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## Universal Audio LA610M2

# Universal Audio LA-610 MKII Tube Recording Channel Strip User Manual

## 1. INTRODUCTION

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The Universal Audio LA-610 MKII is a classic tube recording channel strip, combining a vintage 610 tube microphone preamplifier, a full-featured EQ, and a T4 optical compressor. This unit is designed to provide a warm, rich, and musical sound for a variety of recording applications, from vocals and instruments to entire mixes. This manual provides essential information for the proper setup, operation, and maintenance of your LA-610 MKII.

## 2. SAFETY INFORMATION

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Please read and understand all safety instructions before operating the LA-610 MKII. Retain this manual for future reference.

- **Electrical Shock Hazard:** To reduce the risk of electric shock, do not open the unit. Refer all servicing to qualified service personnel.
- **Moisture Warning:** Do not expose this apparatus to rain or moisture to reduce the risk of fire or electric shock.
- **Ventilation:** Ensure adequate ventilation around the unit. Do not block any ventilation openings. The unit generates heat during operation; proper airflow prevents overheating and ensures optimal performance and longevity.
- **Power Source:** Connect the unit only to a power supply of the type specified in this manual and on the unit itself.

## 3. PRODUCT OVERVIEW

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### 3.1 Front Panel Controls

The front panel of the LA-610 MKII provides access to all primary controls for the preamp, EQ, and compressor sections.



Image: Front view of the LA-610 MKII, displaying the preamp, EQ, and compressor controls, along with the VU meter and power switch.

- **GAIN:** Adjusts the input gain for the preamplifier. Selectable values include -10, -5, 0, +5, and +10 dB.
- **LEVEL:** Controls the output level of the 610 tube preamplifier section.
- **INPUT IMPEDANCE:** Selects the input impedance for the microphone (500Ω, 2KΩ) and Hi-Z (47KΩ, 2.2MΩ) inputs. Matching impedance can affect tone.
- **+48V PHANTOM POWER:** Engages +48V phantom power for condenser microphones.
- **-15dB PAD:** Attenuates the input signal by 15dB, useful for high-level sources.
- **PHASE:** Inverts the phase of the input signal.
- **EQ HIGH:** A shelving equalizer for high frequencies, with selectable frequencies (7KHz, 4.5KHz, 10KHz) and a boost/cut range of +/- 9dB.
- **EQ LOW:** A shelving equalizer for low frequencies, with selectable frequencies (70Hz, 100Hz, 200Hz) and a boost/cut range of +/- 9dB.
- **PEAK REDUCTION:** Controls the amount of gain reduction applied by the optical compressor.
- **GAIN (Compressor):** Provides makeup gain to compensate for gain reduction from the compressor.
- **METER:** Selects what the VU meter displays: **GR** (Gain Reduction), **COMP** (Compressor Output Level), or **LIMIT** (Limiter Output Level).
- **MODE:** Switches between **COMPRESS** and **LIMIT** modes for the optical compressor.
- **POWER:** Main power switch for the unit, with an integrated indicator light.
- **VU METER:** Displays the selected level or gain reduction, providing visual feedback on signal dynamics.

### 3.2 Rear Panel Connections

The rear panel houses all input and output connections, as well as the power inlet.



Image: Rear view of the LA-610 MKII, showing the IEC power inlet, balanced XLR Line Output, Line Input, and Mic Input connectors.

- **POWER IN:** Standard IEC power inlet for connecting the AC power cord. The unit accepts 90-240VAC, 0.30A, 50/60Hz.
- **LINE OUTPUT:** Balanced XLR output for connecting to an audio interface, mixer, or other line-level equipment.
- **LINE INPUT:** Balanced XLR input for processing line-level signals through the unit.
- **MIC INPUT:** Balanced XLR input specifically for connecting microphones.

## 4. SETUP

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Follow these steps to set up your LA-610 MKII for operation:

1. **Unpacking:** Carefully remove the LA-610 MKII from its packaging. Inspect the unit for any signs of damage.
2. **Placement:** The LA-610 MKII is designed for rack mounting. Install it in a standard 19-inch equipment rack, ensuring sufficient space for ventilation, especially above the unit, as it generates heat.
3. **Power Connection:** Connect the supplied IEC power cord to the POWER IN inlet on the rear panel and then to a grounded AC power outlet. Ensure the unit's power switch is in the OFF position before connecting.
4. **Audio Connections:**
  - **Microphone:** Connect your microphone to the **MIC INPUT** XLR connector on the rear panel.
  - **Line-Level Input:** For processing line-level signals, connect your source to the **LINE INPUT** XLR connector on the rear panel.
  - **Hi-Z Instrument:** For direct instrument input (e.g., guitar, bass), use the **HI-Z** input jack on the front panel.
  - **Output:** Connect the **LINE OUTPUT** XLR connector on the rear panel to your audio interface, mixer, or recording device's input.

## 5. OPERATING INSTRUCTIONS

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This section details the operation of the LA-610 MKII's various sections.

### 5.1 Powering On/Off

Press the **POWER** switch on the front panel to turn the unit ON. The indicator light will illuminate. Allow a few moments for the tubes to warm up before use. To power off, press the **POWER** switch again.

### 5.2 Preamplifier Section (610 Tube Preamp)

- **Input Selection:** Ensure your input source is connected correctly (Mic, Line, or Hi-Z).
- **Gain Control:** Use the **GAIN** knob to set the initial input gain. Common settings for vocals might be around -5dB, but adjust based on your microphone and source level.
- **Level Control:** The **LEVEL** knob fine-tunes the output level of the preamp section.
- **Impedance:** Experiment with the **INPUT IMPEDANCE** settings (500Ω, 2KΩ for mic; 47KΩ, 2.2MΩ for Hi-Z) to find the best tonal match for your microphone or instrument.
- **Phantom Power:** If using a condenser microphone, engage the **+48V PHANTOM POWER** switch. Ensure the microphone is connected before engaging phantom power.
- **Pad & Phase:** Use the **-15dB PAD** for very loud sources to prevent clipping. The **PHASE** switch can be used to correct phase issues between multiple microphones or to achieve creative effects.

### 5.3 Equalizer Section

The LA-610 MKII features a simple yet effective two-band shelving EQ.

- **EQ HIGH:** Select a frequency (7KHz, 4.5KHz, 10KHz) and use the knob to boost or cut high frequencies. A slight boost at 7KHz can add presence to vocals.
- **EQ LOW:** Select a frequency (70Hz, 100Hz, 200Hz) and use the knob to boost or cut low frequencies. For many sources, leaving the LOW EQ at zero is a good starting point.

### 5.4 Compressor Section (T4 Optical Compressor)

The T4 optical compressor is known for its smooth and musical gain reduction.

- **Peak Reduction:** This knob controls the threshold and ratio of the compressor. Turn it clockwise to increase compression.
- **Gain (Compressor):** Use this knob to add makeup gain after compression, bringing the signal back to an appropriate level.
- **Mode:** Select **COMPRESS** for standard compression or **LIMIT** for a more aggressive limiting effect.
- **Meter:** Set the **METER** switch to **GR** to monitor gain reduction, or **COMP/LIMIT** to monitor the output level of the compressor/limiter.

## 6. MAINTENANCE

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Proper maintenance ensures the longevity and optimal performance of your LA-610 MKII.

- **Cleaning:** Use a soft, dry cloth to clean the exterior of the unit. Avoid abrasive cleaners or solvents.
- **Ventilation:** Regularly check that the ventilation openings are clear of dust and obstructions.
- **Tube Replacement:** As a tube-based unit, the vacuum tubes will eventually need replacement. If you notice a degradation in sound quality, increased noise, or inconsistent performance, consult a qualified technician for tube testing and replacement. Use only recommended replacement tubes.
- **Storage:** If storing the unit for an extended period, ensure it is in a dry, temperature-controlled environment, protected from dust.

## 7. TROUBLESHOOTING

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If you encounter issues with your LA-610 MKII, try these basic troubleshooting steps:

- **No Power:** Ensure the power cord is securely connected to both the unit and a working AC outlet. Check the power switch position.
- **No Sound:**
  - Verify all audio cables are correctly connected and functional.
  - Check input and output levels on the LA-610 MKII and connected devices.
  - Ensure the correct input source is selected (Mic, Line, Hi-Z).
  - If using a condenser mic, confirm +48V phantom power is engaged.
- **Distorted Sound:**
  - Reduce the **GAIN** and **LEVEL** settings on the preamp.
  - Engage the **-15dB PAD** if the input signal is too hot.
  - Check for damaged cables.
- **Hum or Noise:**
  - Ensure all equipment is properly grounded.
  - Try different power outlets or a power conditioner.
  - Check for proximity to other electronic devices that may cause interference.
  - Faulty tubes can sometimes cause increased noise; consider professional inspection.

If problems persist after attempting these steps, contact Universal Audio customer support or a qualified service technician.

## 8. SPECIFICATIONS

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<b>Model Number</b>	LA610M2
<b>Item Weight</b>	12.97 pounds (5.88 kg)
<b>Package Dimensions</b>	22.01 x 17.52 x 7.01 inches (55.9 x 44.5 x 17.8 cm)
<b>Power Requirements</b>	90-240VAC, 0.30A, 50/60Hz
<b>Date First Available</b>	October 9, 2008

## 9. WARRANTY AND SUPPORT

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Universal Audio products are manufactured to high standards and are backed by a limited warranty. For specific warranty terms and conditions, please refer to the warranty card included with your product or visit the official Universal Audio website. For technical support, service, or further inquiries, please visit the Universal Audio support page or contact their customer service department directly.

**Universal Audio Official Website:** [www.uaudio.com](http://www.uaudio.com)