

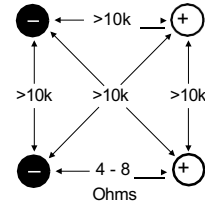
TROUBLESHOOTING GUIDE AND INSTRUCTIONS

Do not use test CDs or signal generators to find a problem with a speaker. You are much more likely to cause a new problem than find an existing one.

- I. If a bi-wire capable speaker (separate inputs for the upper and lower sections) as much lower than normal output or is severely distorted, check the speaker for shorted inputs before you proceed with troubleshooting.

For each reading, allow the meter to stabilize for at least 10 seconds before noting the result.

- Turn off the power amplifier.
- Disconnect the speaker cables from the suspect speaker.
- Measure the inputs with an ohm meter to verify the readings shown in the illustration to the right. If any of the measurements that should read above 10k ohms, read as a short or near short, the crossover has been damaged and the entire speaker must be returned to the factory for repair. In this case, do not proceed with troubleshooting.



2. Verify that the problem is in the speaker.

- Turn off the power amplifier.
- Disconnect the speaker cables from both speakers and physically switch the left and right speakers.
- Reconnect the speaker wires, turn on the power amplifier and play a recording that you know shows the problem.
 - If the problem followed the speaker, it is in the speaker. Proceed to the next section.
 - If the problem did not follow the speaker, it is in the electronics or cables before the speaker. Consult the appropriate manuals for repair information.

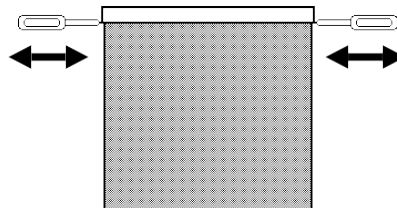
3. Determine the extent of the problem.

- Adjust the balance control on your preamplifier or receiver so that only the suspect speaker is playing.
- Play a recording that you know shows the problem. Determine which driver(s) have a problem.
- On a bi-wire capable speaker, play the upper and lower sections separately to locate the problem driver(s). Do not allow the leads of the cable you have unplugged from the speaker to touch each other and short.
- To find an intermittent buzz, use recordings of solo piano or solo horn.
- While playing music, rotate the contour control(s) on the rear of the speaker to verify proper operation. If the control will not turn, it is damaged and the entire speaker must be returned to the factory for crossover repair.

On Model 2 and 3 series speakers, a midrange driver that is not playing or is much louder than normal is a sign of crossover damage and requires that the entire speaker be returned to the factory for crossover repair.

4. Return the problem speaker or driver(s) for repair.

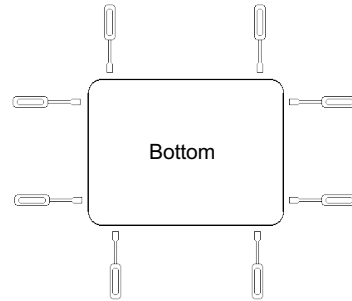
- Fill out the first page of this form with the information you have gathered troubleshooting and listening to the speaker. Remember to pack complete speakers according to the packing instructions.
- Those of you that are mechanically inclined may wish to remove the problem driver(s) from the cabinet and only return them for repair.
 - Turn the speaker upside-down on a soft padded surface that will not scratch the wood top.
 - Remove any stands and all the screws holding the bottom onto the speaker.
 - Insert a wide flat-blade screwdriver $\frac{1}{4}$ to $\frac{3}{8}$ inch straight into the speaker between the wood bottom and the grille cloth as shown in the illustration to the right at the locations shown in the illustration at the top of the next page. **DO NOT PRY UP OR DOWN.** Work your way around the speaker several times, inserting the screwdriver a little deeper each time around.
 - As the wood bottom comes loose, you will be able to easily lift it off the speaker.



Special 2W, 2Wq and V2W Subwoofer Notice

The modular design of Vandersteen subwoofer allows the amplifier section to be removed from the cabinet and returned for repair. Do not send a complete subwoofer into the factory for repair.

5. Carefully pull the bottom off the speaker. Leave the caulking on the speaker and the wood bottom. When the repair is completed and the bottom is reattached, the caulking will bond together over time.
6. Pull out the staples securing the grille cloth to the speaker using a thin, flat blade screwdriver to start each staple out then needle-nose pliers to remove them completely. On the Model 3, also remove the staples above and below the rear brace mounting hole on the back of the speaker unless you are only interested in getting to the rear mounted 10 inch acoustic coupler. Pull the grille cloth away from the bottom.
7. Turning the grille cloth inside out, pull it toward the top of the speaker as far as it will go without putting abnormal stress on the fabric. After the cloth stops in the back due to the input plate, the front can usually be pulled over the top of the speaker and completely out of the way.
8. If you still are not sure which driver is the problem, you can play music again and listen to each driver with your ear directly in front of the driver.



c. To remove the problem driver(s):

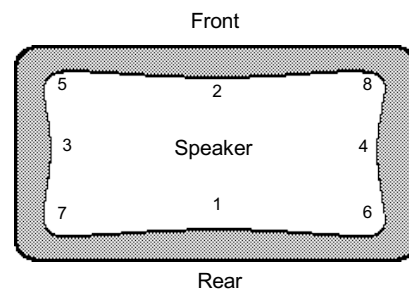
1. Remove any felt or other material attached to the front plate of the driver. Note the positioning of the material so you can properly attach it to the replacement driver.
2. Carefully remove the suspected driver by removing the screws and gently prying up one edge of the driver with a flat blade screwdriver.
3. Note the polarity of the wires connecting the driver. The positive wire will be colored. (Red, green, yellow, etc.) The negative wire will be black or marked with a black ring.
4. Clip the wires as close as possible to their connection point to the driver. If you cut the wires too far back, there will not be enough wire left to connect the replacement driver.

d. To install the repaired driver:

1. Unpack the driver and inspect for shipping damage.
2. Connect the wires in the proper phase. The positive wire will be colored. (Red, green, yellow, etc.) The negative wire will be black or marked with a black ring. The positive terminal on the repaired driver will be marked with red ink. Solder the wire to driver connections using the solder included with the repaired driver.
3. When mounting the repaired driver, use a thin layer of silicone to insure the complete sealing of the driver. On acoustic couplers, woofers and midranges, it is essential to achieve an airtight seal.
4. Reattach any felt or other material that was attached to the front face of the driver.

To reinstall the grille cloth:

1. Turn the speaker upside down on a padded surface.
2. On the Model 3, align the hole in the grille cloth with the hole in the enclosure above the 10" acoustic coupler and staple slightly above and below the hole.
3. With the seam in the center of the rear of the speaker, pull the grille cloth at the seam up and over the edge of the speaker bottom.
4. Staple the grille cloth you have pulled over the speaker bottom to the speaker bottom in the order shown in the illustration to the right.
5. Once the initial eight points have been stapled, staple around the grille cloth while maintaining the grille cloth at equal tension.
6. Pound the staples flat with a hammer if needed.
7. Reinstall the bottom end cap.
8. Reattach any stands or bases.



SPECIAL NOTE FOR PEOPLE OUTSIDE OF THE UNITED STATES

We are not able to ship speakers or drivers outside of the United States on a COD basis. If there is a charge for the repair, we will need a Money Order or Cashier's Check in US funds to cover the cost of the repair and shipping before the repaired item(s) can be returned. It is very important that you provide a valid phone number and/or fax number where we can contact you regarding the repair charges.