HOW TO SOLDER WIRE

Electronics are a big part of our world, and while we have a lot of microelectronics in this day and age with phones and electronic gadgets, there are still huge amounts of electronics that rely heavily on soldered wire. So whether you find yourself one day repairing a loose wire, or creating a circuit from scratch, having the ability to solder wire is a good little skill to have.

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EARN THIS NUGGET

To earn your Nugget, solder 5 wire joints.

For this exercise you'll need a soldering iron. (There are a variety of sizes, but anything close to a medium size will work fine), a small length of solder, a small length of electrical wire to practice with (not too thick, perhaps around 18 gauge) and some wire strippers. With great care you can get away with a utility knife, but wire strippers take the danger out of the equation.

1. First step, you'll need two pieces of wire to solder together, so you may need to cut a couple of short lengths from your wire supply.

2. You need to remove around half an inch of the plastic coating from the end of the wire. This is where the wire strippers come in. Alternatively you can make a slit into the plastic around the wire and pull the plastic end off. Make sure you don't cut into the wire.

3. Flay the wires. Do this by rubbing them, essentially what you are trying to do here is loosen the individual copper strands and fan them out a little so we can make a better connection.

4. Now interlock the two flayed wires with each other and twist together. This is to maximize contact, try to make them visually look like one wire.

Safety: Soldering irons get very hot, do not touch any area below the handle, and be very aware that when you start to work, molten solder can drip, so do this over a safe surface, not on grandma's antique table. Also, be very careful where you place the iron when you are not holding it.

5. With the soldering iron heated, (you can tell it is hot enough, because if you touch the tip to the solder, it should melt after a few seconds) touch the tip to the exposed wires for thirty seconds or so to get the wires hot; this will improve flow.

6. Now introduce the solder, melt it and shape it around the wire until the copper is covered in solder as neatly as possible.

7. Let the wire cool and test your joint.