

3. Press the Gold Tip (D) into the Black Tip (E). Thread the Gold Nib (F) onto the stud of the Black Tip/Gold Tip assembly (D+E). Press the entire nib assembly (D+E+F) into one end of Tube #1 the pen bottom.

4. Join the two pen halves by pressing the pen bottom assembly onto the remaining end of the center ring (C).

5. Place the spring (G) over the end of the Ink Refill (H). Insert the spring and ink refill through the opening of the knurl top and into the pen body.

6. Place the Gold Pen Cap (I) onto the silver end of the Twist Mechanism (J). Press the cap/twist mechanism assembly into the knurl top until the cap seats flush on the knurl top.

9. Twist Mechanism Adjustment

1. Once the pen has been completely assembled, turn the gold pen cap clockwise to extend the pen tip. If the tip does not extend completely through the nib, remove the gold pen cap (I), place the pen in a vise or clamp and **very carefully press the twist mechanism deeper into the pen body. Proceed slowly, this is a trial and error process. Do not press the twist mechanism too far into the pen body or the ink refill tip will not fully retract into the pen nib even though the twist mechanism is in the fully retracted position.** After the mechanism has been pressed slightly deeper into the pen body, place the gold cap (I) back on the twist mechanism and rotate the mechanism to extend the ink refill. Continue the above process until the ink refill tip is positioned correctly in the nib when fully extended.

