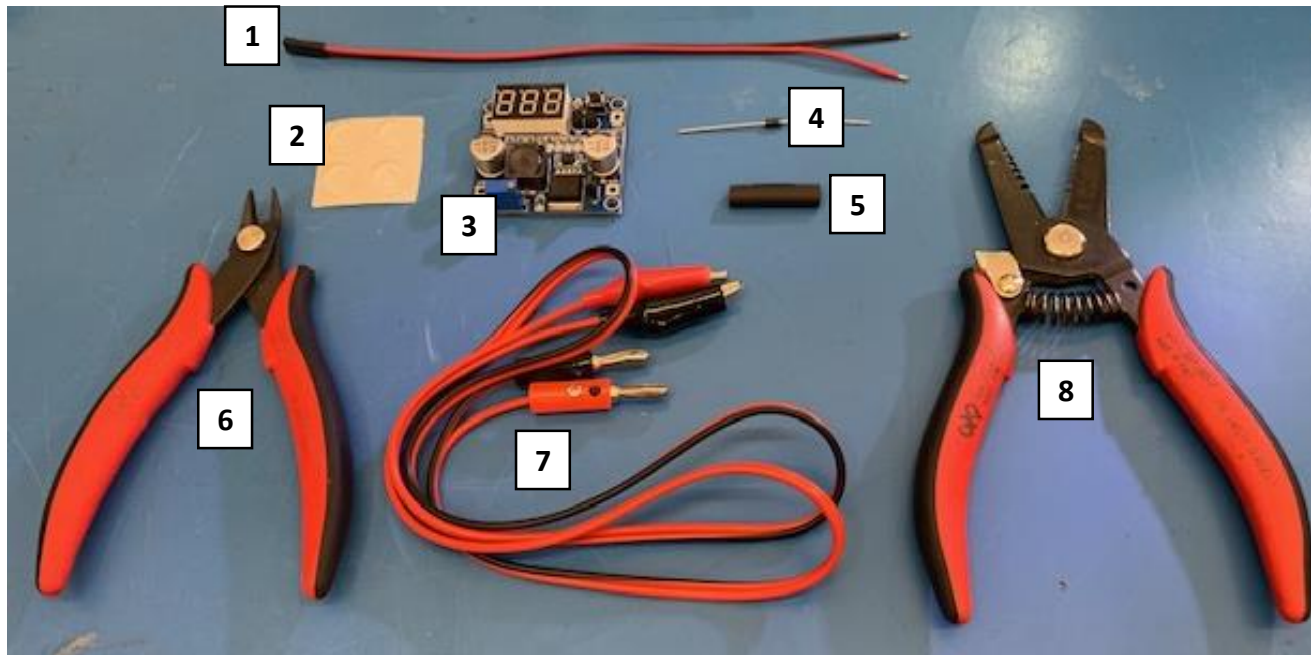


SYNTHIAM

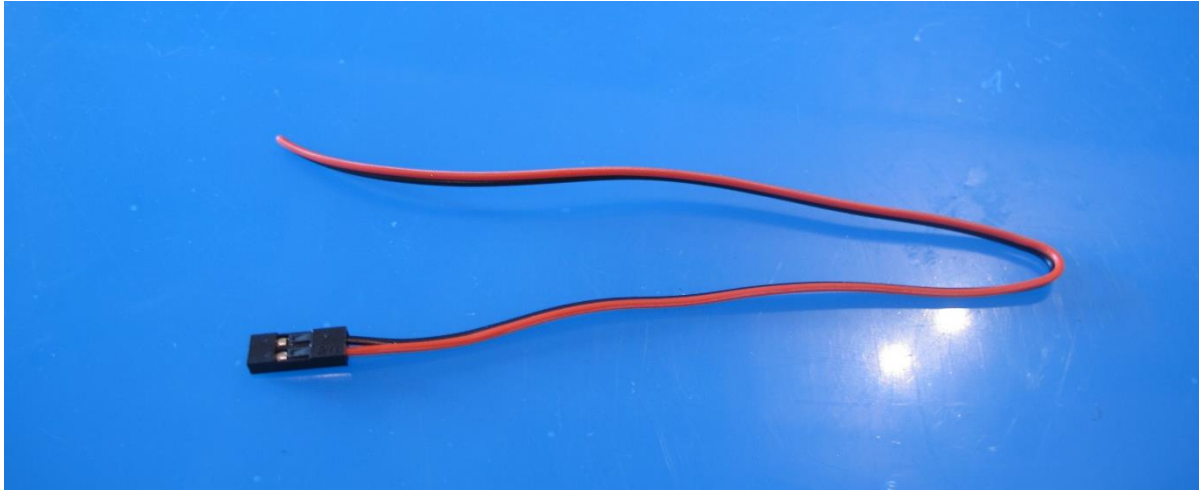
Assembly Instructions

Variable Voltage Supply [E-31]

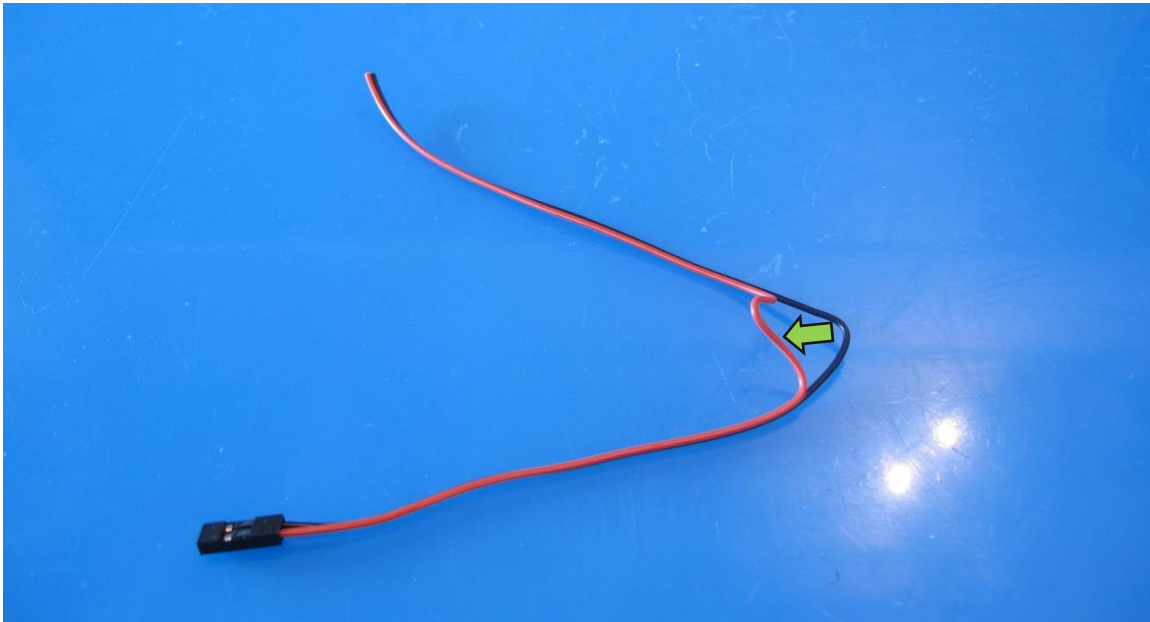


PARTS & TOOLS

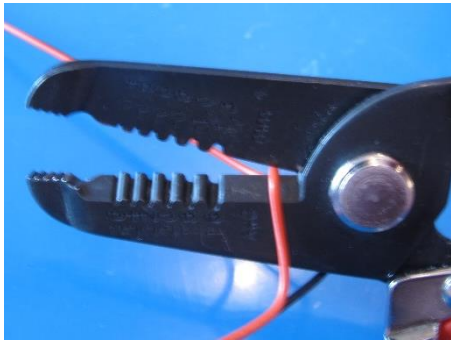
#	Qty	Name
1	1	2-wire 20AWG Red & Black ribbon Cable
2	4	12x4mmTransparent Adhesive silicone feet
3	1	China LCTech LM2596 Voltage Display module
4	1	SB540 Diode
5	1	35mm length of 3/16" size black Heatshrink Tubing
6	1	Side cutters
7	1	Alligator clip + Banana Plug test cable
8	1	Wirestrippers
9	1	Heat Gun (Not Pictured)
10	1	Soldering Iron (Not Pictured)



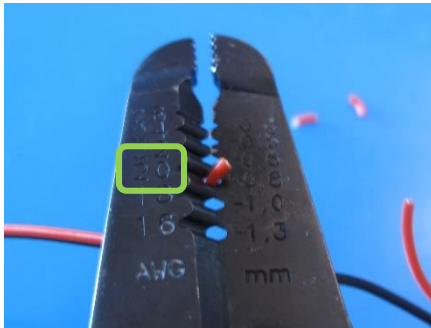
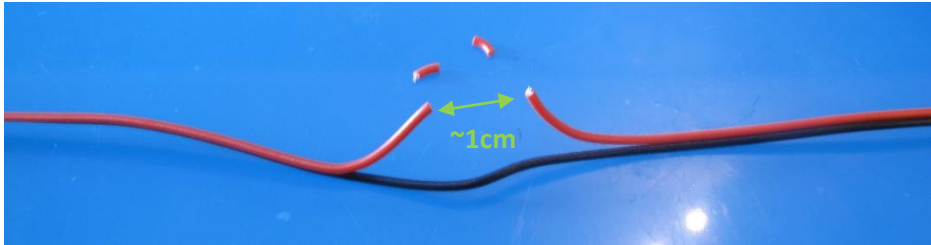
Step 1. Fold the 2-wire cable in half.



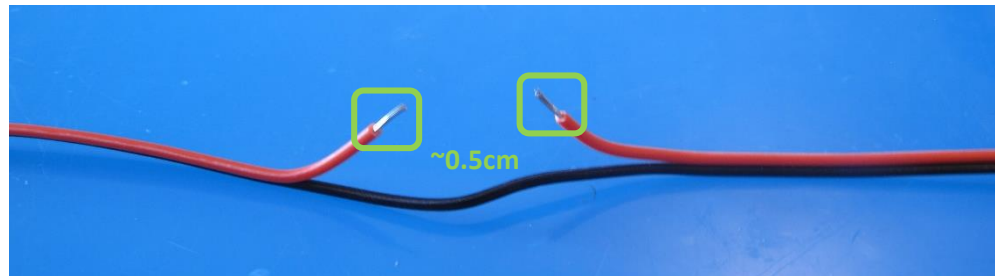
Step 2. Split the red wire from the 2-wire cable.

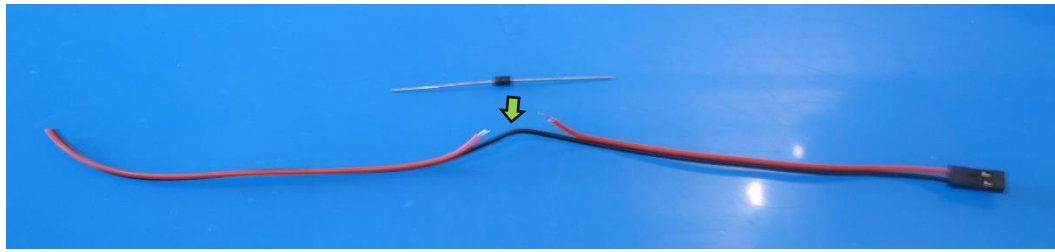


Step 3. Use the wirestrippers to cut off ~1 cm from the middle of the red wire.

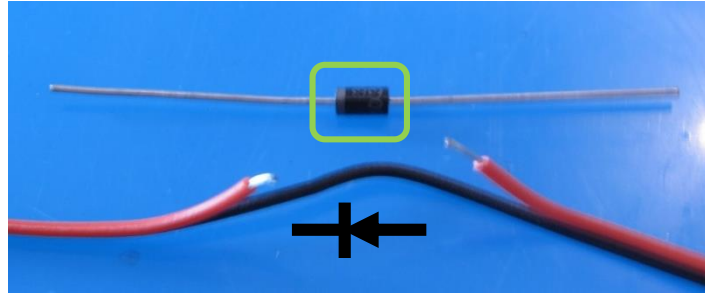


Step 4. Use the 20 AWG setting on the wirestrippers to take 0.5cm of insulation off both sides of the red wire.

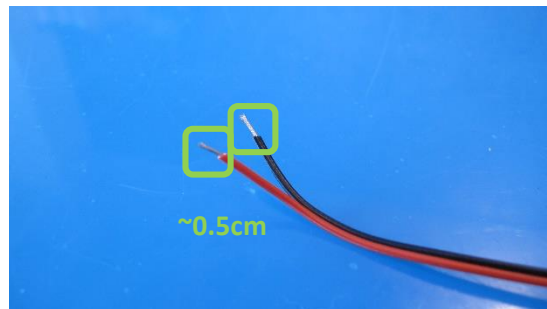
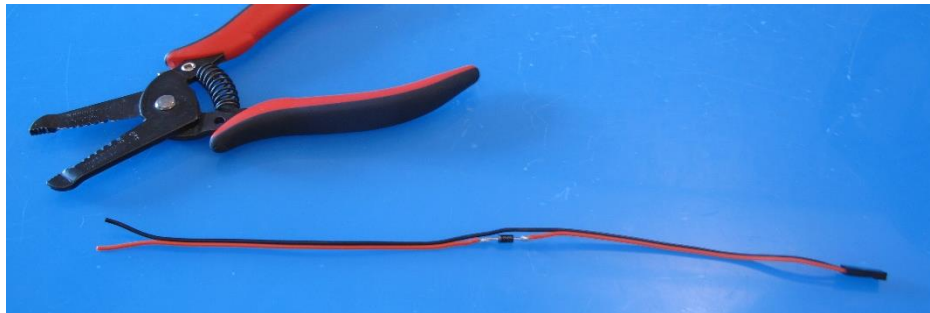




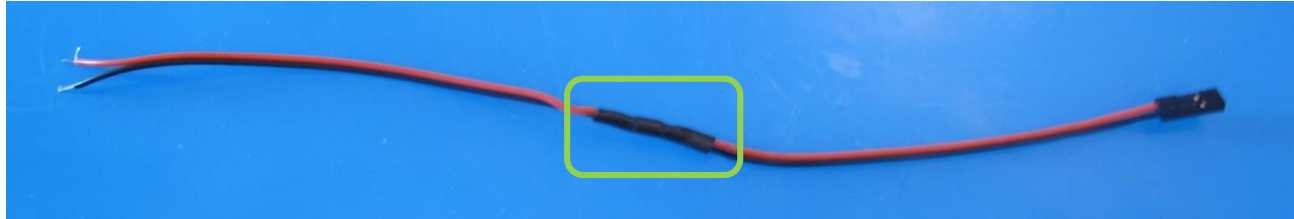
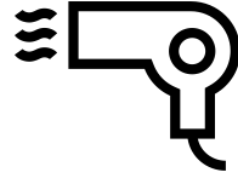
Step 5. Solder the SB540 diode onto the red wire as shown and clip off the excess diode leads with the sidecutters.



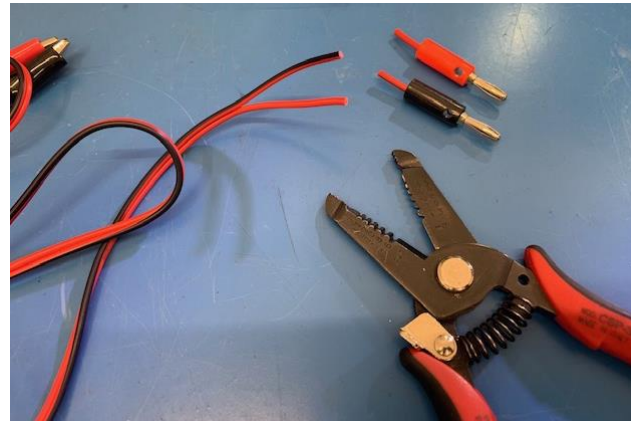
IMPORTANT The cathode must be facing the bare wire end of the 2-wire cable.



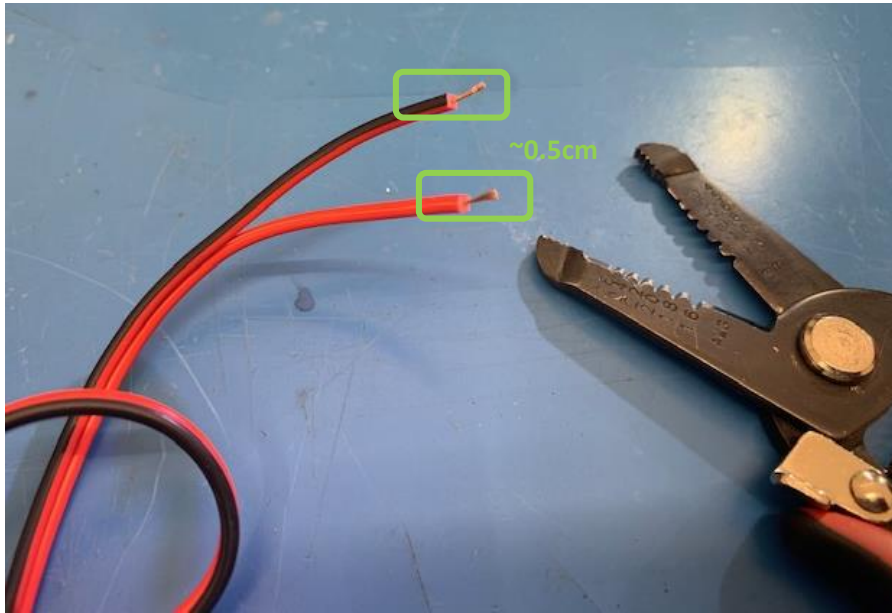
Step 6. Use the wirestrippers on the 20 AWG setting to strip ~0.5cm of insulation off the end of the red and black wires.



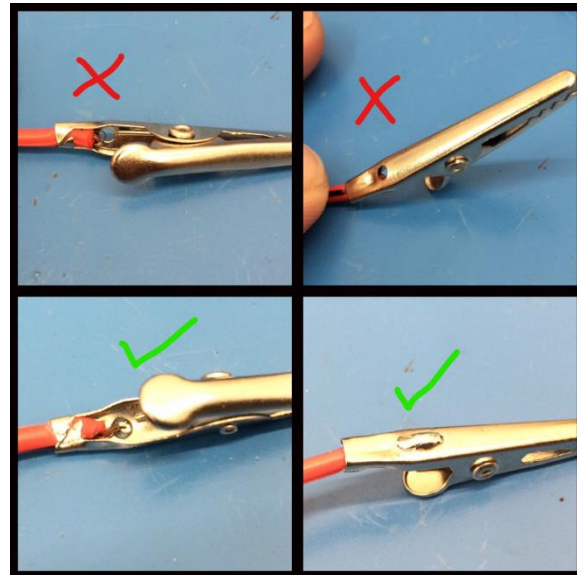
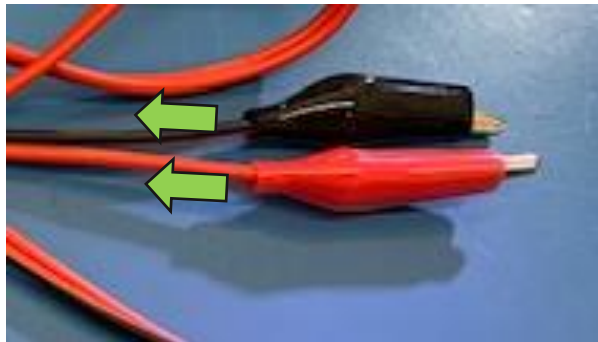
Step 7. Place the Heatshrink tubing over the SB540 diode and use a heat gun shrink it over both wires and diode.



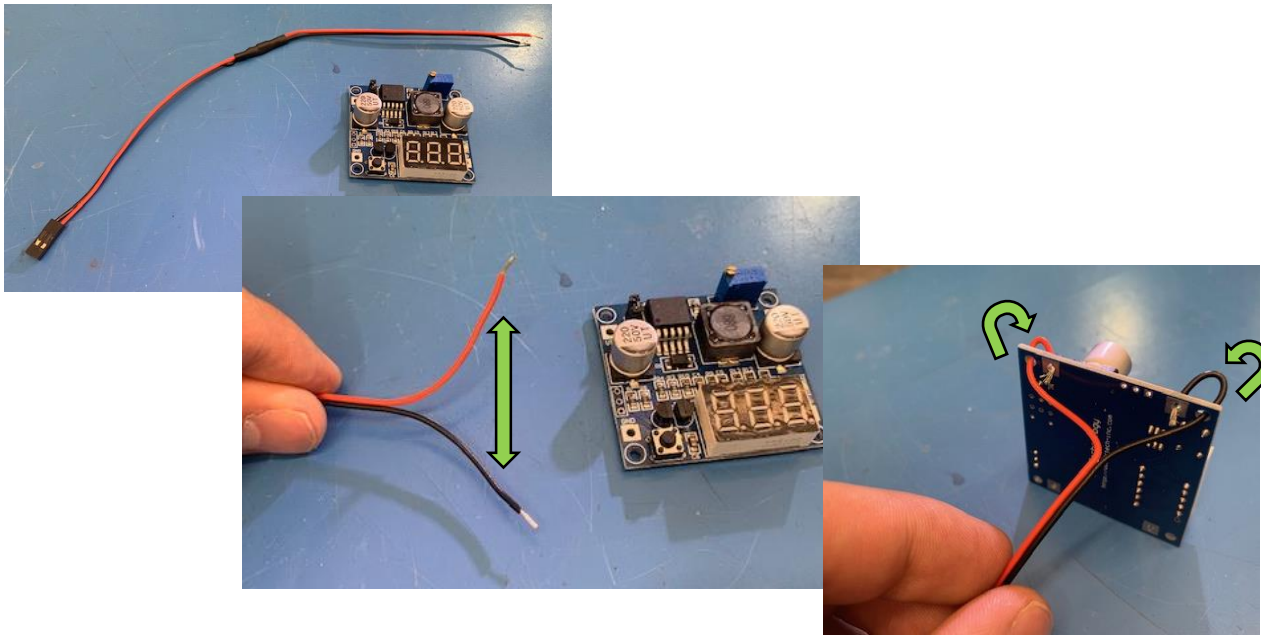
Step 8. Use the wirestrippers to cut the banana plugs off the Alligator clip + Banana Plug test cable.



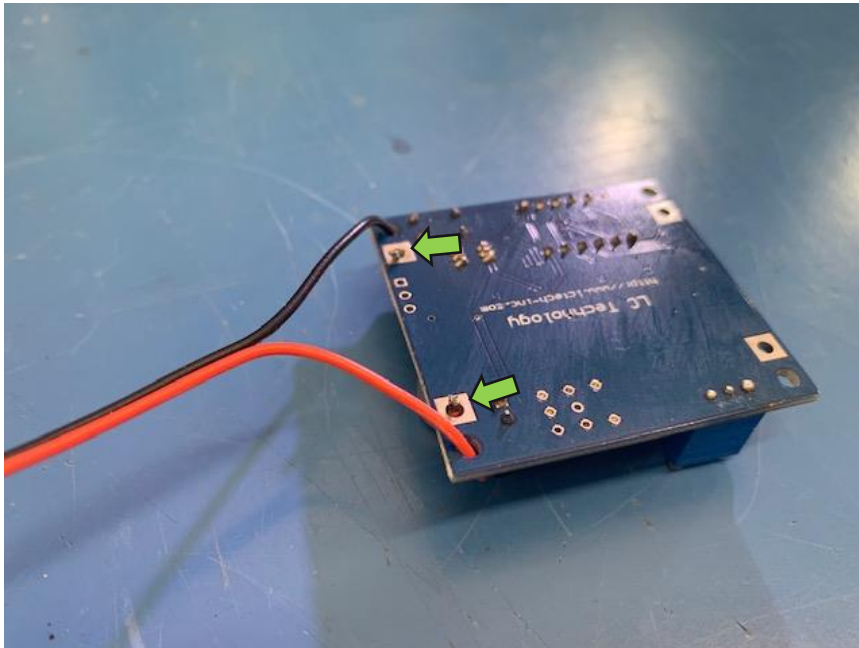
Step 9. Using the wirestrippers on the 20 AWG setting to strip ~0.5cm of insulation off the end of the red and black wires.



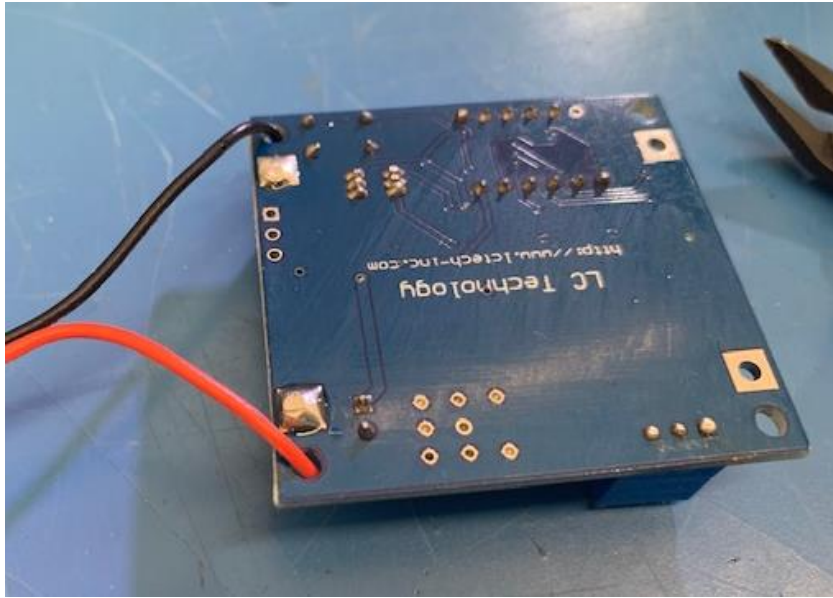
Step 10. Slide the boot off of each Alligator clip and solder the wire to the alligator clip.



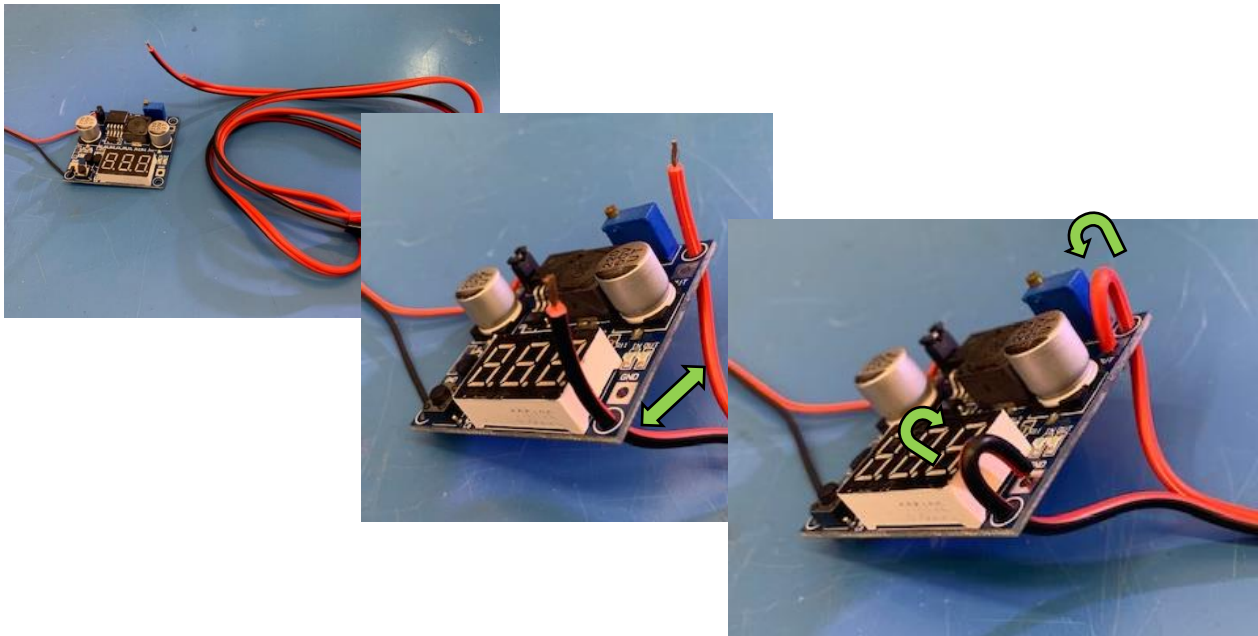
Step 11. Take the 2-wire cable and spread out the wires then feed them through the LM2596 PCB mounting holes (for strain relief).



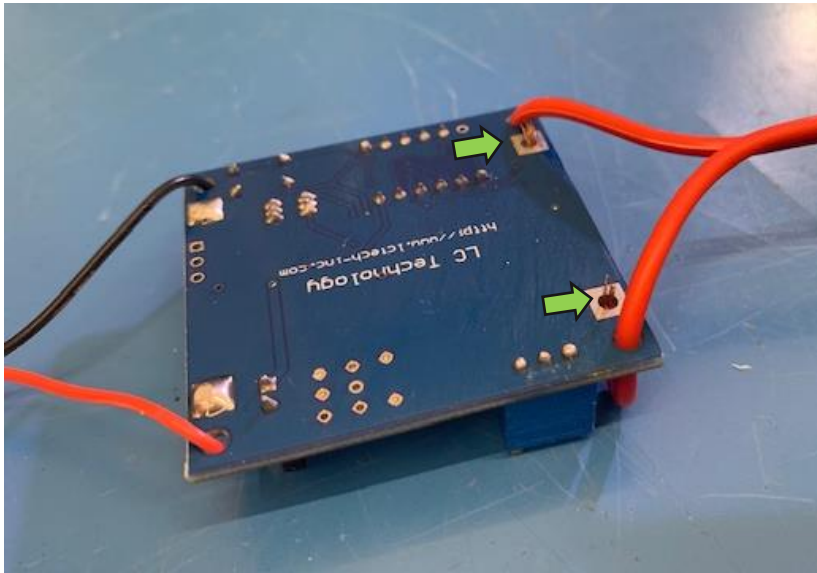
Step 12. Solder the red wire to the pad labeled 'VIN' and the black wire to the pad labeled 'GND'.



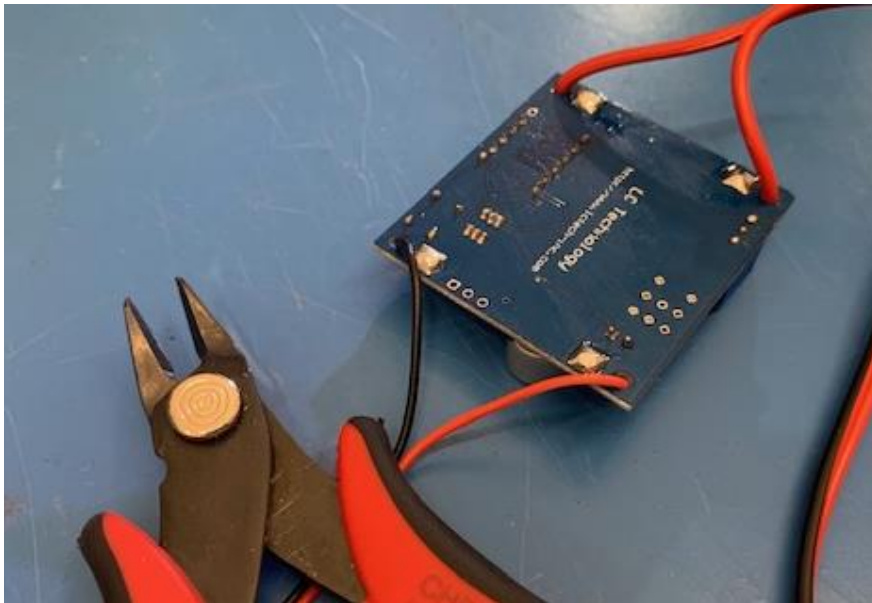
Step 13. Use the sidecutters to trim the wire coming out of the solder joints.



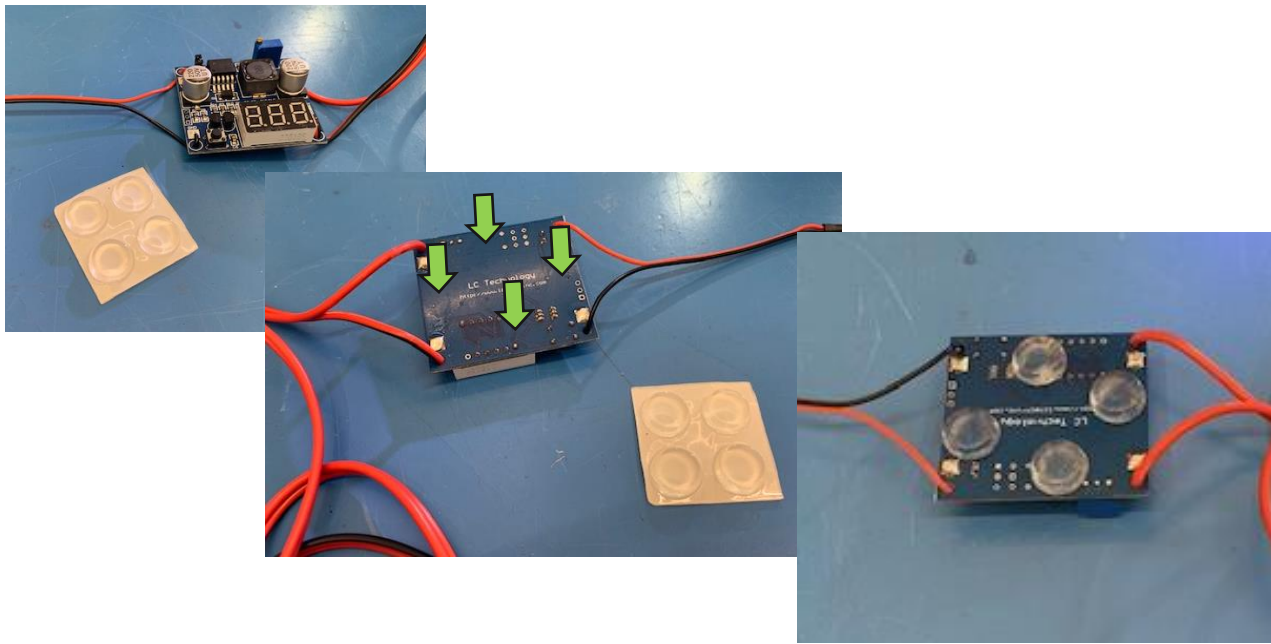
Step 14. Take the Test cable and spread out the wires then feed them through the LM2596 PCB mounting holes (for strain relief).



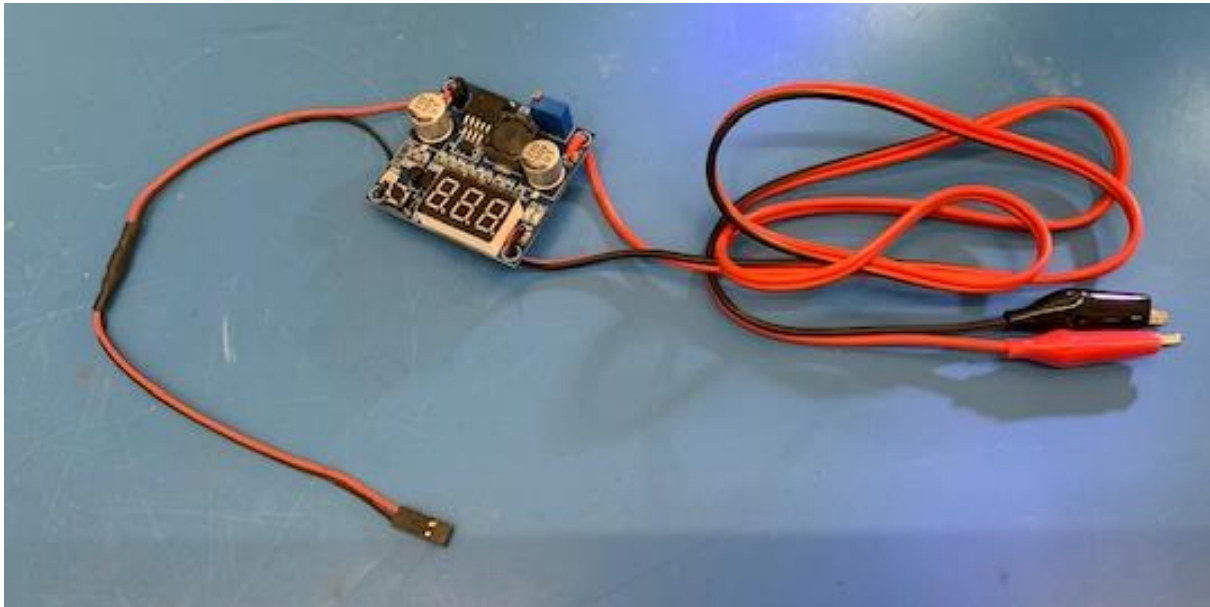
Step 15. Solder the red wire to the pad labeled 'OUT' and the black wire to the pad labeled 'GND'.



Step 16. Use the sidecutters to trim the wire coming out of the solder joints.



Step 17. Flip the LM2596 PCB over and adhere the Adhesive feet in the 4 areas shown.



The E-31 Variable Voltage Supply is now complete!