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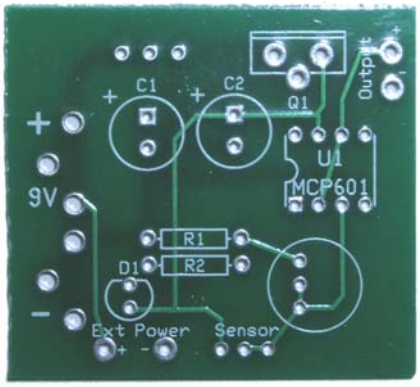
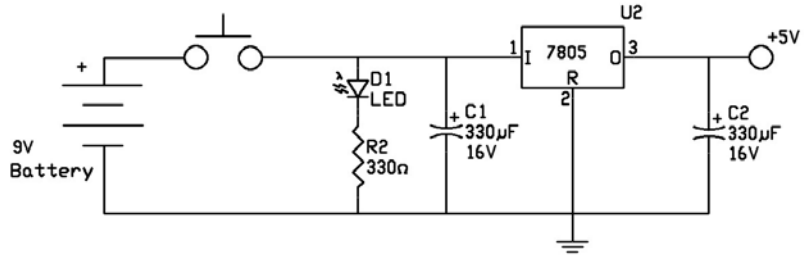
Op-Amp Circuit

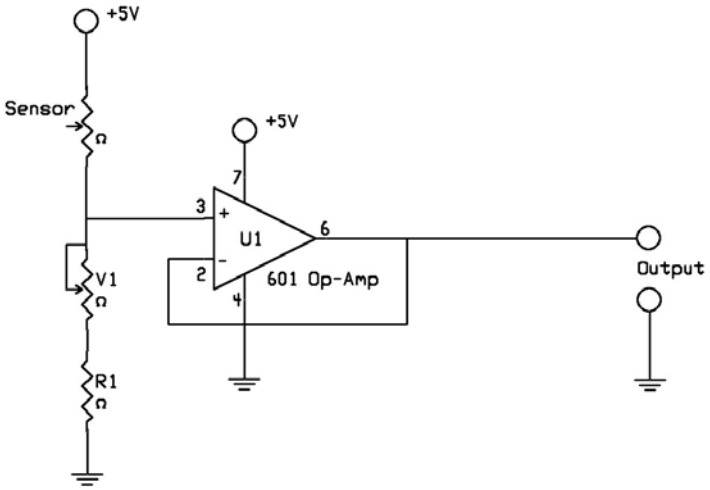


The Op-Amp circuit is designed to use a variety of resistive sensors and output a 0-5V DC.

The sensor utilized are the FSR and PS series of sensors. The value of the resistors used on the circuit board will change depending upon the sensor.

See chart on schematic below.





Sensors

Interlink	V1 Pot. Value	R1 Value
FSR-400	20 Kohm	10K
FSR-402	20 Kohm	2.2K
FSR-406	20 Kohm	1.0K

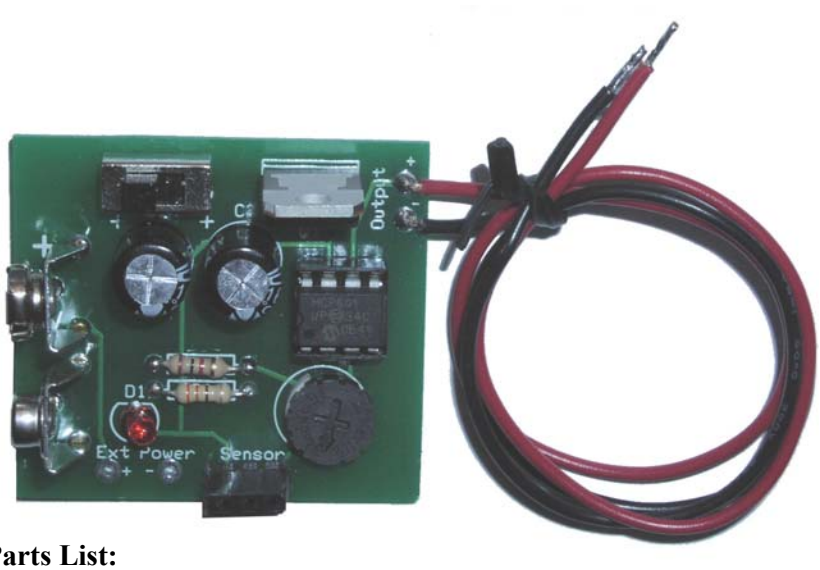
Flexiforce	V1 Pot. Value	R1 Value
PS-01	500 K-ohm	470 K
PS-02	500 K-ohm	1 Megaohm
PS-03	500 K-ohm	220 K

Construction:

Begin by mounting and soldering to the pcb; 7805 Voltage regulator, C1 and C2, 9-Volt battery terminals, switch, 8-pin socket, 3 pin socket to sensor position, subminiature LED, (R2) 330 ohm resistor. Solder 8 inch red and black wire leads the + and—output. Choose your value for V1 and R1 using the chart on the schematic. Then solder and mount the components to the pc board. Mount the MCP601 op-amp into the 8-pin socket.

Usage:

Plug sensor into the 3 pin socket. Apply power to the circuit. Monitor the voltage output of the circuit with a voltmeter set to a range of 0 to 5 VDC. Apply pressure to the sensor and vary the potentiometer V1 to obtain the required voltage output for pressure.



Parts List:

PC board
7805 voltage regulator (Q1)
MCP 601 op-amp
Subminiature LED
3 pin straight line socket
8 pin dip socket
Switch pc mount
(2) 9V battery terminals +,-
(2) 200-330 uF Capacitors (C1,C2)
20K pc mount potentiometer
500K pc mount potentiometer
330 ohm resistor (R2)
1 K resistor
2.2 K resistor
10 K resistor
220 K resistor
470 K resistor
1 Meg resistor