

william wood-write

Closed-end Baron Pens – Instructions

The following photo tutorial describes how to prepare, turn and finish a closed-end Baron rollerball and/or fountain pen using the closed-end mandrel. This example uses tulipwood.

About closed-end Baron mandrels

The very cool thing about this mandrel is the expansion nut design. When the nut is tightened, the opposite end of the mandrel expands in two directions, keeping the blank perfectly centered relative to the mandrel. Alternatively, common pin-chuck designs lock the blank in place by rolling a loose pin up against one inside surface of the blank's brass tube. This often causes an out-of-round turning, where one side of the finished blank's wall is thinner than the opposite side.

Preparing the blanks

1. Start with a blank at least 3" long.
2. Drill a 25/64" hole down the center of the blank, exactly 2 7/8" deep.
3. The lower barrel hole is drilled deeper than normal so you've got clearance for the rollerball innards, resulting in the stock brass tube not bottoming out in the hole. In fact, the stock brass tube is almost an inch shorter than the hole's required depth. The problem is that when you go to press fit the ring and threaded end-piece into the finished lower barrel opening, the glue may give way and the brass will work its way further down the hole, resulting in nothing to press fit into. My solution is to custom cut an extra 10mm brass tube to make up the space in the hole's depth. That way the brass tube bottoms out at the bottom of the hole and will always be in the proper position for the press fit operation.



Make sure the mandrel is all the way in, with the bushing face flush up against the blank's end.



Two box wrenches are used in this example to tighten the end-nut just enough so the blank is "locked" in position and will not spin around the mandrel shaft.



Next, mount the mandrel's exposed shaft in a drill or scroll chuck and tighten the chuck's jaws down snugly against the mandrel shaft.



The mandrel has been mounted in a # 2 MT drill chuck so that about 1/4" of clearance between the end of the blank and the chuck is exposed. You'll need this 1/4" space to get your cutting tools in position for the finish cuts. Also, the tailstock has been brought up to the opposite end of the blank, adding support for the piece while turning.



The blank has been turned into a cylinder, about 1/16" proud of the mandrel's bushing. In this example, the blank is left extra long - about 4". The hole inside the blank must be 2 7/8" deep to allow space for the rollerball's innards.



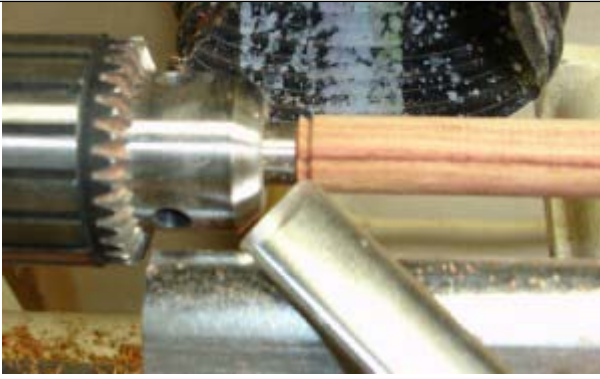
Using a sharp skew or parting tool, mark a ring on the blank that is at least 3" to the right of the headstock end of the blank's end. This mark indicates where the end of the finished pen will be and will help calibrate the shape and design of your finished blank.



If you like beads...using a thin parting tool, make the first of two cuts, on the left side of the headstock end of the turning.



Here you can see the first cut that has been made at about a 45 degree angle.



Now, using the point of a skew or thin parting tool, make the bead's second (right-side) cut.



Use a 1/2" round nosed scraper to make some decorative cove cuts in the blank.



Use a skew to make decorative cuts in the lower barrel's end.



The thin parting tool is used to make a final end cut, separating the lower barrel from waste wood.



The thin parting tool is used to clean up the end-cut.



While the piece is still on the lathe, sand as you normally would.



Remove the mandrel from the chuck.



Apply a coat of Renaissance Wax, wait about

	<p>30 seconds and buff the piece out on a clean buffing wheel.</p>
 <p>Then wait about 15 minutes, apply a second coat of Renaissance Wax and repeat the final buffing process.</p>	 <p>This photo shows all of the hardware included with a Baron pen kit. The four parts shown at the bottom of this photo will not be used and may be discarded or saved as spares.</p>
	<p>Put a drop or two of medium thick CA down the center of the finished lower barrel, and drop in the tension spring.</p> <p>Let the CA dry thoroughly before going further in the assembly process.</p> <p>Finally, assemble the pen as you normally would.</p>
 <p>And here is the finished Rollerball Baron in Tulipwood.</p>	

Photos courtesy of Arizona Silhouette.