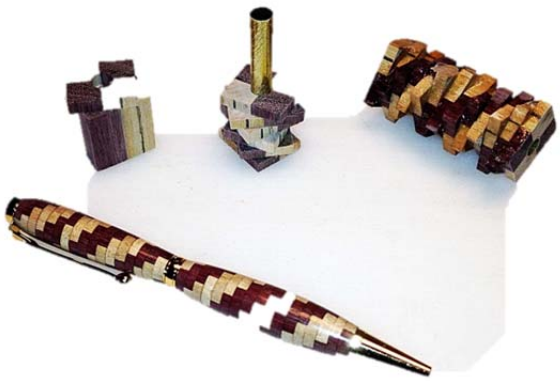
Turning a segmented pen



Discussion:

Making a segment from strips of contrasting woods requires careful milling and preparation of the stock. Also a table saw fixture is needed to safely cut the thin slices safely; the strip cannot be "trapped" by the saw when cut.

Assembly onto the pen kit's brass tube demands precision but is not time consuming.

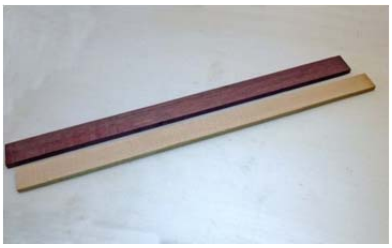
The assembled pen blanks should be carefully turned until they are round to avoid splits or blowouts.

Materials for a 7 mm slim line pen:

- Pen kit with 2 each 2.125 bras tubes
- Two contrasting species of wood ripped to ½ inch square and a minimum of 24 inches long
- Thin cyanacrylolate (CA) instant bonding glue, and medium thickness CA glue
- PVA yellow wood glue
- Clamps for gluing
- Chuck for on-lathe drilling of the blanks
- 7 mm drill bits
- Nitrile gloves
- Materials for turning and finishing the pen

Process:

1. Prepare stock
    a. Cut two species of wood to 5/8 square and a minimum of 24 inches in length
    b. Mill accurately to square



    c. Glue and clamp

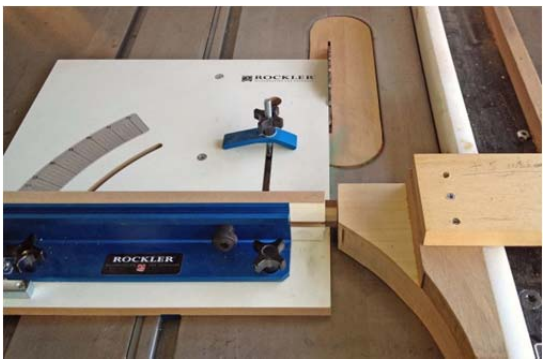
d. When glue is dry, cut the strip in half

e. Clean surfaces and re-glue the two sections reversing the colors
f. When glue is dry, re-mill stock to 1 inch square

2. Cut into sections and drill
    a. Cut the glue up into shorter section that can be drilled with your 7 mm drill bits.
        i. (Suggestion if you choose to drill with a longer bit, start the hole with a stubbier one than change bits half-way through.)

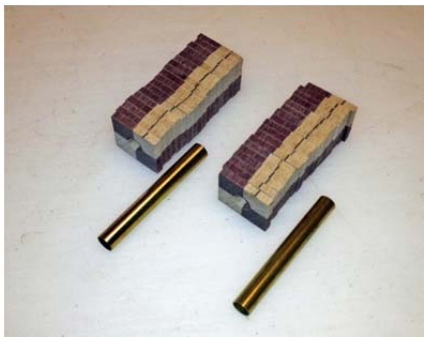
3. Slice the glue up into thin section
    a. Mark a line on one face of the light colored species 1/8 inch from the face. Do this on all glue ups before cutting in to slices

b. Prepare a cutting sled to safely slice thin section safely
    i. The cut off should fall free from the saw blade
    ii. Use a zero clearance throat plate
    iii. Cut with a 60-80 tooth finish cut blade recently sharpened



c. Slice thin sections
    i. Section 1/8 to 3/16 will be attractive
    ii. Clamp the glue up to the cutting sled to keep fingers safely away from the cutting are
    iii. There will be a stub of glue up wood wasted from each cutting that will be discarded

    iv. Sand the faces of each slice to remove any saw blade marks.



4. Prepare the turning blanks
    a. Rough the surface of each brass tube with 60-80 grit sandpaper to increase the “tooth” of the glue to be used

    b. With nitrile gloves and the medium CA glue, add the first slice to the end of the first brass tube; Assure that it is well attached and the glue is dry.
    c. Place the second slice on the same tube using the pencil line to rotate this slice a specific amount
    d. With the thin CA glue tack one corner of the added slice in place.

e. Repeat with each additional slices until the brass tube is filled.

f. Lay the filled tube on its site on a protected surface and flood it with the thin CA glue. Rotate the tube 90 degree and flood it again. This will lock all the slices into permanent place.

g. Sand the ends of the tubes square until the shiny ends of the brass tubes are visible.

5. Turn and assemble the pen
   a. Assemble the two blanks on the pen mandrel and carefully turn the blanks round.
   b. Complete the desired shape and sand.

6. Finish the turned blanks with a friction polish, spray lacquer or a CA finish. Penetrating oil finish is not recommended.
   a. Assemble the pen as described in the kit instruction sheet.