

Pen Turning - The Important Steps

There are a myriad of pen kits available to the woodturner, the ones I use regularly all come from Axminster. I always buy quantities more than 10 to get discount, AND spend over £45 to get free postage. The product codes are Biro (310490), Pencil (310493), Roller Ball (810116), and Fountain Pen (500171). Rollerball, fountain pen, and ANY kit that uses tubes other than the standard 7mm will need additional non standard bushes on the mandrel. I use these kits because spare tubes are readily available. You may find that you drill a blank then glue a tube in, only to find that the wood has a flaw which only shows after you start turning. You then either throw away the kit, or have a spare tube to hand to put into another blank.

Blank cutting - 3/4" or 1" square, length = 2 tubes plus 1/4". Add a witness mark across the centre of the blank **BEFORE** cutting it in half.

Jacobs chuck in headstock, 7mm drill for biro/click pencil, 10mm drill for roller ball/fountain pen. Live centre in tailstock. Lock banjo in correct position to avoid live centre and drill bit making contact with each other. Blank held in pump pliers. Check grain alignment. Centre point all 4 ends. **Always drill from end to centre.** Acrylic blanks **ALWAYS** drilled with blank in chuck and Jacobs chuck in tailstock. Mark length of blank on drill bit. Regular clearing of drill flute. Take great care at point of break-through. I do not recommend Colt drills, they are too long and flexible

Glue tubes into blanks with Titebond Polyurethane. Slip-Lock superglue also good **but** tubes need to be roughed up a bit first. Leave glue to set for 4 or 5 hours before turning. Titebond part number at Axminster is 212513 but it is available via many other suppliers.

Next bit of kit is a pen mandrel. Most important that the description says "universal" or "adjustable length". It will be supplied with standard 7mm bushes. see Axminster part no. 211322 or 211323 (1 or 2 MT), £33.30 each. Also see Stiles and Bates, £23.00 each (also buy the pair of spanners for that one). Best I know is the Planet mandrel from Norfolk Saw and any other Planet supplier, don't know what the current price is. The tubes in the blanks are straight, but are square and parallel to nothing, so mount blanks on mandrel **with witness marks together**, use skew to turn into the round, about 20mm diameter. If you are not happy using a skew, use a spindle gouge (but the skew will give a much better and consistent finish). **Put the witness marks back on.**

Mount blanks in chuck, trim ends flush to the tube ends with a concave undercut using point tool. Pen trimmers are expensive (£25) and do not stay sharp for long. Prime purpose of this and the previous step is to ensure that the ends are trimmed square and flush back to the tube ends.

Mount blanks back on mandrel (witness marks together) to turn down to final size and shape. Ends of blanks need to be cut down to match the spacer bushes. Various shapes work, barrel, straight, bullet. final stage of acrylic turning is to plane a smooth surface with the edge of the point tool from Ashley Iles, do not know current price, I got mine direct from John Berkeley.

Sand wood from 240 to about 400 or 600 grit, acrylic to 12000 grit (**YES, twelve thousand grit**).

Clean mandrel bushes with thinners. Dirt on bushes will bleed into the wood when the sealer is applied

Finish wood with sealer / friction polish / Carnuba Wax. Finish acrylic with burnishing cream only. When you take the pen barrels off the mandrel, take great care to keep them in the correct orientation, you have now lost your witness marks.

Assemble the pen. A pen press is an expensive luxury (£42.00), and a completely versatile press already exists in every turners workshop (the lathe). I use 2 hard wooden plugs turned to 2MT taper to fit into the lathe and a small metal bracket with a magnet attached. Always press wood with metal and metal with wood. Pen kits are supplied with instruction sheets to show method and order of assembly.