



# Making a Segmented Pen Blank

by Frans Brown

Have you ever been intrigued by segmented turning but never got around to it? Here is a project that is much simpler than laying out a larger bowl or vessel project, but still packs the wow factor.

Begin by choosing 4 contrasting woods of similar density.

Prepare the 4 pieces of wood by cutting to 12mm square and twice the length of your proposed pen blank.

(Figure 1). Sand on at least 2 adjacent faces, keeping square to each other (90 degrees).

It is best to glue up in stages as this helps keep alignment of all 4 sections. First apply good wood glue along one complete face of a cut strip and carefully adhere it to another strip keeping it perfectly aligned, secure with several clamps. Repeat this process with the other pair of strips. When you have two pairs of strips securely bonded to each other sand the faces to be joined to maintain a flat surface and bond the two pairs together. Allow to dry. (Figure 2)

You should now have a square sectioned blank made up of your 4 chosen woods.

Mount the now square composite blank in suitable chuck jaws and using a drill

chucked in the tailstock, carefully and slowly drill all

the way through. A small smaller starter drill is a good idea, as when using various wood types they will not all be of equal hardness and with

a glue centre the drill will easily wander. Finish drilling with the correct size wood drill necessary for your proposed pen tube. Mark the lightest coloured wood from one end of the blank to other, this will help identify

placement of the sections after they have been cut. Cut cross sections from your blank at 3 to 5mm intervals either on a fine tooth



Figure 1



Figure 3

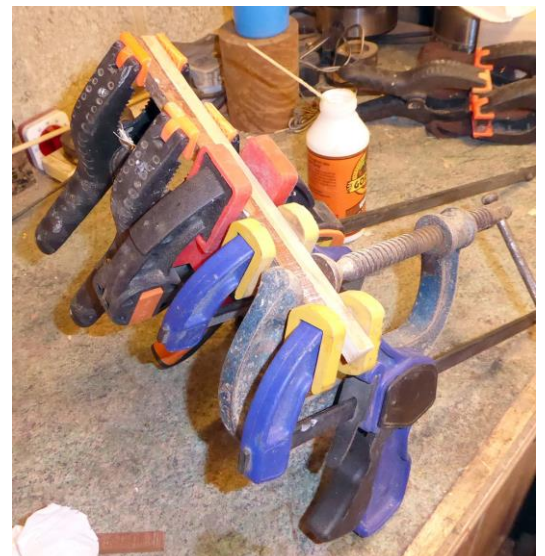


Figure 2



bandsaw or a thin kerf table saw. Using a cutting sledge helps greatly with this task. (Figure 3) Remember when calculating the length of blank for your proposed project that the number of cut sections times the thickness of your saw kerf will give you the amount of material that will be lost, add around 25% to allow for loss. Keeping the orientation and placement of the cut pieces, carefully sand the freshly cut faces if you want to keep your joints tight when assembled.



Figure 4

on each subsequent section keeping the rotation consistent throughout the blank.

Holding the now twisted sections with tube inserted carefully add thin cyanoacrylate (superglue) to the entire exposed surface, holding together tight and turning the blank as the adhesive penetrates throughout the blank. Once the glue holds the blank together securely, set it aside to harden (Figure 5).



Figure 6

(figure 7). Completion with a polished cyanoacrylate (super glue) finish will work well.

This method of making a segmented blank makes striking and appealing blanks in as many colour combinations as you can think of, putting a new dimension to your pen turning, but don't just stop there, using this technique many types of segmented blanks using all sorts of materials can be made for almost any project.

Gluing the sections to each other can be done in several ways. I have found the quickest way to bond the sections together is to assemble in a clamp with a plastic sheet protecting the clamp jaws at each end. (Figure 4) It is best to keep the cut sections in their original order after cutting so as to maintain any grain alignment. Insert the pen tube into the sections and prepare to clamp the cut sections together ensuring there is sufficient section material beyond the length of tube for final facing. The sections should all be in the same orientation as if they had not been cut. Carefully rotate each section a few degrees from the next, repeat



Figure 5

The assembled blank can now be end faced, preferably by sanding square to the face, as a barrel trimmer would likely break out the short grain. Before attempting to turn the blank, sand the outer diameter until roughly round by carefully holding against a sanding disc. This helps eliminate major chip out, which is likely when beginning to turn a blank of this type with so much unsupported end grain (Figure 6) Use the assembled segmented blank as you would any normal blank, you will be surprised how strong it is



Figure 7