

24 kt Classic Twist Pen Kit - Instructions

Kit Features :

- Heavy 24kt plating
- Pen constructed to be similar in appearance to classic Parker® writing instruments
- Overall length 5-1/2"
- Smooth operating doubletwist mechanism
- No notch needed for pocket clip
- Uses Parker® type ball point refill

Pen Parts:

See step 9

Step 1 - Cut wood blanks

From 5/8" or larger square stock, cut blanks to the length of each tube plus 1/8" (approx. 2-1/8"). Grain should run lengthwise.

Step 2 - Drill the wood blanks

Bore a centered hole lengthwise through each blank. Drill carefully since excessive pressure may cause the drill bit to wander and/or split the blank. Slow the feed rate and back the bit out repeatedly for chip removal. For best results - use a 8mm HSS drill bit or letter O size bit.

Step 3 - Glue the tubes into the blanks

Apply epoxy or a gap filling cyanoacrylate (super glue), to the tube and insert into the blank with a twisting motion. This will spread the glue evenly. Center the tube within the blank and allow to dry.

Step 4 - Square the ends

With a disc sander or other sanding device, square the ends of the blanks 90 degrees to the length of the brass tubes as needed. A barrel trimmer will also do an excellent job to square the ends by hand.

Step 5 - Turn the wood blanks

There are three different bushings needed to properly turn the Classic Pen. A wide bushing at the cap end, a narrow bushing at the tip end, and a center bushing. The proper bushings have been made to give you a "template" to help turn the pen blanks accurately. This pen may be turned one section at a time, or both pieces mounted side by side on a long mandrel.

Step 5 - Turning the pen cap and body:

Mount the wide bushing, one wood blank (to become the cap) and center bushing on the mandrel as indicated in Diagram A. . When using a short mandrel, only one half of the pen is turned at a time. Note that the center bushing has

two shouldered diameters made to match the wide and narrow bushings. When using a short mandrel tighten the nut snugly against the bushing and bring the tailstock center firmly against the dimple in the end of the mandrel. Use the same procedure for the pen body.

When using our long mandrel, the second wood blank should be mounted next to the center bushing, and the third (narrow) bushing mounted last. (See Dia. A) Make sure that the center bushing is positioned properly to turn the cap and body to different diameters matching the outside dimensions of the bushings. The cap is the wider, and the body is narrower. For the best results, the blanks must be turned to the exact diameter of the bushings. After final turning and before finishing, a tenon must be cut in the cap to accommodate the center band.

Step 5a - Turning the tenon:

The diameter of the tenon should match the narrow diameter of the center bushing. To ease the turning of the tenon, slide the center bushing off the mandrel and turn it around 180 degrees. Next, slide the center band onto the bushing (flat end towards the wood) and replace it on the mandrel as indicated in Diagram B.

The length of the tenon can be approximately 1/4" which is about 5/32" less than the width of the center band. This is done to allow the pen body to inset into the center band when closed. When ready for the final cut, slide the center band from the bushing onto the tenon to test for fit. The proper diameter for the pen cap body should be the same as the outside diameter of the center band. When the proper fit is obtained, move the band away from the wood and finish the blank. You may then permanently mount the band by adhering with a drop of glue. (See Step 9 h) NOTE: When turning this blank near the center bushing, use a small piece of tape to secure the center band to the bushing so it does not spin and possibly hit your turning tool.

Diagram A

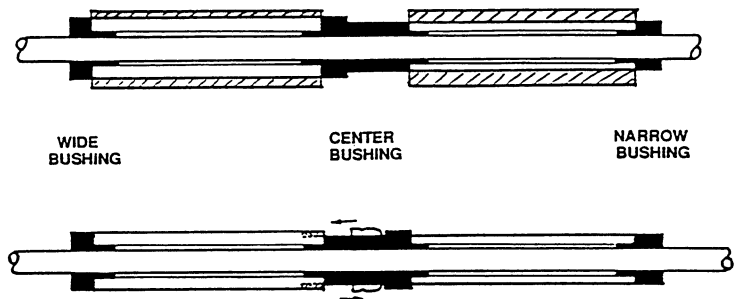


Diagram B

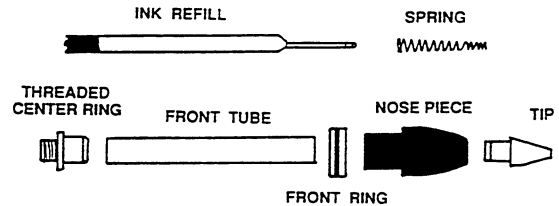
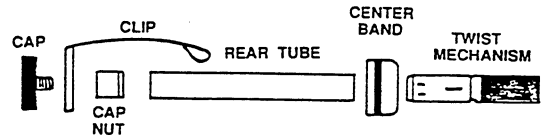
Step 9 - Pen Assembly :

Step 6 - Sand

As with any sanding, progress through a range of grits. The type of wood used and the quality of the beginning surface will dictate your selection:

- 80-100 grits if rough surface or additional shaping is needed (overly thick)
- 120-150 grits if fairly smooth and straight
- 220-240 for final finish with most domestic woods
- 320-400 especially on dense or oily exotic woods

Scotch Brite® is helpful as it doesn't tend to scratch. Sand with blank spinning. For initial shaping, stick a piece of sandpaper on a board the width of each tube; use this to remove any hills or valleys. Final sanding with the grain (lathe off). To obtain a flush fit with the pen hardware, sand to the exact diameter of the bushings. A little heavier look is possible by leaving more material.



Step 7 - Finish

Try a finish of your choice but be careful if brushing on a poly, etc. as you can stick the tube, bushings, and mandrel together. The following friction polish works well on most woods:

1/3 wood alcohol (methanol), 1/3 white or clear shellac, 1/3 boiled linseed oil.

Mix equal parts of three ingredients in a bottle and shake before using. Apply with a rag to the spinning tube. Keep rag in contact with work to build up heat, thus sealing finish. Apply two coats.

Step 8 - Touch up

With tubes off mandrel, lay them end to end to decide how to arrange the pen body to look best with the cap when assembled. Remember, they will be 1/8" apart (due to center ring) so minor differences won't show. If necessary, a light sanding of the ends on a block will square the ends and improve the fit during assembly.

General Assembly hints:

- Use a clamp or vise with wood jaws to press parts together, squeeze slowly to avoid splitting wood.
- If all mating wood parts are turned correctly, assembly is relatively simple.
- Any parts that do not fit tightly on the cap or pen body may be glued.

- Align pen parts according to the diagram above.
- Thread the cap into the hole in the clip and tighten with the cap nut, leaving the tapered end exposed.
- Press the cap/clip assembly into the short pen blank opposite the tenon.
- Press the twist mechanism (brass end last) flush into the opposite end of the same blank.
- Slide the front ring on the nose piece and insert into the front tube - press together.
- Insert the tip into the nose piece and press together.
- Insert the threaded center ring into the opposite end of the pen body leaving the threads exposed; press together.
- Glue the center band onto the tenon you cut in the pen cap body making sure you place the squared end against the wood.
- Slide the spring on the pen refill tip and insert the refill into the pen body. Push the two pen halves together aligning grain as desired. The pen is operated by twisting the halves in opposite directions to extend or retract the point.

If the pen point is not retracting smoothly, try to stretch the spring and retry.

Note: If the mechanism does not fit tight enough in the tube, you may use a dot of glue on the silver section of the mechanism to secure it in place. Do not glue the brass section.