








# Inlaying a Celtic Knot in a Pen Blank

## Keys to Inlaying a Celtic Knot

- 1. Squared blanks** -- For Celtic Knots, it is important that the blank be as square as possible and the top and bottom cut and squared as well.
- 2. Dimensions** -- For 7mm pens (e.g. Slimline, Designer/Euro etc.) blanks should be **5/8" x 5/8" x 5"** – going larger is generally a waste of material.
- 3. Blade Kerf**--The material you inlay must match the kerf of the blade used to make the cut. Measure this in a scrap piece of wood before proceeding. *Kerf for the Small Bandsaw in class will accommodate 2 standard sheets of veneer (or 2 pieces of 26 gauge metal).*
- 4. Inspect Blank** -- Take a moment to inspect the blank and decide where you want to place the knot and how long it should be.
- 5. Setup Jig** – Use a simple jig that attaches to your Bandsaws Miter Gauge to accurately make the Inlay Cuts.
  - Setup a stop on the jig so that you can accurately register the blank for each cut. *Set to 1/2" on the jig used in class.*
  - Adjust the length of the knot by changing the angle of the Miter-gauge. ~~Smaller~~ **Greater** the angle the longer the knot will be. *Jig in class is set to 37° which will give a knot about 1" long. Setting to 20° will make the knot ~~longer~~ shorter, setting to 50° will make it shorter longer.*
- 6. Inlay Cuts** -- Celtic Knot requires 4 inlay cuts using the following sequence for each cut.
  - Place blank in jig and register against the stop.
  - Make cut – do not cut all the way through, leave about 1/16" uncut.
  - Glue inlays (wood glue for veneers, epoxy for metals) into cut. Trim inlay as required for accurate gluing.
  - Use gluing jig and a clamp to allow the glue to dry (about 25 **minutes**).
  - Trim inlay so blank is again square. Sharp chisel works well for veneers, Bandsaw for cutting aluminum veneer. **(Be sure to support the aluminum against a ridged backing such as plywood for support.)**
  - Rotate blank for next cut.
- 7. Turning** – The Celtic Knot inlay can be a bit delicate so a light touch is required. *Tip: Use some thin CA glue to strengthen the knot and re-apply as you continue to turn the section down. Complete pen with a CA finish.*

## Notes:

<p>Jig to accurately cut a Celtic Knot using a <math>37^\circ</math> angle, attached to my bandsaw's miter gauge.</p>	
<p>Blank ready for the 1<sup>st</sup> cut. Small clamp is acting as a stop to insure accurate registration.</p>	
<p>Don't cut all the way through the blank, leave about 1/16" of wood to insure accurate gluing.</p>	
<p>Best to have inlay pre-cut to match the width of the blank. In this example the inlay is 1 piece of veneer and 1 piece of 26 gauge aluminum. Glue-up will use a 5m epoxy. <i>Previously measured to match the kerf of the Bandsaw blade.</i></p>	
<p>Gluing jig to insure an accurate glue-up. <i>Jig is waxed to avoid gluing the blank to the jig.</i></p>	
<p>Trim inlay so blank is square.</p>	
<p>Ready for the next cut.</p>	

Rotate blank and repeat process – a total of 4 cuts are required.



Completed Blank – Note, both sides of each X should line up on each side of the blank. The bottom of the Celtic Knot cuts should also line up and form a continuous line across each side of the blank.

