



Picture of all the parts in the Extra demo

There are a lot of different places where one can go to for electronic parts. The cheapest place for electronic parts in Salt Lake City would be the Electrical Engineering Department's stockroom located in the **Merril Engineering Building in room 2355 at the University of Utah**. However, if you do not have a University of Utah ID card, you will need to talk to the stockroom on how to get those parts. If you aren't able to get the parts from the University, then the second best place would be to buy wholesale from Digikey. Below is a table comparing the two:

Part Number	Part name	U of U ECE Stockroom price	Digikey (Buying wholesale)
1	Wire Kit: Contains wires.	\$0.00 if you buy \$9.85 breadboard	Buy 25 or more \$11.14 (Comes with breadboard)
3	10kΩ Resistor	\$0.03	Buy 10 or more \$0.08
9	Photodetector	\$1.70 (Note that this part will look different if bought from the ECE stockroom, but it will still work)	Buy 25 or more \$1.28
12	Breadboard	\$9.85 (ECE stockroom only sells a larger version of the breadboard than has been used for the demo)	(see part 1)
100	LF353 Op Amp	\$0.50	Buy 25 or more \$0.45
101	50kΩ Potentiometer	\$0.50	Buy 10 or more \$0.92
102	LED	\$0.25	Buy 10 or more \$0.21
	Total	\$12.83	\$14.08

Summary: This circuit is cheap when you take the breadboard and wire-kit out of the price (\$2.98 at the ECE Stockroom and \$2.94 at Digikey buying wholesale). My tip would be to get all the breadboards and wire kits from one cheap site because after you have those two objects, all the electronics circuits seem cheaper.

Digikey links to parts:

1. Breadboard and wire kit: <http://search.digikey.com/scripts/DkSearch/dksus.dll?Selection>
3. 10K resistor: <http://search.digikey.com/scripts/DkSearch/dksus.dll?Detail&name=P10KBACT-ND>
9. Photodetector: <http://search.digikey.com/scripts/DkSearch/dksus.dll?Detail&name=PDV-P9203-ND>
12. Breadboard: (Comes with wire kit)
100. LF353 Op-Amp: <http://search.digikey.com/scripts/DkSearch/dksus.dll?Detail&name=LF353NFS-ND>
101. 50kΩ Potentiometer: <http://search.digikey.com/scripts/DkSearch/dksus.dll?Detail&name=3361P-503GLFCT-ND>
102. LED: <http://search.digikey.com/scripts/DkSearch/dksus.dll?Detail&name=P375-ND>