

| Part | Value | Digikey PN | Notes | Cost |
|--------------------------|-------------------|---------------|--------------------------------|--------|
| U1 | LM3524D | LM3524DN-ND | SMPS PWM IC | \$1.46 |
| U2 | LM339N | LM339NNS-ND | Quad Comparator | \$0.49 |
| Q1 | 2N3904 | 2N3904-ND | Gen Purpose NPN | \$0.23 |
| Q2 | 2N3904 | 2N3904-ND | Gen Purpose NPN | \$0.23 |
| Q3 | 2N3906 | 2N3906-ND | Gen Purpose PNP | \$0.26 |
| Q4 | 2N3906 | 2N3906-ND | Gen Purpose PNP | \$0.26 |
| Q5 | IRFI3205 | IRFI3205-ND | 55 Volt Fullpack N-Ch Mosfet. | \$6.36 |
| Q6 | IRFI3205 | IRFI3205-ND | 55 Volt Fullpack N-Ch Mosfet. | \$6.36 |
| Q7 | 2N3904 | 2N3904-ND | Gen Purpose NPN | \$0.23 |
| Q8 | 2N3906 | 2N3906-ND | Gen Purpose PNP | \$0.26 |
| Q9 | 2N3904 | 2N3904-ND | Gen Purpose NPN | \$0.23 |
| D1 | RED LED T1-3/4 | P300-ND | Red LED (Low Battery LED) | \$0.22 |
| D2 | GRN LED T1-3/4 | P303-ND | Green LED (Supply Enabled LED) | \$0.22 |
| D3 | 1N4148 | 1N4148DICT-ND | Gen Purpose Diode | \$0.23 |
| D4 (Changed to resistor) | 100K | | See FAQ for more info | \$0.23 |
| D5 | 1N4148 | 1N4148DICT-ND | Gen Purpose Diode | \$0.23 |
| D6 | 1N4148 | 1N4148DICT-ND | Gen Purpose Diode | \$0.23 |
| D7 | Dual Diode | 40L40CW-ND | New or salvaged | \$3.38 |
| | HeatPad for Diode | BER178-ND | New or salvaged | \$0.82 |
| C1 | 3300uF 16V | P10260-ND | HF Electrolytic Capacitor | \$1.46 |
| C2 | 3300uF 16V | P10260-ND | HF Electrolytic Capacitor | \$1.46 |
| C3 | 3300uF 16V | P10260-ND | HF Electrolytic Capacitor | \$1.46 |
| C4 | 3300uF 16V | P10260-ND | HF Electrolytic Capacitor | \$1.46 |
| C5 | 3300uF 16V | P10260-ND | HF Electrolytic Capacitor | \$1.46 |
| C6 | 3300uF 16V | P10260-ND | HF Electrolytic Capacitor | \$1.46 |
| C7 | 3300uF 16V | P10260-ND | HF Electrolytic Capacitor | \$1.46 |
| C8 | 3300uF 16V | P10260-ND | HF Electrolytic Capacitor | \$1.46 |
| C9 | 3300uF 16V | P10260-ND | HF Electrolytic Capacitor | \$1.46 |
| C10 | 3300uF 16V | P10260-ND | HF Electrolytic Capacitor | \$1.46 |
| C11 | 3300uF 16V | P10260-ND | HF Electrolytic Capacitor | \$1.46 |
| C12 | 3300uF 16V | P10260-ND | HF Electrolytic Capacitor | \$1.46 |
| C13 | 4.7uF 25V | P973-ND | Electrolytic Capacitor | \$0.20 |
| C14 | 220uf 25V | P10271-ND | Electrolytic Capacitor | \$0.63 |
| C15 | 10uF 25V | P916-ND | Electrolytic Capacitor | \$0.32 |
| C16 | 1nF (1000pF) | 1383PH-ND | Ceramic Capacitor | \$0.08 |
| C17 | 47nF(47000pF) | 399-2072-ND | Ceramic Capacitor | \$0.34 |
| C18 | .01uF | 399-2068-ND | Ceramic Capacitor | \$0.19 |
| C19 | 100pF | 1338PH-ND | Ceramic Capacitor | \$0.09 |
| C20 | 220pF | 1342PH-ND | Ceramic Capacitor | \$0.11 |
| C21 | .1uF | 399-2074-ND | Ceramic Capacitor | \$0.22 |
| R1 | 4.7K | | 1/4 W Resistor | \$0.05 |
| R2 | 4.7K | | 1/4 W Resistor | \$0.05 |
| R3 | 2.2K | | 1/4 W Resistor | \$0.05 |
| R4 | 10K | | 1/4 W Resistor | \$0.05 |
| R5 | 4.7K | | 1/4 W Resistor | \$0.05 |
| R6 | 15K | | 1/4 W Resistor | \$0.05 |
| R7 | 1K | | 1/4 W Resistor | \$0.05 |
| R8 | 10K | | 1/4 W Resistor | \$0.05 |
| R9 | 150K | | 1/4 W Resistor | \$0.05 |
| R10 | 68K | | 1/4 W Resistor | \$0.05 |
| R11 | 10K | | 1/4 W Resistor | \$0.05 |
| R12 | 33K | | 1/4 W Resistor | \$0.05 |
| R13 | 27K | | 1/4 W Resistor | \$0.05 |
| R14 | 10K | | 1/4 W Resistor | \$0.05 |
| R15 | 33 Ohm (changed) | | 1/4 W Resistor | \$0.05 |
| R16 | 20K Pot | D4AA24-ND | Single Turn Potentiometer | \$0.35 |
| R17 | 33 Ohm (changed) | | 1/4 W Resistor | \$0.05 |

| | | | | |
|----------------------------------|--------------------|---------------------|---------------------------------|---------|
| R18 | 100K | | 1/4 W Resistor | \$0.05 |
| R19 | 10K | | 1/4 W Resistor | \$0.05 |
| R20 | 33K (changed) | | 1/4 W Resistor | \$0.05 |
| R21 | 10K | | 1/4 W Resistor | \$0.05 |
| R22 | 1K | | 1/4 W Resistor | \$0.05 |
| R23 | 4.7K (New) | | 1/4 W Resistor | \$1.05 |
| R24 | 4.7K (New) | | 1/4 W Resistor | \$2.05 |
| T1 | Transformer | | Custom Transformer | \$0.00 |
| L1 | 9uH, 25Amps | | Custom Inductor | \$0.00 |
| F1 (F2 Optional) | 30 Amp ATO fuse | | 32 Amp ATO or ATC fuse | \$0.45 |
| F1 CLIPS | Spade receptacles | | Crimp Female Spade connectors | \$0.50 |
| J1 | Pin Header | 929400-01-36-ND | Pin Header. Cut to length. | \$0.25 |
| Magnet Wire | 40 Feet of #24 | | | \$4.00 |
| Stranded Wire. | 4 feet #12 | | | \$3.00 |
| Circuit Board | 5.9 x 2.4 Inch | www.farcircuits.net | Fabricated by N8XJK | \$17.00 |
| UnLabeled Pads (Bottom of Board) | 25V 1uF Capacitors | PCC1893CT-ND | Qty of 18 Total Capacitors used | \$5.00 |

Miscellaneous hardware

| | | |
|---|-------------------------|--------|
| Two 4-40 by 3/8" inch bolts with nuts. | Mounting Hardware | \$0.30 |
| One 6-32 by 1/2 inch bolt with nut. | Mounting hardware | \$0.15 |
| Aluminum .062 thick | Mounting Plate/Heatsink | |
| Eight 6-32 by 1/4 long Male-Female threaded spacers | Mounting hardware. | |
| Toggle Switch, SPST | Manual Enable Switch | |
| Toggle Switch, SPST | Power Switch | |

Approximate CostTotal \$76.74