# PROJECT PEN KITS





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## **Letter Opening Kit**

Code: 700297



**Bushing Set:** 

95119ž

Drill Bit Size:

7.5 mm

Minimum Blank Size:

19 mm x 19 mm x 50 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, minus approximately 4mm.
- 2. Using the recommended drill bit, drill a hole lengthwise through the blank.

**Note:** This kit requires 5mm of the tube remains exposed at the blade end of the handle, mark with a pencil.

When inserted into the blank this will leave approximately 1mm of the blank at the other end to allow for trimming.

**3.** Apply epoxy glue, Polyurethane glue or gap filling cyanoacrylate (super glue) to the tube.

Insert the tube into the blank with a twisting motion to spread the glue evenly inside the hole up to the 5mm mark.

- 4. Allow the adhesive to cure.
- 5. When cured, square the top 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.
- 6. Take the excess material down flush with the end 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 blank onto a pen mandrel according to the diagram.
- 2. Secure the bushings and blank 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 blank down to become the Letter Opener Handle with the profile of your choice.
- 5. Turn the blank 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 the Letter Opener Handle.
- 7. Finish the Letter Opener Handle with your preferred choice of polish.

#### Tips/Hints

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



## **ASSEMBLY, HINTS & TIPS**

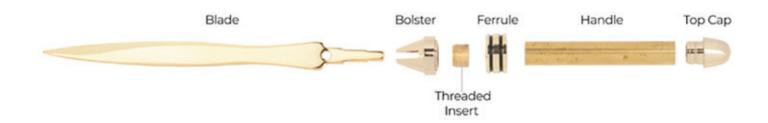
Layout parts according to diagram A.

- 1. Introduce the End Cap into the top of the Handle. Using the 12.1mm Bushing to safeguard the protruding tube; press the End Cap into the Handle.
- 2. Introduce the Handle Ferrule onto the protruding brass tube, carefully press/push the Ferrule onto the Tube and up against the Handle.
- **3.** Introduce the Threaded Insert into the Brass Tube and press home.
- **4.** Pass the tang of the Blade through the Blade Ferrule and screw into the Threaded Insert in the Handle.
- **5.** Ensure the locating ring on the Blade Ferrule is aligned with the recess in the Handle Ferrule and tighten firmly.

## 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



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