

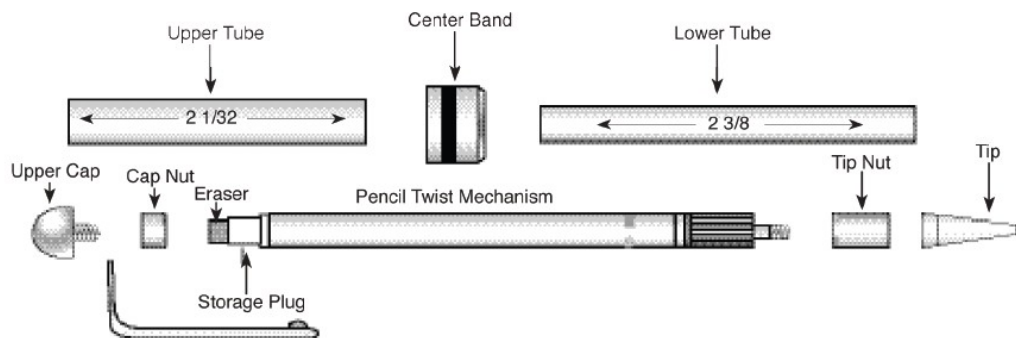
Xiamen Rizheng Industry Co.,Ltd

Designer Twist Pencil Kits Assembly Instructions

Required Accessories:

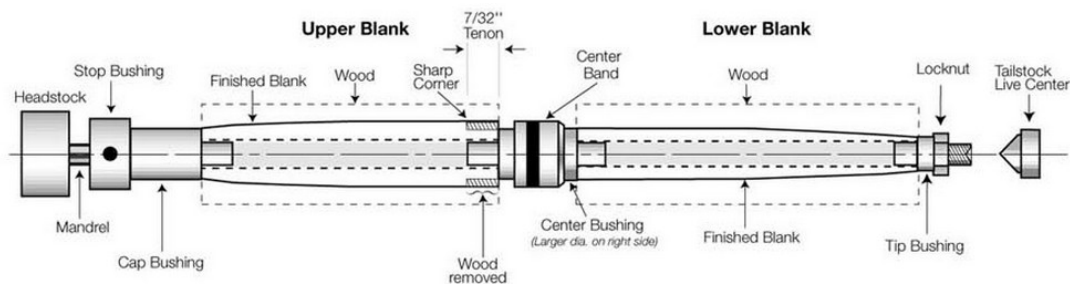
- 7mm, long mandrel
- Pencil bushings RZ-PCL15#-BU
- 8mm drill bit RZ-DB008
- Universal barrel trimmer
- 2 part epoxy glue or insta-cure (cyanoacrylate)

DIAGRAM A / PARTS LAYOUT



Preparing the Blank:

- Cut $\frac{5}{8}$ " square blanks, to the length of the brass tubes (add $\frac{1}{16}$ " for squaring off).
- Drill 8mm centered hole lengthwise through each blank.
- Spread glue over tubes. Insert into blanks with a twisting motion to spread the glue evenly inside. Center tubes lengthwise inside the blanks.
- When glue dries, square the ends of the blanks. Use the trimmer with a 7mm shaft and chrome sleeve adapter, or belt/disc sander.
- Take wood down flush to the brass tube.



Turning the Blanks:

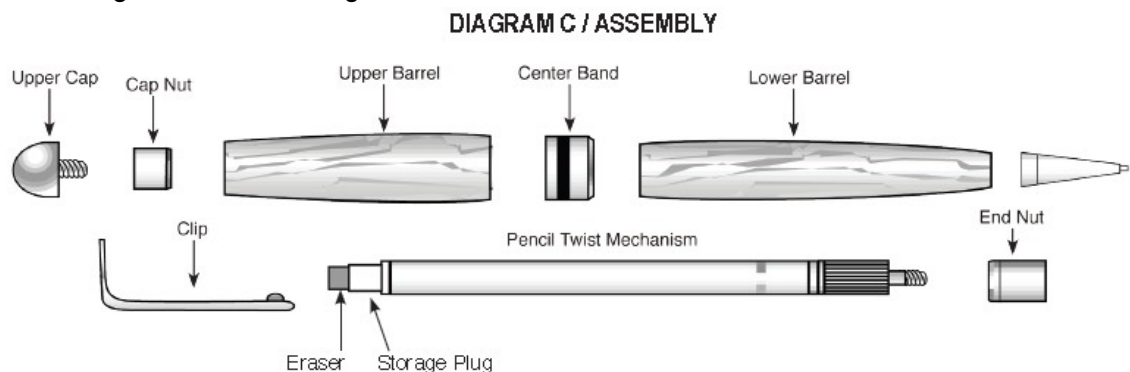
- Place stop bushings onto the mandrel. Place the cap bushing next on the mandrel, then slide on the upper blank. Place the center band or a scrap band over the center bushing, square end of band toward cap. Place this on mandrel. Use tape to hold the center band against the lower blank. Place lower blank against the center bushing, next, slide on the tipbushing, thread the lock nut hand tight. Bring the tailstock snug with the mandrel. (Do not over tighten, it could damage the mandrel).slide the stop bushing towards the blank ,adjusting to remove spaces, , then tighten the screw set and lock nut.

- Turn the wood down to the bushings and the diameter of the center band with chisels and sand paper. Taper the end cap and tip ends of the blanks (follow diagram C for profile) to conform with the cap and tip. Remove tape and use the outside dia. of the band to determine the outside diameter of the upper blank.

Be sure the wood on the lower blank next to center bushing does not exceed the bushing diameter, it may cause the twisting mechanism to jam when parts are engaged. Sand down to the final size.

Cutting the Tenon

- Keep the center band away from the upper barrel. Make a pencil mark $7/32$ " from end. Use a parting tool to cut a $7/32$ " tenon down to the diameter of the bushing. Use the center band by sliding it over tenon to achieve a good snug fit. Make sure you keep a sharp outside 90° corner on the tenon. Finish, polish and wax both barrels.
- Use a finish of your choice but be careful if brushing on a poly, etc. You can stick the tube, bushings, and mandrel together.



Assembly

- Line up finished parts according to diagram C.
- Press cap nut (recessed end first) into the tapered end of upper barrel.
- Insert cap thread into clip. Screw together into cap nut.
- Press end nut (recessed in first) flush with the tapered end of lower blank.
- Insert the pencil mechanism into the blank, thread extending through end nut hole. Screw tip snug over thread.
- Engage both ends together. The pencil is now ready to operate. Twist the ends to extend or retract the lead.

To Replace the Lead

- Pull the upper barrel apart, remove the storage plug.
- Slide out a fresh lead. Replace the storage plug, push upper blank back on.
- Unscrew the tip, slide off lower barrel.
- Twist mechanism forward until gripper and pilot extend out. Retract until gripper is flush with the thread.
- Gently push lead slightly into gripper. Twist mechanism back until the lead is completely inside. Slide the lower barrel back over the mechanism. Screw tip on snug. Extend lead. Pencil is ready to operate.