

# WA12 MKII

DISCRETE MICROPHONE PREAMPLIFIER W/ DI



# THANK YOU!

## **REGISTER YOUR WA12 MKII!**

**Before we begin, please take the time to visit [www.warmaudio.com](http://www.warmaudio.com) to register your product. To ensure you receive proper and uninterrupted warranty support for your product, please register your unit within 14 days from purchase.**

Thank you for purchasing the Warm Audio WA12 MKII microphone preamplifier and DI. We feel this product offers the best in terms of the sound, function, and vibe from the classic era of analog recording. We don't cut corners when it comes to what goes into our products, and the WA12 MKII is no exception. The WA12 MKII uses the highest quality custom input and output transformers made by Cinemag Transformers USA, and employs an all discrete signal path using only large through-hole components on PCBs that are assembled by hand.

## **Welcome Back To the World Of Analog**

Though digital technology and software have made great strides in performance in recent years; we still feel that nothing compares to the level of articulation, depth, realism, and responsiveness of a well-built piece of analog gear. When you hear the bottom end presence and top end detail of quality analog gear, the difference can be astounding. The cost of most boutique analog equipment is financially out of reach for many recording artists. Our mission is to change this, and introduce as many people as we can to recording and mixing with real hardware. Whether this is the first mic preamp or piece of outboard gear you've ever purchased outside of a recording interface, or merely the first in a long time; we thank you, and welcome you back to the world of analog.

**Bryce Young**

President

Warm Audio

Liberty Hill, Texas USA

# CHAPTER 1: WARRANTY STATEMENT

Warm Audio warranties this product to be free from defect in materials and workmanship for one year from the date of purchase, for the original purchaser to whom this equipment is registered. This warranty is non-transferrable.

This warranty is void in the event of damage incurred from unauthorized service to this unit, or from electrical or mechanical modification to this unit. This warranty does not cover damage resulting from abuse, accidental damage, misuse, improper electrical conditions such as mis-wiring, incorrect voltage or frequency, unstable power, disconnection from earth ground (for products requiring a 3 pin, grounded power cable), or from exposure to hostile environmental conditions such as moisture, humidity, smoke, fire, sand or other debris, and extreme temperatures.

Warm Audio will, at its sole discretion, repair or replace this product in a timely manner. This limited warranty extends only to products determined to be defective and does not cover incidental costs such as equipment rental, loss of revenue, etc. Please visit us at [www.warmaudio.com](http://www.warmaudio.com) for more information on your warranty, or to request warranty service.

This warranty applies to products sold in the United States of America. For warranty information in any other country, please refer to your local Warm Audio distributor. This warranty provides specific legal rights, which may vary from state to state. Depending on the state in which you live, you may have rights in addition to those covered in this statement. Please refer to your state laws or see your local Warm Audio retailer for more information.

## NON-WARRANTY SERVICE

If you have a defective unit that is outside of our warranty period or conditions; we are still here for you and can get your unit working again for a modest service fee. Please visit us at [www.warmaudio.com](http://www.warmaudio.com) to contact us about setting up a repair or for more information.

With the proper care, your Warm Audio gear should last a lifetime and provide a lifetime of enjoyment. We believe the best advertisement we can have is a properly working unit being put to great use. Let's work together to make it happen.

# CHAPTER 2: NOW LET'S GET STARTED!

## INTRODUCTION

The WA12 MKII is our take on one of the most successful and iconic preamp types in the history of classic console designs. Our goal was to make this type of discrete transformer coupled mic preamp available for the first time at an affordable price, without compromising any of the design parameters and characteristics that make this type of preamp so desirable.

The MKII version of our first product reflects the vital feedback from our valued customers, and our ongoing commitment to provide the most value we possibly can for your purchase. We've added metering, output trim control (channel fader), and our discrete op-amp is now socketed, allowing for easy replacement with any discrete op-amp that conforms to the +/-16v, 2520-style pinout standard. The quality, design, and sonic character have not otherwise been changed; so rest assured that this unit can sonically 'fit in' perfectly alongside your classic WA12 or WA12-500 units!

## OPERATION

As a discrete transformer coupled, high gain microphone preamplifier, the WA12 MKII works great with all types of microphones, including dynamic, ribbon, and condenser microphones. Dynamic microphones and ribbon microphones are generally lower output devices and require no external power source. Condenser microphones are generally more sensitive than dynamic and ribbon microphones and typically require external +48V phantom power.

The WA12 MKII also works well with a variety of instruments, via the onboard active instrument DI.

## FEATURES

The WA12 MKII is a completely discrete, high voltage, dual-transformer microphone preamplifier designed for high gain (+71dB), high headroom, low noise, and an exciting sonic performance – great for all types of recording applications. A high quality mic preamp is one of the most critical pieces needed to achieve the elusive 'larger than life' sound, and the WA12 MKII is more than capable of delivering.

The WA12 MKII features both a large, high-headroom custom-wound microphone input transformer, and a line output transformer by Cinemag Transformers USA. The WA12 MKII is based around a discrete op-amp, the X731, which is our own reproduction of the vintage classic Melcor 1731, considered by some to be the warmer predecessor to the modern 2520-style op-amp. The X731 can achieve vibrant, clean and lifelike tones; but can also be driven into mild saturation at much higher gain levels. The effects can be subtle, but very pleasing to the ear. The WA12 MKII can also accept any discrete op-amp on the market which conforms to the +/-16v, 2520 pinout standard.

# CHAPTER 3: TECHNICAL SPECS

## HARDWARE CONTROLS - FRONT PANEL



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### 1. HI-Z Input

The front panel 1/4" input provides an active discrete DI circuit, which sends the instrument's signal through the entire preamp circuit, including the input transformer, discrete opamp (operational amplifier) and output transformer. The thorough layout of the HI-Z's signal path ensures that instruments are subject to the same robust preamplification as microphones. You can connect a variety of instruments via the HI-Z input on the front panel of the WA12 MKII, including: acoustic (with pickup) guitars, electric guitars, bass guitars, keyboards, samplers, synth modules, and drum machines.

### 2. HI-Z Switch

This feature engages the front panel 1/4" input and turns off the back panel XLR input.

### 3. +48 Volt Phantom Power

The WA12 MKII has +48V phantom power available. This assures optimum performance of your condenser microphones that require phantom power.

### 4. -20dB PAD Switch

Engaging this feature applies -20db to the incoming signal. This is a very useful feature for reducing the level coming into the WA12 MKII and thus preventing the signal from clipping or distorting. Use this feature when receiving a high output level from a microphone or other device. Padding the input serves to provide increased "headroom" for the operator and lessens the likelihood of signal overload.

### 5. POL Switch

This feature inverts the polarity of the microphone input signal. This can be useful in aligning the phase of 'opposing' microphones in some recording scenarios, such as microphones placed on the top and bottom of a snare drum, microphones in front of and behind the speaker in an open-back guitar cabinet, etc.

# CHAPTER 3: TECHNICAL SPECS



## 6. Tone Switch

This control switches the input transformer configuration from a 1:4 (step up) turns ratio to a steeper 1:8 (step up) turns ratio, drawing out a greater degree of coloration and impact from both the input transformer as well as the discrete op-amp. When engaged, the input impedance of the WA12 MKII is 150 ohms. When disengaged, the input impedance of the WA12 MKII is 600 ohms. The 150 ohm (switched-in) setting will increase the gain of the WA12 MKII by +6db, changing the maximum gain from +65 to +71 db. This feature will make a noticeable tone change to most microphones and instruments. The Microphone and Hi-Z inputs are both altered by this feature; as every input source ultimately will pass through the affected components. The 600 ohms impedance setting is recommended for condenser and dynamic microphones, and 150 ohms is recommended for ribbons. This switch is labeled “Tone” for a reason though; most listeners will find the normal setting to be more open and natural, with the engaged setting to be more punchy, aggressive, or thick. The engaged setting is very much akin to how vintage console preamps such as those that inspired the WA12 MKII have always been wired; however the disengaged setting is more akin to how many other modern types of solid-state preamps are normally wired. We strongly suggest you experiment with both settings on all sources to find the best possible tone for your recordings. As with all things, let your ear and artistic taste be the final judge on which settings to use for any given situation.

## 7. GAIN Knob

The gain control is variable and adjusts the WA12 MKII’s gain from +29db to +65db or from +35db to +71db when the “TONE” switch is engaged. The “PAD” feature lowers the minimum and maximum ranges by -20db when engaged.

## 8. OUTPUT Knob

This control acts as the ‘channel fader’, providing seamless attenuation to the output signal. This can be highly useful in ‘sculpting’ the sound of the preamp. For example, higher gain with lower output tends to produce a more overdriven, harmonically rich sound; while lower gain, higher output tends to produce a more open, dynamic, clean, and articulate sound. As with all things, let your ear and artistic taste be the final judge on which settings to use for any given situation.

## 9. Meter Display

The LED meter displays gain level for the WA12 MKII, and can be a valuable tool for monitoring peak level activity and ensuring a safe recording level is achieved.

## 10. Power Button

The power button is used to power the unit on and off. To extend the life of the electronics please turn unit off when not in use.

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## BACK PANEL

### 1. XLR & TRS Balanced Output

Output is provided by an XLR and 1/4" TRS output connector. For unbalanced operation, use an unbalanced 1/4" TS cable. We recommend for best results to use only one output at a time.

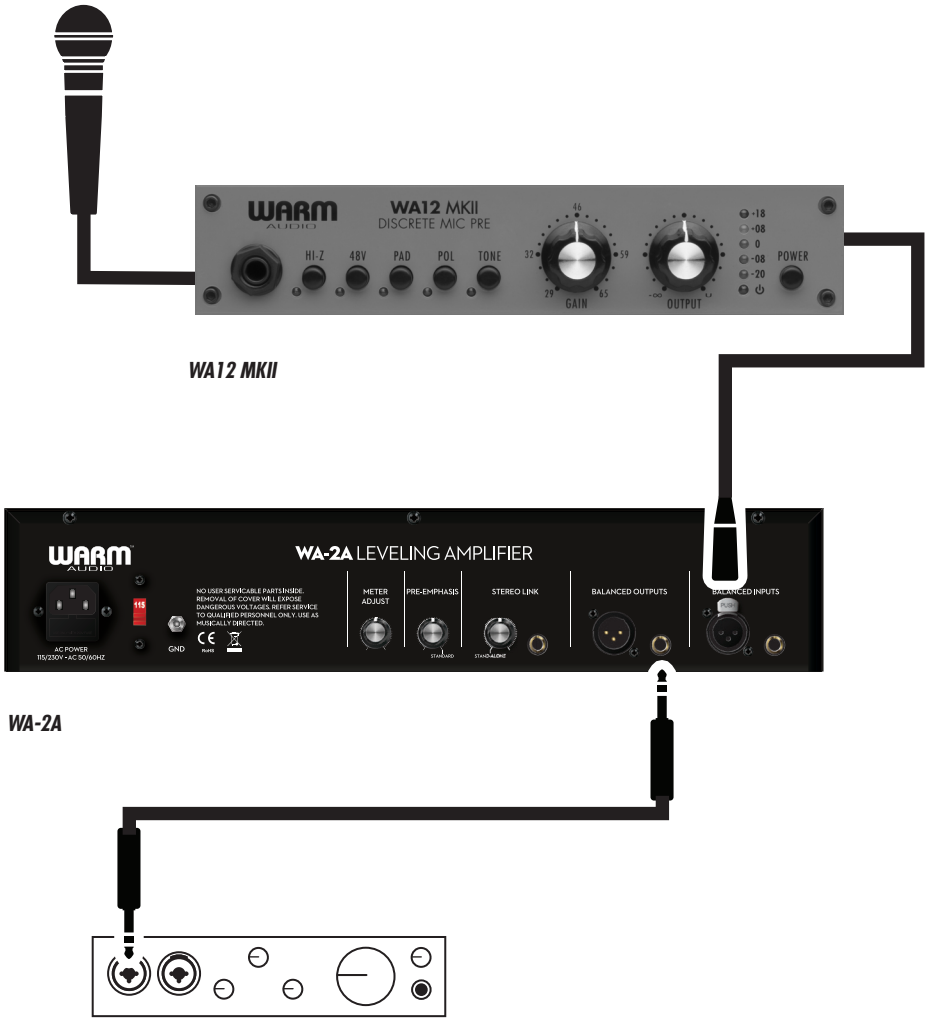
### 2. Microphone Input

Microphones and mic-level signals may be connected via the rear XLR connector.

### 3. AC POWER

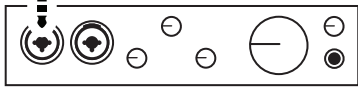
The WA12 MKII is designed to use a 24V AC power supply. Warm Audio recommends that you use the 24V AC supplied in the original box or another of identical spec.

# CHAPTER 4: HOOKUP DIAGRAMS



WA12 MKII

WA-2A



Recording interface

In this diagram, the WA12 MKII is used as a mic preamp to capture a microphone signal and bring the signal into a recording interface.

**Note: it is important to use a line level input on your recording device as opposed to a microphone or instrument level input.**



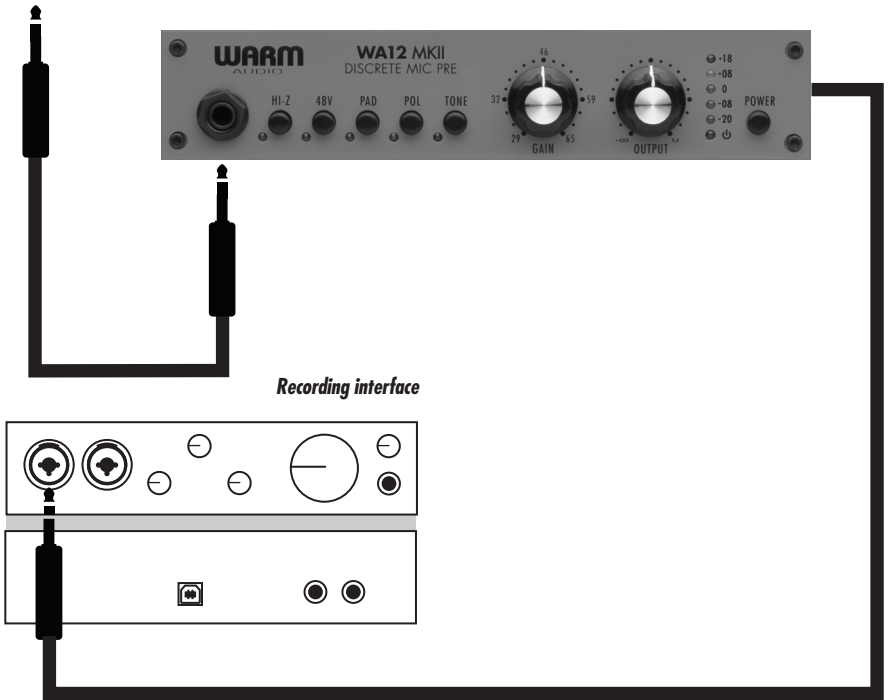
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WA12 MKII



In this diagram, the WA12 MKII is used as an active instrument DI to capture an electric guitar and bring the signal into a recording interface.

**Note:** it is important to use a line level input on your recording device as opposed to a microphone or instrument level input.

# CHAPTER 5: RECALL SHEETS



Session: \_\_\_\_\_ Track: \_\_\_\_\_ Notes: \_\_\_\_\_  
Date: \_\_\_\_\_ Instrument: \_\_\_\_\_ Notes: \_\_\_\_\_



Session: \_\_\_\_\_ Track: \_\_\_\_\_ Notes: \_\_\_\_\_  
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Session: \_\_\_\_\_ Track: \_\_\_\_\_ Notes: \_\_\_\_\_

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Session: \_\_\_\_\_ Track: \_\_\_\_\_ Notes: \_\_\_\_\_

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**WARM**<sup>TM</sup>  
AUDIO

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