**Brickwork Style Segmented Pen**

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# **Key Points:**

1. **Wooden-Segments -** Use Straight-Grained wood that will contrast with the Veneer. Segments should be ¾” square and 3/16” thick with a double layer of Veneer in the center. *See directions below.*
2. **Veneer –** Use a double layer of Veneer and cut ¾” square. *See directions below.*
3. **Wooden Band –** Add a matching wooden band (3/4” square, 3/16” to 3/8” thick) and toss out the one that comes in the Slimline kit.
4. **Bottom Blank –** Make the bottom blank 2 3/8” long which will improve the over-all look of the pen. Custom cut 7mm pen tubes to 2 3/8”.
5. **Prepare Blanks** – See directions below for preparation details. Make sure the blanks have been flooded with Thin CA Glue and allowed to dry.
6. **Barrel Trimming** – Take it slow and gentle. Don’t be aggressive in your cuts.
7. **Turn Pen** – Turn the top and bottom portions of the pen using a Mandrel and Slimline bushings. Take it easy—don’t be aggressive. Remember this is a segmented pen and is relatively fragile. Add additional Thin CA glue as needed.
8. **Finish** – Plan to use a CA Finish for the pen. The CA used in the glue-up and turning will not be visible after the Finish is applied.

# **Wood Segments:**

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| Prepare Blank:   1. Start with a ¾” thick board that is sanded on both sides. 2. On Bandsaw, re-saw the board into (2) 3/8” thick pieces. 3. Glue boards together:    1. Flip boards so sanded side is to the middle    2. Glue boards with 2 sheets of veneer between them.    3. Clamp and let dry 4. Cut into ¾” square lengths |  |
| Cut and drill   1. Cut into 3” lengths 2. Drill a 7mm hole through blank making sure to clear the chips frequently. |  |
| Cut Segments   1. Use cutting jig on a Tablesaw with a zero-clearance insert. 2. Segments should be about 3/16” wide 3. Carefully cut segments using the hold down for safety. |  |
| Lightly sand Wood-Segments   1. Lightly sand wood-segments to insure they are flat. |  |
| Drill and cut a band to be used instead of the Slimline Band. *Tip: Use the same jig and approach as you used for cutting the wood-segments. Band should be of contrasting wood and can be anywhere from 3/16” to 3/8” thick depending on your design preference.* |  |

# **Veneer Segment Preparation:**

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| Glue (2) 8”x10” sheets of Veneer together. Use a Veneer that will contrast with the wood on the pen blanks. |  |
| Use the jig to insure accurate registration between the sheets. Place another sheet of plastic on top, weight and allow to dry |  |
| Cut Veneer into ¾” strips (to match width of segments) and jig. |  |
| Bundle Strips together – *Tip: Use 2 thin strips of wood (1/8” thick, ¾” wide) and bundle the strips between the wood strips and then tape that.* |  |
| *Use as many strips of veneer as needed to match the height of the jig (typically 6 veneer strips and 2 wood strips).* |  |
| Carefully register the veneer strips in the jig and drill a 7mm hole through the wood strips and veneers. |  |
| Move jig to the Bandsaw and cut out a square of veneers. *Tip: Drill 1 square and then cut it on the bandsaw. Then register the veneer in the jig again and repeat the drilling and cutting process.* |  |
| Bag Segments and Veneers   1. 18 Wooden Segments 2. 16 Veneer Segments |  |

# **Glue-up the Pen Blank**

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| **Organize all of your materials:**   1. Nitrile Gloves 2. Med-thick CA Glue 3. Thin CA Glue 4. 18 Wood-segments 5. 16 Veneers 6. 1 Wood Band 7. 2” 7mm Pen Tube (*for top of pen)* 8. 2 3/8” 7mm Pen Tube (for point of pen) |  |
| **Glue-up the Pen Top Blank first (2” pen tube)**  Use Med-thick CA Glue and glue the wooden band on the tube. |  |
| Add a wooden-segment and then drizzle some Thin CA to lock it to tube and blank below. |  |
| Add a layer of Veneer and then more Thin CA |  |
| Next add another wooden-segment but rotate 90o and more Thin CA. |  |
| Continue adding layers of Veneer and Wooden-segments and gluing with Thin CA (rotating each wooden-segment 90o ) until tube is completely covered. |  |
| Flood the blank with Thin CA glue and then let dry |  |
| **Glue-up the Pen Point Blank first (2 3/8” pen tube)**   1. Start with a Wooden-Segment and Med-Thick CA 2. Add a Veneer and use Thin CA 3. Add a Wooden-Segment and rotate 90o, use Thin CA 4. Repeat Steps 2 & 3 until blank is completed 5. Flood blank with Thin CA and then led dry |  |