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there are four basic electrical quantities that we need to know current potential difference voltage power resistance electrical current current is a flow of charge each electron carries a charge of 1.6×10^{-19} coulombs this is far too small to be any use so we consider electricity to flow in packets called coulombs electricity basics when beginning to explore the world of electricity and electronics it is vital to start by understanding the basics of voltage current and resistance these are the three basic building blocks required to manipulate and utilize electricity at first these concepts can be difficult to understand because we cannot see them written by willy mcallister voltage and current are the cornerstone concepts in electricity we will create our first mental models for these basic electrical quantities we will also talk about power which is what happens when voltage and current act together charge the concept of electricity arises from an observation of nature in this video we learn how electricity works starting from the basics of the free electron in the atom through conductors voltage current resistors led alternating current ac direct current dc 120v 60 hz sine wave diagram basic electricity including electrical definitions ohm s law and electrical circuit information including direct and alternating current in its simplest terms electricity is the movement of charge which is considered by convention to be from positive to negative no matter how the charge is created chemically like in batteries or physically friction from socks and carpet the movement of the discharge is electricity understanding current in this article we ll be learning the basic concept behind how electricity works according to classical theory we ll cover atoms electrons protons neutrons then move onto the difference between conductors and insulators wires and cables circuits volts and voltage currents and amps resistors resistance and ohms induction and electricity is a type of energy that can build up in one place or flow from one place to another when electricity gathers in one place it is known as static electricity the word static means something that does not move electricity that moves from one place to another is called current electricity static electricity electricity explained 1 into the ordinary 117k subscribers subscribed 66k 2 8m views 6 years ago groningen electricity playlist electricity what is electricity how does our articles on electrical basics are designed to be accessible yet informative providing a solid foundation in electrical basic principles and preparing you for more advanced electrical engineering topics fundamentals space charge definition examples and effects may 3 2024 understanding sinusoidal wave signals june 19 2023 this video provides a basic introduction into electricity it covers the basic concepts of voltage current and resistance as mentioned by ohm s law it a electricity is briefly defined as the flow of electric charge but there s so much behind that simple statement where do the charges come from how do we move them where do they move to how does an electric charge cause mechanical motion or make things light up so many questions electricity phenomenon associated with stationary or moving electric charges electric charge is a fundamental property of matter and is borne by elementary particles in electricity the particle involved is the electron which carries a charge designated by convention as negative electricity is the set of physical phenomena associated with the presence and motion of matter possessing an electric charge electricity is related to magnetism both being part of the phenomenon of electromagnetism as described by maxwell s equations unit 1 introduction to electrical engineering getting started unit 2 circuit analysis circuit elements resistor circuits dc circuit analysis natural and forced response ac circuit analysis unit 3 amplifiers operational amplifier unit 4 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