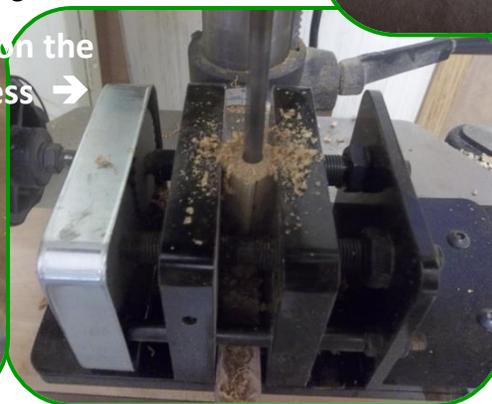
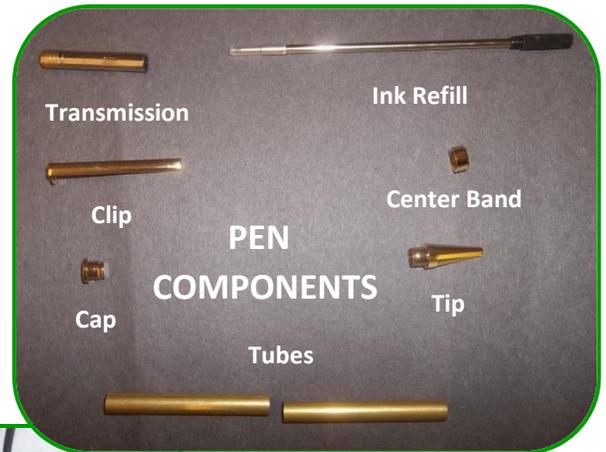


SEPTEMBER 2014 DEMONSTRATION

PEN TURNING WITH BOB IRELAND

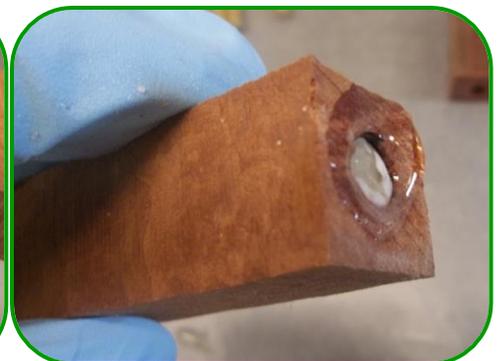
In his Powerpoint presentation about making pens, Bob Ireland explained his membership with the Pen Makers Guild and the International Association of Penturners. He started by talking about different kinds of pen materials such as wood material from trees, vines, bushes, cacti, or gluing up several woods into a pen blank for turning. The wood grain, color, and texture patterns in curly, spalted, or exotic woods and burls were described as being prized by penturners. Other materials like acrylics, plastics, metals, antler bone, grasses, corn cobs, and plywoods were offered as potential materials for pen blanks. The various parts of pen hardware were described and examples shown.

The first step in pen making is to select the pen materials and mark the parts so that pens with two turned parts will match up with grain and coloring after they are both turned. After marking the center point on the pen blank, drill out the blank for the metal tube using a brad point drill bit on either the lathe using a pin chuck or on a drill press using a blank holder. Match the drill bit size to the metal tube for the pen (such as a 7mm) and make the blanks slightly longer than the tube in case there is tear out when drilling.



The second step is to glue the metal tube into the drilled blank using polyurethane or epoxy glue. Put wax paper on your workbench so the blank does not get glued to the bench. Sand the outside of the metal tube so that it will bond with blank material. Put potato or dental wax into the end of each metal tube so that glue

does not get inside the metal tube. Rotate the metal tube with glue on it as you insert the tube into the blank to make sure glue bonds both pieces completely together. Hold the metal tube inside the wood blank using small rubber bands so the tube does not creep out as the polyurethane glue expands. [**Editor's Note:** You can also use CA glue.]



The next step when the glue is dry is to remove the end plug and trim the end of the blank until the metal is shiny and the end is square. Use a barrel trimmer and sanding jig on a disk sander to get a clean end of the blank before turning. Then mount the blank on the mandrel with bushing appropriate for the pen kit you are using (see manufacturers directions and specifications). If the pen kit includes two blank parts, try mounting both on the same mandrel using a spacer bushing or with a wood spacer block.



Blanks on Mandrel with Center Bushing
With Wood Spacer to Replace Center Band

Turn the pen blanks at high speed and use a roughing gouge or bowl gouge to get general desired shape and then use fine cuts with a skew or gouge to get final shape. Starting cut from center outwards to reduce tear out on end of blank. Leave slightly more wood on the blank than bushing diameter to allow for some sanding. Use sharp tools and shape carefully to minimize the sanding time.

Sand carefully and slowly (to minimize overheating the blank) starting with 220 grit and going up to 2,000 or 4,000 grit to get a polished finish. Be careful not to sand the bushings as the copper material may stain the wood blank and turn black when the finish is applied.



Finalize with Bowl Gouge or Skew



Sanding
Remove Tool Rest for Safety

Finish the blank using wipe on polyurethane, enduropoly, CA glue, boiled linseed oil, or any finish of your choice. For example, finishing with boiled linseed oil and then applying CA glue on a second coat can make curly and unusual grains stand out. Always dry the piece thoroughly between coats and resand with 12,000 grit sandpaper before applying another coat. Up to three coats maybe necessary to get durability and good definition in the wood grain.



Homemade Assembly Jig



FINISHED

Assemble the pen parts with slow and even pressure using your drill press or lathe to get good alignment and fit. Follow the directions from the pen kit manufacturer for transmission depth and other factors as this affects how the pen point protrudes from the housing for writing.

Submitted by *Chad Dawson*
Photos by *Bob Ireland*