

**Bill of Materials -- Electrical Components for the Desktop Convection Apparatus**

Gerald Recktenwald, gerry@pdx.edu, 2016-03-21

**Total Cost:** \$ 108.00

Qty	Vendor	Part Number	Description	Unit Price	Cost
1	Adafruit	269	MAX31855 Thermocouple amplifier breakout board	\$ 13.46	\$ 13.46
1	Amazon	B003TUMDWG	12V 6A DC power supply	\$ 8.68	\$ 8.68
1	Amazon	B005CMP434	DC power Female connector plug	\$ 0.24	\$ 0.24
1	Digikey	603-1159-ND	12V, 80x15mm, 3800 RPM, DC axial fan	\$ 9.68	\$ 9.68
2	Digikey	987-1661-ND	10k Ohm, Rotary potentiometer, w/ solder lugs	\$ 0.64	\$ 1.28
1	Digikey	FQP30N06I-ND	MOSFET N-channel 60V, 32A, TO-220	\$ 1.05	\$ 1.05
1	Digikey	ED2610-ND	Terminal block, 3 position	\$ 0.54	\$ 0.54
1	Digikey	ED2609-ND	Terminal block, 3 position	\$ 0.42	\$ 0.42
1	Digikey	696-1153-ND	50 Ohm, 20W, Resistor TO-126 package	\$ 2.49	\$ 2.49
1	Digikey	345-1093-ND	Wakefield-Vette CPU Heat sink 40.6mm square	\$ 1.96	\$ 1.96
1	Sparkfun	LCD-09394	Serial enabled 16x2 LCD Panel	\$ 24.95	\$ 24.95
1	Sparkfun	DEV-12757	Redboard (or equivalent)	\$ 19.95	\$ 19.95
1	Sparkfun	CAB-11301	USB Mini-B Cable, 6 ft	\$ 3.95	\$ 3.95
1	Sparkfun	DEV-07914	Prototype shield	\$ 9.95	\$ 9.95
1	Sparkfun	COM-09590	LED, basic red, 5mm	\$ 0.35	\$ 0.35
1	Sparkfun	COM-09592	LED, basic green, 5mm	\$ 0.35	\$ 0.35
2	URS	54-395	SPST on-off subminiature toggle switch	\$ 2.35	\$ 4.70
2	URS	AZCC302	5mm/2.1mm DC power plug pigtail	\$ 1.50	\$ 3.00
1	URS	13-1208B	PA8 Eurostyle 12 position barrier strip	\$ 1.00	\$ 1.00

**Vendors**

Name	URL	Location
Adafruit	www.adafruit.com	New York, NY
Amazon	www.amazon.com	Seattle, WA
Digikey	www.digikey.com	Thief River Falls, MN
Sparkfun	www.sparkfun.com	Boulder, CO
URS	www.ursele.com	Portland, OR

**Notes**

Plywood, screws, zip-ties, hook-up wire and other miscellaneous supplies are not listed