

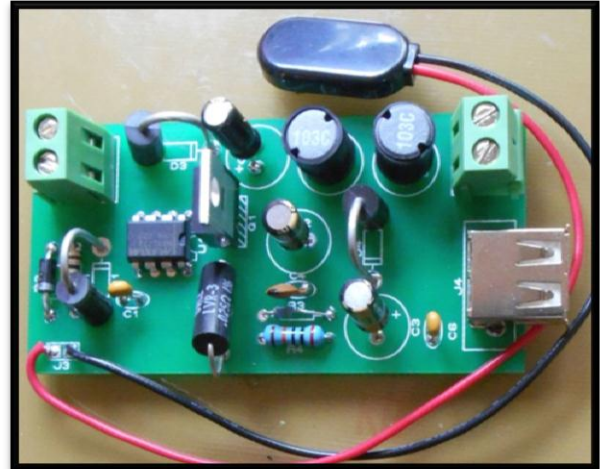
Build Manual

Sepic UPS for Raspberry Pi

Kit Contents

In this kit you should find the following:-

- Sepic PCB Board x 1
- 100 Ω Resistor (R1) x 1
- 470 k Ω Resistor (R3) x 1
- 200 k Ω Resistor (R4) x 1
- 25 m Ω Resistor (R2) x 1
- 100nF Capacitors(C1,C6) x 2
- 68uF Capacitors(C2,C3,C5) x 3
- 47pF Capacitors(C4) x 1
- MAX1771 Ic (U1) x 1
- IRL8113L FET(Q1) x 1
- 13R103C 10 μ H(L1,L2) Inductor x 2
- 1N5820 3A Schottky Diode(D1,D3,D4) x 3
- 1N4004 Diode(D2) x 1
- 2 Way Terminal Block(J1,J2) x 2
- USB Type A Socket x 1
- Battery Connector x 1



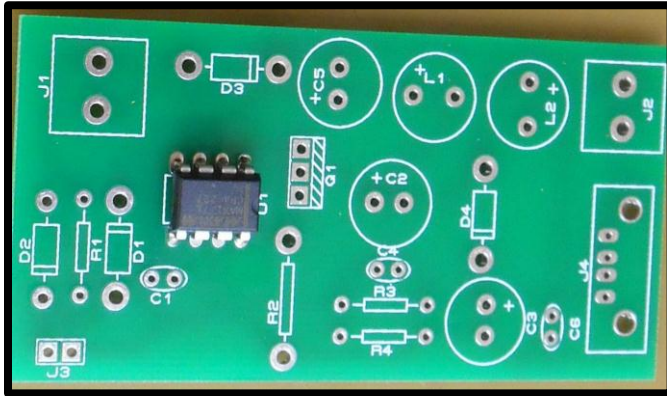
Tools needed

In order to assemble this kit you will need the following tools

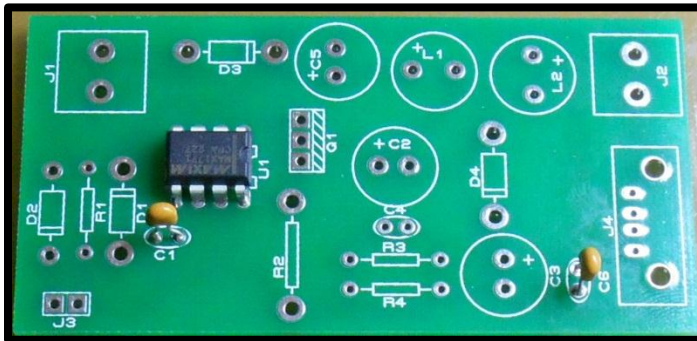
- Soldering iron
- Solder
- Wire cutters

The Build

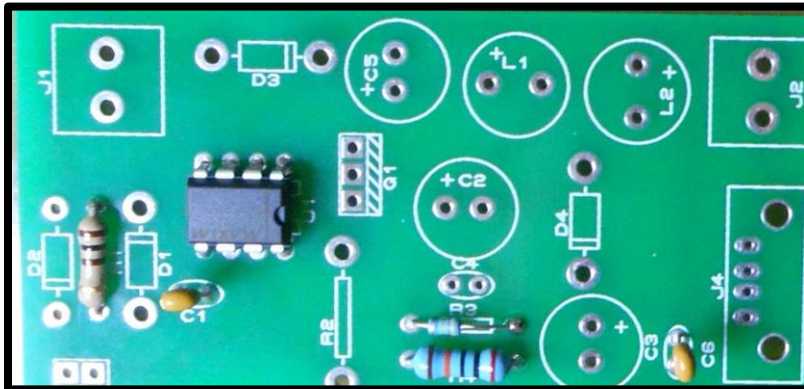
1. Insert the MAX1771 U1 into the board as shown turn the board over and solder the IC.



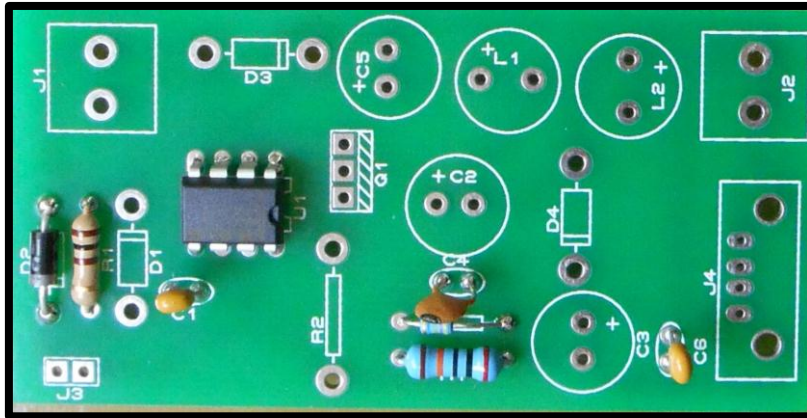
2. Insert the 100nF capacitors C1 & C6 and solder them into place as shown below



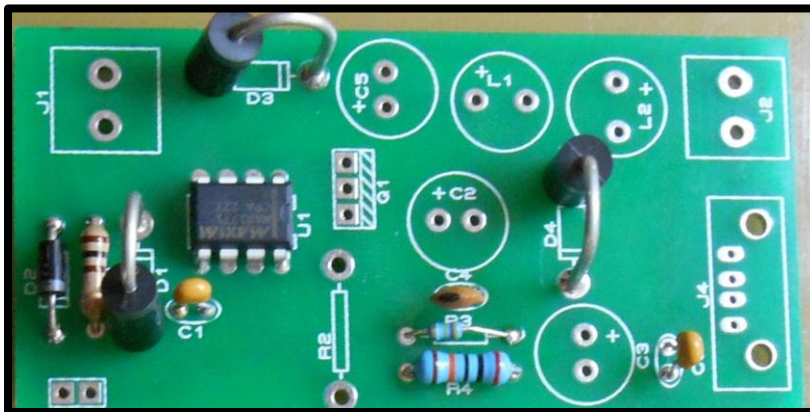
3. Insert the resistors R1, R3, R4 solder into place



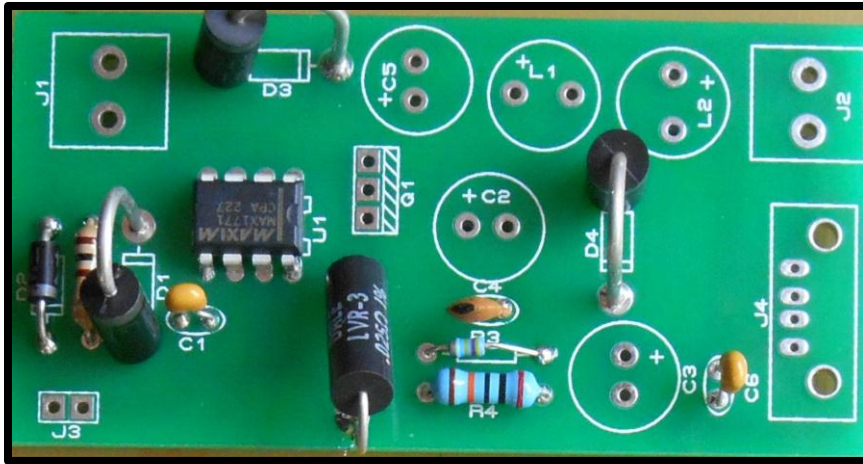
4. Insert and solder the 47 pF Capacitor C4



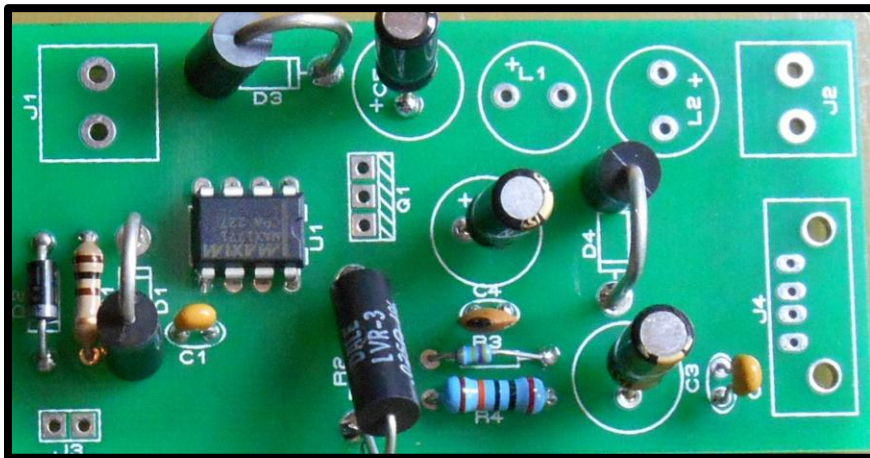
5. Insert the Diode D1-D4, note D2 is the smaller diode ensure they are the right polarity



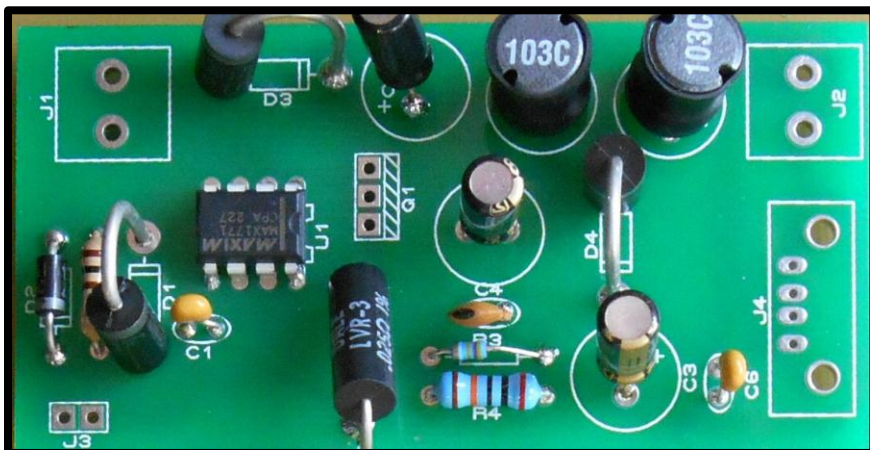
6. Insert the 25mΩ sense resistor R2



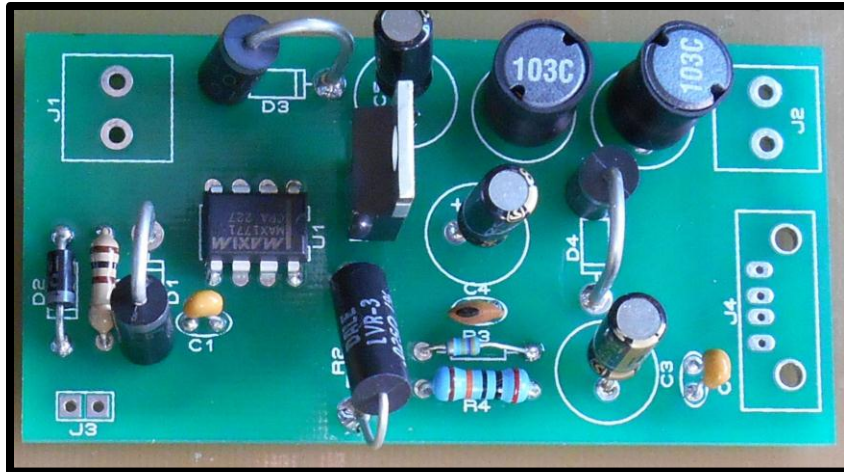
7. Insert the capacitors C2,C3,C5 ensure they are the right polarity



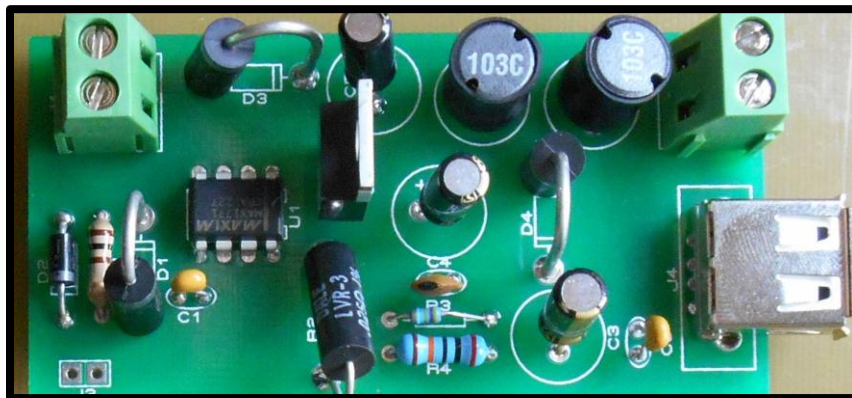
8. Insert the Inductors L1 & L2



9. Insert the IRL8113L FET Q1 note the orientation



10. Inset the USB and Terminal Connectors



11. Connect the battery holder red wire to left connector on J3

