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Sntieecr ST0124

Sntieecr DC Motors Kit ST0124 Instruction Manual

Model: ST0124

1. Product Overview

The Sntieecr 6 Set DC Motors Kit provides a comprehensive collection of components for engaging in various mini electric projects. This kit is designed to facilitate learning about basic electrical circuits, motors, and mechanical principles through hands-on experimentation. It is suitable for educational purposes and DIY enthusiasts.



Image 1.1: All components included in the Sntieecr DC Motors Kit.

2. Safety Information

Attention: This kit is suitable for users aged 8 years and up. Adult supervision is required for children.

- Always read the circuit diagrams carefully before making connections.
- Use the correct circuit diagram to avoid short circuits.
- A short circuit can produce high temperatures, potentially causing the battery holder case to melt or burn.
- It is recommended that the voltage used be between 1.5V and 3V.
- When operating at 3V, control the operation time to within 3 minutes to prevent overheating.
- Ensure all circuits are properly connected before applying power.

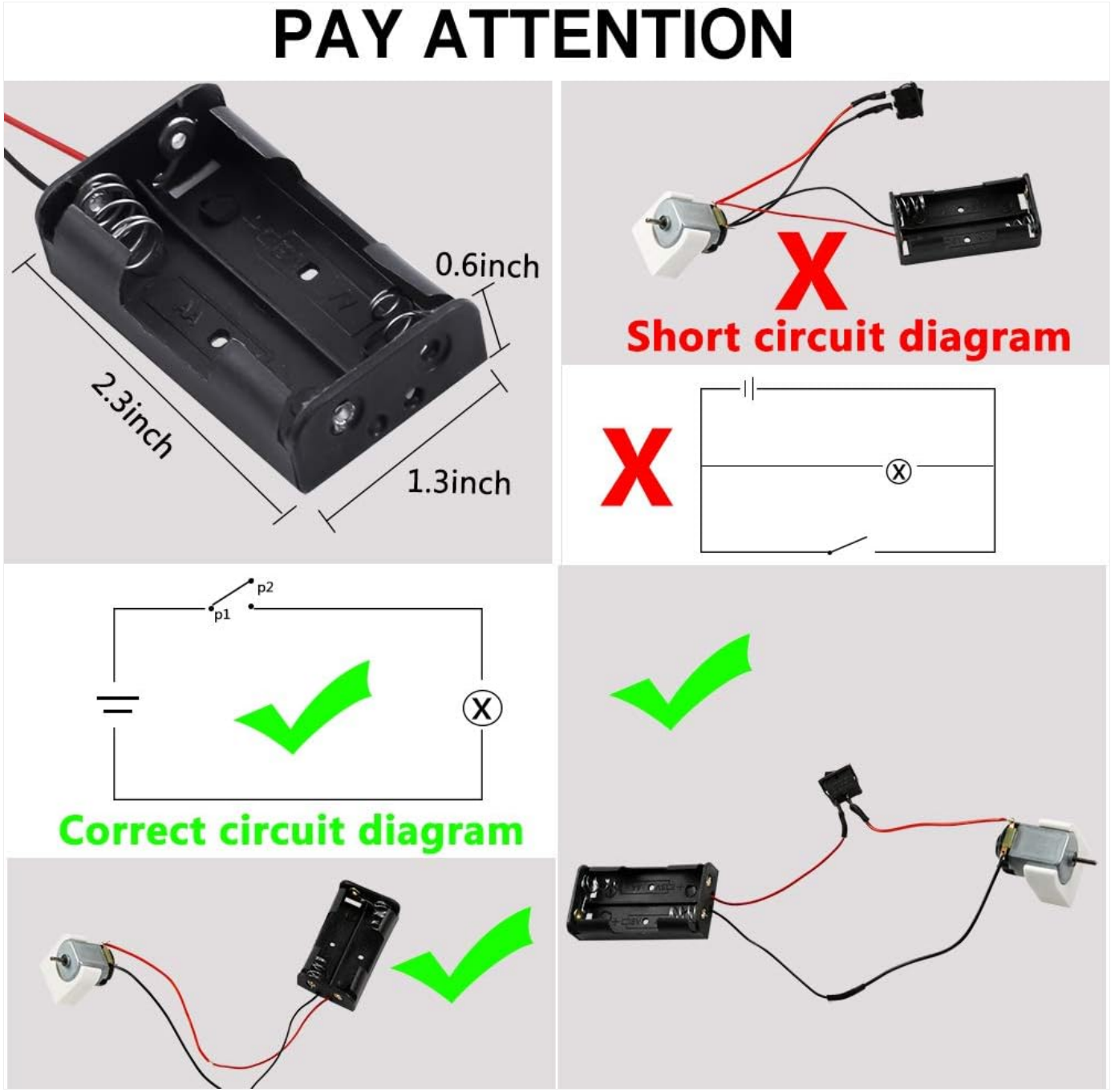


Image 2.1: Correct and incorrect circuit diagrams to prevent short circuits.

3. Package Contents

The Sntieecr DC Motors Kit includes the following components:

- 6 x DC Motors
- 6 x AA Battery Holder Cases
- 6 x Rocker Switches
- 6 x Motor Mounting Brackets
- 12 x Electronic Wires (3.92 inches)
- 1 x Heat Shrink Tubes (40cm x 3mm)
- 66 x Plastic Gears (various sizes)
- 6 x Shaft Propellers with 4 Vanes
- 6 x Shaft Propellers with 3 Vanes

4. Component Details

4.1 DC Motors

The kit includes 6 mini DC motors with the following specifications:

- Body Diameter: 28mm (1.06 inches)
- Mounting Hole Distance (center to center): 15mm (0.59 inches)
- Shaft Size: 10mm (length) x 2.0mm (diameter) (0.39 inches x 0.08 inches)
- Motor Body Length: 38mm (1.46 inches)
- Recommended Voltage: 1.5V-3V
- RPM: 15000 (at optimal voltage)



Image 4.1: DC motor with key dimensions.

4.2 Shaft Propellers

The kit provides 12 shaft propellers in two styles and various colors: 6 pieces with 4 vanes and 6 pieces with 3 vanes. These can be used for different project requirements, such as mini fans or propulsion systems.

4.3 Rocker Switches and Electronic Wires

Six rocker switches are included for controlling power flow in your circuits. The electronic wires are used to establish connections between components.



Image 4.2: Rocker switch and electronic wires.

5. Setup and Assembly

5.1 Attaching Gears to Motors

To attach a gear to a DC motor shaft:

1. Select the desired plastic gear.
2. Align the center hole of the gear with the motor shaft.
3. Gently but firmly push the gear onto the shaft until it is securely in place. Ensure it is not too tight to prevent damage to the motor or gear.



Image 5.1: Steps for attaching a gear to a DC motor shaft.

5.2 Connecting Battery Holder and Switch

Follow the provided circuit diagrams (refer to Image 2.1) to connect the battery holder, rocker switch, and DC motor. Ensure that the positive (+) and negative (-) terminals are correctly aligned to avoid short circuits. The heat shrink tubes can be used to insulate exposed wire connections.

5.3 Example Project: Mini Fan Car

One common project is a mini fan car. You can use craft sticks or other materials to build a chassis, attach the motor with a propeller, and connect it to a battery holder and switch. The plastic gears can be used for wheel mechanisms.



Image 5.2: An example of a mini fan car project.

6. Operating Instructions

Once your circuit is assembled and all connections are secure:

1. Insert AA batteries into the battery holder, ensuring correct polarity.
2. Flip the rocker switch to the 'ON' position to activate the circuit.
3. Observe the motor's operation or the light bulb illuminating.
4. To turn off, flip the rocker switch to the 'OFF' position.

Important: If using 3V, limit continuous operation to 3 minutes to prevent overheating of components.

7. Maintenance

- Store all components in a dry, cool place away from direct sunlight.

- Keep small parts away from young children to prevent choking hazards.
- Regularly check wires for fraying or damage. Replace damaged components as needed.
- Remove batteries from the holder when the kit is not in use for extended periods to prevent leakage.

8. Troubleshooting

- **Motor not spinning / Light not illuminating:**
  - Check battery polarity and ensure batteries are fresh.
  - Verify all wire connections are secure and correctly follow the circuit diagram.
  - Ensure the rocker switch is in the 'ON' position.
  - Inspect wires for breaks or loose connections.
- **Components overheating:**
  - Immediately disconnect power.
  - Check for short circuits (e.g., bare wires touching, incorrect connections).
  - Ensure the voltage does not exceed 3V and limit continuous operation time.
- **Gears slipping off motor shaft:**
  - Ensure the gear is pushed firmly onto the shaft.
  - If the gear is too loose, a small amount of adhesive may be used, but this is generally not recommended for reusability.

9. Specifications

Feature	Specification
Product Dimensions	8.27 x 4.33 x 1.97 inches
Item Weight	6.7 ounces
Item Model Number	ST0124
Manufacturer Recommended Age	8 years and up
Batteries Required	AA batteries (not included)
Motor Voltage	1.5V-3V
Motor RPM	15000

10. Warranty and Support

For any product-related issues, questions, or support, please contact the manufacturer, Sntieecr, through their official channels. Specific warranty details may vary and are typically provided with the product packaging or on the manufacturer's website.

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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.

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