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› GODIYMODULES WH148 B10K 10K Ohm Linear Taper Potentiometer Instruction Manual

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Model: WH148 B10K

1. INTRODUCTION

This manual provides instructions for the proper use, installation, and maintenance of the GODIYMODULES WH148 B10K 10K Ohm Linear Taper Potentiometer. Please read this manual thoroughly before use to ensure optimal performance and safety.

2. PRODUCT OVERVIEW

A potentiometer is a three-terminal resistor with a sliding or rotating contact that forms an adjustable voltage divider. If only two terminals are used, it acts as a variable resistor or rheostat. The WH148 B10K is a 10K Ohm linear taper rotary potentiometer, commonly used for controlling electrical signals such as volume, tone, or light intensity in various electronic circuits.



Figure 2.1: WH148 B10K Potentiometer with dimensional drawing. This image shows the complete potentiometer assembly, including the shaft, mounting nut, washer, and the three solder terminals, along with a detailed diagram of its physical dimensions in millimeters.

3. PACKAGE CONTENTS

Each package contains the following items:

- 10 x WH148 B10K 10K Ohm Linear Taper Potentiometers
- 10 x Matching Knobs (typically black with a blue indicator)
- 10 x Nuts for mounting
- 10 x Washers for mounting

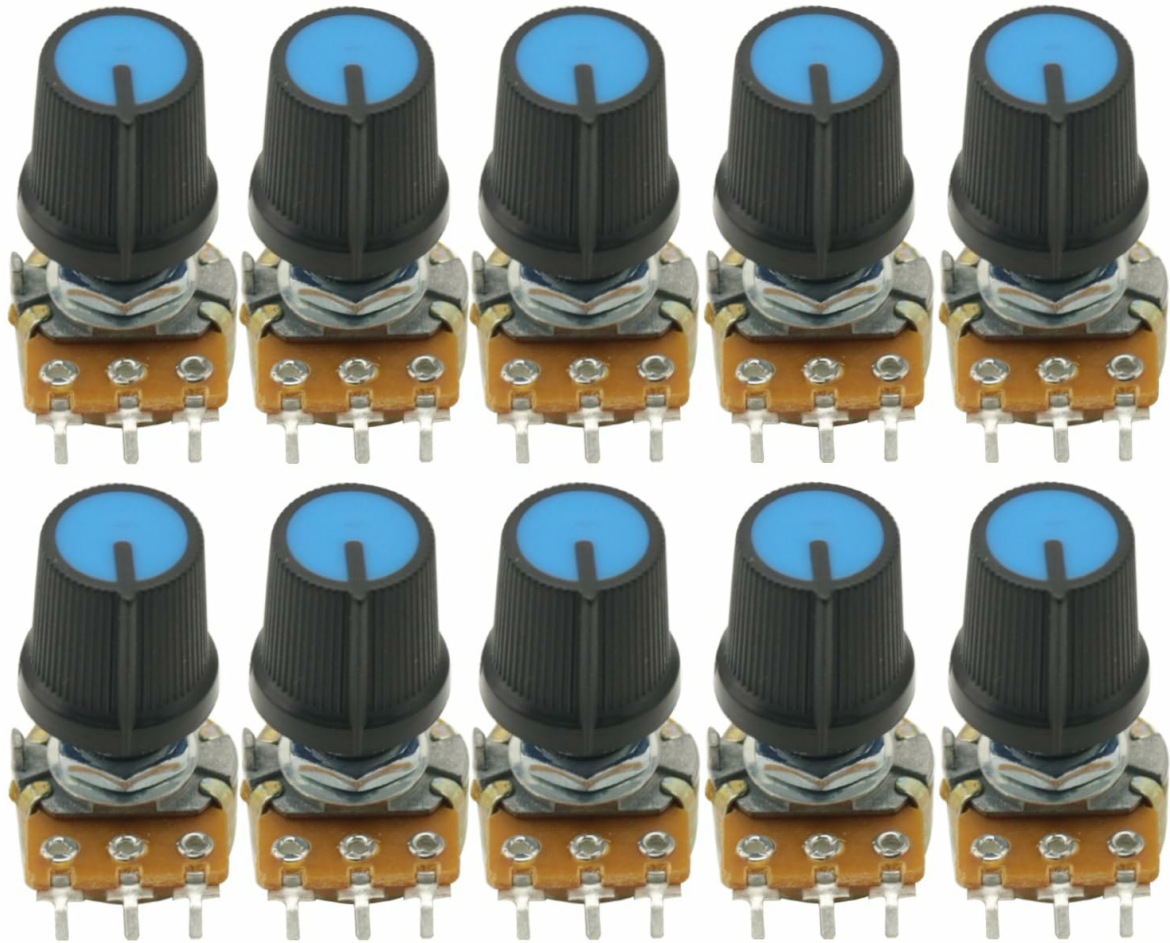


Figure 3.1: Contents of the 10-piece package. This image displays ten complete potentiometer units, each with its knob attached, arranged in two rows of five.

4. SPECIFICATIONS

Feature	Specification
Resistance Value	10K Ohm (B10K)
Taper Type	Linear
Shaft Length	15mm
Number of Pins	3 Pin
Model Number	WH148
Manufacturer	GODIYMODULES

5. SETUP AND INSTALLATION

Follow these steps to properly install your potentiometer:

1. Mounting the Potentiometer:

Insert the threaded shaft of the potentiometer through the desired mounting hole on your panel or enclosure. Secure it in place using the provided washer and nut. Tighten the nut firmly but do not overtighten to avoid damaging the component.

2. Attaching the Knob:

Align the D-shaped opening of the knob with the D-shaped shaft of the potentiometer. Press the knob firmly onto the shaft until it is seated securely. Ensure the knob rotates smoothly without obstruction.



Figure 5.1: Potentiometer and knob separated. This image shows the potentiometer with its shaft, nut, and washer, alongside the separate knob, illustrating how they fit together during assembly.

3. Wiring Connections:

The WH148 potentiometer has three pins. Typically, the two outer pins are connected to the full voltage supply (e.g., VCC and GND), and the center pin (wiper) provides the variable output voltage. For use as a variable resistor (rheostat), connect one outer pin to the center pin, and use this combined connection along with the other outer pin.

- **Pin 1 (Left):** Typically connected to ground (GND) or one end of the voltage supply.
- **Pin 2 (Center):** The wiper, which provides the variable output.
- **Pin 3 (Right):** Typically connected to the positive voltage supply (VCC) or the other end of the voltage supply.

Note: Always refer to your circuit diagram for specific wiring requirements. Ensure all connections are secure and properly insulated.

6. OPERATING INSTRUCTIONS

Once installed and wired, the potentiometer operates by rotating the knob. The linear taper means that the resistance changes proportionally to the angle of rotation. For example, if the knob is at 50% of its rotation, the resistance between the wiper and either end terminal will be approximately 50% of the total resistance (10K Ohm).

- **Variable Voltage Divider:** When used as a voltage divider, rotating the knob will vary the output voltage at the center pin from minimum (near GND) to maximum (near VCC).
- **Variable Resistor (Rheostat):** When configured as a rheostat, rotating the knob will vary the resistance in the circuit, allowing for control of current flow.

Caution: Do not exceed the maximum power rating of the potentiometer, which is typically specified by the manufacturer. Excessive current or voltage can damage the component.

7. MAINTENANCE

The WH148 B10K potentiometer is designed for durability and requires minimal maintenance. However, adhering to the following guidelines can prolong its lifespan:

- **Cleaning:** Keep the potentiometer free from dust and debris. Use a soft, dry cloth for external cleaning. Avoid using liquid cleaners directly on the component.
- **Environmental Conditions:** Operate and store the potentiometer in a dry environment, away from extreme temperatures and humidity.
- **Physical Handling:** Avoid applying excessive force to the shaft or terminals. Rough handling can lead to mechanical damage or internal connection failures.

8. TROUBLESHOOTING

If you encounter issues with your potentiometer, consider the following common troubleshooting steps:

- **No Change in Resistance/Voltage:**
 - Check all wiring connections for continuity and proper soldering.
 - Ensure the potentiometer is correctly wired for its intended function (voltage divider or rheostat).
 - Verify the potentiometer itself is not faulty by testing its resistance across terminals with a multimeter.
- **Intermittent or Erratic Operation:**
 - This could indicate a dirty or worn-out resistive track. While these potentiometers are generally sealed, prolonged use or exposure to contaminants can cause this.
 - Check for loose connections or cold solder joints.
- **Knob is Loose or Falls Off:**
 - Ensure the knob is fully pressed onto the D-shaped shaft.
 - If the shaft or knob opening is damaged, replacement may be necessary.

9. WARRANTY AND SUPPORT

For warranty information or technical support, please contact GODIYMODULES directly through their official channels or the retailer from whom the product was purchased. Keep your purchase receipt as proof of purchase.