

## How I Make a Celtic Knot Pen Blank



One of my most popular Youtube videos is one I did in 2014 while I was experimenting with making a Celtic Knot pen. It shows how I make a blank out of a piece of Walnut and an off cut of Sycamore, and prepare it for turning. The process is quite simple and good results can be accomplished if care is taken to ensure accurate cuts.

I had a couple of initial failures but consistent success was achieved with the use of a simple jig.

The jig comprises of a base board with a runner to suit the band saw mitre slot glued and nailed to the underside. The board is left a little wide so when the runner is located in the mitre slot, the edge of the board can be trimmed to exact

size on the saw, creating a zero clearance jig.

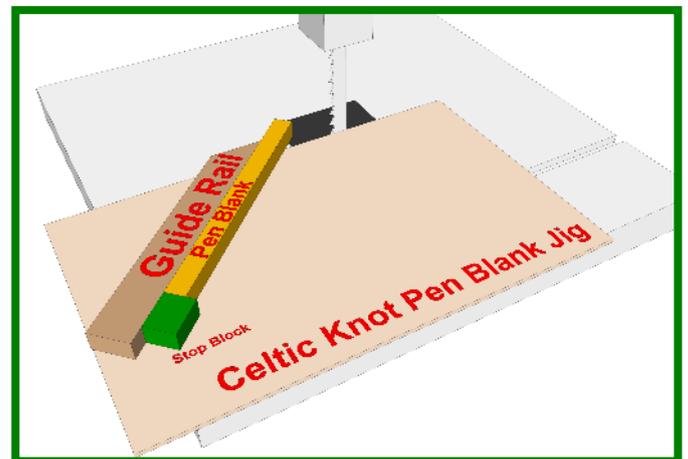
Mounted to the top of the board is a simple guide rail, set at approximately 45 degrees from the line of cut. This is to locate the pen blank at a consistent angle for all the cuts. A block of scrap wood is used as a stop block to control the pen blank length wise.

The pen blank is placed against the guide rail and the place where the Celtic knot is going to be produced should be aligned up to the saw blade. The stop block can now be adjusted to the rear of the pen blank and secured to the jig. I used a couple of screws for this.

### THE BLANK.

Although the size of the blank doesn't have to be exact, what is very important is that the blank be as square as possible (all sides exactly the same size and corners at 90 degrees).

When the blank and jig are ready, the first of 4 cuts can be made. Place the blank in the jig and firmly push it towards the stop block to ensure correct positioning. It might be easier to clamp the blank to the guide rail. Then to make the cut just ease the jig



forward and let the blade cut the blank almost BUT not all the way through. Leave about 2-3mm (1/8") of the blank uncut. Pull back the jig and switch off the saw.

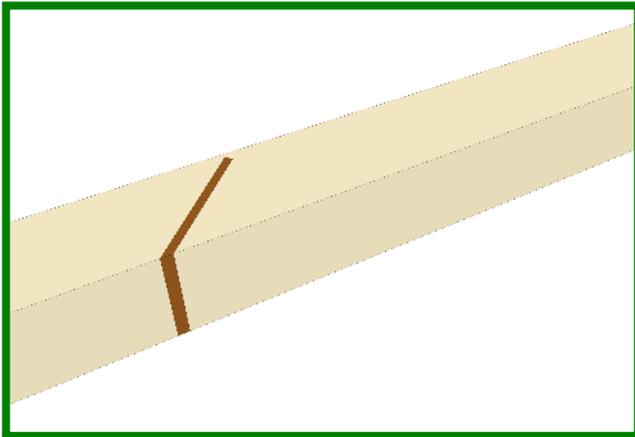
## THE INSERT STRIP.

The next step is to cut some thin slices of a contrasting wood exactly the same thickness as the kerf you've just cut in the pen blank. This will become the insert material. I use the band saw fence but you could use a table saw with zero clearance plate and a thin strip jig.

The strip needs to be a tight fit into the kerf cut without distorting the blank. The idea is to glue in the strip with some clamping pressure without bending the blank.

A few attempts might have to be made before getting the thickness of the strip spot on but it's well worth the effort to get it right. Once you have your setup dialled in, cut several more slices, you will need at least 4 but I recommend cutting several more for that 'just in case' situation.

## THE GLUE UP



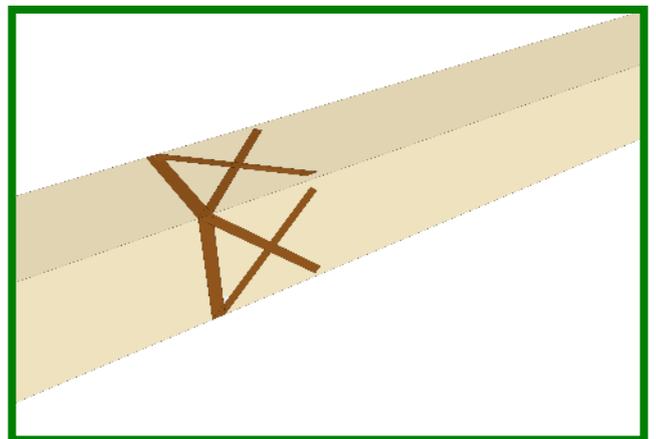
Now everything is ready for part one of the glue up. Add a good quality glue to the kerf cut, I use a clean hacksaw blade to spread the glue into the narrow kerf. Don't skimp on the glue. I also add glue to the insert strip for good measure. Then push the insert strip into the kerf cut, moving it around to ensure good glue coverage. When the strip is fully inserted, add a clamp to the ends of the blank and apply a little pressure. Mop up any squeeze out and put aside to dry.

Once the glue has dried sufficiently, any squeeze out and excess wood needs to be removed with a chisel and sandpaper to retain the square profile of the blank.

Then the blank needs to be put back in the cutting jig but rotated 90 degrees to cut a new face.

The process of cutting the kerf and gluing in the insert strip is repeated on all 4 sides, being patient and allowing the glue to dry between cuts is a must, otherwise the blank could fall apart on you during the cutting.

Once the blank is finished and cleaned up it can be used like a normal pen blank, except



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for one thing, the hole for the brass tube must be cut very accurately down the centre of the blank. I use the pen jaws in my lathe chuck to ensure the hole is as centred as I can get it. If the hole is a little bit out, the rings in the knot will not be even and will look lop sided.

Now the pen can be turned, sanded and finished to make a lovely one of a kind pen.

