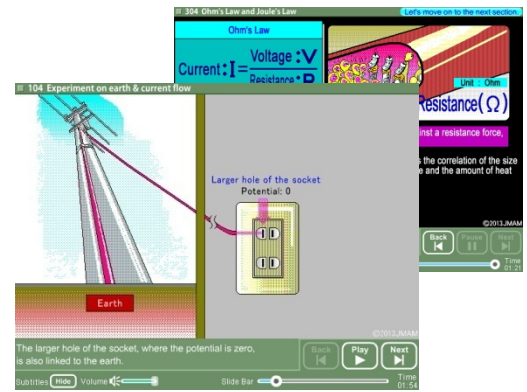


"Complicated" electricity concepts are made easy-to-understand with the use of narration, CG, and pictures.

Basic Electricity Course

※本コースは日本語版『電気の基礎コース』を英訳した教材です。



★To learn the basics of electricity, from three-phase AC to practical real world applications.

- Electricity, something difficult to see with the human eye, will be visualized and explained with a combination of computer graphics, narration, and images.
- There are lecture questions at the end of each section for this course. By working through the questions, you can see how much you have come to understand about the basics of electricity.

Characteristics

- ★ Even with know prior knowledge of electricity, learn about three-phase AC and basic concepts.
- ★ The focus will be on practical applications instead of difficult formulas, so that those who wish to learn the basics of Electricity will be able to do so more easily.

Curriculum

Chapter 1 AC Electricity Flow Mechanism (AC)	
101 Let's examine the power plug socket	105 Mechanism of AC electricity flow
102 What is electric current?	106 Effective value of AC
103 What is voltage?	107 Summing up quiz
104 Experiment on earth & current flow	
Chapter 2 Three-phase AC	
201 Electricity for industrial plants	205 Mechanism of 3-phase AC flow
202 What is three-phase AC?	206 Single-phase AC tap from 3-phase AC
203 3-phase AC cable has 3 wires. Why? 1	207 Auxiliary units
204 3-phase AC cable has 3 wires. Why? 2	208 Summing up quiz
Chapter 3 Ohm's Law and Joule's Law	
301 Problem! Smoke from power cable!	305 Resistance of troublesome circuit
302 Measuring current in power cable	306 Heat generated in electric cable
303 Allowable current in cable & heat	307 Summing up quiz
304 Ohm's Law and Joule's Law	
Chapter 4 Series and Parallel Connection	
401 The lighting is not bright enough	404 Current in parallel circuit
402 Series and parallel connection	405 Summing up quiz
403 Voltage/electrical equipment rating	
Chapter 5 Power Consumption and Power Factor	
501 A set breaker trips open	504 VA and W
502 AC power consumption/power factor	505 Summing up quiz
503 Current calculation/power factor	
Chapter 6 Useful Knowledge on Electricity	
601 Working clothes and safety	603 Three-phase AC current value
602 Equation for calculation motor rpm	604 Circuitry symbols worth remembering

Who should take this course

For those who want to learn the basics of electricity

Course material outline

Expected learning time

◆ 2 hours

Shortest duration

◆ 54minutes

◆ Number of tests: 2