

Model # PKMINI

24 kt Mini Key Chain Kit - Instructions

Kit Features :

- Heavy 24kt plating
- Simplified construction through the use of two identical length brass tubes
- Overall length 3-1/4"
- Smooth operating twist mechanism

Step 1 - Cut wood blanks

From 1/2" or larger square stock cut blanks to the length of the tube plus 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 7mm HSS drill 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 7mm barrel trimmer will also do an excellent job to square the ends by hand.

Step 5 - Turn the wood blanks

Install the blank on a turning mandrel with the appropriate bushing on each side. Tighten the nut snugly and bring the tailstock center firmly against the end of the mandrel. Turn or file the diameter down to any shape that your creativity dictates. For best results, turn the ends of the tubes down to be the same as the diameter of the bushings.

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 1-1/4" wide 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 (21/64"). 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. 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 the three ingredients in a bottle and shake before using. Apply with a rag to the spinning tube. Keep the rag in contact with the wood to build up heat, thus sealing the finish. Apply two coats.

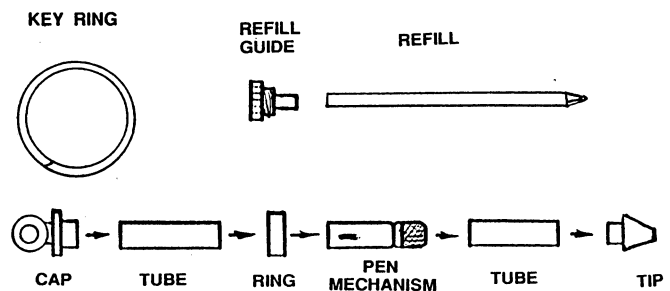
Step 8 - Touch up

With the blanks off the mandrel, lay them end to end, to decide which sets will look best 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.
- Front and rear tubes are identical; they may be made in advance and then mixed and matched.

Step 9 - Pen Assembly



- Align pen parts according to the diagram above.
- Press tip into the end of one tube.
- Press pen mechanism (brass end first) into opposite end of same tube (usually to indentation in the silver section). Test after the refill is inserted, don't push too far! The pen mechanism cannot be easily removed.
- Slide ring over mechanism to the point where it comes in contact with the front tube.
- Press cap into the remaining tube, and thread the key ring through the hole in the cap.
- Insert the refill guide into the refill, and slide this into the front tube screwing the guide into the pen mechanism.
- Push two halves together aligning grain as desired. Operate the pen by twisting the halves in opposite directions to extend and to retract the point.

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