

## COBRA AND MONKEY WRENCH ROLLERBALL PEN KITS

### Instructions

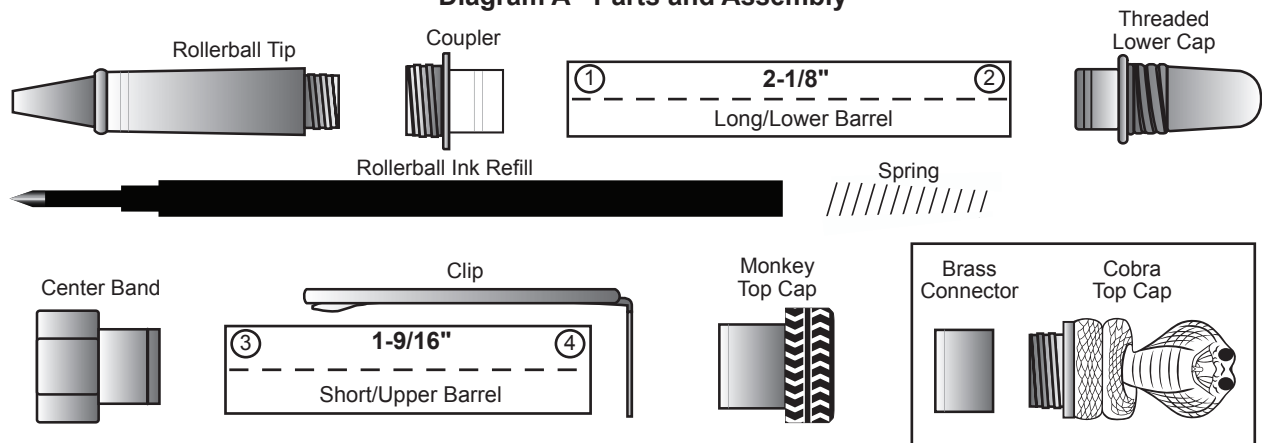
#### Kit Features

- Shows off the wood in a way a smaller pen can not
- Rollerball uses smooth-writing Schneider rollerball refill (RE-RB-SCHN3)

#### Required Accessories & Materials

- 7mm mandrel
- 4-pc. Cobra bushing set (PKCOBRA-BU)
- 10mm and 11mm drill bits (DB10mm) (DB11mm)
- Glue (We recommend the thick "gel" CA glue—GTHICK2)
- Sanding and finishing supplies
- Barrel trimmers, sizing sleeve, and/or belt sander for squaring the tubes
- Optional Barrel Trimmer Sleeves: PKMAJRBTS

#### Diagram A - Parts and Assembly



#### BLANK PREPARATION

The tubes in this pen kit are of different lengths and diameter. Make sure that, as you cut the blanks for the tubes, you orient them so that the longer tube will be used as the lower pen barrel. The upper tube is shorter one. **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

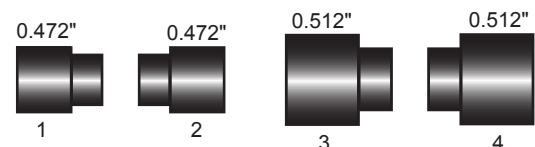
**Set up** the mandrel as shown in Diagram C. This pen has four bushings, so proper orientation is critical. In setting up your bushings, you will slide on one of the smaller bushings (bushing 1) first. Then slide the lower barrel onto the mandrel followed by the other small bushing (bushing 2). Next, place one of the larger bushings (bushing 3) on the mandrel followed by the upper barrel and then the last large bushing (bushing 4). Keep in mind which pen barrel you are turning as the top and bottom. **Turn** the blanks down to the bushings, then **sand** with abrasives and **finish** with your choice of polish.

#### 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. Assemble the four-piece upper barrel, which consists of the either the Monkey top cap or Cobra Brass Connector, the center band, clip, and short barrel.
2. **Monkey Wrench:** Slide the clip over the Top Cap and press it into the barrel (4) end. Then press the center band into the bottom of the short barrel (3) end.  
**Cobra:** Press the Brass Connector into the barrel (4) end. Then press the center band into the bottom of the short barrel (3) end. Slide the clip over the Cobra Top Cap and screw it into the Brass Connector.
3. Carefully press the coupler into (1) end of the long barrel.
4. Press the Threaded Lower Cap into the other (2) end of the long barrel. Then insert the spring and ink refill; screw the Rollerball Tip into the coupler.

#### Diagram B - Bushings



#### Diagram C - Turning the Pen

