

Copper Beads

By Jeff Fulkerson

When I saw the square and triangle Wubbers Mandrel Pliers, I just knew I had to make something, but I wasn't sure what. After a little contemplation, it hit me; Beads! I make mine out of copper as a first attempt, because copper is cheap. But after finishing these beads, it would be MUCH easier to make them out of silver because you don't have to plate them, etc.

Materials List

- 22 gauge copper sheet, as much as you need for the number of beads you want to make.
- Medium silver solder

Tool List – Don't forget Safety Glasses!

- Jeweler's saw
- Soldering setup
- Wubbers Large Square Mandrel pliers
- Rawhide mallet
- Files
- Drill bits
- 600 grit sandpaper
- Safety glasses
- Liver of sulfur
- Wubbers Medium Triangle Mandrel Pliers
- Bench block
- Drill press or flex shaft
- Rolling mill

Project Steps

Step 1. Start by cutting a 6" strip of copper sheet $\frac{1}{2}$ " wide and another $\frac{3}{4}$ " wide. Then run them through the rolling mill to get a texture on them. I used 2 different textures, let your imagination run wild. You can also texture with stamps or hammers if you don't have a rolling mill.



Step 2. Here are a couple of pieces with their pattern.



Step 3. Next, place the strip about half way into the jaws of the square pliers. Make sure the metal is square to the pliers. Bend the metal over and hammer flat with the rawhide mallet. Repeat for the other four corners.



Step 4. Once you have bent all four corners, your long end should overlap the end you began with. Take your jeweler's saw and saw a straight line through both pieces so you will have a nice even joint to solder. Use the pliers to square up your bead.



Step 5. Solder your joint with medium silver solder, pickle and rinse.



Step 6. Take a piece of textured metal to make the end of your bead. You can mark the middle and put a dimple in the metal to drill a hole in the bead so you can string them later. I used a #51 drill bit. You can either drill the end now, in which case you have to be very careful to line up the end when you solder, or solder the end on one side of the bead, then drill it.



Step 7. Solder the end piece to the bead with medium solder. Pickle, rinse, and drill the end before soldering the other end on. (You don't want to try to solder the bead closed with no air hole; it will collapse when it cools, and it could possibly spray hot solder on you!)



Step 8. After you've soldered the end on, take the jeweler's saw and trim the excess off. Don't file yet.



Step 9. If you didn't mark the middle, now you can. Then drill your hole.



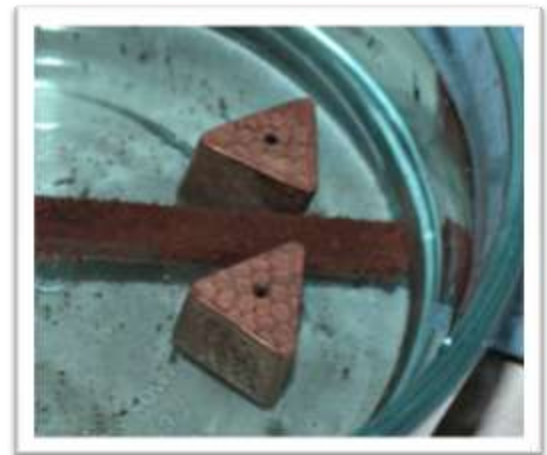
Step 10. If you have a little "flash" from the drill, use a 1/4" drill (by hand) to cut it off.



Step 11. Solder the other end on your bead, following the exact same procedure as before. File the edges smooth, being careful not to file off your pattern. Make as many beads as you want. Since the Wubbers pliers have 2 different size mandrels on each pair, I made 2 of each size. I also make beads using the triangle pliers. The procedure is the same.



Step 12. Put your beads in some hot pickle and add a piece of iron to plate the silver solder copper. Do this with all your beads. I find it works best if the beads are touching the iron.



Step 13. After all of your beads are plated, mix up about 2 cups of water with 2 tablespoons of baking soda. Place the beads in the solution and boil for about 10 minutes to neutralize and pickle solution that is still in the beads. Take the beads out and rinse them very well with clean water.



Step 14. If you want to add a little color to your beads, mix up a little Liver of Sulfur in a dish and place your beads in it to patina them. When you like the color, take them out, rinse WELL in clean water and shake out all the excess water you can. Set the beads on an absorbent surface (I used a couple layers of paper towel) overnight so that they dry out completely.

Once your beads are dry, sand them with 600 grit sandpaper to bring out the texture. I also like to brass brush them to give them a nice sheen. Now you can string your beads.

Check out my other tutorial on Wubbers University—Shadow Box Pendant—for a great focal

pendant for your new beads!



Review Questions

- 1) What gauge works well to make these beads?
 - a) 18 gauge
 - b) 22 gauge
 - c) 28 gauge
 - d) None of the above

- 2) True/False. This project requires a rolling mill, and cannot be done without.
 - a) True
 - b) False

- 3) True/False. Any shape Wubbers Jumbo Mandrel Pliers could be used to make the copper beads.
 - a) True
 - b) False

- 4) True/False. To find the center of the bead on a square bead, draw two lines, each from the corner to corner.
 - a) True
 - b) False

- 5) True/False. The silver solder can be plated by putting a piece of iron in the pickle.
 - a) True
 - b) False