



4XL-80-94 MIDBASS

Application Guide



Thank you and Congratulations

Congratulations on your decision to purchase a Powerbass Xtreme™ 4XL Competition Component loud-speaker. This series offers incredible value and performance. By incorporating the highest quality parts and state-of-the-art materials, these speakers display the ultimate balance between high fidelity, extreme performance and long-lasting reliability.



At PowerBass USA, Inc. we are confident you will have many years of outstanding enjoyment from this great SPEAKER investment. For maximum performance we recommend that you have your new PowerBass Xtreme product installed by an Authorized PowerBass Xtreme Dealer. Doing so will also automatically extend your warranty to a full THREE-YEAR Period.

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

⚠ Warning ⚠

Continuous exposure to sound pressure levels in excess of 100 dB can cause permanent hearing loss. PowerBass Xtreme Speakers are capable of producing sound pressure levels well over 170 dB. Please observe all local sound ordinances while listening to your PowerBass Xtreme 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. property damage due to the result of use or misuse of this product.

FEATURES

Infinite Baffle Mid Bass Performance: Installs on any flat panel without the need for an enclosure.

Shallow Mounting Depth: At less than 3.5 inches deep, this speaker is perfect for newer vehicles with large but narrow door panels.

Spun Aluminum Phase Plug: Bullet design reduces inherent phase cancellations that occur between the dust cap and the speaker cone improving frequency response while at the same time adding depth and clarity to the sound stage.

Treated Cloth Accordion Surround: Increases efficiency and reduces cone flexure at high power.

KSV High Temperature 4-ohm Voice Coil: Specially designed Kapton® high temperature voice coil formers ensure high power handling and precise linear excursion while maximizing thermal heat dissipation.

Chrome Push Input Terminals: These high strength compression loaded speaker terminals insure maximum current and power transfer.

The 4XL-80-94 is a Mid Bass driver designed for infinite baffle applications. It is not a subwoofer and should not be used to reproduce frequencies below 90Hz.

WIRING GUIDELINES

Your PowerBass Xtreme 4XL Mid Bass driver uses a single 4-ohm voice coil. It is important to know the limits of your amplifier to optimize its performance. You can vary the impedance by altering the wiring configurations: Series, Parallel, or Series-Parallel. Choose the wiring diagram below that corresponds to the number of speakers in your system and the impedance stability of your amplifier.

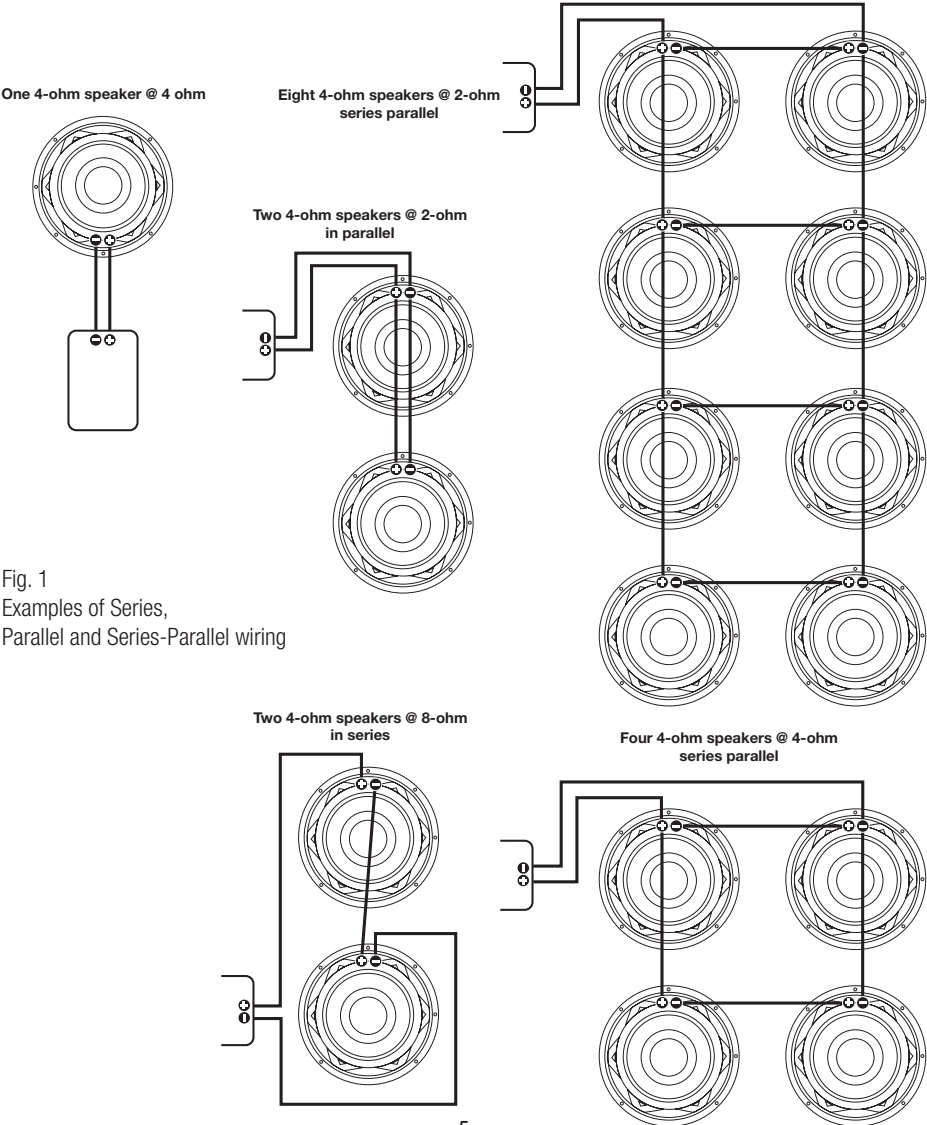


Fig. 1
Examples of Series,
Parallel and Series-Parallel wiring

INSTALLATION EXPERIENCE

Installation of PowerBass Xtreme speakers requires experience with a variety of mechanical procedures including enclosure construction. This manual only provides general installation and operation instructions. If you have any reservations about your installation skills, please contact your local Authorized PowerBass Xtreme dealer for assistance.

CHOOSING SPEAKER MOUNTING LOCATIONS

Choosing the correct speaker mounting location will have the greatest effect of the sound quality of the system. There are many different considerations needed when choosing the location(s) that best meet your needs. The locations must be large enough for the speakers to fit. Care is needed to ensure that the desired location will not affect either the mechanical or electrical operation of the vehicle.

WARNING! The use of silicone rubber to seal in a speaker will void the Warranty! If any sealing is needed in addition to the speaker's gasket, use caulking cord or vinyl weather strip.

PREPARING FOR INSTALLATION

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

- An electric drill with bits
- Saber, circular and jig saw
- Phillips-head and standard screwdrivers
- Wire strippers
- Crimping tool and needle-nose pliers
- Silicone sealant (for enclosures), closed cell weather-stripping (for the speakers)

INSTALLATION PRECAUTIONS

NOTE: Proceed only if you are a qualified installer otherwise; let your dealer do it.

- Always wear protective eyewear when using tools.
- Turn off all stereo and other electrical devices before you begin.
- Disconnect the (-) negative lead from your vehicle's battery.
- Keep the speakers in the package until final installation, and always rest it with the cone facing up. Never use force when installing a speaker.
- Locate all fuel lines, brake lines, oil lines, and electrical cables when planing your installation.

- Check to see if there is enough clearance behind the mounting surface before drilling holes or installing screws for proper speaker ventilation.
- Also make sure there's enough front clearance for speaker cone excursion. Failure to do this could cause the cone to vibrate against any obstructing object.
- Use a utility knife to trim away fabric from the speaker mounting hole location before drilling. It is hard to get a good seal if you have both the carpet & subwoofer gasket between the speaker and the enclosure.
- When running speaker wires through sheet metal, be sure to use grommets to properly insulate the wires from metal edges.

DOOR MOUNTING

When checking for possible speaker locations in the doors, check the operation of the window and all assemblies. There is also a stabilizer stop bar in between the door and the door jam. This bar prevents the door from opening too far.

REAR DECK MOUNTING

In rear deck installations, check the operation of the trunk suspension springs or tension bars. These tension bars move in the opening and closing of the trunk. You cannot be too cautious during this part of the installation. In addition do not locate the speakers too close to the back of the rear deck. Installing the far screws may not be possible without removing the rear window.

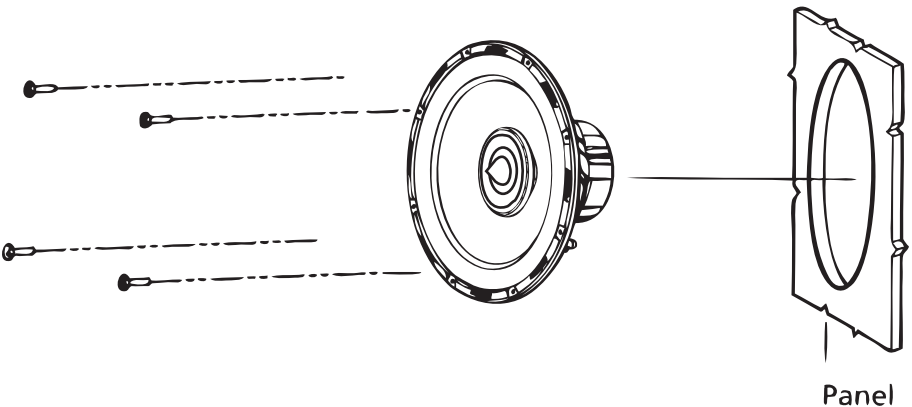


Fig. 2 Mounting Surface must be flat

INSTALLING THE MID BASS DRIVER

1. Determine where the speaker will be mounted. Make sure there is a flat area large enough for the speaker to fit properly. An uneven mounting surface can damage the driver.
2. Check to make sure the space you have selected for the speaker will not interfere with the operation of the vehicle.
3. Using the supplied template, mark the hole with a pen.
4. Cut the hole for the speaker. A hole can be cut either with a pair of metal tin snips, a saber or jig saw.
5. Run speaker wire (not included) to the speaker. Make sure to keep wires away from sharp metal or other rough edges. When passing through metal, use a grommet to protect the wires from sharp edges.
6. Pre drill the mounting holes using a 1/8" (3mm) drill bit.
7. Pull the wire through the speaker opening and connect to the speaker. Be sure to observe proper polarity.
8. Mount the speaker using the supplied screws.

RECOMMENDED ELECTRONIC CROSSOVER SETTING

There are two types of crossovers, passive and active. Passive crossovers (coils or inductors) are placed on the speaker leads between the amplifier and speaker (close as possible to speaker). An active crossover is an electronic filter that separates the audio signal fed to the amplifiers.

For optimum performance of your 4XL-80-94 mid bass driver, we recommend using an active crossover and setting the controls at 120Hz and HPF. If the electronic crossover has settings for midrange usage, set the controls to 120Hz in HPF (High Pass) and 5KHz in LPF (Low Pass).

PARAMETERS FOR 4XL-80-94 MID BASS

(due to Constant Improvement, Specification and Parameter are subject to change without notice)

VC Impedance (ohms)	4
Test Impedance (ohms)	3.4
Fs (Hz)	35.46
SD (sqCM)	226.98
Vas (Ltr)	16.6
Cms (M/N)	227.08
Mms (g)	15.8
BLTM	7.42
Qms	2.953
Qes	0.440
No (%)	1.833
Spl (dB)	94.6
Xmax (mm)	1.4
Voice Coil Size (inches)	1-3/8"
Frequency Response (Hz)	90 - 10kHz
Magnet Weight (ounces)	35oz.
Mounting Depth (inches)	3.34"
Power (RMS/Peak)	150/300 watts

POWERBASS XTREME LIMITED WARRANTY POLICY

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

PowerBass Xtreme Speakers are to be free of defects in material and workmanship for a period of one (1) year. The warranty is extended to three (3) years for parts and labor, if an Authorized PowerBass Xtreme Dealer performs the installation.

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:

- **Speakers received with bent frames or water damage**
- **Abuse such as holes in the cone, surround or ripped spider**
- **Voice coil damage due to amplifier clipping or distortion**
- **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 inquiries regarding service and warranty should be sent to the above address.

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 2008 PowerBass USA, Inc.



PowerBass Xtreme (PBX) – A division of PowerBass USA, Inc.

13936 Mountain Avenue – Chino, CA 91710

Tel. (909) 993-5399 – Fax (909) 993-5393

www.powerbassusa.com