

Most Commonly Used Units

•Current: Measured in Amps (A)

*The **rate** that electrons **flow** around a circuit*

CURRENTS ARE OFTEN VERY SMALL AND SO ARE OFTEN MEASURED IN mA (milliamps)

$$1\text{mA} = 0.001\text{A}$$

•Voltage: Measured in Volts (V)

*The number of **Joules of Energy** that the electrons carry with them at a given point in a circuit*

VERY SMALL VOLTAGES ARE OFTEN MEASURED IN mV (millivolts)

$$1\text{mV} = 0.001\text{V}$$

•Resistance: Measured in Ohms (Ω)

*The amount that an electrical component takes energy out of a circuit **and** Reduces the current*

RESISTANCES ARE OFTEN VERY HIGH AND MEASURED IN K Ω AND M Ω

$$1\text{K } \Omega = 1000 \Omega$$

$$1\text{M } \Omega = 1000000 \Omega$$

By writing the values like this we don't have to write loads and loads of zeros for very high values. Instead we move the decimal point 3, 6, or 9 places in either direction and use the relevant PREFIX in front of the unit.

<u>Symbol</u>	<u>Prefix</u>	<u>Normal Number</u>	<u>What we'd call it</u>
G	giga	1000000000	billion
M	mega	1000000	million
K	kilo	1000	thousand
(none)	-	1	one
m	mili	0.001	One thousandth
u	micro	0.000001	One millionth
n	nano	0.000000001	One billionth
p	pico	0.000000000001	One trillionth