# Nordic Rollerball pen



#### Needed:

7mm Mandrel; bushings 121A; 15/32" drill; 3/8" drill

## Preparing the blanks

- Cut the blanks about 1/4" longer than the length of each brass tube.
- Drill the shorter blank through the center, lengthwise, with a 15/32" drill bit.
- **3.** Drill the longer blank through the center, lengthwise, with a 3/8" drill bit.
- Scuff the brass tubes with sandpaper to clean off the oxidation and give the glue a better adhesion surface.
- 5. Plug the ends of the tubes with a material of your choice we recommend base plate wax to keep the glue from getting into the tube. Push the tube ends into a thin section of the material to form a plug. This is important glue inside the tubes is a common cause of kit failure.
- **6.** Roll the tubes in glue. We recommend thick CA glue.
- Insert the tubes into the blanks with a twisting motion.
- When the glue has cured, use a hobby knife to remove the plugs from the ends. Using a barrel trimmer of the proper size, square off the ends



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of the blanks until you can see bright brass tube. STOP at this point. This can also be done with the proper jig and a disk sander. *Not having the proper tube length is another common cause of pen failure.* 

## **Turning the blanks**



- Assemble the blanks on the mandrel using the 121A bushings following the diagram above.
- Lightly tighten the mandrel and secure. Do not over-tighten the brass nut – this can bend the mandrel which will result in an oval pen.
- **3.** Turn the pen blanks to the desired shape using the bushings as a sizing guide.
- After turning, sand the surface in progressive steps until you get to 400 or 600 grit. For a smooth finish, continue sanding with Micro Mesh from 1,500 to 12,000 grit.
- **5.** Apply a finish of your choice and remove the blanks from the mandrel.

#### Assembling the pen

- Press the bottom finial into one end of the lower (longer) barrel.
- 2. Press the coupler into the other end of the lower (longer) barrel.
- **3.** Drop the spring into the lower barrel, wide end first. Then, drop the refill in.
- **4.** Press the center band assembly into one end of the upper (shorter) barrel, black plastic end first.
- Press the threaded insert into the other end of the upper barrel, stepped end first, until it is flush with the end of the barrel.
- **6.** Slide the clip onto the top finial and screw this assembly into the threaded insert.

