Sntieecr D-015C

Sntieecr STEM Physics Circuit Kit: Electricity & Magnetism Lab Instruction Manual

Brand: Sntieecr | **Model:** D-015C

Important Safety Information

- **CHOKING HAZARD:** Small parts. Not suitable for children under 3 years.
- This kit contains small magnets. Adult supervision is required for children during use.
- Beware of scalding caused by short circuits. Always ensure correct circuit connections.
- Do not mix old and new batteries.
- Do not mix alkaline, standard (carbon-zinc), or rechargeable batteries.
- Recommended age for this experiment kit is 14+ years.
- Always refer to the circuit diagrams in the included instruction manual to avoid short circuits. Incorrect connections can generate high temperatures and may melt or burn the battery holder casing.
- Please note that batteries are not included in the package.

Package Contents

The Sntieecr STEM Physics Circuit Kit includes 98 items designed for electricity and magnetism experiments. A detailed 52-page color instruction manual is provided.

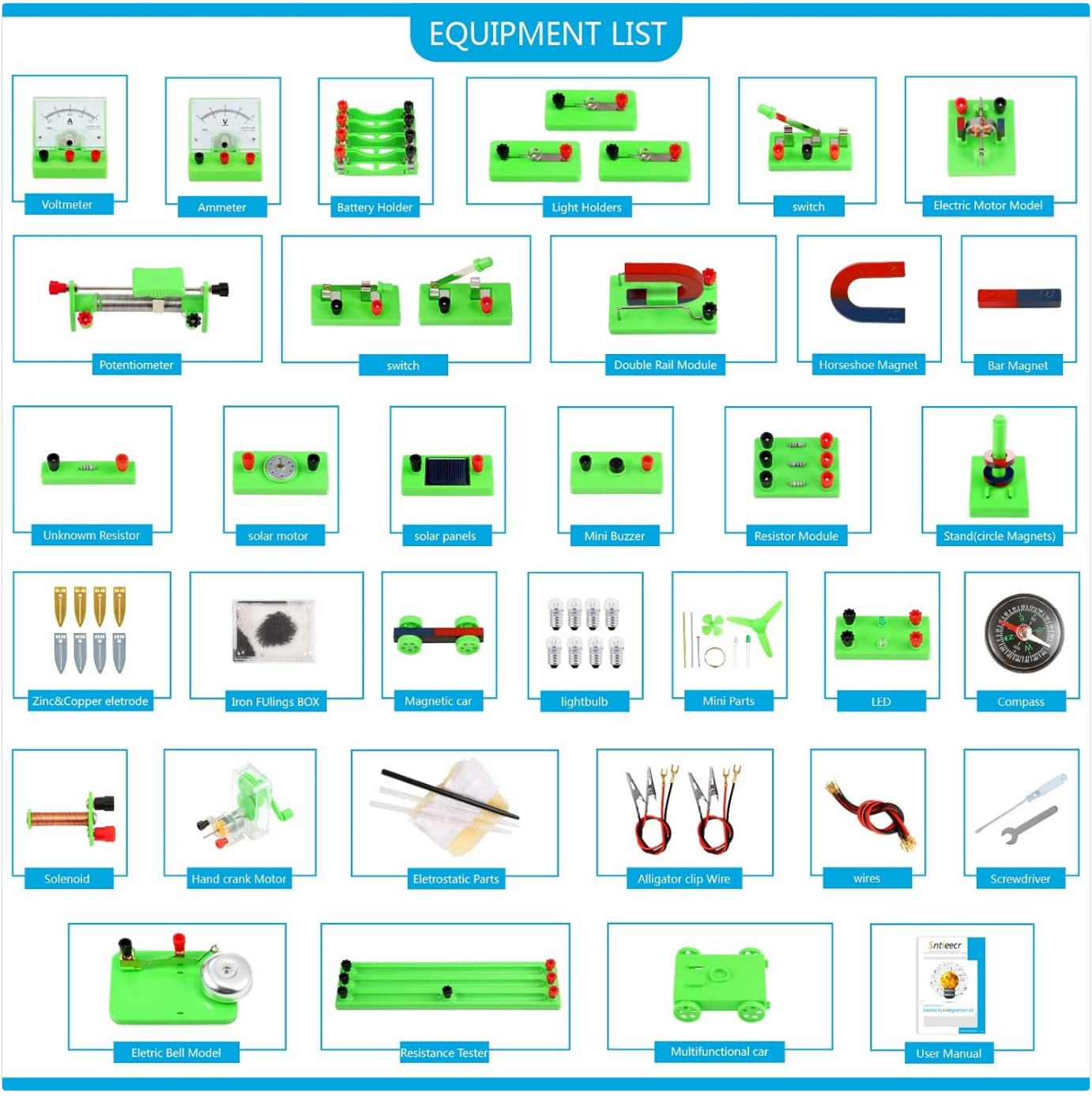


Figure 1: Detailed Equipment List

Electricity Components (77 items)

- 1 x Ammeter (0.6A, 3A)
- 1 x Voltmeter (3V, 15V)
- 8 x Light Bulbs
- 4 x Light Bulb Holders
- 2 x Switch A
- 2 x Switch B
- 4 x Battery Holders
- 1 x Resistor Module (5-Ω, 10-Ω, 20-Ω)
- 1 x Unknown Resistor Module
- 1 x Solar Panel
- 1 x Potentiometer
- 1 x Mini Buzzer

- 1 x LED Module
- 5 x Copper Electrodes
- 5 x Zinc Electrodes
- 1 x Resistance Tester
- 1 x Electrostatic Interaction Kit
- 30 x Wires
- 4 x Alligator Clip Wires
- 3 x LEDs

Magnetism Components (21 items)

- 1 x Bar Magnet
- 1 x Horseshoe Magnet
- 2 x Circle Magnets
- 1 x Mini Magnetic Car
- 1 x Compass
- 1 x Iron Filings Box
- 1 x Solenoid
- 1 x Copper Rod
- 1 x Double Rail Module
- 1 x Electric Motor Model
- 3 x Fan Blades
- 1 x Electric Motor
- 1 x Solar Motor
- 1 x Hand Crank Generator
- 1 x Electric Bell Model
- 1 x Multifunctional Car
- 1 x Stand (for circle magnets)
- 1 x Copper Coil
- 1 x Iron Nail

Additional Items (3 items)

- 1 x Storage Bag
- 1 x Color Instruction Manual (52 pages)
- 1 x Screwdriver-Wrench

Setup Guide

Before beginning any experiment, ensure you have a clean, flat, and well-lit workspace. Unpack all components from the storage bag and identify them using the provided equipment list in the instruction manual.



Figure 2: Kit components in carrying case

Familiarize yourself with the 52-page color instruction manual. This manual contains detailed, step-by-step instructions and diagrams for each experiment, ensuring a clear and safe learning experience.

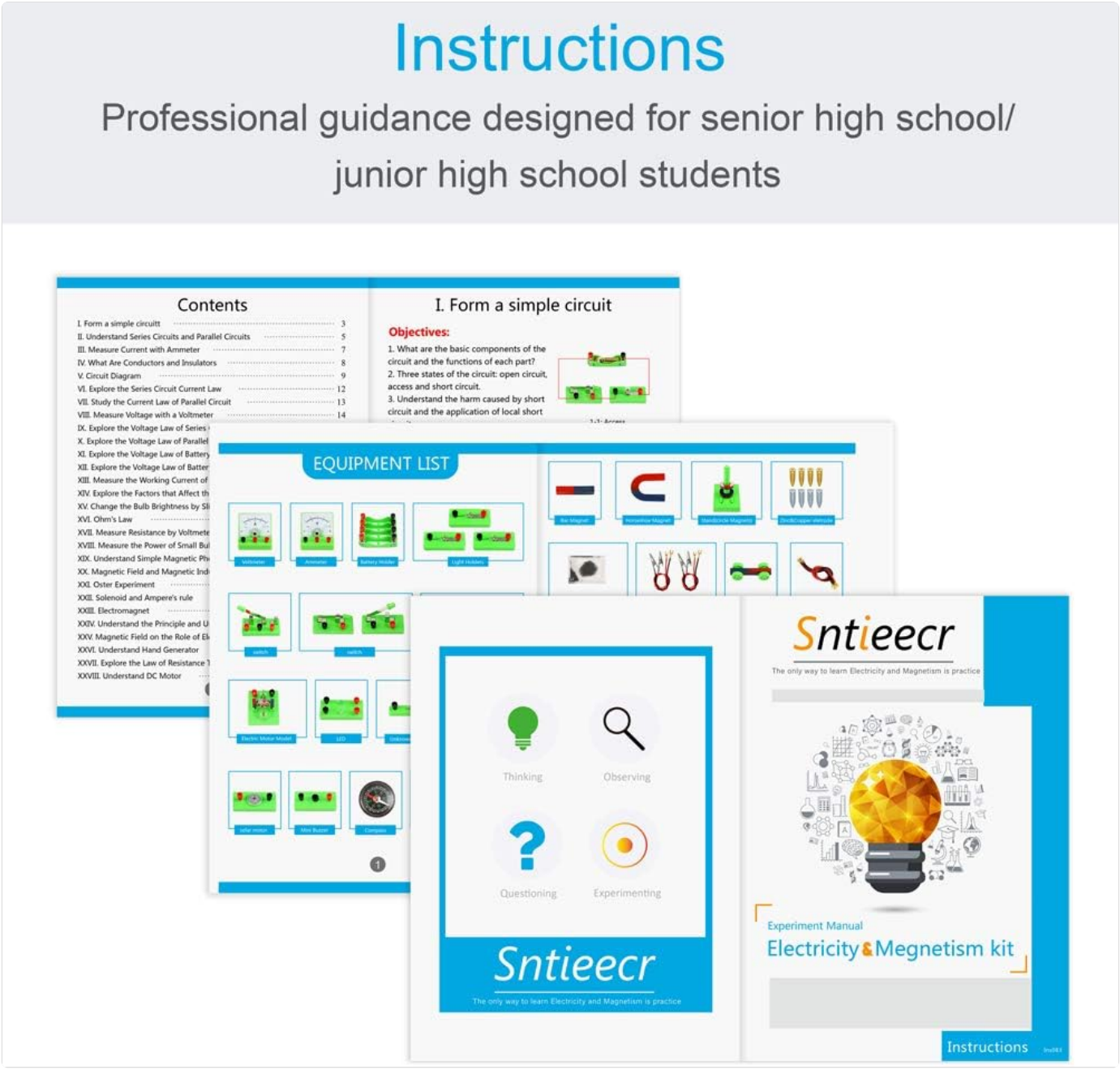


Figure 3: Instruction Manual Overview

Operating Instructions

Each experiment in the Sntieecr STEM Physics Circuit Kit is designed to be intuitive, but careful adherence to the instruction manual is crucial. Generally, operation involves:

1. **Connecting Components:** Use the provided wires and alligator clips to connect the various electrical and magnetic components as shown in the manual's diagrams.
2. **Power Source:** Insert appropriate batteries (not included) into the battery holders. Connect the battery holders to the circuit as instructed.
3. **Activating Circuits:** Use the switches to complete or break the circuit, observing the resulting phenomena (e.g., light bulbs illuminating, motors spinning, buzzers sounding).
4. **Measuring:** Utilize the ammeter and voltmeter to measure current and voltage in specific parts of the circuit, as guided by the manual.

Always double-check your connections before applying power to prevent short circuits and ensure safety.

Experiment Examples

The kit allows for a wide range of experiments to explore fundamental principles of electricity and magnetism. Below are some examples:

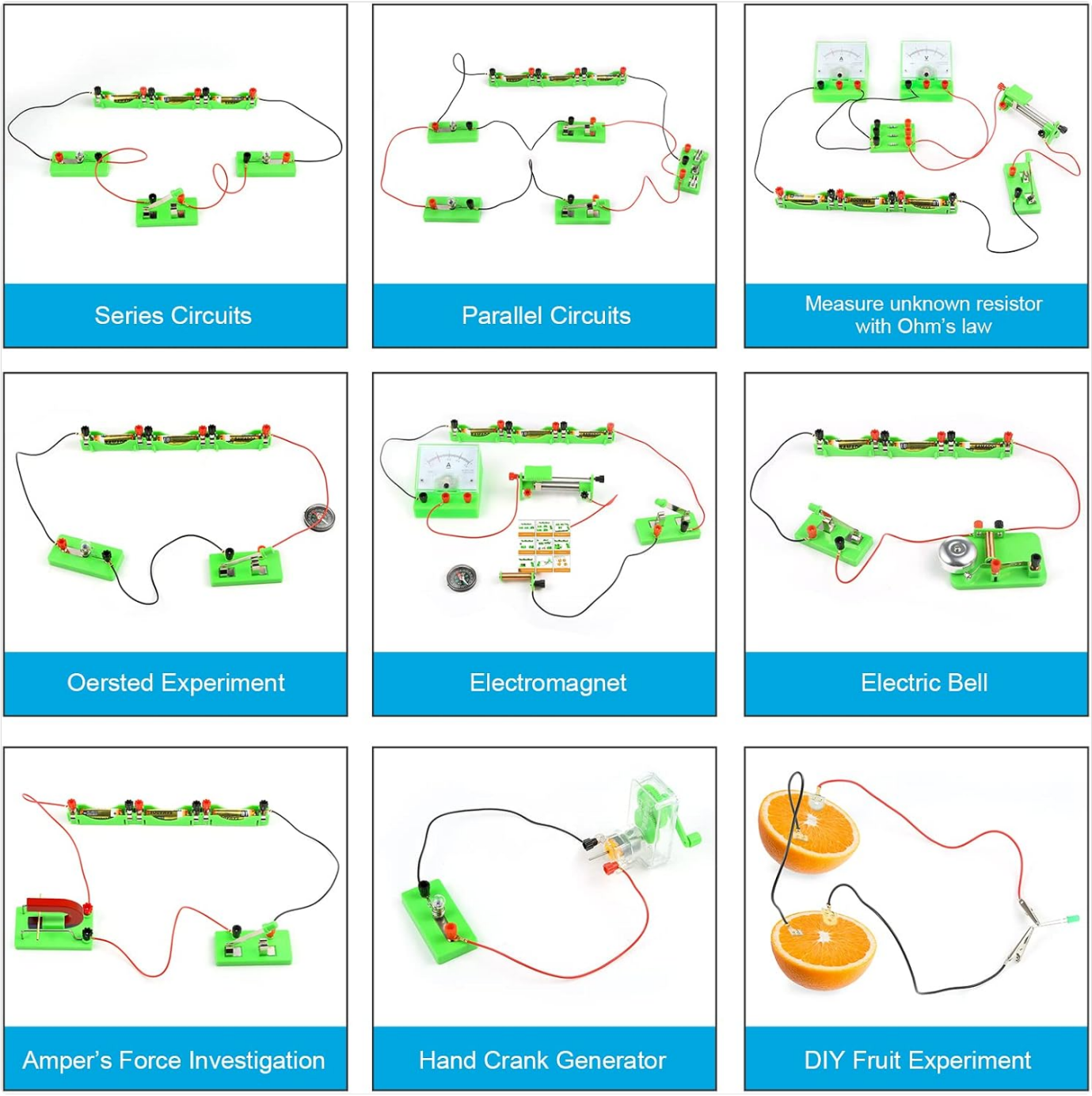


Figure 4: Various Circuit and Magnetism Experiments

Basic Circuits

- **Series Circuits:** Understand how components behave when connected end-to-end.
- **Parallel Circuits:** Explore the properties of components connected across common points.

Electromagnetism Experiments

- **Oersted Experiment:** Observe the magnetic effect of electric current.
- **Electromagnet:** Build and test a simple electromagnet.
- **Electric Bell:** Construct a working model of an electric bell.
- **Ampere's Force Investigation:** Study the force between current-carrying conductors.

Energy Conversion

- **Hand Crank Generator:** Convert mechanical energy into electrical energy.
- **DIY Fruit Experiment:** Generate electricity using fruits and electrodes.

For detailed steps and expected outcomes for each experiment, consult the included 52-page instruction manual.

Your browser does not support the video tag.

Video 1: Demonstration of DC motors and related circuits, provided by Sntieecr FR.

Maintenance

- **Cleaning:** Wipe components with a dry, soft cloth after use. Avoid using liquids or harsh chemicals.
- **Storage:** Store all components in the provided storage bag in a cool, dry place, away from direct sunlight and extreme temperatures.
- **Battery Handling:** Always remove batteries from battery holders when the kit is not in use for extended periods to prevent leakage. Dispose of used batteries responsibly.

Troubleshooting

- **Circuit Not Working:**
  - Check all connections to ensure they are secure and match the diagram in the manual.
  - Verify that batteries are inserted correctly and are not depleted.
  - Ensure all switches are in the 'ON' position.
  - Inspect wires for any damage or breaks.
- **Overheating:** If any component feels hot, immediately disconnect the power source. Recheck the circuit for any short circuits or incorrect connections.
- **Weak Performance:** If lights are dim or motors are slow, replace old batteries with fresh ones.

Product Specifications

Attribute	Value
Brand	Sntieecr

Model Number	D-015C
Part Number	ST-00245
Theme	Science (Physics, Electricity, Magnetism)
Age Range (Recommended)	14+ years (Children and Adults)
Item Dimensions (L x W x H)	34 x 27 x 6.5 cm
Item Weight	1520 Grams
Educational Objective	Discover, Experiment
Material Type	Plastic
Unit Count	98 units
Country of Origin	China

Customer Support

For any questions, concerns, or technical assistance regarding your Sntieecr STEM Physics Circuit Kit, please contact our customer support team.

Please refer to the contact information provided on the product packaging or the official Sntieecr website for the most up-to-date support details.

We are committed to providing a positive and educational experience with our products.



Figure 5: Learning with the Sntieecr STEM Physics Circuit Kit

Ask a question about this manual

Ask about setup, troubleshooting, compatibility, parts, safety, or missing instructions. Manuals+ will review the question and use this page's manual context to help answer it.

Name

Anonymous

Email

you@example.com

After a successful submission, we securely hash the supplied account or form email before sending it to Microsoft Advertising for conversion attribution. Privacy details.

Question

Example: How do I reset this device or fix this error?

Details

Model number, symptoms, what you tried, or the section of the manual you are using.

Submit question