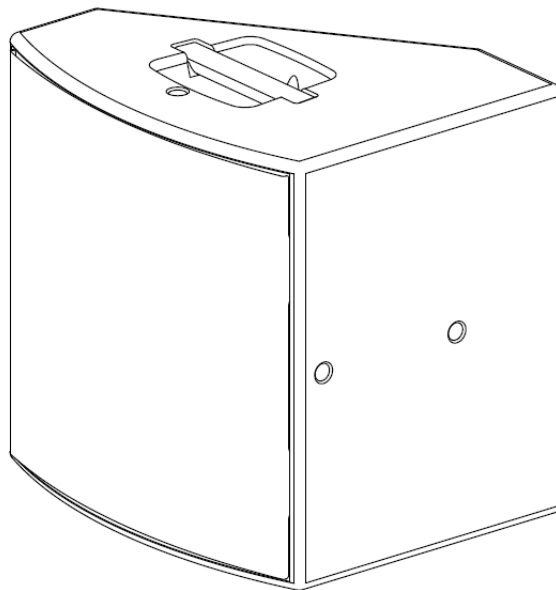


BOSE

AMM112

Multipurpose Loudspeaker



CONTENTS

Title	Page
PRODUCT DESCRIPTION	3
SAFETY INFORMATION	3
ELECTROSTATIC DISCHARGE SENSITIVE (ESDS) DEVICE HANDLING	4
WARRANTY	4
PART LIST NOTES	4
PACKAGING PART LIST	5
Figure 1. Packaging Exploded View	5
MAIN ASSEMBLY LIST	6
Figure 2. Main Assembly Exploded View	7
CROSSOVER PCB PART LIST	8
IO ASSY PCB PART LIST	8
DISASSEMBLYPROCEDURE	9-10
Figure 3. Grille Screws Removal	9
Figure 4. Grille Removal With Spudger	9
Figure 5. Waveguide Screws Removal	9
Figure 6. Waveguide Labels & Waveguide Cover Removal	9
Figure 7. Waveguide Screws Removal 2.....	9
Figure 8. Woofer Screws Removal	10
Figure 9. Woofer Cable Harnesses Removal	10
Figure 10. Waveguide Mounting Holes	10
FUNCTIONAL TEST PROCEDURE	11
SERVICE MANUAL REVISION HISTORY	12

PRODUCT DESCRIPTION


AMM112 Multipurpose Loudspeakers integrate a coaxially mounted 3.0-inch compression driver with a 12-inch low frequency transducer in a compact, heavyweight enclosure.

Ideally suited for a variety of short throw sound reinforcement and monitoring applications, the AMM112 operates from 75 Hz to 20 kHz.

An internal passive crossover network combined with Bose loudspeaker presets ensure the best possible performance in a variety of installed and portable applications.

See www.pro.BOSE.com for additional product information.

SAFETY INFORMATION

Parts that have special safety characteristics are identified by the  symbol on schematics or by special notes on the parts list. Use only replacement parts that have critical characteristics recommended by the manufacturer.

CAUTION: The Bose® AMM112 Multipurpose Loudspeaker 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.

Electrostatic Discharge Sensitive (ESDS) Device Handling


This unit contains ESDS devices. We recommend the following precautions when repairing, replacing or transporting ESDS devices:

- Perform work at an electrically grounded work station.
- Wear wrist straps that connect to the station or heel straps that connect to conductive floor mats.
- Avoid touching the leads or contacts of ESDS devices or PC boards even if properly grounded. Handle boards by the edges only.
- Transport or store ESDS devices in ESD protective bags, bins, or totes. Do not insert unprotected devices into materials such as plastic, polystyrene foam, clear plastic bags, bubble wrap or plastic trays.

WARRANTY

The Bose AMM112 Multipurpose Loudspeaker is covered by a limited 5-year transferable warranty. Units that fail within 90 days of sale should be replaced.

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 PART LIST

AMM112 Multipurpose Loudspeaker (see Figure 1)

Item Number	Description	Part Number	Note
1	PAPER TRAY-TOP	-	
2	BAG, FOAM-FILM, .5 EPE, 667X130	-	
3	CARTON, SLEEVE	853682-0010	
4	PAPER TRAY-BOTTOM	-	

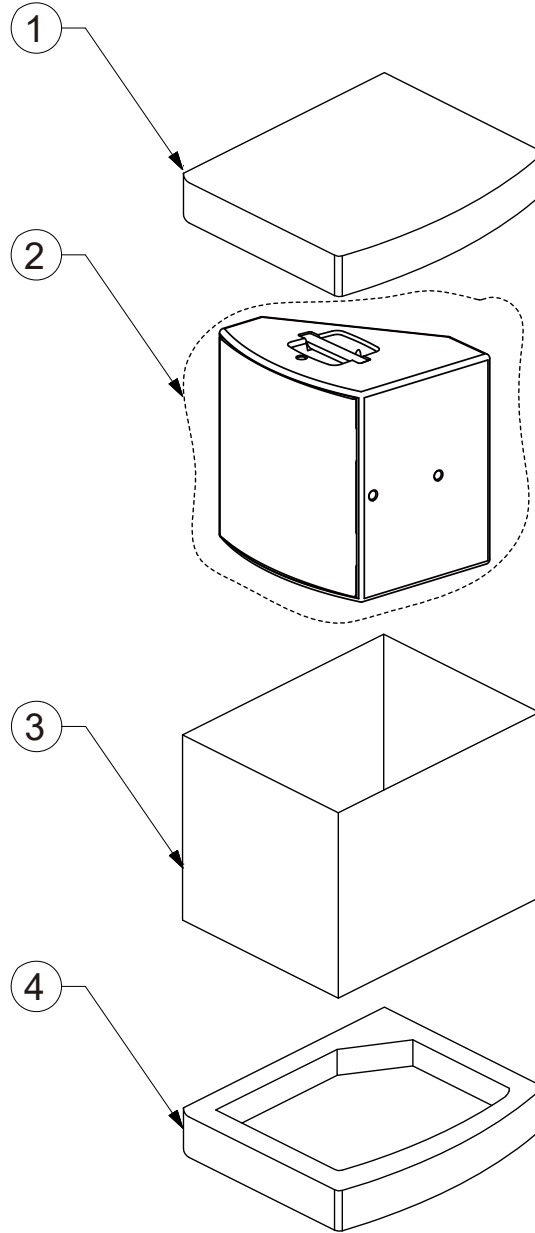



Figure 1. AMM112 Packaging Exploded View

MAIN ASSEMBLY LIST

AMM112 Multipurpose Loudspeaker (see Figure 2)

Item Number	Description	Part Number	Note
1	ASSY, ENCLOSURE	-	
2	ASSY, GRILLE	853603-0110	
3	ASSY, I/O BOX W/SWITCH	-	
4	ASSY, WAVEGUIDE	-	
5	DRIVER, COAXIAL	840923-0010	3 
6	GASKET, SHOCK PAD	-	
7	ASSY, PCB, CROSSOVER	-	
8	FOOT ENCLOSURE	-	
9	BRACKET SUPPORT	-	
10	BRACKET MTG WOOFER	-	
11	CUP HANDLE, W/POLE	-	
12	HANDLE, ALUMINUM	-	
13	LABEL, WAVEGUIDE	-	
14	GASKET, HANDLE CUP	-	
15	GASKET, WOOFER BKT	-	
16	GASKET, HANDLE	-	
17	GASKET, WOOFER BKT, M10 SEAL	-	
18	GASKET, M10 SUPPORT BRKT	-	
19	COVER, WAVEGUIDE	-	
20	SCREW, M5, MACH, 25MM LG, SKT HD	-	
21	WASHER, M5, FLAT, 5.5	-	
22	SCREW, M6, MACH, 25MM LG, BTN HD	-	
23	WASHER, M6, FLAT, 6.6	-	
24	SCREW, M5, MACH, 30MM, LG, FH	-	
25	SCREW, M10, MACH, 25MM, LG, FH	-	
26	SCREW, M6, MACH, 25MM, LG, FH	-	
27	SCREW, M5, MACH, 40MM, LG, SKT	-	
28	SCREW, M3.5, THD FRM, 12MM LG, PH	-	
29	SCREW, M3.5, THD FRM, 19MM LG, PH	-	
30	SCREW, M6, MACH, 50MM LG, FH	-	
31	WASHER, M6, LOCK, 6.5	-	
32	HEXNUT, M6X1.0PX5.0THK	-	
33	SCREW, M4.6 THD FRM, 10MM LG, PH	-	
34	GASKET, WAVEGUIDE, TOP/BTM	-	
35	SCREW, M5, MACH, 22MM LG	-	
36	WASHER, M5, MACH, 22MM LG, BTN	-	
37	BATTING, ACOUSTIC, BTM	-	
38	BATTING, ACOUSTIC, BACK	-	
39	BATTING, ACOUSTIC, TOP	-	
40	ADHESIVE, THREAD LOCKING	-	
41	GASKET, ENCLOSURE FRONT, TOP/BTM	-	

MAIN ASSEMBLY EXPLODED VIEW

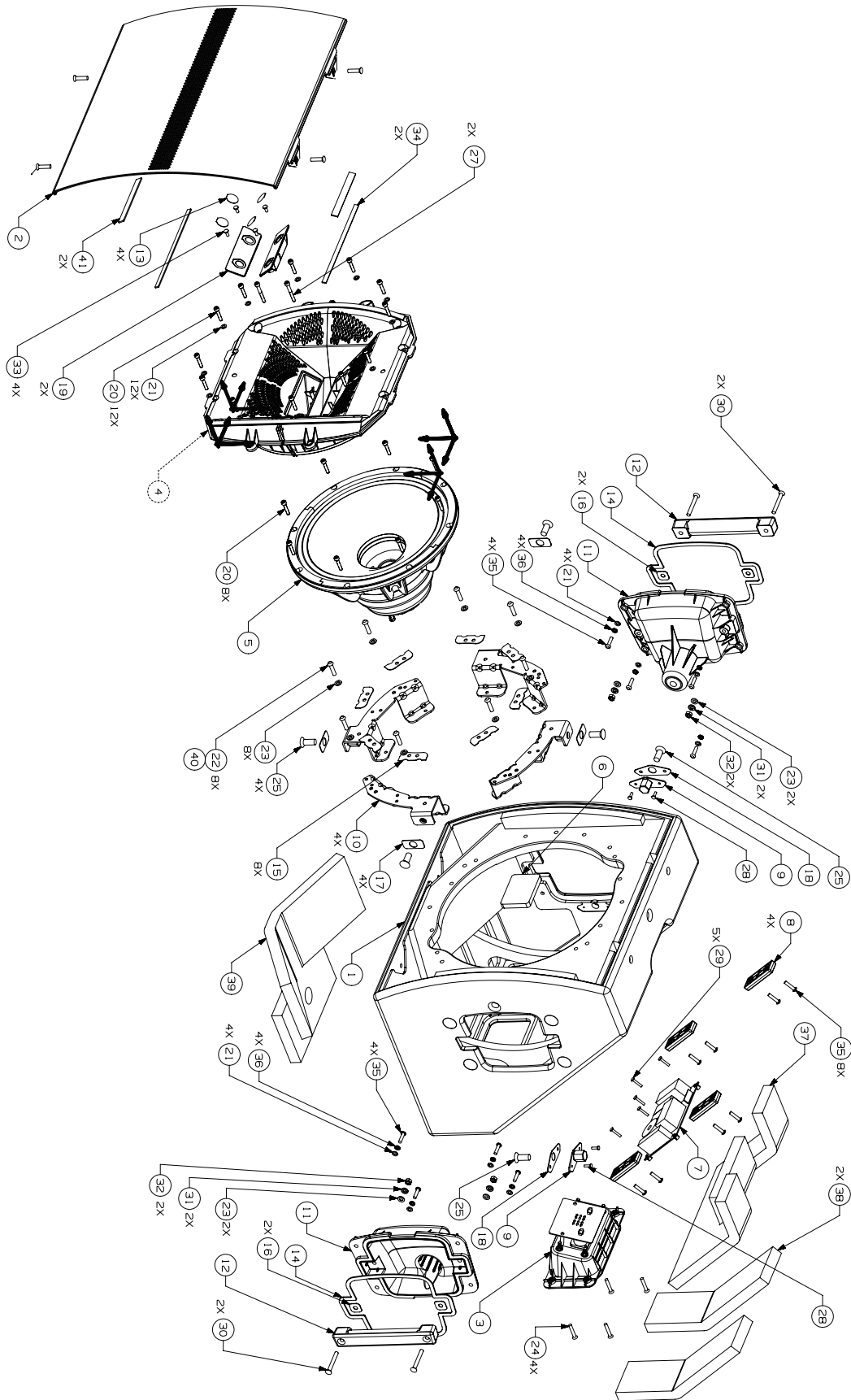


Figure 2. AMM112 Exploded View

CROSSOVER PCB PARTS LIST

Miscellaneous

Reference Designator	Description	Material Number	Note
	CABLE TIE, PA66, 160X2.5mm	862857-0010	
	SUPPORT, SPACER, SS4-6, PA66	862859-0010	
	SOLDER, WIRE, D9930C, Sn/0.7Cu, D1.2mm	862860-0010	
	ADHESIVE, HIGH BONDING, SA-6060P	863031-0010	
	ADHESIVE, SILICONE RTV, KE-45	863034-0010	
	CAP, FILM, 125, 250V, 5%, 10uF	863360-106J2E	
	CAP, FILM, 125, 250V, 5%, 20uF	863360-206J2E	
	CAP, FILM, 125, 250V, 5%, 6uF	863360-605J2E	
	RES, WW, CERMET, AXIAL, 25W, 5%, 1 OHM	863368-1R00J	
	INDUCTOR, CUSTOM, 1mA, DCR0.22, 5%, 1.5mH	863381-1R5J	
	INDUCTOR, CUSTOM, 1mA, DCR0.5, 5%, 1mH	863385-1R0J	
	CABLE ASSY, 6 PIN,	863558-0010	
	CABLE ASSY, HF	863559-0010	
	CABLE ASSY, LF, SMP 12	863560-0010	

IO ASSY PARTS LIST

Miscellaneous

Reference Designator	Description	Material Number	Note
	SWITCH, SLIDE, DPDT, 6P, ST, TH	847895-0010	
	SOLDER, WIRE, D9930C, Sn/0.7Cu, D1.2mm	862860-0010	
	CONN, BTW, 6.2MM C, 6P, 2R, ST, TH	862938-0006	
	CONN, NL4, 4P, R, ST, TH, 31X26mm, 2NUTS	862939-0010	

DISASSEMBLY PROCEDURE

1. Grille Removal

1.1 On the Enclosure of the unit, remove the 4 M6 screws securing the Grille as indicated in Figure 3.

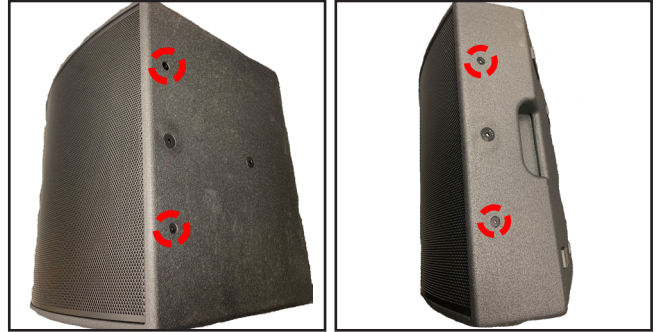


Figure 3. Grille Screws Removal

1.2 Using a spudger, lift up the Grille at the edge to release the Grille edge from the snaps. Figure 4.



Figure 4. Grille Removal With Spudger

Re-assembly Note: When installing the Grille, make sure the grille is inserted in the grille guides.

The install torques of the Grille is around 20 +/-1 kgf*cm.

2. Woofer Removal

2.1 Perform step 1.

2.2. Remove the 12 screws securing the Waveguide as indicated in Figure 5.

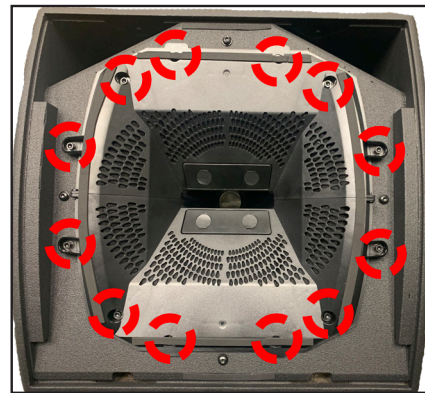


Figure 5. Waveguide Screws Removal

2.3 Use your finger to peel off the 4 Waveguide Labels. Figure 6 (left).

Re-assembly Note: The 4 Waveguide Labels need to be reused.

2.4 Remove the 4 screws that secure the Waveguide Cover. Figure 6 (right).

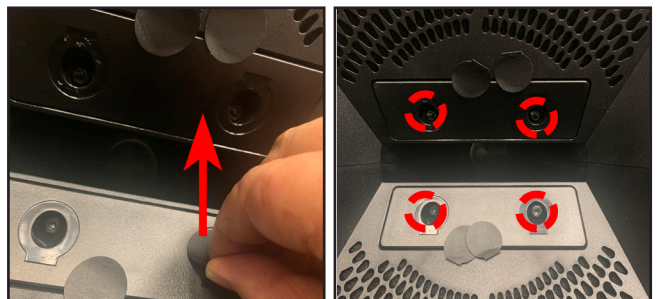


Figure 6. Waveguide Labels & Waveguide Cover Removal

2.5 Lift out the Waveguide Cover from the enclosure.

DISASSEMBLY PROCEDURE

2.6 Remove the 2 screws securing the Wave guide as indicated in Figure 7.

2.7 Lift out the Waveguide from the enclosure.

2.8. Remove the 8 screws securing the Woofer as indicated in Figure 8.

Re-assembly Note: The install torques of Woofer is around 20 +/-1 kgf*cm.

2.9 Detach the 4 Cable harnesses from the Woofer by pressing the white fastener as indicated in Figure 9.

Note: Be careful When removing the Woofer because it is very heavy.

Re-assembly Note:

The waveguide mounting holes should be top/ bottom as the red arrows indicated in Figure 10.

Note: Screw the Woofer on the flat surface.



Figure 7 Waveguide Screws Removal 2

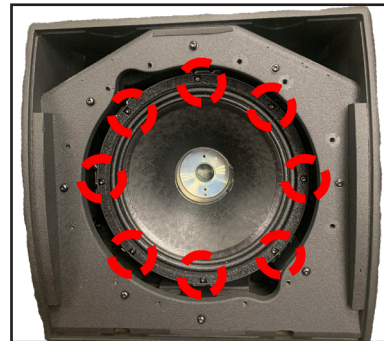


Figure 8. Woofer Screws Removal

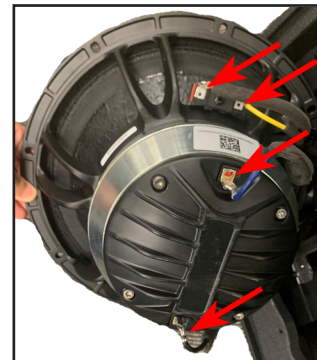


Figure 9. Woofer Cable Harnesses Removal



Figure 10. Waveguide Mounting Holes

FUNCTIONAL TEST PROCEDURES

Required Equipment

- Audio Sweep Generator
- L2400 Power Amplifier

1. Air Leak Test

1.1 Apply a 50 Hz, 10 Vrms tone signal to the unit's PARALLEL (left) input.

1.2 Listen for any air leaks from sealed areas such as the Grille Assy and Cup Pole.

2. Buzz and Sweep Test

2.1 Apply a 20 Vrms signal to the unit's PARALLEL (left) input.

2.2 Sweep the generator from 50 Hz to 10 KHz, input sweep sine wave to power amplifier (Filter: -6dB slope, low pass, 100Hz cut-off).

2.3 Duration Time is 5-10s and Listening Distance is 60cm.

2.4 Listen for buzz, rub, or extraneous sounds. Localize and repair any buzz. Replace any Woofer that rubs or produces extraneous sounds.

3. Switch and Biamp LF Function Test

3.1 Apply a 20 Vrms signal to the unit's PARALLEL (left) input.

3.2 Sweep the generator from 50 Hz to 3 KHz, input sweep sine wave to power amplifier (Filter: -6dB slope, low pass, 100Hz cut-off).

3.3 Duration Time is 5-10s and Listening Distance is 60cm.

3.4 Listen for buzz, rub, or extraneous sounds. Localize and repair any buzz. Replace any Woofer that rubs or produces extraneous sounds.

4. Switch and Biamp HF Function Test

4.1 Apply a 20 Vrms signal to the unit's PARALLEL (left) input.

4.2 Sweep the generator from 400 Hz to 10 KHz, input sweep sine wave to power amplifier (Filter: -6dB slope, low pass, 100Hz cut-off).

4.3 Duration Time is 5-10s and Listening Distance is 60cm.

4.4 Listen for buzz, rub, or extraneous sounds. Localize and repair any buzz. Replace any Woofer that rubs or produces extraneous sounds.

SERVICE MANUAL REVISION HISTORY

Date	Revision Level	Description of Changes	Changes Driven By	Pages (s) Affected
4/2021	00	Document released at revision 00	Initial Release	ALL

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Reference Number 843161-SM REV 00, 4/2021
<http://serviceops.bose.com>