



## Tutorial for the “The Morning After”

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Many pen turners have asked me about my segmented pen designs. I wrote this paper to help illustrate exactly how I go about creating these wonderful pens. In this example, we’ll look at how I create a design called The Morning After.

### Supplies and Equipment

The consumable supplies you’ll need to begin this project are:

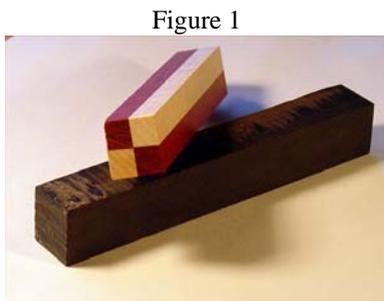


Figure 1

- Two checkerboard blanks (*figure 1 shows Blood wood and Curly Maple*)
- One black blank (*see figure 1*)
- One pen kit
- 2 sets of tubes for the pen kit (1 for the pen, 1 for temporary use)
- Medium CA glue and optional accelerant
- Variety of sandpaper grits

I assume you have the following equipment in your shop:

- Miter saw
- Belt sander
- Mini lathe
- Drill press and bit(s) appropriate for your pen kit

I also assume you’ve created other pens and have some experience in this area.

Now that we’ve got the equipment and materials together, let’s make a pen!

### Steps

To begin with you will need to drill both the checkerboard blanks as well as the ebony blank as deep as your drill press will allow. It is critical that you drill the checkerboard blanks as close to center as possible. (*see figure 2*) Drill one end of each blank with the proper size drill bit for your kit choice.

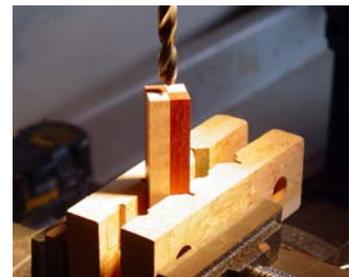


Figure 2

Now take your drilled pen blanks with you to the miter saw. Before we cut, let’s take a quick look at a jig that I use. As you know it is extremely difficult to make small cuts on a miter saw.

Figure 3



After a lot of trial and error I have finally figured out a way to use my miter saw to make very small and consistent cuts without much of a waste factor. (see figure 3) I have taken a piece wood and clamped it to each side of my saw blade. The distance between the boards where the blade drops will only allow the blade to go through the gap. This is also known as a “zero clearance fence”.

For this particular design I have an 11.25-degree angle cut on the end of the wood to allow for the blade to travel at the angle I have chosen. I then have a second piece of wood that I have precut an 11.25-degree angle in the opposite direction clamped over the wood on the right side of the blade. This is what I call my “rest board” since the piece I am cutting will rest against the end of this piece of wood. Not only will the blank being cut rest against it but the 11.25-degree cut edge of the blank will actually rest inside the cut angle to help secure it during and after cutting. (see figure 4) When making these very small pieces on the miter saw, it is helpful to NOT bring the blade of the miter saw up while it is still in motion, rather turn off the power to the blade after the cut then move the blade up and out of the way. Otherwise you may be picking up very small wood scraps from all over the shop.



Figure 4



Figure 5

Now let’s start cutting! As I make my cuts I like to have a pen tube near me so that after I cut any particular piece I can slip it on the tube. Let’s go ahead and cut all of the ebony pieces first so that they are ready to be added to the puzzle when needed. (see figure 5) Be sure to cut these pieces at an 11.25-degree angle as well otherwise they won’t rest flush on the cut checkerboard pieces. *Don’t forget that you will need three pieces straight cut for the ends of the blank.*

At this time you should hopefully have no less than 10 slivers of the dark contrasting wood cut (three straight cut and seven at a 11.25 degree) and resting on your workbench next to the pen tubes. No pen tubes sitting there? Ok. I’m going to take a break while you go get them. You will find this very helpful when keeping your cuts in order.

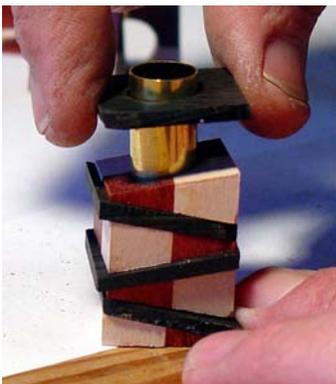


Figure 6

That was fast! Too fast! Now that we have our ebony cut, let’s go ahead and start cutting our checkerboard blanks.

Rest your checkerboard blank against the rest board and make your first cut. Insert this on your tube as your base and add a piece of the dark wood that is cut at an 11.25-degree angle. Flip the blank over and make another cut being careful that the cut end of the blank is resting at the end of your rest board. (see figure 4) Now stack this cut blank on your tube upside down. In other words, make sure that opposing colors are resting on each other. Continue this process until you have the tube completely covered. (see figure 6)



Figure 7

Repeat this process with your second drilled blank and tube. (*see figure 7*) While cutting the blanks be sure to keep track of the depth of your drilled hole. You will have to drill again so be sure to leave enough drilled hole to guide your bit.

If everything went as planned you should now have two unglued puzzle-looking blanks sitting on your workbench ready to be glued. Now all you have to do is take your two puzzles apart and remake them, gluing as you go. I have a second set of tubes sitting there so that I can pull one piece off one tube and glue it together on the other tube. I find this a much faster and more efficient way to do it. So.....feel free to go find another set of tubes as I get the Medium CA and sandpaper ready for you.

I am in the habit of sanding all of my tubes with 120 grit sandpaper to help the CA bond to the tube.



Figure 8

As you take one piece of wood off the first tube go ahead and glue it to the wood on the second tube. As you do your gluing and stacking be sure that all the lines line up in your design. (*see figure 8 & 9*)

Note that I am doing my glue up on a pad of paper. When you are done gluing your blanks you will be able to tear the sheet of paper off the pad with the blank glued to it. Then just tear the paper off the blank. I use this method whether I am building a segmented blank standing up on the tubes or laying on it side.



Figure 9



Figure 10

After I have my blank completely glued up I spray with an accelerant to speed the CA glue curing process up. (*see figure 10*) This way I can sand and turn the blank in a few minutes instead of having to wait until tomorrow. You'll find that after you make a segmented blank that you can't wait to see what the final pen looks like.

Once we have completed our first blank we will proceed on to the second blank building it the same way we did the first.



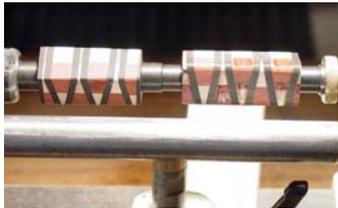
Figure 11

Now we use a belt sander to sand all the sides flat and remove sharp corners of our modified blanks. (see figure 11 &12) This seems to help eliminate blowouts on the segmented blanks.



Figure 12

We are now ready to put our blanks on the lathe so that we can turn, sand and finish them.



Ready to turn



Play time



Ready to sand and finish

Now we just assemble the pen as we would any other kit.

That's it. Very easy and it makes a truly amazing pen. It's a fun design and easy enough to make so do some experimenting with this one.

Have fun and I would love to see what you come up with. Please send me pictures at [sales@mckinneypens.com](mailto:sales@mckinneypens.com) sometime.

Checker Board blanks can be purchased at <http://www.woodpenblanks.com/>

**Here are some examples of pens that I have made using this technique.**  
These designs include The Morning After, The Grand Illusion,  
Surely you Jest, and Ace of Spades.

