WOOD Turningz

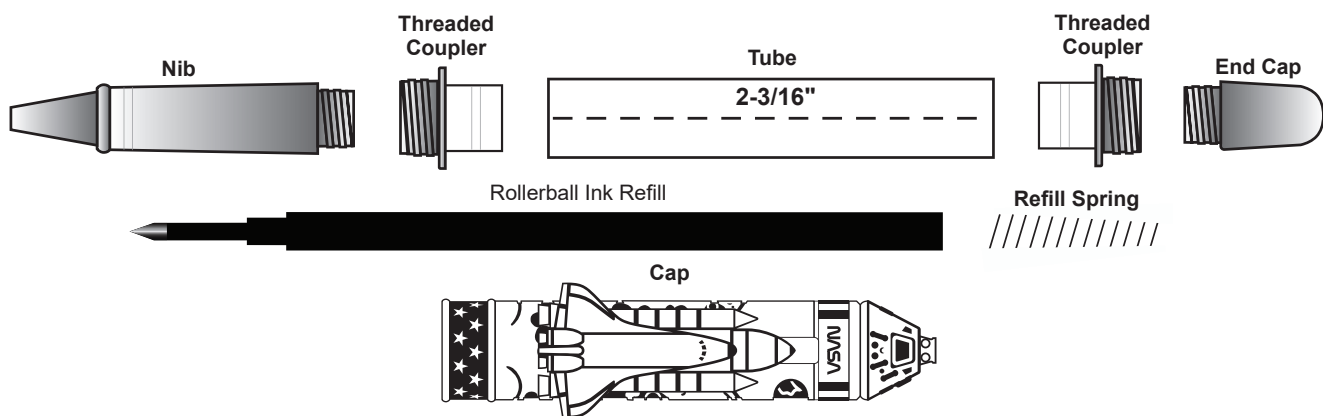# SHUTTLE, OWL, METRO & CHESS ROLLERBALL PEN KIT
Instructions

Kit Features
• Twist mechanism
• Rollerball uses smooth-writing Schneider rollerball refill (RE-RB-SCHN3)
• Overall length: 5-1/4"

Required Accessories & Materials
• 7mm mandrel
• 2-pc. Shuttle bushing set (PKSHUTTLEBU)
• Drill bit – 10mm (DB10MM)
• Universal trimming kit (BTRIMKIT8)
• Glue (We recommend the thick "gel" CA glue—GTHICK2)
• Sanding and finishing supplies

Diagram A - Parts and Assembly

Nib — Threaded Coupler — Tube 2-3/16" — Threaded Coupler — End Cap — Rollerball Ink Refill — Refill Spring — Cap

BLANK PREPARATION
The pen has a tube measuring 2-3/16". **Cut** your blanks approximately 1/16" longer than the tube to allow for squaring with the barrel trimmer (carefully trying not to remove any of the brass tube). Use a medium drill speed to **drill** the blank. 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 blank, **sand** the exterior of the brass tube to roughen its surface and use CA **glue** to glue the tube inside the blank. Sand or barrel trim to **square** the ends of the blank.

TURNING THE PEN
Set up the mandrel as shown in Diagram C. The pen's upper and lower bushings both have an outside diameter of .470" (see Diagram B). **Turn** the pen blank to the bushing diameter at the ends. **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 pen press or a vise with covered jaws.

1. Press one of the threaded couplers into the end of the barrel.
2. Press the other threaded coupler into the opposite end of the pen barrel and screw on the End Cap to one of the ends.
3. Drop the spring into the Threaded Coupler/End Cap. Then, insert the refill and screw on the nib.
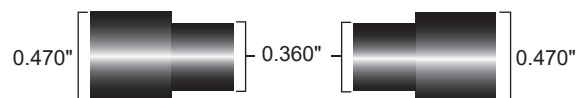4. Your Cap is now ready to thread on.

Diagram B - Bushings

0.470" — 0.360" — 0.470"

Diagram C - Turning the Pen

7mm spacer bushings — Barrel — Locknut — Live Center — Headstock — Tip Bushing — Finished blank — Wood or Acrylic — Cap Bushing — Mandrel