

Engineering Principles

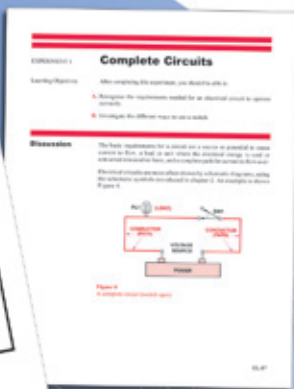
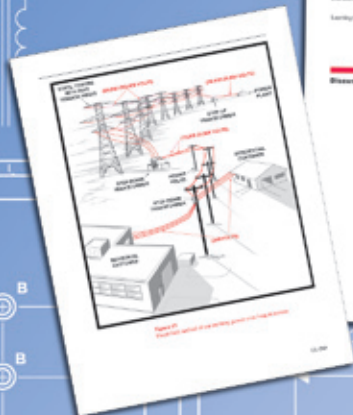
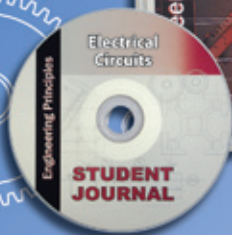
Electrical Circuits

Science

Technology

Engineering

Math

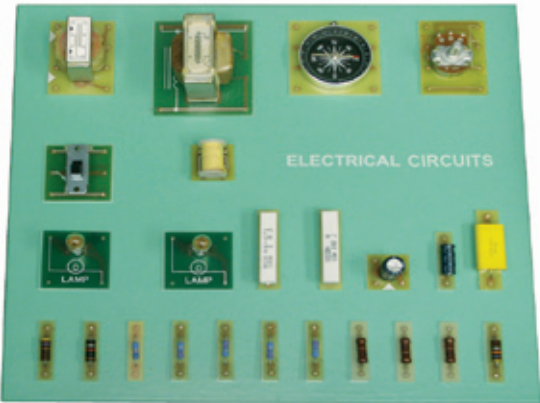


ENERGY CONCEPTS, INC.



Electrical Circuits

The **ECI Model 273S Electrical Circuits Trainer** guides students through hands-on experiments designed to provide an understanding of electricity, electrical components, and circuits. The understanding of electrical circuits is a necessity for engineers working with complex systems and devices. Students will be able to apply what they have learned in a wide range of job situations in their future careers.



Components

Potentiometer	10 Ω , 10 W Resistor	1 μ fd, 50 VDC Capacitor
Coil	100 Ω , 2 W Resistor	100 μ fd, 25 VDC Capacitor
SPDT Switch	220 Ω , 1 W Resistor	1000 μ fd, 50 VDC Capacitor
Compass	470 Ω , 5 W Resistor	Accessory Package
Inductor	820 Ω , 1 W Resistor	
Transformer	1 k Ω , 1 W Resistor	
Lamp	10 k Ω , 1 W Resistor	
	47 k Ω , 1 W Resistor	

Circuit Panel and Easel



ECI's **Circuit Panel** is completely flexible and suitable for any general breadboarding work. The patented design can be used for basic set-up to advanced electronic circuits. The **Circuit Panel Easel** is designed to hold the circuit panel for convenient circuit building. The base lifts out to reveal a roomy storage compartment for tools and accessories.

Instrumentation



High Current Power Supply

The AC/DC power supply is fully protected and specifically designed to provide long life under classroom conditions. Built with rugged 20-gauge steel, it is made in the USA and backed by a 3-year warranty.



Digital Multimeter

The Laboratory Manual

The Lab manual is designed to help students develop a thorough understanding of the subject matter. The manual is clearly written and professionally illustrated. It is printed in two-colors and comes in a quality vinyl binder.

- System Familiarization
- Safety In The Laboratory
- Parts and Symbols
- Wiring Procedures
- Basic Electricity
- Structure of Matter

- Conductors and Insulators
- Batteries
- Series Circuits
- Parallel Circuits
- Resistors and Ohm's Law
- Electrical Power and Energy

- Resistive Circuits
- Magnetism and Electromagnetism
- Alternating Current
- Self Inductance in a Coil
- Capacitance
- Capacitor Characteristics



Instructor's Resource Guide

The Resource Guide includes sample data and answers to quiz questions, as well as a Student Journal CD. The journal provides a convenient way for students to enter and save their data and answers to experiment questions. The instructor can also have the students print paper copies to hand in for grading.