**Mount Diablo Woodturning Center**

**Slimline Pens – Joel Albert**

**Random Thoughts and Directions:**

1. **Everything I am going to tell you is probably wrong, but it works for me--usually!**
2. Pen making is **addicting**! Plan on making a bunch! The more you do, the better you get.
3. I **hate** the center-band in Slimline pens—my first step is to always toss it in a box hoping I will figure out a good use for it someday.
4. Once you **get rid of the center-band** you have many more options for how to design your pen. You need to size the dimensions of the pen to match the Point and the Cap of the pen—what happens in between is up to you.
5. I like to have the Bottom section of the pen (with the Point) longer than the Top section. Usually, I make this section 2 3/8” long and custom cut pen tubes to match. Occasionally I have gone to 2 ½” if it strikes my fancy.
6. My focus has been on **wooden** pens, I will leave it to others to discuss acrylics and other materials.
7. I tend to have about 5 different designs and normally have something in mind before I make any cuts, glue, or drill.
8. For Slimline pens, I prefer blanks that are **5/8” x 5/8” x 5”** since this gives me plenty of width to work with. In a pinch (or if I am feeling cheap and want to get extra blanks), I use blanks as thin as **½”**
9. I use the same kind of wood for the Bottom and Top of the pen—although for highly figured burls, not necessarily from the same blank.
10. Usually I start by choosing a **contrasting** wood and make my own center band, unless I decide to choose a similar tone or even skip the band entirely.
11. I vary the width of the wooden bands to match how I want to design the pen. Usually it varies from 1/8” to 3/8”.
12. Once I have the band (or decided to skip it), I use it as a spacer to cut the Top of the Pen to a combined length of **2 1/8”**. After that I cut the Bottom of the pen, normally to **2 ½”.** This will give me blanks that are **1/8”** longer than the pen tube provided in a Slimline kit and the custom cut pen tube.
13. I always glue up the Top Blank and the center band and let dry for at least 30m before drilling
14. Some equipment I really like:
    1. I love the **Pen jaws** *(*[*Nova 6034 Pen Jaws*](http://www.amazon.com/NOVA-6034-Plated-Standard-Twist/dp/B00KTJN2RU/ref=sr_1_1?ie=UTF8&qid=1436387814&sr=8-1&keywords=teknatools+pen+jaws)*)* on my Nova chuck and highly recommend a solution that allows you to drill on the lathe.
    2. **Pen State Mandrel Saver** (*Item#* [*PKMSTS2*](http://www.pennstateind.com/store/PKMSTS2.html)*)* really helps to improve holding the pen blanks and bushings on the mandrel. There is also a good package deal on a Pen Mandrel and Saver to consider. *(Item#* [*PKMS2SET)*](http://www.pennstateind.com/store/PKMS2SET.html)*.*
    3. Another great innovation is the **Penn State Pen Blank Squaring Jig** (*Item#* [*PKSQUARE*](http://www.pennstateind.com/store/PKSQUARE.html)*)*—it allows me to accurately flatten the blanks in relation to the pen tubes and is not affected by blanks that aren’t square or flat.
15. **Bushings work great as spacers**—for accurate dimensions **use a dial caliper** and the parts from the pen kit.
16. **Don’t rush turning the pen!** Think about how it flows, who is going to use it, how thick it should be, and how it will look when assembled.
17. **I spend more time sanding and finishing the pen than I do turning it!** 
    1. Normally, my first sanding is at 150 grit – always making sure to get any circular sanding marks.
    2. Next a Sanding Sealer, usually Shellac unless it’s a light colored wood and I am trying to preserve its color. In that case, I use a thin coat of Thin-CA glue (without BLO).
    3. Then I sand back the sealer with 150 and make sure I have a clean surface. Porous woods like walnut may need another coat of shellac and sanding before moving on.
    4. Then I move through the grits, 220, 320, 400, 600 and 0000 Steel Wool.
    5. Lastly, I carefully apply a Thin-CA and BLO finish, normally 6 coats, no sanding in between.
18. I let the finish dry for at least 24 hours (well at least 4 hours) before buffing with Tripoli, White Diamond, and Carnuba Wax.
19. I made myself a quick jig (3/4” block of wood) that helps me quickly figure out how far to press in the Pen Transmission given that the blank is longer than normal.