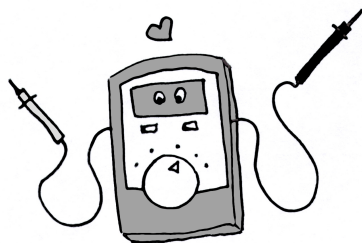


Note: this guide is best suited to an auto-ranging multimeter. If you have the other kind (upper ranges for voltage, resistance, etc. to turn the dial to, eg. 20V), make your best guess of the voltage or resistance you are expecting and turn the dial to that spot.

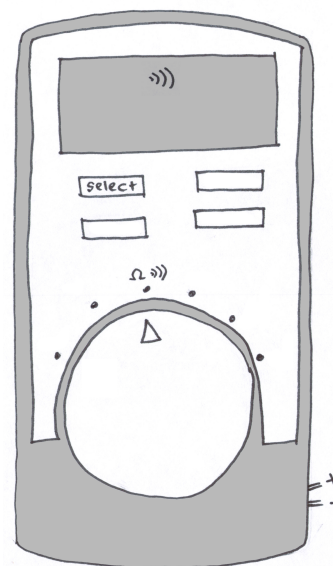
natalie freed
2015

CC BY-NC-SA 4.0

*the multimeter
is your friend*



continuity

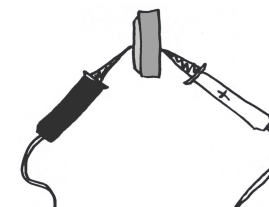


1

How much do the electrons you are providing want to get through your material? Higher voltage = greater “pushing force” through your wire, measured in **volts**.

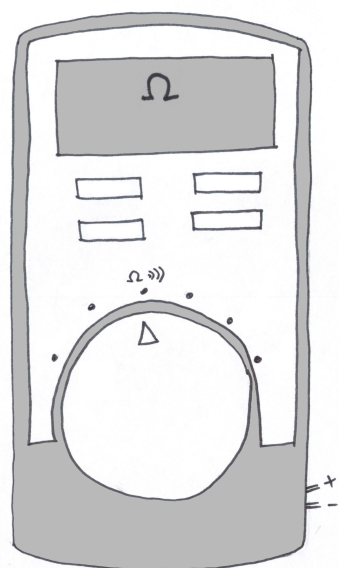
Turn dial to **V** and make sure you see the letters DC on the display.

You can measure the voltage in a battery (a 3V battery that is low on charge will measure less than 3V).



6

resistance

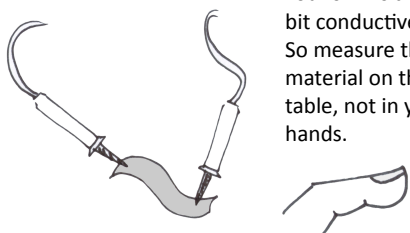


3

How difficult is it for electrons to flow through a material? The higher the resistance, the lower the conductivity. Resistance is measured in **Ohms**.

Turn dial to the Ω symbol.

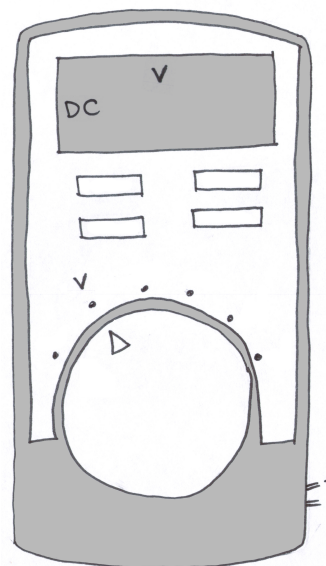
Your circuit should **not** be powered (disconnect the battery).



Your skin is a little bit conductive! So measure the material on the table, not in your hands.

4

voltage



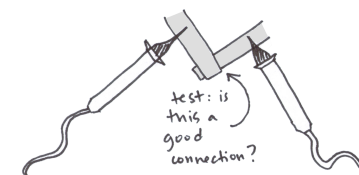
5

Is there a conductive path where electrons can flow? Test for faulty connections or short circuits.

Turn dial to the Ω symbol. You may then need to press the select button a few times until you see the symbol on the display.

When there is a connection, you will hear a beep! Try this by touching the probes together.

Your circuit should **not** be powered.



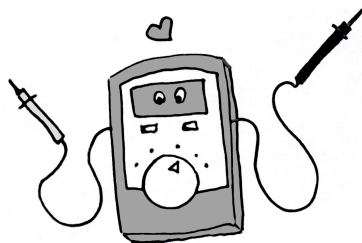
2

Note: this guide is best suited to an auto-ranging multimeter. If you have the other kind (upper ranges for voltage, resistance, etc. to turn the dial to, eg. 20V), make your best guess of the voltage or resistance you are expecting and turn the dial to that spot.

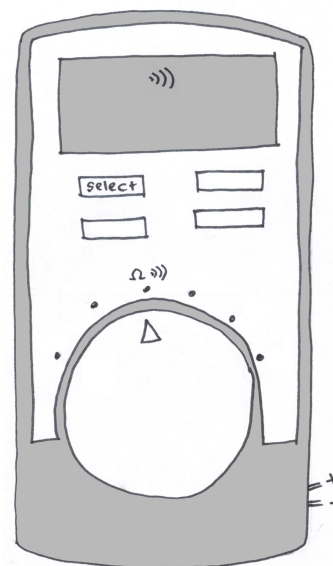
natalie freed
2015

CC BY-NC-SA 4.0

*the multimeter
is your friend*



continuity

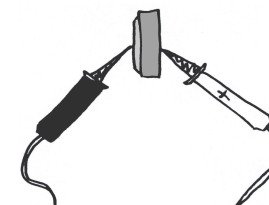


1

How much do the electrons you are providing want to get through your material? Higher voltage = greater “pushing force” through your wire, measured in **volts**.

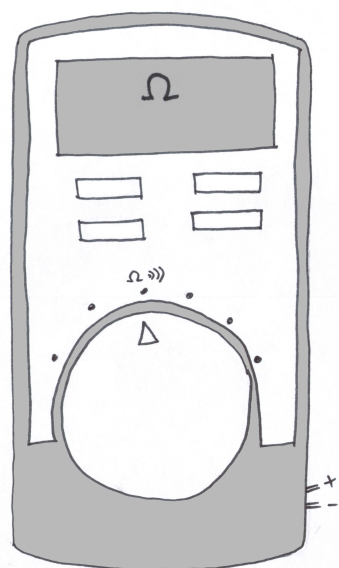
Turn dial to **V** and make sure you see the letters DC on the display.

You can measure the voltage in a battery (a 3V battery that is low on charge will measure less than 3V).



6

resistance

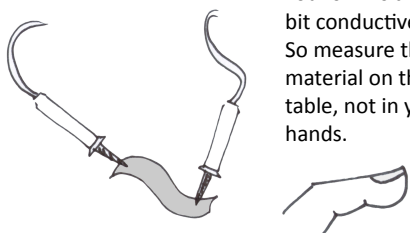


3

How difficult is it for electrons to flow through a material? The higher the resistance, the lower the conductivity. Resistance is measured in **Ohms**.

Turn dial to the **Ω** symbol.

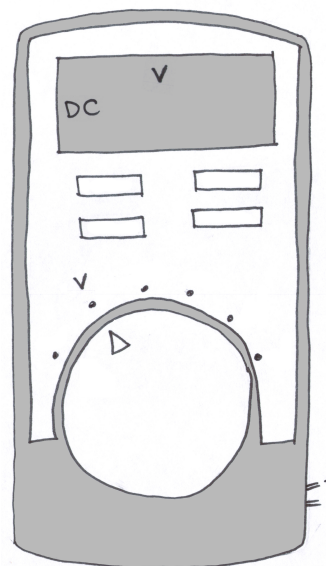
Your circuit should **not** be powered (disconnect the battery).



Your skin is a little bit conductive! So measure the material on the table, not in your hands.

4

voltage



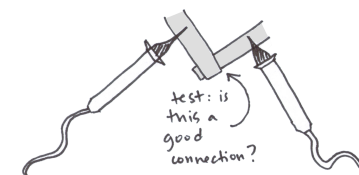
5

Is there a conductive path where electrons can flow? Test for faulty connections or short circuits.

Turn dial to the **V** symbol. You may then need to press the select button a few times until you see the symbol on the display.

When there is a connection, you will hear a beep! Try this by touching the probes together.

Your circuit should **not** be powered.



2