



PERFECT FIT CONVERTIBLE BALL POINT PEN/PENCIL

TOOLING

- B MANDREL
- DRILLS-O BIT & 11/32 BIT
- BUSHINGS-14B
- WOOD 5/8 " X 5/8" X 5

CUTTING & TURNING WOOD

METHOD 1

- 1-LOWER BARREL LONG TUBE-CUT WOOD SAME LENGTH OF TUBE OR A LITTLE LONGER TOO SQUARE OFF, DRILL WITH LETTER O BIT)
- 2-UPPER BARREL SHORT TUBE-CUT WOOD 1 7/8" (FINISHED SIZE) DRILL WITH 11/32 BIT. THIS WILL LEAVE PART OF TUBE EXPOSED.
3. EPOXY TUBES INTO WOOD BLANKS. TRY NOT TO LEAVE ANY GLUE ON EXPOSED TUBE
4. MOUNT ON MANDREL AND TURN DOWN TO DEPTH COLLAR, SAND & POLISH.
5. MANDREL SET UP FOR THIS METHOD. SEE PAGE #2.

METHOD 2

- 1-LOWER BARREL-CUT WOOD SAME LENGTH AS TUBE OR LITTLE LONGER TO SQUARE OFF.(DRILL WITH LETTER O BIT)
- 2-UPPER BARREL-CUT WOOD SAME LENGTH AS TUBE OR LITTLE LONGER TO SQUARE OFF.(DRILL WITH LETTER 11/32 BIT)
- 3-MOUNT ON MANDREL AND TURN DOWN TO DEPTH COLLARS.
- 4-UPPER BARREL ONLY-WHEN YOU ARE FINISHED TURNING YOUR BLANKS DOWN, PART OFF WOOD LEAVING 1 7/8 " OF WOOD LEFT OR ABOUT 1/4 OF TUBE EXPOSED. (THIS IS FOR CENTER RING)
- 5-SAND & POLISH
- 6-MANDREL SET UP FOR THIS METHOD. SEE PAGE #2.

ASSEMBLY

LOWER BARREL(LONG)

- 1-PRESS NIB INTO SMALL END OF LONG TUBE.
- 2-PRESS TWIST HOLDER INTO OTHER END. THIS SHOULD BE DONE BY PRESSING ON THE FLANGE TO PREVENT DAMAGE TO THREADED END.

UPPER BARREL (CAP)

- 1-PRESS THREE PIECE CENTER RING ONTO EXPOSED TUBE.
- 2-PRESS BRASS INSERT INTO TOP OF CAP, FLUSH WITH TUBE.
- 3-INSERT PEN OR PENCIL INTO LOWER BARREL (IF PEN SLIDE SPRING, SMALL END FIRST ONTO INK REFILL, PENCIL NO SPRING IS NEEDED.
- 4-SCREW BLACK PLASTIC SCHMIDT MECHINISM INTO TWIST HOLDER.
- 5-SLIDE CAP OVER MECHINISM & HOLDER.

6-SCREW FINIAL & CLIP INTO BRASS INSERT ON TOP OF PEN.

TO REPLACE INK REFILL WITH PENCIL MECHANISM, SCREW OFF CAP AND REMOVE INK REFILL AND SPRING. REPLACE THIS WITH PENCIL MECHANISM AND SCREW CAP BACK ON. THIS CAN ALSO BE DONE BY PULLING OFF CAP AND REMOVING TWIST MECHANISM.



MANDREL SET UP METHOD #1

ALL FIVE BUSHINGS ARE USED IN THIS METHOD.

- 1- BUSHINGS #1 ARE FOR THE LOWER BARREL, 1 FOR NIB, 2 FOR TOP END.
- 2- BUSHINGS #3 ARE FOR UPPER BARREL(CAP), 3 FOR CENTER RING, 4 FOR FINIAL, THESE ARE STEP BUSHINGS.
- 3- BUSHING #5 IS TO COVER EXPOSED TUBE ON UPPER BARREL.

METHOD #2-4 BUSHING USED IN THIS METHOD , SAME AS ABOVE, EXCEPT YOU DO NOT NEED BUSHING #5. SET COLLAR CAN BE PUSH BACK TO ACCEPT BOTH TUBES.

MATCH BUSHINGS WITH PARTS IF YOU DON'T UNDERSTAND BUSHINGS.