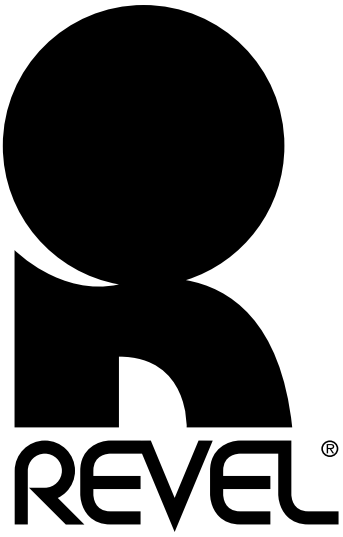
# Revel® Performa™ F52 Loudspeaker

## Owner's Manual



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Part No. 353739-001 | Rev A | 02/05



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# DOCUMENTATION CONVENTIONS

This document contains general safety, installation, and operation instructions for the Revel Performa F52 Floor-Standing Loudspeaker. 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.

This owner's manual assumes that two F52s are included in the loudspeaker setup.

# ABOUT THE F52

Thank you for purchasing the Revel Performa F52 floorstanding Loudspeaker. A true full-range reproducer, the F52 delivers an impressive combination of wide frequency range, uncompressed dynamic range, and low distortion across the entire audible spectrum. Five proprietary transducers, sophisticated filter networks, and an acoustically inert cabinet allow the F52 to achieve acoustical precision and performance befitting the most demanding home entertainment systems.

The F52 features advanced woofer and midrange motor structures that include two high-grade Neodymium magnets placed at the center of the motor structure, inside the voice coil, for improved magnetic shielding. Inside the motors, black-plated steel shield cups facilitate heat dissipation for higher power handling. Integrated aluminum flux stabilization rings minimize modulation inside the motor static gap flux fields, greatly reducing distortion. Copper rings inside each motor gap reduces distortion even further. Both rings are optimally sized and placed to maintain constant linear voice coil inductance with forward and backward cone motions.

Combining superior form and function, the F52 transducers feature a distinctive design that allows for smoother frequency response. The woofer and midrange cones are constructed with Organic Ceramic Composite cone material to reduce distortion, while the spiders are constructed with a high-strength Nomex blend with optimized geometry for increased linearity.

A three-way design, the F52 transducers accurately reproduce the entire audible spectrum. Three 6.5-inch (165mm) woofers deliver highly refined and dynamically authoritative low frequencies down to the very lowest octaves. Housed in its own sub-enclosure, a 5.25-inch (133mm) midrange handles critical mid-band frequencies with natural tonal balance over a wide operating range. A 1-inch (25mm) aluminum-dome tweeter, incorporating a custom-designed wave guide, blends perfectly with the midrange and reproduces high frequencies well above audible levels. The tweeter is vented for improved cavity damping and low-frequency mechanical resonance.

High-order filters at 200Hz and 2.3kHz optimize loudspeaker on and off-axis response, helping to ensure smooth octave-to-octave balance and timbral accuracy. Separate woofer, midrange, and tweeter filter boards prevent mutual interference between filter network components, dramatically reducing distortion over a wide dynamic range. Separate Low Frequency Compensation and Tweeter Level switches allow precise adjustment for less-than-ideal listening room acoustics and loudspeaker placement. Removable shorting straps and gold-plated binding posts accommodate single-wired, bi-wired, and bi-amplified connections.

The F52 cabinet is constructed with 1-inch (25mm) thick walls and extensive internal bracing to reduce cabinet-induced colorations. Rounded baffle edges minimize diffraction and optimize off-axis response for smoother high-frequency reproduction. Adjustable spikes are attached to the bottom of the cabinet for optimal stability, accommodating installations on tile, hardwood, or carpeted floors. A sonically optimized grille is also included.

## *About the F52* (continued)

Since 1996, Revel has stood at the forefront of loudspeaker design. Backed with Harman International's extensive research and design facilities, all Revel Loudspeakers benefit from cutting-edge 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 precise tests and measurements.
- Finite element analysis produces advanced loudspeaker modeling.
- A stereo lithography apparatus helps to achieve tight tolerances.

Adding to the proud lineage of Revel's Ultima and Performa Series Loudspeakers, the F52 further advances Revel's reputation as the leading designer and manufacturer of high-quality, high-performance loudspeakers. Each F52 is individually hand-tuned during manufacturing to match the production reference standard within a fraction of a decibel, ensuring incomparable loudspeaker-to-loudspeaker consistency. As a result, the F52 is an ideal loudspeaker for the most demanding listeners.

## HIGHLIGHTS

- True full-range reproduction
- Three proprietary 6.5-inch (165mm) woofers with Organic Ceramic Composite cones
- Proprietary 5.25-inch (133mm) midrange with Organic Ceramic Composite cone
- Proprietary 1-inch (25mm) aluminum dome tweeter incorporating a proprietary wave-guide
- High output with low distortion
- Separate filter boards for each frequency range
- Adjustable low frequency compensation
- Adjustable calibrated tweeter level
- Advanced woofer and midrange motor structure
- Magnetic shielding
- Large voice coils for wide dynamic range without compression
- Hand-tuned to match the production reference standard within a fraction of a decibel
- Adjustable spikes
- Elegant cabinet design in real wood veneer finishes
- Removable gold-plated shorting straps
- Gold-plated binding posts.

## PRODUCT REGISTRATION

Please register the F52 within 15 days of purchase. To do so, register online at www.revelspeakers.com or complete and return the included product registration card. Retain the original, dated sales receipt as proof of warranty coverage.

# UNPACKING

The F52 requires special care and handling during unpacking. Pay particular attention to the precautions that appear in this section and throughout this owner's manual.

## WARNING

Do not attempt to lift or move the F52 alone. Proper lifting requires at least two strong people. When lifting the F52, keep your back as straight as possible using the leg muscles to lift. When moving the F52, rock it side-to-side into the desired position. Failure to follow these procedures may result in personal injuries and/or loudspeaker damage.

To unpack the F52:

1. Place the packing carton on its side and fully open the top flaps as shown in figure 1 (below).

2. Without allowing the top flaps to close, stand the packing carton in an inverted position as shown in Figure 1 (below).

3. Lift the packing carton off of the loudspeaker. Use caution to avoid damaging the loudspeaker cabinet and objects located above the packing carton. At this point, the loudspeaker will be upsidedown.

4. Remove the grille from the back middle pad. Then remove the bottom pad and the front and back middle pads. These items are identified in Figure 2 (next page).

### *Note*

*While the loudspeaker is upside-down, it is recommended to adjust the spikes if the F52 will be placed on a carpeted floor. Refer to the "Adjustable Spikes" section for instructions.*

5. Grasping the sides of the cabinet, place the F52 on its side. Then place the F52 in the upright position without allowing the protective bag identified in Figure 2 (right) to become "stuck" under the spikes.

6. When the F52 is in the upright position, remove the protective bag.

Save all packing materials for possible future shipping needs.

*Figure 1: Unpacking the F52*

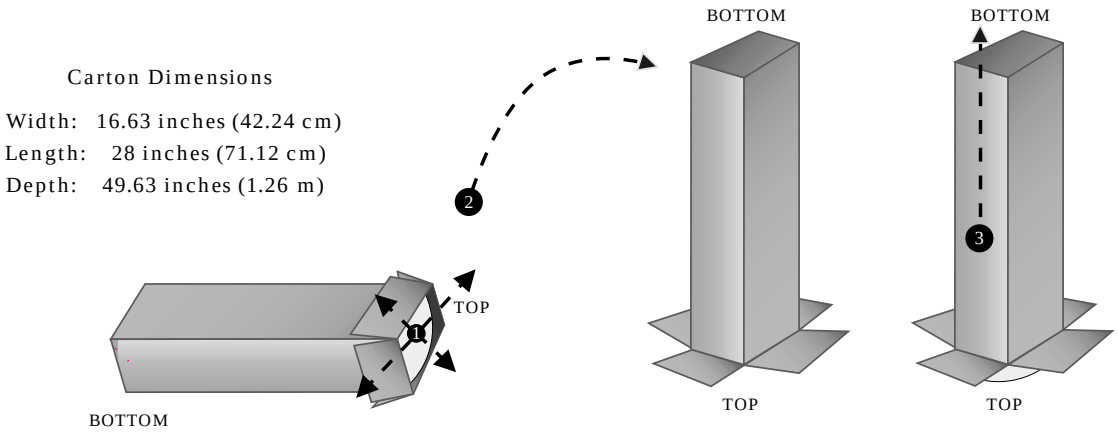
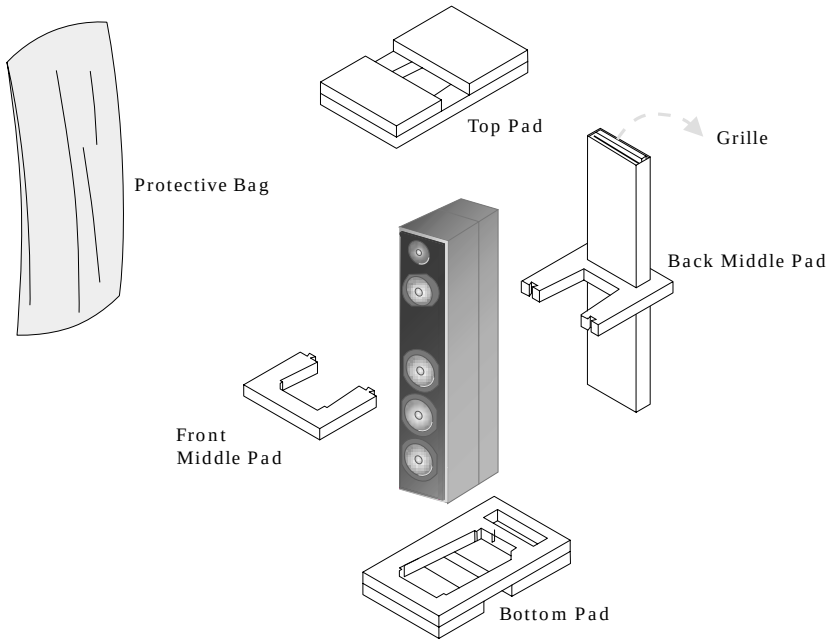


*Figure 2: Packing Materials*




# LOUDSPEAKER OVERVIEW

## DRIVER COMPLEMENT

The numbers in Figure 3 (next page) correspond with the numbered items in this section.

1. Proprietary 1-inch (25mm) aluminum dome tweeter incorporating a proprietary wave-guide.
2. Proprietary 5.25-inch (133mm) midrange with Organic Ceramic Composite cone.
3. Three proprietary 6.5-inch (165mm) woofers with Organic Ceramic Composite cones.

## CABINET

Reduces cabinet-induced colorations with 1-inch (25mm) thick walls and extensive internal bracing. Adjustable spikes are attached to the bottom of the cabinet for optimal stability, accommodating installations on tile, hardwood, and carpeted floors.

The cabinet's wood veneer finish does not require routine maintenance. Cabinet surfaces that have been marked with dust, fingerprints, or other dirt can be cleaned using a soft cloth and a high-quality furniture polish. Use a high-quality wax for a higher-gloss finish.

- To clean the cabinet, apply furniture polish to a soft cloth; then use the cloth to lightly wipe the cabinet surface.
- To clean the grille, gently vacuum using a soft-bristled brush vacuum attachment.

## CAUTION

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

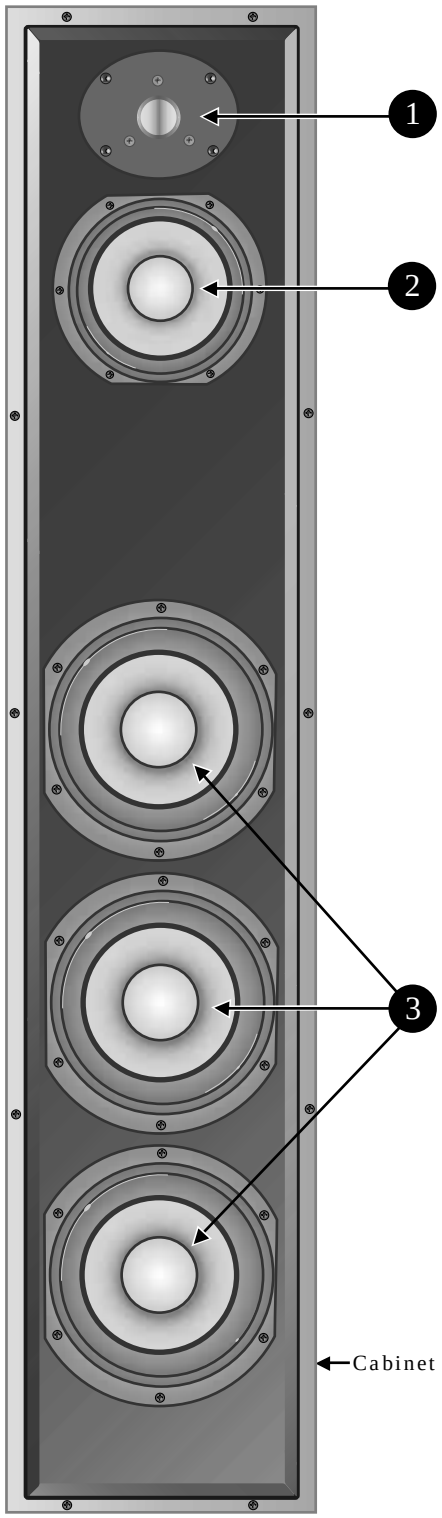
## FILTER NETWORK

Optimize loudspeaker on and off-axis response with high-order filters at 200Hz and 2.3kHz, helping to ensure smooth octave-to-octave balance and timbral accuracy. Separate woofer, midrange, and tweeter filter boards prevent mutual interference between filter network components, dramatically reducing distortion over a wide dynamic range. Removable shorting straps and gold-plated binding posts accommodate single-wired, bi-wired, and bi-amplified connections, while separate Low Frequency Compensation and Tweeter Level switches provide precise balance to compensate for less-than-ideal listening room acoustics and loudspeaker placement.

## WOOFER PORT

Enhances low-frequency extension. Computer-optimized internal and external flares minimize distortion resulting from air turbulence. The woofer port is identified in Figure 4 (next page).

*Figure 3: F52 Loudspeaker (Front View)*




*The numbers in Figure 3 (above) correspond with the numbered items in the "Driver Complement" section on this page.*

## INPUT PANEL

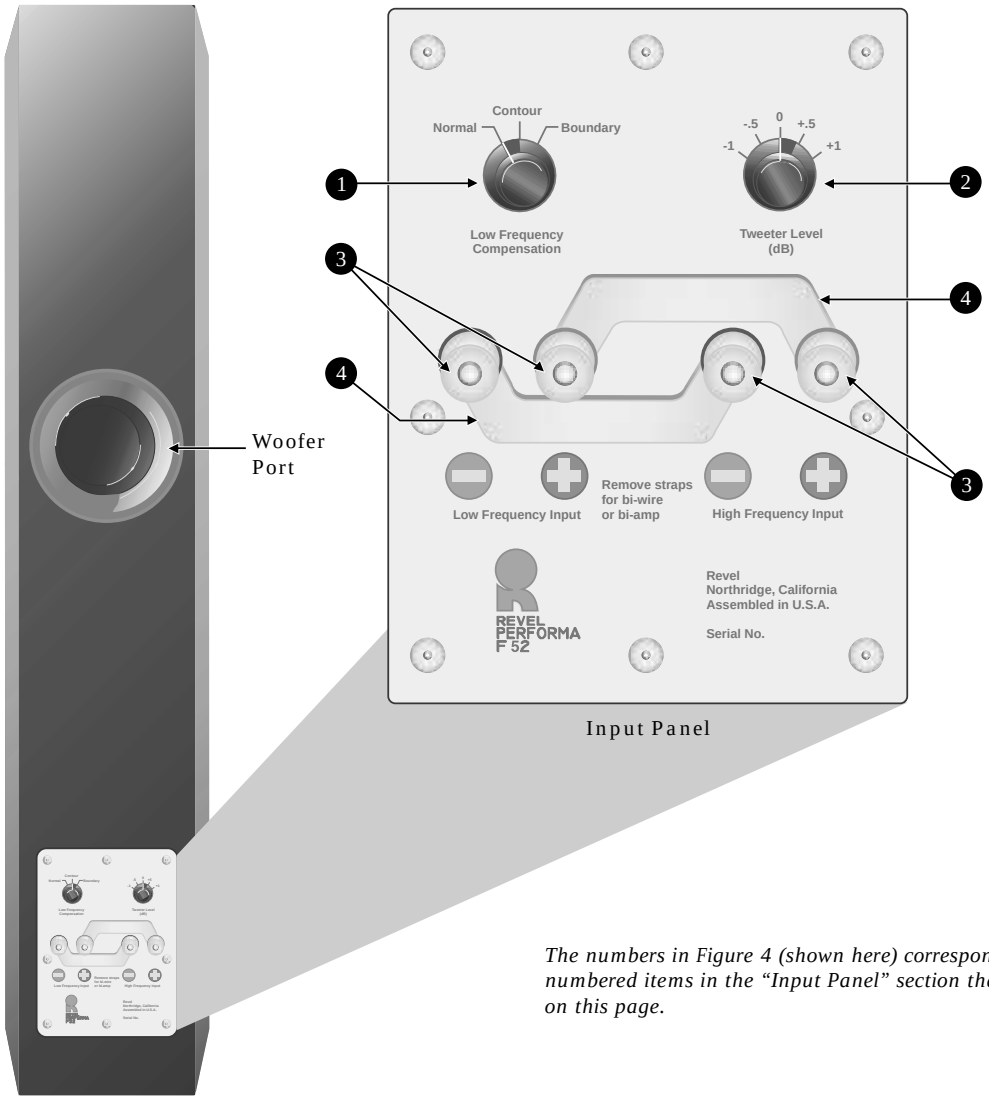
The numbers in Figure 4 (below) correspond with the numbered items in this section.

### 1. Low Frequency Compensation Switch

Compensates for less-than-ideal loudspeaker placement near a wall, in an entertainment center, or in a room that “boosts” low frequencies.

- Select the Normal setting if the loudspeaker is located at least 3 feet (0.91m) from walls and other large objects.
- Select the Contour setting to reduce low-frequency signal levels.
- Select the Boundary setting if the loudspeaker is built into an entertainment center or shelving unit or if the loudspeaker is located less than about 2 feet (0.61m) from walls or other large objects.

*Figure 4: F52 Loudspeaker (Rear View)*




*The numbers in Figure 4 (shown here) correspond with the numbered items in the “Input Panel” section that begins on this page.*

2. Tweeter Level (dB) Switch

Alters tweeter output levels by –1, –0.5, 0, +0.5, or +1dB.

*Note*

*Refer to the "Optimizing Performance" section for more information about the Low Frequency Compensation and Tweeter Level switches.*

3. Input Terminals

Provide high and low-frequency connections from the associated power amplifier(s). One pair of high-frequency and one pair of low-frequency gold-plated binding posts are available. The input terminals can be configured for single-wired, bi-wired, or bi-amplified connections. Refer to the "Making Connections" section for additional information.

4. Shorting Straps

Accommodate single-wired, bi-wired, and bi-amplified connections. Two gold-plated shorting straps are installed for single-wired connections. The shorting straps must be removed when the input terminals are configured for bi-wired or bi-amplified connections. Refer to the "Making Connections" section for additional information.

# INSTALLATION CONSIDERATIONS

Loudspeaker fidelity depends on the following three factors:

1. Loudspeaker accuracy
2. Loudspeaker placement
3. Listening room acoustics

Advanced Revel design features allow the F52 to achieve exceptional acoustical precision. Each F52 is individually hand-tuned during manufacturing to match the production reference standard within a fraction of a decibel, ensuring incomparable loudspeaker-to-loudspeaker consistency. As a result, experimenting with loudspeaker placement and listening room acoustics have the most significant impact on the F52's performance.

## LOUDSPEAKER PLACEMENT

The bulleted items that begin below indicate important loudspeaker placement considerations for the F52.

- Remove all obstructions between the F52 and the primary listening position. For instance, a coffee table between the F52 and the primary listening position will degrade stereo imaging and timbre. Placing the F52s near large objects may also cause unwanted reflections.

- For the best stereo imaging, place the F52s at equal distances from the primary listening position and the side walls as shown in Figure 5 (next page).

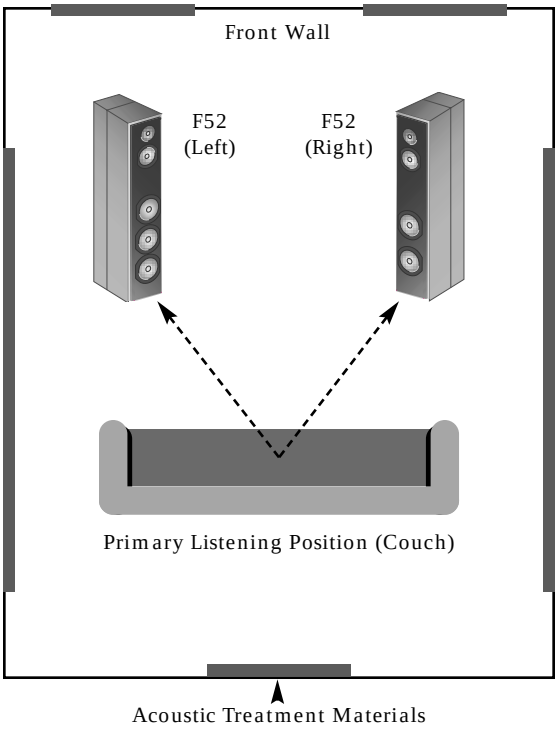
## *Loudspeaker Placement* (continued)

- For optimal stereo imaging and timbre, point the F52s almost directly toward the primary listening position as shown in Figure 5 (right). The toe-in angle can be reduced to widen the soundstage, even to the point at which the F52s are pointing straight forward.

- Move the F52s farther from the front and side listening room walls to improve stereo imaging and the sense of spaciousness in the listening space.

- Move the F52s closer to the corners or walls of the listening room to increase bass response.

*Figure 5: Loudspeaker Placement*




## LISTENING ROOM ACOUSTICS

Listening rooms have a profound impact on sound, particularly at lower frequencies. In fact, listening rooms can dominate sounds below about 400Hz. Ideally, listening rooms would include optimized dimensional ratios to minimize the effects of room resonances. But in reality, most listening rooms are not designed to enhance loudspeaker performance.

The interaction between loudspeakers and listening rooms is complex, depending on two important determinants that affect the loudspeaker and the listener.

1. Surfaces and other boundaries often cause large peaks and dips in low-frequency extension. These peaks and dips often range 12dB or more.

2. Standing waves (also known as room modes or resonances) interact with both the loudspeaker and the listener, resulting in large frequency response errors.

Unfortunately, there is no simple solution that considers both factors. Even computer software programs that examine one or both factors may not calculate proper primary listening position or loudspeaker placement values.

In most cases, proper selection of the primary listening position combined with proper placement of the loudspeaker can still result in superior performance at lower frequencies. The difference between superior and inferior results is often just a small adjustment of the primary listening position or loudspeaker placement. Contact an authorized Revel dealer for assistance.

### *Acoustic Treatment Materials*

The F52 features high-order filters at 220Hz and 2.3kHz that optimize loudspeaker on-axis and off-axis response, minimizing degradations that occur in overly "live" rooms. Placing minimal acoustic treatment materials at primary reflection points will reduce these distortions even further. Ideally, acoustic absorbers should be placed at the first reflection points on the front and side walls and either acoustic absorbers or diffusers should be placed at the first reflection point on the rear wall.

Because the listener's eyes and ears are on the same plane, the "mirror method" is an accurate determinant of critical reflection points. This method can be used to determine reflection points for side walls, rear walls, front walls, and even the ceiling. Applying acoustic treatment materials to the side walls is most important, followed by the front wall, rear wall, and ceiling.

To determine reflection points using the mirror method:

1. Once the F52s have been placed, sit in the primary listening position and ask another person to slide a mirror along the listening room walls.

2. Note the locations at which the person sitting in the primary listening position can see either F52. Be sure to look for both F52s in the reflection on each room boundary. These are reflection points that require acoustic treatment materials.

If acoustic treatment materials are not available, hanging a rug over the reflection points will help reduce degradation in overly "live" rooms. Carpeting the floor between the loudspeakers and the primary listening position and placing irregular surfaces such as bookcases at first reflection points will also help minimize strong reflections.

## ADJUSTABLE SPIKES

When shipped, adjustable spikes are attached to the bottom of the cabinet for optimal stability, accommodating installations on tile, hardwood, and carpeted floors. The F52 is shipped with spikes attached as shown on the left side of Figure 6 (next page), with the round end protruding from the cabinet. The protective cap is placed over the round end to protect tile and hardwood floors.

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*Note*

*When moving the F52, avoid dragging it across the floor.*

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If the F52 is placed on a carpeted floor, the spikes should be adjusted as shown on the right side of Figure 6 (next page), with the sharp end protruding from the cabinet. If needed, follow the instructions that begin below to adjust the spikes.

To adjust the spikes:

1. Place the F52 on its side on a soft towel or carpeted floor.

2. Remove the protective cap from the round end of the spike. Save it for possible future use.

3. Rotate the locking ring counterclockwise to detach it from the spike. Save it for use in step 6.

4. Rotate the spike counterclockwise to remove it from the cabinet.

*Adjustable Spikes* (continued)

5. Rotate the spike clockwise into the cabinet, round end first, as shown on the right side of Figure 6 (below).

6. Reattach the locking ring, rotating it clockwise to firmly secure the spike to the cabinet.

7. Repeat steps 2 through 6 for the remaining three spikes. In step 6, make sure to thread each locking ring to achieve a level balance.

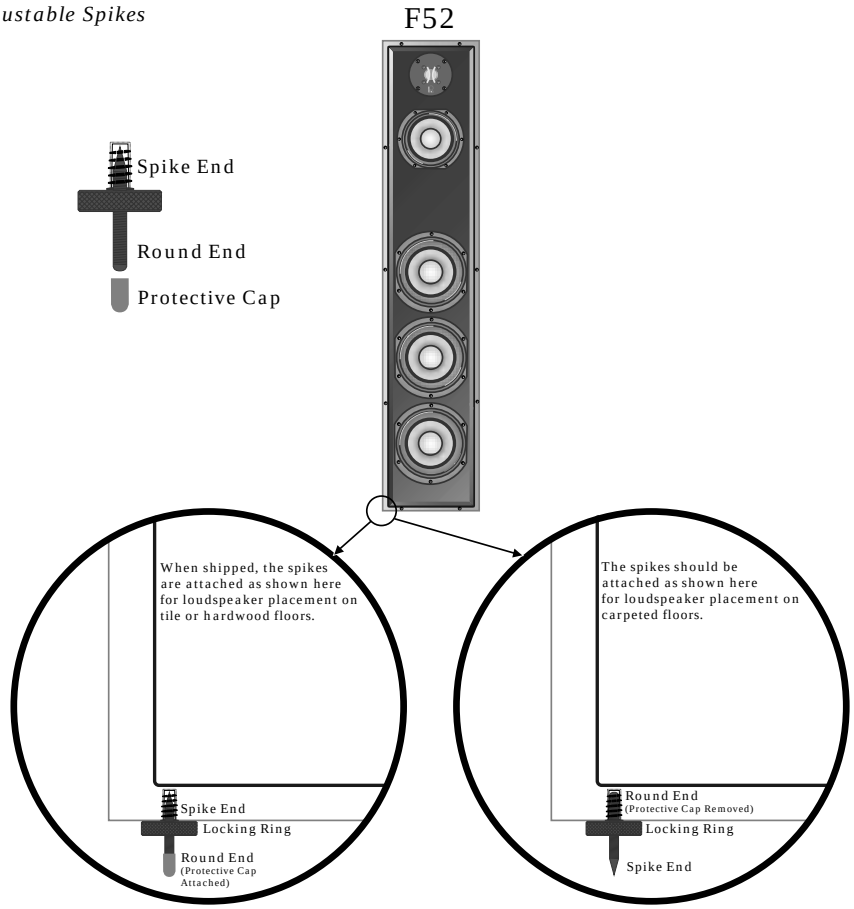
8. When all four spikes have been reversed, stand the F52 in the upright position. If needed, repeat steps 1 and 6 to achieve a level balance.

9. Repeat these steps to adjust the spikes on the other F52.

## CAUTION

Floor-standing loudspeakers such as the F52 have a high center of gravity, which may cause them to fall if tipped or improperly positioned. To avoid this, anchor the loudspeaker to the floor and/or wall using the same procedures and hardware used to anchor bookcases, wall units, and other furniture. Harman Specialty Group assumes no responsibility for proper selection and installation of hardware or for any personal injuries or product damages resulting from improper installation or a fallen loudspeaker.

*Figure 6: Adjustable Spikes*



# MAKING CONNECTIONS

The F52 features gold-plated binding posts and shorting straps that allow it to be configured for single-wired, bi-wired, or bi-amplified connections.

## CAUTION

- Never make or break connections unless all system components are powered off.
- Remove the shorting straps identified in Figure 4 before making bi-wired or bi-amplified connections. Failure to do so may cause damage to some power amplifiers.

Before making connections, note the following:

- The standard connection method uses a single loudspeaker wire. The F52 is equipped with two pairs of input terminals to allow for bi-wiring or bi-amplification. While Revel does not endorse one particular connection method over another, these additional connection options are available if desired. The design of this loudspeaker is such that optimal performance can be attained using the standard connection method.

- Make all connections observing the proper polarity, positive-to-positive (+) and negative-to-negative (–). Connections that do not observe the proper polarity will cause poor stereo imaging and diminished bass response.

- Use high-quality loudspeaker cable with a maximum total loop resistance of 0.07ohms or less (for each wire run). Refer to the table at the top below to determine the appropriate maximum wire gauge.

*Maximum Wire Gauge*

| Gauge (AWG) | Length (Feet) | Length (Meters) |
|---|---|---|
| 6 | 87 | 27 |
| 7 | 69 | 21 |
| 8 | 58 | 18 |
| 9 | 43 | 13 |
| 10 | 34 | 10 |
| 11 | 27 | 8 |
| 12 | 22 | 7 |
| 13 | 17 | 5 |
| 14 | 14 | 4 |
| 15 | 11 | 3 |
| 16 | 9 | 3 |
| 17 | 7 | 2 |
| 18 | 5 | 2 |

*Note*

*High loop resistances that exceed 0.07Ω (for each wire run) will cause the filter network to be mis-terminated, resulting in considerable degradation of sound quality.*

- Vertical bi-amplified connections must be made with identical power amplifiers. Horizontal bi-amplified connections can be made with identical or non-identical power amplifiers with identical gain factors.

## *Making Connections* (continued)

- When making bi-amplified connections, both power amplifiers must receive identical input signals from the associated preamplifier. A "Y" adaptor is required if the associated preamplifier does not offer two connectors per output channel. Otherwise, each power amplifier can be connected to a separate connector for the same output channel of the preamplifier.
- If desired, contact an authorized Revel dealer for information about the suitability of power amplifier components before connecting the F52 to the associated power amplifier.
- Review the owner's manuals for associated audio components to determine their connection procedures.

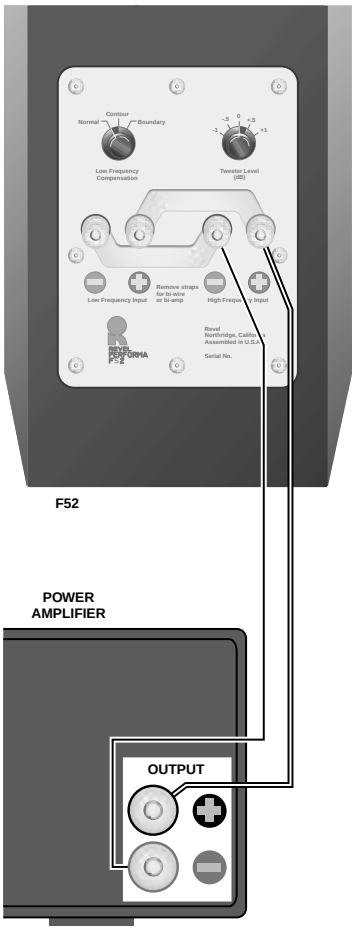
## SINGLE-WIRED CONNECTIONS

Single-wired connections are the most common. These are made between one pair of F52 input terminals and one power amplifier output channel as shown in Figure 7 (right).

To make single-wired connections:

1. Connect one pair of loudspeaker wires to the desired F52 input terminals. Then connect the same pair of loudspeaker wires to the desired power amplifier output channel. (The high-frequency input terminals are recommended.)
2. Repeat step 1 to connect the second F52 to a separate power amplifier output channel.

*Figure 7: Single-Wired Connections*



## BI-WIRED CONNECTIONS

Bi-wired connections are made between both pairs of F52 input terminals and one power amplifier output channel as shown in Figure 8 (right).

To make bi-wired connections:

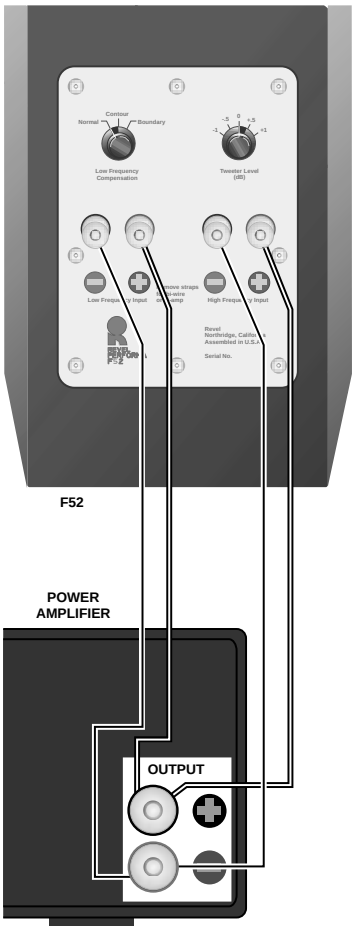
1. Remove the shorting straps identified in Figure 4.

2. Connect one pair of loudspeaker wires to the high-frequency pair of F52 input terminals. Then connect the same pair of loudspeaker wires to the desired power amplifier output channel.

3. Connect another pair of loudspeaker wires to low-frequency pair of F52 input terminals. Then connect the same pair of loudspeaker wires to the same power amplifier output channel that was selected in step 2.

4. Repeat steps 2 and 3 to connect both input terminals on the second F52 to a separate power amplifier output channel.

*Figure 8: Bi-Wired Connections*




## VERTICAL BI-AMPLIFIED CONNECTIONS

Vertical bi-amplified connections are made between both pairs of F52 input terminals and two separate power amplifier output channels. Each F52 is connected to its own power amplifier, which sometimes increases sonic performance. These power amplifiers must be identical. Vertical bi-amplified connections are shown in Figure 9 (next page).

*Note*

*When making vertical bi-amplified connections, both power amplifiers must receive identical input signals from the associated preamplifier. A "Y" adaptor is required if the associated preamplifier does not offer two connectors per output channel. Otherwise, each power amplifier can be connected to a separate connector for the same output channel of the preamplifier.*

## *Vertical Bi-Amplified Connections*

(continued)

To make vertical bi-amplified connections:

1. Remove the shorting straps identified in Figure 4.

2. Connect one pair of loudspeaker wires to the high-frequency pair of F52 input terminals. Then connect the same pair of loudspeaker wires to the desired power amplifier output channel.

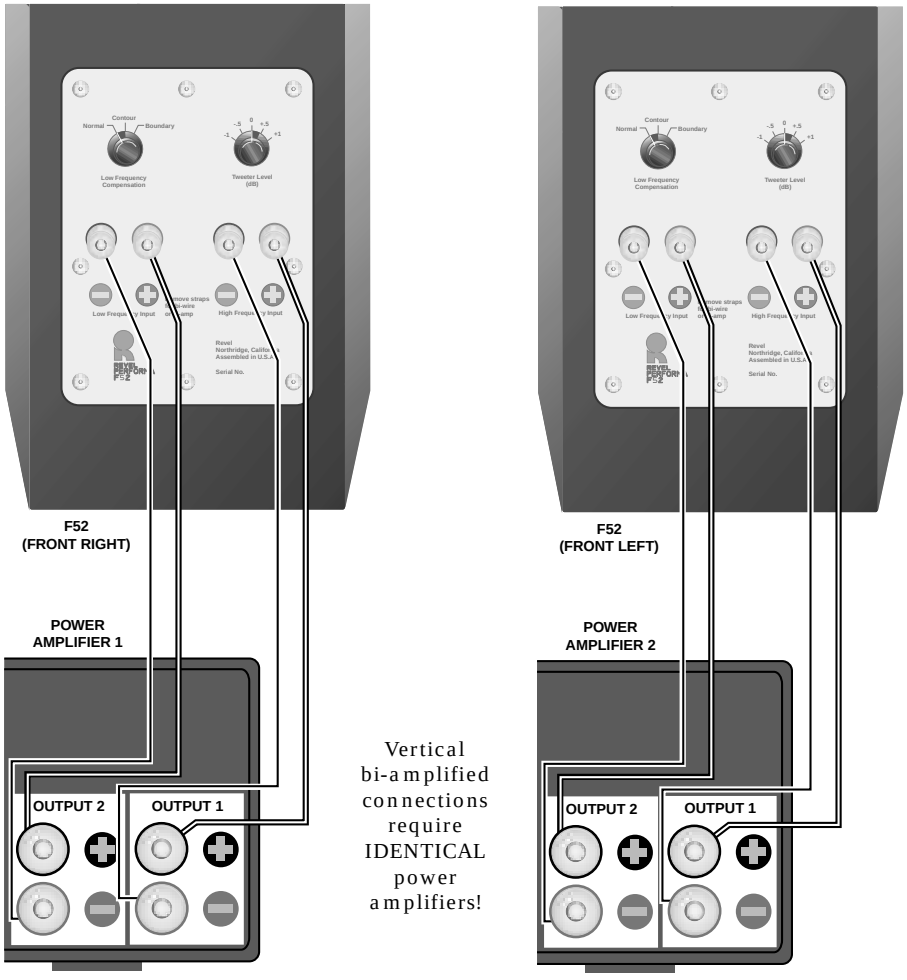
3. Connect another pair of loudspeaker wires to the low-frequency pair of F52 input terminals. Then connect the same pair of loudspeaker wires to a separate output channel on the same power amplifier.

4. Repeat steps 2 and 3 to connect both input terminals on the second F52 to another, identical power amplifier.

### *Note*

*Vertical bi-amplified connections must be made using two identical power amplifiers.*

*Figure 9: Vertical Bi-Amplified Connections*



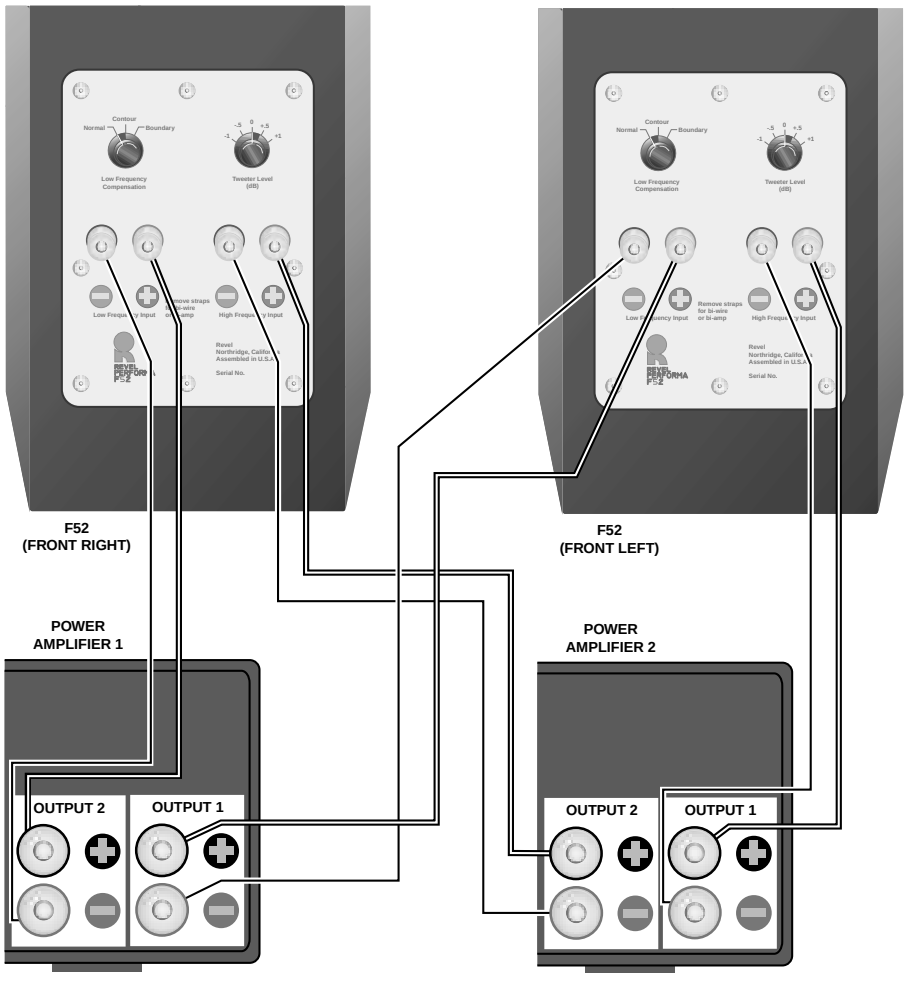
## HORIZONTAL BI-AMPLIFIED CONNECTIONS

Horizontal bi-amplified connections are made between both pairs of F52 input terminals and two separate output channels on two separate power amplifiers. The high-frequency pair of F52 input terminals is connected to one power amplifier, while the low-frequency pair is connected to another power amplifier.

These power amplifiers can be identical or non-identical, but must have identical gain factors. If the gain factors are not identical, a means of adjusting the input level of at least one power amplifier is required. Horizontal bi-amplified connections are shown in Figure 10 (below).

> *Note*
>
> *When making horizontal bi-amplified connections, both power amplifiers must receive identical input signals from the associated preamplifier. A "Y" adaptor is required if the associated preamplifier does not offer two connectors per output channel. Otherwise, each power amplifier can be connected to a separate connector for the same output channel of the preamplifier.*

*Figure 10: Horizontal Bi-Amplified Connections*



### *Horizontal Bi-Amplified Connections* (continued)

To make horizontal bi-amplified connections:

1. Remove the shorting straps identified in Figure 4.

2. Connect one pair of loudspeaker wires to the high-frequency pair of F52 input terminals. Then connect the same pair of loudspeaker wires to the desired power amplifier output channel.

3. Connect another pair of loudspeaker wires to the low-frequency pair of F52 input terminals. Then connect the same pair of loudspeaker wires to the desired output channel on another power amplifier.

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*Note*

*Horizontal bi-amplified connections can be made using identical or non-identical power amplifiers. However, these power amplifiers must have identical gain factors. If the gain factors are not identical, a means of adjusting the input level of at least one power amplifier is required. Contact an authorized Revel dealer for assistance.*

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4. Repeat step 2 to connect the high-frequency pair of F52 input terminals on the second F52 to the same power amplifier that was selected in step 2.

5. Repeat step 3 to connect the low-frequency pair of F52 input terminals on the second F52 to the same power amplifier that was selected in step 3.

# OPTIMIZING PERFORMANCE

To optimize the F52 for best performance:

1. Set the Tweeter Level switch to 0. (Different listening rooms may require other settings.)

2. Set the Low Frequency Compensation switch to the appropriate position.

   - Select the Normal setting if the loudspeaker is located at least 3 feet (0.91m) from walls.
   - Select the Contour setting to reduce low-frequency signal levels. This setting is useful for applications in which the loudspeakers cannot be optimally placed, or where room acoustics result in excessive low-frequency level. Such conditions are common with stiff room construction, such as concrete or brick. The Contour setting cannot perfectly counteract such conditions, but in may cases can significantly improve the overall spectral balance.
   - Select the Boundary setting if the loudspeaker is built into an entertainment center or shelving unit or if the loudspeaker is located less than about 2 feet (0.61m) from walls and other objects.

3. Begin playback of a familiar music or film source.

4. Listen from the primary listening position, increasing volume to a comfortable level.

5. Experiment with the F52's placement to achieve the best overall tonal balance, image precision, and sense of spaciousness in the listening room. Refer to the "Loudspeaker Placement" section for additional information about loudspeaker placement.

6. Adjust the Tweeter Level switch on each F52 to change high-frequency balance and timbre.

7. Repeat these steps to optimize performance of the second F52.

*Note*

*For best results, set the Tweeter Level switch on both F52s to the same position.*

### LOUDSPEAKER VOLUME LEVELS

High-order filters include steep cut-offs to reduce potential damage from "out-of-band" frequencies. Combined with carefully selected transducers and filter network components, this approach helps the F52 to maintain its performance under extreme operating conditions.

However, all loudspeakers have limits when it comes to continuous playback. To extend these limits, avoid playback at volume levels that distort or strain sound.

**CAUTION**

To avoid damage, reduce volume level immediately if loudspeaker sound is not clean and clear.

## SPECIFICATIONS

### DIMENSIONS & WEIGHT

Width: 9.5 inches (24.13cm)

Height: 43.94 inches (111.61cm)

Depth: 17.5 inches (44.45 cm) with grille
17 inches (43.18cm) without grille

Weight: 87.70 pounds (39.78kg) with grille
86.20 pounds (39.10kg) without grille

Specifications are subject to change without notice.

*Note*

*Other specifications are listed on the next page.*

## OBTAINING SERVICE

To obtain warranty or non-warranty service, contact an authorized Revel dealer. Refer to the included Revel warranty card for warranty information.

| Specification | Value | Definition |
|---|---|---|
| Sensitivity | 87.5dB SPL with 2.83Vrms @1 meter (4 pi anechoic) | Indicates the amount of power the associated power amplifier must deliver to drive the loudspeaker at reasonable volume levels. Conservatively-rated specifications indicate moderate sensitivity, meaning that a massive power amplifier is not required to drive Revel loudspeakers to reasonable volume levels in large listening spaces. |
| Impedance | • 6.5Ω (nominal)<br>• 3.5Ω (minimum @ 373Hz) | Indicates whether the loudspeaker presents a "difficult" or "easy" load on the associated power amplifier. Combined with moderate phase angles, a minimal impedance specification of 3.5Ω allows a reasonably designed power amplifier to drive Revel loudspeakers. |
| Filter Network | • Three-way, high-order acoustic response @ 200Hz and 2.3kHz | Indicates the acoustical characteristics of the filter network. Steep filters indicate an optimized filter network that produces minimal acoustical interference, low distortion, and expansive dynamic range. Revel's filter networks are mounted on printed circuit boards with carefully selected components. Woofer, midrange, and tweeter filter boards are independent of one another. Each includes provisions for single-wired, bi-wired, and bi-amplified connections as well as flexible controls for user adjustments. |
| In-Room Response | • ±0.5dB from 33Hz to 18kHz | Indicates sound quality in context with other specifications. A breakthrough measurement, this specification closely correlates to sound quality in a single curve—a long-standing goal of loudspeaker engineers.<br>In-room response is measured through the use of large anechoic chambers. The loudspeaker's response is measured every 10 degrees, horizontally and vertically, for a total of 72 response measurements.<br>The in-room response curve is a prediction of how the loudspeaker would measure in a typical room. Research and observation reveals that ubiquitous on-axis response curves cannot distinguish between two loudspeakers with radically different sound qualities. |
| Target Response | • ±0.5dB from 31Hz to 20Hz | Indicates sound quality in context with the individual loudspeaker's application, considering the acoustical impact of its placement. An ideal response goal, a target response is not flat at either end of the audible spectrum and is used when the ideal reference is not a flat line. |
| First Reflections Response | • ±0.5dB from 33Hz to 17kHz | Indicates the response listeners hear in relation to the first reflections from walls, ceilings, and floors. This specification indicates that Revel loudspeakers will remain accurate, even in listening rooms that cast strong reflections. |
| Listening Window Response | • ±1.0dB from 38Hz to 18kHz | Indicates the on-axis response of the loudspeaker. An improved on-axis measurement, this specification reduces the visual confusion of inaudible interference. It retains full accuracy without using "spectral smoothing," which results in significant data loss. |
| Low-Frequency Extension | • –10dB @ 23Hz<br>• –6dB @ 26Hz<br>• –3dB @ 37Hz | Indicates the low-frequency response of the loudspeaker. Studies have shown that the –10dB specification best correlates to controlled listening tests. At low frequencies, most loudspeaker and listening room combinations demonstrate significant room gain, which produces an increase in levels as frequencies decrease. Unlike the –3dB specification, the –10dB specification reflects the steepness of low-frequency roll-offs. |

Specifications are subject to change without notice.

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Part No. 353739-001 | Rev A | 02/05