

HUM KLEANER

User's Manual

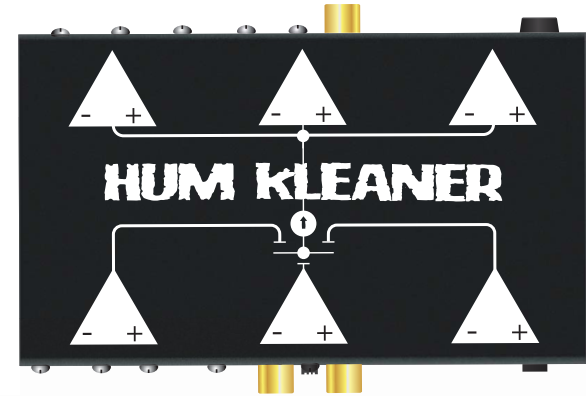


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WARRANTY CONTINUED

with your complete/correct shipping address, a valid phone number, and a brief description of the problem you are experiencing with the product. In most cases, our technicians might be able to resolve the problem over the phone, thus eliminating the need to ship the product.

(F) Shipping Instructions:

Product(s) must be packaged in its original protective box(es) to minimize transport damage and prevent repackaging cost (at the ongoing rates). Shipper claims regarding items damaged in transit must be presented to carrier. Earthquake Sound Corporation reserves the right to refuse improperly packed product. A copy of the original sales receipt must accompany product returned to service. We encourage you to include with the package a written description of the problem. Ship product to:

Earthquake Sound Corp.
2727 McCone Avenue, Hayward, CA 94545.
Tel: (510) 732-1000.

You are responsible for the cost of shipping the product to Earthquake Sound Corporation.

(G) Disputes Resolution:

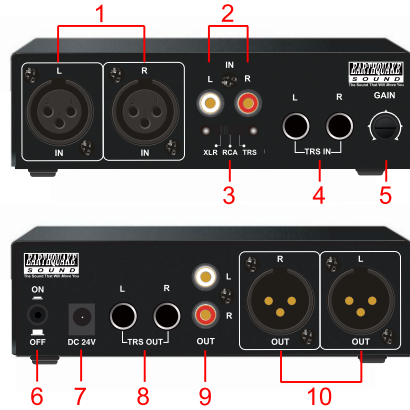
All disputes between clients and Earthquake Sound Corporation resulting from the one (1) year limited warranty policy must be resolved according to the laws & registration of the county of Alameda California.

Product Registration

This Hum Kleaner can be registered by returning the Product Registration card attached to this manual. Please also retain the sales receipt which represents proof of purchase and helps expedite warranty issues.

PANEL OVERVIEWS:

1. Balanced XLR input
2. Unbalanced RCA input
3. Input selector switch
4. Balanced TRS input
5. Input gain control
- (See page 7 for values)
6. On/Off power switch
7. 24VDC Power
8. Balanced TRS output
9. Unbalanced RCA output
10. Balanced XLR output



INSTALLATION AND OPERATION

Unbalanced-to-Balanced: RCA to XLR/TRS

1. Connect the left and right stereo outputs of the consumer audio unit (CD/DVD player, MP3 player, computer sound card, etc.) to the Hum Kleaner's unbalanced input L & R RCA connectors. Set **input selector** to "RCA."
2. Connect the Hum Kleaner's balanced output L & R male XLR/TRS connectors to the balanced inputs of the pro audio unit (e.g. a power amplifier or two channels of a mixer) with two low-impedance balanced XLR/TRS cables, respectively.
3. With power applied, adjust the balanced output gain control to match the next audio component specification.

Balanced-to-Unbalanced: XLR/TRS to RCA

1. Connect the left and right balanced outputs from your pro audio unit (e.g. mixer or processor) to the Hum Kleaner's balanced input L & R female XLR/TRS connectors with two low-impedance balanced XLR/TRS cables. Set **input selector** switch to "XLR" or "TRS," respectively.
2. Connect the Hum Kleaner's unbalanced output L & R RCA connectors or to the left and right inputs on your consumer audio unit (computer sound card, digital recorder, stereo sound system, etc.) with the appropriate cable.
3. With power applied, adjust the unbalanced output level control for best signal strength and clarity.

Inline Balanced or Unbalanced Level/Gain Control

1. Loop unbalanced outputs to unbalanced inputs to provide an inline balanced level / gain control.
2. Loop balanced outputs to balanced inputs to provide an inline unbalanced level / gain control.

OUTPUT VOLTAGE TABLE

This table shows the output of the Hum Kleaner using RCA/XLR/TRS VAC (most units).

1 VOLT INPUT

Knob Set	RCA Output	XLR/TRS Output
MIN	0.94	1.9
	1.02	2.02
	2.3	4.6
	3.8	7.6
MAX	4	8

GAIN RANGE on RCA out = 1V MAX 12dBV
 GAIN RANGE on XLR out = 0dBV MAX 18dBV

Input Gain Limit = 5VAC with MAX out
 RCA= 9VAC
 XLR= 18VAC

SPECIFICATIONS

Frequency Response:	20 Hz - 20kHz, ± 2 dB
Maximum Gain Limit:	5 VAC
THD:	< .0003% @ 1 kHz
Maximum Output:	RCA:9V XLR:18V TRS:18V
Signal to Noise Ratio:	114 dB @ full level
Gain Separation:	80 dB @ 1000Hz
Output Gain:	18dBV
Input Impedance:	balanced: 20k Ohms unbalanced: 100k Ohms
Output Impedance:	balanced: 100 Ohms unbalanced: 300 Ohms
Dimensions HxWxD:	
inches:	1 5/8" x 4 3/8" x 3 3/16"
mm:	40mm x 110mm x 81mm
Weight (lbs/kg):	1 lbs 0.5 kg

WARRANTY INFORMATION:

Limited Warranty (USA only)

Earthquake Sound warrants to the original purchaser that all factory Sealed New Audio Products to be free from defects in material and workmanship under normal and proper use for a period of one (1) year from the date of purchase (as shown on the original sales receipt with serial number affixed/ written on it.) The one (1) year warranty period is valid only if an authorized Earthquake dealer properly installs the product and the warranty registration card is properly filled out and sent to Earthquake Sound Corporation. If a non-authorized party installs the product, a ninety (90) day warranty period will be applied.

(A) One (1) year limited warranty plan coverage guidelines:

Earthquake pays for labor, parts, and ground freight (only in US mainland, not including Alaska and Hawaii. Shipping to us is not covered).

(B) Warning:

Products (sent for repair) that are tested by Earthquake technicians and deemed to have no problem(s) will not be covered by the one (1) year limited warranty. Customer will be charged a minimum of one (1) hour of labor (at the ongoing rates) plus shipping charges back to customer.

(C) Earthquake will repair or replace at our option all defective products/parts subject to the following provisions:

- Defective products/parts have not been altered or repaired by other than an Earthquake factory-approved technicians.
- Products/parts are not subjected to negligence, misuse, improper use or accident, damaged by improper line voltage, used with incompatible products or have its serial number or any part of it altered, defaced or removed, or have been used in any way that is contrary to Earthquake's written instructions.

(D) Warranty Limitations:

Warranty does not cover products that have been modified or abused, including but not limited to the following:

- Damages to cabinet/casing finish due to misuse, abuse or improper use of cleaning materials/methods.
- Fading and or deterioration of speaker components & finish due to improper exposure to elements.
- Bent amplifier casing, damaged finish on the casing due to abuse, misuse or improper use of cleaning material.
- Burnt tracers on PCB.
- Product/part damaged due to poor packaging or abusive shipping conditions.
- Subsequent damage to other products

A warranty claim will not be valid if the warranty registration card is not properly filled & returned to Earthquake with a copy of the sales receipt.

(E) Service Request:

To receive product service, contact Earthquake Service Department at (510) 732-1000 and request an RMA number (Return Material Authorization). Items shipped without a valid RMA number will be refused. Make sure you provide us

INTRODUCTION:

Thank you for purchasing Earthquake Sound's Hum Kleaner. The Hum Kleaner provides two channels of unbalanced to balanced level conversion and two channels of balanced to unbalanced level conversion in a resilient, compact, and portable unit. Balanced lines offer increased immunity to external electrical noise, such as hum. Since a balanced system minimizes induced noise, it is the preferred method of connecting audio gear, especially when long lengths of cable are used.

The Hum Kleaner consists of input and output sides. The input side accepts RCA (unbalanced), TRS (balanced), and female XLR (balanced) inputs. The input side also features an input selector switch to select between used inputs (either RCA, TRS or XLR). The output side of the Hum Kleaner features RCA (unbalanced), TRS (balanced) and male XLR (balanced) outputs. Both output ports will produce signals of the selected input. Hum Kleaner amplifier allows the user to gain the signal.

The Hum Kleaner can be a valuable tool to application areas such as home or professional recording studios, live sound, PA, permanent installs, DJ, AV, consumer HiFi, podcasting and broadcasting. The Hum Kleaner can be used with: mixers, audio processors, laptop computers, computer sound cards, CD/DVD players, video gaming machines, MP3 player/recorders, powered monitors and digital audio workstations.

IMPORTANT SAFETY INSTRUCTION - READ FIRST



This symbol, whenever it appears, alerts you to the presence of uninsulated dangerous voltage inside enclosure-voltage that may be sufficient to constitute risk of shock. This symbol, whenever it appears, alerts you to important operating and maintenance instructions in the accompanying literature. Please read the manual.

READ INSTRUCTIONS: Retain safety and operating instructions for future reference. Heed all warnings printed here and on the equipment. Follow the operating instructions printed in this user guide.

DO NOT OPEN: There are no user serviceable parts inside. Refer any service work to qualified technical personnel only.

GROUNDING: Only connect the unit to equipment with properly grounded mains power. Do not defeat the grounding and polarization means of the power cord plug of the connected equipment. Do not remove or tamper with the ground connection on the power cord of the connected equipment.

ENVIRONMENT: Protect from excessive dirt, dust, heat, and vibration when operating and storing. Avoid tobacco ash, drink spillage and smoke, especially that associated with smoke machines.

HANDLING: Protect the controls from damage during transit. Use adequate padding if you need to ship the unit. To avoid injury to yourself or damage to the equipment, take care when lifting, moving or carrying the unit.

SERVICING: Refer servicing to qualified technical personnel.

INSTALLATION: Install the unit in accordance with the instructions printed in this user guide.