

LEEDS PRO AUDIO

HiZ PRE

***ACOUSTIC INSTRUMENT
TUBE PREAMP - EQ - ACTIVE D.I.***



User's manual

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Revision 1**

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HiZ Pre Limited Warranty

Leeds Pro Audio warrants this product to be free of defects in material and workmanship for a period of three year from date of original retail purchase. This warranty is enforceable only by the registered owner of the product identified by the product serial number. To be protected by this warranty, the purchaser must complete and return the enclosed warranty registration card within 14 days of purchase or complete the on line at: <http://www.leedsproaudio.com/15101.html>. During the warranty period, Leeds Pro Audio shall at its sole and absolute option, either repair or replace, free of charge, any product that proves to be defective on inspection by Leeds Pro Audio or its authorized service representative. To obtain warranty service, the purchaser must first email or write Leeds Pro Audio at the email or address printed below to obtain a Return Authorization Number and instructions of where to return the unit for service. All inquiries must be accompanied by a description of the problem. All authorized returns must be sent to the Leeds Pro Audio repair facility postage pre-paid, insured and properly packaged. Leeds Pro Audio reserves the right to update any unit returned for repair. Leeds Pro Audio reserves the right to change or improve the design of the product at any time without prior notice. This warranty does not cover claims for damage due to abuse, neglect, alteration or attempted repair by unauthorized personnel, and is limited to failures arising during normal use that are due to defects in material or workmanship in the product. Any implied warranties, including implied warranties of merchantability and fitness for a particular purpose, are limited in duration to the length of this limited warranty. Some states do not allow limitations on how long an implied warranty lasts, so the above limitation may not apply to you. In no event will Leeds Pro Audio be liable for the incidental, consequential or other damages resulting from the breach of any express or implied warranty, including, among other things, damage to property, damage based on inconvenience or on loss of use of the product, and, to the extent permitted by law, damages for personal injury. Some states do not allow the exclusion of limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you. This warranty only applies to products sold and used in the United State of America. For warranty information in all other countries please refer to your local distributor.

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1. OVERVIEW

1.1 INTRODUCTION

Thank you for purchasing the HiZ Pre Acoustic Instrument Tube Preamp - EQ - Active D.I. The HiZ Pre is a vacuum tube driven active direct box with a superb equalizer to craft your sound. The ultra high input impedance preserves the full bandwidth and bass response of a piezo element pick up. Our negative feedback voltage amplifier design provides a very low noise floor and wide bandwidth to ensure accurate reproduction of your instrument's timbre. The buffered outputs allow you to simultaneously drive your mixer/console and stage amplifier without loss of signal clarity. The road ready rugged heavy gauge steel chassis is rack mountable for your instrument case or studio rack. This pre-amp was designed using state of the art components to provide a clean, yet warm tube sound. Please contact us at support@leedsproaudio.com with your questions or comments regarding this product. Leeds Pro Audio welcomes the comments of our customers. We appreciate the support you have shown us through the purchases of this product.

Please pay close attention to how you connect your HiZ Pre to your system. Improper grounding is the most common cause of noise problems found in studio or live sound systems. We recommend you to read this manual to familiarize your self with this product.

Enjoy your HiZ Pre

OVERVIEW

1.2 FEATURES

The following is a summary of your HiZ Pre features:

- **Ultra-high input impedance input stage**
The ultra high input impedance provides a very low noise floor and preserves the full bandwidth and bass response of a piezo element pick up.
- **12AX7 vacuum tube for warm harmonically rich sound**
Our negative feedback voltage amplifier design provides a very low noise floor and wide bandwidth to ensure accurate reproduction of your instrument's timbre.
- **2 band Baxandall type shelving equalizer**
The shelving equalizer enables ultra clean +/- 20 dB boost or cuts of treble and bass frequencies.
- **Balanced XLR output, Unbalanced 1/4" buffered output**
The buffered output allows you to simultaneously drive a stage amplifier and a balanced XLR input on your console or mixer without loss of signal quality.
- **Rugged Road Ready Construction**
The HiZ Pre is constructed of heavy duty 16 gauge steel. The chassis is finished in a scratch resistant, textured powder coating designed to combine an elegant look that withstands the wear and tear of a working musician. The HiZ Pre is rack mountable for your instrument case or studio rack.

2. CONTROLS & CONNECTIONS

2.1 FRONT PANEL



Hi Z input – High impedance input matched to piezo electric elements such as under saddle and soundboard transducers.

Bass – Sets low frequency shelving equalizer gain to +/- 20dB.

Treble – Sets high frequency shelving equalizer gain to +/- 20dB.

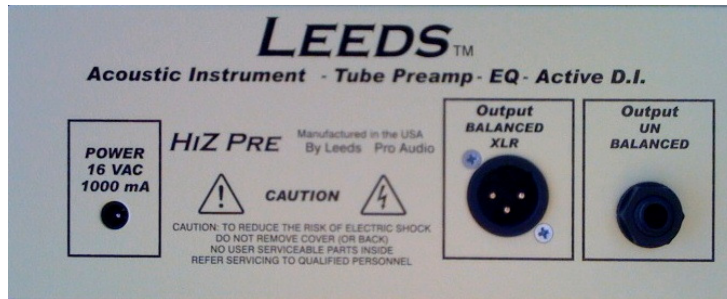
Clip – Monitors the instrument input and indicates if the input is being driven with a signal that is too hot. The clip indicator has been finely tuned to illuminate when the input signal level reaches an amplitude that may cause an increase in harmonic distortion of the output of the HiZ Pre.

Volume – Sets the output level. Ideally

Power – Power switch and indicator.

CONTROLS & CONNECTIONS

2.1 REAR PANEL



Unbalanced output – Buffered ¼ inch output to drive a monitor or stage amplifier. The buffer allows both the 1/4 and XLR outputs to be used simultaneously without loading down the output stage of the HiZ Pre. Cable Wiring:

TIP	SIGNAL (+)
SLEEVE	GROUND (-)

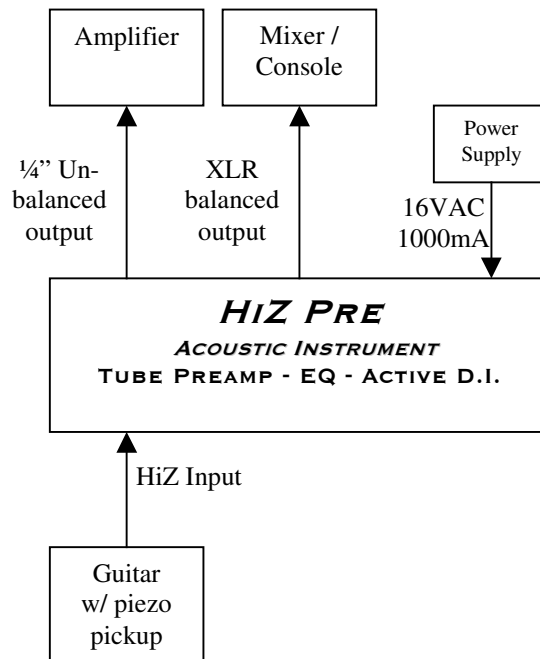
Balanced Output – XLR output to couple to a console or mixer. Use this for highest quality sound and for long cable runs (through a stage snake for example). Cable Wiring:

PIN 1	GROUND
PIN 2	SIGNAL (+)
PIN 3	SIGNAL (-)

Power Jack – Connect the 16VAC, 1000mA wall transformer.

CONTROLS & CONNECTIONS

2.3 CONNECTION DIAGRAM



3. OPERATION

3.1 OVERVIEW

In summary, ensure you do not overdrive the HiZ Pre input. EQ and maximize the HiZ Pre Volume while minimizing the input level on the mixer, console, or amplifier.

3.2 INSTRUMENT INPUT

The instrument input is designed to accommodate a 1/4" tip and sleeve plug from instruments such as acoustic electric guitars and basses. This instrument input is an ultra high impedance amplifier designed to allow the full frequency bandwidth of an acoustic piezo element instrument pickup to be realized. Care should be taken not to overdrive this input with instruments that have their own preamplifiers. Ideally, the HiZ Pre is to be connected directly to the piezo pickup.

3.3 CLIP INDICATOR

This is particularly useful for instruments which have an integral battery powered pre-amplifier. Turn the pre-amplifier gain to a level when the clip light momentarily blinks when the guitar is strummed just a bit louder than the musician's playing style. This will optimize the signal strength entering the HiZ Pre, allowing the user to not overdrive the HiZ input.

3.4 EQUALIZER

The shelving equalizer is controlled with the Treble and Bass knobs to boost or cut high and/or low frequencies +/-20dB. The "0" at the 12 o'clock position is flat or 0dB gain.

OPERATION

3.5 OUTPUT LEVEL

For ideal signal-to-noise ratio (clean signal with lowest noise), it is recommended that the output level of the HiZ Pre is set as high as possible without overdriving the mixer, console, or amplifier while keeping the input level on the mixer, console, or amplifier at a minimum.

3.6 VACUUM TUBES

The HiZ Pre comes supplied with a 12AX7 vacuum tube. Tube life and performance are affected by how often a tube is used and by how hard the tube is driven when in use. Signs of wear may be exhibited by poor performance or by the tube becoming "microphonic". Periodic replacement of vacuum tubes is recommended. The time between the suggested replacement varies greatly with the amount of the nature of use of the vacuum tube. A good rule to follow: If you notice deterioration in sound quality, then it's time to change the tube. Tube replacement can be accomplished by following these steps:

1. Unplug the unit from the electrical outlet
2. Remove the (3) knobs on the front panel by loosening (not removing) the screws on the side of each knob
3. Remove the (3) nuts and washers from the potentiometers (posts under knobs)
4. Remove the plastic nut on the front panel input jack
5. Remove the (8) screws which attach the front/top to the chassis.

OPERATION

6. Carefully slide the front panel / top cover forward away from the rear chassis.
7. Gently remove the vacuum tube. Care should be taken to properly align the pins on the tube to the corresponding holes in the receptacle. Make sure the tube is completely seated in the receptacle.
8. Re-assemble the unit using steps 6-1 in reverse order, Care must be taken to align the LEDs, power switch, and potentiometer posts in the front panel holes.

Experiment! Your HiZ Pre can accept the 12AT7 and 12AU7 vacuum tubes. Try swapping out the 12AX7 for one of these lower gain tubes to experiment and customize your sound.

Vacuum tubes do not have an infinite life span, and must be periodically replaced. Primary causes of tube failure are:

1. Mechanical failure – bumps, excessive vibration, and mishandling of the HiZ Pre unit can cause the vacuum tube to fail. Care must be taken to mount the unit in a vibration free environment, and avoid hard bumps or knocks when transporting the unit.
2. Aging – Tube aging occurs as the unit is in use. Be careful to not leave any tube driven device powered on indefinitely. Use the power switch to power down the unit to preserve tube life.

3.7 POWER SUPPLY

The HiZ Pre is accompanied by a 16VAC, 1000mA external wall transformer. To ensure safe proper operation, do not use any other wall transformer other than the unit provided.

OPERATION

3.8 MOUNTING INSTRUCTIONS

The HiZ Pre can be rack mounted, or operated as a stand-alone unit.

Stand-alone Use: The HiZ Pre comes with (4) rubber shock mount vibration dampers or “feet”. Please attach the rubber feet to the bottom side of the HiZ Pre when using in a stand-alone configuration.

Rack Mount Use: A rack mount kit is available from authorized distributors.

The kit includes:

1. 1 Each, 2U Rack Mount plate (holds two HiZ Pre units)
2. 5 Each: Mounting screws
3. 4 Each: Rack nut clips, screws, and washers

Use the kit to mount the HiZ Pre into a studio rack or travel case.

3.9 INTERFERENCE

Care must be taken when operating the HiZ Pre in environments susceptible to radio or magnetic interference. Using the HiZ Pre in close proximity to computer CPU's, power supplies, or other electrical devices may introduce undesired audio artifacts such as buzzing or hum into the output signal of the HiZ Pre. Please operate the HiZ Pre to insure no electrical interference occurs.

4. TECHNICAL

4.1 AUDIO SPECIFICATIONS

Bandwidth	30–18k Hz +/- 1dB
Dynamic Range	80 dB
THD (-10dBu, 1kHz input)	<1%
Noise Floor	-75 dB μ

4.2 INPUT SPECIFICATIONS

Impedance, Unbalanced 1/4" TS	10 M Ω
Peak Input Level	-10 dB μ

4.3 OUTPUT SPECIFICATIONS

Impedance, Balanced XLR	100 Ω
Output Level, Balanced XLR	-10 dB μ
Impedance, Unbalanced 1/4" TS	100 Ω
Output Level, Unbalanced 1/4" TS	-10 dB μ

4.3 EQUALIZER SPECIFICATIONS

Maximum Boost/Cut	+/- 20 dB
Shelving slope	20 dB/Dec
Shelving center frequency	1 kHz

4.4 POWER SPECIFICATIONS

Input	16VAC, 1000mA
Power	5.8 VA

4.5 PHYSICAL SPECIFICATIONS

Net Weight	2.84 Lbs.
Dimensions	3.375" H X 8.000" W X 5.250" D

Leeds Pro Audio reserves the right to change specification at any time without notification.

5. MISCELLANEOUS

5.1 INFORMATION

Please record information for your HiZ Pre for future reference.

Model Name / Number: _____

Serial Number: _____

Date of Purchase: _____

Place Of Purchase: _____

5.2 NOTES