



The Rinehart Ball Point Pen Kit

Product #152729, 152730



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.

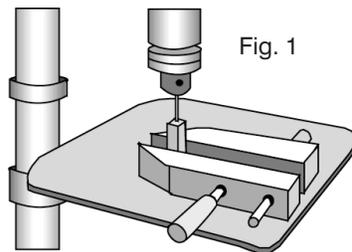


Fig. 1

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.

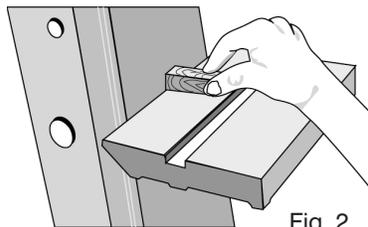


Fig. 2

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 (141468) or a #2 Morse Taper (141469). 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 (11L61) 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 pen press or machinists 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.



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1. Cutting Blanks

Cut two wood blanks slightly longer than the brass tubes. Upper tube (cap) will be approximately 17/8" long, the Lower tube (body) will be approximately 23/8" in length.

2. Drilling Blanks

Using a 15/32" brad point drill bit, drill a hole lengthwise through the center of the shortest blank. Using a 25/64" brad point drill bit drill a hole lengthwise through the center of the longest blank.

3. Gluing Blanks to Tubes

See General Instructions for details.

4. Sanding Blanks to Length

See General Instructions for details.

5. Mandrel Preparation

This pen uses a four bushing set, two each large shouldered bushings and small shouldered bushings. Slide one of the two larger bushings onto the mandrel with the shoulder or lip facing the tailstock. Slide the shortest blank onto the mandrel and over the lip of the first bushing, followed by the second large bushing, lip first, making sure the lip slides inside the blank already on the mandrel. Place one of the smaller bushings on the mandrel with the lip facing the tailstock, followed by the longer blank, and finally the second small bushing, lip first. Make sure the lips of

all the bushings are inside the respective tubes. Install the washer and the nut on the mandrel to secure the bushings/tubes. Do not over tighten the nut or damage to your mandrel may occur. If you are not using the Woodcraft Professional Mandrel (145988) you may have to make a wooden spacer to fill any gap on your mandrel between the bushings and blank assembly and threaded portion of your mandrel. Secure the bushings and blank assembly (and spacer if necessary) with the mandrel washer and nut.

6. Turning the Blanks

See General Instructions for details.

7. Finishing the Barrels

See General Instructions for details.

8. Assembly

Upper Barrel (cap):

Press the Center Trim Ring (A) into one end of the Upper Barrel (B). Next press the clip retaining bushing (D) into Cap Finial (E) followed by the Clip Retaining Tube (C). Slide Clip (F) over the Finial Cap Assembly (C, D, and E) and press into the other end of the Upper Barrel Assembly.

Lower Barrel (body):

Begin by pressing Nib (G) into one end of the Lower Barrel (H) followed by pressing the Twist Holder (I) into the other end of the Lower Barrel Assembly. Next slide the Refill Cartridge (K) into the Lower Barrel Assembly and finish by threading on the Twist Mechanism (J). Complete the pen kit by sliding the Upper Barrel Assembly onto the finished Lower Barrel Assembly and check for proper operation.

