

## Horse Twist Pen Kits Assembly Instructions

### Required Accessories

- 7mm pen mandrel
- 4 piece Bushing Set
- Drill Bit 3/8" and 9.7mm
- Barrel Trimmer
- Live Tailstock Center
- Glue (Thick CA or Epoxy)
- Pen Blank: Minimum Size- 3/4" x 3-1/2"

### Preparing the Blank

- Cut 2 blanks to the length of the tube(s) and add 1/16" for squaring off.
- Drill a centred hole lengthwise through each blank.
- Upper blank (shorter tube)—drill a 9.7mm hole through.
- Lower blank (longer tube)—drill a 3/8" hole through.
- Spread glue over the tube(s), insert the blank with a twisting motion to spread the glue evenly inside.
- Center the tubes lengthwise inside the blanks.
- When the glue is dry, square the ends of the blanks. Use a barrel trimmer, or a universal pen blank squaring jig with a power disc sander. 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). Use a barrel trimmer to clean the inside of the tubes.



### Turning the Blank

- Mount the bushings and blanks according to the diagram above.
- Thread on the knurled nut and hand tighten to hold all components in place.
- Slide the tailstock up snugly against the mandrel shaft inserting the live centre point into the mandrel dimple, lock in place.
- Hand tighten the quill adjustment to firm up the mandrel. (DO NOT overtighten, it could damage the mandrel.)
- Using sharp tools, turn the blank down close to the bushing diameter. Turn the barrel (straight or to a profile of your choice)
- Sand the blank down to be flush with the bushings gradually increasing the sandpaper grits.
- Finish the barrel with your choice of polish. Allow sufficient time for the polish to cure.



### Assembly

- Layout parts according to diagram above
- Press the tip assembly into either end of the lower barrel (longer).
- Press the centre band coupler with the centre band into the opposite end of the lower barrel.
- Affix the spring over the refill end and drop into the opening at the coupler.
- Screw the twist mechanism over the refill end.
- Press the cap assembly into the either end of the upper barrel.
- Engage both ends to close the gap in the center.
- The pen operates by twisting the ends to extend or retract the refill.