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Introduction To Modern Electronics – Lesson 2: Electricity

FORMULAS

The following formulas and information are meant to go with the online lesson found here:
http://www.pyroelectro.com/edu/basics/electricity/

VOLTAGE, CURRENT AND POWER

If you're not already familiar with the metric system, you'll need to be! Below are some simple examples of the metric system is broken up and how it translates over to the electrical units of power voltage and current.

Voltage (**V**olts)	0.001 k**V** = 1 **V** = 1000 m**V**
Current (**A**mps)	0.001 k**A** = 1 **A** = 1000 m**A**
Power (**W**atts)	0.001 k**W** = 1 **W** = 1000 m**W**

Prefix	abbreviation	Power of 10	Length unit
kilo-	k	10^3 or 1000	kilometer, km
hecto-	h	10^2 or 100	hectometer, hm
deka-	da	10^1 or 10	dekameter, dam
base unit	------	10^0 or 1	**meter**
deci-	d	10^{-1} or 0.1	decimeter, dm
centi-	c	10^{-2} or 0.01	centimeter, cm
milli-	m	10^{-3} or 0.001	millimeter, mm

USING VOLTAGE AND CURRENT TO FIND POWER

Voltage and Current describe the speed and energy of electricity. Using those two elements we find that the Power is a mere product of voltage and current.

$$Power = Current \times Voltage$$

$$P = i * V$$

In electrical theory, power takes the uppercase symbol of the letter **P**. Current takes the lowercase symbol of **i** and voltage takes the uppercase symbol of **V**.

ADDITIONAL INFORMATION

If you have any questions about the formulas or information found in this document, please feel free to head on over to the forums and ask us some questions!
http://www.pyroelectro.com/forums/