

PROJECT PEN KITS



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AXMINSTER

woodturning

Americana Twist Pen Kit - 10kt Gold

Code: 800382



WHAT'S REQUIRED

Bushing Set:
310382

Drill Bit Size:
8 mm

Minimum Blank Size:
16 mm x 16 mm x 115 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. Decide which blank will become the upper Pen Barrel and which the lower.
2. Add the small diameter bush first followed by the blank chosen to be the lower Pen Barrel
3. Add the centre bush complete with the Sizing Ring followed by the blank chosen to be the upper Pen Barrel.
4. Finally add the larger diameter bush.
5. Secure the bushings and blanks onto the mandrel and 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.

6. Using sharp tools, turn the blank chosen to be the lower Pen Barrel to the profile of your choice with each end the diameter of the bushes.
7. Turn the blank chosen to become the upper Pen Barrel to the profile of your choice with the ends matching the outer diameter of the Sizing Ring and large diameter bush.
8. Finally move the Sizing Ring out of the way and turn a 3mm long 'step' on the lower part of the upper Pen Barrel the same diameter as the centre bush. Use the Sizing Ring to achieve a tight fit.

9. Turn the blanks very slightly oversize, then sand and polish the ends down to the same diameter as the bushings.
10. Using successively finer abrasives gradually sand and polish both Pen Barrels.
11. Finish both Pen Barrels with your preferred choice of polish.

Tips/Hints

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



Continues over...

ASSEMBLY, HINTS & TIPS

1. Locate the Threaded Bush for the Clip Retainer.
 2. Ensure it is aligned with the top of the Upper Pen Barrel and press into place
 3. Introduce the Clip Retainer through the Clip and screw into the Threaded Bush.
 4. Locate the Decorative Upper Band and using a few drops of CA glue for added security, press the Decorative Upper Band over the stepped section of the upper Pen Barrel. Ensure it is fitted the correct way around. (the butting face has a chamfer on the inside edge).
 5. Introduce the Nib Assembly through the Decorative Lower Band carefully align the Nib Assembly with the bottom of the Lower Pen Barrel and press firmly together.
 6. Press the Centre Joining Bush into the top of the Lower Pen Barrel (with the threaded section outward).
 7. Screw the Twist Mechanism onto the threaded portion of the Centre Joining Bush.
 8. Introduce the Twist Mechanism into the Upper Pen Barrel, ensure both Barrels are aligned and press together. Press until the Decorative Upper Band covers the ring of the Centre Joining Bush.
 9. The protrusions on the Twist Mechanism will provide sufficient anchor to hold the Upper Pen Barrel in place and activate the Twist Mechanism to extend and retract the Refill.
 10. Unscrew the Upper Pen Barrel (the Twist Mechanism mounting thread) and separate the two parts.
 11. Introduce the Refill with Spring into the Twist Mechanism, feed it into the Lower Pen Barrel and screw the two parts together again.
 12. Overtighten slightly, (to prevent the pen unscrewing when extending or retracting the Refill)
- Note:** When taking the pen apart to replace the Refill the two halves must be unscrewed and not pulled apart.

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 barrel may have a "top" and "bottom", now is the time to be certain of the orientation.

DIAGRAM A



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