

# PROJECT PEN KITS



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AXMINSTER

woodturning

## Artisan Click Pencil Kit - 24kt Gold

Code: 310493



## WHAT'S REQUIRED

Bushing Set: **8.5 mm O/D**  
(as supplied with mandrel) (100793)

Drill Bit Size:  
**7 mm**

Minimum Blank Size:  
**16 mm x 16 mm x 112 mm**

## PREPARING THE BLANKS, HINTS & TIPS

Preparing a wooden or acrylic/polyester blank for a pen mandrel.

1. Cut a blank to the length of each tube plus approximately 2.5mm to allow for trimming and squaring off the ends.
2. Mark the centre on the end of the blank.
3. Using the recommended drill bit, drill a hole lengthwise through the blank.
4. Apply epoxy glue, Polyurethane glue or gap filling cyanoacrylate (super glue) to the tubes.
5. Insert the tube into the blank with a twisting motion to spread the glue evenly inside the hole.

6. Centre the tube lengthwise inside the blank.
7. Allow the adhesive to cure.
8. When cured, square the ends of the blank. Using a barrel trimmer with a guide matching the inner diameter of the tube or a universal pen blank squaring jig with a disc sander.
9. Take the excess material down flush with the ends of the brass tube. (do not trim beyond the length of the tube since this may interfere with operation of the mechanism and assembly).

### Tips/Hints

- If using a wooden blank, draw a short pencil line lengthwise across the centre of the blank. This will help maintain grain alignment when mounting the blanks onto a mandrel.
- Excessive pressure may cause the drill bit to wander and/or split the blank. Slow the feed rate and back the drill bit out repeatedly for chip removal.
- Roughen the brass tube slightly with abrasive for better adhesion.
- Certain acrylic blanks are more transparent than others, especially lighter colors or blanks with light colored swirls. To avoid the risk of the brass tube showing through the pen blank, paint the tubes white or black before gluing them in.
- The barrel trimmer guide also cleans any adhesive that may have gotten inside of the tube.

## TURNING THE BLANK, HINTS & TIPS

1. Mount the bushings and blanks onto a pen mandrel according to the diagram (If using a wooden blank, check the grain alignment).
2. Secure the bushings and blanks onto the mandrel.
3. Slide the tailstock with a live centre into place against the mandrel and lock in position. This is for support; only slight pressure is required.

4. Using sharp tools, turn the blanks down to become the Upper Pencil Barrel and Lower Pen Barrel with profiles of your choice.
5. Turn the blanks very slightly oversize, then sand and polish the ends down to the same diameter as the bushings.
6. Using successively finer abrasives gradually sand and polish both Pencil Barrels.

7. Finish both Pencil Barrels with your preferred choice of polish.

### Tips/Hints

- Don't be afraid to sharpen frequently especially when turning acrylics.



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## ASSEMBLY, HINTS & TIPS

1. Layout parts according to diagram A, ensuring the turned Barrels are the same orientation as when mounted on the mandrel.

**Hint:** When removing the blanks from the mandrel, mark the inside of each tube where they join to maintain grain alignment, if using a wooden blank, during assembly.

2. Insert the Cap Retainer into the Clip and press the Clip Retainer through the Clip into the top of the Upper Pen Barrel.

3. Carefully align the Coupler with the bottom of the Upper Pen Barrel and press home

4. Press the other end of the coupler into the top of the Lower Pen Barrel.

5. Take the Pencil Mechanism, remove the Cap from the end.

6. Remove the Eraser and gently shake out the Lead.

**Note:** This is quite fragile and should be carefully kept aside until all 'work' has been completed.

7. Carefully insert the Pencil Mechanism into the bottom of Lower Barrel. When it impinges on the Lower Barrel; press the Pencil Mechanism firmly into the Barrel.

**Note:** it may not be possible to press the Mechanism fully 'home' into the Lower Barrel, as the length of the Mechanism itself may hold it off. A small packing piece with a hole to accept the upper end of the Mechanism or a small tube to fit over the tip of the Mechanism to enable it to be pushed 'home'.

**Note:** It is suggested that the tip of the Pencil Mechanism is not rested against a 'hard' surface as this is liable to damage the tip and the lead will not feed through.

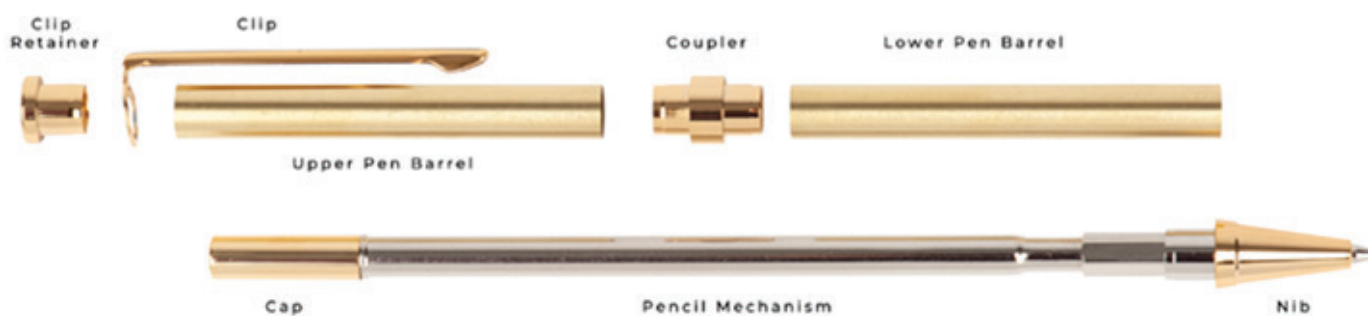
8. Carefully feed a lead into the Mechanism, replace the Eraser and the Magazine Cap/Push Button.

9. Holding the pencil upright with the tip 2 or 3mm above a surface, press the button repeatedly until the lead appears at the tip. If there is too much lead extended, holding the button depressed will allow the lead to be pushed back into the pencil. The lead will lock as soon as the button is released.

### Tips/Hints

- Use a woodworking vice, one handed bar clamp, arbor press or a dedicated pen press.
- Press parts together slowly and steadily
- When pressing the parts together, CHECK the parts are correctly aligned with each other and straight. If the part is crooked or misaligned, it will result in a poor fit.

## DIAGRAM A



Visit the Knowledge blog 'How To Make A Pen' for hints, tips and videos  
[knowledge.axminstertools.com/pen-turning](http://knowledge.axminstertools.com/pen-turning)



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