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› Treedix 4PCS TRS Jack Breakout Board (Model B09Z2MQLHX) Instruction Manual

## Treedix B09Z2MQLHX

# Treedix 4PCS TRS Jack Breakout Board (Model B09Z2MQLHX) Instruction Manual

## INTRODUCTION

This instruction manual provides essential information for the proper setup, operation, and maintenance of your Treedix 4PCS TRS Jack Breakout Boards. These boards are designed to facilitate easy integration of 1/4" (6.35mm) stereo audio jacks into prototyping environments like breadboards, making connections to all pins accessible.

## PRODUCT OVERVIEW

The Treedix TRS Jack Breakout Board simplifies the use of 1/4" stereo audio jacks in electronic projects. Each board allows a 6.35mm female socket to be mounted, providing convenient access to its internal connections via clearly labeled pins. This design is ideal for prototyping and development, especially when working with breadboards.

- **Easy Prototyping:** Designed for straightforward integration with breadboards, making audio jack connections simple.
- **Comprehensive Pin Access:** Provides access to all necessary TRS jack pins: GND (Ground), T (Tip), TN (Tip Neutral), R (Ring), RN (Ring Neutral), S (Sleeve), and SN (Sleeve Neutral).
- **Durable Construction:** Features gold-plated holes for improved strength and oxidation resistance, ensuring reliability.
- **Versatile Application:** Suitable for a wide range of audio and video equipment, including media players, MP3 players, and car audio systems.

## SPECIFICATIONS

<b>Material</b>	Metal, Plastic
<b>Color</b>	Black, Silver
<b>PCB Board Size</b>	30.4 x 27.9 mm
<b>Operating Temperature</b>	-25°C to 70°C
<b>Rated Load</b>	DC 30V 0.3A
<b>Contact Resistance</b>	≤0.05Ω
<b>Insulation Resistance</b>	≥100MΩ
<b>Withstand Voltage</b>	AC250V (50Hz) 1 minute
<b>Insertion Force</b>	5-30N
<b>Package Dimensions</b>	4.88 x 3.31 x 0.75 inches
<b>Item Weight</b>	1.13 ounces

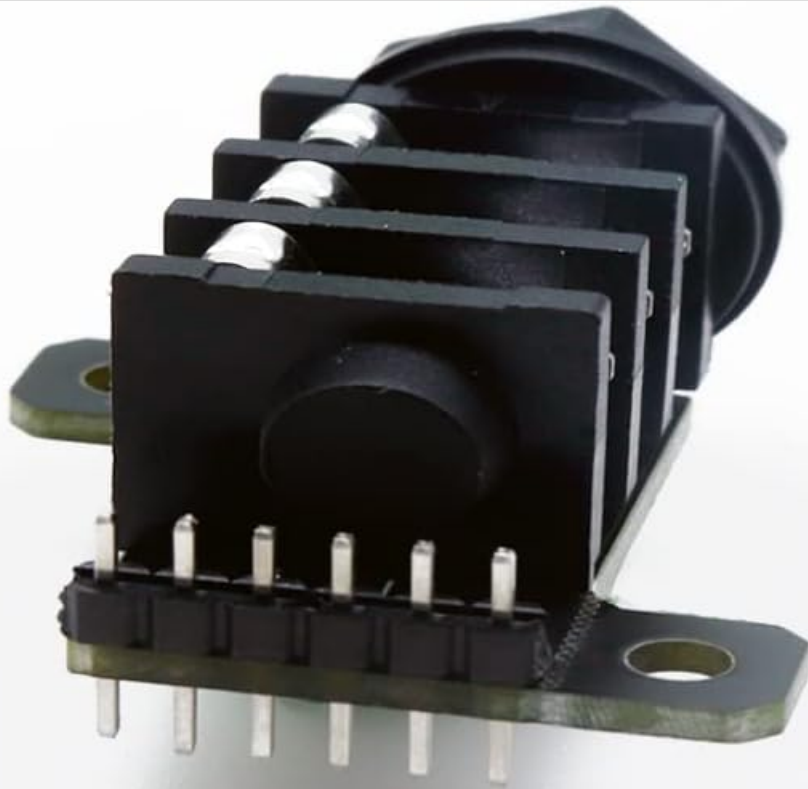
## SETUP INSTRUCTIONS

The Treedix TRS Jack Breakout Board requires soldering for assembly. Basic soldering skills and equipment are necessary.

- 1. Prepare Components:** Ensure you have the 1/4" (6.35mm) female stereo headphone jack and the PCB breakout board.
- 2. Position the Jack:** Carefully align the pins of the 1/4" jack with the corresponding holes on the PCB breakout board. The board is designed to mount the jack on one specific side, often indicated by text like "Mount jack on this side".
- 3. Solder Connections:** Using a soldering iron and solder, carefully solder each pin of the jack to its respective pad on the PCB. Ensure strong, clean solder joints to prevent intermittent connections.
- 4. Inspect Solder Joints:** After soldering, visually inspect all connections for cold solder joints, bridges, or incomplete connections. Re-solder any problematic areas.
- 5. Optional Pin Headers:** If using with a breadboard, solder male pin headers to the breakout pins (GND, T, TN, R, RN, S, SN) on the PCB.



*Image: A close-up view of the Treedix TRS Jack Breakout Board, showing the 1/4" female socket and the labeled breakout pins (T, TN, R, RN, GND, S, SN) on the PCB.*



*Image: Side view of the assembled TRS Jack Breakout Board, illustrating the soldered pins extending from the PCB.*



*Image: Front view of the 1/4" (6.35mm) female stereo headphone jack, showing the opening for audio plugs.*

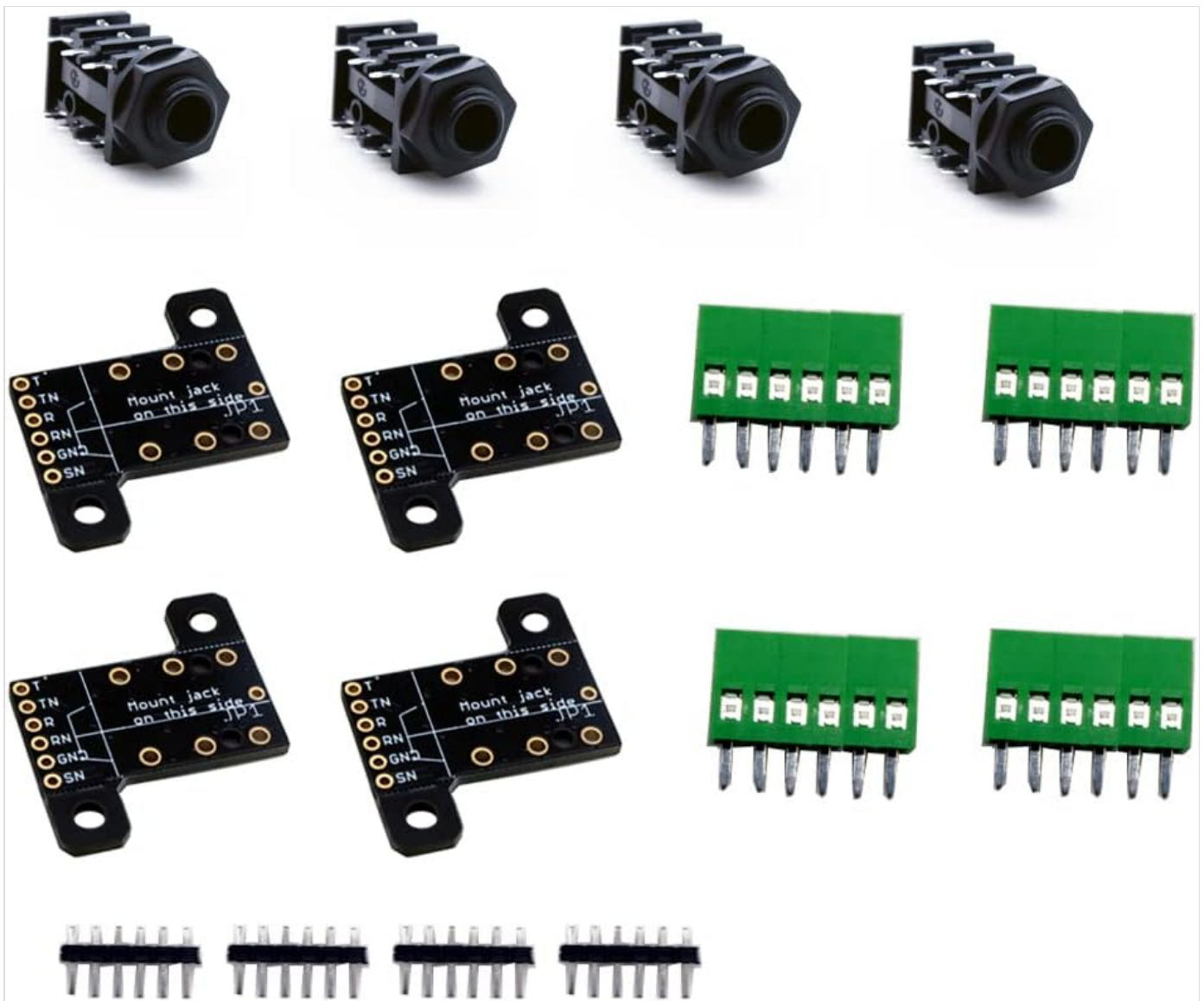


Image: A complete kit showing multiple Treedix TRS Jack Breakout Boards, 1/4" female sockets, and pin headers, as supplied for assembly.

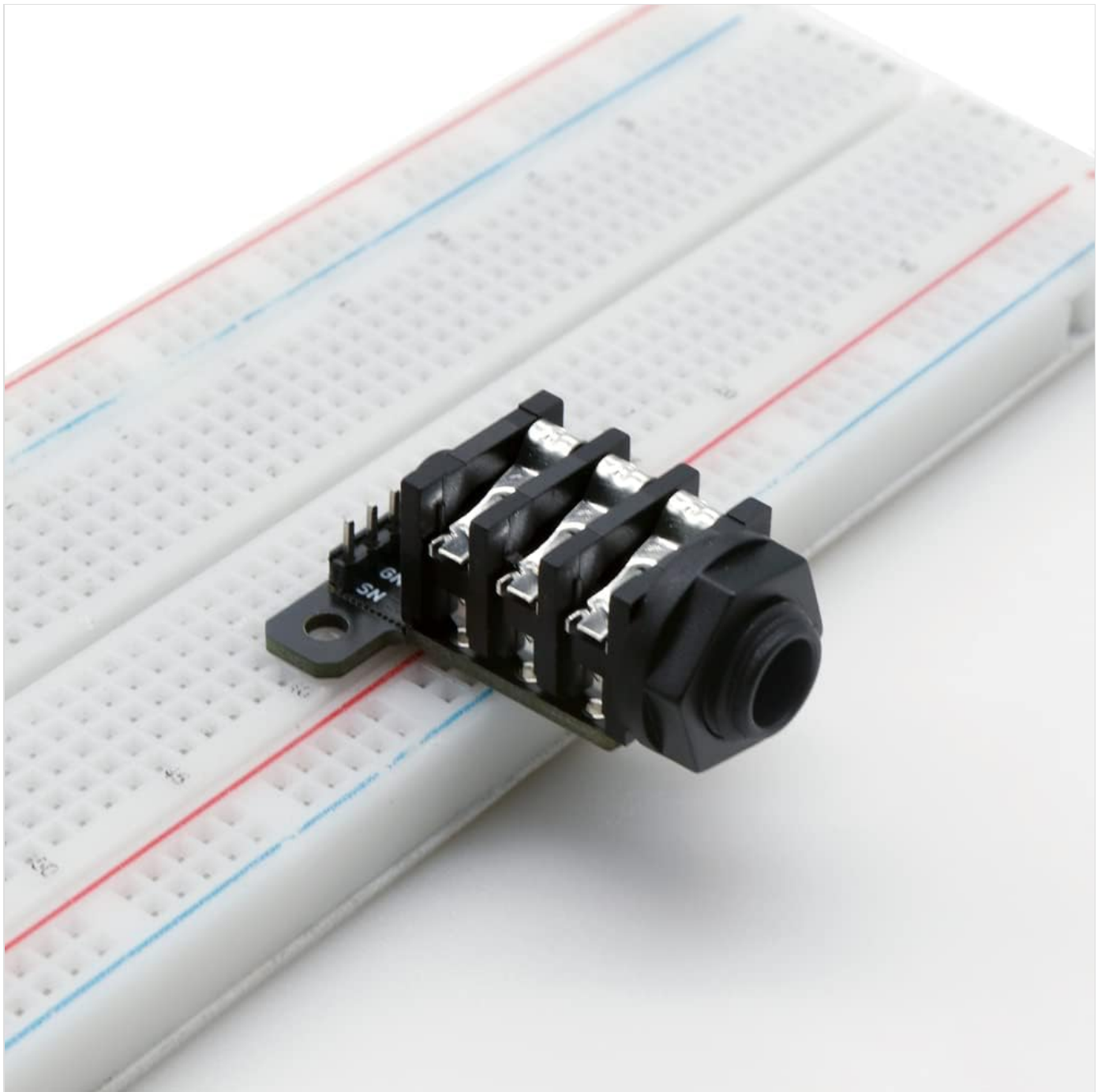
## OPERATING INSTRUCTIONS

Once assembled, the breakout board provides easy access to the internal connections of the 1/4" stereo jack. Understanding the pinout is key to proper operation.

### Pinout Description:

- **GND:** Ground connection.
- **T (Tip):** Typically carries the left audio channel signal for stereo connections.
- **TN (Tip Neutral):** A switch contact that closes when a plug is inserted, connected to the Tip.
- **R (Ring):** Typically carries the right audio channel signal for stereo connections.
- **RN (Ring Neutral):** A switch contact that closes when a plug is inserted, connected to the Ring.
- **S (Sleeve):** The common ground connection for the audio signal.
- **SN (Sleeve Neutral):** A switch contact that closes when a plug is inserted, connected to the Sleeve.

Connect these pins to your microcontroller, amplifier, or other circuit components as required for your audio project. For breadboard use, simply insert the soldered pin headers into the breadboard rows.



*Image: The assembled TRS Jack Breakout Board securely inserted into a standard breadboard, demonstrating its ease of use for prototyping.*

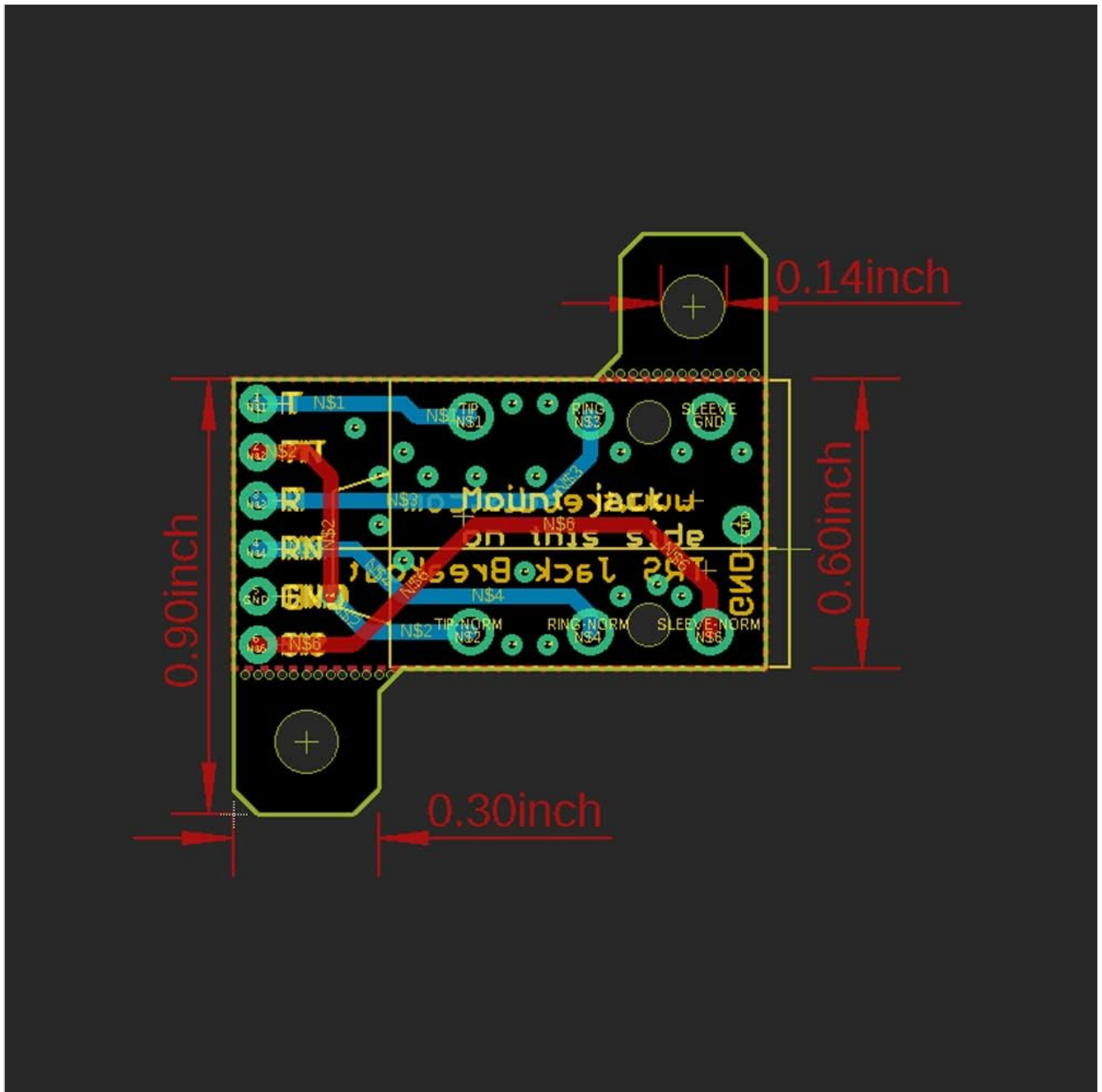


Image: A technical diagram illustrating the precise dimensions of the PCB breakout board, including pin spacing and overall board size.

## MAINTENANCE

The Treedix TRS Jack Breakout Boards are designed for durability and require minimal maintenance. Follow these guidelines to ensure longevity:

- **Keep Dry:** Avoid exposure to moisture or liquids, which can cause short circuits and corrosion.
- **Clean Gently:** If cleaning is necessary, use a dry, soft cloth. Avoid abrasive cleaners or solvents.
- **Avoid Physical Stress:** Do not apply excessive force when inserting or removing audio plugs or when handling the board, especially the soldered connections.
- **Storage:** Store the boards in a cool, dry environment, away from direct sunlight and extreme temperatures.

## TROUBLESHOOTING

If you encounter issues with your Treedix TRS Jack Breakout Board, consider the following common troubleshooting

steps:

- **No Audio Signal:**

- Check all soldered connections for continuity and ensure there are no cold joints or bridges.
- Verify that the audio plug is fully inserted into the jack.
- Confirm that the correct pins (T, R, S/GND) are connected to the appropriate audio channels and ground in your circuit.

- **Intermittent Connection:**

- Re-inspect solder joints for any cracks or weak points.
- Ensure the audio plug is clean and free of debris.

- **Short Circuit:**

- Visually check the PCB for any solder bridges between adjacent pins.
- Ensure no conductive material is accidentally touching the board's contacts.

## WARRANTY AND SUPPORT

For warranty information and technical support regarding your Treedix TRS Jack Breakout Boards, please refer to the original purchase documentation or visit the official Treedix website. Contact information for customer support can typically be found on the product packaging or the seller's platform.