



User's Manual

Mic Preamp / EQ H9

Thank you for your purchase of an Iron Age H9 500 series module. Iron Age Audioworks is a small team of engineers and designers and we truly appreciate your business. We hope you enjoy using this as much as we enjoyed making it.

## **Safety**

Safety with audio equipment is normally a matter of common sense, but we want to make sure you get the best use out of your equipment. So please, use common sense including...

- Use typical practices for using electrical and audio equipment.
- Don't clean this with water or use it around water.
- Any ventilation openings in the case need to remain open.
- Don't use this around anything that's hot (such as a radiator or space heater).
- Don't defeat the ground pin on the plug or use a ground-lift device that does.
- Don't use a cut or damaged power cord, and keep the cord from getting pinched or stepped on.
- Don't service the box unless you're a qualified technician.

## **Power**

The unit is powered by the 500 series chassis it is mounted in, and uses an onboard voltage regulator. It complies with VPR standards.

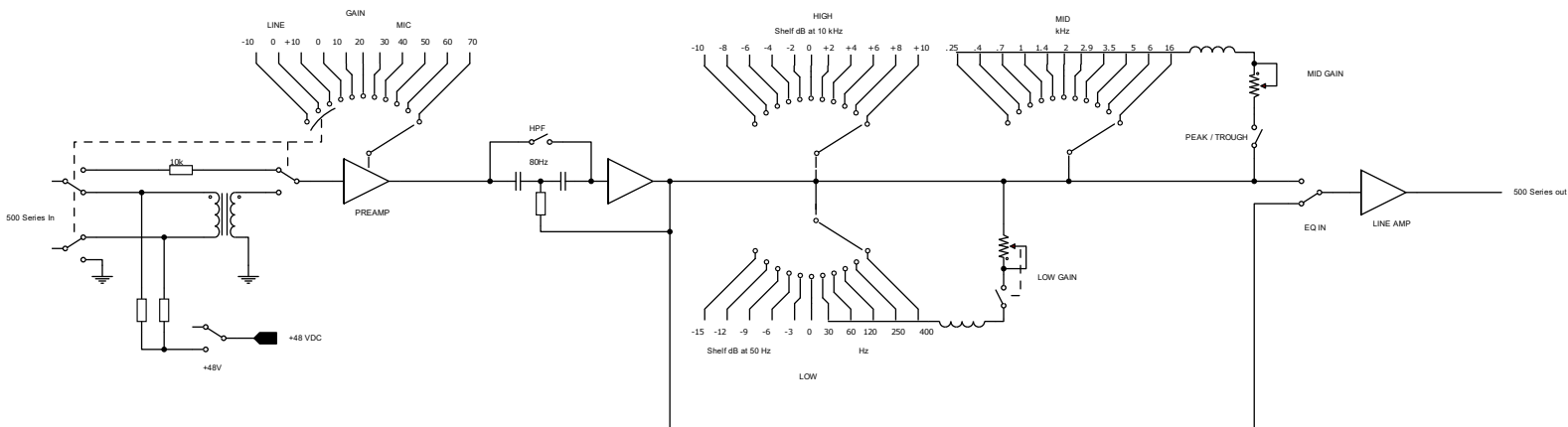
## Overview

The Iron Age 500 series H9 module was designed as a tribute to famous British consoles of the early 70s. The mic preamp and EQ combine for an instantly recognizable character, and are all around useful tools in tracking or mixdown.

Each H9 features a discrete class A mic pre that offers 0 to 70 dB of gain in 10 dB steps. In mic mode the signal starts with a Jensen input transformer. In line, a true-to-history unbalanced input is available at +10, 0 and -10 dB gain. The preamp stage feeds a discrete high pass filter set for 80Hz, followed by the classic three band passive EQ. A second gain stage acts as makeup gain for the EQ, and a discrete class A buffer drives the line out. 48V phantom power is available in mic mode only.

As with all Iron Age products, the H9 is as discrete as possible, designed and made in the USA.

## Block Diagram



## Controls



The GAIN knob adjusts the gain of the preamplifier. In the first three positions, it is in line input mode, which bypasses the mic input transformer and engages a pad. Line mode also disconnects phantom power from the input. In the final seven modes, the net gain is adjusted to the amount indicated. A pad is automatically engaged in the first two positions.

The +48 switch provides phantom power to the microphone. This only works in mic gain points.

The HPF switch engages an active 80 Hz high pass filter.

The EQ switch engages the passive EQ.

The high band is shelf, where each step adjusts the frequency response at 10 kHz by 2 dB from -10 to +10.

The mid band is an inductor peaking band with eleven selectable frequencies. The cut or boost function of the mid band is set by the boost/cut switch. The amount of gain or cut is set by the gain knob. Fully clockwise is +15 dB, counterclockwise is 0 dB. A feature of the passive inductor EQ is that the cut behavior is narrower than the boost.

The low band switch has two functions. Counterclockwise from center a 50 Hz shelf is engaged in 3 dB increments up to -15 dB. Clockwise from center selects the boost frequency and engages the boost control knob. The boost control knob can be rotated to a fully clockwise position to turn the low frequency band off. This ensures a flat frequency response.

## **Inputs and Outputs**

The input uses a Jensen mic input transformer to receive a nominal -66 dBu balanced input in mic mode or +4 dBu in line mode via the 500 series pinout.

The output is a nominal +4 dBu impedance balanced line output via the 500 series pinout.

## **Chassis**

The Iron Age H9 is a VPR compliant 500 series module.

## Technical Specifications

### Gain Range

Mic	0 - 70 dB
Line	-10 - +10 dB

### Maximum Input Level

Mic	-2.5 dBu
Line	+25 dBu

Maximum Output Level +15 dBu

### Input Impedance

Mic	1500 Ohms, transformer balanced
Line	10 kOhms, unbalanced

Output Impedance 47 Ohms, impedance balanced

Frequency Response +/- 1 dB 20Hz-20kHz

Actual Measured Noise better than -90 dBA

THD @ +15 dBu output <1%

Power Consumption <120 mA

## Warranty

We warrant this product to be free from defects of materials and workmanship for a period of one (1) year from the date of purchase. We will remedy any defect identified within this period by repairing or replacing the product at our option. It will be your responsibility to pay for shipping the product to us, and if the product is determined to be defective, our responsibility to pay for shipping the product back to you.

**LIMITATIONS AND EXCLUSIONS.** This warranty, and any other express or implied warranty, does not apply to any product which has been improperly installed, subjected to usage for which the product was not designed, misused or abused, damaged during shipping, or which has been altered or modified in any way. This warranty is extended to the original purchaser only. **THIS EXPRESS, LIMITED WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, TO THE EXTENT ALLOWED UNDER APPLICABLE STATE LAW. IN NO EVENT SHALL IRON AGE AUDIOWORKS BE LIABLE FOR ANY SPECIAL, INCIDENTAL, OR CONSEQUENTIAL DAMAGES RESULTING FROM THE USE OF THIS PRODUCT.**

If you suspect a defect in this product, please contact us to discuss the problem (it is possible that a suspected defect could be quickly remedied or due to improper usage).

Contact us with any issues, to say hi, or share the music you've made. We love this gear and want you to love it too.

[contact@ironageaudioworks.com](mailto:contact@ironageaudioworks.com)