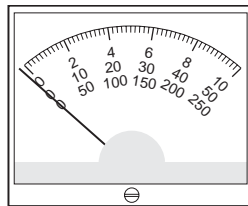


MULTIMETERS

From the simplest circuits in electronics to complex computer systems, it becomes necessary at some time to measure voltage, current or resistance.

The instrument most commonly used for this is a multimeter. It is voltmeter, ammeter and ohmmeter rolled into one. There are two types:

- analogue
- digital.



Analogue scale



Digital scale

The scales of each are shown above right.

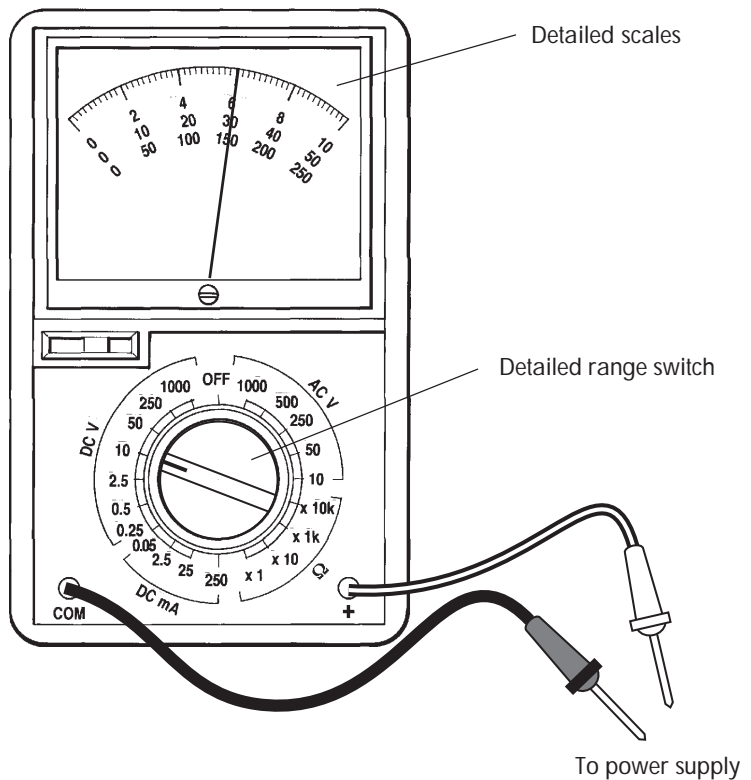
The analogue scale shows a value by the needle's position on a scale. The digital scale simply shows the value as a number.

Whichever meter you use or whatever quantity you measure, a selector switch (e.g. for resistance, voltage or current) has to be set in the correct position.

The illustration to the right shows an example of an analogue meter used to measure voltage.

The DC volts range 0 - 10 V has been selected and the pointer indicates 6 V.

Meters from different manufacturers vary. Some digital meters have range-selector switches, others automatically select the correct value range. With the automatic type, you still have to select the correct quantity to measure (i.e. current, voltage or resistance).



WARNING

Analogue meters have an internal resistance which will affect resistance and voltage readings. Cheaper meters can affect readings quite significantly. Also, readings of resistance will be affected by the voltage of the battery in the meter.

