

How to use a Multimeter

There are a few types of meters, manual and Auto ranging. Most modern meters have digital readouts. Your meter should be fused. If the meter stops working, you either blew the fuse or the battery is dead. Many meters have auto turnoff features to save battery life.

With a **manual meter**, you have a knob with lots of settings, decide the approximate value that you are testing for, then put the indicator to the setting one higher than what you think it will be. If you are too high or too low, it will give an out of range reading, such as 1.

An **auto ranging meter** will find the value for the variable you are testing for. You set it to the variable and put it on a circuit, it will find the value for you. There are only a few settings on an auto ranging meter.

Volts DC: indicated by a bar with three dots below it. This is for measuring direct current voltage. Put the test probes in parallel in the circuit.

Volts AC: indicated by a ~ sine wave symbol. Alternating current voltage. Put the test probes in parallel in the circuit. Current switches direction 60 times per second in North America, but 50 times/sec in Europe.

Resistance: indicated by Greek omega symbol. Resistance is measured in Ohms, can be followed by K - x1000 KiloOhms, M - x10,000 MegaOhms. Put the test probes in parallel in the circuit.

Amperage indicated as A or mA. Amperage is measured in amps or milliamps. Put the test probes in series, disconnect the circuit, and bridge the gap with the probes of the meter. Make amperage readings for brief times only. If you leave it connected for longer, you may blow the fuse. If you are measuring a higher amp circuit, you will have to move the red probe from the regular port to the 10a or 20a port. Switch it back when you want to measure volts or amps.

Contuity indicated as a point with several arcs emanating from it. Put the test probes in parallel with the circuit. The meter will beep to indicate a complete/closed circuit between the two points of the probes.

For more information:

<http://www.doctronics.co.uk/meter.htm>

http://www.bobvila.com/FixItClub/Task/Repairing/FIG_Multimeter.html