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> Sntieecr 131-Piece DC Motor Kit: 1.5-3V 15000 RPM Small Electric Motor with Plastic Gears, Shaft Fans, Lights, Buzzer for Science Engineering Projects

Sntieecr D-005C

Sntieecr 131-Piece DC Motor Kit Instruction Manual

Model: D-005C

INTRODUCTION

The Sntieecr 131-Piece DC Motor Kit is an educational set designed for children and teenagers interested in science, technology, engineering, and mathematics (STEM) projects. This kit provides a comprehensive collection of components to build various electrical circuits and motorized models, fostering creative skills and practical abilities. It is suitable for individual exploration or collaborative learning in school settings.

SAFETY INFORMATION

- **Age Recommendation:** This kit is suitable for users aged 8 years and above.
- **Adult Supervision:** Children must use this kit under direct adult supervision due to small parts and electrical components.
- **Circuit Diagrams:** Always read and follow the provided circuit diagrams carefully. Incorrect wiring can lead to hazards.
- **Short Circuits:** Avoid creating short circuits. Short circuits can generate high temperatures, potentially melting or burning the battery holder and other components.
- **Voltage and Usage Time:** It is recommended to use a voltage less than 3V. Limit continuous operation time to within 3 minutes to prevent overheating.
- **Small Parts:** The kit contains small parts that may pose a choking hazard for young children. Keep out of reach of children under 3 years old.

PAY ATTENTION

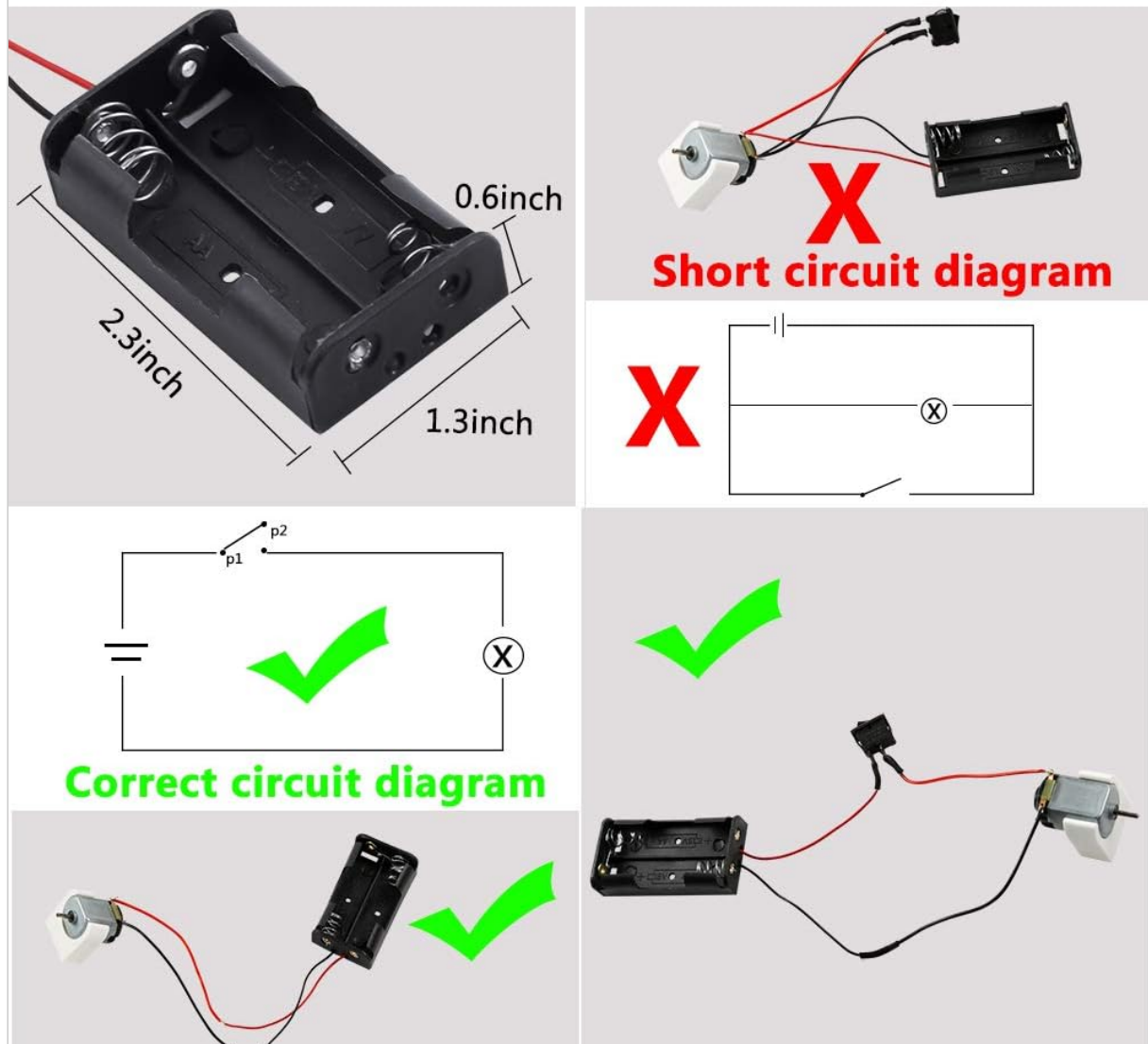


Figure 1: Important safety information regarding correct circuit diagrams and avoiding short circuits. Incorrect wiring can damage components.

KIT COMPONENTS

This kit includes 131 pieces designed for various electrical experiments:

- 6 x DC Motors (3V, 15000 RPM)
- 6 x DC Motor Mounting Brackets
- 6 x AA Battery Holders (for 2 x 1.5V batteries each)
- 66 x Plastic Gears (various sizes)
- 6 x Shaft Fans with 4 blades (various colors)
- 6 x Shaft Fans with 3 blades (various colors)
- 6 x Small Boat Rocker Switches (3A/250V, 6A/125V, 2-pin SPST ON/OFF)
- 6 x Electronic Wires (10cm, black)
- 6 x Electronic Wires (10cm, red)
- 1 x Heat Shrink Tube (40cm, ϕ 3mm)
- 3 x Buzzers
- 5 x Light Bulbs

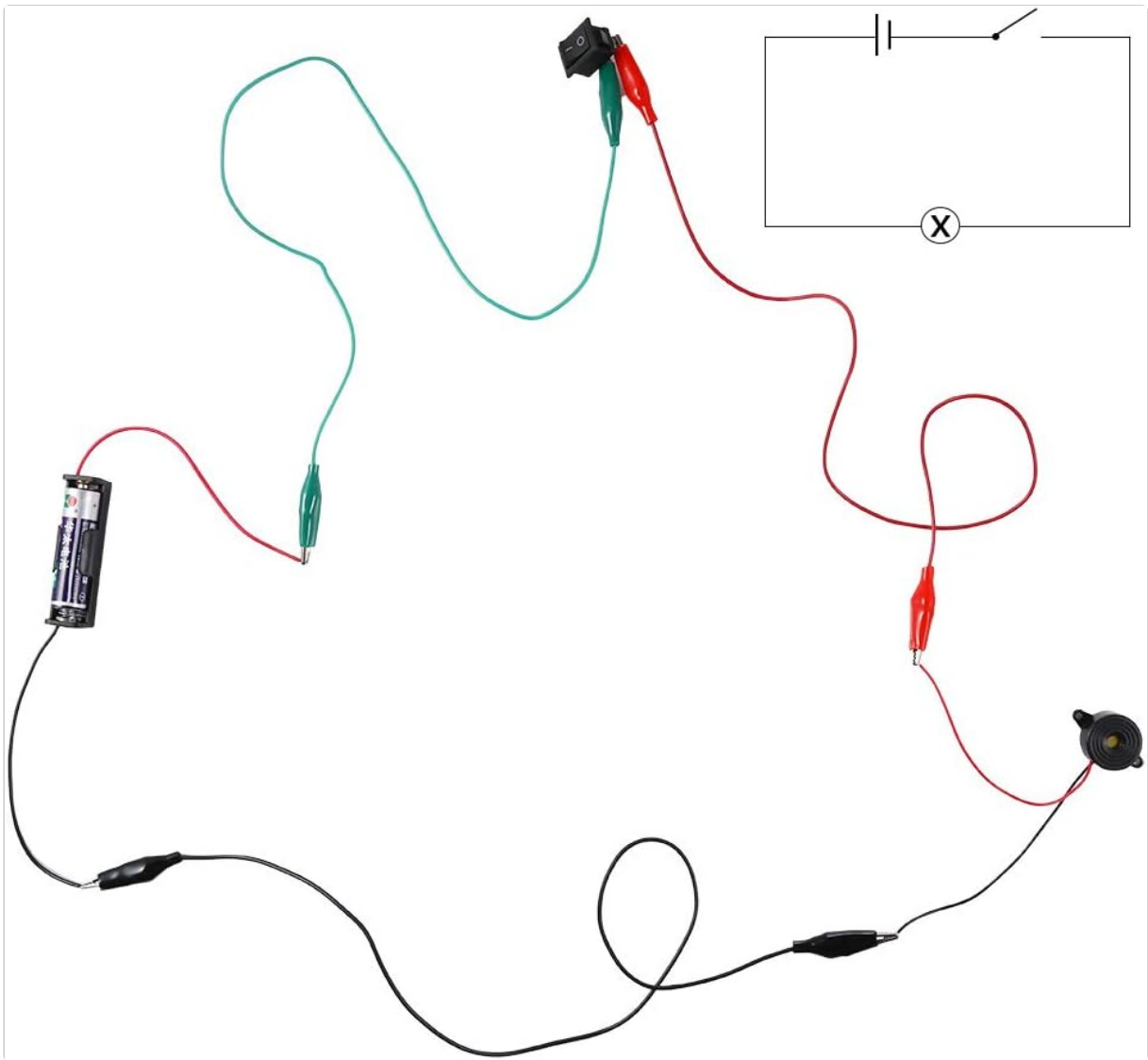


Figure 3: A simple circuit demonstrating connections between a battery, switch, and buzzer using alligator clips.



Figure 4: A close-up view of a light bulb illuminated within a circuit, demonstrating a successful connection.

OPERATING INSTRUCTIONS

Once your circuit is assembled and checked for correct connections:

1. **Power On:** Activate the circuit using the rocker switch. The motor should spin, the light should illuminate, or the buzzer should sound, depending on your circuit design.
2. **Observe and Learn:** Pay attention to how different components interact. Experiment with various configurations to understand basic electrical principles.
3. **Duration:** For optimal component longevity and safety, avoid running motors or lights continuously for more than 3 minutes. Allow components to cool down between uses.
4. **Experimentation:** Use the diverse range of components to build creative projects such as small fans, cars, or other motorized devices.



Figure 5: An example of a DIY car project constructed using a DC motor, fan, battery holder, and a cardboard tube.

MAINTENANCE

To ensure the longevity and proper functioning of your Sntieecr DC Motor Kit:

- **Storage:** Store all components in a dry, cool place away from direct sunlight and moisture. Keep them in their original packaging or a designated storage box to prevent loss or damage.
- **Cleaning:** Gently wipe components with a dry, soft cloth if they become dusty. Do not use water or chemical cleaners.
- **Battery Care:** Remove batteries from holders when the kit is not in use for extended periods to prevent leakage and corrosion.
- **Wire Integrity:** Regularly inspect wires and alligator clips for any signs of wear, fraying, or damage. Replace damaged components as necessary.
- **Motor Care:** Avoid applying excessive force to motor shafts or housing. Ensure gears and fans are properly aligned to prevent strain on the motor.

TROUBLESHOOTING

If your circuit or components are not functioning as expected, consider the following:

- **No Power:**

- Check if batteries are inserted correctly with the right polarity.
- Ensure batteries have sufficient charge. Replace if necessary.
- Verify that the switch is in the 'ON' position.

- **Component Not Working (Motor, Light, Buzzer):**

- Inspect all wire connections for looseness or incorrect placement.
- Ensure there are no short circuits (refer to Safety Information).
- Test the individual component in a known working circuit if possible.

- **Motor Not Spinning Freely:**

- Check for any obstructions preventing the shaft from rotating.
- Ensure gears or fans are not too tight or misaligned on the shaft.

- **Overheating:**

- Immediately disconnect power if any component feels excessively hot.
- Review your circuit for potential short circuits or excessive current draw.
- Ensure you are using the recommended voltage (less than 3V).

SPECIFICATIONS

Feature	Detail
Model Number	D-005C
Recommended Age	8 years and above
Educational Objective	Creative skills
Material Type	Plastic
Assembly Required	Yes
Batteries Required	Yes (AA, not included)
Motor Voltage	DC 1.5-3V (Recommended: <3V)
Motor Rated Speed	15000 RPM
Motor Body Length	38 mm (1.46 inches)
Motor Body Diameter	27 mm (1.06 inches)
Motor Shaft Size (L x D)	10 x 2.0 mm (0.39 x 0.08 inches)
Mounting Hole Distance	15 mm (0.59 inches)
Rocker Switch Rating	3A/250V, 6A/125V (SPST ON/OFF)
Product Dimensions	21 x 11 x 5 cm
Product Weight	350 grams

Mini Size With Strong Power

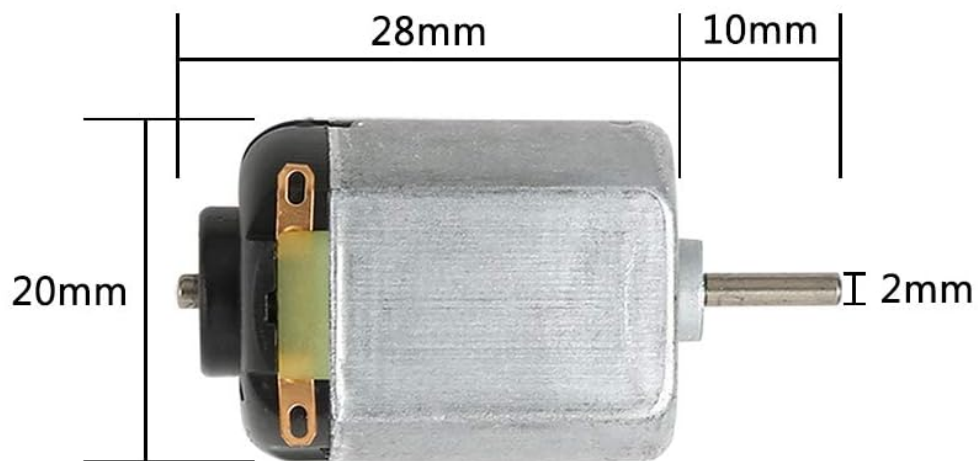


Figure 6: Detailed dimensions of the mini DC motor included in the kit.

WARRANTY INFORMATION

No specific warranty information is provided for this product. Please refer to the retailer's return policy for details regarding returns or exchanges.

CUSTOMER SUPPORT

For any questions or assistance regarding the Sntieecr 131-Piece DC Motor Kit, please contact the seller or refer to the platform where the product was purchased for customer service options.