

Basic Electronics Program Model H-CAI-BE

The Hampden H-CAI-BE Kit teaches students about the behavior of electricity, basic electrical devices and basic circuit designs by providing complete resources for the quick assembly and disassembly of simple breadboard experiments.

(No Soldering Required)

A Student Workbook guides students in the connection of circuits, making measurements and observations, and arriving at conclusions. All experiments are performed at low voltage levels. Each concept is presented simply with easy-to-follow circuit diagrams.

Description

This kit provides all necessary components and breadboarding apparatus required to complete the topics covered in *Grob's Experiments in Basic Electronics*.

Experiments in Basic Electronics provides the basis of coverage for DC/AC circuits, network theorems, measurements, filters, magnetism, resonance, solid-state electronics, transistor amplifiers and integrated circuits as well as digital electronics.

Each component is permanently secured to its own sturdy plastic base—Velcro® backed for fast and easy assembly of circuits on the supplied Velcro work board. This "Velcro" attachment system has become the preferred method for laboratory circuit assembly due to its simplicity, ease of use and durability.

All components are secured to Velcro-covered sliding trays. All kits can be ordered as drawer storage kits using the supplied glue-on tray support panels (two per drawer) or with heavy-duty lockable cabinets.

(Specify -D or -C)



Optional Drawer Storage Available

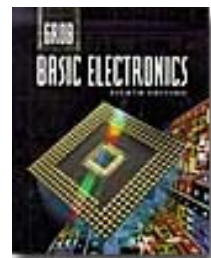
Hardware Features

- Lockable Storage & Carrying Case
- Neat Work Areas
- Ease of Circuit Assembly & Disassembly
- Individually Mounted Components
- Low Voltage

Courseware Features

- Background Theory
- Easy to Follow Sequence
- Experiments and Tests

All the necessary components & breadboarding apparatus required to complete ▶



Grob's Basic Electronics



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All Hampden units are available for operation at any voltage or frequency

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■ Topics

I. Introduction to Powers of 10

1. Electricity
2. Resistors
3. Ohm's Law
4. Series Circuits
5. Parallel Circuits
6. Series-Parallel Circuits
7. Voltage Dividers and Current Dividers
8. Analog and Digital Multimeters
9. Kirchoff's Laws
10. Network Theorems
11. Conductors and Insulators
12. Batteries
13. Magnetism
14. Electromagnetism
15. Alternating Voltage and Current
16. Capacitance
17. Capacitance Reactance
18. Capacitance Circuits
19. Inductance
20. Inductive Reactance
21. Inductive Circuits
22. RC and L/R Time Constants
23. Alternating Current Circuits
24. Complex Numbers for AC Circuits
25. Resonance
26. Filters
27. Diodes and Diode Applications
28. Bipolar Junction Transistors
29. Transistor Amplifiers
30. Field Effect Transistors
31. Power Amplifiers
32. Thyristors
 - A. Electrical Symbols and Abbreviations
 - B. Solder and the Soldering Process
 - C. Listing of Preferred Resistance Values
 - D. Component Schematic Symbols
 - E. Using the Oscilloscope
 - F. Introduction to Multism

■ Courseware

Text: **Grob's Basic Electronics**, Mitchel Shultz (Includes Tests and Experiments)

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