

JBL LS Center

JBL Loudspeaker Troubleshooting/Repair Tips

Most customers prefer to do simple loudspeaker repairs themselves. By following the steps below, a majority of loudspeakers can be returned to their original factory performance with minimum effort. Choose the example that best describes the problem you are experiencing.

Problem 1: No sound or distorted sound from one loudspeaker in a pair (or set)

Connect the dead/distorting loudspeaker to a different amplifier channel (one that had a functioning loudspeaker connected to it). If it functions normally, the problem is not loudspeaker-related. If the loudspeaker still makes no sound or sounds distorted, a wire may have become loose or disconnected, the network (also known as a crossover) may be defective, the drivers (woofer, tweeter, etc.) may be defective or, in very rare cases, all may be defective.

Refer to the wiring diagram and exploded view below. The network is a small circuit board found on the inside of the terminal cup, or mounted to an inside wall of the enclosure. It sends low-frequency sounds to the woofer, high-frequency sounds to the tweeter and, if applicable, mid-frequency sounds to the midrange driver. Make sure all wires are secure and connected. Look for components on the network that look burnt, "bulged," or abnormal. If everything looks normal, connect the network to the drivers from another matching loudspeaker. **MAKE SURE** you attach the correct wires to each driver – mid- and low-frequency sounds can damage the tweeter! If there is still no sound or distorted sound, the network is defective. If there is clean undistorted sound, the drivers are defective.

Problem 2: No sound or distorted sound from one or more (but not all) drivers in an enclosure

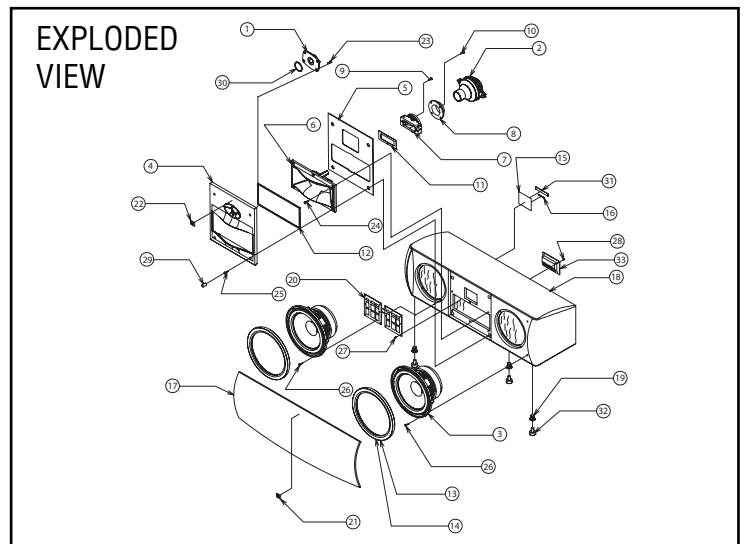
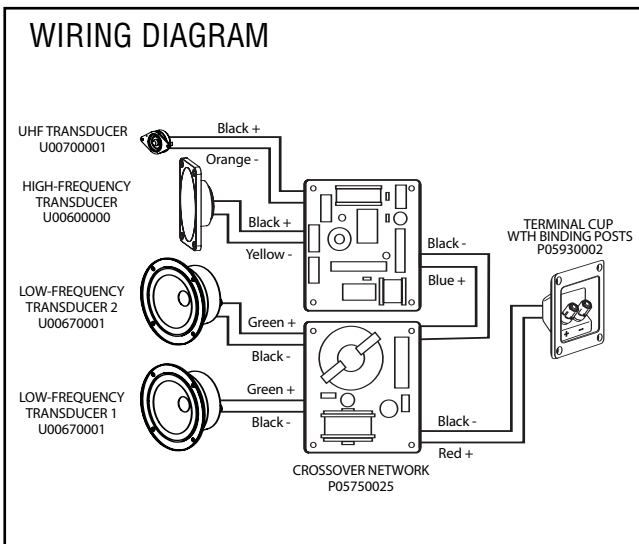
Remove the problem driver(s) from the enclosure and make sure all wires are secure and connected. If they are, proceed with the following test:

Woofer or midrange driver – Connect the driver's + and – input terminals directly to the loudspeaker wires from your receiver/amplifier and play some music at a reasonable volume. If the driver now sounds normal (produces a clean, undistorted sound), the network is most likely defective.

Tweeter – Replace the tweeter with a functioning tweeter from another loudspeaker. If the tweeter now functions normally (produces clean, undistorted sound), the original tweeter is defective. If the replacement tweeter also sounds distorted or produces no sound, the network is most likely defective.

Problem 3: Loudspeakers distort, rattle or pop at higher volumes

This is usually NOT a loudspeaker problem. Common causes are too much power (playing the loudspeakers too loud and causing them to distort), an amplifier with not enough power (the amplifier can't produce the required volume without distorting), excessive equalization (turning the tone controls too far clockwise, and/or engaging the loudness/bass boost button on your receiver) or some combination of the above. If only one loudspeaker is exhibiting the problem, and you're confident that it's not caused by too little power/too much power/excessive equalization, see solutions for Problems 1 and 2.



ITEM	PART NO.	DESCRIPTION	QTY.
1	U00700001	UHF Tweeter	1
2	U00600000	HF Tweeter	1
3	U00670001	6-1/2" Woofer	2
4, 5	M00050014	LF/UHF Faceplate w/Gasket	1
6-12	M00050015	HF Horn Assembly	1
13,14	M00050016	Trim Ring, Woofer w/Felt Gasket	2
15	Not for Sale	Label	1
16	Not for Sale	Label	1
17	P07950000	Front Grille	1
18	Not for Sale	LS Center Cabinet	1
19	P02780000	Insert Nut	4
20	P05750025	Crossover Network	1
21,22	P08160001	JBL Logo	1
23-28	M00050018	Screw Set Includes the Following:	6
		Screw, UHF #6-32 x 3/8BM	4
		Screw, LF Horn 4 x 20BA	6

ITEM	PART NO.	DESCRIPTION	QTY.
		Screw, LF/UHF Faceplate 3 x 12PA	4
		Screw, Woofer 4 x 25FA	8
		Screw, Crossover Network 3 x 20BA	11
		Screw, Terminal Cup 3 x 15BA	4
29	P07980000	Grille Cup	8
30	P08170000	Gasket, UHF	1
31	Not for Sale	Label	1
32	P08660000	Foot	4
33	P05930002	Terminal Cup w/Binding Posts	1
34	Visit www.jbl.com	LS series Owner's Manual	1
35	P00490002	Warranty Card	1
36	M00050020	Spike Foot Set	1
37	M00050021	Coaster Set	1
38	M00050019	Packing Set	1
39	P08540000	Outer Carton	1

SERVICE NOTES

- 1) Remove the grille.
- 2) Access to the woofer and crossover network is accomplished by gently prying the woofer trim ring out of the counterbore, which is attached with a friction fit, using a small, flat-blade screwdriver or similar tool. The four Phillips screws will then be visible.
- 3) Access to the HF/UHF sections is accomplished by first extracting the upper four rubber grille retainers. This can be accomplished by a) inserting a long screw with coarse threads into the cup hole, thread the screw and extract the cup or b) carefully pulling them out of their cavities with long-nosed pliers or a similar tool. It's possible each grille cup could be damaged since the cups are affixed with RTV (a silicon seal). Each cavity should be cleaned out with a 1/4" drill bit before the Phillips head screw is turned. (Power tools are not recommended here). Remove the four screws, then pull off the faceplate w/UHF driver attached to it.
- 4) Access LF, UHF tweeter or crossover network as needed.
- 5) Woofer Replacement: Make sure the woofer is exactly centered in the counterbore, otherwise the trim ring will not fit in place.