

# powerbass®

X T R E M E



**XEQ-9XO**

---

**9-BAND PREMIUM EQUALIZER/ PREAMP**

## **Owners Manual**

*Please read through this manual to familiarize yourself with your new equalizer. Should your PowerBass Xtreme equalizer ever require service, you will need to have the original dated receipt.*



# powerbass®

X T R E M E

## EQUALIZER

Thank you and Congratulations

Thank you for your decision to purchase a PowerBass USA Premium Equalizer with Subwoofer Output, commonly called an EQ. This equalizer is a high fidelity audio control that automatically adjusts the bandwidth or “Q” as you change frequencies. The built-in preamplifier stage raises the signal level of your head unit and increases the dynamic range of your system. All this housed in an attractive ½ DIN chassis.



## PREMIUM EQUALIZER/PREAMP

This installation manual contains valuable information on how to get the most out of your new PowerBass Premium Equalizer. Designed and engineered using the latest in signal processing technology, virtually any car stereo system will benefit from the addition of this unique and versatile product.

### Δ Caution Δ

High powered audio systems in a vehicle are capable of generating higher than "Live Concert" levels of sound pressure. Continued exposure to excessively high volume sound levels will cause hearing loss or damage. Also, operation of a motor vehicle while listening to audio equipment at high volume levels may impair your ability to hear external sounds such as horns, warning signals, or emergency vehicles—thus creating a potential traffic hazard. In the interest of safety, PowerBass USA highly recommends listening at lower volume levels when driving.

## FEATURES

**Stereo Premium Equalization with Variable Subwoofer Control:** Combine these controls for maximum flexibility with a subwoofer crossover to turn your dashboard into a mini-mixing board. This specially designed graphic control gives you ultimate bass response.

**PWM Power Supply:** The PWM (Pulse Width Modulated) power supply is used to provide steady voltage from the vehicle's charging system which can vary under normal driving conditions.

**Master Volume Control:** This one knob allows the user to raise the volume on your source units to their maximum level, eliminating the need to adjust multiple controls.

**Auxiliary Input Selector:** The SOURCE switch on the front of the equalizer allows the user to switch back and forth between two sources. If you are thinking about adding a video system, DVD player, or extra CD player this feature makes hook-up easy and functional.

**Fader Control:** Allows easy balancing between the front and rear speakers when used with separate amplifiers for the front and rear channels.

**Pre-Amp Line Driver:** Boosts the output voltage of your Radio (head unit) and increases it up to 20dB (10-13 volts peak) and then deliver it to the amplifier inputs.

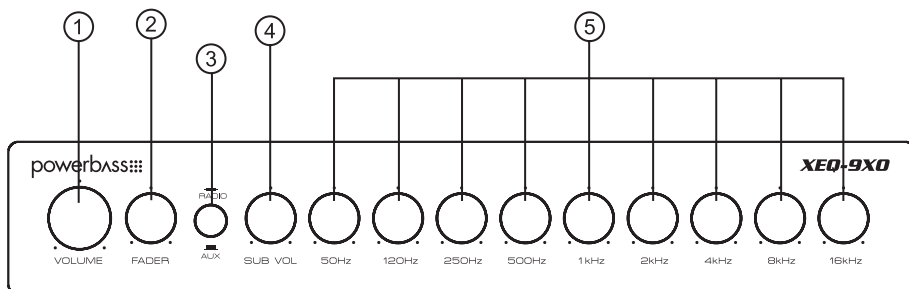
**Retractable Control Knobs:** Allow you to adjust your settings and then "push in" to prevent accidental movement.

**Night Illumination:** When the EQ is powered-on the control knobs are back lit with blue illumination for easier adjustment at night.

## INSTALLATION EXPERIENCE

Installation of your PowerBass mobile equalizer requires detailed knowledge of electronics wiring and proper installation skills. We strongly recommend installation by an authorized PowerBass dealer. This Owners Manual only provides general installation and operation instructions. If you have any reservations about your installation skills, please contact your local PowerBass dealer for assistance.

## FRONT PANEL LAYOUT



### 1. VOLUME Control

This control adjusts the output level of the system.

### 2. FADER Control

This control adjusts the volume between the front and rear amplifier channels as desired. Front and rear fading is now possible even with source units that have only two-channel outputs.

### 3. SOURCE Button

This faceplate switch selects the equalizer input source: RADIO (Head unit) input or a second AUX (Auxiliary) as connected to the rear panel RCA style inputs.

### 4. SUB VOL Control

The Subwoofer Volume control independently adjusts the output level of the woofer to a level you enjoy (requires use of a dedicated woofer or bass amplifier connected to the subwoofer RCA style outputs).

### 5. GRAPHIC EQUALIZER CONTROLS

These nine rotary knobs control the frequency response by “boosting” or “cutting” the 50Hz, 120Hz, 250Hz, 500Hz, 1KHz, 2KHz, 4KHz, 8Hz and 16KHz signals by 18dB. These nine controls can be used to fine tune your system to suit your taste and listening environment.

## PLUS TOP CHASSIS ADJUSTMENT

### SUB FREQ Control (top mounted)

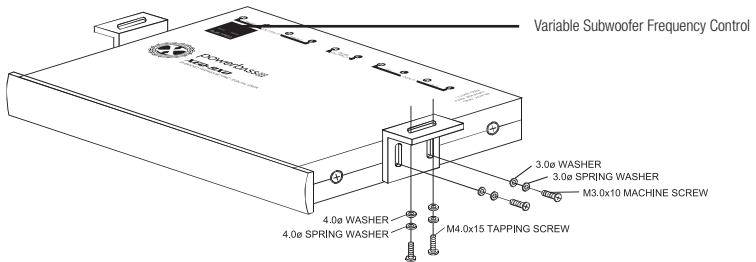
This crossover control is variable between 30Hz to 120Hz and controls the output frequency to the subwoofer.

## INSTALLATION PRECAUTIONS

**NOTE: Proceed only if you are a qualified installer, otherwise; see your authorized Powerbass Dealer to professionally install this amplifier. Always wear protective eyewear when using tools.**

- Turn off all stereo and other electrical devices before you begin.
- Disconnect the negative (-) lead from your vehicles battery.
- Locate all fuel lines, brake lines, oil lines, and electrical cables when planning the install.
- Check the mounting depth to make sure there is sufficient room around the EQ.
- When connecting ground points, make sure all paint is carefully scrapped away from the auto body and contact is made with bare metal.
- Use a utility knife to trim away fabric from hole locations before drilling or cutting.
- When running power cables through sheet metal, be sure to use grommets to properly insulate the metal edges from the wire insulation.
- If possible, use tubing through grommets.

## MOUNTING THE EQUALIZER



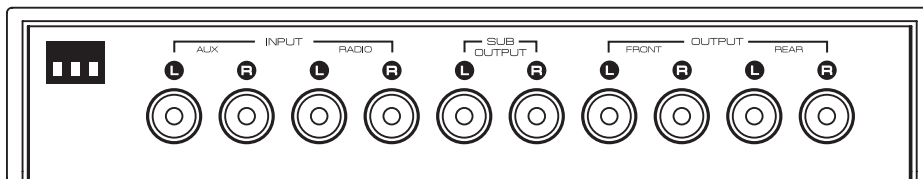
There are two basic mounting options for your PowerBass equalizer. One is to mount the unit under the dash with the supplied brackets as shown below:

The other option is to cut a hole through a suitable panel in the dash for a built-in look. If you choose the in-dash mounting method, be careful to cut the right size hole for the best appearance. Also take care not to let your EQ and/or its cables interfere with other in-dash components.

Some dash kit manufacturers make a special kit for some vehicle models that will allow the installation of the EQ with a DIN sized head unit. Check with your local PowerBass dealer for additional information.

**NOTE: Be sure to adjust the variable subwoofer frequency control prior to mounting the equalizer. Once mounted you will not have access to this electronic crossover setting.**

## REAR PANEL HOOK UP



1. **Power Connections:** Use the convenient Power Plug to wire up the Power, Ground and Remote Turn-on as follows



Power Plug

**+12 VDC:** Insert an 18 gauge or larger wire into the plug for the 12 volt (+) position. The other end should be connected to a good, fused, constant 12V DC positive source (a wired in-line fuse holder complete with appropriate fuse has been included).

**GND:** Use the same gauge wire as you did for the positive connection and run it from the "Ground" connector to a good ground (-) location.

**REM:** Connect a 22 to 18 gauge wire from the Radio's (head unit) remote turn-on lead.

Once you have completed wiring the Power Plug, gently push it into the socket on the rear panel of the PowerBass XEQ-9X0.

2. **Input Jacks:** The EQ has two sets of RCA style input jacks, RADIO and AUX. The radio inputs should get their signals from the main source unit/head unit. The auxiliary inputs should get their inputs from a secondary source such as a cd player, video player, DVD, etc.
3. **Sub Output Jacks:** Next to the inputs are the sub out RCA jacks which should be connected to a dedicated subwoofer or bass amplifier, if applicable.
4. **Output Jacks:** This final set of RCA outputs are the jacks which should be connected to the front and rear amplifiers, if applicable.

## RCA INTERCONNECTS

Run all of the RCA cables from the amplifiers to the location of the PowerBass XEQ-9X0. Make sure all the RCA cables are run on the opposite side of the vehicle from where you ran the power cables to the amplifiers. Attach the RCA cables from the amplifiers to the corresponding Output jacks on the rear panel of the EQ; the Subwoofer Output to the subwoofer amplifier, the Rear Output to the rear amplifier, and the Front Output to the front amplifier.

Next attach the RCA cable from the output of the source to the Radio Input on the rear of the equalizer.

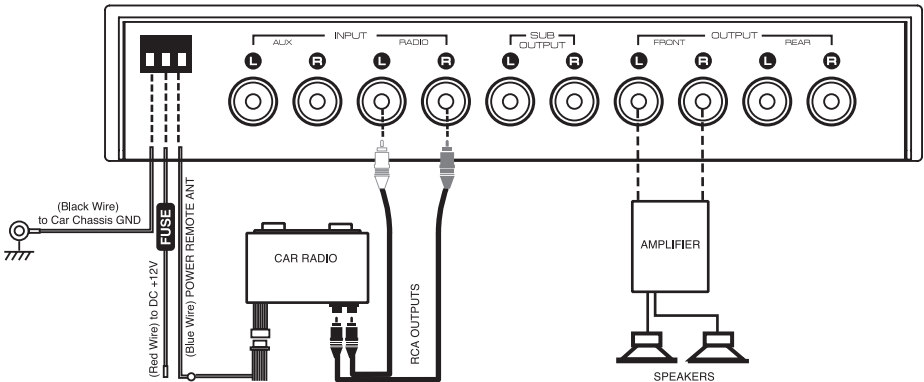
**NOTE: Always take care not to cross power wires with the RCA cables.**

## WIRING CONFIGURATIONS

As you may have already guessed, there are numerous ways to configure your PowerBass EQ into your audio system. Spending a little time planning out your system will yield the most satisfying results. The following diagrams are just a few of the possibilities:

### ONE SOURCE/ONE AMPLIFIER

The PowerBass XEQ-9XO goes in the signal chain between the main head unit (or AUX) and the system's amplifiers. The most basic configuration will be with one source unit and one amplifier:



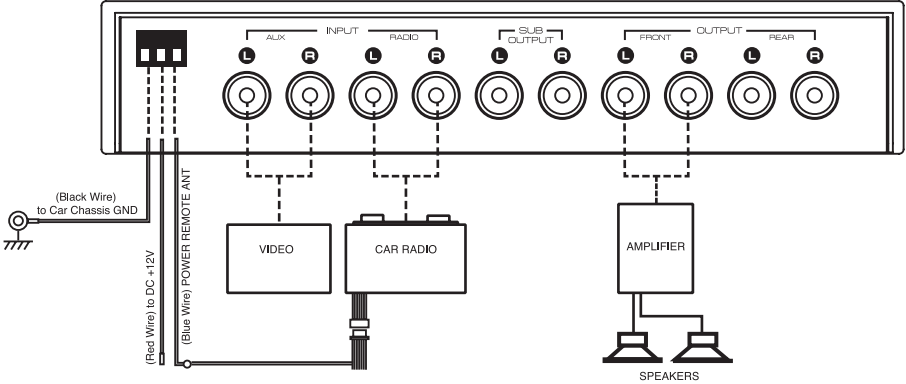
When only one source unit is used it really doesn't matter which set of input jacks are used, but the Radio Input Jacks are the most logical. Make sure the input selector switch on the XEQ-9XO front panel is in the correct position. Likewise, if only one set of RCA cables are run to your amplifier(s), make sure the Fader control is turned to the direction that gives you output to the jacks being used (clockwise for rear, counter-clockwise for front).

**NOTE: If you are using a source unit that does not have RCA output (low level) jacks, a optional Line Level (High/Low) Converter must be connected between the speaker output (high level) leads and the XEQ-9XOA. Direct connection of high level (speaker) outputs to the XEQ-9XOA will damage the source unit.**



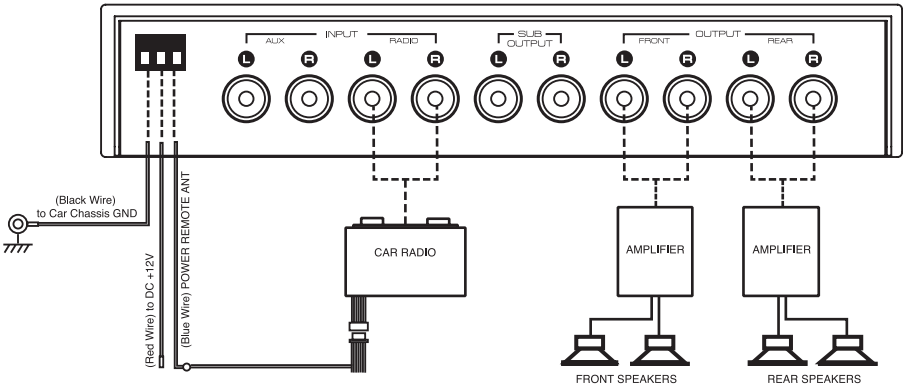
## TWO SOURCE UNITS/ONE AMPLIFIER

Your XEQ-9X0 has two separate inputs marked CD and AUX. The source units can be just about any kind of units normally found in a car stereo system; video, video game, mp3 player, portable CD, factory radio or aftermarket radios with or without cassette or CD. This allows the use of two source units in a system. The diagram below shows the correct wiring configuration when using two source units and one amplifier:



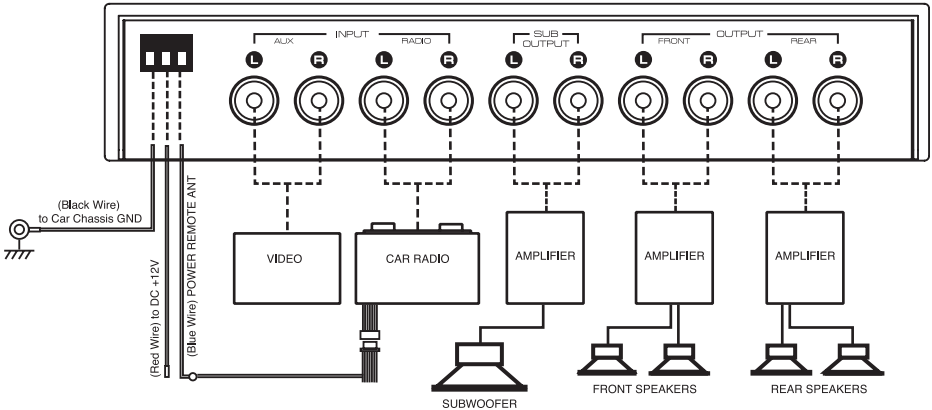
## USING FRONT AND REAR OUTPUTS

When used in systems with separate amplifier channels for the front and rear speakers, run two sets of RCA cables from the XEQ-9X0 to the amplifiers. The following wiring configuration will allow for the use of the built-in fader:



## USING FRONT, REAR, AND SUB OUTPUTS

If you are using a dedicated subwoofer (bass) amplifier run RCA cables to that amplifier as shown (this will allow use of the Subwoofer Volume control):



## TURNING ON THE POWER

The XEQ-9X0 has internal ON/OFF circuitry which responds to turning ON or OFF the head unit (radio) of your car audio system. This requires that your head unit have a remote turn on lead available on the rear panel (which most aftermarket radios have).

With this convenient remote turn-on/off feature, you never have to worry about turning off the power to the equalizer when you shut off the audio system.

## EQUALIZATION ADJUSTMENT

There are no strict rules to adhere to when setting the main equalizer controls. Common sense says to use your PowerBass EQ to make your system sound its best. However, don't try to push your system too hard by overdriving the amplifiers and speakers resulting in damage to some of the components. (see page 11)

## EQUALIZER BAND RANGES

Each knob is essentially a tone control dedicated to a specific part of the audio spectrum from 50Hz to 16,000Hz. They can help your speakers match the environment of your vehicles interior. Start with all nine knobs in the 12 o'clock position, listen to a variety of musical passages. By rotating each of the knobs it will become apparent which knob affects which part of the audio spectrum.

Each center frequency receives 18db of boost and cut--rotating counter clock wise gives you the minimum while clockwise rotation provides the maximum. When it comes to music, everyone has their own particular taste. The following equalization guidelines should help you achieve the superior sound you want.

**SUB BASS (50Hz):** Use this control sparingly since it can produce low bass punch but may force the speakers to reproduce sounds beyond their capability.

**MID BASS (120Hz and 250Hz):** Controls frequencies above sub bass and below the midrange.

**LOWER MIDRANGE (500Hz and 1kHz):** This range is responsible to musical instruments, vocals and midrange percussion.

**UPPER MIDRANGE (2kHz and 4kHz):** Tailors the female vocals.

**TREBLE (8kHz and 16kHz):** Considered the upper high range frequencies



**INSTALLATION NOTES**

**Model Number** \_\_\_\_\_

**Serial Number** \_\_\_\_\_

**Date Purchased** \_\_\_\_\_

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

## TROUBLESHOOTING TIPS

Problem	Solution
<b>No Sound</b>	<ol style="list-style-type: none"><li>1. Check "Power" and remote turn-on for the proper voltage.</li><li>2. Center the Fader Control</li><li>3. Check the Ground connections</li><li>4. Push the "Source" button</li></ol>
<b>Hiss</b>	<ol style="list-style-type: none"><li>1. Turn down the amplifier gains</li><li>2. Adjust the Source unit output</li><li>3. Check for kinked or faulty RCA interconnect cables</li></ol>
<b>Distorting Speakers</b>	<ol style="list-style-type: none"><li>1. Adjust the equalization levels</li><li>2. Lower the volume of the Source unit</li><li>3. See your Dealer</li></ol>

## SPECIFICATIONS

Frequency Response: 20Hz-40,000Hz

Frequency EQ Center: 50Hz, 120Hz, 250Hz, 500Hz, 1kHz, 2kHz, 4kHz, 8kHz and 16kHz

Total Harmonic Distortion (THD): 0.02%

Signal to Noise Ratio: >101dB

Inputs: switchable, 2-source (2 rear panel), 2-channel

Equalization Boost/Cut: -/+ 18dB

Variable Subwoofer Frequency Crossover: 30Hz ~ 120Hz

Channel Separation: 85dB

Maximum Output Voltage: 10Vrms @ 0.1%THD

Power Supply: 11-15V DC negative ground

Fuse: 1Amp (AGC type included)

Dimensions: Chassis 7"W x 1.0"H x 4"D (178mm x 25.4mm x 102mm)

Mounting Depth: 4.625"D (117mm)

**(Due to continuing improvement, features and specifications are subject to change without notice)**

**This manual is the exclusive property of PowerBass USA, Inc. Any reproduction of this manual, or use other than its intentions is strictly prohibited without the express consent of PowerBass USA, Inc. ©Copyright 2013 PowerBass USA, Inc.**

# **POWERBASS ELECTRONICS LIMITED WARRANTY POLICY**

PowerBass USA, Inc. offers limited warranty on PowerBass products under normal use on the following terms:

**PowerBass Xtreme Electronics are to be free of defects in material and workmanship for a period of one (1) year.**

This warranty applies only to PowerBass products sold to consumers by Authorized PowerBass Dealers in the United States of America. Products purchased by consumers from a PowerBass dealer in another country are covered only by that country's Distributor and not by PowerBass USA.

This warranty covers only the original purchaser of PowerBass product. In order to receive service, the purchaser must provide PowerBass with the receipt stating the consumer name, dealer, product and date of purchase.

Products found to be defective during the warranty period will be repaired or replaced (with a product deemed to be equivalent) at PowerBass's discretion and will not be liable for incidental or consequential damages. PowerBass will not warranty this product under the following situations:

- **Electronics received with apparent rust or corrosion**
- **Any evidence of liquid damage or exposure to excessive heat**
- **Attempted repairs or alterations of any nature**
- **Product that has not been installed according to this owners manual**

Any implied warranties including warranties of fitness for use and merchantability are limited in duration to the period of the express warranty set forth above. Some states do not allow limitations on the length of an implied warranty, so this limitation may not apply. No person is authorized to assume for PowerBass any other liability in connection with the sale of this product.

**Please call (909) 923-3868 for PowerBass Customer Service.** You must obtain an RA# (Return Authorization Number) to return any product to PowerBass. The RA number must be prominently marked on the outside of the shipping carton or the delivery will be refused. Please pack your return carefully; we are not responsible for items damaged in shipping. Return the defective product along with a copy of the original dated retail sales receipt, plus \$12.00 for handling and diagnostic evaluation to:

**PowerBass USA, Inc.,  
Attn: Returns (RA# \_\_\_\_\_)  
2133 S. Green Privado, Ontario, CA 91761**

Residents of HI, AK and US territories will be charged for return shipping. All inquires regarding service and warranty should be sent to the above address.

**Removed or altered serial numbers will void this warranty**



PowerBass Xtreme – A division of PowerBass USA, Inc.

2133 S. Green Privado, Ontario, CA 91761

Tel. (909) 923-3868 – Fax (909) 923-8048

**[www.powerbassusa.com](http://www.powerbassusa.com)**