



S-6903
S-6902T
S-6802
S-4102
S-6752
S-6502
S-650T
S-5202
S-4602
S-4002
S-3502
S-275CF

AUTOSOUND S-SERIES SPEAKERS

Application Guide

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



Thank you and Congratulations

Congratulations on your purchase of PowerBass Autosound speakers. You now own a speaker of uncompromising design and engineering from a factory that truly believes in the relentless pursuit of perfection. 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 your superior SPEAKER investment. For maximum performance we recommend that you have your new PowerBass Autosound speakers installed by an Authorized PowerBass Dealer.

Δ Caution 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.

POWERBASS AUTOSOUND S SPEAKER FEATURES

2-Layer Black Paper, DDC Finish Cone: The choice of cone materials has everything to do with the difference between good and great sound. Paper delivers one of the warmest sounds available along with the DDC (Dynamic Damping Coating) finish to give your music uncompromised fidelity.

Balanced Pure Silk, Soft Dome Tweeter: Silk dome tweeters have been used for many years by audiophile's world wide for the most accurate and smooth high frequency sound reproduction available. The low profile tweeter design makes upgrading factory speakers a simple and non-evasive task. (The S-4602 and S-3502 use a PEI dynamic tweeter. The S-6903 utilizes a mylar Mid and PEI Tweeter and S-275CF is full range)

OEM Drop-in Replacement: Designed to fit most OEM speaker applications for an easy installation upgrade over factory speakers. Fits behind factory grills in many cars.

Double Pressed Treated Rolled Foamed Surround: The high damping, double rolled foam surround on these speakers ensure linear travel throughout the entire frequency range resulting in more bass output and higher efficiency while reducing distortion.

Sound Expander Tweeter Lens: Our new tweeter ring has been designed to re-focus the high frequencies for a more spacious and open sound. (All models except S-275CF)

Additional Features: Acoustically transparent speaker grills*, professional mounting hardware and splice-in speaker wiring harness adds further value to your investment.

****Grills not included on some models.***



Before starting your installation, thoroughly read this guide and keep it as a reference. It will give you tips on proper placement, wiring, and installation as well as how to obtain the best sound from the PowerBass speakers you have selected.

INSTALLATION EXPERIENCE

Installation of PowerBass Autosound Speakers requires experience with a variety of mechanical and electrical procedures. This manual only provides general installation and operation instructions. If you have any reservations about your installation skills or lack of the proper tools, please contact your local PowerBass Autosound dealer for assistance.

TIPS TO GET THE MOST OUT OF YOUR POWERBASS SYSTEM

Your PowerBass Autosound speakers have been meticulous engineered and designed to handle high power musical reproduction. Despite their rugged construction, it is possible to damage your speaker if they are improperly used. In general, you will hear distortion as a so-called warning before any damage occurs. If you hear distortion in your system, immediately reduce the musical level to the point where the sound retains its clarity.

1. Be sure you supply the speakers with enough unclipped amplifier power to drive them properly. **(More damage can be done to a speaker by under-powering and clipping your amplifier than any other way!)**
2. Where possible, a separate amplifier just for your speaker should be used with an electronic crossover to set the frequency range. One amplifier with passive crossovers will work (Tri-Way Setup), but the system will do more with less stress on the amplifier by using two amps.
3. To avoid any possible sound cancellation from the front of the speaker to that of the rear of the speaker, cut a panel of Masonite or MDF to firmly mount the speaker if the vehicle's original cutout is too big.
4. When connecting speaker wires from the amplifier or head unit to that of the speaker itself, pay attention to the polarity of the connection. This will insure optimum sound reproduction and performance.
5. For maximum dynamic performance use weather stripping to insure a tight seal.
6. Do not mount any speakers or external crossovers where they will get wet.
7. Remember the Golden Rule "Measure twice...cut once."

PREPARING FOR INSTALLATION

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

- An electric drill with drill bits
- Phillips-head and standard screwdrivers
- Wire strippers
- Crimping tool and needle-nose pliers
- Silicone sealant or closed cell weather-stripping
- Metal file
- Hole saw
- Tin Snips
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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.
- Locate all fuel lines, brake lines, oil lines, and electrical cables when planning your installation.
- Check to see if there is enough clearance behind the mounting surface before installing the speakers.
- When running speaker wires through sheet metal, be sure to use grommets to properly insulate the wires from metal edges.

SPEAKER MOUNTING LOCATIONS

PowerBass has engineered our S-series speakers to fit into existing factory locations. However, you are not limited to these locations alone. Choosing the correct mounting location will have the greatest effect on the overall quality of the sound system. The cosmetics of your vehicles interior will also play a role in determining the best location. Another consideration is stereo imaging, it may be necessary to add more speakers to the system to help distribute and balance the sound. Keep in mind that custom mounting will require more preparation and work.

Whether you choose to use existing factory locations or have the speakers custom installed, the location must be large enough for the speakers to fit. Make sure there is a flat area large enough for the speaker to fit properly and seal the frame (basket). An uneven mounting surface can damage the speaker and/or result in poor sound quality.

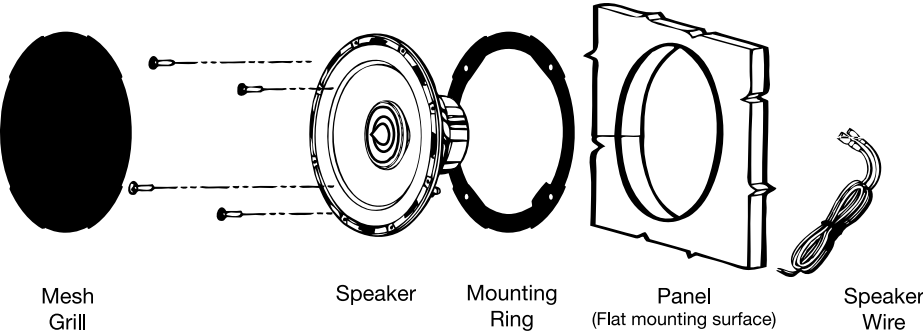
Care is also needed to ensure that the location you have chosen will not interfere with any of the mechanical or electrical operations of the vehicle. When drilling watch out for fuel lines, electrical wires and modules that may be hidden from sight.

NOTE: CAREFULLY CHECK BEHIND ANY PANELS BEFORE YOU DRILL

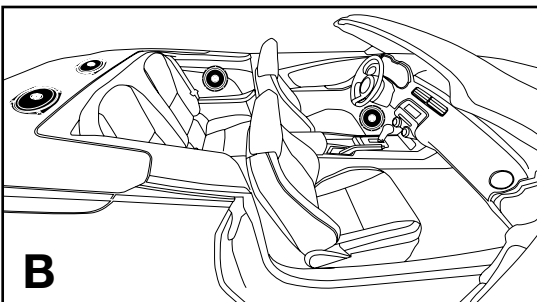
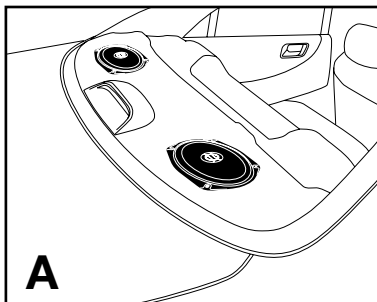
GENERAL

If the speaker cut out locations require you to cut metal, avoid structural metal and braces. If the door body and panel cannot support the weight of the speaker, a reinforcing ring may need to be constructed around the speaker for extra support. Always use a protective grommet when passing speaker wires through metal and avoid any sharp edges.

When using PowerBass grills, first drop the speaker into the mounting ring and then screw in. Once secured, the mesh grill can be pressed into the mounting ring to protect the speaker.

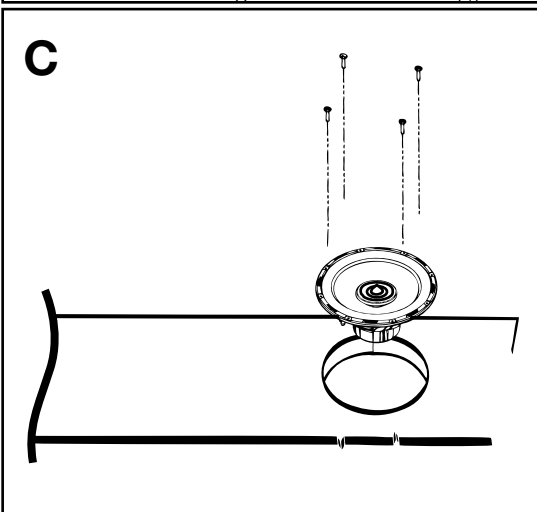


EXAMPLES OF MOUNTING



Mounting Options

- A: Rear Deck Mounting
- B: Multiple Mounting
- C: Dash Mounting



DASH MOUNTING

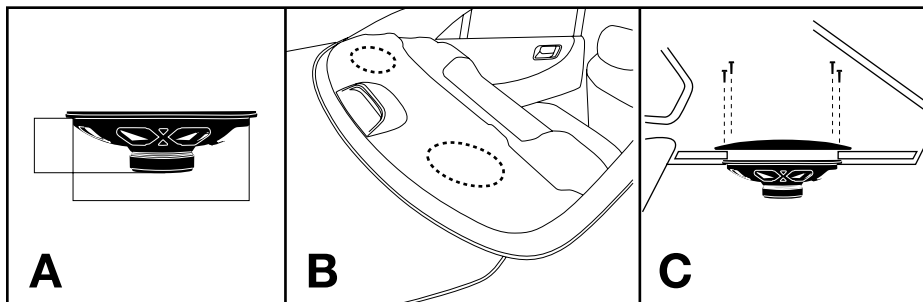
Some vehicles use dash speakers in which case the PowerBass S-series has been designed as a drop-in replacement. This may require removal of the front dash or OEM grill.

DOOR MOUNTING

When checking for possible speaker locations in the doors, check the operation of the window and all of the door assemblies. Always cycle the windows all the way up and down before mounting. Many vehicles use a stabilizer stop in between the door and door jamb. This bar prevents the door from opening too far. Be sure this will not affect speaker placement and damage the speaker when you close the door.

REAR DECK MOUNTING

In rear deck or package tray installations, carefully check the operation of the trunk suspension springs or tension bars. These tension bars move when the trunk opens and closes, so make sure speaker installation does not interfere with this mechanism. Also, when installing the speakers near a rear window check to make sure there is plenty of access to secure the mounting screws.



- A: Speaker mounting depth and hole cutout diameter (See enclosed mounting template).
- B: Cut hole using saber saw/ utility knife.
- C: Connect wiring to speaker terminals. Make sure of polarity (+)positive (-)ground.
Using a philips screwdriver secure speakers and mounting ring (if applicable).

For additional installation suggestions please consult your authorized PowerBass dealer.

LISTENING ENJOYMENT

These PowerBass car audio speakers were designed to perform in the rigors of the harsh automotive environment. They are constructed using the latest materials and loudspeaker technology, however care must still be taken to ensure their long lasting performance. Damage to loudspeakers can occur when a radio or amplifier, regardless of its power output, is made to play at higher listening levels than it can produce at low distortion levels. Listening under these conditions can result in very high levels of audible distortion emanating from the amplifier which results in adding a noisy or gritty sound to your music. Contrary to popular belief, a loudspeaker is more likely to be damaged by trying to get too much volume from a low powered amplifier or radio than from a high powered one.

Playing your speakers through a sound system with plenty of spare power (amplifier headroom) will greatly improve the sound and increase your listening enjoyment.

SPECIFICATIONS FOR POWERBASS S SERIES SPEAKERS

(Due to Constant Improvements, Specifications and Parameters are subject to change without notice.)

Model	Size	Nominal Impedance	Frequency Response	Sensitivity 1W/1M	Magnet Size	Mounting Depth	Power RMS/ Peak
S-275CF*	2.75"	4-ohm	150Hz-19kHz	90dB	3 oz.	1.25"	30W/60W
S-3502*	3.5"	4-ohm	80Hz-20kHz	85dB	4 oz.	1.5"	30W/90W
S-4002	4"	4-ohm	70Hz-20kHz	86dB	6 oz.	1.8"	35W/105W
S-4602*	4x6"	4-ohm	70Hz-20kHz	88dB	6 oz.	1.94"	35W/105W
S-5202	5.25"	4-ohm	65Hz-20kHz	87dB	8 oz.	2.0"	40W/120W
S-650T	6.5" thin	4-ohm	63Hz-20kHz	88dB	10 oz.	2"	45W/135W
S-6502	6.5"	4-ohm	60Hz-20kHz	88dB	10 oz.	2.3"	50W/150W
S-6752*	6.75"	4-ohm	63Hz-20kHz	88dB	10 oz.	1.8"	50W/150W
S-4102	4x10"	4-ohm	60Hz-20kHz	89dB	10 oz.	2.31"	50W/150W
S-6802*	6x8"	4-ohm	56Hz-20kHz	88dB	10 oz.	2.3"	60W/180W
S-6902T	6x9" thin	4-ohm	55-Hz-20kHz	89dB	10 oz.	2.5"	50W/150W
S-6903	6x9"	4-ohm	45Hz-20kHz	90dB	20 oz.	3.3"	70W/210W

****Grills not included on some models.***



The PowerBass S-series was engineered with multi-hole mounting patterns, specifically tooled baskets and shallow depth magnets to give you the highest vehicle application ratio available. The result is easy drop-in installations on just about any car.

POWERBASS AUTOSOUND LIMITED WARRANTY POLICY

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

PowerBass Autosound Speakers 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:

- **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.

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.

Removed or altered serial numbers will void this warranty