

powerbass®

A u t o S o u n d



ABA-1

AUTOSOUND BASS ACCELERATOR

User's Manual

Please read through this manual to familiarize yourself with your new signal processor. Should your PowerBass AutoSound bass accelerator ever require service, you will need to have the original dated receipt.



Thank you and Congratulations

Thank you for your decision to purchase a PowerBass ABA-1 Bass Accelerator signal processor. The ABA-1 is a bass restoration unit that allows you to electronically shape low frequency bands in a stereophonic system. Your PowerBass ABA-1 has been designed and engineered using the latest in signal processing technology and will afford you many years of listening pleasure.



BASS ACCELERATOR

This installation manual contains valuable information on how to get the most out of your new PowerBass ABA-1 Bass Accelerator. Virtually any car stereo system will benefit from the addition of this unique and versatile product.

To learn more about PowerBass Autosound, please visit us on the World Wide Web at
<http://www.powerbassusa.com>

Δ Warning Δ

Continuous exposure to sound pressure levels in excess of 100 dB can cause permanent hearing loss. PowerBass Autosound Speakers are capable of producing sound pressure levels well over 170 dB. Please observe all local sound ordinances while listening to your PowerBass Autosound system. PowerBass USA, Inc. accepts no liability for hearing loss, bodily injury, or property damage due to the result of use or misuse of this product.

FEATURES

Bass Driver: Contains a proprietary Bass Driver circuit that accurately recreates and injects low frequency information back into the signal path.

Bass Equalization Circuit: This unique equalization circuit contours restored bass to your speaker system.

Decibel Level Meter: The three (3) L.E.D. indicators flash when the bass equalization circuit is activated and SPL (Sound Pressure Level) is increased.

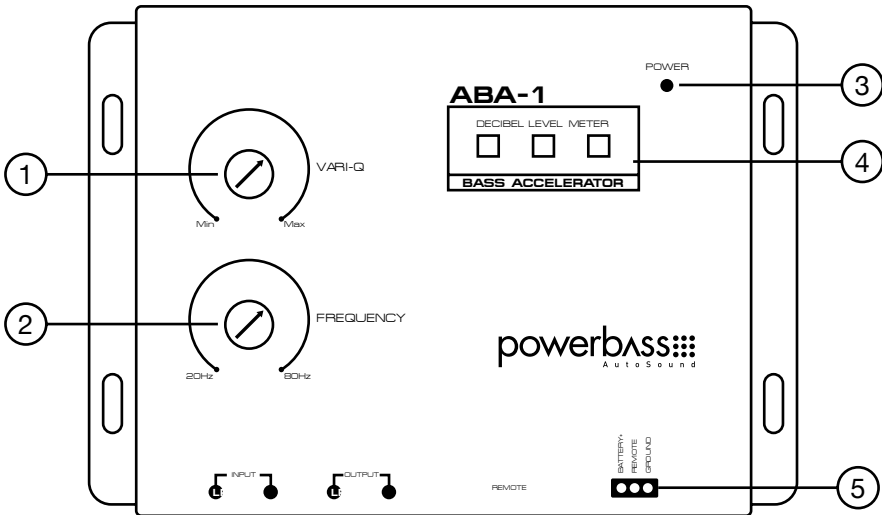
Dash Mount Remote Control: This is a wired level control that allows the user to adjust the amount of bass from the driver's seat.

INTRODUCTION

The Bass Accelerator is a bass restoration signal processor with a remote gain control. Think of it as an electronic subwoofer turbo-charger for your system! The Bass Accelerator identifies and restores the low frequencies mixed down or filtered out during the normal recording process.

Since the acoustics and speaker placements of each vehicle are different, the Bass Accelerator is equipped with a set of frequency and bandwidth (Q) controls to fine tune and compensate for possible bass deficiencies. For hands on control of the amount of bass restoration, a dash mount wired remote gain control is included.

CONTROL PANEL LAYOUT



1. VARI Q Control

Fine tunes the bandwidth of the frequencies being amplified.

2. FREQUENCY Control

Selects the center frequency for the bass restoration effect.

3. POWER On L.E.D.

This control is used to match the input sensitivity of the amplifier to the particular source unit that you are using up to 4 volts.

4. LEVEL METER

A bank of three clear L.E.D.'s that glow on and off. The brightness intensifies as the amount of bass restoration increases. Should the lights no longer blink, clipping is taking place that could harm the speakers, the amplifier or both.

5. POWER PLUG

Provides power to the processor (follow POWER CONNECTION on page 7).

INSTALLATION EXPERIENCE

Installation of PowerBass mobile sound equipment requires detailed knowledge of electronics wiring and proper speaker impedance. We strongly recommend installation by an authorized PowerBass dealer. This Owner's 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.

PREPARING FOR INSTALLATION

NOTE: The tools listed below may be required for basic installation

- An electric drill with bits
- Philips head and standard screwdrivers
- Wire strippers
- Crimping tool
- VOM (electronic volt ohm meter)
- Heat shrink tubing and heat gun
- Soldering iron

MOUNTING THE PROCESSOR

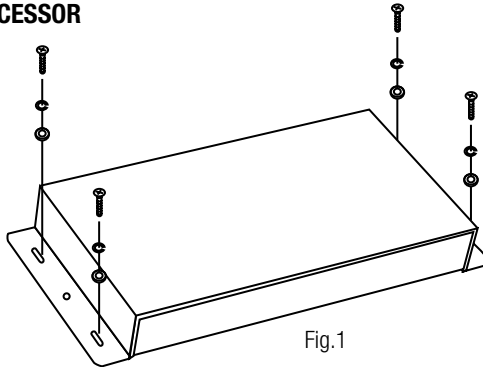


Fig.1

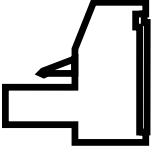
To keep your PowerBass Bass Accelerator running at top performance, choosing the proper location is of utmost importance. The processor should also be protected from exposure to moisture and direct sunlight.

The best place to mount your processor is a location which will allow access to the inputs and other variable controls. Be sure that the power and signal cable connections can enter and leave the processor in a straight line to avoid the risk of kinked wires causing malfunction.

You may use the processor as a template and mark the four screw locations with a felt tip pen. Use caution to make sure there are no objects behind the installation surface that may become damaged during drilling. (Fig. 1)

POWER CONNECTION

Power Connections: Use the convenient Power Plug (fig.2) to wire up the Power, Ground and Remote Turn-on as follows:



Power Plug

BATTERY+: 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.

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

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

Once you have completed wiring the Power Plug, gently push it into the socket on the side panel of the PowerBass ABA-1.

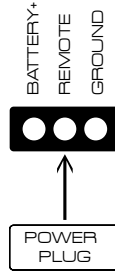


Fig.2

RCA INTERCONNECTS

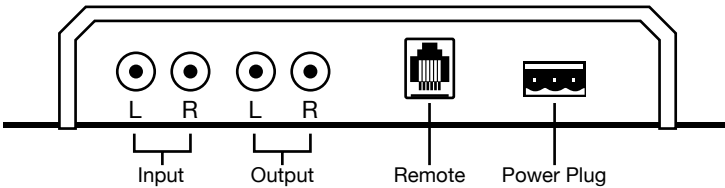


Fig.3

Choose the correct length and style of RCA interconnects for your needs (not included). Run the RCA cables from the bass amplifier to the location of the PowerBass ABA-1. Make sure all the RCA cables are run on the opposite side of the vehicle from where you ran the power cables to the amplifier(s). Hiss, engine noise, and fan noise can easily be picked up through the RCA cables if run incorrectly.

Attach the RCA cable from the bass amplifier to the OUTPUT jacks on the side panel of the processor.

Next attach the RCA cable from the output on the source unit to the processor's INPUT jacks.

NOTE: For signal connection, the output RCA connectors should be connected to the next component before the ABA-1, such as a crossover or equalizer and then the amplifier (see Fig. 4)

SIDE PANEL HOOK UP

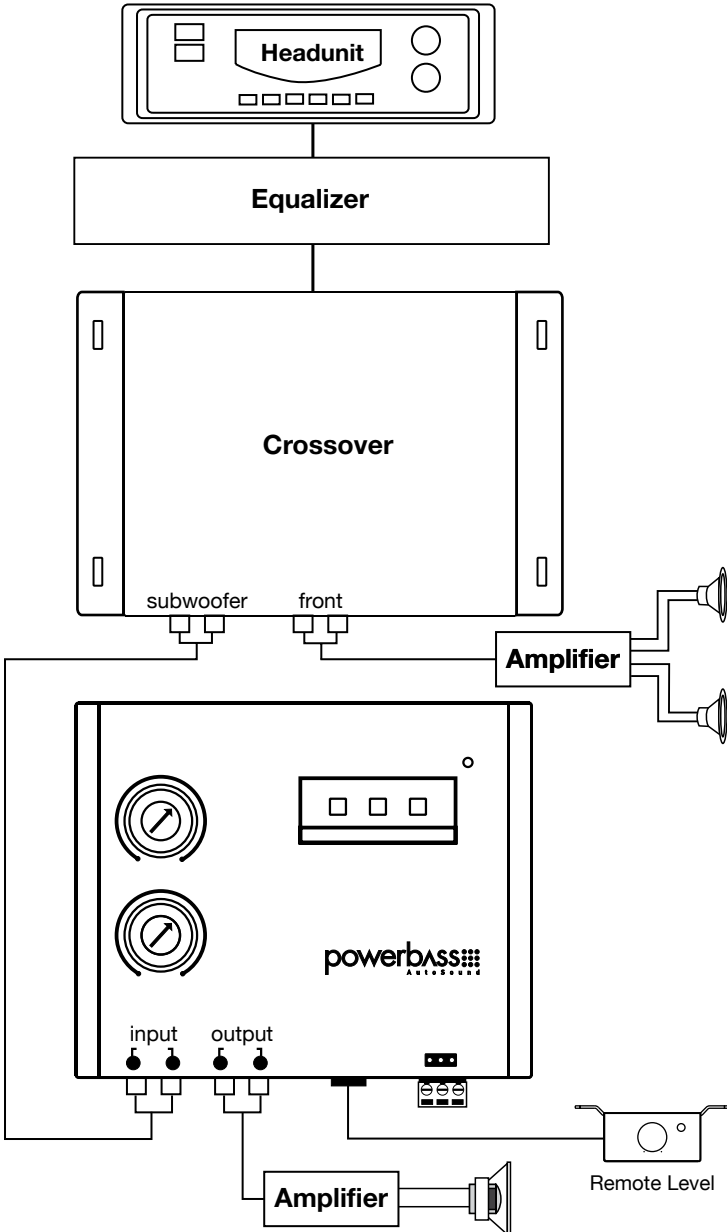


Fig.4

VARIABLE CONTROLS

These two adjustments control the “Bass Restoration” functions of the unit. The FREQUENCY control allows you to pick the center frequency that you want the Bass Accelerator circuit to maximize. The VARI Q control adjusts how wide of a frequency range the restoration will effect.

ADJUSTING THE BASS ACCELERATOR

The Bass Accelerator provides variable enhancement of the bass frequencies. The level of peak boost varies from 0 to +12dB. The frequency that peak boost occurs is adjustable from 20Hz to 80 Hz. The Vari Q settings can be adjusted from MIN to MAX. When adjusting the Q, turning the control to MAX will boost a wide range of frequencies and is useful for general sound quality enhancement. Setting the Q to MIN will boost a narrow range of frequencies and can be used to tune a subwoofer system for maximum output. Rotating the VARI Q between MIN and MAX will provide you with a linear progression of frequency boost.

TUNING THE BASS ACCELERATOR

Before you begin, be sure that your loudness setting is turned OFF and the bass boost setting you your amplifier is turned OFF. The ABA-1 will replace these settings. Leaving these setting on will cause audible distortion and lead to damage or destruction of your subwoofer and amplifier.

The Bass Accelerator VARI Q adjustment should be set to the MIN position. The FREQUENCY control should be set to approximately one octave below the subwoofers resonate frequency. In vented enclosures, the roll off of the system is quite steep below the tuning frequency (typically 24dB/octave). In this case, the Bass Accelerator should be set to the MAX position.

SPECIFICATIONS

ABA-1 BASS ACCELERATOR

Frequency Response: 10Hz - 100Hz

S/N: >100dB

THD: 0.003%

Input Impedance: 10K ohm

PWM Power Supply: 10 – 16V DC, negative ground

Power Draw: 150mA

Recommended Fuse: 1 Amp

Dimensions: 1.212" (H) x 7.477" (W) x 5.178" (D)

31mm (H) x 190mm (W) x 132mm (D)

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POWERBASS AUTOSOUND LIMITED WARRANTY POLICY

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

PowerBass Autosound 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) 993-5399 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 \$9.00 for handling and diagnostic evaluation to:

**PowerBass USA, Inc.,
Attn: Returns (RA# _____)
13936 Mountain Avenue, Chino, CA 91710**

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 Autosound – A division of PowerBass USA, Inc.

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