



Scrappy Steel Soldering:

The ShapeSorter Necklace on the *Now That's a Jig!*



Materials

24 in. necklace

- 16-gauge dark annealed steel wire, 80-90 in. (www.BrendaSchweder.Etsy.com)

Tools & Supplies

- Wirework Toolbox
 - Ruler
 - White charcoal pencil (or other white marking utensil)
 - Heavy duty diagonal wire cutters*
 - Pliers: chainnose, flatnose*
 - Bench block or anvil
 - Hammer: 4-6 oz. utility- or ball peen hammer
 - Equalizing (or other) needle file
 - Wire brush or steel wool (fine, 00)
 - Renaissance wax and soft cloth

- Soldering Toolbox
 - Fire brick and/or pan with vermiculite
 - Silver solder, EZ
 - Butane torch
 - Flux (I use Handi-Flux with the built-in brush)
 - Soldering Pick
 - Tweezers
 - Quench tub with water
 - Citric Acid Pickle
- Now That's a Jig! Toolkit
 - Startr Kit (jig bed, bracket, Starter Peg Pak, screwdriver) (www.RioGrande.com)
 - NTaJ! SwiveLok™
 - NTaJ! WireLiftr (optional)
 - NTaJ! Shaped pegs (This design uses the 1", 3/4" and 1/2" Peg Pack: Combos (Square, Triangle, Oval), and the 3/4" Round.)

** When using dark annealed steel, use pliers (and tools) dedicated for steel wire use.*

Step-by-Step

Now That's a Jig! Set-up

1. Screw in the shaped pegs with enough room to work around each.
2. Screw in the SwiveLok next to each (as you go) to secure the wire against each peg as a third hand, if needed.

Chain Links

1. Wrap the wire tightly around each shape, overlapping slightly. Mark the intersection with the white charcoal pencil.
2. Flush cut each side of the wire link and hammer/texture it.
3. File each link parallel, working the connection point back and forth so that the opening meets perfectly. Repeat to all links to make two sets of each size Peg Pack: Combo. In other words, 2-1" squares, ovals and triangles; 2-3/4" squares, ovals and triangles; and 2-1/2" squares, ovals and triangles. Make 6 3/4" rounds as well.

Assembly Overview

1. Set up your square, oval, and triangle links in sets of three by size. Solder the two end links (the square and triangle), and then connect the end links with the middle (oval) link.
2. Solder (see *Soldering Specifics* below). Repeat to form the six shape sets.
3. Connect/solder the largest shape set to the medium shape set with a round link.
4. Connect/solder the large/medium set to the small set with a round link. This makes one complete side of the necklace.

5. Repeat Steps 3 and 4 to form the other side and connect/solder the two sides (this will be the top and bottom) with two round links. This forms the entire necklace.

Soldering Specifics

1. Lay a link with the area to be joined toward you on a firebrick in a safe soldering station.
2. Paint flux over the area to be joined.
3. Cut a chip of solder and lay it on top of the flux and behind the area to be joined in a lean-to fashion.
4. Turn on your torch and adjust your flame to make the blue inner flame somewhat small and pointy. (Big, bushy flames are primarily for annealing metal.)
5. Hold your soldering pick in your dominant hand and have it at-the-ready to keep the solder from bouncing out of position.
6. Concentrate the flame on the opening area—moving the tip of the flame back and forth over it until the solder chip goes from pasty to glassy.
7. Then concentrate the tip of the flame right in front of the opening so that the solder will flow through. (Note: Think of the solder as a moth attracted to flame; it wants to “fly” toward it.) (Note: the video indicates to warm the entire piece—then the area to be joined—with the flame, slowly zeroing in on the opening, but steel doesn’t conduct heat as efficiently as silver or copper, so this step is unnecessary.)
8. Turn off the torch and set it aside, then pick-up the soldered links with a tweezers and place them in the quench tub.
9. When the links have cooled, place them in the pickle. (Note: Be cautious not to splash pickle up and onto you or your clothes and do not quench directly in the pickle.)
10. Remove the links after a few minutes, dry and clean with steel wool.

Finishing

1. Seal with Renaissance Wax by rubbing a tiny amount (as you would lip gloss) over the entire piece.
2. Buff with a clean cloth.