LS-308

Noise Rejection, High-Dynamic Range, Large Diaphragm Condenser Microphone

PRODUCT OVERVIEW & OPERATION MANUAL

Summary

The LS-308 is a noise rejecting, high-dynamic range microphone to be used as a problem solver in challenging recording situations when isolation is needed but difficult to achieve. Designed for use in studio, broadcast, and sound reinforcement environments when sources are in very close proximity and isolation of those sources is difficult; for example, a small commentators booth with multiple commentators, or rejecting drums from a guitar amp on a tight stage. The LS-308 is a large-diaphragm condenser microphone featuring exceptional off-axis frequency rejection combined with ultra-high dynamic range. Constructed from high-quality components and outfitted with frequency shaping high and low-cut filters, the LS-308 offers excellent handling capabilities. It includes two different mounting options, a foam windscreen, and a road case.

The LS-308 is a great choice for

- When off-axis rejection is important
- Highly dynamic instruments in noisy environments
- Close micing drums and guitars both studio and on-stage
- Close-quarter broadcast booths when off-axis rejection is essential
- Podcast and Voice-overs when off-axis rejection is essential

Detailed Description

The LS-308 offers 270 degrees of side and rear frequency rejection reducing nearby sound by up to 25dB. The rejection is achieved with Lauten Audios' unique dual, large-diaphragm pressure gradient transducer element in combination with its specially designed circuit. The LS-308 is intended for use in multi-person close-proximity vocal dialogue, like close-quarter broadcast commentary, or when the rejection of other instruments, crowds, etc., in a live studio, on-stage or sound reinforcement is desired.

The LS-308 does not require pre-attenuation and can handle 135dB+ of SPL. The circuit also allows for an ultra-wide 120db of dynamic range. These features give engineers the ability to capture high dynamic sources, and in noisy environments.

The Independent, multi-stage, high and low-cut filters help engineers balance recordings at the microphone and aid in successfully capturing the source. The 2-stage low-cut aids in reducing low frequency rumble and proximity effect. The 2-stage high-cut helps tame high frequencies.

Fully accessorized both internally and externally, the LS-308 comes with the following.

- Internally shock mounted transducer elements to help reduce rumble and handling.
- Detachable side swing arm mount
- Hard mount for added mounting versatility
- Foam windscreen to protect the transducer element from plosives, wind, and debris
- Hard-case that fits all accessories and built for the rigors of the road.

Unlike any microphone of its kind on the market today, the LS-308 offers exceptional noise rejection and dynamic-range capabilities for recording in challenging environments.

Key Features

270° degrees of off-axis sound rejection

Full 120dB (135dB total) of dynamic range without the need of additional attenuation

Independent 2-stage low and high-cut frequency switches

Internally shock mounted pressure gradient condenser elements

Swing-arm mount with 135 degrees of movement (removable)

Included threaded hard mount

Foam windscreen for plosive and wind rejection

Operating Instructions

Quick Start Guide/Sequence of Operation

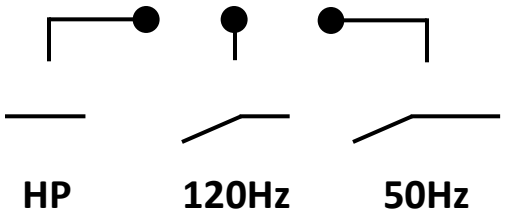
1. Attach the chosen mount to a high-quality microphone stand. Loosen the adjustment nut, or handle, depending on the mount chosen, and adjust for proper pickup position.

   Note: The microphone picks up sound from the silver grill (or the logo side), this is the "front" of the microphone.

2. Make sure +48v phantom power is turned off, and the gain on the preamplifier channel is turned down.
3. Securely connect the female end of a high-quality standard 3-pin XLR microphone cable to the male connector on the microphone, and then the male end of the XLR cable to your recording interface or microphone preamp.
4. After securely connecting the cables, turn on the +48v phantom power and allow the microphone to warm up for a several minutes.
5. If you are using the microphone for vocals, voice, or in a windy environment, please ensure you use a high-quality pop-filter or the included foam windscreen.
6. Gradually increase the input gain on your recording interface or preamp to test and achieve your desired microphone input levels.
7. Congratulations, you are ready to begin using your microphone.

High-pass Filter

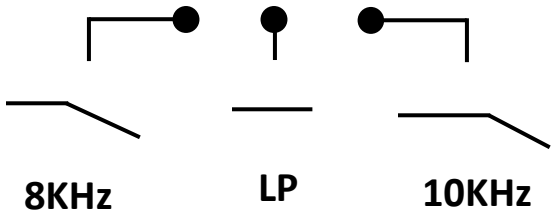
The LS-308 features a 2-stage high-pass filter located on the left side, and rear of the microphone. The low-cuts are at 50Hz and 120Hz. The "HP" is the off position.



Left "HP" is OFF position

Low-pass Filter

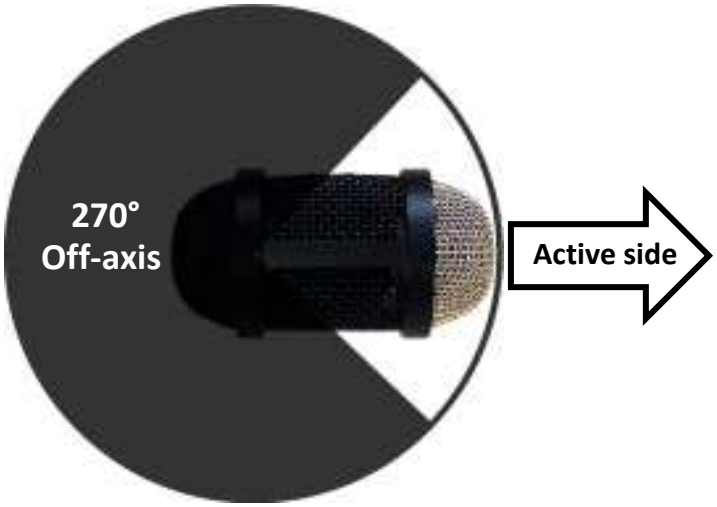
The LS-308 features a 2-stage low-pass filter located on the right side, and rear of the microphone. The high-cuts are at 8KHz and 10KHz. The "LP" is the off position.



Center "LP" is OFF position

Microphone Axis

The on-axis side of the microphone is the side with the silver grill or Lauten Audio logo. The switches are located on the rear for easy access after the microphone is placed.



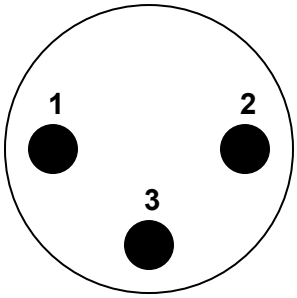
Power Requirements

This microphone requires +48v phantom power, and a minimum of 150Ohm impedance. Phantom power is a built-in feature on most modern recording interfaces and microphone preamplifiers, or you may use an external +48v phantom power supply.

Do not connect this microphone to any power source other than +48v phantom power. Using +48v phantom power is the only way to ensure safe and reliable operation.

Connections

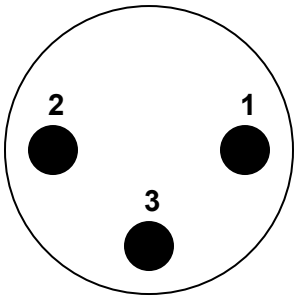
Always use a high-quality 3-pin XLR microphone cable with your microphone. Connect the female end of the XLR cable to the microphone and the male end of the XLR cable to your recording interface.



Female

Output

To microphone

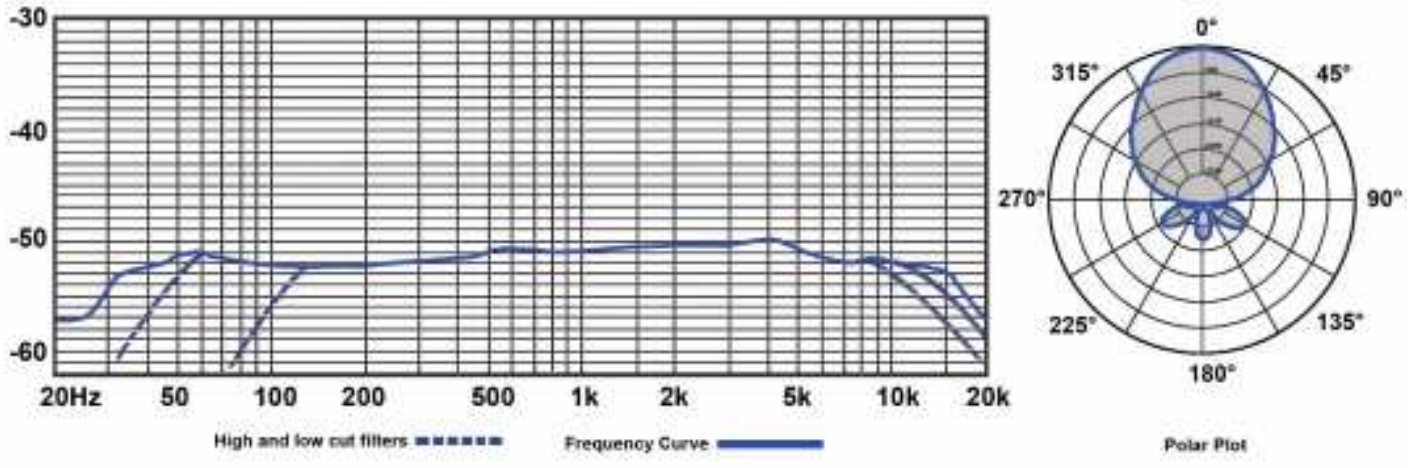


Male

Input

To recording interface

Specifications



Type: Side-Address (Silver Grill) Pressure gradient large diaphragm transducer microphone.

Polar Patterns: Second-order cardioid

Circuit: JFET transistor with transformer balanced output

Frequency Range: 20Hz-20KHz

Dynamic Range: 135dB (>120dB (15dB to 135dB)) without the need of internal or external attenuation

Impedance: >150 ohms

SPL Handling: >135dB (0.5%THD@1000Hz)

Self-noise Level: <15dB-A

Sensitivity: 1.5mV/Pa -56dBV (0 dB=1V/Pa 1kHz)

Special Features: Independent 50 & 120Hz low-cut & 8 & 10 kHz high-cut filters

Connector: 3-pin XLR

Power Requirement: +48v Phantom power

Weight: Microphone only: 1.25lbs – 0.57kg

w/ swing arm: 1.4lb – 0.64kg

w/ hard mount: 1.5lbs – 0.68kg

w/ case and accessories – 4.6lbs –2.09kg

Dimensions (no case): Height: 7.25in (18.4cm)

Width (w/ arm): 2.46in (6.25cm)

Depth: 3.75in (9.53cm)

Care and Cleaning

THERE ARE NO SERVICABLE PARTS INSIDE THE MICROPHONE

Only authorized Lauten Audio technicians should perform disassembly and maintenance on any part of this microphone. Disassembling and modifying any part of this microphone by anyone other than an authorized technician will void its warranty.

NEVER DISASSEMBLE ANY PART WHEN POWER IS BEING SUPPLIED

This microphone is a precise and delicate instrument. Do not drop or allow the microphone to collide with other objects as this may damage the internal components.

The metal surfaces of the microphone can be cleaned with mild mineral spirits or alcohol on a lightly dampened very soft cloth. Be very careful not to get any moisture inside the microphone grill or microphone.

Warranty

This microphone comes with a 1-year limited warranty from date of sale from authorized dealer/distributor. Items limited to 90-days coverage include shock mounts, shock mount bands, hard mounts, clips, windscreens, cases, boxes, cables, microphone bags, and vacuum tubes.