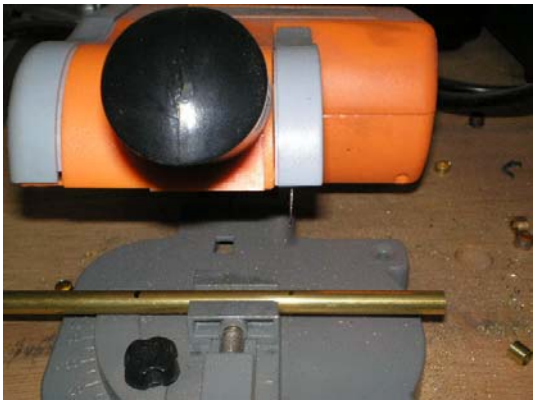
How to make bullet “pocket pens”

This tutorial is to show how I make a pair of bullet “pocket pens”. You will need a teacher’s pen kit, one extra black mini refill, two fired 30 caliber cartridges, two pieces of 8mm brass pencil tube, each two inches in length, solder, flux, and a small hobby torch. I use solder that is 40% tin and 60% lead. This solder has a lower melting point and is easier to use.

Start by cutting the 8mm pencil tube into two pieces each 2 inches long, plus or minus 1/8 inch. If you are using 308 brass, cut them about 1 ¾ inches long as the 308 brass is really two short, but with some tweaking, can be made to work. I have a small harbor freight cut-off saw that works great for this. Small dia. Tubing is about all it works for, but in the pen business it is real handy.



Next, take the 7mm tube from the teachers kit and cut two pieces each about 7/8 inch long. For the 308 cut them about ¾ inch long. You will have a short piece of brass left over, it will not be needed.

The picture below shows the two 2 inch 8mm tubes and the two 7/8 inch 7mm tubes after cutting and deburring the ends. They have also been sanded, the 7/8 tubes completely and the 2 inch tubes on one end on the outside and on the inside of the opposite end for solder. Also sand the inside of the brass cartridge, this is VERY important or the solder will not stick.

Put flux on the short (7/8) piece and insert it into the 2 inch 8mm piece leaving about 1/8 inch protruding. I let this end over hang on my bench with a piece of foil under to keep the flame off of the bench. As you will see in the pictures I still get some burn marks. I need to get a bigger piece of something fire proof to solder on. Heat the tube all the way around and touch your solder to the smaller tube near the lip of the outside tube. If it is hot enough the solder will melt and wick in between the tubes. When these cool, put flux on the sanded end and work some flux into the bullet mouth where you sanded. Now insert the tube with the soldered insert going in first so it will be at the base of the cartridge. If using the 308 you need to sand the protrusion smooth to the 8mm tube end. 30-06 and longer cases, leave it sticking out, you will have room and it will not hurt any thing. Leave a little bit of the tube sticking out of the cartridge to make soldering easier. Apply heat and solder. As soon as the solder wicks, use the side of the nozzle of the torch and push gently on the tube to push it flush with the cartridge mouth.

If you use a new unfired cartridge or one that has been resized by a re-loader, you can not just slide the tube in the cartridge, but will have to PRESS it in until flush with the mouth. Then this part will not have to be soldered.

Now I trim the mouth of the cartridge to make sure it is flush with the soldered in tube and also square with the cartridge so the nib will fit with no gap. You can use a belt sander or even a pen mill as the brass is soft and will cut pretty easy. I used to reload a lot when I lived in Colorado and still have my reloading gear. I use a case trimmer with a pilot that fits in the cartridge mouth and gives a good finish.

Next, I take the cartridge to a buffing wheel with some white diamond and polish to a nice shine. Here is before and after.

Now back to the pen kit. Take the short brass piece that came with the kit and press it onto the nib. Do this with both sets. Now press the transmission into the end and using the mini refill with the threaded cap pushed all the way onto the refill end, use as a guide for how far to press in the transmission.

If using 308 cartridge, you need to clip about a ¼ inch off the end.

Now take the nib and transmission and insert into the polished brass. If the nib is a bit crooked, sometimes the tube is a little loose as it is being soldered and will not be exactly straight, I remove transmission assy. and nib, insert a punch or a metal rod (Philips screwdriver will work) and gently apply pressure in the direction I want the nib to point. This has always worked well for me.

Done. I apply a coat of car wax on mine. Total cost for kit, 8mm tube including shipping and extra mini refill to replace the red refill from the teachers pen is between $4.00 and $5.00 depending on who you buy from and where you get your brass. I traded a finished pen for 300 pieces of brass. That $5.00 is for TWO pens. I can do two pens complete in 15 minutes. That is 7 or 8 minutes per pen. I sell them for $15.00 a pen. $15.00 - $2.50 cost is $12.50 net for 7 ½ minutes work comes to $100.00 per hour shop rate. Swweeeet.

If I have missed anything or you have any questions, feel free to pm or e-mail me.

I would like to thank Ben (BLLEHMAN) for the inspiration and conversations that led to this end result.

Thank you,

Gary, AKA CaptG