

Since 1984

Boulder



808 Phono Preamplifier

3/25/2026
Rev. 1.0

P/N:

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About

About Boulder Amplifiers, Inc.

Boulder was founded in 1984 and is the last high-performance audio manufacturer operating in North America to still perform all of its own design, engineering and manufacturing in-house. While this form of production may be more costly than outsourcing, the resulting quality control and reliability of the finished products are never compromised.

In 2016, Boulder moved into a new, purpose-built production facility to increase manufacturing efficiency and offer space for expansion to meet the needs of future growth.



Thank You

Congratulations and thank you for selecting the Boulder 808 Phono Preamplifier for your high-performance sound system. We are certain it will provide you with many years of listening pleasure.

The 808 represents the concerted efforts of numerous Boulder designers, engineers, and technicians working to bring you the best audio playback components in the world. Please take a few moments to read through this instruction manual prior to using your 808. This will help you understand the many functions and capabilities of the phono preamplifier. It will also allow you to maximize the convenience and performance for which it was engineered.

Your Boulder 808 Phono Preamplifier has undergone extensive laboratory tests for safety, functionality and technical excellence. In addition, it has been individually subjected to rigorous listening trials in our sound room utilizing a wide range of musical material. No product ever leaves our factory until we are totally satisfied that it achieves its full potential.

Table of Contents

Getting Started

Introduction	1-1
Audio Features	1-1
Operational Features	1-1
Unpacking and Care	1-2
Before You Start	1-2
How to Clean the Casework	1-3
Placement and Installation of the 808	1-3
Turntable Connection Types	1-4
Connecting a Turntable	1-5
Connecting the Outputs to a Balanced Preamplifier	1-6
Connecting the Outputs to an Unbalanced Preamplifier	1-7
Setup and Loading	1-8
Personality Cards	1-8
Cartridge Loading Adjustment - Resistive	1-9
Cartridge Loading Adjustments - Capacitive	1-12

Operation

Power	2-1
Standby	2-1
Mute	2-2
Lowcut Filter	2-3
Equalization	2-3

Appendix

Technical Specifications	3-1
Weights & Dimensions	3-2
808 Phono Preamplifier Dimension Diagram	3-3
Troubleshooting	3-4
Notes	3-5

Getting Started

Introduction

The 808 Phono Preamplifier embodies decades of development and is directly descended from the legendary 2008 Phono Preamplifier, one of the greatest Phono Preamps ever designed. Here are some of the features that set the 808 apart from the competition:

Audio features:

- Fully-balanced operation from input to output.
- Surface-mount design (SMD) circuitry wherever possible.
- One pair of balanced inputs on XLR connectors.
- Fully-balanced audio path from input to output.
- Customizable loading settings to match any phono-cartridge.

Operational features:

- Compact chassis design.
- Switchable gain for MM (moving magnet) or MC (moving coil) cartridges.
- Casework machined from a solid blocks of aluminum.
- Extremely robust and quiet power supply.
- Ultra-low power consumption.
- Mono mode to optimize mono playback with stereo cartridges.

Getting Started

Unpacking and Care

The 808 Phono Preamplifier features finely finished casework. Please use care when unpacking, lifting, and installing the preamplifier to avoid any damage to the metalwork and furniture. The 808 Phono Preamplifier weighs 10.5 lbs. (4.76 kg).

Be sure to save all packing materials! The 808 is shipped in a foam wrap to protect the phono preamplifier's fine finish. Try not to damage this wrap in the event that the unit must be transported elsewhere in the future.

Before You Start

You should have received a large, heavy box. The pieces included inside the box are:

1. 808 Phono Preamplifier
2. Unbalanced PHRCA phono adaptors
3. AC Mains Power Cable
4. Ground wire
5. Labels for Personality Cards

If any of these pieces are missing or damaged, please contact your authorized Boulder dealer immediately before continuing with the installation.

Getting Started

How to Clean the Casework

If the 808 must be cleaned, use only a soft, lint-free cloth moistened with plain water.

Never use any type of chemical cleaner unless recommended by your dealer or the Boulder factory.

Do not use bleach! Bleach will remove the anodized surface of the casework.

Never use any type of abrasive to clean the casework.

If you have any questions, please contact your authorized Boulder dealer.

Placement and Installation

Your Boulder 808 Phono Preamplifier is designed to reduce the effects that external magnetic fields and radio frequencies (RF) have on its circuitry. While placement is not critical, because of the high gain of the 808, known magnetic fields should be avoided whenever possible. Power transformers in other pieces of nearby equipment should be placed a minimum of 12 inches (30 cm) away.

Because it is heavy, the 808 must be placed on a sturdy, stable surface.

Do not place in an enclosed rack without ventilation. The 808 must have at least 2 inches (5 cm) of airspace around the chassis for proper cooling and airflow.

Be sure to leave access to the AC mains and interconnect cables when installing the phono preamplifier. Depending on how easy it is to access the back panel of the 808, it may be wise to pre-install the power and interconnect cables before placement.

Getting Started

Turntable Connection Types

To get started listening, you only need to connect a turntable to the 808 as you would any other phono preamplifier. Please take note of the following:

The 808 can be connected to many different types of analog turntables and will provide excellent sound quality for each. To fully realize the sonic potential of your 808 Phono Preamplifier, use balanced cable connections with XLR terminations whenever possible. Balanced XLR cables minimize interference from magnetic, hum, and RF sources.

Getting Started

Connecting a Turntable

Because a phono cartridge is an intrinsically balanced source, balanced inputs are provided on the 808. Connect the output cables from your turntable to the **LEFT** and **RIGHT CHANNEL** input connections of the 808.



Please follow the following instructions to avoid picking up hum in the system:

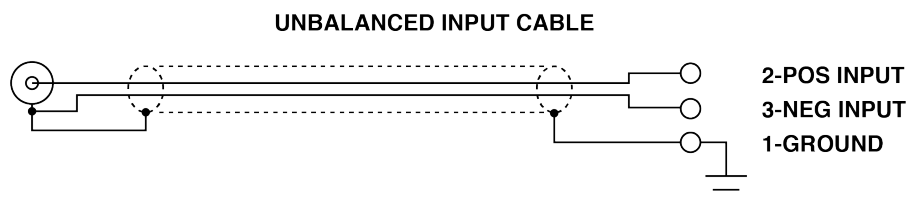
Do not short Pin-1 (chassis/ground) to either Pin-2 or Pin-3 of the XLR connector at any point in the cable, turntable chassis, or tonearm. This will cause hum in the system. Pin-2 and Pin-3 must only be connected directly to the cartridge pins. Proper wiring diagrams are shown on the next page.

Use only a connection from Pin-1 of the turntable's XLR connector to the turntable chassis **OR** the provided ground wire from the 808's rear panel chassis screw terminal to the turntable chassis. Using both may form a ground loop, which will cause hum.

RCA connections can be accommodated. If your turntable does not have XLR connections, one pair of Boulder PHRCA Phono Adaptors is provided. These will convert the 808's inputs to RCA and give acceptable performance. A separate ground wire is also provided.

CAUTION: If your turntable does not have XLR connectors, do not use the Boulder ABL2 input adaptor or any other "standard" RCA phono to XLR adaptors. These are not intended for phono use, as they short Pin-1 to Pin-3 and will cause hum in your system. Only use the Boulder PHRCA Phono Adaptors.

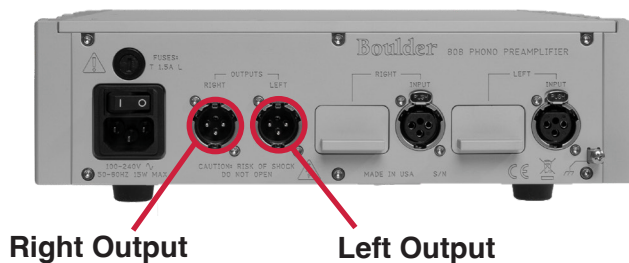
Getting Started



Connecting the Outputs to a Balanced Preamplifier

With the low output impedance of the 808 Phono Preamplifier, distances of more than 50 meters between the 808 and preamplifier are practical.

Connect the **LEFT** and **RIGHT OUTPUT** interconnects from the 808 to your preamplifier. To maintain the best sound quality, Boulder recommends that balanced interconnections always be used.



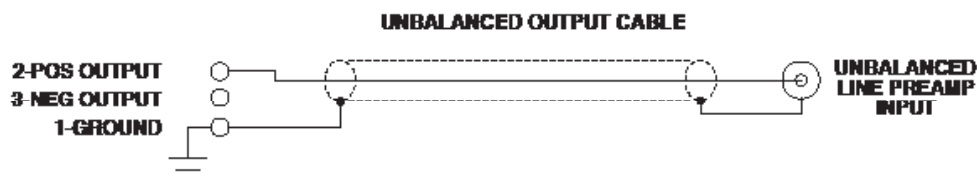
Getting Started

Connecting the Outputs to an Unbalanced Preamplifier

A special cable is required to make this connection. This cable connects Pin-1 to the shield. This adapter also connects Pin-2 to the center pin of the RCA. It leaves the negative output (Pin-3) unconnected.

Connecting the unused output pin (usually Pin-3) to ground will cause excessive ground currents and degrade performance. Use an ohmmeter or continuity checker to determine how your cable is wired.

NOTE: The 808 Phono Preamplifier conforms to the standard of Pin-2 as high or “hot” for all balanced analog inputs and outputs.



Getting Started

Setup and Loading

Personality Cards

The 808 has slots next to the XLR inputs for Personality Cards, one for the left and right channel of the input. These cards have two functions:

1. Selection of the type of cartridge to be used with the input (MC or MM).
2. Adjustment for loading the cartridge to be used with the input.

On each Personality Card there is a DIP switch selector for choosing the cartridge type. In order to switch between MC or MM simply flip this switch to the desired configuration.

WARNING: Always press the Standby button on the front panel to place the 808 in Standby mode before removing or installing any Personality Card! Failure to place the unit in Standby mode may result in very loud pops through the system!

Getting Started

Cartridge Loading Adjustment - Resistive

Set the **Cartridge Type DIP Switch** to either **MC** (Moving Coil) or **MM** (Moving Magnet), depending on the type of cartridge mounted to your turntable. From the factory, this is set to MC.

From the factory Personality Cards for INPUT 1 and INPUT 2 are set to the MC position and the resistive cartridge loading is 100Ω, with a maximum unadjusted load of 1,000Ω (no resistor installed). When the Cartridge Type DIP Switch is set to the MC position, an additional low-noise 24 dB gain stage is inserted at the input for a total of 70 dB of gain.

When the Personality Card DIP Switch is set to the **MM** position and no additional loading resistor is installed, the resistive cartridge loading is 47kΩ. This is the most common setting for moving magnet cartridges. Total gain in the MM position is 44 dB.

For **MC** cartridges the maximum resistive loading is 1,000Ω. This is the value when there is no resistor installed in position **R1** of the Personality Card. This value can be lowered by installing a resistor in position R1. The value for the load when a resistor is installed is calculated by the following: $R1 = 1/(1/R_{DESIRED} - .001)$ or by using the following table.

Desired Cartridge Loading Value	Resistor to Install in Position R1
50 Ohm	53 Ohm
75 Ohm	81 Ohm
100 Ohm	111 Ohm
125 Ohm	143 Ohm
150 Ohm	176 Ohm

Getting Started

Desired Cartridge Loading Value	Resistor to Install in Position R1
175 Ohm	212 Ohm
200 Ohm	250 Ohm
225 Ohm	290 Ohm
250 Ohm	333 Ohm
275 Ohm	379 Ohm
300 Ohm	429 Ohm
325 Ohm	481 Ohm
350 Ohm	538 Ohm
375 Ohm	600 Ohm
400 Ohm	667 Ohm
425 Ohm	739 Ohm
450 Ohm	818 Ohm
475 Ohm	905 Ohm
500 Ohm	1000 Ohm
525 Ohm	1105 Ohm
550 Ohm	1222 Ohm
575 Ohm	1353 Ohm
600 Ohm	1500 Ohm
625 Ohm	1667 Ohm
650 Ohm	1857 Ohm
675 Ohm	2077 Ohm
700 Ohm	2333 Ohm
725 Ohm	2636 Ohm
750 Ohm	3000 Ohm
775 Ohm	3444 Ohm
800 Ohm	4000 Ohm
825 Ohm	4714 Ohm
850 Ohm	5667 Ohm

Getting Started

Desired Cartridge Loading Value	Resistor to Install in Position R1
875 Ohm	7000 Ohm
900 Ohm	9000 Ohm
925 Ohm	12333 Ohm
950 Ohm	19000 Ohm
975 Ohm	39000 Ohm
1000 Ohm	Open (No resistor installed)

For **MM** cartridges, the maximum resistive load is **47kΩ**. This is the value when there is no resistor installed in position **R1** of the Personality Card. This value can be lowered by installing a resistor in position R1. The value for the load when a resistor is installed is calculated by the following: $R1 = 1/(1/R_{\text{DESIRED}} - .0000213)$ or by using the table below:

Desired Cartridge Loading Value	Resistor to Install in Position R1
1000 Ohm	1020 Ohm
5000 Ohm	5620 Ohm
10000 Ohm	12700 Ohm
20000 Ohm	348000 Ohm
47000 Ohm	Open (No resistor installed)

Getting Started

Cartridge Loading Adjustments - Capacitive

The 808's inputs have "parasitic" capacitance of less than 50 pF directly across the cartridge inputs. If desired, additional capacitance can be added on the Personality Card at position **C1**. The selected capacitor value should be 50 pF less than the desired value.

Solder holes are provided for two different sizes of capacitors. There are two pairs of solder holes provided. Each left or right pair is connected together so that it does not matter which pair you use. The capacitor must only be soldered to one of the left and one of the right holes.

All solder joints on the Personality Card have grommets installed to reinforce the solder joint when parts are added or removed. Do not remove these grommets.

NOTE: *While some cartridge manufacturers may recommend additional capacitive loading, we suggest that you do not do so. Additional capacitance lowers the resonant frequency of the capacitor and the cartridge winding inductance, particularly with MM cartridges while the resonance peak remains just as high and will increase distortion.*

Instead, we suggest trying a lower resistor value. The lower the value, the "heavier" the load and the lower the resonance peak (not frequency), which will give better damping to the cartridge.

With low-level MC cartridges there is practically no effect with capacitive loading, as the cartridge output impedance is inherently very low.

Operation

Power

With all of your connections made, you are now ready to listen to your Boulder 808 Phono Preamplifier.

To turn the 808 **ON**, move the **Master AC Power Switch** located on the rear panel to the **ON** position. The 808 will then go into Standby mode.

To bring the 808 out of Standby mode, press the **STANDBY** button on the front panel. The LED above the STANDBY button will illuminate white and the 808 will be powered on.

To turn the 808 **OFF**, move the **Master AC Power Switch** located on the rear panel to the **OFF** position. The LED on the front panel of the phono preamplifier will not be illuminated when the 808 is turned OFF.

Standby

To bring the 808 out of Standby mode, press the **STANDBY** button on the front panel. The LED above the STANDBY button will illuminate white and the 808 will automatically unmute when it is ready for listening.

To place the 808 in Standby mode, press the STANDBY button on the front panel. The LED above the STANDBY button will no longer be illuminated and the 808 will go into power saving mode.

Mono

When played with a stereo cartridge, monaural or “mono” recordings can be enhanced by mixing the left and right channels to create a true monaural audio signal. It is possible to do this with the 808 by putting the unit into MONO mode.

When the MONO button on the front panel of the 808 is pressed, the LED above the MONO button will illuminate amber to indicate that the Mono circuit is active.

2-1

Operation

To return the 808 to stereo operation, press the MONO button on the front panel and the LED will no longer be illuminated.

Mono ON



Mute

The Boulder 808 Phono Preamplifier provides a Mute feature that is turned on by two different methods.

First, the outputs are muted for a short period of time when the 808 is powered on.

Second, the outputs can be temporarily muted at any time for your convenience. To temporarily mute the output, press the front panel **MUTE** button. When the 808 is in Mute mode, the small LED above the Mute button will illuminate amber.

Pressing the **MUTE** button a second time will restore normal output and the LED will not be illuminated.

When the 808 is turned **OFF**, the outputs will be muted.

Mute ON



Operation

Low-Cut Filter

The Boulder 808 Phono Preamplifier uses a 3-pole (18 dB/octave) low cut filter that may be switched on or can be turned off. When the Low Cut circuit is activated, response will be -3 dB at 10 Hz. Operation

Because this filter is fairly steep, its effect is virtually negligible in the audio band. It is recommended that it be kept turned on in order to avoid excessive woofer travel caused by warped or damaged records.

Select the low cut filter by pressing the **Low Cut** button. The indicator above the button will illuminate white.

To completely turn off the filter, press the **Low Cut** button a second time. The low cut filter will be deactivated and the LED indicator will turn off.

WARNING: Due to the low frequency content of some recordings, care should be taken with the volume level when turning the low cut filter ON or OFF as there may be an audible transient or click through the loudspeakers. This effect is normal

Lowcut ON



Equalization

The Boulder 808 Phono Preamplifier provides the standard RIAA record equalization curve. This curve is appropriate for all records produced and manufactured after 1954.

Appendix

Technical Specifications

Balanced Inputs	1 x 3-pin balanced XLR
Balanced Outputs	1 x 3-pin balanced XLR
Maximum Output Level	16 Vrms
Distortion, THD	0.01%
1 kHz Gain, RIAA	MC: 70 dB, MM: 44 dB
Noise (EIN), MC	123 millivolts flat, 20 Hz to 20 kHz
Frequency Response, 20 Hz to 20kHz	RIAA: ± 0.25 dB, 20 Hz to 20 kHz
Crosstalk, L to R or R to L	-90 dB, or better 20 Hz to 20 kHz
Low Cut Filter	-3dB @ 10Hz, 18dB/Octave
Input Impedance	MC: 1000 Ω Maximum, MM: 47k Ω *Resistive and capacitive loading is adjustable on individual Personality Cards.
Output Impedance	100 Ω Balanced
Power Requirements	90-120V / 200-240V, 50 - 60 Hz
Power Consumption	15W Max

All specifications measured at 120 VAC mains Power.

Appendix

Weights and Dimensions

808 Phono Preamplifier Chassis:

12" W x 12" D x 3.63" H
(10.5 lbs.)

30.84 cm W x 30.84 cm D x
9.2 cm H (4.76 kg)

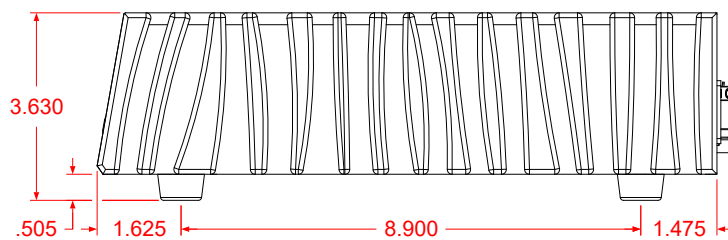
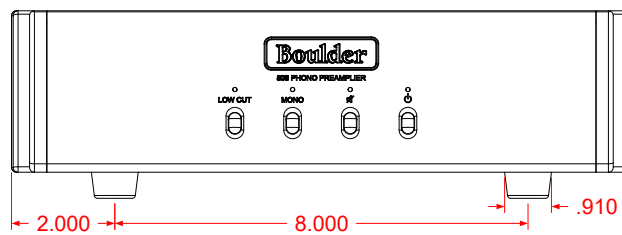
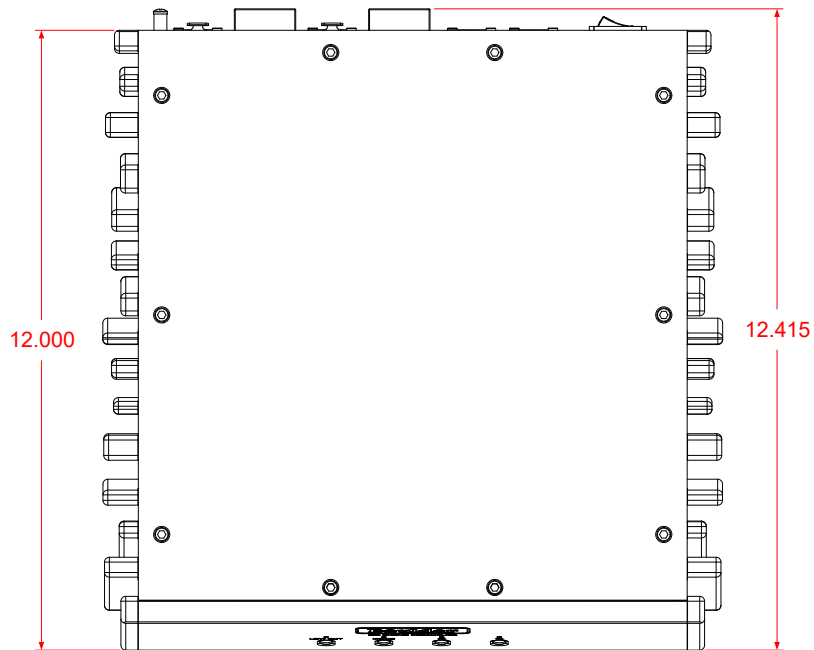
Shipping:

19" W x 19" D x 8" H
(16 lbs.)

48.26 cm W x 48.26 cm D x
20.32 cm H (7.26 kg)

Appendix

808 Phono Preamplifier Dimensions (Inches)



Appendix

Troubleshooting

SYMPTOM	CAUSE	REMEDY
No power indication	Power button has not been pressed	Press Power button
	808 is not plugged in	Connect power cord to AC mains outlet
	808's fuse is blown	Replace 808's fuse
	Home circuit breaker is tripped	Reset home circuit breaker
	Low line voltage	Have line voltage checked
	Defective power cable	Have power cable tested or replaced
	Defective 808	Return 808 to dealer for service
Red LED indicator	808 is Muted	Press Mute button to take 808 out of Mute mode
	Phono preamplifier is booting up	Wait until boot process completes
	Defective power supply	Return 808 to dealer for service
White power indication, but no sound	No signal from one channel of turntable	Check turntable cables and connections
	No signal out to preamplifier	Check cables and connections to preamplifier
Hum Through Loudspeakers	No ground connection	Check or install ground wire
	Duplicate ground connection	Check or install ground wire
	808 or turntable is too close to another component's power supply	Move 808 and/or turntable away from power supply
One Channel Louder than the Other	MC/MM Switches not set equally	Set MC/MM Switches on the Personality cards to same setting
	Cartridge loading is not set equally	Check cartridge loads on Personality Cards.

Age Group	Percentage
18-24	10%
25-34	15%
35-44	20%
45-54	25%
55-64	30%
65-74	35%
75-84	40%
85+	45%

[illegible]

Appendix

Notes:

This image shows a single sheet of white paper with horizontal ruling lines. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.

