

# Pen Turning

## 1. Prepare the blanks

- a. Select stock
  - i.  $\frac{3}{4} \times \frac{3}{4} \times 5$  inches
  - ii. Long grain
  - iii. No knots or checks
- b. Cut to appropriate lengths
  - i. Measure against kit's brass tubes and add  $\frac{1}{8}$  inch
  - ii. Mark mating ends
- c. Drill holes for brass tubes
  - i. Prepare for drilling
    1. Select correct drill bit for selected kit
      - a. Bullet point or brad point bits desirable
    2. Locate stock center on marked end only
    3. Squarely clamp stock with marked end upward
  - ii. Drill holes for brass tubes
    1. Drill slowly
    2. Plunge and clear
    3. Use backer board to prevent blowout on reverse end
- d. Prepare brass
  - i. Rough sand brass with 60 – 80 grit
- e. Glue brass into wood blanks
  - i. Use medium thickness cyanoacrylate glue (e.g., "Hot Stuff")
  - ii. Insert brass from marked end
  - iii. Press slightly below surface
  - iv. Set aside to dry or use accelerator
- f. Square and prep blanks for turning
  - i. Select appropriate pen mill
  - ii. Clamp blanks firmly
  - iii. Drill out with pen mill until shiny brass is just visible
    1. Drill out both ends of each blank

## 2. Turn pen

- a. Prepare for turning
  - i. Assemble mandrel and blank
    1. Follow instruction sheet for specific pen kit
    2. insert blanks with marked ends facing each other in the center of the mandrel
    3. Sharpen tools
- b. Rough turn
  - i. Use roughing gouge or skew
- c. Finish turn
  - i. Turn to final shape
  - ii. Leave pen lightly proud of bushing to allow sanding
  - iii. Sand and prepare for finishing
    1. Sand to 600 grit minimum
      - a. Sand with lathe on
      - b. Re-sand with lathe off with the direction of the grain

2. Sand with 0000 steel wool
  - a. Lathe on than lathe off

d. Finish

### 3. Assemble pen per instructions

## Supplies required

Pen blanks  $\frac{3}{4} \times \frac{3}{4} \times 5$  inches each

Pen kits

Pen kit instruction sheet

Pen mandrel

Bushings as required by pen kit specifications

Drill bit as required by pen kit specifications

Pen mill as required by pen kit specifications

Medium thickness cyanoacrylate glue (e.g., Hot Stuff) for gluing brass tubes etc.

Accelerator for glue

Fixture for holding blank vertical while drilling

Center finder and center punch for marking center of blanks

Pencil for marking blanks

Miter saw, band saw or other means for safely cutting blanks to length

Drill press or hand drill for drill out blanks

60 – 80 grit sand paper for roughing the brass tubes

180, 220, 340, 400, 600 sand paper for finish sanding pens

0000 steel wool for final sanding

Finish – friction polish

Pen press or other means of assembling pens

## Turning tools

Roughing gouge

Spindle gouge  $\frac{3}{8}$  inch

Skew chisel