Electric Circuits: A Stick Figure Physics Primer

Electric circuits are a fundamental part of our modern world. They're used in everything from our computers to our cars to our homes. But how do electric circuits work? And what are the basic principles that govern them?



Electric Circu	uits (Stick Figure Physics) by Sarah Allen
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In this article, we'll take a look at the basics of electric circuits using stick figure physics. Stick figure physics is a simplified way of representing the behavior of objects in motion. It's a great way to understand the basic principles of electricity without getting bogged down in the details.

What is an Electric Circuit?

An electric circuit is a path that allows electricity to flow. It consists of a source of electricity, a conductor, and a load.

- The source of electricity can be a battery, a generator, or another device that produces electricity.
- The conductor is a material that allows electricity to flow through it.
 Examples of conductors include metals, such as copper and aluminum.
- The load is the device that uses the electricity. Examples of loads include light bulbs, motors, and computers.



How Do Electric Circuits Work?

Electricity flows through an electric circuit because of a difference in electrical potential. Electrical potential is a measure of the amount of electrical energy that is stored in a given point. The higher the electrical potential, the more electrical energy is stored.

When a source of electricity is connected to a circuit, it creates a difference in electrical potential between the two ends of the circuit. This difference in electrical potential causes electrons to flow through the circuit. Electrons are negatively charged particles that are found in atoms. When electrons flow, they create an electric current.

The strength of the electric current is determined by the amount of difference in electrical potential and the resistance of the circuit. Resistance is a measure of how difficult it is for electricity to flow through a material. The higher the resistance, the more difficult it is for electricity to flow.

Types of Electric Circuits

There are two main types of electric circuits: series circuits and parallel circuits.

- In a series circuit, the components are connected in a single loop. This means that the current flows through each component in turn.
- In a parallel circuit, the components are connected in multiple loops. This means that the current can flow through any of the components without having to flow through the others.



In a series circuit, the components are connected in a single loop.



Applications of Electric Circuits

Electric circuits are used in a wide variety of applications. Some of the most common applications include:

- Lighting
- Powering motors
- Controlling computers
- Transmitting data
- Detecting objects

Electric circuits are an essential part of our modern world. They're used in everything from our computers to our cars to our homes. By understanding the basics of electric circuits, we can better understand how these devices work and how to troubleshoot them when they stop working.



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