

## DESIGNER PEN

### Instructions

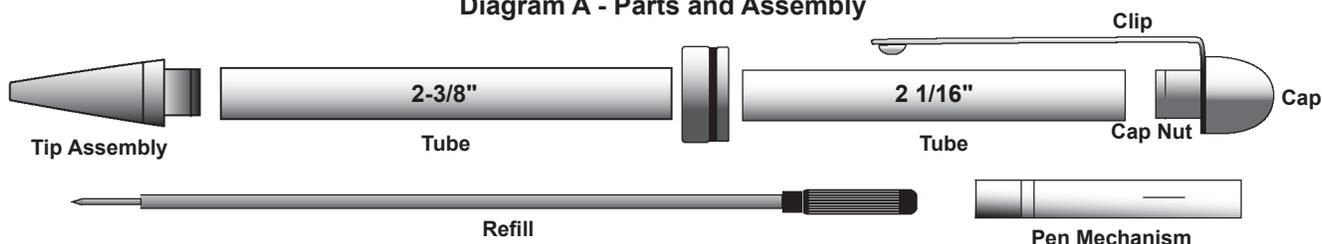
#### Kit Features

- Larger and more substantial than the Slimline pen
- Shows off the wood in a way a smaller pen cannot
- Elegant and distinctive--a very popular showpiece!
- Uses Cross® style ballpoint pen refill (RE-CROSS)

#### Required Accessories & Materials

- 7mm mandrel
- 3-pc. Designer bushing set (EUROBU)
- 7mm drill bit (DB7MM or DB7MMCT)
- 7mm barrel trimmer or belt sander to square the ends of the blanks to the tubes
- Glue (We recommend the thick "gel" CA glue—GTHICK2)
- Sanding and finishing supplies

#### Diagram A - Parts and Assembly



#### BLANK PREPARATION

The tubes in a Designer pen are of different lengths. The lower tube, which holds the pen tip and twist mechanism, is 2-3/8" long. The upper tube is 2-1/16" long. **Cut** your blanks approximately 1/16" longer than the tube to allow for squaring with the barrel trimmer. If using wood blanks, mark the blanks so it is easier to keep the grain running in the same direction when you place them on the mandrel for turning. Use a medium drill speed to **drill** the blanks. Raise the bit from the wood every 1/4" to 1/2" to allow the chips to clear from the flutes of the drill bit. Don't force the drill bit; use an even pressure and let the bit do the work. After drilling the blanks, **sand** the exterior of the brass tube to roughen its surface and use a CA **glue** to insert the tube inside the blank. Sand or barrel trim to **square** the ends of the blanks.

#### TURNING THE PEN

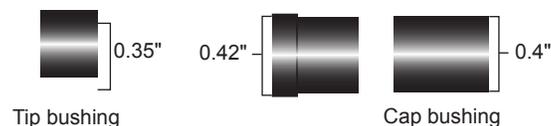
**Set up** the mandrel as shown in Diagram C. Slide the tip bushing on the mandrel followed by the lower (longer) barrel and the center bushing with the larger end toward the tip. You should slip on the center band or optional EUROBUX Center Band Sizing Sleeve, square end toward the cap. Then slide the upper (shorter) barrel and the cap bushing on the mandrel. **Turn** the barrels using the outside diameter of the center band to guide you on the diameter of the upper barrel. **Cut** a tenon on the upper barrel by making a mark 7/32" from the end and use your parting tool to cut the tenon down to the diameter of the bushing. Slip the center band over the tenon occasionally as you work to ensure you have a close fit. Make sure the edge of the tenon is a sharp 90-degree angle.

#### ASSEMBLY

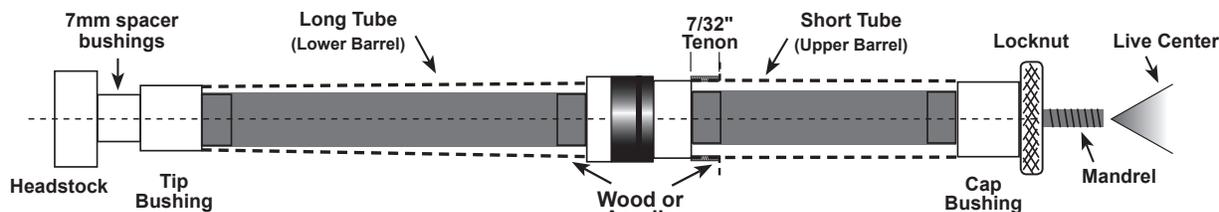
(Line up finished parts according to Diagram A)  
*To avoid damage to components when assembling, use a vise with covered jaws or one of WoodTurningz' pen presses.*

1. Press the cap nut, tapered end first, into the narrow end of upper barrel.
2. Put a drop of glue on the tenon, slip the center band on, and let it dry.
3. Push the threaded post on the upper cap through the hole in the clip and screw it into the cap nut.
4. Press the tip into the narrow end of the lower barrel. Press the twist mechanism into the opposite end of the lower barrel. **Note:** The line on the mechanism is only a guide. Pressing it too far may cause your pen not to fully retract. Press the mechanism in, then screw the refill in and check it. Take the refill out, press a little more, and check it again. Repeat this until the fit is perfect.
5. Insert the refill through the upper end of the twist mechanism and screw it in.
6. Push the barrels together.

#### Diagram B - Bushings



#### Diagram C - Turning the Pen



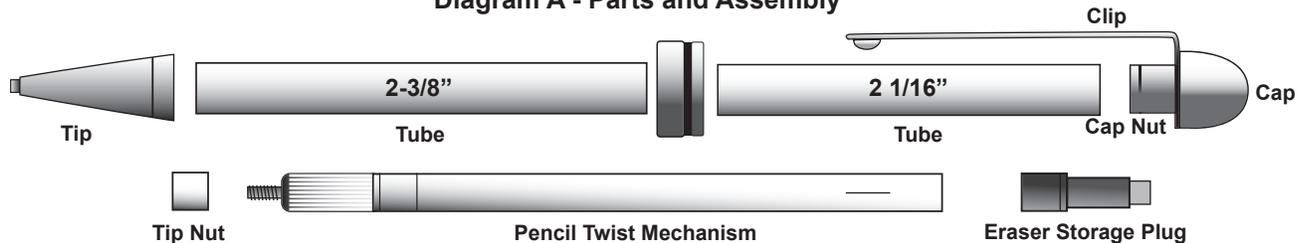
#### Kit Features

- Larger and more substantial than the Slimline pencil
- Heavy duty .7mm graphite lead
- Overall length: 5-1/2"

#### Required Accessories & Materials

- 7mm mandrel
- 3-pc. Designer bushing set (PKMONT-BU4)
- 8mm drill bit (DB8MM or DB8MMCT)
- 8mm barrel trimmer or belt sander to square the ends of the blanks to the tubes
- Glue (We recommend the thick "gel" CA glue—GTHICK2)
- Sanding and finishing supplies

Diagram A - Parts and Assembly



#### BLANK PREPARATION

The tubes in a Designer pencil are of different lengths. The lower tube is 2-3/8", and the upper tube is 2-1/16". **Cut** your blanks approximately 1/16" longer than the tube to allow for squaring with the barrel trimmer. If using wood blanks, mark the blanks so it is easier to keep the grain running in the same direction when you place them on the mandrel for turning. Use a medium drill speed to drill the blanks. Raise the bit from the blank every 1/4" to 1/2" to allow the chips to clear from the flutes of the drill bit. Don't force the drill bit; use an even pressure and let the bit do the work. After drilling the blanks, **sand** the exterior of the brass tubes to roughen their surface and use CA glue to **glue** the tubes inside the blanks. Sand or barrel trim to **square** the ends of the blanks.

#### TURNING THE PEN

**Set up** the mandrel as shown in Diagram C. Slide the tip bushing on the mandrel followed by the lower (longer) barrel and the center bushing with the smaller end toward the tip. You should slip on the center band, square end toward the cap. Then slide the upper (shorter) barrel and the cap bushing on the mandrel. **Turn** the barrels using the outside diameter of the center band to guide you on the diameter of the upper barrel. **Cut** a tenon on the upper barrel by making a mark 7/32" from the end and use your parting tool to cut the tenon down to the diameter of the bushing. Slip the center band over the tenon occasionally as you work to ensure you have a close fit. Make sure the edge of the tenon is a sharp 90-degree angle.

Diagram B - Bushings



#### ASSEMBLY

(Line up finished parts according to Diagram A)  
*To avoid damage to components when assembling, use a vise with covered jaws or one of WoodTurningz' pen presses.*

##### Upper Blank

1. Press the cap nut, tapered end first, into the narrow end of upper barrel.
2. Put a drop of glue on the tenon, slip the center band on, and let it dry.
3. Push the threaded post on the upper cap through the hole in the clip and screw it into the cap nut.

##### Lower Blank

1. Press the end nut (recessed end first) flush with the tapered end of the blank.
2. Insert the pencil mechanism into the opposite end of the blank and push the threaded end through the hole in the end nut.
3. Tightly screw on the tip on the exposed threads. Push the barrels together to assemble the pencil.
4. The pencil operates by twisting the ends to extend or retract the lead.

#### REPLACING YOUR LEAD

1. Pull apart the two barrels of the pencil. Remove the eraser storage plug and turn the mechanism upside-down to pull out a spare lead piece.
2. Unscrew the tip from the pen. Gently insert the new piece of lead into the hole at the tip. Twist mechanism so lead fully retracts inside.
3. Screw the tip back onto the pencil. On the other end, push the eraser storage plug back into place.
4. Push the two pencil blanks together. Pencil is now ready to operate.