Revel® Concerta™ B12 Subwoofer

Owner's Manual
(120V/230V)

3 Oak Park, Bedford, MA, 01730-1413 USA
Telephone: 781-280-0300
Fax: 781-280-0490
www.revelspeakers.com

Customer Service:
Telephone: 781-280-0300
Sales Fax: 781-280-0495
Service Fax: 781-280-0499

Product Shipments
16 Progress Road
Billerica, MA 01821-5730 USA
Part No. 354111-001 | Rev A | 12/04

IMPORTANT SAFETY PRECAUTIONS

CAUTION

To reduce the risk of electric shock, do not remove cover (or back). No user-serviceable parts inside. Refer servicing to qualified service personnel.

CAUTION

To prevent electric shock, do not use this (polarized) plug with an extension cord, receptacle or other outlet unless the blades can be fully inserted to prevent blade exposure.

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 a 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. Do not use attachments not recommended by the product manufacturer, as they may cause hazards.
16. This product should be operated only from the type of power source indicated on the marking label. If you are not sure of the type of power supply to your home, consult your product dealer or local power company. For products intended to operate from battery power, or other sources, refer to the operating instructions.

17. If an outside antenna or cable system is connected to the product, be sure the antenna or cable system is grounded so as to provide some protection against voltage surges and built-up static charges. Article 810 of the National Electrical Code, ANSI/NFPA 70, provides information with regard to proper grounding of the mast and supporting structure, grounding of the lead-in wire to an antenna discharge unit, size of grounding conductors, location of antenna discharge unit, connection to grounding electrodes, and requirements for the grounding electrode. See Figure A (below).

18. An outside antenna system should not be located in the vicinity of overhead power lines or other electric light or power circuits, or where it can fall into such power lines or circuits. When installing an outside antenna system, extreme care should be taken to keep from touching such power lines or circuits, as contact with them might be fatal.

19. Do not overload wall outlets, extension cords, or integral convenience receptacles, as this can result in a risk of fire or electric shock.

20. Never push objects of any kind into this product through openings, as they may touch dangerous voltage points or short-out parts that could result in a fire or electric shock. Never spill liquid of any kind on the product.

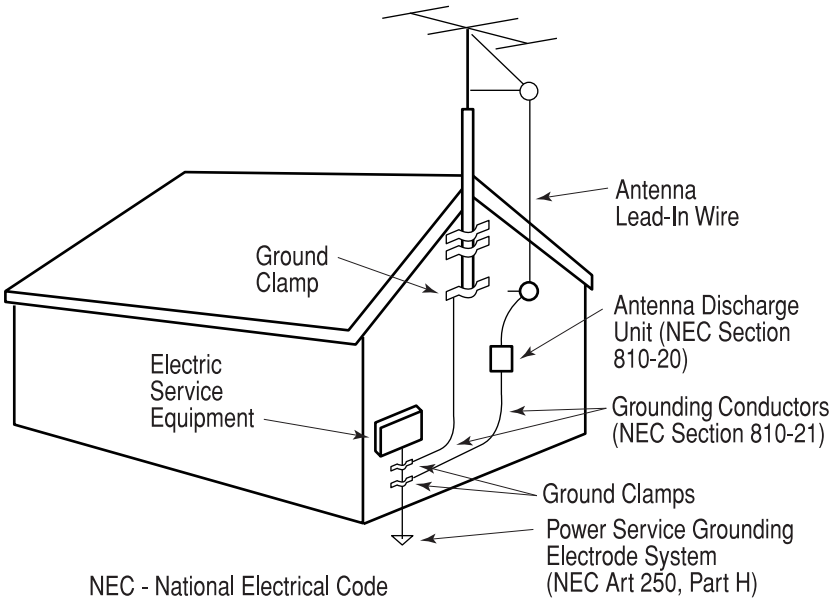
21. Do not attempt to service this product yourself, as opening or removing covers may expose you to dangerous voltage or other hazards. Refer all servicing to qualified service personnel.

22. When replacement parts are required, be sure the service technician has used replacement parts specified by the manufacturer or that have the same characteristics as the original part. Unauthorized substitutions may result in fire, electric shock or other hazards.

23. Upon completion of any service or repairs to this product, ask the service technician to perform safety checks to determine that the product is in proper operating condition.

24. The product should be mounted to a wall or ceiling only as recommended by the manufacturer.

Figure A: Outdoor Grounding



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DOCUMENTATION CONVENTIONS

This document contains general safety, installation, and operation instructions for the Revel Concerta B12 Subwoofer (both the 120V and 230V models). It is important to read this document before attempting to use this product. Pay particular attention to safety instructions.

Appears on the component to indicate the presence of uninsulated, dangerous voltage inside the enclosure – voltage that may be sufficient to constitute a risk of shock.

Appears on the component to indicate important operating and maintenance instructions in the accompanying literature.

WARNING Calls attention to a procedure, practice, condition, or the like that, if not correctly performed or adhered to, could result in injury or death.

CAUTION Calls attention to a procedure, practice, condition, or the like that, if not correctly performed or adhered to, could result in damage to or destruction of part or all of the product.

Note Calls attention to information that is essential to highlight.

ABOUT THE B12

Thank you for purchasing the Revel Concerta B12 Subwoofer. The B12 is a high-performance powered subwoofer that produces prodigious low-frequency output. The B12 perfectly augments the Revel Concerta Series loudspeakers in stereo music or home theater entertainment systems.

The B12 subwoofer system features a 10-inch (254mm) woofer powered by a 650-watt amplifier. The B12 subwoofer reproduces deep, realistic bass sounds down to the lowest frequencies with low distortion. The B12 woofer produces up to 2-inch (50.8mm) peak-to-peak excursion providing extraordinarily high output down to the lowest frequencies.

Combining superior form and function, the B12's proprietary woofer features a distinctive design that allows for low distortion, even at high output levels. The woofer is constructed with an anodized aluminum diaphragm for high strength at high output levels. The spider is constructed with a high-strength Nomex blend with optimized geometry for increased linearity.

The subwoofer's motor structure features a Symmetrical Field Gap (SFG) configuration. The motor includes a large ceramic magnet motor system. An integrated stabilization ring minimizes modulation inside the motor's static gap flux field, which aids in reducing distortion. A 3-inch (76mm) copper voice coil is wound on a Kapton® bobbin for impressive power handling and freedom from compression. A vented center pole facilitates heat dissipation which allows for high power handling and low compression.

The B12 cabinet is constructed with medium-density fiberboard (MDF) walls and extensive internal bracing to reduce cabinet-induced colorations. Rubber feet are attached to the bottom of the cabinet for optimal stability, accommodating installations on tile and hardwood floors. Optional (included) spikes can be installed for placement on carpeted surfaces.

The Concerta B12 features adjustable controls and multiple connection options which allow you to optimize its performance in any system and listening room.

Since 1996, Revel has stood at the forefront of loudspeaker design. Backed by Harman International's extensive research and design facilities, the Revel Concerta Series Loudspeakers benefit from cutting-edge development tools. A multi-channel listening lab allows for double-blind listening tests. A laser interferometer enables detailed driver and cabinet analysis. Multiple large anechoic chambers provide for precise tests and measurements. Finite element analysis allows for advanced loudspeaker modeling. A stereo lithography apparatus aids in achieving tight tolerances.

Adding to the proud lineage of Revel's Ultima and Performa Series Loudspeakers, the Concerta B12 solidifies Revel's reputation as the leading designer and manufacturer of high-quality, high-performance loudspeakers and subwoofers.

HIGHLIGHTS

- Powerful bass output
- Proprietary 10-inch (254mm) anodized aluminum diaphragm woofer
- Built-in 650W amplifier
- Line Level RCA inputs
- Advanced woofer motor structure
- Large voice coils for wide dynamic range without compression
- Phase Switch
- Low Pass Frequency control
- Bass Volume Level control
- Parametric Room Equalization controls
- Rubber feet/spikes
- Elegant cabinet design in vinyl finishes

PRODUCT REGISTRATION

Please register the B12 within 15 days of purchase. To do so, register online at www.revelspeakers.com or complete and return the included product registration card. The product registration card serves no warranty purposes. Retain the original, dated sales receipt as proof of warranty coverage.

UNPACKING

The B12 requires special care and handling during unpacking. Pay particular attention to the precautions that appear in this section and to other precautions that appear throughout this owner's manual.

WARNING

Do not attempt to lift or move the B12 alone. Proper lifting requires at least two strong adults. When lifting the B12, stand as straight as possible using the leg muscles to lift. Do not attempt to lift the B12 while bending at the waist. When moving the B12, rock it side-to-side into the desired position. Failure to follow these procedures may result in personal injuries and/or loudspeaker damage.

When unpacking, save all packing materials for possible future shipping needs. Refer to the Obtaining Service section on page 21 for additional information.

To unpack the B12:

1. Place the packing carton on its side and fully open the top flaps as shown in Figure 1 (page 9).

Figure 1: Unpacking the B12

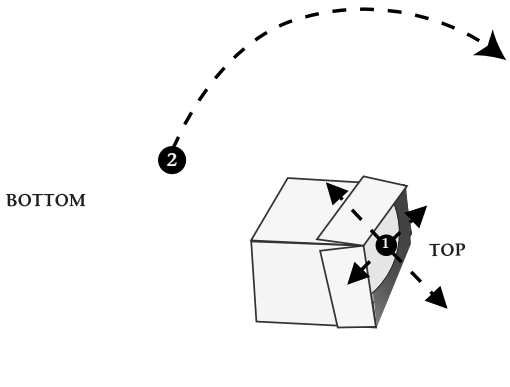
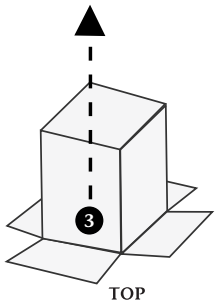


Figure 2: Lifting the Carton



Unpacking *(continued)*

2. Without allowing the top flaps to close, stand the packing carton upside-down as shown in Figure 1 (above).

3. Lift the packing carton off of the subwoofer as shown in Figure 2 (above). Use caution to avoid damaging the cabinet and objects located above the packing carton. At this point, the subwoofer will be upside-down.

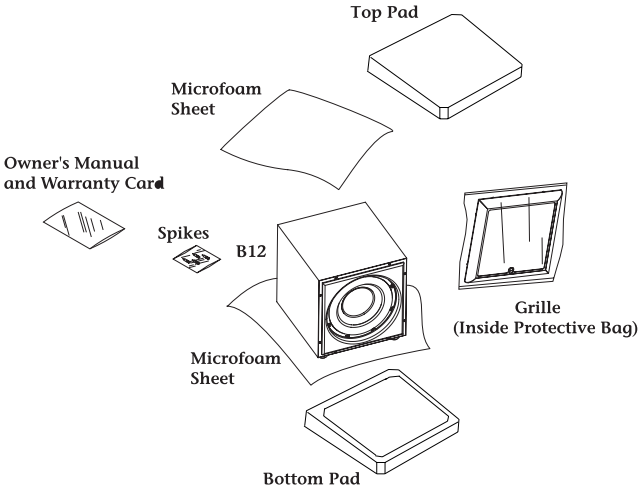
4. Grasping the sides of the cabinet, place the B12 on its side. Then, place the B12 in the upright position.

5. When the B12 is in the upright position, remove the Owner's Manual, Warranty Card and microfoam sheet.

Note

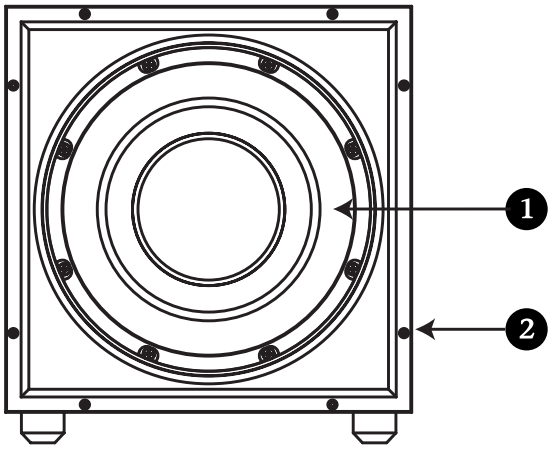
While the subwoofer is upside-down, it is recommended to adjust the spike feet if the B12 will be placed on a carpeted floor. Refer to the Feet and Optional Spikes section that begins on page 17 for instructions.

Figure 3: Packing Materials



SUBWOOFER OVERVIEW

Figure 4: B12 Subwoofer (Front View)



The numbers in Figure 4 (shown here) correspond with the numbered items in the Front View section that begins below.

FRONT VIEW

The numbers in Figure 4 (above) correspond with the numbered items below.

1. Woofer

2. Cabinet

Reduces cabinet-induced colorations with MDF walls and extensive internal bracing. Rubber feet/spikes are attached to the bottom of the cabinet for optimal stability, accommodating installations on tile, hardwood, and carpeted floors. The cabinet's vinyl finish does not require routine maintenance. However, cabinet surfaces that have been marked with fingerprints, dust, or other dirt can be cleaned using a soft cloth. Do not use any cleaning products or polishes on the cabinet or grille.

CAUTION

To prevent cabinet damage, do not use a cloth made with steel wool or use metal polish to clean the cabinet.

REAR PANEL

The numbers in Figure 5 (page 11) correspond with the numbered items in this section.

1. Line-Level Inputs

Gold-plated stereo RCA line-level inputs allow you to connect the subwoofer to a receiver or surround processor's subwoofer output using an RCA patch cable.

2. Power Indicator LED

Indicates whether the B12 is in Standby or Normal operation mode. Lights red to indicate Standby mode. Lights green to indicate Normal operation. The B12 will automatically enter Standby mode after approximately ten minutes when no signal is detected from your system. The B12 will power on instantly when a signal is detected.

3. Subwoofer Level (Volume) Control

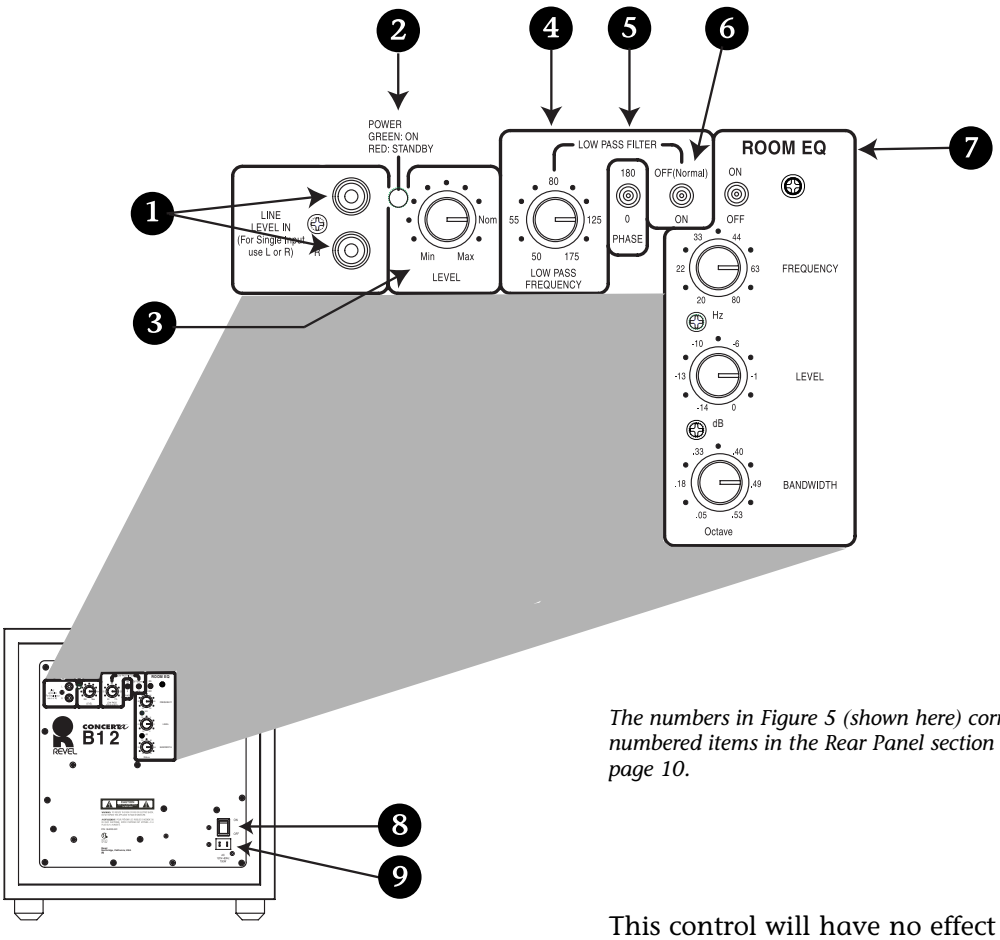
Adjusts the woofer's volume level.

4. Low Pass Frequency Control

Adjusts the variable 50Hz-175Hz low-pass crossover. Determines the highest frequency at which the B12 reproduces sounds.

- Set to a lower frequency setting, between 50Hz and 100Hz, for larger main loudspeakers that can comfortably reproduce some low-frequency sounds.

Figure 5: B12 Subwoofer (Rear View)



The numbers in Figure 5 (shown here) correspond with the numbered items in the Rear Panel section that began on page 10.

Low Pass Frequency Control (continued)

A lower frequency setting will concentrate the B12 subwoofer's efforts on the deep bass required by contemporary music and film soundtracks.

- Set to a higher setting, between 100Hz and 175Hz, for smaller bookshelf loudspeakers that do not extend to the lower bass frequencies.

If the frequency control is set too high, bass will sound "too boomy" and overpower the overall sound. If it is set too low, some low frequency sounds may be difficult to hear, or absent altogether.

This control will have no effect if the Low-Pass Filter Switch (No. 6 in Figure 5) is set to **OFF (Normal)** because in that case the receiver/processor will set the crossover frequency. If using a DTS or Dolby Digital receiver/processor, set this control to **OFF (Normal)**.

Note

This control does not limit the frequency range of the main speakers in the system. The objective of adjusting the Low Pass Frequency control is to result in the reproduction of all frequencies, while minimizing any overlap. (It is undesirable for the subwoofer and the main speakers to both reproduce the same frequencies, as this would result in very irregular response. That is because there would be reinforcement at some frequencies where they happened to be in phase, and cancellation at others where they are out of phase).

5. Phase Switch

Compensates for the absolute phase of the B12's output relative to the front speakers. Some associated electronics can invert the absolute phase. Use this switch to correct such occurences. Proper phase adjustment can also depend on variables such as room size, subwoofer placement and listener position. Use this switch to maximize bass output at the primary listening position.

- Select the **180** setting to invert the B12 output (180 degrees) relative to the input.
- Select the **0** setting to set the B12 acoustic output in phase (0 degrees) with the input.

6. Low Pass Filter Switch

Activates or deactivates the Low Pass Frequency Control. This switch optimizes the B12 for receiver/processor connections to ensure proper low-frequency reproduction.

- Select the **OFF (Normal)** setting if you have a 5.1-, 6.1- or 7.1 channel Dolby Digital or DTS home theater receiver/processor with a subwoofer output. When set to **OFF (Normal)**, the receiver/processor will set the crossover frequency.
- Select the **ON** setting if your system does not include a crossover. For example, most 2-channel configurations do not include a crossover.

Note

Some processors might incorrectly label the subwoofer output connector as "LFE." If there is no connector labeled "subwoofer," but there is an LFE output, that is the correct connection. Some processors offer both "Subwoofer" and "LFE" outputs. In those cases, the "Subwoofer" outputs should always be used.

Some processors offer multiple subwoofer outputs. If there are two subwoofer outputs, a few connection options are possible. You can set the processor to "mono subwoofer" and use either the Left or Right outputs. An alternative method is to connect the two subwoofer outputs to the B12 Left and Right inputs. If two B12s are used, each subwoofer output can be connected to a separate B12. If four B12s are included in your system, use Y-adapters to make connections.

7. Room EQ (Equalizer) Parametric Control

Optimizes the subwoofer's response for the listening room. The parametric equalizer includes variable controls to adjust Frequency, Bandwidth and Level.

- Use the **Frequency** control to select the center frequency of the particular problem area. The range is from 20Hz to 80Hz.
- Use the **Bandwidth** control to define the range of frequencies over which the equalizer will have an effect. The range is from 0.05 octaves to 0.53 octaves.
- Use the **Level** control to set the amount of cut (in dBs) the equalizer is set for. The range is from 0dB to -14dB.

8. Power Switch

Connects or disconnects power from the AC input cord. During periods of intermittent use, the Power Switch can be left on. Turn off the Power Switch for extended periods of nonuse.

9. AC Input Cord

Provides power to the B12 through the attached power cord.

PLACEMENT/OPTIMIZATION OVERVIEW

Below 300Hz, loudspeaker and listener locations have a profound impact on the way sound is reproduced. All rooms have "standing waves," where certain frequencies are emphasized or diminished. Their complex patterns can combine to introduce tremendous sound coloration at low frequencies.

The B12's Room EQ parametric equalization system offers a powerful tool to help compensate for these effects. However, no electronic system alone can fully compensate for the dramatic effects of room acoustics. Every room will have locations where "nulls" at specific frequencies occur. These cancellations of the sound are like "black holes," which no amount of equalization can fill. The best results are always achieved through careful placement of both the loudspeakers and the listening position. Optimum placement can be determined through the use of computer modeling programs, or by trial-and-error measurements. If at all possible, find the best loudspeaker and listener locations before proceeding with adjustments of the Revel parametric equalizers.

- To help determine good locations for the subwoofer(s) and the listener(s), we recommend making high-resolution in-room response measurements. Your authorized Revel dealer can make the appropriate measurements using suitable equipment to assure optimum results. Further information, including how to perform in-room measurements yourself can also be found at www.revelspeakers.com.

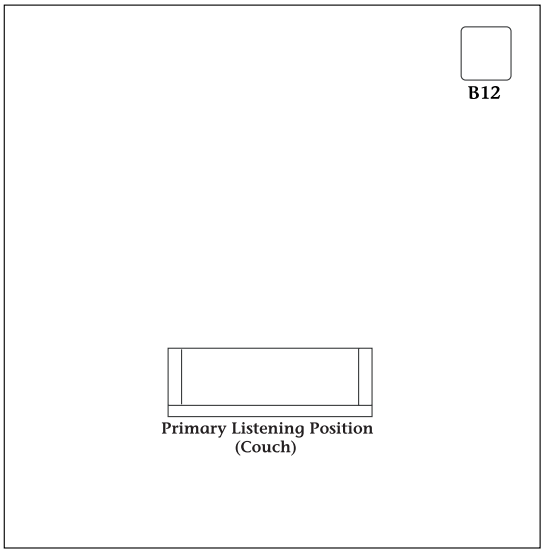
Note

The Concerta B12 parametric equalizer can be used with sound measurement equipment having at least one-tenth-octave resolution at 20Hz. Do not use crude measurement devices, such as most real-time or any one-third-octave analyzers, to measure low-frequency performance in a listening room. Room boundaries often cause modes or standing waves with very narrow-band peaks and dips that are beyond this equipment's measurement-resolution capability. Adjusting the parametric equalizer based on this data can result in very misleading results and degraded sound quality.

GENERAL PLACEMENT GUIDELINES

- As a general rule, placing a subwoofer in the corner of a room, as shown in Figure 6 (below), will result in the maximum number of "peaks" and minimum number of "dips" in the response. Most dips cannot be equalized, but they can be minimized through optimum placement of subwoofer(s) and the listening position. The resulting peaks can be corrected through the use of the B12 subwoofer's built-in parametric equalization.

Figure 6: B12 Placement



General Placement Guidelines (continued)

- Due to the nature of room acoustics, experiment with different listening location(s), as well as loudspeaker locations, to obtain the best sound at low frequencies.

- For best results, place the Concerta B12 subwoofer(s) near solid walls to reinforce bass response, and avoid windows which can rattle and transmit sound to the outside world.

- The use of two properly placed Concerta B12 subwoofers will result in smoother low frequency response and more consistent sound throughout the listening area.

- If you plan to use two B12 subwoofers and you cannot make high-resolution measurements, try placing the subwoofers at diagonally-opposite corners as shown in Figure 7 (right), or at the mid-points of opposite walls, as shown in Figure 8 (right) and Figure 9 (page 15). Use of a modeling program or trial-and-error measurements to further determine the best locations is recommended. Using precise measurements to determine subwoofer placement will minimize response dips due to standing wave cancellation. See your Revel dealer for assistance.

- For large rooms (greater than 2,000 to 3,000 cubic feet or 57 to 85 cubic meters) consider adding one or more B12 subwoofers for more bass output and lower distortion.

Figure 7: B12 Placement in Opposite Corners

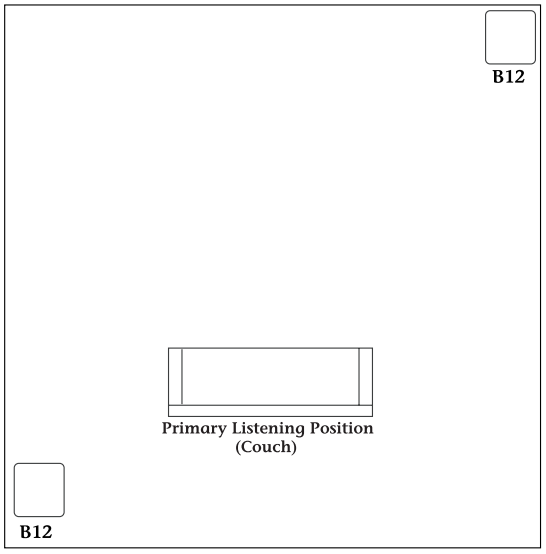


Figure 8: Subwoofer Placement at Opposite Walls

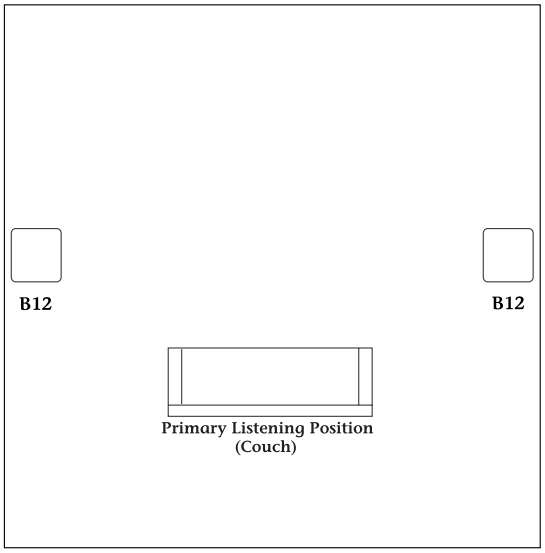


Figure 9: Alternative Placement at Opposite Walls

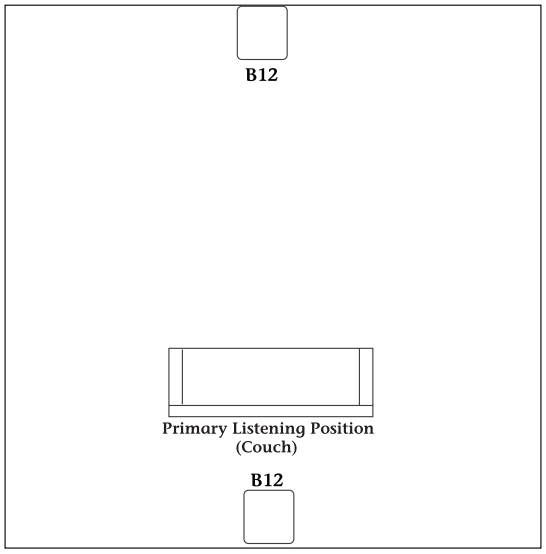
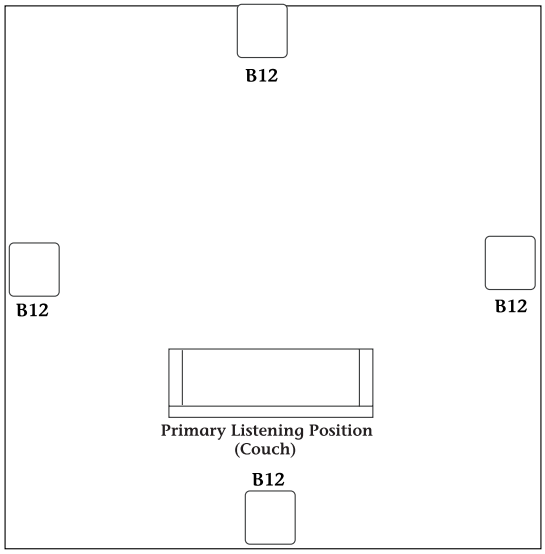


Figure 10: Four B12 Subwoofers Placement



General Placement Guidelines (continued)

- The use of four properly placed Concerta B12 subwoofers can achieve the smoothest low frequency response with the most consistent sound throughout the listening area. When using four B12s, the flattest response is usually obtained by placing one pair at the mid-way point of the opposite front and back walls, and a second pair at the mid-way points of the side walls as shown in Figure 10 (right). Your Revel dealer can use in-room measurements to fine-tune the locations to account for variations in construction among the room walls.

- Another option is to place the four Concerta B12 subwoofers in the corners of the listening room as shown in Figure 11 (right).

Figure 11: Four B12s Corner Placement

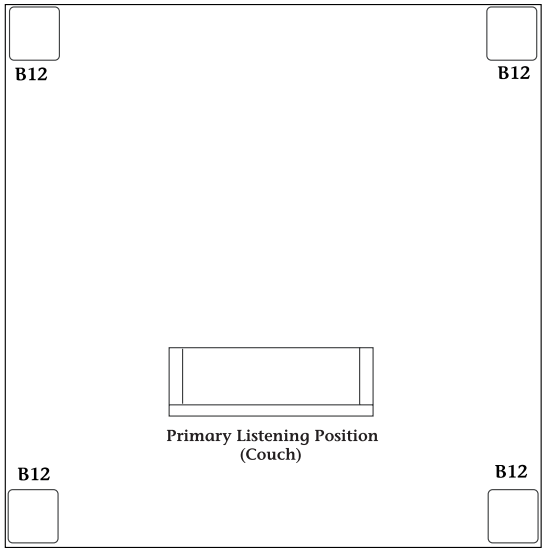
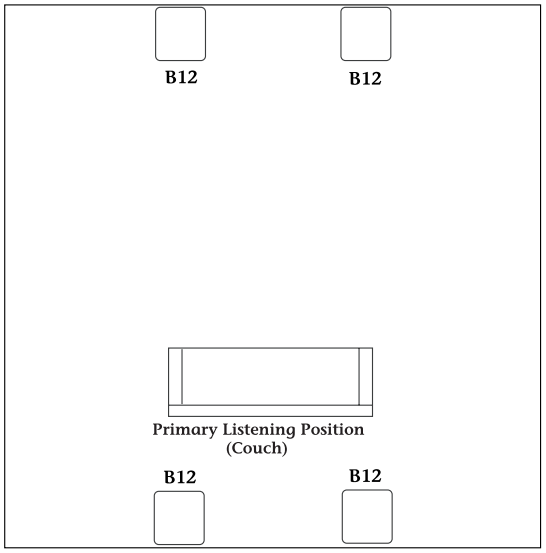


Figure 12: Third Alternative for Four B12s Placement



General Placement Guidelines (continued)

- Another alternative is to place the four B12s on the front and back walls one-third of the distance into the room as shown in Figure 12 (above).

- The placement of the other system loudspeakers in the listening room will also affect the way sound (below 300Hz) is reproduced. Just as you would for the subwoofers, use a modeling program or trial-and-error measurements to determine the best locations.

- Since listening and speaker locations are equally important, the trial-and-error process can be time consuming. However, the sonic rewards are well worth the time spent determining the ideal placement locations. Remember that peaks (below the subwoofer crossover frequency) can be eliminated by the proper adjustment of the Concerta B12's EQ controls, but dips cannot be corrected. Therefore, the most important objective is to find locations that result in the minimum number (and severity) of dips. See your authorized Revel dealer for additional information.

Note

For detailed B12 Room Equalizer Parametric Control instructions, go to www.revelspeakers.com.

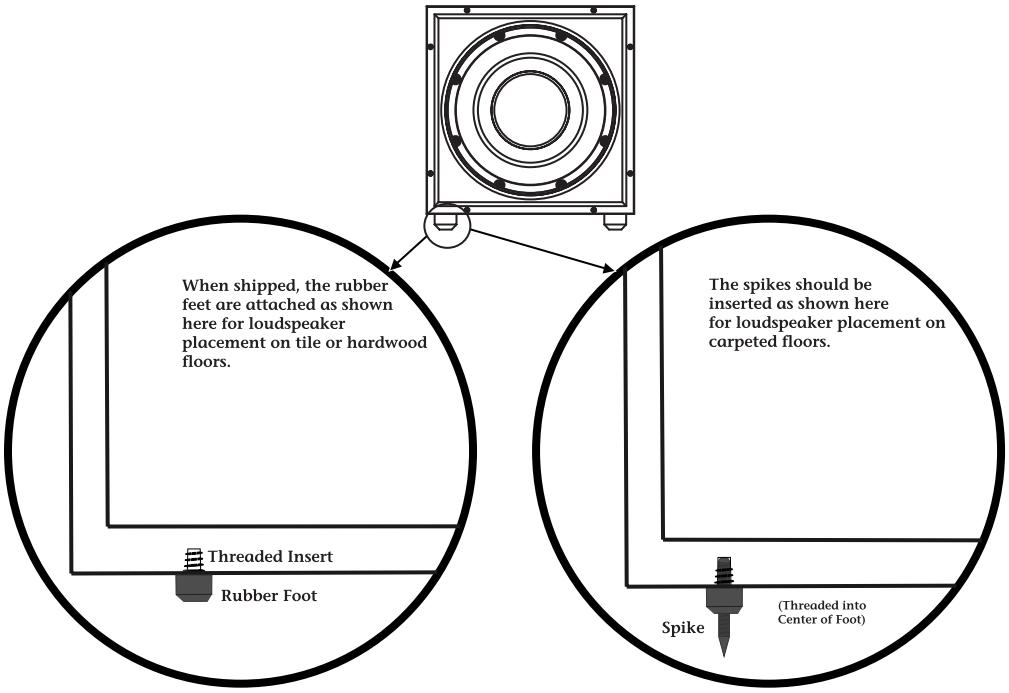
- After placing the B12s, begin playback of a familiar music or film source that has substantial bass content. Listen from the primary listening position, increasing the overall volume of the system to a comfortable level. Adjust the Subwoofer Level (Volume) Control until you obtain the desired blend of bass. Also, test the subwoofer level by playing a recording of a deep male voice. Setting the subwoofer level (or crossover frequency) too high will result in unnaturally "thick" or "booming" vocal reproduction. Bass response should not overpower the room. The bass should be adjusted to achieve a harmonious blend across the entire audible range.

- If you are using a multi-channel receiver or processor with a subwoofer output, it is preferable to use the subwoofer level adjustment on the processor. Set the B12 level control to the indicated "Nominal" position.

Note

Setting the volume level of the subwoofer in relation to the left and right front speakers is of critical importance because it is essential that the subwoofer integrate smoothly with the entire system. Setting the volume level too high will result in an overpowering bass. Setting the volume level too low will negate the benefits of the B12.

Figure 13: Adjustable Spike feet



FEET AND OPTIONAL SPIKES

When shipped, rubber feet are attached to the bottom of the cabinet for optimal stability, accommodating installations on tile and hardwood floors. The B12 is shipped as shown on the left side of Figure 13 (above).

Four metal spikes are included for use when the subwoofer is placed on carpeted surfaces. Insert the spikes into the threaded inserts at the bottom of the feet as shown on the right side of Figure 13 (above), so that the spikes protrude from the cabinet.

Note

When moving the B12, avoid dragging it across the floor, as this will damage the feet, the spikes and/or the cabinet itself. Always lift the B12 and carry it to its new location.

To install the spikes:

1. Place the B12 on its side on a soft towel or carpeted floor.

2. Rotate the spike clockwise into the threaded insert in the center of a rubber foot, round end first, as shown on the right side of Figure 13 (above).

3. Repeat step 2 for the remaining three spikes. Make sure to thread each spike fully to achieve a level balance.

4. When all four spikes have been installed, stand the B12 in the upright position. If needed, repeat steps 1 and 3 to achieve a level balance.

5. Repeat these steps to install the spikes on the other B12.

MAKING CONNECTIONS

The B12 features gold-plated stereo RCA line-level inputs to accomodate connections.

CAUTION

Never make or break connections unless all system components are powered off.

- Review the owner's manuals for associated audio components to determine their connection procedures.

Note

Some processors might incorrectly label the subwoofer output as "LFE." If there is no subwoofer output, but there is an LFE output, use the LFE output. Some processors offer both "Subwoofer" and "LFE" outputs. In those cases, the "Subwoofer" output should always be used.

TYPICAL CONFIGURATION WITH A RECEIVER OR MULTI-CHANNEL PROCESSOR

Summed (mono) subwoofer connections are made between one B12 input and the receiver/processor Subwoofer output as shown in Figure 14 (right).

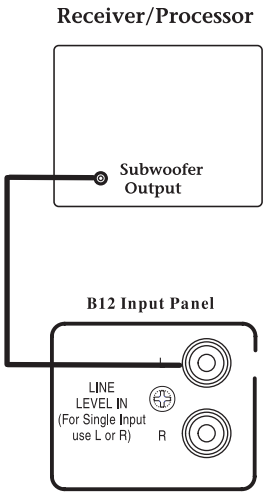
To make single-wired connections to a receiver/processor with a subwoofer output:

- Connect a single cable from the Subwoofer or LFE output on your receiver/processor to either the left or right input on the B12 as shown in Figure 14 (right).

Note

In this case, you do not need to use a Y-adapter. Simply connect the subwoofer output on your receiver/processor to either the left or right RCA input on the subwoofer.

Figure 14: Typical Connection



TWO-CHANNEL APPLICATIONS WITHOUT AN EXTERNAL CROSSOVER

This configuration is for use with 2-channel pre-amplifier/power amplifier combinations or 2-channel receivers. The internal low-pass filter in the B12 is used to limit its frequency range and prevent undesirable overlap with the main loudspeakers.

Two-Channel Applications Without An External Crossover (continued)

To make connections to a receiver or 2-channel pre-amplifier with full-range outputs for left and right channels:

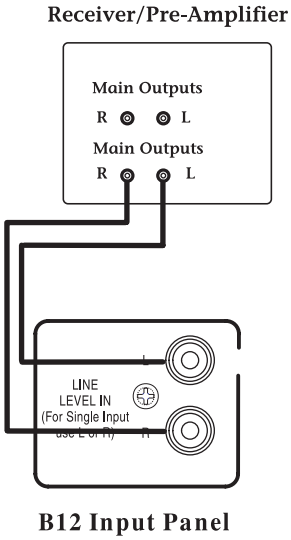
1. Connect a pair of cables to the left and right main outputs on your receiver/pre-amplifier.

2. Connect the other end of the cables to the B12 subwoofer's right and left line-level inputs as shown in Figure 15 (below).

Note

This configuration applies to receivers with pre-amp outputs, or to pre-amp/power-amplifier configurations in which there are two sets of "Main" outputs on the pre-amplifier. If the receiver has jumpers from the "Pre-" or Main-out" to the "Amp in" connectors or if the pre-amplifier has only one set of "Main-out" connectors, a Y-adapter should be used to send the same signal to both the main power amplifier and the subwoofer(s). The "Tape Out" or "Record Out" connectors cannot be used.

Figure 15: B12 Connecton to Main Outputs



MULTIPLE B12 CONNECTIONS

Connections are made between multiple B12s and a receiver/processor with a sub-woofer output as shown in Figure 16 (below).

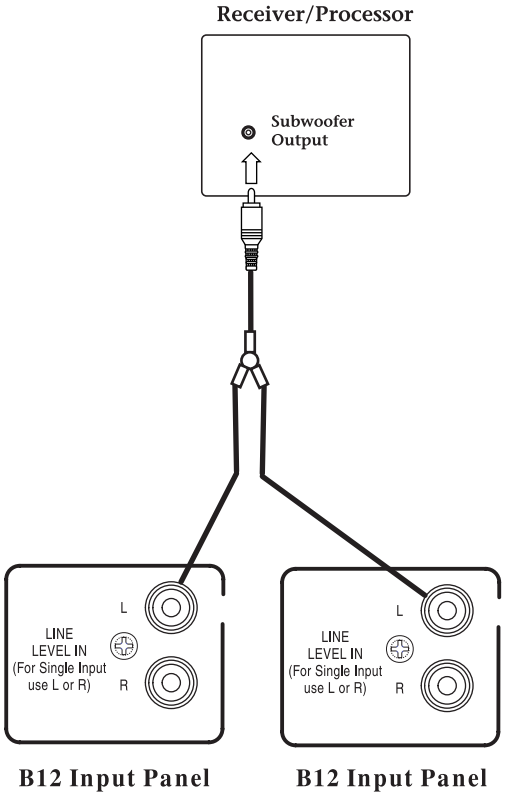
To make connections between two B12s and a receiver/processor with a sub-woofer output:

1. Connect a single cable from the sub-woofer output on your receiver/proces-sor to the single input on the Y-adapter as shown in Figure 16 (below).

2. Connect cables from the two outputs on the Y-adapter to the B12 left inputs as shown in Figure 16 (below).

3. Additional B12s may be connected by using additional Y-adapters.

Figure 16: Connecting Multiple B12s



TYPICAL CONFIGURATION WITH A RECEIVER/PROCESSOR WITH TWO SUBWOOFER OUTPUTS

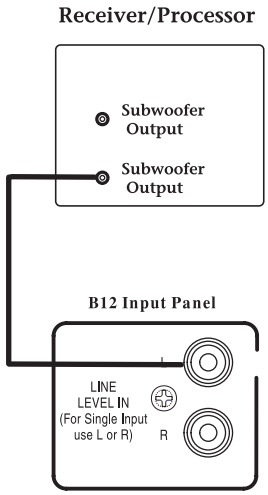
Connections can also be made between a receiver/processor with multiple subwoofer outputs as shown in Figure 17 (below).

To make a connection between a B12 and a receiver/processor with two subwoofer outputs using a single cable:

1. Set the processor to "mono subwoofer."

2. Connect cables from either subwoofer output to either B12 input as shown in Figure 17 (below).

Figure 17: Typical Connection with Receiver/Processor with Two Subwoofer Outputs



ALTERNATE CONFIGURATION WITH A RECEIVER/PROCESSOR WITH TWO SUBWOOFER OUTPUTS

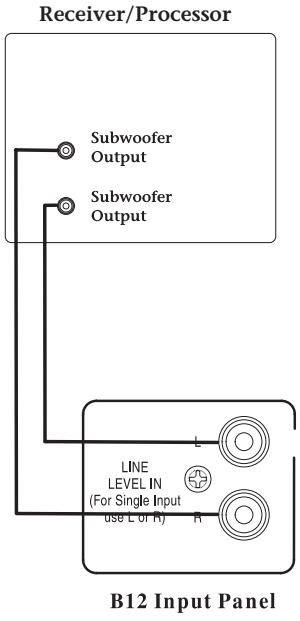
Connections can also be made between the B12 inputs and a receiver/processor with multiple subwoofer outputs as shown in Figure 18 (below).

To make connections between a B12 and a receiver/processor with two subwoofer outputs using a pair of cables:

1. Set the processor to "stereo subwoofers."

2. Connect cables from the two subwoofer outputs to the B12 left and right inputs as shown in Figure 18 (below).

Figure 18: Alternate Connection with Receiver/Processor with Two Subwoofer Outputs



STEREO BASS CONNECTIONS WITH MULTIPLE B12S

Connections are made between two B12s and a receiver/processor with multiple subwoofer outputs as shown in Figure 19 (below).

To make connections between multiple B12s and a receiver/processor with multiple subwoofer outputs:

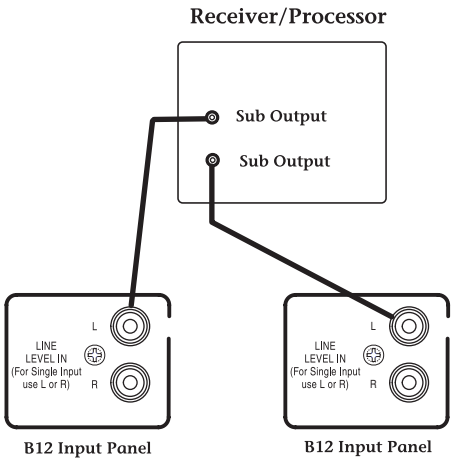
1. Set the processor to "stereo subwoofer" (if stereo bass is desired).

2. Connect a single cable from one processor output to one B12 left input as shown in Figure 19 (below).

3. Connect a single cable from the other processor output to the other B12 subwoofer's left input as shown in Figure 19 (below).

If four B12s are used, use Y-adapters to enable connections.

Figure 19: Stereo Bass Connection for Multiple B12s



OBTAINING SERVICE

To obtain warranty or non-warranty service, contact your authorized Revel dealer. Refer to the included Revel Warranty Card for warranty information.

SPECIFICATIONS

Specification	Value
Frequency Response	+/- 0.5dB in the pass band
Low Frequency extension (anechoic)	-3dB at 28 Hz -6dB at 25 Hz -10dB at 23Hz
Maximum Amplifier Output (20Hz-150Hz with no more than 0.1% THD)	650 watts
Low Pass Crossover Frequencies	50Hz-175Hz, 24dB/octave, continuosly variable
Power	120 V_{ac} @ 60Hz, 577 W_{rms} 230 V_{ac} @ 50Hz, 600 W_{rms}

Specification	Value
Width	13.12 inches (33.32cm)
Height	14.10 inches (35.81cm) (including feet)
Depth	15.21 inches (38.63cm) (not including grille) 15.96 inches (40.54cm) (including grille)
Weight	63.9 pounds (29.0kg) (not including grille) 64.4 pounds (29.2kg) (including grille)

Specifications are subject to change without notice.

DECLARATION OF CONFORMITY

Application of Council Directive(s):

89/336/EEC and 73/23/EEC, as amended.

Standard(s) to Which Conformity is Declared:

EN 55013 : 2001

EN 55020 : 2002

EN 61000-3-2 : 2000

EN 61000-3-3 : 1995 + A1 : 2001

EN 60065 : 1998

Manufacturer: Harman Specialty Group
3 Oak Park
Bedford, MA 01730-1413 USA

The equipment identified here conforms to the Directive(s) and Standard(s) specified above.

Type of Equipment: Powered Subwoofer

Model: Concerta B12

Date: December 2004

Harman Specialty Group
Vice President of Engineering
3 Oak Park
Bedford, MA 01730-1413 USA
Tel: 781-280-0300
Fax: 781-280-0490

NOTES

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3 Oak Park, Bedford, MA, 01730-1413 USA | Telephone: 781-280-0300 | Fax: 781-280-0490 | www.revelspeakers.com
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