

BOSE

Bose® MB-210 Compact Subwoofer



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CAUTION: The Bose® MB-210 speaker contains no user-serviceable parts. To prevent warranty infractions, refer servicing to warranty service stations or factory service.

PROPRIETARY INFORMATION

THIS DOCUMENT CONTAINS PROPRIETARY INFORMATION OF BOSE CORPORATION WHICH IS BEING FURNISHED ONLY FOR THE PURPOSE OF SERVICING THE IDENTIFIED BOSE PRODUCT BY AN AUTHORIZED BOSE SERVICE CENTER AND SHALL NOT BE REPRODUCED OR USED FOR ANY OTHER PURPOSE.

WARRANTY

The Bose MB-210 speaker is covered by a limited 5-year warranty.


Product Description

The Bose® MB210 compact subwoofer is designed for background/foreground music and small sound-reinforcement systems that require low-frequency extension down to 40 Hz. The MB210 subwoofer features two (2) 10-inch high-excursion woofers, derived from the award-winning Bose Professional F1 portable, powered subwoofer. A compact, Baltic-birch plywood enclosure, optimized for fixed-installation applications. Featuring outstanding performance to size ratio. The MB210 is designed to complement Bose Professional FreeSpace®, Panaray® and RMU loudspeaker models with additional bass impact.

Specifications

Frequency Response (-3 dB) (1)	45 – 180 Hz			
Frequency Range (-10 dB)	37 – 270 Hz			
Recommended High-Pass Protection Filter	45 Hz with 24-dB / octave filter			
Nominal Coverage Pattern	omnidirectional below 200 Hz			
Recommended Crossover	80 - 200 Hz (requires active crossover in DSP)			
	Bose extended-lifecycle test (4)		AES transducer test (5)	
	Free Field	Half-Space	Free Field	Half-Space
Power Handling, long-term continuous	500 W	500 W	625 W	625 W
Power Handling, peak	2000 W	2000 W	2500 W	2500 W
Sensitivity (SPL/ 1W @ 1 m) (2)	90 dB	96 dB	90 dB	96 dB
Calculated Maximum SPL @ 1 m (3)	117 dB	123 dB	118 dB	124 dB
Calculated Maximum SPL @ 1 m, peak	123 dB	129 dB	124 dB	130 dB
Transducers				
Low Frequency	2 x Bose 10-inch, high-excursion woofers			
Nominal Impedance	8 ohms			

PART LIST NOTES

1. The individual parts located on the PCBs are listed in the Electrical Part List.
2. This part is referenced for informational purposes only. It is not stocked as a repair part. Refer to the next higher assembly for a replacement part.
3.  This part is critical for safety purposes. Failure to use a substitute replacement with the same safety characteristics as the recommended replacement part might create shock, fire and/or other hazards.

Packaging View

Item Number	Description	Material	Qty	Note
1	PACKING, STIFFENER, 400X50X50	797935-001S	4	
2	PACKING, FOAM, END CAP, SVCE	792464-001S	2	
3	RMU-210 LOUDSPEAKER	REF	1	
4	BRACKET, KIT, WHT, SVCE	792585-021S	1	
	BRACKET, KIT, BLK, SVCE	792585-011S	1	
5	PACKAGING, FOAM, BRACKET, SVCE	REF	1	
6	POLYBAG, PRODUCT, SVCE	792466-001S	1	
7	PACKING, CORNER STIFFENER, SVCE	792462-001S	4	
8	CARTON, MB210, SVCE	792461-001S	1	

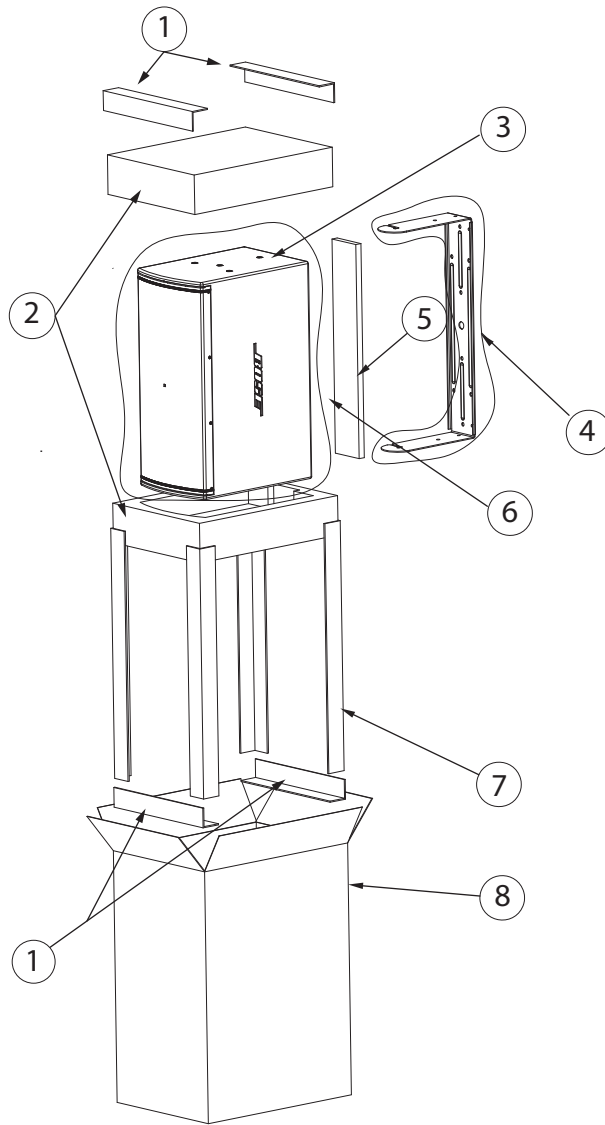


Figure 1. Packaging View

Main Parts List

Item Number	Description	Material	Qty	Note
1	GRILLE AND LOGO KIT, BLK, SVCE	792500-011S	1	
	GRILLE AND LOGO KIT, WHT, SVCE	792500-021S	1	
2	BRACKET, KIT, BLK	792585-011S	1	
	BRACKET, KIT, WHT	792585-021S	1	
3	KIT, LOGO ASSY, RMU108, BLK, SVCE	638372-011S	1	
	KIT, LOGO ASSY, RMU108, WHT, SVCE	638372-021S	1	
4	WOOFER, 10IN, SVCE	786223-001S	2	
5	SCREW, M8X1, .25,25 LG, FLNGD HH, WHT, 003	373847-0210	8	
	SCREW, M8X1, .25,25 LG, FLNGD HH, BLK, 001	373847-0110	8	
-	FOOT, BOTTOM, BLK, SVCE	787399-011S	4	
-	PLUG, 4P, MALE, 1715732, BLK, SVCE, (INPUT CONNECTOR)	762631-011S	1	

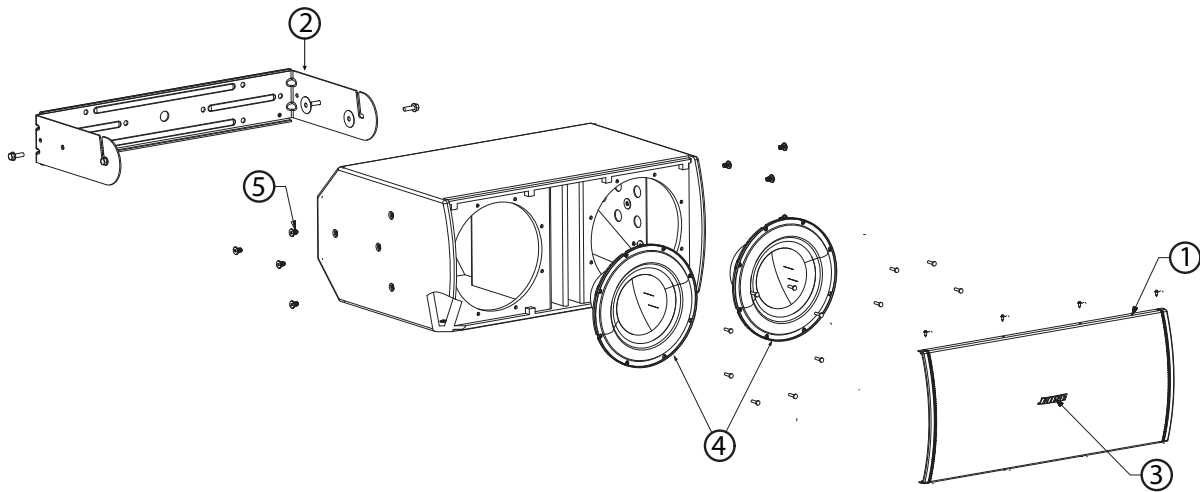
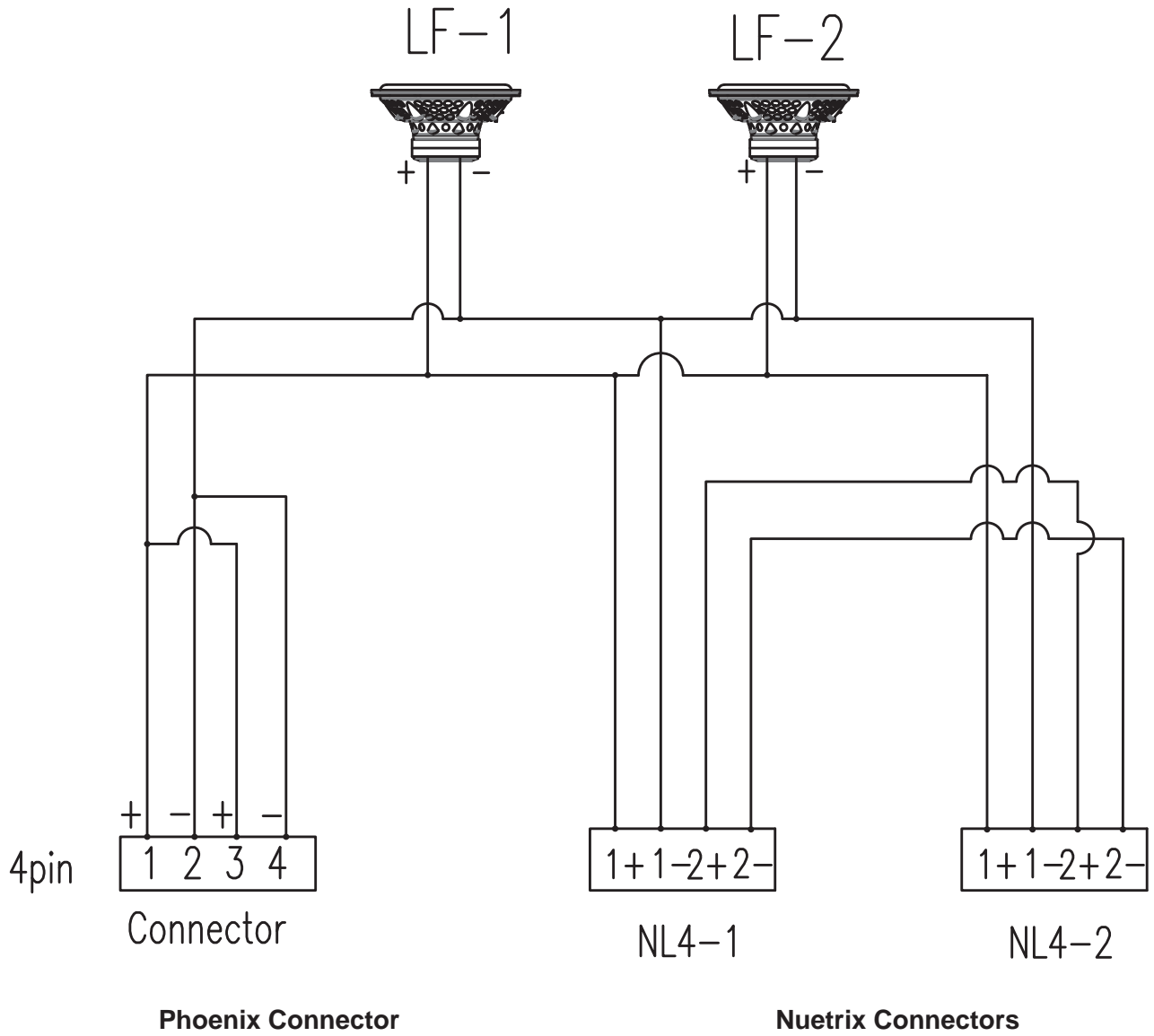


Figure 2. Exploded View

Wiring Diagram



Disassembly Procedures

1. Grille Removal

1.1 Remove the ten screws that secure the grille to the cabinet. Figure 4.

NOTE: There are five screws on each side of the grille.



Figure 4

1.2 Lift off the grille. Figure 5.



Figure 5

2. Logo Removal

2.1 Remove the screw and washers while take care not to lose the spring and logo hardware. Figure 6.



Figure 6

Disassembly Procedures

3. Driver Removal

3.1 Perform procedure 1.

3.2 Remove the eight screws that secure the woofer to the enclosure. Figure 7.

3.3 Carefully lift out the woofer.

3.4 Remove the Faston connectors.

Note: There is a locking tab that must be released to remove the Faston connector. The arrows are pointing to the locking TAB located underneath the plastic. Figures 8 and 9.

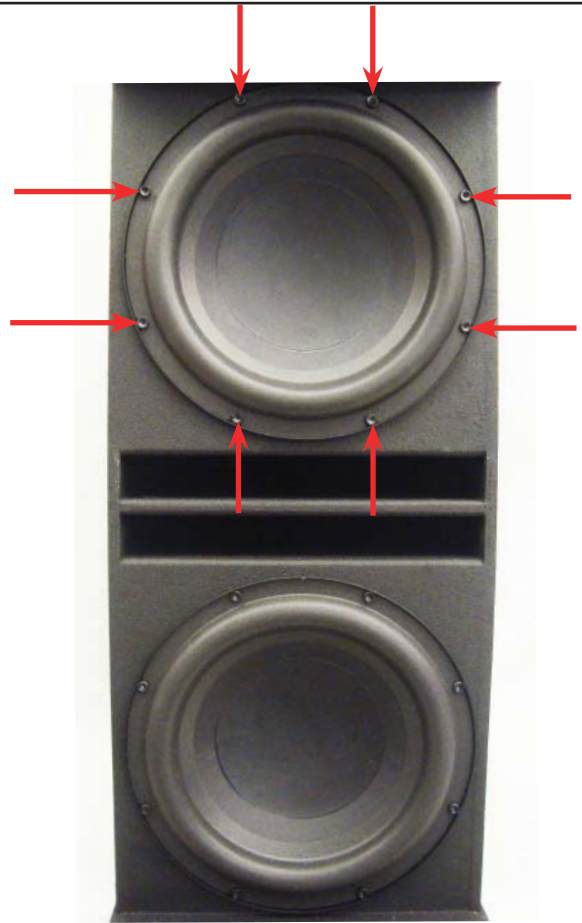


Figure 7



Figure 8

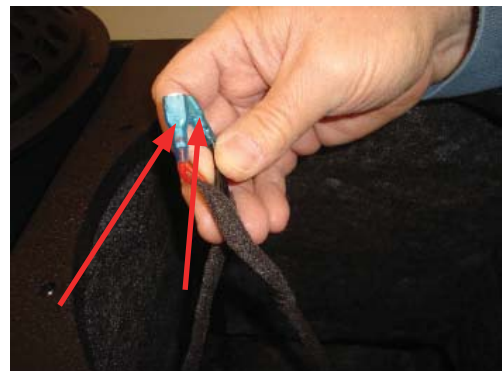


Figure 9

Test Procedures

Equipment Required:

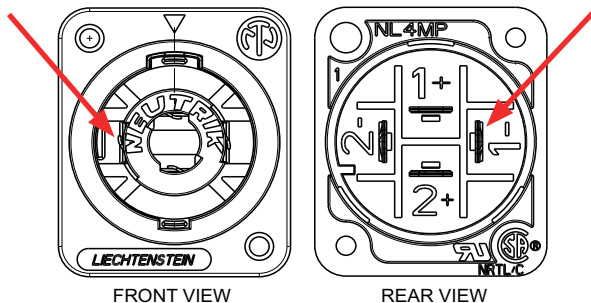
Audio signal generator
Neutrik NL4 cable or spade lug cable
Audio amplifier
Hearing protection

Test Cable Connection Information

Note: The NL4 connections and the Phoenix strip connections are in parallel with each other, so you can use either during these tests. Be sure to test all connections before returning the unit to the customer.

When using the NL4 connection, the input signal should be applied to the 1+ and 1- connections. The 2+ and 2- connections are used for the THRU connections from the loudspeaker to allow connection to other speakers.

Note: Red arrow indicates 1-



1. Phase Test

Note: All acoustic testing from 1.1 through 3.2 should be performed without the grille attached.

1.1 Refer to disassembly procedure 1, **Grille Removal, Figures 4-5.**

1.2 Connect the NL4 output of the amplifier to either input of the speaker. Ensure that the NL4 input is wired to pins 1+,1-.

1.3 Place one hand on one of the woofers and gently touch the dust cap or cone with fingers. Momentarily apply a voltage of 8 VDC \pm 1VDC, to either input NL4 or the Phoenix connector.

Pass: Any speaker/woofer where both cones move outward.

Fail: Any speaker/woofer where only one cone moves outward.

2. Air Leak Test

Note: You can measure the AC input voltage levels for the following tests at the loudspeaker barrier strip terminals.

2.1 Apply a signal of 20 Vrms, \pm .1 Vrms, @ 40 Hz to the speaker input.

2.2 Sweep the input frequency from 20 Hz to 200 Hz.

2.3 Listen carefully for air leaks at gaskets and joints. Replace any driver that has a rubbing or a ticking noise.

3. Rub and Tick Test

3.1 Apply a 20 Vrms, 10 Hz, \pm 1 Vrms signal to the speaker input.

3.2 Listen carefully for buzzes, rattles, or other extraneous noises from the drivers or from the enclosure.

4. Low Frequency Sweep with Grille attached

4.1 Reattach Grille.

4.1 Slowly apply 20 Hz to 200 Hz, at 10 Vrms, \pm .5 Vrms into the speaker. Listen carefully for any buzzing or rattles from the grille assembly.

4.2 Replace any speaker that has a buzzing noise or is defective. There must not be any buzzes, ticks, rubs, bottoming sounds, air leaks or other unwanted acoustic noises.

Revision History

DATE	REV	CN	DESCRIPTION
08/2017	00		INITIAL RELEASE



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