

**Bose[®] SoundLink[®] Mini
Bluetooth[®] Speaker II**



Contents

Product Description	3
Safety Information	3
Electrostatic Discharge Sensitive (ESDS) Device Handling	4
Warranty	4
Part List Notes	4
Packaging Part List, SoundLink® Mini II	5
Figure 1. SoundLink Mini II, Packaging View	6
Main Part List, SoundLink Mini II	7
Figure 2. SoundLink Mini II Main Assembly, Exploded View	8
Electrical Parts List	9-20
Disassembly Procedure	21-25
Assembly Key Points	26-29
Using TAP Commands	30
Test Procedures	31-33
Remanufacturing TAP Commands	34
Service Manual Revision History	35

PRODUCT DESCRIPTON

The Bose® SoundLink® Mini Bluetooth® speaker II is a one-piece, ultra-compact, battery-powered Bluetooth speaker. It delivers full, deep sound that's unexpected from a mobile speaker that fits in the palm of your hand. Its ability to connect wirelessly to Bluetooth enabled audio devices, combined with its size, allows you to enjoy your music, videos or games almost anywhere. It's engineered with a solid aluminum chassis that contributes to the sound while providing the durability to withstand the rigors of everyday use. The included charging cradle provides a home base to keep it charged so it's ready and able to go just about anywhere with you. The SoundLink Mini II has a built-in speakerphone, so you can enjoy the same clear sound for out-loud calls. And voice prompts talk you through Bluetooth pairing, so wirelessly connecting to your music is easier than ever.

The SoundLink Mini Bluetooth speaker II uses many proprietary Bose acoustic, mechanical and electrical technologies. Most prominent are two compact transducers specifically designed with unusually high cone displacement for exceptional sound output relative to their size. In addition, dual opposing passive radiators allow the SoundLink Mini Bluetooth speaker II to deliver high-quality low-note performance from a small enclosure. With the radiators placed symmetrically opposite each other, the SoundLink Mini Bluetooth speaker II reduces unwanted and wasteful vibration, turning that energy instead into acoustic output. The unique, patented shape of the radiator surrounds also produce performance beyond most competitive products. Together, these technologies allow the SoundLink Mini Bluetooth speaker II to produce surprisingly full and deep sound from a speaker that fits in the palm of your hand. The speaker also uses voice prompts that walk the user through Bluetooth pairing, so connection management of Bluetooth enabled devices is easier than ever.

- Speakerphone feature – including mic
- USB charging - New battery charger IC, Rohm BD8665
- Voice prompts – similar to SoundLink Color
- No AUX button – relies on AUX sensing
- Updated BT processor – 8670 – same as SoundLink Color
- Custom battery pack, based on SoundLink Mini Palladium architecture, with 4 conductor ribbon cable to connect to boost board.
- Boost circuit – redesigned for Boost-on-Demand feature to save battery life
- New external power supply and charging cradle
- Mechanical parts – grilles with scrim, new rear grille gasket with mic port, housing finish and machining changes, color changes, new keypad and topcap
- Two system color schemes

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,

WARRANTY



The Bose® SoundLink® Mini Bluetooth® speaker II is covered by a limited 1-year transferable warranty. 2 years in Europe.



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, SOUNDLINK MINI II

(See Figure 1)

Item	Description	Material Number	Note
1	PACKING, RIGID, BOX, 8.94X4.46X4.81IN, BLK	730349-0010	
2	PACKING, PAD, CORR, 8.75X4.25IN.275C, WHT	730362-0010	
3	PACKING, INSERT, DC, 14.38X10.5IN, 275C, WHT	730355-0010	
4	TRAY, THERMO, BLK, HIPS, 60GA, 12.8X4.3X2.5IN	730342-0010	
5	BAG, POLY, BOPP, 9"X3.31"X1.5MIL	369909-0010	
6	CARTON, DC, 4.31X1.5X6.31IN, 24PT, SLMI, ACCY	629148-0010	
7	GLOBAL WARRANTY CARD, 1 YR.	324486-0010	AUS/NZ
8	LETTER, COMMITMENT	343108-0010	
9	GLOBAL WARRANTY CARD, 1 YR.	324486-0010	
	SOUNDLINK, COLOUR, CHINA, WARRANTY CARD	732263-0010	
10	QSG, SL, MINI, BT, SPKR, II, US/MX/JP	730350-0010	US/MX/JP
	QSG,SL, MINI, BT, SPKR, II, EU1	730350-0020	EU/UK
	QSG, SL, MINI, BT, SPKR, II, EU2	730350-0030	EU/UK
	QSG,SL, MINI, BT, SPKR, II, EU3	730350-0040	EU/UK
	QSG, SL, MINI, BT, SPKR, II, EU4	730350-0050	EU/UK
	QSG, SL, MINI, BT, SPKR, II, APAC	730350-0060	APAC
11	SAFETY, SHEET, SL, MINI, BT, SPKR, II	741810-0010	3 
13	CHARGING CRADLE, WHT	725267-0020	
	CHARGING CRADLE, BLK	725267-0010	
14	POWER SUPPLY, EXT WALL, 5V, 8W, USB, US, BLACK	722809-0010	3 
	POWER SUPPLY, EXT WALL, 5V, 8W, USB, US, WHITE	722809-0011	
	POWER SUPPLY, EXT WALL, 5V, 8W, USB, WW, WHITE	722809-0021 or 722809-0031	
	POWER SUPPLY, EXT WALL, 5V, 8W, USB, WW, BLACK	722809-0020 or 722809-0030	
15	PACKING, FOAM, CLPE, BLK, DC, 8.63X4.38X.12IN	730343-0010	
16	PACKING, INSERT, DC, 14.13X10.5IN, 275C, WHT	730355-0010	
17	PACKING, SLEEVE, SLMI2, US/MEX/JP, BLK	730346-0010	US/JAP/CN
	PACKING, SLEEVE, SLMI2, US/MEX/JP, WHT	730346-0020	US/JAP/CN
	PACKING, SLEEVE, SLMI2, EU1, BLK	730346-0030	EU1
	PACKING, SLEEVE, SLMI2, EU1, WHT	730346-0040	EU1
	PACKING, SLEEVE, SLMI2, EU2, BLK	730346-0050	EU2
	PACKING, SLEEVE, SLMI2, EU2, WHT	730346-0060	EU2
	PACKING, SLEEVE, SLMI2, EU3, BLK	730346-0070	EU3
	PACKING, SLEEVE, SLMI2, EU3, WHT	730346-0080	EU3
	PACKING, SLEEVE, SLMI2, EU4, BLK	730346-0090	EU4
	PACKING, SLEEVE, SLMI2, EU4, WHT	730346-0100	EU4
	PACKING, SLEEVE, SLMI2, APAC, WHT	737381-0020	
	PACKING, SLEEVE, SLM2, APAC, BLK	737381-0010	

18	KIT, POWER ADAPTERS, APAC, CARBON	738691-0010	APAC
	KIT, POWER ADAPTERS, APAC, PEARL	738691-0020	3 
Item	Description	Material Number	Note
-	BAG, SHRINK, 14.25X12IN, 100GA, PRE-PERFORATED	730366-0010	US/JAP/CN
	BAG, SHRINK, 16.75X12IN, 100GA, PRE-PERFORATED	739943-0010	EU/UK/APAC
-	CARTON, FOL, 5.13X4.81X9.31IN, 275C, KRAFT (OVER PACK CARTON FOR SHIPPING SINGLE WITHOUT CLIP CARTON)	371649-0010	US/JAP/CN
-	CARTON, FOL, 5.13X4.81X11.5IN, 275C, KRAFT (OVER PACK CARTON FOR SHIPPING SINGLE WITH CLIP KIT CARTON)	372532-0010	EU/UK/APAC
	CABLE, USB A TO MICRO B, 1.0M, 22AWG, BLACK	743203-102210	3 
	CABLE, USB A TO MICRO B, 1.0M, 22AWG, IVOR	743203-102220	

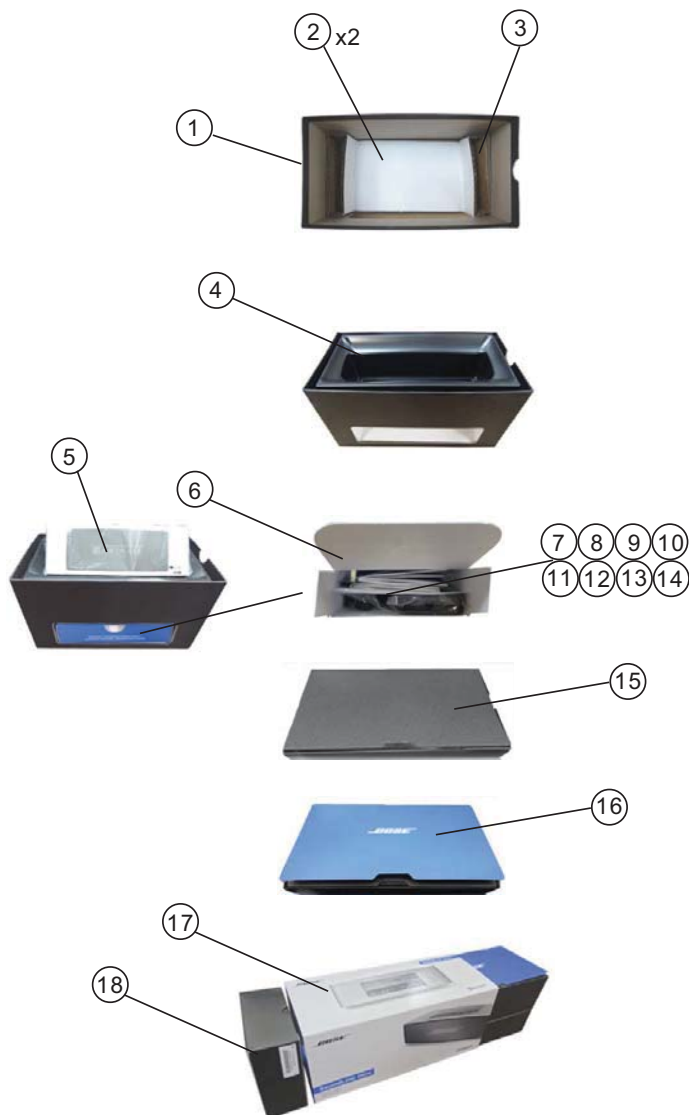










Figure 1. SoundLink Mini II, Packaging View

MAIN PART LIST, SOUNDLINK MINI II

(See Figure 2)

Item	Description	Material Number	QTY	Note
1	GASKET, GRILLE, FRONT, NG5	626978-0020	1	
2	ADHESIVE STRIP, DIE CUT, GRILLE	729681-0010	2	
3	SCREW, THRDROLL, 2-56X3/8, PAN, TORX	360575-006	8	
4	BAFFLE, FRONT	357404-0020	1	3 
5	PASSIVE RADIATOR	357793-0010	1	
6	TWID ASSY, 39.5OD, REVOLVER, SuFREE SRND	360563-0040	2	3 
7	SCREW, THD FRM, 2-28X1/4, PAN	289396-004	4	
8	PCB ASSY, SOUNDLINK MINI BT 2, BOOST, SVCE	716536-002S	1	
9	KEYPAD, 5 POSITION, NG4	727755-0020	1	
	KEYPAD, 5 POSITION, BLACK	727755-0010	1	
10	CAP, TOP, NG4	757367-0020	1	
	CAP, TOP, BLACK	757367-0010	1	
11	ADHESIVE, DIE CUT, TOP CAP	729581-0010	1	
12	GASKET, MAIN PCB	730114-0020	1	
13	PCB ASSY, KCUP, AMP, SVCE	716527-002S	1	3 
14	SCREW, THRDROLL, 2-56X3/8, PAN, TORX	360575-006	4	
15	ADHESIVE STRIP, DIE CUT, GRILLE	729681-0010	2	
16	GASKET, GRILLE, REAR, NG 5	729899-0020	1	3, 
17	REAR GRILLE, BLK, SL MINI II, SNGL, SERV	357407-002S	1	
	REAR GRILLE, NG3, SL MINI II, SNGL, SERV	357407-003S	1	
	REAR GRILLE, BLK, SL MINI II, BULK, 400 per carton	357407-0020		
	REAR GRILLE, NG3, SL MINI II, BULK, 400 per carton	357407-0030		
18	FILTER, MICROPHONE, 8MM OD (use gloves to handle, see page 33 for details)	744588-0010	1	
19	SCREW, THRDROLL, 2-56X5/8, PAN, TORX	360575-010	4	
20	PCB ASSY, SOUNDLINK MINI BT 2, IO, SVCE (does not include mic filter, item 18)	716544-002S	1	
21	BAFFLE, REAR	357405-0020	1	3 
22	PASSIVE RADIATOR	357793-0010	1	
23	SCREW, THD FRM, 2-28X1/4, PAN	289396-004	4	
24	SLAB ASSY, SOUNDLINK MINI BT 2, MAIN, SVCE	716517-004S or 755974-002S	1	3 
25	GROMMET, FFC, MOLDED	361348-0010	1	
26	CABLE, FFC, 0.5mm, 34COND	357413-0010	1	
27	ENCLOSURE, EXTRUSION, CARBON	732932-0020	1	3 
	ENCLOSURE, EXTRUSION, CLEAR	732932-0010	1	
28	HARNESS, XDUCER	357412-0010	1	
29	BATTERY PACK, LI-ION, 2CELL, 2SIP	724056-0010	1	
30	*FOOT, SILICONE, NG7 *FOOT, SILICONE, NG7, APAC	*756361-0010 *756361-0040	1	
31	SCREW, THRDROLL, 2-56X1/4, PAN, TORX	360575-004	1	
32	FRONT GRILLE, BLK, SL MINI II, SNGL, SERV	730209-001S	1	3 
	FRONT GRILLE, WHT, SL MINI II, SNGL, SERV	730209-002S	1	
	FRONT GRILLE, BLK, SL MINI II, BULK, 400 per carton	730209-0010		
	FRONT GRILLE, NG3, SL MINI II, BULK, 400 per carton	730209-0020		

33	TAPE, FOAM	373978-0010	1	
-	VELCRO, 6MMX78MM, BLK (Use when replacing the Main board - see service bulletin 725192-B2)	638167-1078	1	

*The replacement foot/battery cover does not have a serial number printed on it. Print the serial number on a small label and install on the unit above the foot. See Figure 2 on next page.

EXPLODED VIEW

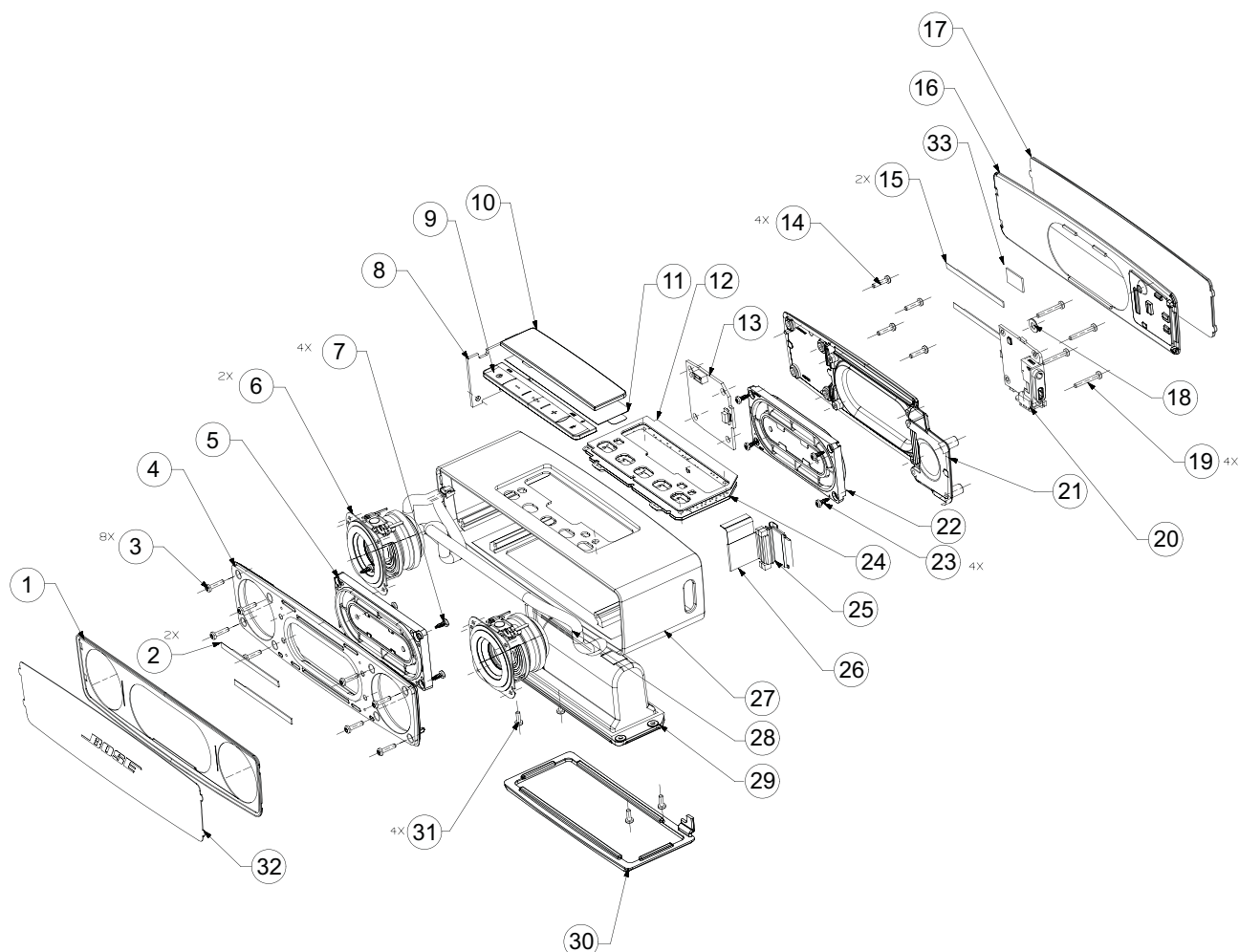


Figure 2. SoundLink Mini II Main Assembly, Exploded View



SoundLink Mini II Serial Number Placement (when replacing the foot)

ELECTRICAL PARTS LIST

Main PCB
Resistors

Reference Designator	Description	Material Number	Note
R204	RES, 0402, 63MW, 1%, 100 OHM	268361-1000	
R205	RES, 0402, 63MW, 1%, 100 OHM	268361-1000	
R209	RES, 0402, 63MW, 1%, 4.99K	268361-4991	
R211	RES, 0402, 0.063W, 1%, 30.1 OHMS	268361-30R1	
R212	RES, 0402, 0.063W, 1%, 30.1 OHMS	268361-30R1	
R213	RES, 0402, 0.063W, 1%, 30.1 OHMS	268361-30R1	
R214	RES, 0402, 0.063W, 1%, 30.1 OHMS	268361-30R1	
R215	JUMPER, 0402, 0 OHM	280043	
R216	JUMPER, 0402, 0 OHM	280043	
R217	JUMPER, 0402, 0 OHM	280043	
R218	JUMPER, 0402, 0 OHM	280043	
R219	JUMPER, 0402, 0 OHM	280043	
R220	JUMPER, 0402, 0 OHM	280043	
R221	RES, 0402, 63MW, 1%, 4.99K	268361-4991	
R223	RES, 0402, 63MW, 1%, 4.99K	268361-4991	
R224	JUMPER, 0402, 0 OHM	280043	
R225	JUMPER, 0402, 0 OHM	280043	
R226	JUMPER, 0402, 0 OHM	280043	
R301	RES, 0402, 63MW, 1%, 1K	268361-1001	
R303	JUMPER, 0402, 0 OHM	280043	
R304	RES, 0402, 63MW, 1%, 100 OHM	268361-1000	
R305	RES, 0402, 63MW, 1%, 100 OHM	268361-1000	
R306	RES, 0402, 63MW, 1%, 4.99K	268361-4991	
R307	RES, 0402, 63MW, 1%, 4.99K	268361-4991	
R401	RES, 0805, .125W, 1%, 3.48K	133625-3481	
R402	RES, 0805, .125W, 1%, 3.48K	133625-3481	
R403	RES, 0402, 63MW, 1%, 249 OHM	268361-2490	
R404	RES, 0402, 63MW, 1%, 249 OHM	268361-2490	
R405	RES, 0402, 63MW, 1%, 249 OHM	268361-2490	
R406	RES, 0402, 63MW, 1%, 249 OHM	268361-2490	
R409	RES, 0402, 63MW, 1%, 1K	268361-1001	
R410	RES, 0805, .125W, 1%, 475	133625-4750	
R411	RES, 0805, .125W, 1%, 475	133625-4750	
R412	RES, 0402, 63MW, 1%, 3.74 KOHM	268361-3741	
R413	RES, 0402, 63MW, 1%, 3.74 KOHM	268361-3741	
R414	RES, 0402, 63MW, 1%, 3.74 KOHM	268361-3741	
R415	RES, 0402, 63MW, 1%, 3.74 KOHM	268361-3741	
R416	RES, 0402, 63MW, 1%, 100 OHM	268361-1000	
R417	RES, 0402, 63MW, 1%, 100 OHM	268361-1000	
R503	RES, 0402, 0.063W, 1%, 46.4K	268361-4642	
R504	RES, 0402, 63MW, 1%, 200 OHM	268361-200R	
R505	RES, 0402, 0.063W, 1%, 46.4K	268361-4642	

ELECTRICAL PART LIST

Main PCB
Resistors (continued)

Reference Designator	Description	Material Number	Note
R506	RES, 0402, 63MW, 1%, 1K	268361-1001	
R507	RES, 0603, .1W, 1%, 1 OHM	191465-01R0	
R508	RES, 0603, .1W, 1%, 1 OHM	191465-01R0	
R509	RES, 0603, .1W, 1%, 1 OHM	191465-01R0	
R510	RES, 0603, .1W, 1%, 1 OHM	191465-01R0	
R511	RES, 0603, .1W, 1%, 1 OHM	191465-01R0	
R512	RES, 0603, .1W, 1%, 1 OHM	191465-01R0	
R513	RES, 0603, .1W, 1%, 1 OHM	191465-01R0	
R514	RES, 0603, .1W, 1%, 1 OHM	191465-01R0	
R515	RES, 0603, .1W, 1%, 1 OHM	191465-01R0	
R516	RES, 0603, .1W, 1%, 1 OHM	191465-01R0	
R517	RES, 0402, 63mw, 1%, 2.49K	268361-2491	
R518	RES, 0402, 63MW, 1%, 100K	268361-1003	
R519	RES, 0402, 63MW, 1%, 1K	268361-1001	
R520	RES, 0402, 63MW, 1%, 49.9 OHM	268361-49R9	
R521	RES, 0402, 63MW, 1%, 100K	268361-1003	
R522	RES, 0603, .1W, 1%, 150 OHMS	191465-1500	
R523	RES, 0603, .1W, 1%, 150 OHMS	191465-1500	
R524	RES, 0603, .1W, 1%, 150 OHMS	191465-1500	
R525	RES, 0603, .1W, 1%, 150 OHMS	191465-1500	
R526	RES, 0603, .1W, 1%, 150 OHMS	191465-1500	
R527	RES, 0402, 63MW, 1%, 100K	268361-1003	
R528	RES, 0402, 63MW, 1%, 2.21K	268361-2211	
R531	RES, 0603, .1W, 1%, 1 OHM	191465-01R0	
R602	RES, 0402, 63MW, 1%, 100K	268361-1003	
R603	RES, 0402, 63MW, 1%, 10K	268361-1002	
R604	RES, 0402, 0.063W, 1%, 332K	268361-3323	
R605	RES, 0402, 63MW, 1%, 100K	268361-1003	
R701	RES, 0402, 0.063W, 1%, 681K	268361-6813	
R702	RES, 0402, 63MW, 1%, 1K	268361-1001	
R703	RES, 0402, 63MW, 1%, 4.99K	268361-4992	
R704	RES, 0402, 63MW, 1%, 64.9K	268361-6492	
R705	RES, 0402, 63MW, 1%, 49.9K	268361-4992	
R706	RES, 0402, 63MW, 1%, 64.9K	268361-6492	
R707	RES, 0402, 63MW, 1%, 499	268361-499R	
R708	RES, 0402, 63MW, 1%, 499	268361-499R	
R709	RES, 0402, 0.063W, 1%, 30.1 OHMS	268361-30R1	
R710	RES, 0402, 0.063W, 1%, 30.1 OHMS	268361-30R1	
R711	RES, 0402, 0.063W, 1%, 30.1 OHMS	268361-30R1	
R712	RES, 0402, 0.063W, 1%, 30.1 OHMS	268361-30R1	
R713	RES, 0402, 0.063W, 1%, 30.1 OHMS	268361-30R1	
R714	RES, 0402, 0.063W, 1%, 30.1 OHMS	268361-30R1	
R715	RES, 0402, 63MW, 1%, 4.99K	268361-4991	

ELECTRICAL PART LIST

Main PCB
Resistors (continued)

Reference Designator	Description	Material Number	Note
R716	RES, 0402, 63MW, 1%, 4.99K	268361-4991	
R717	RES, 0402, 63MW, 1%, 10K	268361-1002	
R720	RES, 0402, 63MW, 1%, 4.99K	268361-4992	
R721	RES, 0402, 63MW, 1%, 4.99K	268361-4992	
R722	RES, 0402, 63MW, 1%, 2.21K	268361-2213	
R723	RES, 0402, 63MW, 1%, 1M	268361-1004	
R801	RES, 0402, 63MW, 1%, 1K	268361-1001	
R802	RES, 0402, 63MW, 1%, 10K	268361-1002	
R803	RES, 0402, 63MW, 1%, 10K	268361-1002	
R805	RES, 0402, 63MW, 1%, 100 OHM	268361-1000	
R806	RES, 0603, .1W, 1%, 20 OHM	191465-20R0	
R807	RES, 0402, 63MW, 1%, 1K	268361-1001	
R808	RES, 0402, 63MW, 1%, 100 OHM	268361-1000	
R809	RES, 0402, 63MW, 1%, 10K	268361-1002	
R810	RES, 0402, 63MW, 1%, 10K	268361-1002	
R811	RES, 0402, 63MW, 1%, 10K	268361-1002	
R812	RES ,0603, .1W, 1%, 20 OHM	191465-20R0	
R813	RES, 0402, 63MW, 1%, 1K	268361-1001	
R814	RES, 0402, 63MW, 1%, 100 OHM	268361-1000	
R815	RES, 0402, 63MW, 1%,10 OHM	268361-10R0	
R816	RES, 0603, 0.1W, 1%, 12OHMS	191465-12R0	
R817	RES, 0402, 63MW, 1%, 1K	268361-1001	
R819	RES, 0402, 63MW, 1%, 100 OHM	268361-1000	
R820	RES, 0603, .1W, 1%, 33 OHM	191465-33R0	
R825	RES, 0603, .1W, 1%, 75 OHM	191465-75R0	
R827	RES, 0603, .1W, 1%, 75 OHM	191465-75R0	

ELECTRICAL PART LIST

Main PCB
Capacitors

Reference Designator	Description	Material Number	Note
C302	CAP, X5R, 0402, 20%, 6.3V, 2.2uF	313771-225JM	
C303	CAP, X5R, 0603, 2.2uF, 16V, 20%	313766-225C	
C304	CAP, X5R, 0402, 20%, 6.3V, 2.2uF	313771-225JM	
C305	CAP, X5R, 0402, 10V, 10%, 0.47uF	342199-474	
C306	CAP, COG, 0402, 5%, 15pF, 50V	268364-150	
C307	CAP, X7R, 0402, 50V, 5%, 10 nF	268366-103	
C308	CAP, X7R, 0402, 50V, 5%, 10 nF	268366-103	
C309	CAP, X5R, 0402, 10V, 10%, 0.47uF	342199-474	
C310	CAP, X5R, 0402, 0.1uF, 16V, 10%	313771-104C	
C311	CAP, X7R, 0402, 16V, 10%, 1000pF	293702-102	
C312	CAP, X5R, 0402, 0.1uF, 16V, 10%	313771-104C	
C314	CAP, X5R, 0402, 20%, 6.3V, 2.2uF	313771-225JM	
C316	CAP, X5R, 0603, 4.7uF, 6.3V, 20%	313766-475J	
C317	CAP, X5R, 0402, 0.1uF, 16V, 10%	313771-104C	
C318	CAP, X7R, 0402, 16V, 10%, 1000pF	293702-102	
C319	CAP, X7R, 0402, 16V, 10%, 1000pF	293702-102	
C320	CAP, X7R, 0402, 16V, 10%, 1000pF	293702-102	
C321	CAP, X7R, 0402, 16V, 10%, 1000pF	293702-102	
C322	CAP, X7R, 0402, 16V, 10%, 1000pF	293702-102	
C323	CAP, X7R, 0402, 16V, 10%, 1000pF	293702-102	
C324	CAP, X5R, 0603, 2.2uF, 16V, 20%	313766-225C	
C325	CAP, COG, 0402, 5%, 100pF, 50V	268364-101	
C326	CAP, COG, 0402, 5%, 100pF, 50V	268364-101	
C327	CAP, COG, 0402, 5%, 100pF, 50V	268364-101	
C328	CAP, COG, 0402, 5%, 100pF, 50V	268364-101	
C401	CAP, X7R, 0402, 16V, 10%, 1000pF	293702-102	
C402	CAP, X7R, 0402, 16V, 10%, 1000pF	293702-102	
C403	CAP, X7R, 0402, 16V, 10%, 1000pF	293702-102	
C404	CAP, 1206, X7R, LD, 25V, 10%, 1uF	306105-105	
C405	CAP, 1206, X7R, LD, 25V, 10%, 1uF	306105-105	
C406	CAP, 1206, X7R, LD, 25V, 10%, 1uF	306105-105	
C407	CAP, X7R, 0402, 50V, 5%, 1nF	268366-102	
C408	CAP, X7R, 0402, 50V, 5%, 1nF	268366-102	
C409	CAP, X7R, 0402, 16V, 10%, 1000pF	293702-102	
C410	CAP, X7R, 0402, 16V, 10%, 1000pF	293702-102	
C412	CAP, X7R, 0402, 16V, 10%, 1000pF	293702-102	
C414	CAP, X7R, 0402, 10V, 10%, 0.1uF, COMM	718866-104K1A	
C415	CAP, X7R, 0402, 16V, 10%, 1000pF	293702-102	
C416	CAP, X7R, 0402, 16V, 10%, 1000pF	293702-102	
C417	CAP, 1206, X7R, LD, 25V, 10%, 1uF	306105-105	
C419	CAP, X7R, 0603, 1uF, 16V, 10%	257154-105K16	
C420	CAP, X7R, 0402, 10V, 10%, 0.1uF, COMM	718866-104K1A	
C421	CAP, X5R, 0603, 6.3V, 20%, 22uF, COMM	718835-226M0J	

ELECTRICAL PART LIST

Main PCB
Capacitors Continued

Reference Designator	Description	Material Number	Note
C422	CAP, X7R, 0402, 10V, 10%, 0.1uF, COMM	718866-104K1A	
C423	CAP, X7R, 0402, 16V, 10%, 1000pF	293702-102	
C424	CAP, X7R, 0402, 16V, 10%, 1000pF	293702-102	
C425	CAP, X7R, 0402, 10V, 10%, 0.1uF, COMM	718866-104K1A	
C502	CAP, X7R, 0402, 16V, 10%, 0.1uF, COMM	718866-104K1C	
C504	CAP, X7R, 0402, 16V, 10%, 0.1uF, COMM	718866-104K1C	
C505	CAP, X7R, 0402, 16V, 10%, 0.1uF, COMM	718866-104K1C	
C506	CAP, X7R, 0402, 16V, 10%, 10000pF, COMM	718866-103K1C	
C507	CAP, CER, 1210, X7R, 25V, 10uF	291431-106	
C508	CAP, 1206, X7R, 25V, 10%, 4.7uF	262063-475	
C509	CAP, X7R, 0402, 16V, 10%, 0.1uF, COMM	718866-104K1C	
C511	CAP, CER, 1210, X7R, 25V, 10uF	291431-106	
C512	CAP, X7R, 0402, 16V, 10%, 0.1uF, COMM	718875-104K1C	
C513	CAP, X7R, 0402, 16V, 10%, 1000pF, COMM	718866-102K1C	
C603	CAP, X5R, 0805, 25V, 10%, 10uF	273592-106E	
C604	CAP, 0805, X7R, 50V, 0.33uF	133623-334	
C605	CAP, X5R, 0805, 22uF, 6.3V, 20%	273592-226JM	
C608	CAP, X7R, 0402, 16V, 10%, 1000pF	293702-102	
C610	CAP, X7R, 0402, 16V, 10%, 1000pF	293702-102	
C701	CAP, X5R, 0805, 22uF, 6.3V, 20%	273592-226JM	
C702	CAP, 0805, X7R, 10%, 25V, 1uF	181264-105	
C703	CAP, X5R, 0402, 0.1uF, 16V, 10%	313771-104C	
C704	CAP, X5R, 0402, 0.1uF, 16V, 10%	313771-104C	
C705	CAP, X5R, 0402, 0.1uF, 16V, 10%	313771-104C	
C706	CAP, X5R, 0402, 0.1uF, 16V, 10%	313771-104C	

Diodes

Reference Designator	Description	Material Number	Note
D401	DIODE, SWITCHING, 100V, BAV99, SOT363	319113-001	
D402	DIODE, SWITCHING, 100V, BAV99, SOT363	319113-001	
D403	DIODE, SWITCHING, 100V, BAV99, SOT363	319113-001	
D502	DIODE, SCHOTTKY, 40V, 3A, SMB	193847-001	
D503	DIODE, SCHTKY, SC70, 30V, SERIES	268381-004	
D601	DIODE, SCHTKY, SC70, 30V, COM.CATH	268381-003	
D602	DIODE, SCHTKY, SC70, 30V, COM.CATH	268381-003	
D701	DIODE, SOT-23, BAV99	147239	
D702	DIODE, SCHTKY, SC70, 30V, COM.CATH	268381-003	
DS801	DIODE, LED, 0402, 0.01A, 5V, VERT, WHITE	373123-0010	
DS802	DIODE, LED, 0402, 0.01A, 5V, VERT, WHITE	373123-0010	
DS803	DIODE, LED, 0603, 0.20A, 5V, BLUE	728316-0020	
DS805	DIODE, LED, 0402, 0.02A, 5V, GRN	364327-0020	
DS807	DIODE, LED, 0402, 0.02A, 5V, YELLOW	367495-0020	
DS808	DIODE, LED, 0402, 0.02A, 4V, RED	367495-0010	

ELECTRICAL PART LIST

Main PCB
Transistors

Reference Designator	Description	Material Number	Note
Q501	TRANSISTOR, MOSFET, P-CH, 0.3A, 30V, DMP32D4S	736331-0010	
Q502	TRANSISTOR, BRT, NPN, 4.7K/47K, SOT-23	346223-0010	
Q503	TRANSISTOR, BRT, NPN, 4.7K/47K, SOT-23	346223-0010	
Q504	TRANSISTOR, MOSFET, P-CH, 4A, 20V, SOT-23	626239-0010	
Q505	TRANSISTOR, BRT, NPN, 4.7K/47K, SOT-23	346223-0010	
Q506	XSISTOR, BPLR, P, 40V, 200mA, SOT23	148596	
Q601	XSISTOR, BPLR, N, 40V, 200mA, SOT23	146819	
Q602	TRANSISTOR, MOSFET, P-CH, 0.3A, 30V, DMP32D4S	736331-0010	
Q701	TRANSISTOR, MFET, N-CH, 0.3A, 60V, SOT-23	356154-0010	
Q801	TRANSISTOR, BPLR, NPN, 0.2A, 40V, SOT-363	195857-3	
Q802	TRANSISTOR, BPLR, NPN, 0.2A, 40V, SOT-363	195857-3	
Q803	TRANSISTOR, BPLR, NPN, 0.2A, 40V, SOT-363	195857-3	
Q804	TRANSISTOR, BPLR, NPN, 0.2A, 40V, SOT-363	195857-3	

Integrated Circuits

Reference Designator	Description	Material Number	Note
U200	IC, SoC,BLUETOOTH, W/DSP, CSR8670C, 112VFBGA	354008-0010	
U202	IC, MEM, FLASH, SERIAL, 32Mb, 1.8V, 8SO	716603-0010	
U501	IC, BATT CHRG, LI-ION, USB, 2-CELL, 5V, 20CSP	715728-0010	
U602	IC, VREG, SW, BUCK, 0.5A, 3.3V, TPS62172, 8WSON	715991-0010	
U701	IC, SoC, ARM, 32b, 85C, 4V, STM32F030C6, 48LQFP	715757-0020	

Miscellaneous

Reference Designator	Description	Material Number	Note
FB501	BEAD, FERRITE, 0603, 6A, 26 OHMS	345337-S026	
FB502	BEAD, FERRITE, 0603, 6A, 26 OHMS	345337-S026	
FL301	FILTER, SAW, 2.4GHz, BLUETOOTH, SON-5	331796-0010	
J902	CONN, BRD-BRD, MALE, T ENTRY, 20POS, GRY	357552-0020	
J903	CONN, FFC, 0.5mm, S ENTRY, 34POS	363842-34S2	
L301	INDUCTOR, POWER, SMT, 85C, 1A, 20%, 4.7uH	627684-4R7M	
L302	INDUCTOR, POWER, SMT, 85C, 1A, 20%, 4.7uH	627684-4R7M	
L501	INDUCTOR, SMT, 6X6mm, 2.6A, 20%, 4.7uH	369623-4R7M	
L601	INDUCTOR, POWER, SMT, 85C, 1.2A, 20%, 3.3uH	716046-3R3M	
S801	SWITCH, TACT, SPST, 50mA, 12V, SMT	364142-0010	
S802	SWITCH, TACT, SPST, 50mA, 12V, SMT	364142-0010	
S804	SWITCH, TACT, SPST, 50mA, 12V, SMT	364142-0010	
S805	SWITCH, TACT, SPST, 50mA, 12V, SMT	364142-0010	
S806	SWITCH, TACT, SPST, 50mA, 12V, SMT	364142-0010	
W201	JUMPER, 0402, 0 OHM	280043	
W202	JUMPER, 0402, 0 OHM	280043	

ELECTRICAL PART LIST

Main PCB
Miscellaneous Continued

Reference Designator	Description	Material Number	Note
W301	JUMPER, 0402, 0 OHM	280043	
W302	JUMPER, 0402, 0 OHM	280043	
W402	JUMPER, 0402, 0 OHM	280043	
W403	JUMPER, 0402, 0 OHM	280043	
W404	JUMPER, 0402, 0 OHM	280043	
W405	JUMPER, 0402, 0 OHM	280043	
W408	JUMPER, 0402, 0 OHM	280043	
W409	JUMPER, 0402, 0 OHM	280043	
W412	JUMPER, 0402, 0 OHM	280043	
W413	JUMPER, 0402, 0 OHM	280043	
W414	JUMPER, 0402, 0 OHM	280043	
W416	JUMPER, 0402, 0 OHM	280043	
W703	JUMPER, 0402, 0 OHM	280043	
W704	JUMPER, 0402, 0 OHM	280043	
X301	CRYSTAL, 26MHz, +/-10ppm, SMD	291429-008	

Boost PCB Part List Resistors

Reference Designator	Description	Material Number	Note
R500	RES, 0402, 63MW, 1%, 100K	268361-1003	
R501	RES, 0402, 63MW, 1%, 100K	268361-1003	
R502	RES, 0402, 63MW, 1%, 22.1K	268361-2212	
R505	RES, 0402, 63MW, 1%, 100K	268361-1003	
R508	RES, 0402, 63MW, 1%, 100K	268361-1003	
R509	RES, 0402, 33.2K, 1/16W, 1%	268361-3322	
R510	RES, 0402, 63MW, 1%, 100K	268361-1003	
R511	RES, 0402, 63MW, 1%, 280K	268361-2803	
R512	RES, 0402, 63MW, 1%, 27.4K	268361-2742	
R513	RESISTOR, JUMPER, 2A, 1206	319408-001	
R514	RES, 0402, 63MW, 1%, 1.00K	268361-1001	
R515	RES, METAL FOIL, 1206, 0.5W, 1%, 0.005 OHM	626686-R005F	
R516	RES, 0402, 63MW, 1%, 10.0K	268361-1002	
R517	RES, 0402, 63MW, 1%, 10.0K	268361-1002	
R518	RES, 0805, 1/10W, 5%, 2.7 OHM	133626-2R75	
R519	RES, 0402, 47.5K, 1/16W, 1%	268361-4752	
R520	RES, 0402, 47.5K, 1/16W, 1%	268361-4752	
R521	RES, 0402, 63MW, 1%, 499K	268361-4993	
R522	RES, 0402, 63MW, 1%, 22.6K	268361-2262	
R523	RES, 0402, 63MW, 1%, 3.01K	268361-3011	
R524	RES, 0402, 63MW, 1%, 100 OHM	268361-1000	
R525	RES, 0402, 63MW, 1%, 150K	268361-1503	
R526	RES, 0402, 63MW, 1%, 499K	268361-4993	

ELECTRICAL PART LIST

Boost PCB
Capacitors

Reference Designator	Description	Material Number	Note
C400	CAP, COG, 0402, 5%, 100pF, 50V	268364-101	
C401	CAP, COG, 0402, 5%, 100pF, 50V	268364-101	
C501	CAP, 0603, X7R, 50V, 10%, .033uF	191470-333	
C502	CAP, COG, 0402, 5%, 100pF, 50V	268364-101	
C503	CAP, C0G, 0402, 50V, 5%, 1.2nF	268364-122	
C504	CAP, X5R, 0805, 25V, 10%, 10uF	273592-106E	
C505	CAP, COG, 0402, 50V, 5%, 68pF	268364-680	
C506	CAP, X7R, 0603, 1uF, 16V, 10%	257154-105K16	
C507	CAP, X5R, 0805, 25V, 10%, 10uF	273592-106E	
C508	CAP, X7R, 0603, 10%, 0.1uF, 50V	304991-104	
C509	CAP, COG, 0402, 5%, 100pF, 50V	268364-101	
C510	CAP, X5R, 0805, 25V, 10%, 10uF	273592-106E	
C511	CAP, X5R, 0805, 25V, 10%, 10uF	273592-106E	
C512	CAP, C0G, 0402, 50V, 5%, 1.5nF	268364-152	
C513	CAP, X7R, 10UF, 25V, SMD, 125C, FT	315052-106D	
C515	CAP, X7R, 0402, 25V, 5%, 3.3nF	268367-332	

Diodes

Reference Designator	Description	Material Number	Note
D500	DIODE, DUAL, 75V, 300mA, SOT-23	148774	
D501	DIODE, SOT-23, BAV99	147239	
D503	DIODE, SCHOTTKY, 10A, 40V, SMT	350300-0020	
D504	DIODE, SCHTKY, SC70, 30V, SINGLE	268381-001	

Transistors

Reference Designator	Description	Material Number	Note
Q500	XISTOR, MFET, N-CH, 0.3A, 60V, 2N7002K, AUTO-Q	356154-0020	
Q501	XISTOR, MFET, N-CH, 0.3A, 60V, 2N7002K, AUTO-Q	356154-0020	
Q502	XISTOR, MFET, N-CH, 0.3A, 60V, 2N7002K, AUTO-Q	356154-0020	
Q503	XISTOR, MOSFET, P-CH, 4A,20V, SOT-23	626239-0010	
Q504	XISTOR, MFET, N-CH, 0.3A, 60V, 2N7002K, AUTO-Q	356154-0020	
Q505	XISTOR, MFET, N-CH, 0.3A, 60V, 2N7002K, AUTO-Q	356154-0020	
Q506	XISTOR, MFET, N-CH, 21A, 25V, 8SON	357501-0010	
Q507	XISTOR, BPLR, P, 40V, 200mA, SOT23	148596	

ELECTRICAL PART LIST

Boost PCB
Integrated Circuits

Reference Designator	Description	Material Number	Note
U500	IC, BOOST CONTROLLER, 4.5V TO 52V, 10SON	327304-0020	

Miscellaneous

Reference Designator	Description	Material Number	Note
J400	CONN, BRD-BRD, FEMALE, S ENTRY, 20 POS, GRY	357586-20S1	
J401	CONN, BRD-BRD, FEMALE, S ENTRY, 20 POS, GRY	357586-20S1	
L500	INDUCTOR, SMT, 11.4X10.8mm, 13.6A, 20%, 2.2uH	628640-2R2M	

Amp PCB Part List Resistors

Reference Designator	Description	Material Number	Note
R200	RES, 0402, 63MW, 1%, 249 OHM	268361-2490	
R201	RES, 0402, 63MW, 1%, 249 OHM	268361-2490	
R202	RES, 0402, 63MW, 1%, 249 OHM	268361-2490	
R203	RES, 0402, 63MW, 1%, 249 OHM	268361-2490	
R300	RES, 0402, 63MW, 1%, 100K	268361-1003	
R302	RES, 0402, 63MW, 1%, 100K	268361-1003	
R303	RES, 0603, .1W, 1%, 20K	191465-2002	
R304	RES, 0603, .1W, 1%, 100K	191465-1003	
R305	RES, 0402, 63MW, 1%, 10 OHM	268361-10R0	
R306	RES, 0402, 63MW, 1%, 1K	268361-1001	

Capacitors


Reference Designator	Description	Material Number	Note
C200	CAP, COG, 0402, 5%, 1000pF, 50V	268366-102	
C201	CAP, COG, 0402, 5%, 1000pF, 50V	268366-102	
C202	CAP, X7R, 0402, 50V, 10%, 1500pF, COMM	718866-152K1H	
C203	CAP, X7R, 0402, 50V, 10%, 1500pF, COMM	718866-152K1H	
C204	CAP, X7R, 0402, 50V, 10%, 1500pF, COMM	718866-152K1H	
C205	CAP, X7R, 0402, 50V, 10%, 1500pF, COMM	718866-152K1H	
C300	CAP, 1206, X7R, LD, 25V, 10%, 1.0uF	306105-105	
C301	CAP, 1206, X7R, LD, 25V, 10%, 1.0uF	306105-105	
C302	CAP, 1206, X7R, LD, 25V, 10%, 1.0uF	306105-105	
C303	CAP, 1206, X7R, LD, 25V, 10%, 1.0uF	306105-105	
C304	CAP, X7R, 0603, 1uF, 16V, 10%	257154-105K16	
C305	CAP, 1206, X7R, 50V, 1uF, 10%	286500-105	
C306	CAP, 0805, X7R, 50V, 10%, 0.22uF	133623-224	

ELECTRICAL PART LIST

Amp PCB Part List
Capacitors (Continued)

Reference Designator	Description	Material Number	Note
C307	CAP, 0805, X7R, 50V, 10%, 0.22uF	133623-224	
C308	CAP, 0805, X7R, 50V, 10%, 0.22uF	133623-224	
C309	CAP, 0805, X7R, 50V, 10%, 0.22uF	133623-224	
C310	CAP, COG, 0402, 5%, 1000pF, 50V	268364-102	
C311	CAP, COG, 0402, 5%, 1000pF, 50V	268364-102	
C312	CAP, X7R, 0603, 10%, 0.1uF, 50V	304991-104	
C313	CAP, X7R, 0603, 10%, 0.1uF, 50V	304991-104	
C315	CAP, X7R, 0603, 10%, 0.1uF, 50V	304991-104	
C317	CAP, X7R, 0603, 10%, 0.1uF, 50V	304991-104	
C320	CAP, 1206, X7R, 50V, 1.0uF, 10%	286500-105	
C321	CAP, 1206, X7R, 50V, 1.0uF, 10%	286500-105	
C322	CAP, COG, 0402, 5%, 100pF, 50V	268364-101	
C323	CAP, COG, 0402, 5%, 100pF, 50V	268364-101	
C324	CAP, COG, 0402, 5%, 100pF, 50V	268364-101	
C325	CAP, 1206, X7R, 50V, 1.0uF, 10%	286500-105	
C327	CAP, COG, 0402, 5%, 100pF, 50V	268364-101	
C328	CAP, X7R, 10uF, 25V, SMD, 125C, FT	315052-106D	
C329	CAP, X7R, 10uF, 25V, SMD, 125C, FT	315052-106D	
C330	CAP, X7R, 10uF, 25V, SMD, 125C, FT	315052-106D	

Integrated Circuits

Reference Designator	Description	Material Number	Note
U300	IC, PWR AMP, CLASS D, 2X30W, 8 OHM, 32SO	356443-0010	3 

Miscellaneous

Reference Designator	Description	Material Number	Note
FB300	BEAD, FERRITE, 1806, 6A, 100 OHM	722888-0010	
FB301	BEAD, FERRITE, 1806, 6A, 100 OHM	722888-0010	
FB302	BEAD, FERRITE, 1806, 6A, 100 OHM	722888-0010	
FB303	BEAD, FERRITE, 1806, 6A, 100 OHM	722888-0010	
J200	CONN, BRD-BRD, MALE, T ENTRY, 20POS, GRY	357552-0020	
J300	CONN, HEADER, 4POS, 1.25mm, MALE, WHITE	330701-0004	

ELECTRICAL PART LIST

I/O PCB Part List
Resistors

Reference Designator	Description	Material Number	Note
R702	RES, 0402, 47.5K, 1/16W, 1%	268361-4752	
R703	RES, 0402, 63MW, 1%, 100K	268361-1003	
R708	RES, 0402, 63MW, 1%, 100K	268361-1003	
R713	RES, 0402, 63MW, 1%, 100K	268361-1003	
R714	RES, 0402, 63MW, 1%, 100K	268361-1003	
R715	RES, 0402, 63MW, 1%, 20.5K	268361-2052	
R716	RES, 0402, 63MW, 1%, 20.5K	268361-2052	
R717	RES, 0402, 63MW, 1%, 10.0K	268361-1002	
R718	RES, 0402, 63MW, 1%, 23.7K	268361-2372	
R719	RES, 0402, 63MW, 1%, 10.0K	268361-1002	
R720	RES, 0402, 63MW, 1%, 10.0K	268361-1002	
R721	RES, 0402, 63MW, 1%, 10.0K	268361-1002	
R722	RES, 0402, 63MW, 1%, 100K	268361-1003	
R723	RES, 0402, 63MW, 1%, 23.7K	268361-2372	
R901	RES, 0805, 1/8W, 1%, 3.01K	173767-3011	
R902	RES, 0805, 1/8W, 1%, 3.01K	173767-3011	
R903	RES, 0402, 63MW, 1%, 100 OHM	268361-1000	
R904	RES, 0402, 63MW, 1%, 100 OHM	268361-1000	

Capacitors

Reference Designator	Description	Material Number	Note
C601	CAP, 0805, COG, 50V, 5%, 180pF	133622-181	
C701	CAP, X7R, 0402, 16V, 5%, 0.1uF, COMM	718866-104J1C	
C703	CAP, X7R, 0402, 16V, 5%, 0.1uF, COMM	718866-104J1C	
C704	CAP, X7R, 0402, 16V, 5%, 0.1uF, COMM	718866-104J1C	
C705	CAP, X7R, 0402, 16V, 5%, 0.1uF, COMM	718866-104J1C	
C706	CAP, X7R, 0603, 1uF, 16V, 10%	257154-105K16	
C709	CAP, X7R, 0603, 1uF, 16V, 10%	257154-105K16	
C801	CAP, X7R, 0402, 16V, 5%, 0.1uF, COMM	718866-104J1C	
C902	CAP, X7R, 0402, 16V, 10%, 1000pF	293702-102	
C903	CAP, COG, 0402, 5%, 180pF, 50V	268364-181	
C904	CAP, X7R, 0402, 16V, 5%, 0.1uF, COMM	718866-104J1C	
C905	CAP, X7R, 0402, 16V, 5%, 0.1uF, COMM	718866-104J1C	
C906	CAP, 0805, COG, 50V, 5%, 180pF	133622-181	
C909	CAP, X7R, 0402, 25V, 5%, 10nF	268367-103	
C910	CAP, X7R, 0603, 16V, 10%, 0.1uF	257154-104K16	
C913	CAP, X7R, 0402, 16V, 10%, 1000pF	293702-102	

ELECTRICAL PART LIST

I/O PCB Part List Diodes

Reference Designator	Description	Material Number	Note
D702	DIODE, SOT-23, BAV99	147239	
D703	DIODE, SOT-23, BAV99	147239	
D704	DIODE, SCHTKY, SC70, 30V, COM. CATH	268381-003	
ZR701	DIODE, ZEN, 5.6V, 225MW, 5%, SOT-23	135247-5232	

Transistors

Reference Designator	Description	Material Number	Note
Q701	XSISTOR, BIAS, PNP, 0.03A, 50V, 47K/47K, SOT23	351912-0010	
Q702	TRANSISTOR, MOSFET, P-CH, 4A, 20V, SOT-23	626239-0010	
Q703	TRANSISTOR, MOSFET, P-CH, 4A, 20V, SOT-23	626239-0010	
Q704	XSISTOR, BIAS, PNP, 0.03A, 50V, 47K/47K, SOT23	351912-0010	
Q705	TRANSISTOR, MOSFET, P-CH, 4A, 20V, SOT-23	626239-0010	
Q706	TRANSISTOR, MOSFET, P-CH, 4A, 20V, SOT-23	626239-0010	
Q707	XSISTOR, BPLR, P, 40V, 200mA, SOT23	148596	
Q708	BSS ASSY, SOUNDLINK MINI BT 2, IO	716542-0010	

Integrated Circuits

Reference Designator	Description	Material Number	Note
U701	IC, VOLTAGE COMPARATOR, LM339	187618-001	
U901	MICROPHONE, MEMS, BOTTOM PORT, AKU440	728418-0010	

Miscellaneous

Reference Designator	Description	Material Number	Note
FB901	JUMPER, CHIP, 0603	196042	
J901	CONN, CUSTOM, IO, 3.5MM, MICRO USB-B NG6	726796-0010	
J903	CONN, FFC, 0.5mm, S ENTRY, 34POS	363842-34S2	
J905	CONN, CUSTOM, BATTERY, 4POS, BLK	360718-0010	
S801	IC, MUX/DEMUX, 2X2:1, USB, TS3USB221E, 10QFN	353620-0030	

DISASSEMBLY PROCEDURE

Important Notes!

*Place the system in "Ship Mode" prior to disassembly by entering the TAP command "sh". See TAP command set up on page 30.

Metal shavings might come out when removing screws from the aluminum boss in the housing. Effort must be taken to avoid metal shavings from entering the unit. Use a vacuum to remove any metal shavings.

1. Grille Removal

Note: The grille is held in place by Pressure Sensitive Adhesive (PSA) strips located in the center of the grille (figure 5.) and also by two tabs on either end of the grille (figure 3).

To avoid destroying the grill during the removal process, brush alcohol over the PSA strips (figure 5) before attempting to remove it.

Important Note: To avoid damage to the cabinet, do not use the cabinet as a pry point to remove the grille.

1.1 At the location shown in Figure 3, insert the tip of a plastic tool, such as a spudger, between the grille and its rubber gasket.

Note: The location shown is between the PSA and grille tabs securing the grille.

1.2 Rotate the spudger away from you while prying against the rubber gasket. Figure 4.

1.3 Once a portion of the grille is released, grasp the grille and pull it across the unit lengthwise to release the PSA. Figure 5.

2. Battery Removal

The Battery in SoundLink® Mini II is hardwired to the Boost PCB. See figure 6. Place the product in ship mode prior to disassembly. See entering ship mode on page 33.

The rear grille, I/O PCB, rear baffle and Amp PCB must be removed before the Battery and Boost board can be removed. Use the following procedure to remove the battery and the boost board in order to unsolder the cable and replace the battery.



Figure 3.



Figure 4.

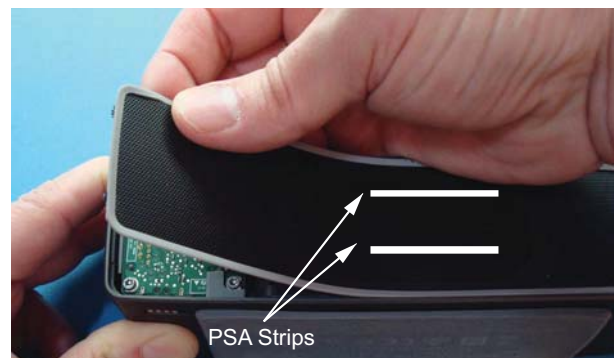


Figure 5.

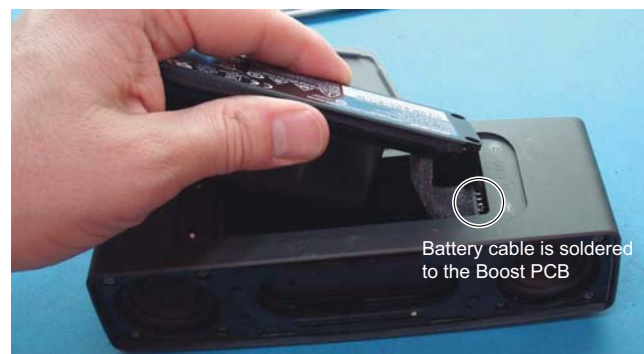


Figure 6.

DISASSEMBLY PROCEDURE

Battery removal Removal (Continued)

2.1 Remove the foot by pulling it away from the battery.

2.2 Remove the four screws securing the battery to the cabinet. Figure 7.

2.3 Remove the four screws securing the I/O PCB to the cabinet as shown in Figure 8.

2.4 Carefully peel away the foam tape securing the FFC cable to the I/O PCB connector. This foam will be damaged when removing, plan to replace the foam with part number 373978-0010, see item 8 on page 7.

Note: When handling the I/O board, do not touch the microphone filter with fingers. Gloves should be used to avoid contact with the filter. Figure 8.

The replacement I/O PCB does not include the microphone filter. Install new part (744588-0010) when replacing the I/O PCB.

2.4 Move the I/O PCB to the right until the AUX connector clears the housing and then lift the top edge of the PCB until the USB connector clears the housing. Figure 9.

2.5 Partially lift out the I/O PCB. Lift up the connector locking tab to release the FFC cable from the I/O PCB connector.

2.6 Pull the battery cover out of the retaining slot in the cabinet. Figure 9.

2.7 Remove the four screws securing the rear baffle. Figure 10.



Figure 7.

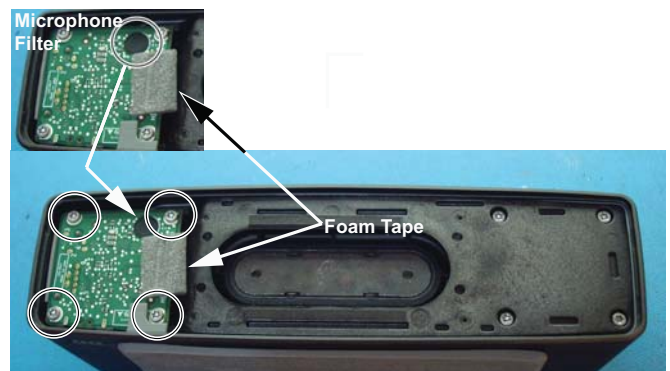


Figure 8.

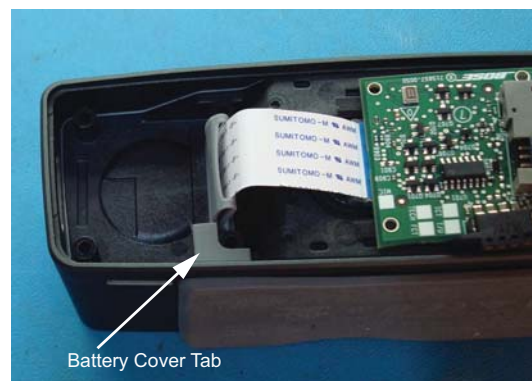


Figure 9.



Figure 10.

DISASSEMBLY PROCEDURE

Battery removal Removal (Continued)

2.8 Lift the battery up and away from the enclosure. The battery will still be connected to the boost board but cannot be fully removed until the end of the procedure.

2.9 As shown in Figure 11, insert your thumb into the battery cavity and press upward on the rear baffle.

2.10 Hold the FFC against the transducer through the battery opening while rocking the baffle back/forth as you slide it out of the cabinet. The FFC will slide out of the slot in the rear baffle while extracting the baffle in this way.

Note: Placing strain on the FFC Main PCB connector can damage the connector if the FFC is not held.

2.11 Using your thumb, push up on the Amp PCB as shown in Figure 13 to release it from the boost board.

2.12 Disconnect the speaker wire harness from the AMP PCB.

2.13 Release the Boost board from the main board connector by pushing upward. Figure 14, left.

2.14 Once the connector is unplugged, pull outward on the boost board to release it from the slot. Figure 14, right.

2.15 Lift the battery away from the enclosure by twisting the boost board to allow it to exit from the assembly along with the battery.



Figure 11.

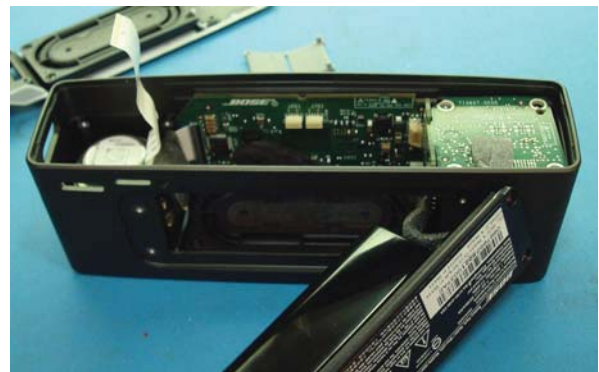


Figure 12.



Figure 13.

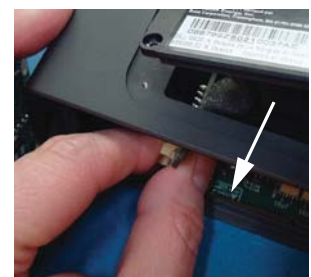
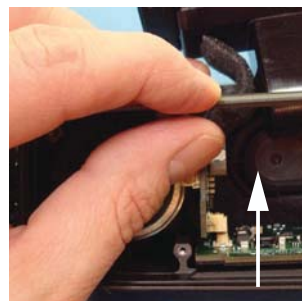


Figure 14.

DISASSEMBLY PROCEDURE

Battery removal Removal (Continued)

2.16 Once the battery and boost board are removed from the enclosure, the battery cable can be unsoldered and a new battery can be installed. Figure 15 shows the solder connections for the battery cable.



Figure 15.

3. Driver Removal

3.1 Remove the eight screws securing the front baffle. Figure 16.



Figure 16.

3.2 As shown in Figure 17, insert your thumb into the back of the unit or the battery cavity and push the front baffle out of the cabinet.



Figure 17.

3.3 Lift the left driver out of the cabinet. With a plastic tool, such as a spudger, release the speaker harness cable from the AMP PCB.

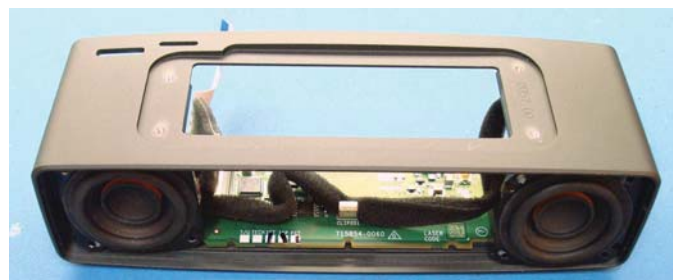


Figure 18.

DISASSEMBLY PROCEDURE

4. Main PCB Removal

Important Note! To avoid damage to the switches on the Main PCB, the front and rear baffle should be removed. The Main PCB is held in place by a shelf on the front and rear baffles which restricts the ability of the Main PCB to be rotated downward enough for the switches to clear the cabinet holes.

4.1 Perform procedures 1, 2, 3.1 and 3.2 to gain access to the Main board.

4.1 Detach the speaker wire from the wire clip on the main board.

4.1 lift upward on the main board and remove.

5. Lens Removal

5.1 Perform procedures 1, 2, 3 and 4 to gain access to the lens

5.2 The Lens is held in place by Pressure Sensitive Adhesive (PSA). Insert your thumbs into the cabinet and press upward on the Lens to release the PSA. Figure 20.



Figure 19.



Figure 20.

6. Button Pad Removal

5.1 Perform procedures 1, 2, 3 and 4 to gain access to the button pad.

6.1 Insert a plastic tool, such as a spudger, under the corner of the button pad and lift it up. Figure 21.

6.2 Peel up the button pad.



Figure 21.

ASSEMBLY KEY POINTS

When assembling the unit, reverse the disassembly procedures. The following assembly instructions provide key points that are important to consider when assembling the unit.

Note: To avoid stripping screws, first rotate the screw counter clockwise to locate the thread holes and then clockwise to tighten.

1. Driver Installation

1.1 When installing the drivers, make sure to place the speaker terminals toward the bottom. Figure 22.

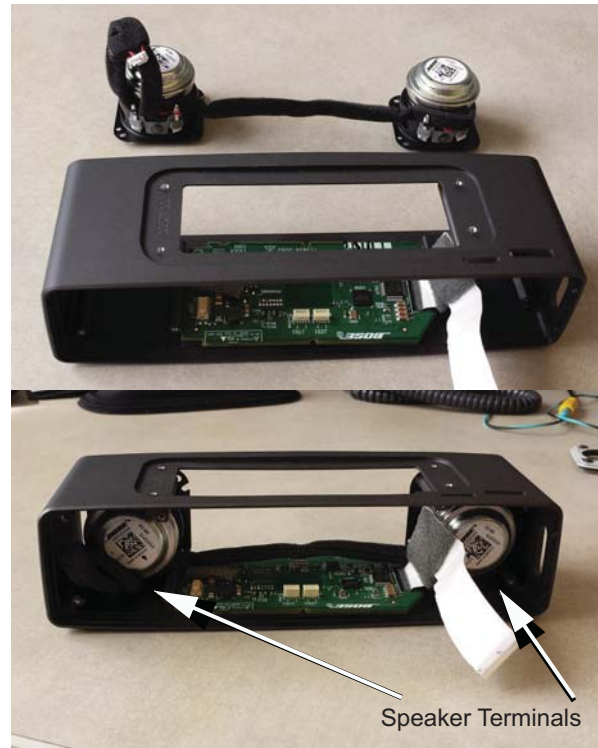


Figure 22. Driver Placement

2. Speaker Harness Dressing

2.1 Run the speaker harness through the notch in the Boost PCB. Figure 23.

2.2 The speaker harness should be dressed taught under the clip on the Main PCB. This will prevent the harness from contacting the moving passive radiator when assembled. Figure 23.

Note: If the harness is too taught, the right driver will rotate out of position.

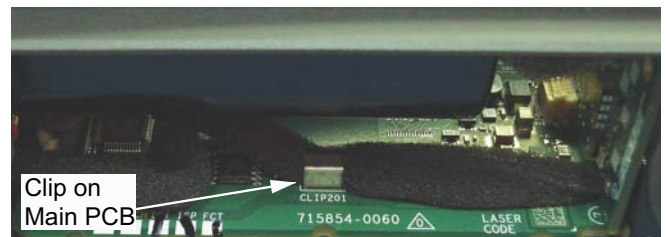
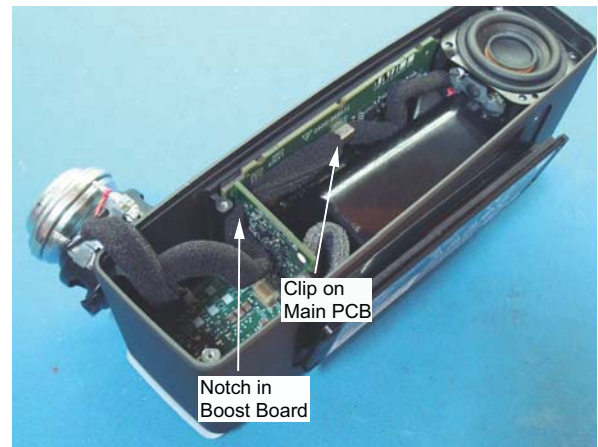


Figure 23. Driver Harness Dressing

ASSEMBLY KEY POINTS

3. Boost Board Installation

3.1 When installing the Boost PCB, ensure the board is placed in the PCB slot as you push down on the board to connect it to the main board. Figure 24.

4. Main and Boost PCB Placement

Note: A new FFC grommet should be used to avoid potential air leaks.

Note: If the baffle was removed, a new baffle should be used to avoid air leaks caused by deformation of the baffle wiper gasket. The baffle must be inserted straight down to prevent the gasket from rolling under and causing an air leak.

4.1 Insert the grommet over the FFC as shown. Figure 25. FFC Grommet

4.2 Lower the Main PCB into the cabinet at an angle so the switches do not scrape against the cabinet. Then feed the boost board through the top of the assembly and make the connection between the boost board and the main board.

Feed the FFC with grommet through the slot in the rear baffle. Ensure both sides of the grommet nub is fully seated in the slot. Figure 25 and 27.

4.3 The back edge of the Main PCB should rest on the shelf of the rear baffle. Figure 26.

4.4 Once fully inserted, rotate the front edge of the Main PCB upward until the switches are aligned to the holes in the cabinet.

4.5 With the speaker harness lined up with the notch in the Boost PCB, rotate the Boost PCB into position. Line up its connector with the connector on the AMP PCB.

Note: Ensure the speaker harness is dressed as described in the Speaker Harness Dressing instructions procedure 2.

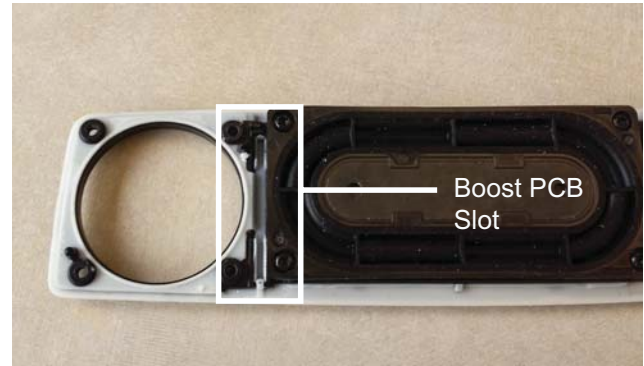


Figure 24. Boost PCB Slot

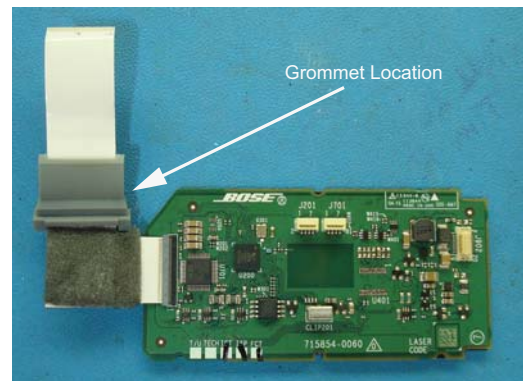


Figure 25. FFC Grommet

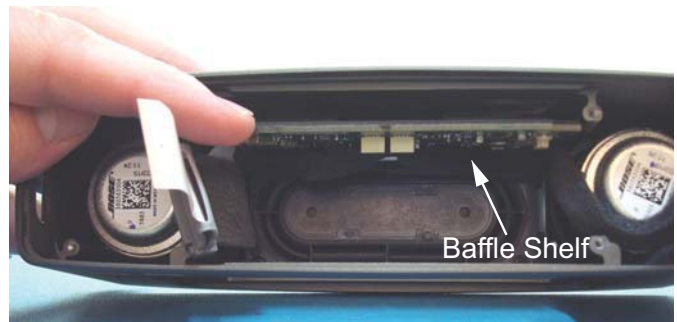


Figure 26. Main PCB Placement

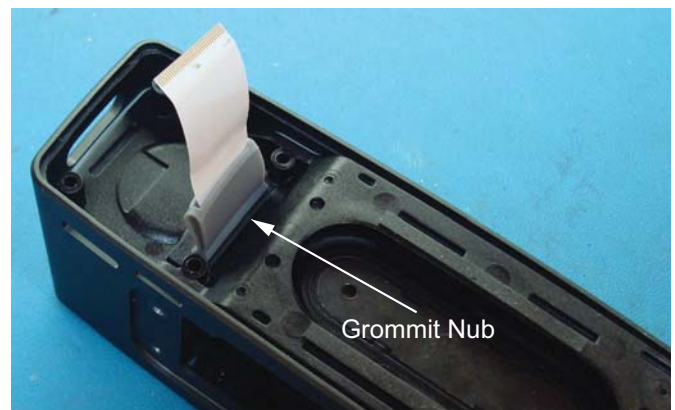


Figure 27. Grommet Seated in Baffle Slot

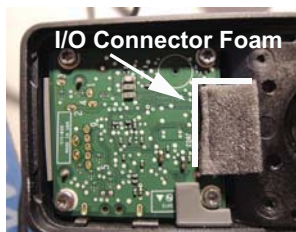
ASSEMBLY KEY POINTS

5. Securing the Baffles - Gasket Pressure

5.1 When securing the screws indicated in Figure 28, apply pressure at the points indicated. The baffle gasket provides an outward pressure on the cabinet which must be counteracted when securing the baffle screws. Failure to do so will result in an air leak.

6. Placing the I/O Connector Foam

6.1 The new foam covering the I/O cable needs to be placed in the top left corner of the FFC connector to avoid encroaching on the rear gasket mic geometry.



6.2 When placing the foam, also check for the presence of the mic filter.

7. Grille Replacement

Note: Remove all adhesive residue from the baffle.

7.1 Align the replacement grille in the grille gasket so the tabs protrude through the holes on the edges. Figure 29 and 30.

7.2 Align the PSA with the front and rear baffles as shown in Figure 31.

7.3 Align the grille tabs with the cabinet and then press down on the center of the grille. A roller can be used to ensure the alignment features on the grille gasket rest in the corresponding features in the baffle. Figures 29, 30, and 31.

Note: Failure to properly seat the grille gasket alignment features will result in an uneven grille. Refer to Figure 32 on the next page for gasket edge alignment pictures.

! Important: The grille is considered a safety device and must be properly installed. To ensure the PSA has been properly activated, a grille press is needed to apply 30 PSI of pressure for 9 seconds to the area of the grille secured by PSA.

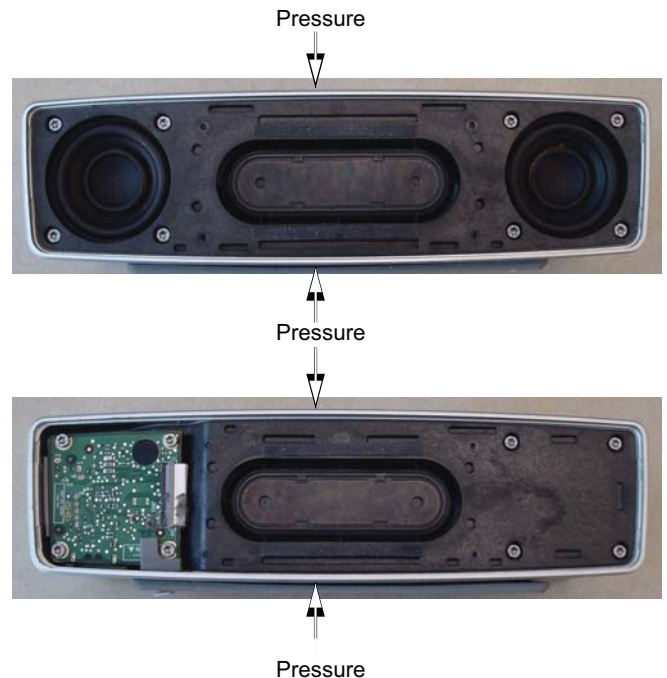


Figure 28. Baffle Gasket Compression

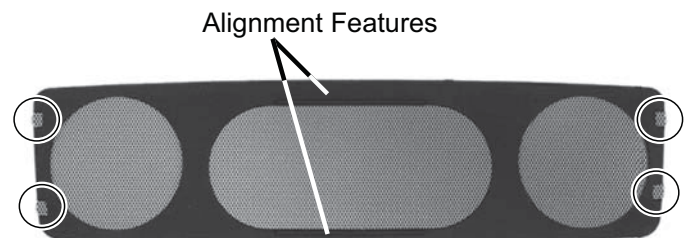


Figure 29. Front Grille Gasket and Tabs

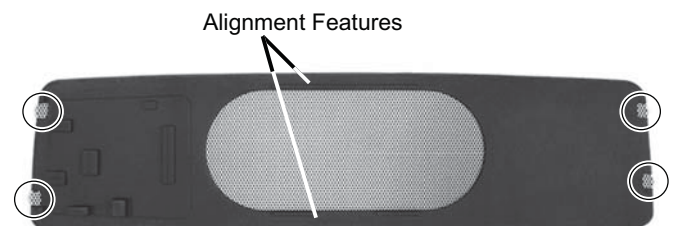
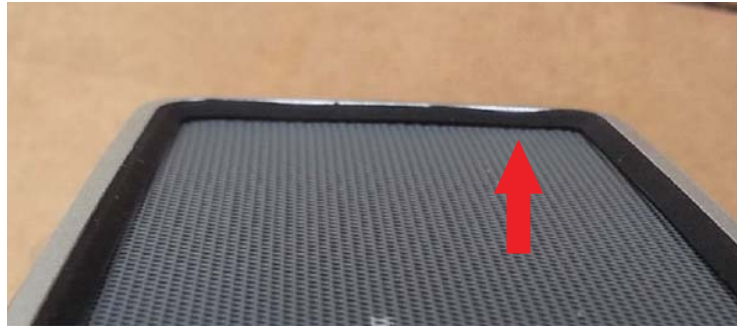


Figure 30. Rear Grille Gasket and Tabs

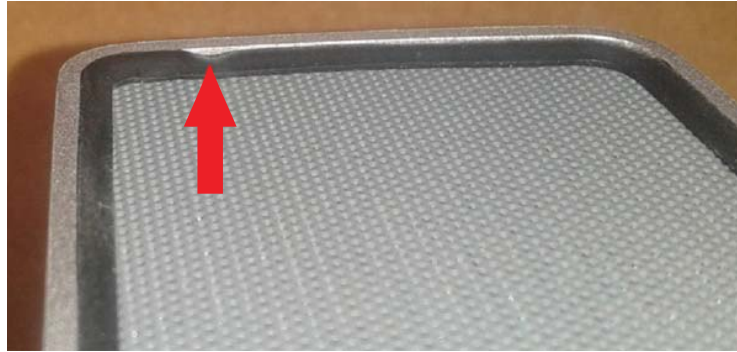


Figure 31. PSA Location

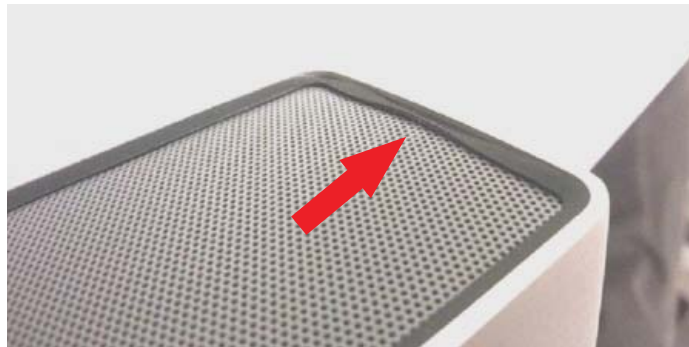
ASSEMBLY KEY POINTS



Acceptable gasket alignment



Not acceptable gasket alignment



Not acceptable gasket alignment - gasket rolled over/pinched



The gasket should align flush within the cabinet edges. The Gasket does not need to have the same flushness to the top and side cabinet edges.

Figure 32. Grille Gasket Alignment

USING TAP COMMANDS

Required Items

A. Polycomm interface tool - download “Polycomm.zip” from the SoundLink® Mini II page on the Bose® repair information website.

B. USB cable Type A to Micro B

Setup

1. Connect the USB cable to your computer and the SoundLink Mini II.
2. Unzip and Install the Polycomm application on your PC by clicking on the setup.exe file- this only needs to be done once.
3. Open the Polycomm application. It should state “Connected” at the bottom of the application. If not connected, click on the TAP Mode button.
4. Enter the TAP command VR to view the software version installed. A response indicates the unit is communicating in TAP mode.

Note: The Polycomm tool will only be used to issue TAP commands. Software updates should be performed using the customer tool.

<http://worldwide.bose.com>

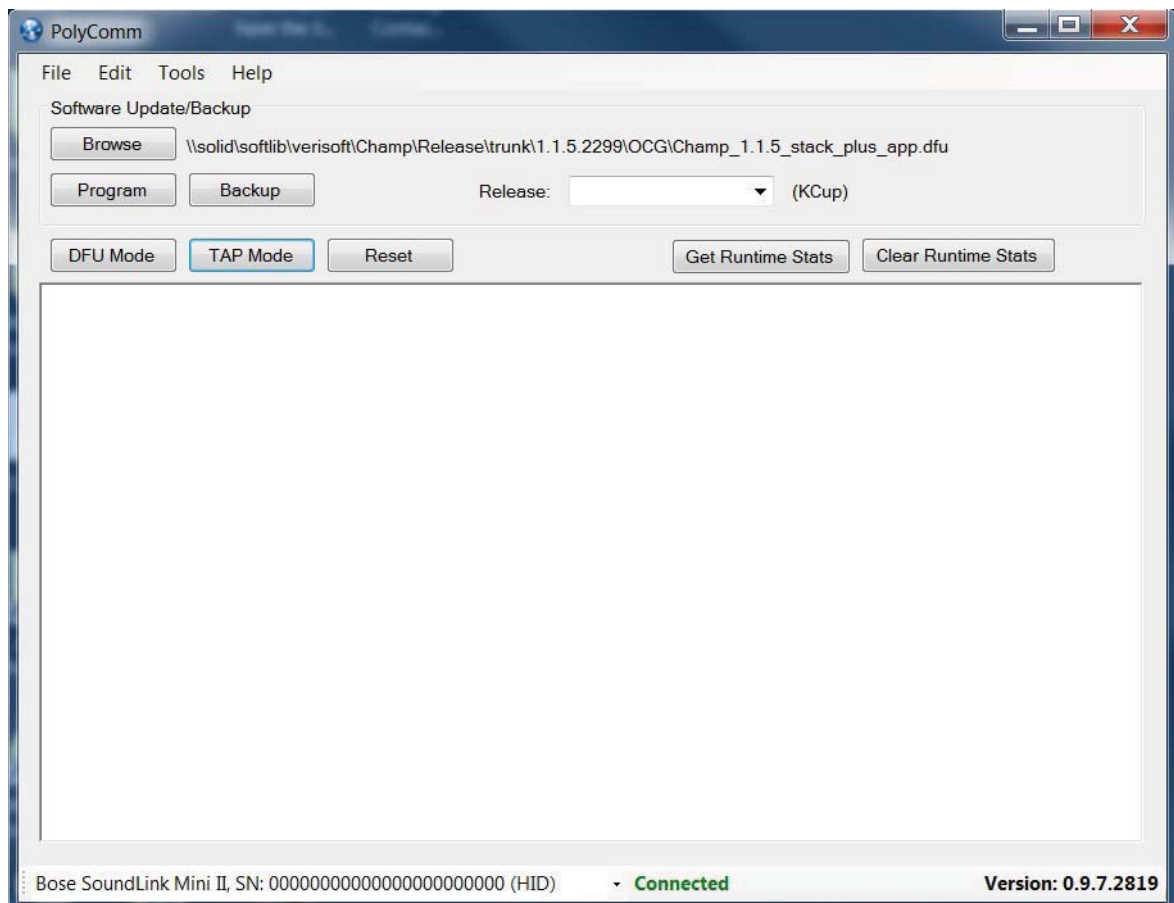


Figure 32. PolyComm Software tool for TAP

TEST PROCEDURES

Equipment Required

Computer w/USB port
PolyComm Software
USB TYPE A to micro B cable
Audio frequency generator
Cell Phone with Bluetooth® Capabilities
USB current meter

Prior to the functional test, the integrity of the external flash IC holding all non English languages should be checked.

A. Factory default the product by pressing the power button for 10 seconds until the LED's turn off. Once the button is released, voice prompts will ask you to select the language.

B. Scroll through the different languages by pressing the volume plus button. Then select a language.

The integrity of the flash IC is confirmed if the different languages can be heard.

1. Test Setup

1.1 Turn on the SoundLink® Mini II by pressing the power button.

1.2 Run the Polycomm software and connect the USB cable from the computer to the SoundLink Mini II. Then select TAP mode.

2. Left/Right Driver/ AUX Input Test

2.1 Connect a signal generator to the left AUX input of the Bose® Mini II Soundlink.

2.2 Adjust the signal generator to 50mVrms, 800Hz.

2.3 Issue TAP command VO 86 to set the volume to 60 (range is 0 to 99)

2.4 Confirm audio plays from the left driver.

2.5 Connect the signal generator to the right AUX input of the Soundlink Color.

2.6 Confirm audio plays from the right driver.

3. Air Leak Test/ AUX Input Test

3.1 Connect a signal generator the AUX input of the SoundLink Mini II.

3.2 Adjust the signal generator to 1.00Vrms, 60Hz.

3.3 Issue TAP command VO 86 to set the volume to 99 (range is 0 to 99)

3.4 Listen for air leaks around the cabinet edges and keypad.

PASS if no audible air leaks can be heard at a distance of less than 1 ft (0.3M).

FAIL if any audible air leaks can be heard at a distance of less than 1 ft (0.3M).

4. Frequency Sweep Test/ AUX Input Test

4.1 Connect a signal generator to the AUX input of the SoundLink Mini II.

4.2 Adjust the signal generator to 1.0Vrms, 50Hz.

4.3 Issue TAP command VO 99 to set the volume to 99 (range is 0 to 99)

4.4 Sweep the signal generator from 50Hz to 2kHz.

4.5 Listen for any extraneous noises such as buzzes, rattles, ticks, or distortion.

PASS if no noise can be heard at a distance of less than 1ft (0.3M).

FAIL if any noise can be heard at a distance less than 1ft (0.3M).

TEST PROCEDURES

5. Bluetooth® Functional Test

For this test, use a Cell phone with A2DP Bluetooth, such as an iPhone® (Advanced Audio Distribution Profile)

Pair SoundLink Mini II and Bluetooth device.

Note: Make sure to remove the 3.5mm connector from the AUX jack. The product switches to AUX when a connector is inserted.

5.1 Remove power from the unit and turn on the SoundLink Mini II.

Note: Removing power will test the units ability to play audio from the battery also.

5.2 Press and hold the Bluetooth button until the LED blinks blue to make the unit discoverable.

5.3 From the Bluetooth device list, select the device named "Bose Mini II SoundLink". Once paired, the LED on the unit should turn a solid white and a voice prompt will identify what device you have connected to.

Note: If you are prompted for a pass code, enter 0000.

5.4 Play a familiar audio track from the Bluetooth device.

5.5 Listen for a clean undistorted sound with no audio drop outs.

6. Speakerphone Test

6.1 Using the cell phone, pair to the SoundLink Mini II via Bluetooth.

6.2 Using a different phone, make a call to the bluetooth connected cell phone.

6.3 The product will announce an incoming call. Answer the call using the multifunction button.

6.4 Listen on the second phone as you talk into the SoundLink Mini II for clear, undistorted audio from its microphone.

Note: The microphone on the SoundLink Mini II is located on a PCB mounted on the back right of the product.

7. Battery Charging/ USB Port Test

7.1 Connect a USB current meter between the power adapter and the SoundLink Mini II.

7.2 Confirm the reading on the current meter is 1.5A.

Note: It is possible the reading will be a number less than 1.5 if the battery is close to being fully charged.

7.3 Connect a USB current meter between a computer and the SoundLink Mini II.

7.4 Confirm the reading on the current meter is 0.5A.

Note: It is possible the reading will be a number less than 0.5 if the battery is close to being fully charged.

8. Battery Level Check - Optional Test

8.1 Enter TAP command "ba 4" to read the battery voltage level.

8.2 The results are returned in percentage of charge. Example: The unit responds with 80 = 80% of a full charge.

9. Battery Age Check

9.1 The battery is not able to supply age information by TAP. Use the product's Date Of Manufacture (DOM) to estimate the battery age or the DOM printed on the battery. The DOM is the 8th,9th,10th,11th number in the serial number in the form YDDD.

Example: 4175 is the 175th day of 2104 or June 24th, 2014.

9.2 The battery should be less than 30 months old.

TEST PROCEDURES

10. Factory Default Unit

Before returning the product to the customer, the unit must be factory defaulted to remove any settings that were changed during testing and also to clear any test bluetooth devices from the pairing list. The unit must then be placed into the ship mode to prevent the unit from turning on during shipping from an inadvertent button press.

10.1 Issue TAP command “fd” to factory default the unit. The unit will respond with “OK”.

10.2 Issue TAP command “sh” to put the unit into ship mode. The unit will respond with “OK”.

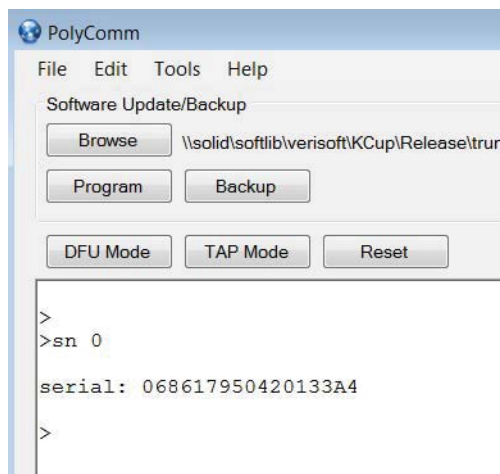
10.3 Disconnect the USB power cable from the product.

10.4 Press the power button and ensure the SoundLink Mini II does not turn on indicating it is in the ship mode.

Note: The unit will not respond to button presses while in the ship mode. When power is connected to the unit, it will come out of ship mode and operate normally.

11. Reading the Serial Number

The serial number for the SoundLink® Mini II is located on the bottom foot. If the foot is missing or the number is unreadable, use the TAP command “sn 0” to read the serial number from the products memory.



11. Additional TAP Commands

sh 99 - Reman Ship Mode; places the unit a special remanufacturing mode. It should only be used for units that will sit in storage for a period of time.

This command is used to drain the battery or charge the battery, depending on how much the battery is charged.

If the battery charge is to high, the LED's will turn on until the battery drains to a lower level, then goes into ship mode.

If the battery has a charge is too low, the battery will be charged to a higher level, then go into ship mode.

If the battery is ok for storage, then the battery will go directly into ship mode.

Only perform the sh 99 command if the product will be in storage for a long period of time. A typical repair that will be sent back to a customer does not require the command.

11.1 Connect power using the USB cable from the computer to the SoundLink Mini II.

11.2 Press the power button to turn off the SoundLink Mini II.

11.3 Issue TAP command “sh 99”.

11.4 Disconnect power.

SERVICE MANUAL REVISION HISTORY

Revision	Date	Description	Page #
00	6/2015	Initial Release	All
01	6/2015	Change sh 99 command. The product must be turned off to execute this command.	pg 30
02	7/2015	New foot part number added 756361-0010	pg 7
03	8/2015	New front and rear baffle part numbers From 357404-0010 to 357404-0020 From 357405-0010 to 357405-0020	pg 7
04	9/2015	I/O, Amp and Boost boards changed. from 716544-001S to 716544-002S PCB ASSY, SOUNDLINK MINI BT 2, IO, SVCE From 716527-001S to 716527-002S PCB ASSY, KCUP, AMP, SVCE From 716536-001S to 716536-002S PCB ASSY, SOUNDLINK MINI BT 2, BOOST, SVCE	pg 7
05	9/2015	Added velco strip part number	pg 8
06	10/2015	Foot part number added APAC	pg 8
07	10/2015	Top Cap part number change from 728773 to 757367.	pg 8
08	10/2015	New part numbers for the shrink wrap	pg 8
09	10/2015	Added bulk pack part numbers for grilles	pg 8
10	12/2015	Add TAP command to retrieve serial number.	pg 33
11	1/2016	Front grills had incorrect colors listed.	pg 8
12	1/2016	Worldwide power supply changed from -0020 and -0021 to -0030 and -0031. Also added new part number for main board - 755974-002S	pg 5 pg 7



Bose Corporation
100 The Mountain Road
Framingham Massachusetts USA 01701

Reference Number 725192-SM REV 12, 6/2015
<http://serviceops.bose.com>