

A TWO PART PEN

THESE DRAWINGS ARE NOT TO SCALE. THE DIMENSIONS GIVEN HERE ARE FOR THE "SLIMLINE" PEN. THERE ARE MANY OTHER PEN KITS AVAILABLE WHICH WILL USUALLY HAVE DIFFERING DIMENSIONS FOR SOME PART OF THE CONSTRUCTION PROCESS.

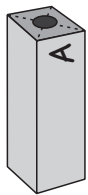
CUTTING THE WOOD



START WITH A PEN BLANK AT LEAST 12MM SQUARE AND 115MM LONG. THE GRAIN DIRECTION IS BEST LENGTHWISE, BUT MAY BE SLIGHTLY ANGLED. CROSS-GRAIN WILL USUALLY NOT WORK.



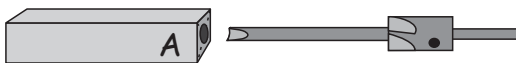
TRIM THE ENDS AND CUT EACH BLANK TO TWO PIECES EACH 54MM LONG. BEFORE SAWING MARK EACH SIDE OF THE CUT LINE SO THAT THE GRAIN OF THE TWO HALVES OF THE BLANK WILL BE MATCHED ON THE FINISHED PEN.



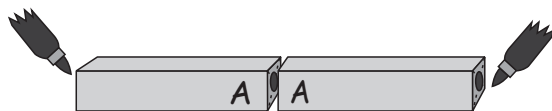
DRILL A 7MM HOLE DOWN THE CENTRE OF EACH PIECE. USE A BRAD POINT DRILL PRESSED GENTLY TO AVOID BREAKOUT AT THE END OF THE HOLE. WITHDRAW THE BIT OFTEN AND CLEAR THE WASTE FROM THE GROOVES IN THE DRILL.



TO ENSURE A GOOD GLUE BIND, LIGHTLY SAND THE OUTSIDE OF EACH BRASS TUBE. GLUE THEM INTO THE HOLES. EACH END OF THE BRASS SHOULD BE ABOUT 1MM INSIDE THE WOOD. MANY GLUES ARE AVAILABLE WHICH WILL WORK. FOR THE BEST RESULT ALL THE WOOD SURFACE MUST BE GLUED TO ALL THE BRASS TUBE SURFACE AND ANY GAPS BETWEEN THE BRASS AND WOOD SHOULD BE FILLED.

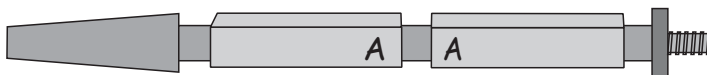


CUT THE WOOD BACK TO EXACTLY THE END OF THE BRASS TUBE. THIS IS BEST DONE WITH A PEN MILL (ALSO CALLED A BARREL TRIMMER) AS IT WILL ALSO CLEAN ANY GLUE FROM THE INSIDE OF THE TUBE.



THE GRAIN MARKING LETTERS ON THE OUTSIDE OF THE WOOD WILL SOON BE REMOVED. MARK THE INSIDE OF THE TUBES TO CONTINUE EASY MATCHING OF THE GRAIN LATER.

MOUNT THE WOOD ON A PEN MANDREL. THIS HAS A MORSE TAPER TO FIT INTO THE HEADSTOCK AND A LIVE CENTRE IN THE TAILSTOCK IS BROUGHT UP FOR SUPPORT. DO NOT OVER-TIGHTEN THE TAILSTOCK AS THIS WILL BOW THE MANDREL.



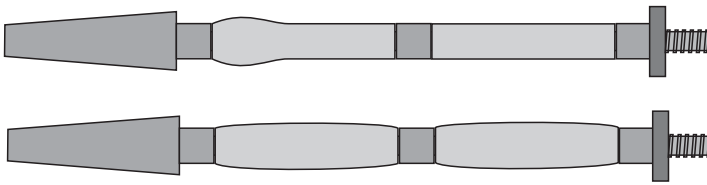
USE THE THREE BUSHINGS AS SHOWN. KEEP THE GRAIN MARKERS TOGETHER AS THIS IS THE WAY THE GRAIN WILL BE ON THE FINISHED PEN. TIGHTEN THE KNURLED KNOB TO SECURE THE PEN PARTS AND BUSHINGS ON THE MANDREL.



CUT THE WOOD AWAY. FOR AN EXACT STRAIGHT-SIDED SLIMLINE PEN CUT THE WOOD DOWN SO THAT IT WILL BE THE DIAMETER OF THE BUSHINGS AFTER SANDING.

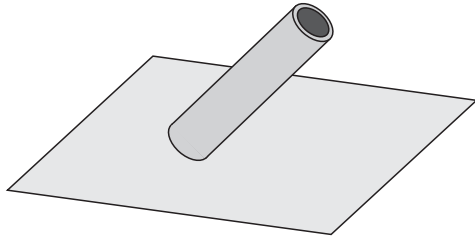
SAND THROUGH THE GRADES TO ACHIEVE THE FINISH OF YOUR CHOICE. DO THE LAST GRADES LONGITUDINALLY WITH THE GRAIN OF THE WOOD. ADD THE FINISH OF YOUR CHOICE. REMOVE THE PEN PARTS FROM THE MANDREL.

OTHER SHAPES ARE POSSIBLE



MAKE THE PEN BULBOUS AT THE NIB END.

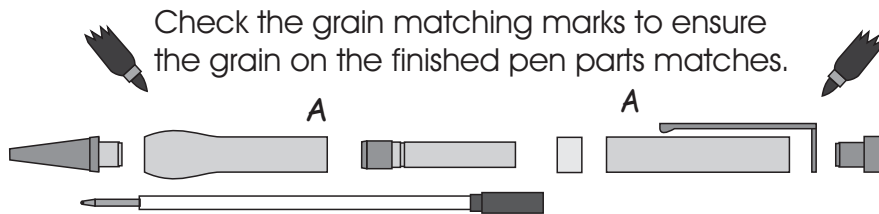
ONE OR BOTH SECTIONS MAY BE LEFT FAT. BUT THE ENDS OF THE WOOD STILL NEED TO BE FINISHED TO THE DIAMETER OF THE BUSHINGS.



THERE WILL BE SHARP CORNERS ON EACH END OF THE BARRELS WHICH MAY BE FELT WHEN THE COMPLETED PEN IS IN HAND. ROLL THE CORNERS GENTLY ON FINE SANDPAPER.

ASSEMBLING THE PEN PARTS

WITH THE WOOD TURNED AND FINISHED YOU CAN LAY OUT ALL THE PEN PARTS AND FIT THEM TOGETHER. TO DO THIS YOU NEED A DEVICE TO PUSH ONE PART INSIDE ANOTHER IN A CONTROLLED MANNER. A WOODWORKERS VICE, THE TAILSTOCK OF YOUR LATHE, OR DRILL PRESS, CAN DO THIS.



Check the grain matching marks to ensure the grain on the finished pen parts matches.

PUSH THE LOWER PART OF THE PEN BARREL ONTO THE PEN TIP.

PUSH THE TWIST MECHANISM INTO THE LOWER PEN BARREL ALMOST TO THE NOTCH IN THE TWIST MECHANISM.

TEST THE LENGTH OF THE REFILL. IF NECESSARY, SQUEEZE THE TWIST MECHANISM IN A LITTLE FURTHER.

SLIDE THE CENTRE BAND ONTO THE TWIST MECHANISM.

PUSH THE CLIP AND CAP INTO THE UPPER END OF THE UPPER PEN BARREL. CHOOSE WHICH PART OF THE WOOD YOU WISH THE CLIP TO COVER.

SLIDE THE PEN HALVES TOGETHER SO THAT THE GRAIN MATCHES.

BEFORE GIVING THE PEN TO AN IMPORTANT PERSON REMOVE THE LITTLE BLUE AIRTIGHT TIP FROM THE BALL POINT SO THAT THE PEN WILL WRITE.