

Date	
Course Name	
Instructor Name	
Student(s) Name	

Ohm's Law

The fundamental relationship among the three important electrical quantities *current*, *voltage*, and *resistance* was discovered by Georg Simon Ohm. The relationship and the unit of electrical resistance were both named for him to commemorate this contribution to physics. One statement of Ohm's law is that the current through a resistor is proportional to the voltage across the resistor. In this experiment you will see if Ohm's law is applicable to several different circuits using a Current Probe and a Voltage Probe.

Current and voltage can be difficult to understand, because they cannot be observed directly. To clarify these terms, some people make the comparison between electrical circuits and water flowing in pipes. Here is a chart of the three electrical units we will study in this experiment.

Electrical	Description	Unit	Water Analogy
Voltage or Potential Difference	A measure of the Energy difference per unit charge between two points in a circuit.	Volt (V)	Water Pressure
Current	A measure of the flow of charge in a circuit.	Ampere (A)	Amount of water flowing
Resistance	A measure of how difficult it is for current to flow in a circuit.	Ohm (Ω)	A measure of how difficult it is for water to flow through a pipe.