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› RECOIL MGLI4 4-Channel RCA Stereo Ground Loop Isolator Instruction Manual

RECOIL MGLI4

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Model: MGLI4

INTRODUCTION

The RECOIL MGLI4 4-Channel RCA Stereo Ground Loop Isolator is designed to eliminate unwanted buzzing and humming noise in car audio systems. This device isolates the audio signal and breaks the ground loop, ensuring a clean audio signal passes through to your amplifier. It is suitable for audio devices with 4-Channel RCA audio outputs, including pre-amp outputs.

SETUP AND INSTALLATION

Follow these steps for proper installation of your RECOIL MGLI4 Ground Loop Isolator:

- 1. Identify Noise Source:** Before installation, confirm that the noise you are experiencing is a ground loop issue. Ground loop noise typically manifests as a whine or hum that changes with engine RPM.
- 2. Power Off System:** Ensure your car's audio system and vehicle ignition are completely turned off before making any connections.
- 3. Locate RCA Connections:** Identify the RCA audio cables connecting your audio source (e.g., head unit, pre-amp) to your amplifier.
- 4. Connect Isolator:** Insert the RECOIL MGLI4 Ground Loop Isolator in-line with the RCA cables. The isolator has male and female RCA connectors. Connect the male RCA plugs from the audio source to the female input jacks of the isolator. Then, connect the male output plugs of the isolator to the female input jacks of your amplifier. Ensure all 4 channels (Left and Right for front and rear, or two stereo pairs) are connected correctly.

RCA Male Input & Femal Output

99.99% Pure Oxygen Free Copper



USA Patent Number: 10505510

Image: The RECOIL MGLI4 Ground Loop Isolator showing its RCA male input and female output connections, highlighting the spiral shielding of the cables.

4-CH Ground Loop Isolator

It eliminates the buzzing or humming noise often heard in car audio systems. Add it between the source unit and the amplifier. It isolates the signal and break the ground loop, allowing the signal to pass through cleanly.

4-CH



USA Patent Number: 10505510

Image: A close-up view of the 4-channel ground loop isolator, illustrating its function in eliminating buzzing and humming noise in car audio systems by isolating the signal.

The compact design of the MGLI4 allows for easy installation even in tight spaces within your vehicle.

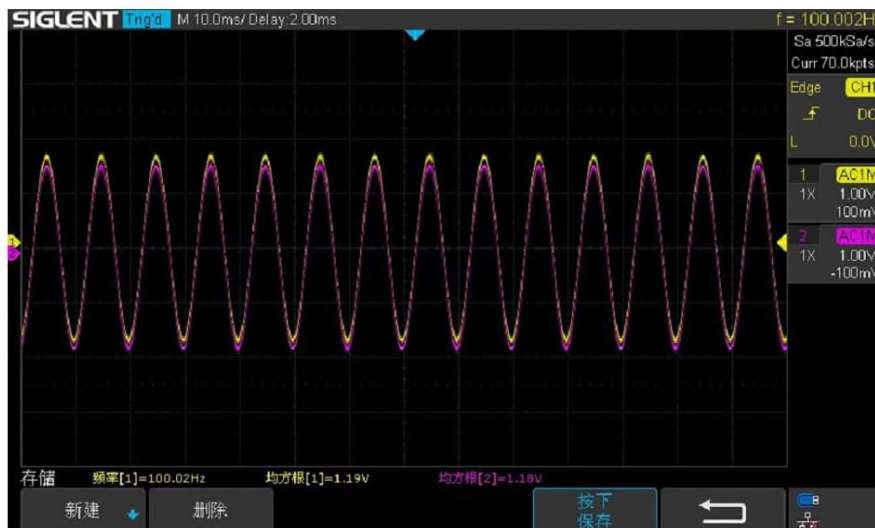
OPERATING INSTRUCTIONS

Once properly installed, the RECOIL MGLI4 operates passively to filter out ground loop noise. No user intervention or power supply is required for its operation. Simply turn on your car audio system, and the isolator will work to provide a cleaner audio signal.

The MGLI4 utilizes High Fidelity Permalloy Transformers to minimize signal loss and distortion, especially under 100Hz, ensuring a near-perfect frequency response of +/- 0.03 dB from 2 to 20,000 Hz.

No Signal Loss Or Distortion

Recoil patented new ground loop isolator has perfect signal input & output response. No signal loss or distortion, unlike other common ones with huge distortion under 100Hz signal.



USA Patent Number: 10505510

Image: An oscilloscope display demonstrating the RECOIL MGLI4's ability to maintain signal integrity without loss or distortion, even at low frequencies, compared to other isolators.

MAINTENANCE

The RECOIL MGLI4 Ground Loop Isolator is a maintenance-free device. To ensure optimal performance:

- Keep the connections clean and free from dust or debris.
- Ensure all RCA connections remain secure to prevent intermittent noise or signal loss.
- Avoid exposing the unit to extreme temperatures or moisture.

TROUBLESHOOTING CAR AUDIO NOISE

If you experience noise in your car audio system, common issues include radio static, amplifier whine, or buzzing speakers. Identifying the source is key to resolving the problem.

1. Noise and Your Receiver

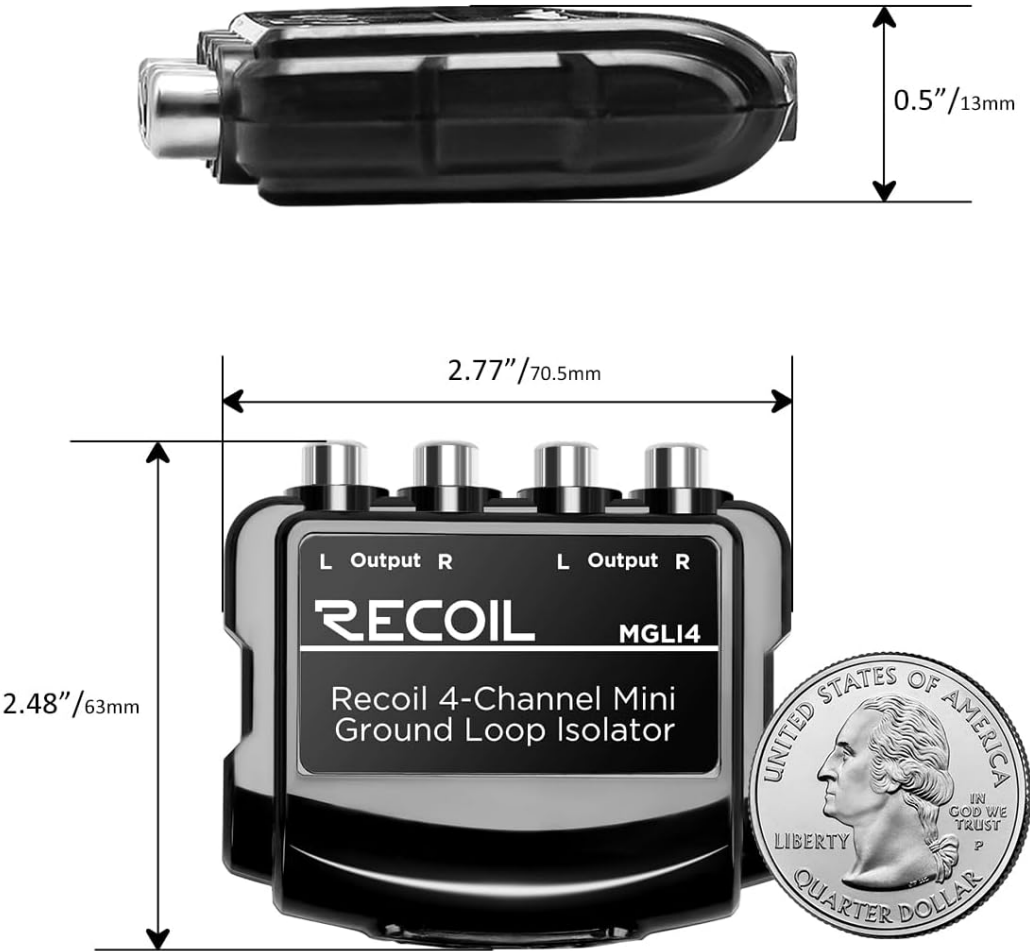
- **Improper Grounding:** An insecure or improperly located ground wire is a frequent cause of noise. Ensure your receiver's ground wire is securely connected to the vehicle's ground and is not near noise sources like heaters, air conditioners, or car computers. The antenna lead can sometimes act as a ground, leading to noise if the receiver's ground is faulty.
- **Radio Static from Antenna:** If noise is only present when using the radio (AM/FM) but not with CD or auxiliary/USB sources, it likely originates from the antenna lead. Try unplugging the antenna; if the noise disappears, an antenna noise suppressor may be needed.
- **Radiated Noise:** If pulling the receiver from the dash while audio is playing eliminates the noise, it suggests the noise is being radiated into your system due to the receiver's proximity to a noise-producing component (e.g., heater motor, car computer).

2. Engine Noise and Alternator Whine

Noise introduced through the power and ground wires connected to your receiver is often referred to as engine noise or alternator whine. This typically sounds like a whining or clicking that varies in pitch with engine speed. The RECOIL MGLI4 is specifically designed to address ground loop noise, which is a common component of alternator whine, by isolating the audio signal path.

SPECIFICATIONS

Dimensions



USA Patent Number: 10505510

Image: Diagram illustrating the compact dimensions of the RECOIL MGLI4 Ground Loop Isolator: 2.77 inches (70.5mm) length, 2.48 inches (63mm) width, and 0.5 inches (13mm) height.

Feature	Detail
Model Number	MGLI4
Brand	RECOIL
Connector Type	RCA
Number of Ports	4
Unit Count	1 Count

Feature	Detail
Frequency Response	+/- 0.03 dB from 2 to 20,000 Hz
Construction	High Fidelity Permalloy Transformers, Oxygen Free Copper spiral shielding wire, Nickel-Plated RCA Ends, 100% UV Stable Flex Frosted PVC Jacket
Dimensions (Approx.)	70.5mm (L) x 63mm (W) x 13mm (H) / 2.77" (L) x 2.48" (W) x 0.5" (H)

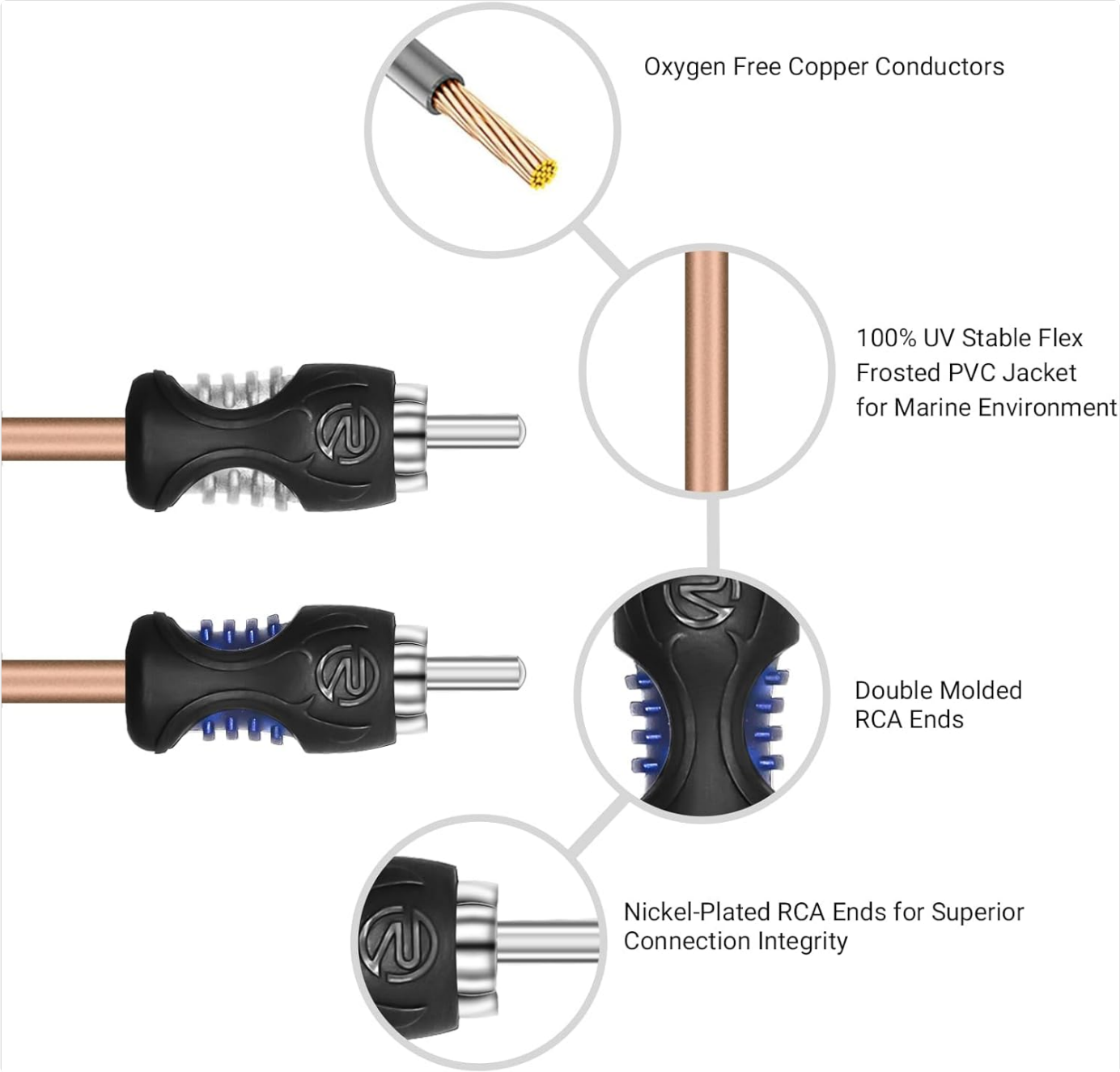


Image: Detailed breakdown of the RCA cable construction, featuring Oxygen Free Copper Conductors, 100% UV Stable Flex Frosted PVC Jacket, Double Molded RCA Ends, and Nickel-Plated RCA Ends for superior connection integrity.

WARRANTY INFORMATION

The RECOIL MGLI4 4-Channel RCA Stereo Ground Loop Isolator comes with a **1 Year Manufacturer Warranty**. Please retain your proof of purchase for warranty claims. For specific warranty details and procedures, refer to the official

RECOIL website or contact customer support.

CUSTOMER SUPPORT

For further assistance, technical support, or inquiries regarding your RECOIL MGLI4 Ground Loop Isolator, please visit the official RECOIL store or contact their customer service department.

RECOIL Official Store: [Visit the RECOIL Store on Amazon](#)

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