



User's Manual

Mic Preamp QP5

Thank you for your purchase of an Iron Age Mic Pre (QP5). 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 use a cut or damaged power cord, and keep the cord from getting pinched or stepped on.
- Don't service a box unless you're a qualified technician.

Power

The unit is powered by the 500 series chassis it is mounted in. It complies with VPR standards, and can also be used with supplies up to +/-24V.

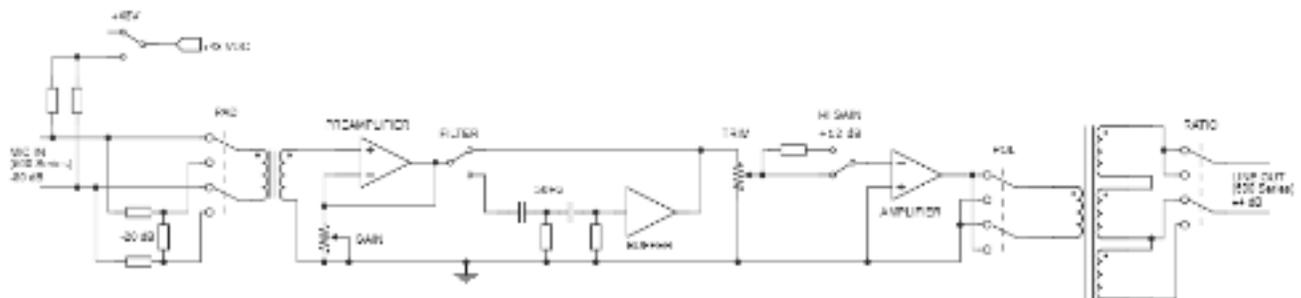
Overview

The Iron Age 500 series mic preamp was designed as a utility front end solution. The mic preamp is the most important part of your signal chain, and this preamp gives the detail and depth your signal deserves.

Each QP5 features an all-discrete, transformer balanced input and output mic pre with a flexible and powerful topology that offers up to 80 dB of gain! The QP5 uses the same preamplifier as our QPP rack mount units, packed with additional useful features. The unit uses a Jensen input transformer and a custom-wound steel core Cinemag output transformer, selectable for 1:2 or 1:3 ratio. The first op amp works as a preamplifier, with adjustable gain of up to 40 dB. We took the rumble filter from our CS1 channel strip, followed by the same discrete transistor buffer we use in the CS1 and the V2 equalizer. A second op amp is fed by a trim control, and a “high gain” switch adds 12 dB more if needed. A bank of -20 dB pad, polarity, and 48V phantom power switches round out the feature set.

As with all Iron Age products, the QPP uses the M2 discrete operational amplifier, designed and built by us.

Block Diagram

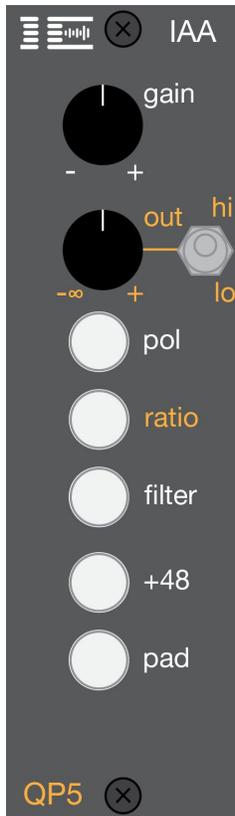


Through the IAA Custom Shop we also offer a variety of input transformers, output transformers, and op amps. Whether you're looking for clean and clear, warm and smooth, or edgy and rock and roll, this preamp can do what you need.

Reach out to us to whiteboard your idea!

contact@ironageaudioworks.com

Controls



The GAIN knob adjusts the gain of the operational amplifier.

The OUT knob attenuates the signal before the output stage. For maximum headroom the OUT should be set fully clockwise.

The OUT HI/LO switch increases the gain provided by the output amplifier by 12 dB.

The POL button inverts the signal being set to the primary side of the output transformer, changing the polarity of the output signal by 180 degrees.

The RATIO button changes the ratio of the output transformer from 1:2 to 1:3 when depressed. This increases the overall gain by 3.5 dB and decreases the output impedance seen by the op amp, causing a pleasant change in tone.

The FILTER button engages a 50 Hz, 12 dB per octave slope high pass filter. This is followed by a discrete three-transistor buffer.

The +48 button provides phantom power to the microphone.

The PAD button engages a -20 dB pad with a characteristic impedance of approximately 2300 ohms.

Inputs and Outputs

The input uses a Jensen mic input transformer to receive a nominal -80 dBu balanced input via the 500 series pinout.

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

Chassis

The Iron Age QP5 is a VPR compliant 500 series module.

Technical Specifications

Gain Range	28 - 80 dB
Maximum Input Level	-3.5 dBu
Maximum Output Level	+29 dBu
Input Impedance	2300 Ohms, transformer balanced
Output Impedance	<75 Ohms, transformer balanced
Frequency Response	+0.1, -0.75 dB 20Hz-20kHz
Actual Measured Noise	-107 dBA typical
THD @ +15 dBu output	0.002% typical
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