

# PROJECT PEN KITS



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AXMINSTER

woodturning

## Stylish Twist Pen Kit - Gold

Code: 504634



## WHAT'S REQUIRED



Bushing Set:  
**701605**

Drill Bit Size:  
**8.5 mm**

Minimum Blank Size:  
**16 mm x 16 mm x 85 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 the 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

- 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 Pen 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 Pen Barrels.

7. Finish both Pen 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 the parts according to diagram A.
2. Align the top of the Pen Barrel with the Pen Clip/Retaining Bush (Internally threaded), and gently but firmly, press the Bush home.
3. Screw the Twist Mechanism into the Pen Clip/Retaining Bush, and gently overtighten (to hold the Twist Mechanism in firmly).
4. Carefully align the Top Cap over the Twist Mechanism and press firmly together.

**Note:** It may help if a piece of paper is put between the Clip flange and the Top Cap when they are pressed together to maintain a minute clearance and prevent the twist action from binding. Leave the paper in situ, pro tem.

5. Screw the Threaded Brass Bush and the Nib together.

5. Align the assembly carefully with the bottom of the Pen Barrel and gently but firmly press together.

**Note:** It may help if the Threaded Insert Bush is unscrewed a half turn, before pressing in that way, the Nib will always be able to be tightened up to the body.

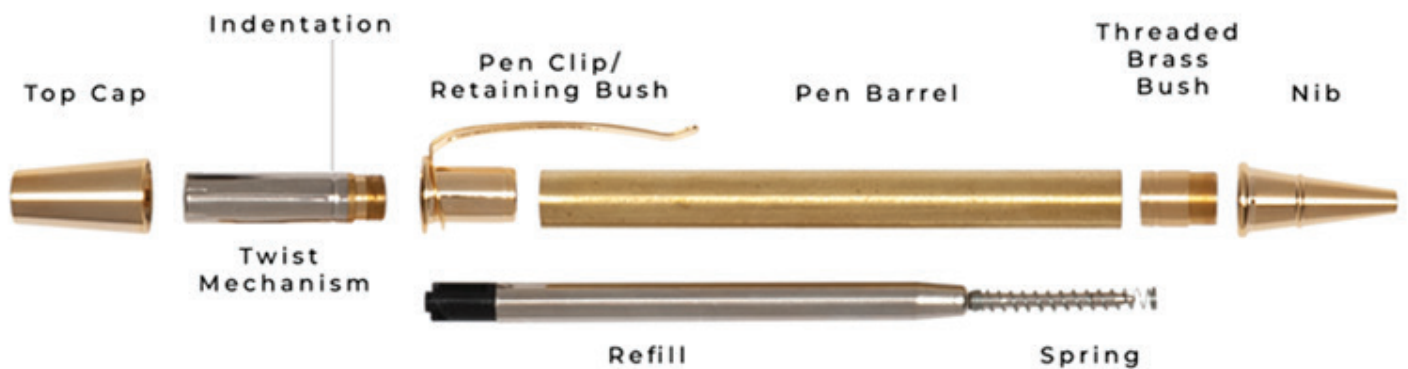
6. Unscrew the Nib, insert the refill, overcome the spring pressure and screw the Nib back onto the body.

**Note:** If as in Note one. a paper spacer was put between the Top Cap and the Clip flange, gentle exercising of the twisting action should allow the paper spacer to be worked free.

### 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 or render the pen unuseable.
- When laying out your pen barrel with the parts, pay careful attention to keep the pen barrels in the same orientation as when on the mandrel. i.e. a pen barrel may have a "top" and "bottom", now is the time to be certain of the orientation.

## DIAGRAM A



Visit the Knowledge blog 'How To Make A Pen' for hints, tips and videos  
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