

Since 1984

Boulder

2108

Phono Preamplifier

*An introduction to the technology within the
Boulder 2108 Phono Preamplifier.*



Welcome

The 2108 follows in the footsteps of one of the most acclaimed products in the history of audio: Boulder's 2008 Phono Preamp, originally released in 2002. Knowledge gathered over the years since has now culminated in the 2108, the next generation of completely uncompromised phono preamp from Boulder that moves the state of the art forward in every way possible.

Isolated Architecture

Isolation is the key to ultimate analog sound reproduction. The 2108 is a dual-chassis, dual-mono design to best protect the sensitive analog audio signal passing inside. Separation of the audio circuitry from the power supply guarantees that the phono signal is never exposed to transformer noise or hum that would otherwise cause distortion, while separating the left and right channels reduces crosstalk and interference.

The power supply chassis houses four independent power supplies in its casework: analog left, analog right, logic and control, and standby. The three supplies used during operation have their own individual transformers and regulation within the power supply casework to keep power supply noise where it belongs: in the power supply chassis and away from the analog audio signal. The standby supply is simply turned off and entirely disconnected from the phono preamp's circuitry when not in use.

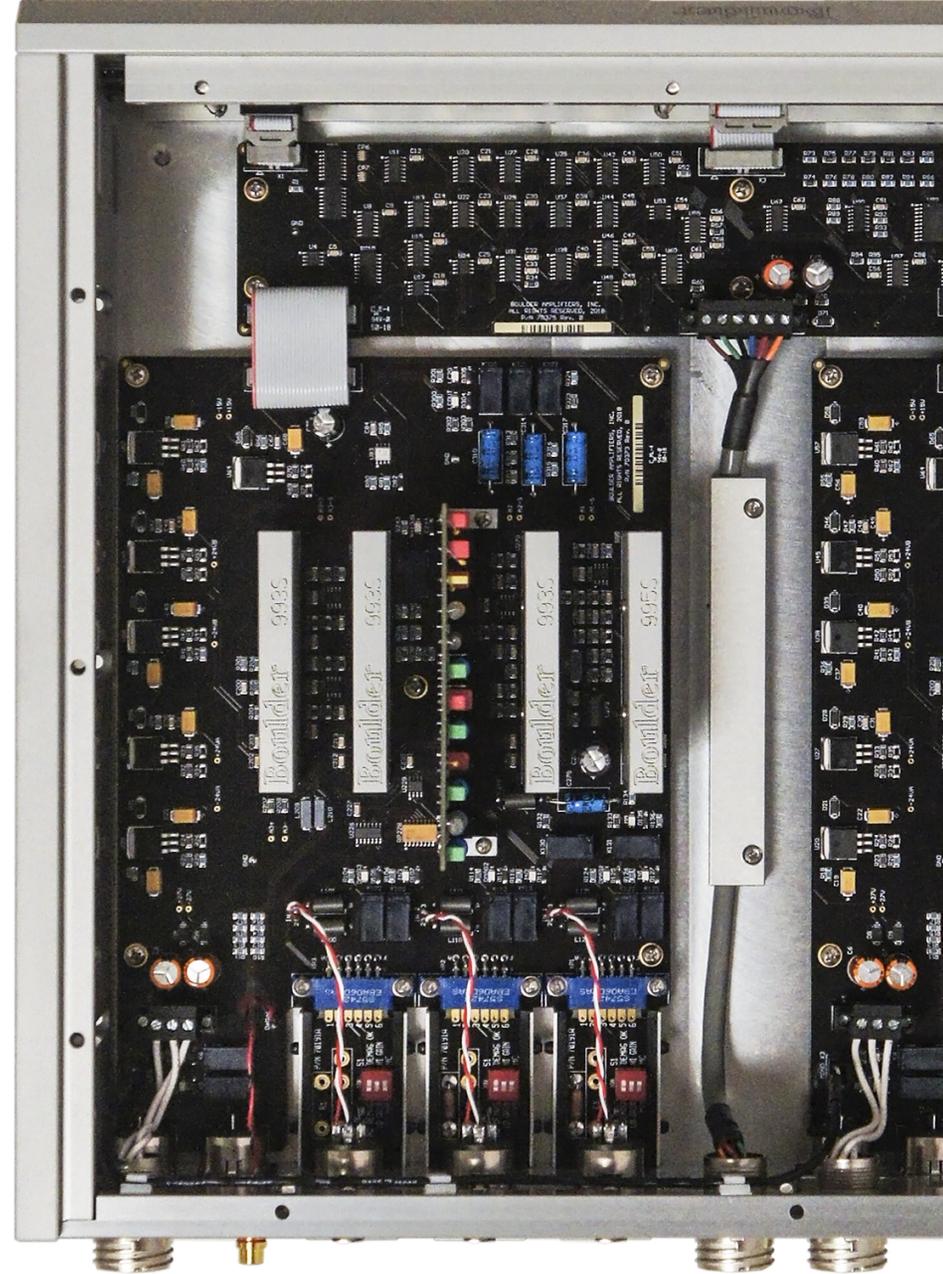
Advanced Circuitry

Left audio, right audio, and logic and control circuit boards take advantage of surface-mount design wherever possible. Surface-mount design (SMD) shortens signal paths, eliminates excess capacitance and lead inductance. What does this mean to you? Faster, more dynamic, more powerful and controlled music, with improved bass response and holographic imaging. SMD also improves long-term reliability and reduces the amount of solder in the overall circuit to absolutely minimize what comes between you and every detail in your record collection.

Controls and Connections

Simple, quiet logic circuits activate every control on the front panel: Standby, Demagnetizer pass-through for specific MC cartridges, Mono to optimize playback of historic mono recordings with stereo cartridges, EQ selection (standard RIAA, as well as EMI, Columbia, and FFRR for proper playback of collectible LPs produced before 1955), Low Cut filters to eliminate noise from warped or damaged records, and Input selection. Logic was chosen as the ideal form of control for the 2108. There is no host computer or microprocessor to interfere with the audio as it makes its way through the phono preamp.

The rear panel hosts connections for three pairs of balanced inputs, two pairs of balanced outputs, demagnetizer inputs, ground (earth), DC power, and each input's customizable Personality Card where loading can be fine tuned to match the





needs of virtually any phono cartridge.

Analog Design

The incredible resolution and dynamic capability of the 2108 results from truly advanced audio design. Each input can be tailored for perfect resistive or capacitive loading, as well as MM or MC selections and variable gain levels. Gain stages are Boulder's proprietary, modular, and discrete 995S. Input and output connections are fully-balanced via 3-pin XLR connectors for optimized signal transfer and the output impedance is specified at 100 ohms for a non-reactive and neutral output capable of driving any preamp's inputs.

Balanced circuitry eliminates noise and maximizes resolution where it's needed most: relative to the tiny analog signal. Because a phono cartridge is actually a balanced source, balanced operation is used throughout to maintain every last bit of clarity.

Cartridge loading is set at 100 ohms for moving coil (MC) cartridges and 47k ohms for moving magnet (MM). Loading is set with a single resistor and only a pair of rigid, low-resistance connections in the signal path. There are no relays or switches in order to minimize what comes between your turntable and the initial gain stage of the 2108.

Phono equalization is accomplished with an active two-stage RIAA filter. This carefully tuned topology takes advantage of 30 years of expertise in building the world's finest phono pre-amplifiers and is executed to ensure

extremely accurate playback EQ.

Separate Power Supply

The 2108's power supply is a massive, isolated supply that enables the unit to reproduce vast dynamic swings. This supply can be made to operate at 100V, 120V, 200V, or 240V.

Transformer hum is most definitely not permitted. In order to eliminate even the slightest hum or noise, the 2108 is carefully designed with a power supply that is completely separate from sensitive audio circuitry.

Mechanical Design

Every piece of metal in the 2108's casework is finely machined from solid blocks of aluminum, giving the phono preamplifier an inert foundation from which to operate. Never does any resonance or vibration make its way to the delicate analog signal passing within.

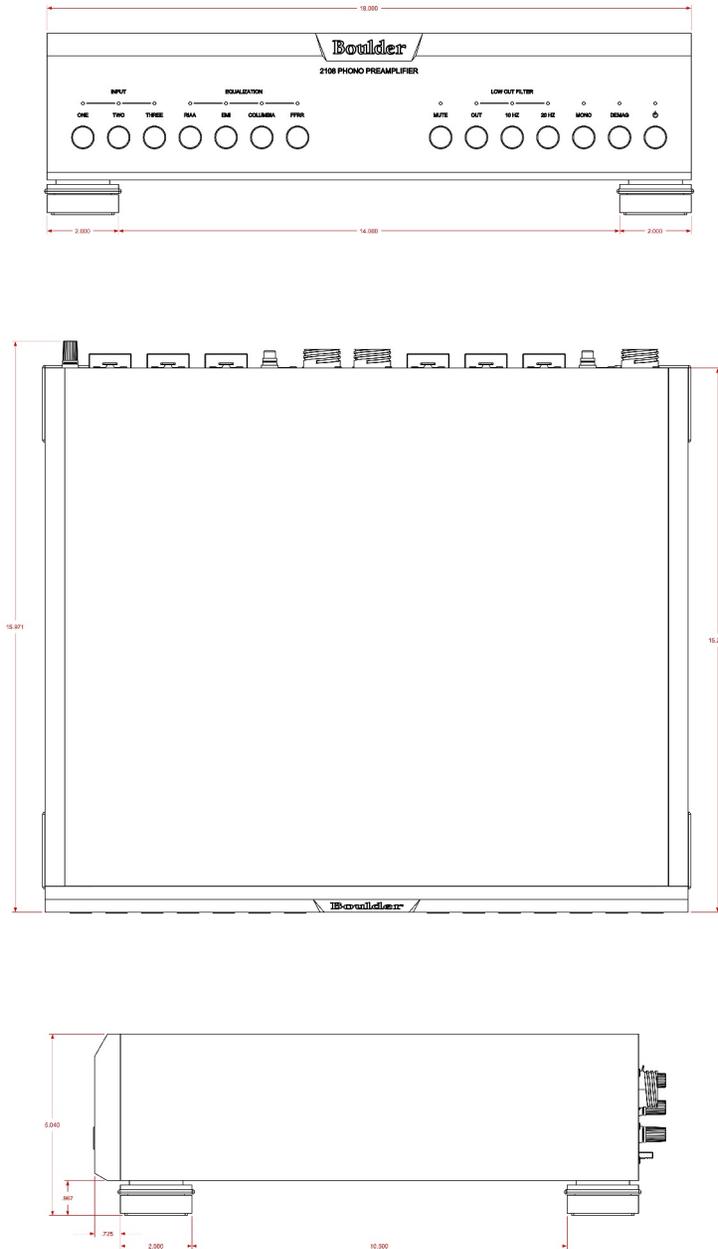
The Truth is in the Listening

In the end it all comes down to what you hear. The soundstage is expansive, vast, and deep. Every image is highly focused. Your records are played back with impact or delicacy, speed or warmth. At no time does the 2108 insert any coloration of its own. What you hear is exactly what the artists intended.

Your record collection contains a brilliant treasure trove of information.

We think it's about time you heard it all.

Dimensions



Technical Specifications

Inputs	3 pairs, via 3-pin XLR
Outputs	2 pairs, via 3-pin XLR
Input Impedance, Maximum	MC: 1000 ohms, MM: 47k ohms
Output Impedance	100 ohms, balanced
1 kHz Gain, RIAA	MC: 70 or 60 dB, MM: 50 or 40 dB
Frequency Response, RIAA	±0.1 dB, 20 Hz to 20 kHz
Distortion, THD	0.005%
Noise (EIN), MC, 20 Hz to 20 kHz	160 uV A-weighted, 275 uV Flat
Crosstalk, L to R or R to L	-100 dB or better, 20 Hz to 20 kHz
Maximum Output Level	28 Vrms
Power Requirements	100, 120, 200, 240 VAC, 50-60Hz
Power Consumption	75W Maximum
Phono Preamp Dimensions	18" W x 15.5" D x 5" H 45.7 cm W x 39.4 cm D x 12.7 cm H
Power Supply Dimensions	18" W x 15.5" D x 4.75" H 45.7 cm W x 39.4 cm D x 10.8 cm H
Phono Preamp Weight	37 lbs. (16.8 kg)
Power Supply Weight	48 lbs. (21.8 kg)
Phono Preamp Shipping Dimensions	24" W x 21" D x 12" H 61 cm W x 53.3 cm D x 30.4 cm H
Power Supply Shipping Dimensions	24" W x 21" D x 12" H 61 cm W x 53.3 cm D x 30.4 cm H
Phono Preamp Shipping Weight	45 lbs. (20.4 kg)
Power Supply Shipping Weight	69.5 lbs. (31.5 kg)

All specifications measured at 120VAC mains power

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