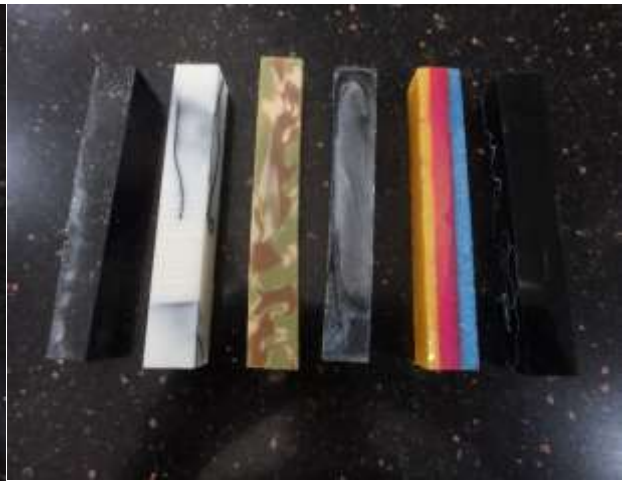
Southern Turners Project Sheet

Jeff's Jazzy Pen's

A selection of turned acrylic pen's



Acrylic Blanks bought and home made

Here is a list of tools and materials required for acrylic pen turning.

- Lathe and turning chisels
- Pen Mandrel
- Pen Kit, this will include all the hardware required for the pen including the brass tubes
- Drill bit which is different for each pen type
- Bushes required for your particular pen to turn your material to size
- Pen Reamer which is required to square the pen blank to the edge of the brass tube
- GA Glue / Super Glue to adhere the brass tube into pen blank
- Pen mandrel saver
- Sand paper around 80 grit to rough the brass tubes to adhere to the pen blanks
- Acrylic blanks
- Sanding process requires 150, 240, 400, 600 then micro mesh ranging from 1500 to 12000

Acrylic or wooden pen turning is virtually the same process except for the final sanding.

Step 1. Pen Preparation

All pens have different size brass tubes and different drilling requirements. The blanks can be bought from Carbatec or Timberbits from $3.50 to $5.00. or you can make your as shown later.

I will be showing the Slimline and Sierra pen. The mechanisms cost $2.80 for slimline and $10.90 for the Sierra from Timberbits.

Timberbits also has pen turning instructions for all their pens.

Cut your pen blanks about 3 - 4mm. longer than the brass tubes.

Drill the required hole which is 7mm. for the 7mm Broad pen or slimline kit and the Sierra pen requires a 10mm hole.

You can use the pen chuck jaws or a drill press will also do the job.

Rough the brass tubes up with 40 or 80 grit paper, then glue the tubes with superglue or any other appropriate glue.

Once the glue has dried you need to use a pen reamer to square the blank pen to the edge of the brass tube.

Cut Blank 3 – 4 mm longer

Drill required hole using pen jaws

Use reamer to square pen blank

Step 2. Lathe turning

Place your pen blanks onto the pen mandrel which cost between $10 to $16, and using the required pen bushes which cost between $5.00 and $7.50.

You can use a tailstock live centre or a Mandrel Saver, with the mandrel saver you do not need spacers if you are only using one blank as in a Sierra pen.

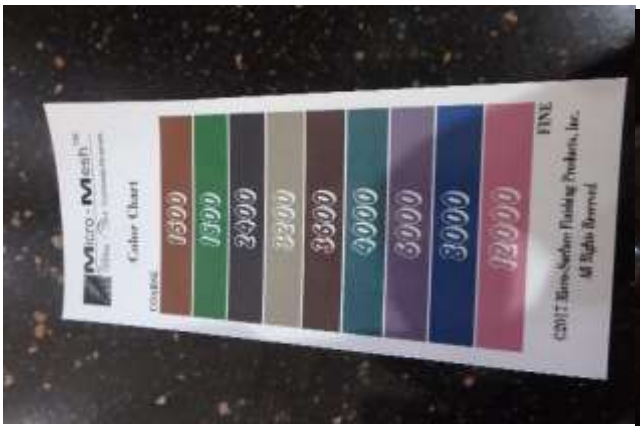
Turn the acrylic blank down to the shape you want using whatever tool you are comfortable with.

Use a lathe speed of about 1800rpm.

Step 3. Sanding

Once the pen is turned to your required shape then the sanding is required which is now different than the wood version.

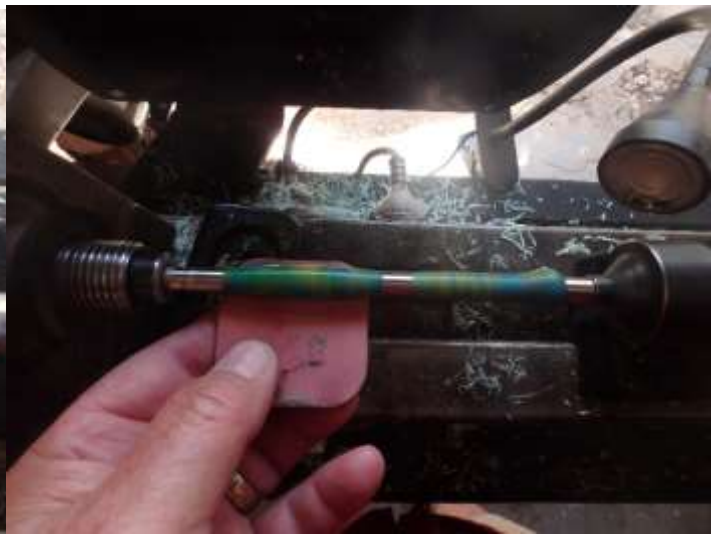
I use the normal grit paper 150 to 600 grit, then I use the micro mesh paper which goes from 1500 to 12000 grit. I normally use water with the micro mesh, others use it dry and the most important part about polishing is not to apply a ton of pressure, sand very lightly.



Micro Mesh chart

Turned pen before sanding

After normal sanding 180 to 600 grit



Using micro mesh sanding with water

Step 4. Pen Assembly

For the Slimline pen press the writing tip into the lower tube, then press the twist mechanism into the opposite end with the brass end first and press until chrome meets the end of the tube.

Slide the centre band over the twist mechanism.

Press the clip and cap assembly into the top end of upper tube, then slide the upper top over the twist mechanism, pen is now complete.

The Sierra pen assembly is somewhat simpler.

Press the cap into brass tube, then assemble the lower half of the pen by inserting the refill into the writing tip then screwing on the mechanism onto the writing tip.

Push the lower half of pen into the brass tube by hand. You can disassemble by hand to change refill.

How to make your own mould (eye protection and gloves required)

You can buy one from Timberbits for around $37.50 or make your own using Pinkysil from Adelaide Mouldings.

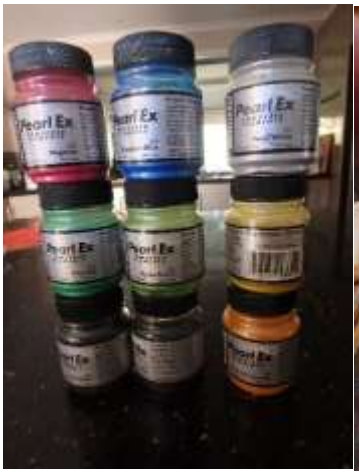
Homemade & timberbits Mould

Home made mould using Pinksil

Different types of Epoxyl

Once you have a mould, the next step is using the epoxy and powdered pigments to make your desired colours. The epoxy usually takes 24hrs. to set. I purchased the pigments and casting epoxy from Adelaide Mouldings in Edwardstown the street north of Bunnings. I have also used Megapoxy from Vilicity Engineering, Thebarton thanks to Gerry which I believe gives a higher gloss, more experimenting required.

The pigments range from $4.50 to $12.00 which is shown below. I use the end of an ice cream stick in a cup of 30 ml. of epoxy which seems to work for me.



I have gained my pen making knowledge from fellow club members Lloyd and Gerry who are great pen makers and Tom has interment knowledge on the use of different Epoxy's.