

Entry
Workbench Design Challenge

I chose these parts, not for lowest price, but for best value.

PART/DESCRIPTION	PART NUMBER	VENDOR	COST
Soldering Iron (temp. controlled)	IR-258	All Electronics	28.95
Needle nose pliers & side cutter	152055	Jameco	15.99
De-soldering braid (5')	41100	Jameco	1.59
Solderless breadboard	389-X1000	Mouser	10.95
Jumper wires (10)	126360	Jameco	4.45
Multimeter/temp/transistor	220741	Jameco	19.95
Power supply (5, +-12)	PS-148	All Electronics	7.50
Power supply (5, 3.3, 2.5)	PS-637	All Electronics	6.50
Resistor, 1/4W, 1%, 100 ohm (10)	271-100-RC	Mouser	0.90
Resistor, 1/4W, 1%, 1000 ohm (10)	271-1K-RC	Mouser	0.90
Resistor, 1/4W, 1%, 10K ohm (10)	271-10K-RC	Mouser	0.90
Resistor, 1/4W, 1%, 100K ohm (10)	271-100K-RC	Mouser	0.90
Transistor, NPN, general purpose	512-2N3904TAR	Mouser	0.50
Total:			99.98

- This soldering iron is adjustable from 250 to 450 deg. C. The soldering iron should be temperature controlled but I felt that the fixed temperature model at 480 deg. C was too hot.
- The needle nose pliers and side cutter are Xcelite brand. You can buy cheaper but I have Xcelite tools that I have been using for 50+ years.
- I prefer de-soldering braid to solder suckers.
- The solderless breadboard is useful for testing low frequency circuits.
- The Multimeter is Mastech 838 and comes with rubber case and thermocouple.
- The power supplies are open frame, but you can't beat the price/value.
- There was money left over so I added the second supply which will allow +- 5V and lower voltages, and the resistors and transistors.

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