

Operation Guide  
Lawson 110A Mic Pre/DI



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Relive the Magic™  
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## Warranty

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### One-Year Limited Warranty

Lawson Incorporated microphones purchased in the U.S.A. from Lawson, Inc., or its authorized agents are warranted for one year from date of purchase by Lawson, Inc., to be free of defects in materials and workmanship (vacuum tubes excluded). In event of such defect, product will be repaired promptly without charge or, at our option, replaced with a new product of equal or superior value if delivered to Lawson, Inc., prepaid, together with the sales slip or other proof of purchase date. **Prior approval from Lawson, Inc., is required for return.** This warranty excludes vacuum tubes, defects due to normal wear, abuse, shipping damage, or failure to use product in accordance with instructions. This warranty is non-transferable and is void in the event of unauthorized repair or modification.

For return approval and shipping information, contact Lawson, Inc., 2739 Larmon Avenue, Nashville, TN 37204 U.S.A.

**To validate your warranty, please return the enclosed registration card or log on to [www.lawsonmicrophones.com/register.html](http://www.lawsonmicrophones.com/register.html).**

## Safety Precautions

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### CAUTION!

\* During the warranty period, repairs should be referred to Lawson, Inc. After expiration of the warranty, for safety reasons any repairs should be referred to Lawson, Inc., or to qualified service technicians.

## Specifications

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### Lawson 110A Mic Pre/DI Specifications

Frequency Response	20 to 20,000 Hz +/- 1dB
Maximum Output	+ 24 dBm (600 ohms)
Sensitivity	-55 dB to +10 dB (0 to -60 dB attenuator)
Gain	55 dB
Equivalent Noise Level	-127 dBm (20 to 20,000 Hz)
Distortion	0.01% THD and IM at levels not exceeding +24 dBm
Microphone Input Impedance	1,000 ohms
Direct Input (DI) Impedance	1 million ohms
Connectors	3-pin gold-plated XLR (mic inputs and line outputs) 1/4" long frame jack (direct inputs)
48V Phantom	Switchable
Dimensions	19" L x 3.5" H x 12.5" W
Shipping Weight	14 lbs.
Voltage Requirements	115/230 VAC switchable

## Introduction

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Congratulations and thank you for purchasing the Lawson 110A Mic Pre/DI. Lawson products are hand-crafted in the USA by real people with pride to give you many years of service and enjoyment.

*To familiarize yourself with the special features of your Lawson 110A Mic Pre/DI, please take the time to read this manual.*

**Your Lawson 110A Mic Pre/DI Serial Number:**

Lawson 110A Mic Pre/DI Serial Number: ???

Created and checked by: **???**

Date: ???

## Features

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The Lawson 110A Mic Pre/DI is a blast from the past. The Lawson 110A Mic Pre/DI is a two-channel mic pre based on the original vintage Spectra Sonics (patented in 1965) 110A discrete pre amp card. The Lawson 110A Mic Pre/DI also includes Hi Z direct instrument inputs that utilize discrete super low noise field effect transistors (FETs). In the DI mode, the output of the FETs feeds the input of the 110A card for adjustable gain.

The Lawson 110A Mic Pre/DI features:

1. Two channels with large VU meters, switchable 48V phantom, and phase reversal switch;
2. Lundahl transformers on input and output with special attention to the impedance ratio of the input transformer;
3. Film capacitors used on I/O of 110A amplifier card (instead of low quality electrolytic capacitors used in the original);
4. Balanced continuously variable input pad (long life high quality conductive plastic dual potentiometers);
5. Ruler flat frequency response from 20 Hz to 20 kHz;
6. Modest 50dB gain (designed specifically for condenser microphones);
7. Extremely low distortion, virtually unmeasurable;
8. Overload recovery time is 1 micro second for up to 1000% overload;
9. Hand-selected low noise discrete transistors matched for beta;
10. Only the very finest components including Neutrik™ gold-plated XLR connectors, 1% metal film resistors, highest quality long frame 1/4" jacks for DI, Gotham™ shielded cable used for internal wiring, toroidal transformer on power supply, anodized aluminum front panel with permanent lettering;
11. Designed for ease of use (straightforward uncomplicated layout of controls).

## Controls

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The Lawson 110A Mic Pre/DI contains two separate channels. Each channel has five controls. Channel One controls and meter are located on the left. Channel Two controls and meter are located on the right.

The five controls are (refer to front panel shown on next page):

1. Rotary Gain Control Knob
2. Microphone/DI Selection Switch
3. 48 Volt Phantom On/Off Switch
4. Phase Switch (Positive/Negative)
5. Meter Zero Adjustment

1. Rotary Gain Control Knob

The gain control adjusts the level of the microphones or DI (instruments).

2. Microphone/DI Selection Switch

Selects the input source: either microphone (rear panel XLR) or DI (front panel 1/4" guitar jack).

3. 48 Volt Phantom On/Off Switch

Turns on or off 48 volt phantom power for microphones that require phantom powering. If you are using a vacuum tube mic, switch to off.

4. Phase Switch

Changes the phase/polarity of the mic/DI (0° or -180°). The normal position for this switch is the "+" position.

5. Meter Zero Adjustment

Controls the position of the meter needle at rest. With no signal, the needle should rest directly on the line just below -20. This adjustment requires a small slotted-blade screwdriver. Insert the screwdriver into the meter adjustment hole and gently rotate slightly clockwise/counter-clockwise until the needle rests on the line just below -20. Adjustment of this control rarely needs attention.

## Inputs and Outputs

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### Inputs

Two mic inputs (one per channel) are located on the rear panel (marked Channel 1 Mic Input and Channel 2 Mic Input). Each mic input is a standard 3-pin XLR female connector (pin 2 positive).

There are two DI inputs (one per channel) located on the front panel. Each DI input requires a 1/4" standard guitar plug. The DI inputs are labeled "HI Z" indicating they are high impedance inputs that would normally be encountered with guitar, bass, etc.

### Outputs

There are two 600 ohm balanced outputs (one per channel) located on the rear panel. Each output is a standard 3-pin male XLR (pin 2 positive).

There are two unbalanced outputs (one per channel) located on the rear panel. Each unbalanced output is a standard 1/4" guitar jack. This output is designed to feed a guitar/bass amp for monitoring purposes. This is a high impedance (HI Z) output. This output level is fixed i.e. is not affected by the gain control settings on the front panel.

## Setup Instructions

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Verify the 115/230VAC voltage selector is set for your AC outlets. In the USA, 115VAC would be the norm. In Europe, 230VAC would be the norm.

Connect the power cord to the power connector located on the rear of the unit. Make sure the power cord is seated firmly into the rear power connector. Turn the unit on via the On/Off Switch. The meters will illuminate.

### Microphones

Turn gain controls to minimum (counter clockwise). Using a 3-pin XLR cable, plug a microphone into one of the female XLR inputs (Channel One or Channel Two) located on the rear of the unit.

Plug an additional XLR cable into the corresponding output (Channel One or Channel Two) located on the rear of the unit. Plug the other end of this cable into the line input of your console/audio workstation.

Switch MIC/DI to MIC. If you are using a phantom powered microphone, switch 48V to on. If you are using a tube mic, switch 48V to off.

Switch Phase Reversal to "+" normal position.

With a vocal or other sound source performing into your microphone, adjust the front panel gain control clockwise until a normal level is indicated on the VU meter. Remember, VU meters are not peak indicators but display average levels. Adjust the gain control so that the peak reading meters on your console/workstation are below digital zero. Some peak levels can be 15 dB higher than that displayed on an "averaging" VU meter.

### DI/Instrument

Turn gain controls to minimum (counter clockwise). Then switch MIC/DI to DI.

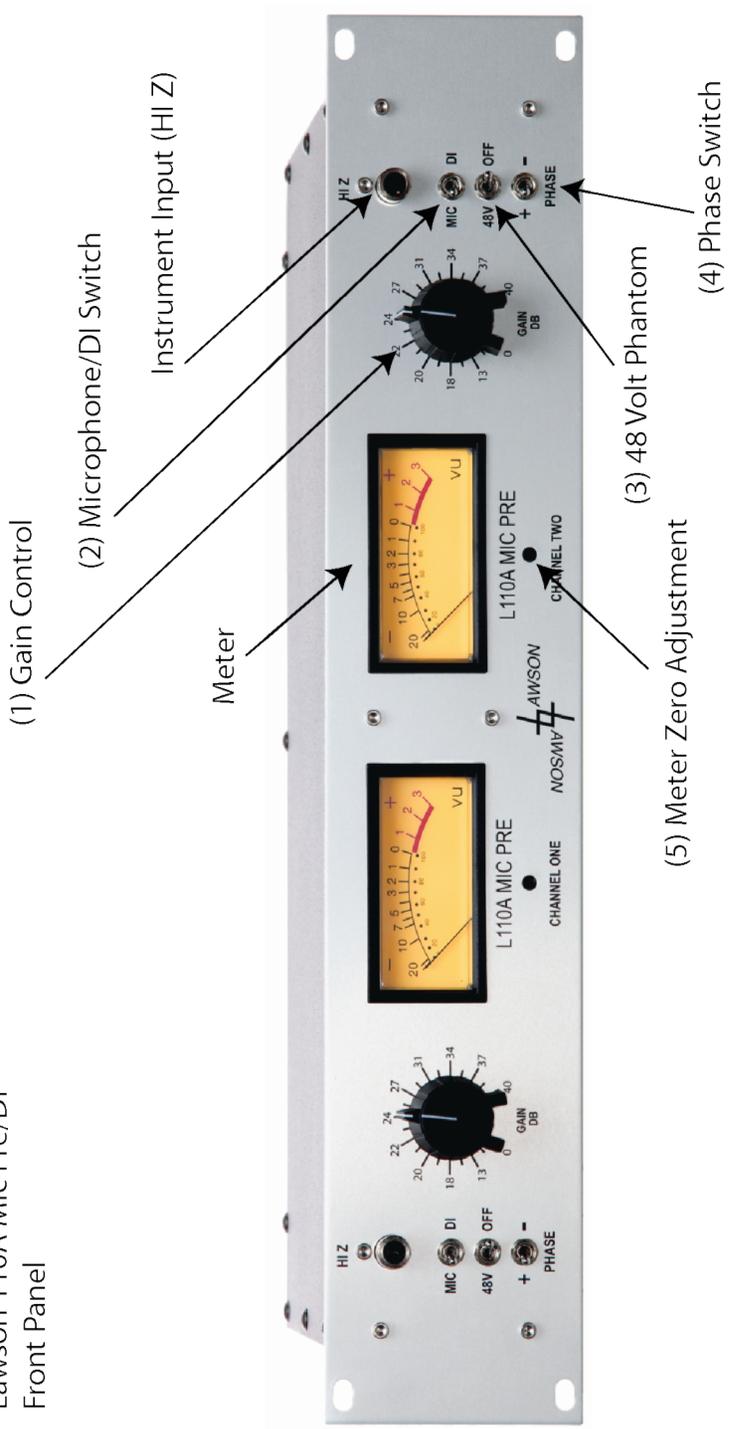
Switch Phase Reversal to "+" normal position.

Plug an instrument (keyboard, guitar, bass, etc.) into the 1/4" jack on the front panel using a standard guitar cord. Be sure the volume control at the instrument is turned to maximum thereby insuring the highest signal-to-noise ratio.

Plug an additional XLR cable into the corresponding output (Channel One or Channel Two) located on the rear of the unit. Plug the other end of this cable into the line input of your console/audio workstation.

With the instrument performing, adjust gain control clockwise until a normal level is indicated on the VU meter. Remember to check peak readings on your console/workstation as VU meters don't indicate instantaneous peaks.

Lawson 110A Mic Pre/DI Front Panel



110A Mic Pre/DI Rear Panel

