

The background of the page features a series of concentric circles and a spiral line that starts from the center and expands outwards, creating a dynamic, wave-like pattern.

PSB
Powered Subwoofers
OWNER'S GUIDE

CONTENTS

I.	Important Safety Instructions	4
II.	Introduction	5
III.	Quickstart	6
IV.	Features, Controls, AC Power	6
V.	Room Acoustics, Subwoofer Placement, Multiple Subwoofers & Control Settings	8
VI.	Connecting the Subwoofer to Your Audio System	11
	A. LFE Connection	
	B. Low/Line Level	
	C. High/Speaker Level	
	D. High/Speaker Level Output	
	E. Using Multiple Subwoofers	
VII.	Set-Up Calibration	13
VIII.	Troubleshooting	14
	Figure 1	16
	Figure 2	17
	Figure 3	18
	Figure 4	19
	Figure 5	20

I. IMPORTANT SAFETY INSTRUCTIONS

1. Read these instructions.
2. Keep these instructions.
3. Heed all warnings.
4. Follow all instructions.
5. Do not use this apparatus near water.
6. Clean only with dry cloth.
7. Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.
8. Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
9. Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding prong. The wide blade or the third prong are provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
10. Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.
11. Only use attachments/accessories specified by the manufacturer.
12. Use only with the cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over.
13. Unplug this apparatus during lightning storms or when unused for long periods of time.
14. Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.
15. The apparatus shall not be exposed to dripping or splashing and that no objects filled with liquids, such as vases, shall be placed on the apparatus.
16. **WARNING:** To reduce the risk of fire or electric shock, this apparatus should not be exposed to rain or moisture.
17. The mains plug or an appliance coupler is used as the disconnect device, the disconnect device shall remain readily operable.



The lightning flash with arrowhead symbol within an equilateral triangle, is intended to alert you to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.



The exclamation point within an equilateral triangle is intended to alert you to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the product.

Notice of FCC Compliance

Warning: Changes or modifications to this unit not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to

provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio TV technician for help.



Notes on environmental protection

At the end of its useful life, this product must not be disposed of with regular household waste but must be returned to a collection point for the recycling of electrical and electronic equipment. The symbol on the product, user's manual and packaging, point this out.

The materials can be reused in accordance with their markings. Through re-use, recycling of raw materials, or other forms of recycling of old products, you are making an important contribution to the protection of our environment.

Your local administrative office can advise you of the responsible waste disposal point.

II. INTRODUCTION

PSB subwoofers are designed to provide the flattest possible frequency response, full bass extension, low distortion and high output. Beyond these characteristics there are a few other parameters that we feel are very important in the design of a subwoofer. First and foremost, a PSB subwoofer must be musical. A subwoofer should also have the ability to play musically even when overloaded or stressed. For this reason PSB subwoofers incorporate proprietary limiting circuitry preventing audible overload while remaining true to the dynamics of the music. This circuitry combines peak limiting circuits that hold amplifier signal swing to the point just short of the amplifier's clipping, with compression circuitry that will reduce the amplifier's gain.

Managing heat dissipation is challenging with today's greater power demands. Where suitable, PSB subwoofers use the latest implementation of super efficient Class D power amplification, featuring an automatically varying switching frequency that maintains maximum efficiency and low THD under all conditions.

PSB woofers are always designed to reduce mechanical noise and prevent harsh sounds at the excursion extremes. Ports have large radius end flares to reduce noise from air turbulence. Cabinets and amplifiers are designed to prevent air leaks, which can contribute minute amounts of noise. All of our designs are exhaustively tested to survive 15 continuous hours of being driven to maximum output.

Whichever PSB subwoofer you have chosen, we hope that you appreciate the attention to detail that has gone into its design. Please take the time to read the following sections about the placement of your subwoofer, its connections and adjustments. Enjoy your PSB subwoofer.

III. QUICKSTART

If you cannot wait to hear your new PSB subwoofer, then:

Turn off all other components and follow one of the connection diagrams. Connect the supplied power cord to the AC power socket. Set the PSB subwoofer volume control to its minimum position (counterclockwise), and then plug the subwoofer into an active AC outlet. Use the same receptacle as the rest of your audio/video system or another on the same electrical circuit in order to avoid ground hum. Set the subwoofer's Sub Cut-Off Frequency control to its midpoint and set the phase switch or control to 0°. Flip the Power Switch to the on position. Play bass-rich material, and slowly bring up the Sub Volume control (clockwise) until the subwoofer contributes a natural level of low frequency sound. Now please read the rest of this guide and fine-tune your installation accordingly—it will be time well spent!

IV. FEATURES, CONTROLS, AC POWER



VOLUME CONTROL

Adjusts the output level of the PSB subwoofer only: This is not intended as a day-to-day volume control. See "VII Setup Calibration".



CROSSOVER FREQUENCY CONTROL

Adjusts the upper limit of the subwoofer's frequency range. Continuously variable from 50Hz to 150Hz for precise matching of subwoofer bass reproduction with the main (left and right) stereo speakers. See "VII Setup Calibration".



ON/STANDBY INDICATOR LIGHT

The light is located on the front of the subwoofer. With both the 120 and 230 volt versions, the subwoofer is initially in stand-by mode awaiting the presence of an audio signal. This status is indicated by a red light. When the subwoofer receives an audio signal the indicator light colour will change to green. With no audio signal, the subwoofer will stay on for approximately 15 minutes.

180°

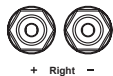
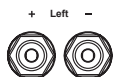


0°



PHASE SWITCH OR CONTROL

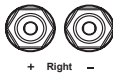
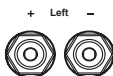
Selects the subwoofer output phase between in-phase (0°) and out-of-phase (180°), or up to 360° to compensate for the low to mid bass acoustic effects of different placement locations and listening rooms. See “VII Setup Calibration”



HIGH LEVEL INPUT FROM RECEIVER

HIGH/SPEAKER LEVEL INPUT TERMINALS

For connecting the PSB subwoofer to receivers or integrated amplifiers equipped with speaker outputs only. See “VI Connecting The Subwoofer to Your Audio System.”



HIGH LEVEL OUTPUT TO SPEAKERS

HIGH/SPEAKER LEVEL OUTPUT TERMINALS

For connecting the PSB subwoofer to speakers. See “VI Connecting The Subwoofer to Your Audio System.”

LOW LEVEL
INPUT FROM
PREAMP

Left



Right

LOW/LINE LEVEL INPUT JACKS

For connecting the PSB subwoofer to a separate component preamplifier, or to an integrated amplifier or receiver with preamplifier-out/main-in connections, at line level. See “VI Connecting The Subwoofer to Your Audio System.”

LOW LEVEL
OUTPUT
TO AMP

Left



Right

LOW/LINE LEVEL OUTPUT JACKS

For connecting the PSB subwoofer to a separate component preamplifier, or to an integrated amplifier or receiver with preamplifier-out/main-in connections, at line level. See “VI Connecting The Subwoofer to Your Audio System.”

LFE INPUT

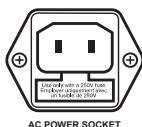


LFE OUTPUT

LFE JACKS

For connecting the PSB subwoofer to a separate component preamplifier, or to an integrated amplifier or receiver with LFE/Subwoofer output connections. See “VI Connecting The Subwoofer to Your Audio System.”

AC POWER SOCKET



AC POWER SOCKET

Supplies AC power to the PSB subwoofer. Connect the supplied power cord to the AC power socket. Plug the power cord into any standard wall outlet. The same receptacle as the rest of the system or another on the same electrical circuit should be used to avoid ground hum.

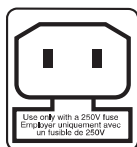
The PSB subwoofer has its own self-contained amplifier and thus requires AC power (keep this in mind when selecting a location). You may plug the power cord into any standard wall outlet and leave the connection in the wall as the PSB subwoofer draws extremely little current when idle. If you are away for an extended period you may want to turn off the power switch or unplug your PSB subwoofer.



POWER SWITCH

The Power Switch turns off the subwoofer's internal amplifier.

EXTERNAL FUSE



AC POWER SOCKET

When you turn on the subwoofer and there is no LED light and/or sound, please check the fuse (accessible from the rear panel) to ensure it is electrically intact. A spare fuse is contained within the fuseholder compartment behind the inscribed text. Use a wide slot screwdriver to pry the fuseholder compartment from the AC power socket. If it is necessary to replace the fuse, use a fuse equivalent to the type and rating of the fuse shipped with the product. See the specifications page at the end of the manual for a detail description of the fuse required for your model of subwoofer.

V. ROOM ACOUSTICS, SUBWOOFER PLACEMENT, MULTIPLE SUBWOOFERS & CONTROL SETTINGS

A. Room Acoustics

If you are critical about low-frequency response, there's quite a bit of useful experimentation you can do, especially in combination with the crossover, level, and phase controls of our subwoofers.

Begin by considering the size of the listening room. The larger the volume of air a speaker must move, the more acoustic output is required to achieve the sound levels you want. In smaller rooms, sound attenuation tends to be offset by reinforcement

from wall reflections. In larger spaces, sound has to travel to reach the reflecting surfaces and then to your ears, which means it has to be louder to begin with. With traditional full-range speakers, that involves properly matching amplifier power, speaker sensitivity, impedance and power handling. Most of the power goes to reproducing bass, so using powered subwoofers and separate midrange/treble satellites allows for a conservative draw on power from your main amplifier, while ensuring a good match between the low-frequency amplifier and the woofer.

After size, the most important aspect of a listening room is its shape. In any room, sound reflects off the walls, ceiling, and floor. If the distance between two opposite parallel surfaces is a simple fraction of the wavelength of a particular frequency, notes of that frequency will bounce back and forth in perfect phase—an effect called a standing wave or room mode. At some point in the room, this note will be reinforced substantially; at others it will cancel out almost entirely. If the prime listening seat is placed at either of these locations, the note will be a horrible boom or virtually non-existent. Almost all rooms are susceptible to some standing waves at low frequencies, but careful positioning of the speakers and the listening seat can minimize the effects. The only way to find out what works best is by experimentation.

Speaker positioning may be fairly limited in your room to still get proper imaging, and some of these positions may still result in standing waves. Use of a subwoofer or two makes this more controllable. Positioning of the bass speakers has almost no impact on imaging, so a subwoofer can be positioned with only standing waves in mind.

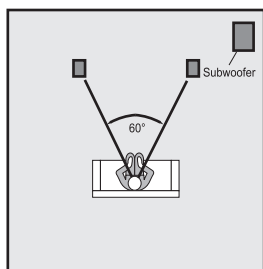
B. Subwoofer Placement

The loudest bass output from a subwoofer comes from corner placement. The outward flaring of walls from a corner focuses low frequencies, giving them no place to go but toward the listener. In the case of subwoofers, there is no penalty in overall balance for this maximal bass, since your main speakers can be located elsewhere. In most cases, there should be plenty of bass from corner placement.

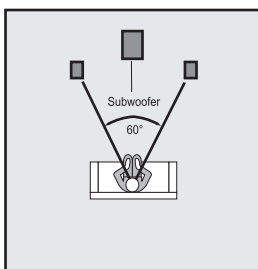
If you are seated in a null spot where sound from the subwoofer is cancelled or diminished by out-of-phase reflections, you will have to move either the subwoofer or your listening position until you get the desired bass. Flipping the phase control 180 degrees sometimes may make a difference, especially if the null is a product of cancellations caused by interaction with low frequencies from your main speakers. If the opposite is happening, where direct and reflected bass waves converge in phase and produce too strong a peak at your listening position, you can change position or change your sub's level control (or possibly the crossover frequency chosen).

The best method for positioning a subwoofer is to put the subwoofer in your listening chair, then play music with lots of bass through the system (something with steady low frequencies or continuous test tones). Move around the room and note where the bass sounds best; if you place the subwoofer in that location, you should get

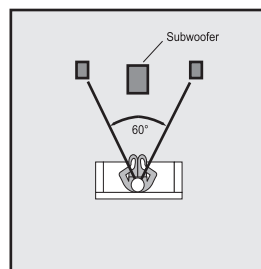
the same bass performance. This test only works if you have your ears at the same height as where the subwoofer will be, so you may have to get down low. A recommended starting point for the placement of this subwoofer would be in either of the front corners of the room, on either side of the main speakers.



Most bass output; least even bass response



Moderate bass output; more even bass response



Lowest bass output; most even bass response

C. Multiple Subwoofers—Why Two Subs Are Better Than One

Sometimes the listening room is not conducive to achieving satisfying amounts or quality of bass. There are rooms with troublesome dimensions, especially those that are more cubical. In such a case, two subwoofers placed carefully to work with each other are recommended to handle acoustical anomalies. This can also be applied when the problem is too much, or too uneven, bass. The overall system benefits from each subwoofer correcting the acoustic problems caused by the other. The two subwoofers do not have to be identical.

A very good starting point for positioning two subwoofers is to place one each on the centre of opposing walls. Experimenting with positioning as previously described should be used for determining the location of the second subwoofer, except in this instance one is listening for the minimum amount of bass output.

D. Control Settings

Once a reasonably smooth response has been achieved by careful positioning of the subwoofers, the overall performance can be fine-tuned by means of the speaker controls. The low-pass filter controls the upper limit of the subwoofer's frequency range. This should be set high enough to overlap the low frequency cutoff of the satellite speakers, but not high enough to localize specific sounds from the subwoofer.

If the frequency response of your satellite speakers is such that the subwoofer's low-pass filter must be set higher than about 80Hz in order to avoid gaps in the overall system response, then you might be able to localize specific sounds from the subwoofer. These sounds may seem to come from beside or behind you. One solution is to ensure the subwoofer is in the front of the listening area; another is to

use multiple subwoofers to diffuse such sounds.

Subwoofers also offer a phase control so the upper frequencies produced will not cancel out the lower frequencies of the satellites. Adjustment of this control can have great effect on spectral smoothness in the crossover area. Phase changes with frequency, however, so these controls may need readjusting every time you vary the cutoff frequency.

The overall level of the subwoofer's output may also be adjusted. To gain smooth response, be careful not to set this too high.

VI. CONNECTING THE SUBWOOFER TO YOUR AUDIO SYSTEM

There are several ways to connect a subwoofer into a system. For best results overall, we recommend using LFE or Low/Line Level connections.

When making a stereo Low/Line Level connection, be sure to follow the coding on the cables to maintain left-to-left and right-to-right. Use high quality, well-shielded, low capacitance RCA cables of minimal necessary length, to avoid picking up noise in the cable runs. When making a High/Speaker Level connection, in addition to maintaining left-to-left and right-to-right, be sure to use the coding of the pair of wires in each speaker cable to maintain phase—+/red/rib/writing to +/red/rib/writing and -/white/smooth/clear to -/white/smooth/clear. We recommend minimum 16 gauge wire and, for longer runs, larger (lower gauge) wire. In multi-subwoofer systems subwoofer inputs can be paralleled.

A. LFE Connection

Connecting Home Theatre Equipment (see Figure 1, page 16):

You can use a single RCA cable to connect the LFE/Subwoofer Output of your receiver, integrated amplifier, or preamplifier to the LFE Input on the subwoofer.

Home Theatre receivers, integrated amplifiers, surround sound processors, and preamplifiers usually have a special Subwoofer Output to provide the optional Dolby Digital or DTS Low Frequency Effects (LFE) Channel present on many movie and other programming sources. To reproduce these deep-bass effects (when they are present), supplementing the bass information in the main channels, this output must be connected to the subwoofer.

The LFE or Subwoofer Output is filtered by most receivers/processors. The subwoofer's variable low pass filter is usually not required and will not affect the frequency response of the subwoofer when using the LFE Input.

In 2-channel source material there is no information in the LFE channel. However, bass signal can be diverted to the subwoofer by selecting the appropriate AV receiver/processor surround mode.

B. Low/Line Level

Connecting Stereo Equipment Using Low/Line Level (See Figure 2 & 3, page 17-18):

If your receiver or integrated amplifier has preamplifier outputs, or if you are using a separate preamplifier, the preferred connection is from the Preamplifier Output of the electronics to the Low Level Input of the subwoofer. Use a dual RCA audio cable. Additionally, you may need to use Y-connectors at the Preamplifier Output to also send signals to the Power Amplifier/Main Input.

Connecting the Low/Line Level Outputs from the subwoofer back to the Power Amplifier Inputs is an important option (see Figure 3, page 18). The Low/Line Level Inputs of the subwoofer are internally processed through an active high pass filter (at 12dB/octave below 80Hz) to the Low/Line Level Outputs of the subwoofer. Connecting the Low/Line Level Outputs from the subwoofer back to the Power Amplifier Inputs delivers the processed signal, with reduced low frequency content, to the main speakers. With less low frequency demands, the main speakers can play louder. Particularly with smaller and/or less efficient main speakers, relieving speakers other than the subwoofer of the demands of reproducing low frequencies will allow greater sound output and dynamic capabilities from the other speakers and from the system overall.

C. High/Speaker Level

Connecting Stereo Equipment with High/Speaker Level (See Figure 4 & 5, page 19-20):

You also can get excellent sonic results by connecting the High/Speaker Level Output of your receiver, integrated amplifier or power amplifier to the High Level Input of the subwoofer. Use standard speaker cable and maintain polarity + –, as well as right and left channel.

Speaker wires can be run onwards from the subwoofer directly to the main speakers. This replaces running wires from the receiver or amplifier to the main speakers. Twist the ends of each input wire from the electronics together with the corresponding wire to the speakers and insert them both into each corresponding input binding post of the subwoofer. Be sure to avoid all contact between wires into the separate binding posts.

D. High/Speaker Level Output

Using High/Speaker Level Output (see Figure 4, page 19) allows speaker wires to be run onwards easily from the subwoofer directly to the main speakers. This replaces running wires from the receiver or amplifier to the main speakers. The signals from the subwoofer to the main speakers are looped through, full-range.

E. Using Multiple Subwoofers

Particularly in difficult rooms with difficult layouts, using two subwoofers is an alternative to smooth, as well as to increase bass response. One subwoofer can be located to increase response, with the second subwoofer located to smooth response. The two subs do not need to be identical. Please refer to Section V, Multiple Subwoofers for further information.

VII. SET-UP CALIBRATION

The following procedure assumes your PSB subwoofer is installed and connected. If possible, work in a team with another person: one listening, one making subwoofer-control adjustments.

1. Set Sub Volume to 0, Sub Cut-Off Frequency to 50Hz. Set any loudness, bass and treble, and/or equalizer controls on your preamplifier or integrated amplifier or receiver, or other components, to their nominal (midpoint or off) positions.
2. Play a familiar compact disc, video soundtrack or other source that includes substantial deep-bass content over an extended section. Your PSB dealer can help you select a few such titles.
3. Gradually turn the Sub Volume control clockwise until you achieve natural balance between the subwoofers deep-bass output and your main left and right loudspeakers.
4. Slowly turn the Sub Cut-Off Frequency control clockwise to reach the best mid-bass blend with your main left and right speakers. This will be the point at which the upper bass retains solid impact and fullness. Boom or muddiness is the result if the control is too high. A thin, "reedy" quality to the mid-bass such as deep male voices (FM announcers; Darth Vader) is the result if the control is too low.
5. Adjust the Phase control between 0° and 180° or 360° several times, leaving it in the position that yields the fullest low to mid bass output. You will now probably want to repeat steps 3 & 4 to double-check the subwoofer blend.

Cycling through steps 3 & 4 several times with slightly different settings of both the Sub Volume and Sub Cut-Off Frequency controls will help you get the most musical performance from your PSB Subwoofer and your system. The best combination is that which yields the most solid very-low-bass sounds, without mid-bass boom or a gap in response between the subwoofer and the main speakers.

The Sub Cut-Off Frequency and Sub Volume controls are interactive. Raising the latter while lowering the former can have the effect of extending deep-bass response somewhat, with a small sacrifice in overall loudness capability (this will still be well beyond the full-range loudness capability of most systems). In general, for well-recorded acoustic music the lowest Sub Cut-Off Frequency setting that yields a smooth transition between subwoofer and main speakers is often the best choice, and will promote deeper low-bass extension.

Note: The Sub Volume control is not a bass-boost or volume control. It is a set-and-forget adjustment, not intended for day-to-day adjustment. Use your preamplifier or receiver/integrated amp tone controls to modify program tonal balance.

VIII. TROUBLESHOOTING

Symptom	Action
No sound On/standby indicator not lit	Ensure the main power switch is on. This switch is located at the back of the subwoofer. Ensure the power cord is connected to the subwoofer and plugged into a <u>live</u> AC outlet. Check the main fuse located in the power cord socket and replace as required. If the new fuse also blows, the subwoofer amplifier requires service.
No sound On/standby indicator remains red	All PSB subwoofers utilize signal sensing auto on/off circuitry. If no signal is sent to the subwoofer, it will not power up and the front panel on/standby indicator will remain red. When using the subwoofer output of a receiver or processor, no signal may be immediately present in this output. The subwoofer will only power up when bass signal appears at the subwoofer input. If the low level cable or speaker cable connection is poor or has been severed, the subwoofer will not power up. Swap cables to determine if this is the source of the problem. To ensure the problem is not associated with the subwoofer, rapidly disconnect and connect the subwoofer low level or high level input. If the subwoofer on/standby indicator then illuminates green, the receiver/processor/amp may not be sending a signal to the subwoofer. When driving the low level inputs from a subwoofer output, ensure the receiver/processor is correctly configured to provide signal at the subwoofer output.

Symptom

Action

Further, a red on/standby indicator can be caused by an overvoltage or undervoltage condition at the AC outlet. The indicator will also turn red during abnormal operating conditions such as excessive internal temperature or a presence of DC voltage at the amplifier output, in which case the subwoofer needs to be serviced.

Sounds distorted

Lower volume if the subwoofer begins to sound distorted to determine if playback at a lower level solves the problem. If a slight reduction in level solves the problem, then the subwoofer level was too high. If the distorted sound remains at a low level, driver(s) may be damaged.

Hum

Hum that appears when using the subwoofer's low level input(s) is usually caused by using an inferior, damaged, exceptionally long low level cable or cables routed near high current wiring/appliances. Replace/shorten the low level cable connecting the subwoofer to the source equipment (receiver or processor). Low level cable runs of longer than 20 feet may require the use of a line driver (not available from PSB).

Hum heard when using the subwoofer's high level input(s) is usually caused by an intermittent or missing positive or negative connection. Ensure there is a good connection between all speaker wires connecting the subwoofer and receiver/amplifier.

If the subwoofer high level connection is routed through a switch box, ensure the box shorts the positive and negative connections together when the subwoofer should be inactive. Hum will result if the switch box floats the positive or negative connection.

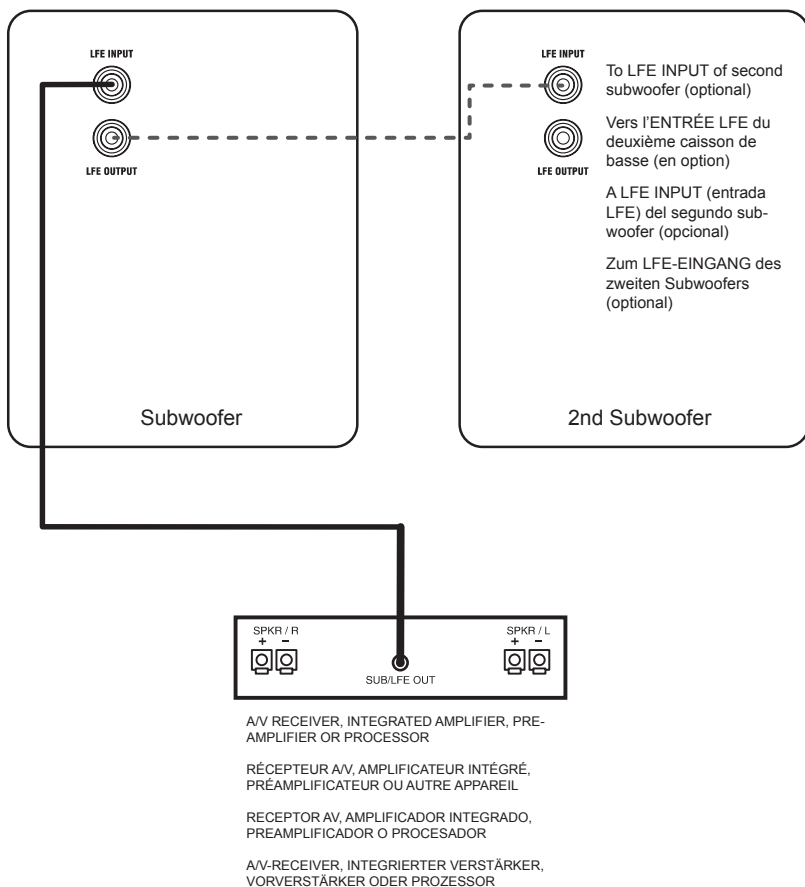
Decreasing the volume control of the subwoofer and increasing the volume control of the receiver/processor/amplifier subwoofer output can sometimes reduce hum to an acceptable level.

See your dealer if you require service. Authorized PSB dealers are equipped to handle almost all problems. You may locate your nearest PSB authorized dealer on-line at www.psbSpeakers.com. If the problem is not resolved, please contact us, providing the model name, serial number, date of purchase, dealer name, and a full description of the problem.

We appreciate your purchase, and hope this owner's guide helps you enjoy the exceptional performance that PSB speaker systems have to offer. We wish you many years of enjoyable listening!

Figure 1

**WITH LFE INPUT
INTEGRATION AVEC ENTRÉE
INTEGRACIÓN CON ENTRADA LFE
MIT LFE-EINGANG**



Use this configuration to connect the subwoofer to an A/V receiver or processor's subwoofer/ LFE output provided your A/V receiver/processor subwoofer/LFE output is low pass filtered.

Utilisez cette configuration pour raccorder le caisson de basse à un récepteur A/V ou à la sortie caisson de basse/LFE d'un appareil à condition que la sortie caisson de basse/LFE du récepteur A/V/de l'appareil soit dotée d'un filtre passe-bas.

Use esta configuración para conectar el subwoofer a un receptor AV o a la salida de subwoofer/ LFE del procesador, siempre que esas salidas estén procesadas por un filtro pasabajos.

Verwenden Sie diese Konfiguration, um den Subwoofer an den Subwoofer/LFE-Ausgang eines A/V-Receivers oder Prozessors anzuschließen, unter der Voraussetzung, dass der A/V-Receiver/ Prozessor-Subwoofer/LFE-Ausgang tiefpassgefiltert ist.

Figure 2

**WITH LOW LEVEL INPUT
AVEC L'OPTION D'ENTRÉE BAS-NIVEAU
CON OPCIÓN de ENTRADA a NIVEL BAJO
MIT LOW-LEVEL-EINGANG**

* Y connector not required for single subwoofer operation

* Connecteur en Y non requis pour l'utilisation d'un seul caisson de basse

* No se requiere un conector en Y para trabajar con un solo subwoofer

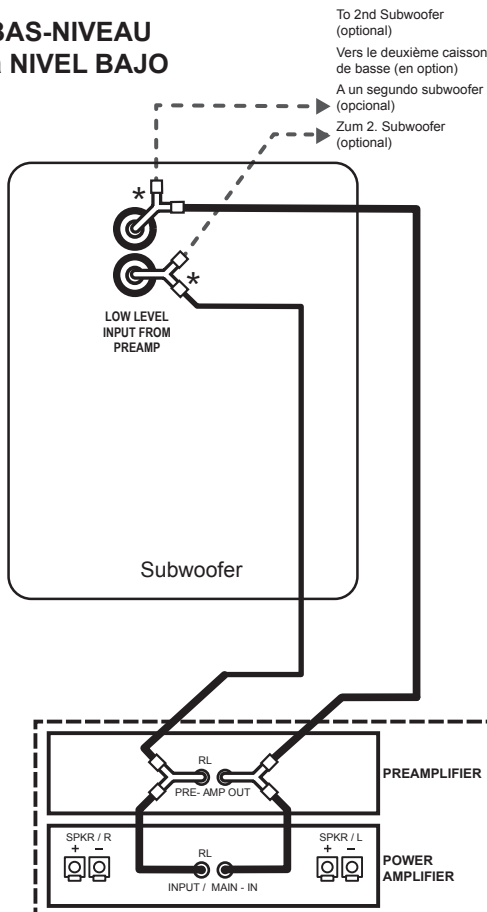
* Y-Steckverbinder nicht erforderlich für den Betrieb eines einzelnen Subwoofers

This method of wiring does not limit low frequencies reaching left and right main speakers.

Ce câblage ne limite pas les basses fréquences atteignant les haut-parleurs principaux gauche et droite.

Esta conexión no limita las frecuencias bajas que llegan a los altavoces principales derecho e izquierdo.

Diese Verkabelungsmethode schränkt die niedrigen Frequenzen für den linken und rechten Hauptlautsprecher nicht ein.



ALTERNATE: RECEIVER OR INTEGRATED AMPLIFIER WITH PRE-AMP OUT AND MAIN-IN JACKS

POSSIBILITÉ : RÉCEPTEUR OU AMPLIFICATEUR INTÉGRÉ AVEC PRÉ-AMPLIFICATEUR ET PRISES D'ENTRÉE PRINCIPALES

ALTERNATIVA: RECEPTOR O AMPLIFICADOR INTEGRADO CON SALIDA DE PREAMPLIFICADOR (PRE-AMP OUT) Y ENTRADA AL AMPLIFICADOR PRINCIPAL (MAIN-IN)

ALTERNATIV: RECEIVER ODER INTEGRIERTER VERSTÄRKER MIT VORVERSTÄRKER-AUSGANGS- UND HAUPT-EINGANGSBUCHSEN

Low level connections wire the subwoofer to a preamplifier or to the “pre-out” jacks of an integrated amplifier or receiver, using standard RCA cables.

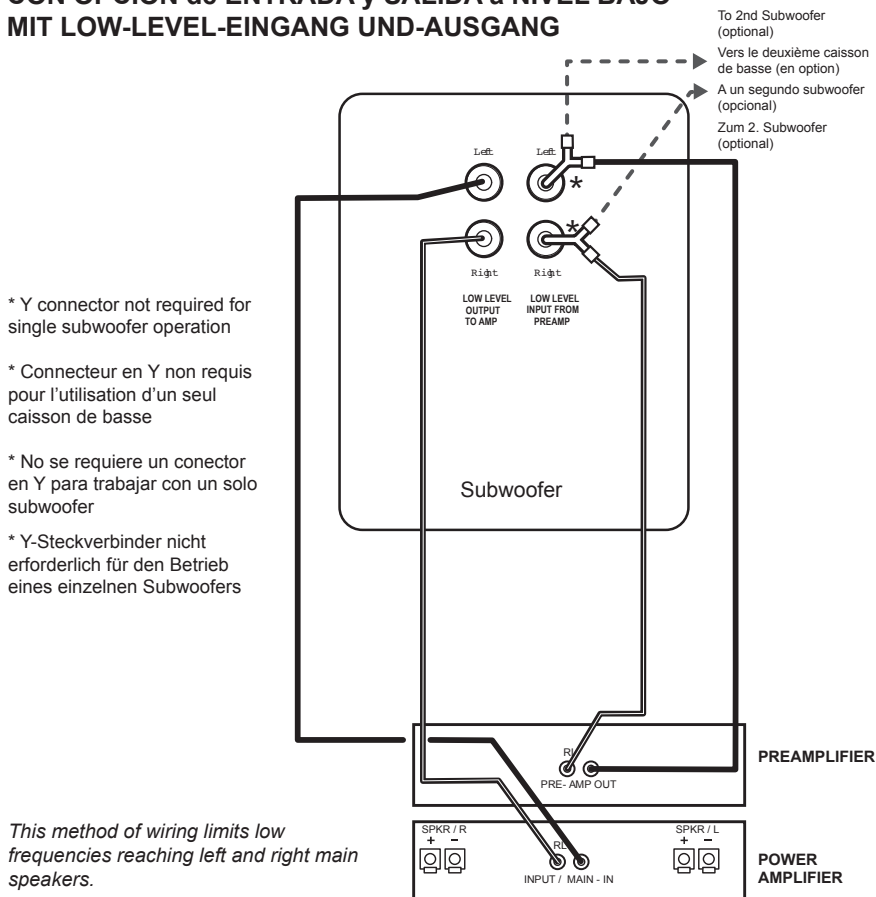
Les raccordements bas-niveau relient le haut-parleur d'extrême grave à un préamplificateur ou aux bornes «sortie préamplificateur» d'un préamplificateur, d'un amplificateur intégré ou d'un récepteur au moyen de câbles RCA standard.

Para conexión al nivel bajo se conecta el subgrave al pre-amplificador o a los conectores “pre salida” de un amplificador integrado o receptor usando cables comunes tipo RCA.

Low-Level-Anschlüsse verdrahten den Subwoofer mit einem Vorverstärker oder den Vorverstärker-ausgangsbuchsen eines integrierten Verstärkers oder Receivers mittels standardmäßigem RCA-Kabel.

Figure 3

**WITH LOW LEVEL INPUT & OUTPUT
AVEC L'OPTION D'ENTRÉE BAS-NIVEAU et de SORTIE BAS-NIVEAU
CON OPCIÓN de ENTRADA y SALIDA a NIVEL BAJO
MIT LOW-LEVEL-EINGANG UND-AUSGANG**



ALTERNATE: RECEIVER OR INTEGRATED AMPLIFIER WITH PRE-AMP OUT AND MAIN-IN JACKS

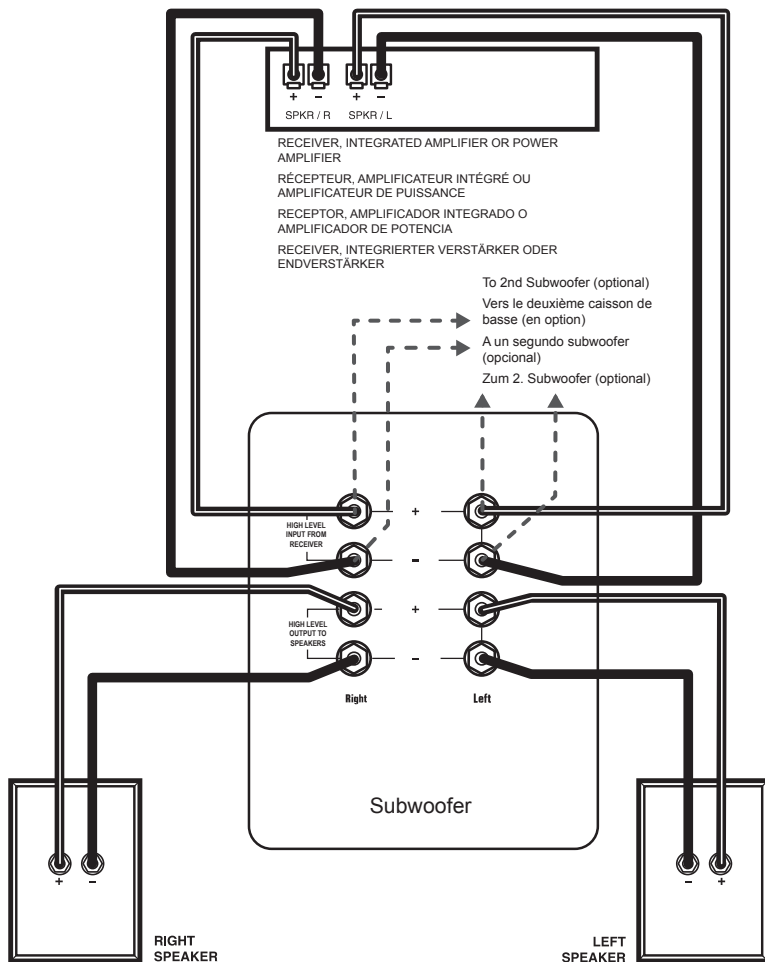
POSSIBILITÉ : RÉCEPTEUR OU AMPLIFICATEUR INTÉGRÉ AVEC PRÉAMPLIFICATEUR ET PRISES D'ENTRÉE PRINCIPALES

ALTERNATIVA: RECEPTOR O AMPLIFICADOR INTEGRADO CON SALIDA DE PREAMPLIFICADOR (PRE-AMP OUT) Y ENTRADA AL AMPLIFICADOR PRINCIPAL (MAIN-IN)

ALTERNATIV: RECEIVER ODER INTEGRIERTER VERSTÄRKER MIT VORVERSTÄRKER-AUSGANGS- UND HAUPT-EINGANGSBUCHSEN

Figure 4

**WITH HIGH LEVEL INPUT & OUTPUT
AVEC ENTRÉE et SORTIE HAUT-NIVEAU
CON ENTRADA y SALIDA de NIVEL BAJO
MIT HIGH-LEVEL-EINGANG UND -AUSGANG**



High level connections wire the subwoofer to the speaker output terminals of a receiver or amplifier, just as if the subwoofer was a pair of speakers.

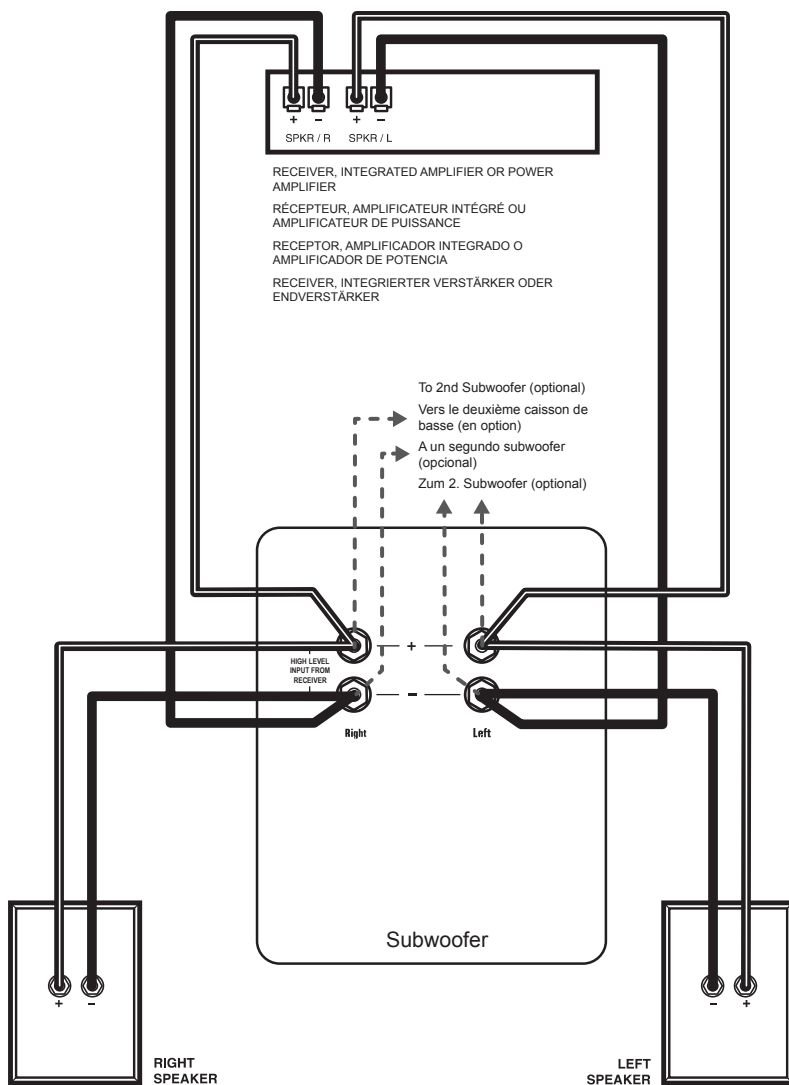
Les connexions haut-niveau relient le haut-parleur d'extrême grave aux bornes de sorties h.-p. d'un récepteur ou d'un amplificateur, comme s'il s'agissait d'une paire d'enceintes acoustiques.

Para conexión al nivel alto se conecta el subgrave a las terminales de salida para altavoz de un receptor o amplificador como si se tratase de un par de altavoces.

High-Level-Anschlüsse verdrahten den Subwoofer mit den Lautsprecherausgangsterminals eines Receivers oder Verstärkers, als ob der Subwoofer ein Lautsprecherpaar wäre.

Figure 5

**WITH HIGH LEVEL INPUT
AVEC ENTRÉE HAUT-NIVEAU
CON ENTRADA de NIVEL BAJO
MIT HIGH-LEVEL-EINGANG**



PSB Speakers
633 Granite Court
Pickering, Ontario L1W 3K1
CANADA
www.psbSpeakers.com
888-772-0000 (North America)
905-831-6555 (International)
Fax: 905-837-6357

