

Since 1984

Boulder

508 Phono Preamplifier

Boulder
508 PHONO PREAMPLIFIER

*An introduction to the technology within the
Boulder 508 Phono Preamplifier.*

Welcome

The 508 Phono Preamplifier is the perfect example of design efficiency: every feature that is not a necessity has been omitted, leaving only pure analog phono preamplification, a direct connection between you, the listener, and the work a dedication of your favorite artists captured in your record collection.

Compact Architecture

The 508 is a single-chassis phono preamplifier designed around the concept of removing every last bit of excess complexity or circuitry. Even the dimensions of the casework were calculated to take advantage of the most efficient use of raw materials in order to reduce discarded metal.

The main circuit board is a small, densely populated, surface-mount design that reduces PCB real estate and allows even the truly balanced input and output sections take up very little space. Surface-mount design also comes with the additional benefits of reducing excess capacitance and eliminating lead inductance for sound reproduction that is true to the actual recording.

The power supply is a small, ultra-efficient design that is installed in its own pocket inside the casework to keep it isolated from the rest of the circuitry and minimize interference with the analog amplification section. This supply is also self-regulating, negating the need for voltage regulators with the additional benefits of reducing noise and heat within the chassis.

Controls and Connections

Because the 508 is by far the least complex product Boulder has ever created, the front panel includes only two controls: a single toggle switch to turn the 508 On or Off, and a Mute button to silence the outputs.

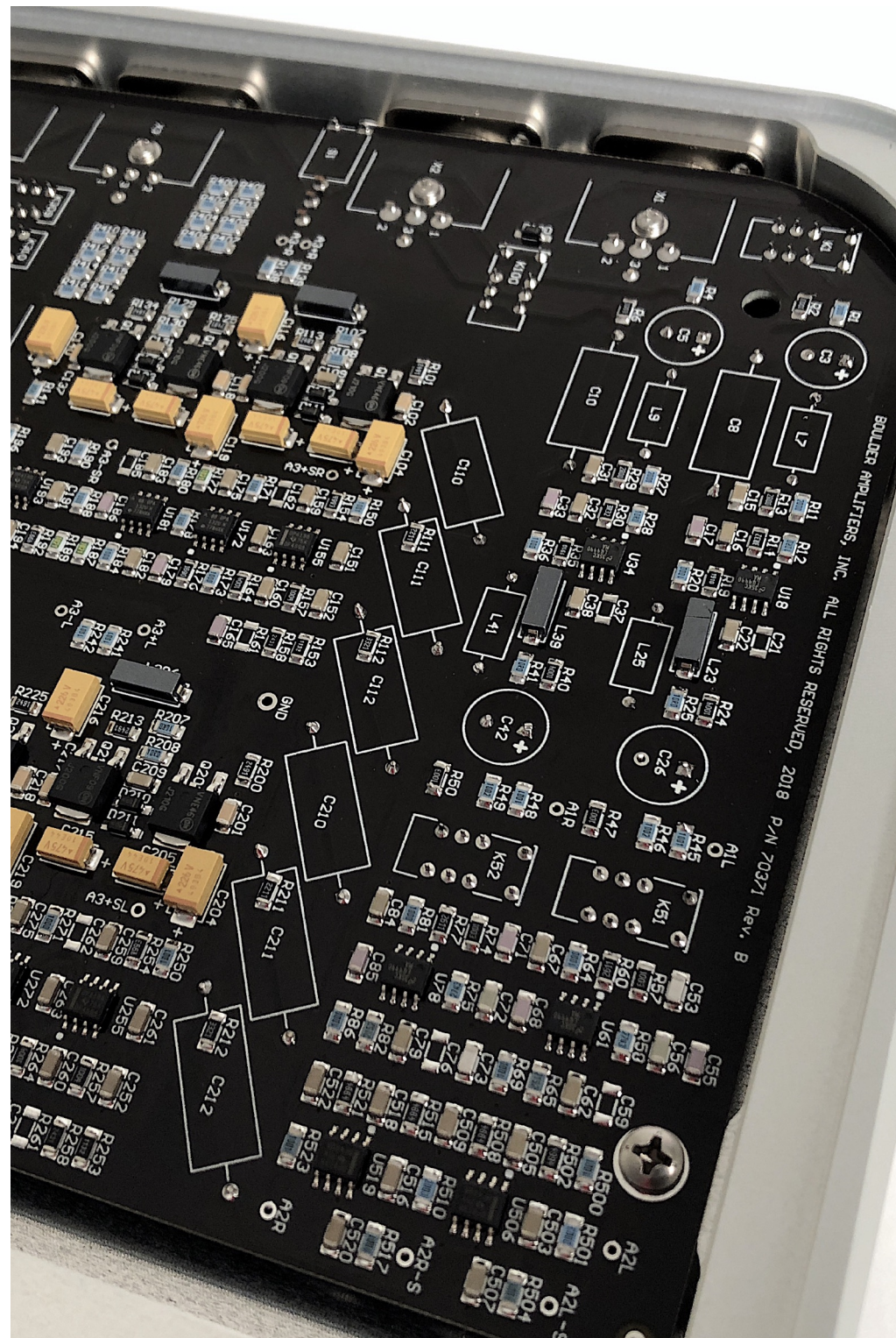
The rear panel hosts the AC power inlet, one pair each of balanced inputs and outputs (both via 3-pin XLR), the MM/MMC switch, and an AC mains fuse.

Analog Design

The 508's simplicity is key to its performance. The direct connection of a single pair of inputs means an unobstructed connection between your turntable and the initial gain stage of the phono preamplifier. There's nothing to get between you and your music: no input switching, no additional circuitry, no wiring, nothing.

Input and output connections are fully-balanced on 3-pin XLR connectors. Output impedance is 100 ohms (balanced) to maintain a non-reactive and neutral output stage capable of driving any preamplifier's inputs.

Balanced circuitry was chosen to reduce noise and maximize resolution where it needs it most: with the tiny analog signal. Despite the fact that a phono cartridge is an inherently balanced design, phono preamplifiers with balanced inputs are still a rarity. By contrast, the 508 features fully-balanced, instrumentation-style inputs.





Cartridge loading is set at 47k ohms for moving magnet (MM) and 100 ohms for moving coil (MC) cartridges. Loading is accomplished via surface-mount resistors with only a pair of tiny solder points in the signal path to minimize the number of connections between your turntable and the initial gain stage of the 508.

Phono equalization is accomplished with an active two-stage RIAA filter. This carefully tuned topology takes advantage of 30 years of expertise in building state-of-the-art phono preamplifiers and executed to ensure extremely accurate playback.

Finally, a built-in 10 Hz high pass filter has been implemented with carefully applied three-pole filtering to eliminate excess low frequency noise caused by warped or damaged records. Once again, the 508 lets nothing get between you and the very essence of your vinyl collection.

508 Power Supply

The 508's power supply is a small, ultra-efficient supply that keeps the unit awake unless the master AC switch is turned off via the front panel. Because of the efficiency of the 508, the phono preamplifier can be left on at all times to avoid any necessary warm up or delays before listening. This supply can be made to operate at 100V, 120V, 200V, or 240V. This supply efficiency allows the 508 to pass even the toughest power consumption regulations.

Transformer hum is not permitted. In

order to eliminate any kind of hum or noise interference, the 508 was carefully designed with a power supply that is separated from sensitive audio circuitry by thick walls within the chassis and is also filtered to maintain absolute isolation.

Mechanical Design

The entirety of the 508's casework is machined from a solid billet of 6061-T6 aluminum on Boulder's own CNC machining centers. A small bracket to secure the front panel switch and button is the only other chassis part in the 508. The casework is then brushed, sanded, bead-blasted and anodized to give the casework Boulder's signature satin finish. Boulder remains one of the last high-end electronics companies in the world to keep every aspect of manufacturing under our own roof.

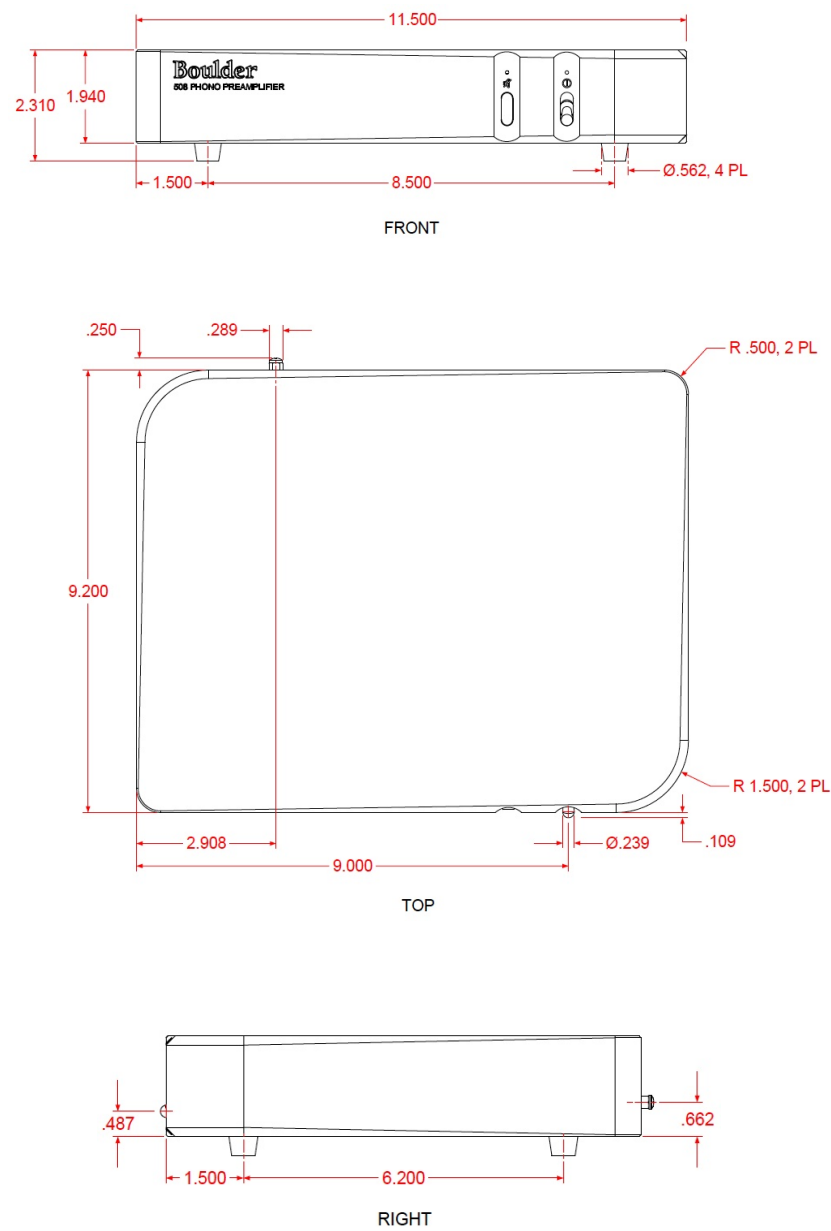
The Best Part: the Sound

Despite its compact design, the 508 sounds supremely dynamic and expansive. The projected soundstage is vast and images are highly focused. Music is presented with incredible resolution and impact. It's detail, low frequency speed, and power are experiences not to be missed.

All of these features make the 508 a muscular and transparent phono preamplifier that punches well above its weight. There's an enormous amount of information captured in the grooves of your record collection.

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

Dimensions



Technical Specifications

Inputs	1 pair, via 3-pin XLR
Outputs	1 pair, via 3-pin XLR
Input Impedance, Maximum	MC: 100 ohms, MM: 47k ohms
Output Impedance	100 ohms, balanced
1 kHz Gain, RIAA	MC: 70 dB, MM: 44 dB
Frequency Response, RIAA	±0.5 dB, 20 Hz to 20 kHz
Distortion, THD	0.01%
Noise (EIN), MC	116 nanovolts flat, 20 Hz to 20 kHz
Maximum Output Level	16 Vrms
Power Requirements	100, 120, 200, 240 VAC, 50-60Hz
Power Consumption	15W Maximum
Phono Preamplifier Dimensions	11.5" W x 9.5" D x 2.3" H 29.2 cm W x 24.1 cm D x 5.8 cm H
Phono Preamplifier Weight	11.5 lbs. (5.2 kg)
Shipping Dimensions	18" W x 20" D x 5" H 45.7 cm W x 51 cm D x 12.7 cm H
Shipping Weight	16 lbs. (7.3 kg)

All specifications measured at 120VAC mains power

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