

VANDERSTEEN

Thank-you for choosing the Vandersteen Model VLR compact loudspeaker system. With proper care, your new speakers will provide many years of trouble free, high-quality sonic enjoyment.

The Vandersteen VLR is a high-technology product. We recommend that you carefully read this entire manual prior to mounting, connecting, or using your new speakers.

Vandersteen Audio

The Vandersteen VLR is a high-performance compact loudspeaker developed and refined by over twenty years of advanced research into dynamic loudspeaker design. Its innovative engineering, exceptional materials and quality construction have resulted in a true high-fidelity speaker unmatched by conventional bookshelf or cabinet mount speakers.

With their superior capabilities, a pair of VLRs excel as front and left main speakers in an A/V system. Like all Vandersteen speakers, the VLR is phase-correct with both its woofer and tweeter wired in positive phase through transient-perfect, first-order

crossover networks. In combination with phase-correct surround and center speakers, VLR main speakers allow you to realize the significant spatial and sonic benefits of a totally phase coherent A/V system.

The VLRs moderate size and versatile placement options allow them to easily integrate into almost any decor or environment. The aligned, coaxial design guarantees consistent superior performance throughout the listening area regardless of their height or position relative to the listeners.

The Vandersteen Audio VLR is designed and built in the United States of America.

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VLR COMPACT LOUDSPEAKER OPERATION MANUAL

Bare wires should never come into contact with the speaker's aluminum dress plate while the amplifier is on. Amplifier damage could result.

CONNECTIONS

The VLR's barrier strip provides superior gas-tight connections that do not deteriorate with time. Connect the VLRs as follows:

1. Crimp and solder spade lugs to the speaker ends of the cables as shown in Illustration # 1. With a pair of pliers, slightly bend the blades of the spade lugs so that the body of the spade lug will be held away from the input plate once the wires are connected as shown in Illustration # 2.
2. Connect the speaker cable to the VLR as shown in Illustration # 3. The input screws should be snug, but should not be overtightened.

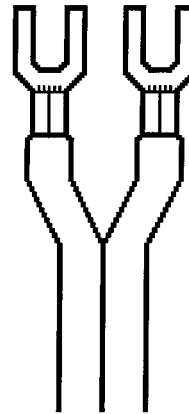


Illustration # 1

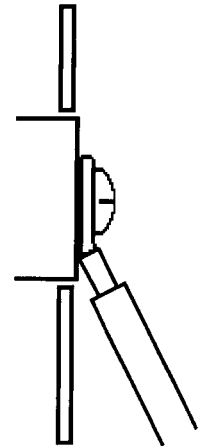


Illustration # 2

PHASE

Like all Vandersteen speakers, the VLR is phase-correct with its tweeter and woofer connected in positive polarity through transient-perfect, first-order crossover networks. When used as part of a Vandersteen multi-channel phase-correct system, all the speakers in the system, including the VLRs, should be connected in positive polarity.

(Amp + to speaker +, amp - to speaker -.)

(The only rare exception would be when the one or more of the amplifiers in the system inverts phase. If you believe that your amplifier inverts phase, contact the amplifier's manufacturer for verification. Most modern amplifiers do not invert phase.)

When VLRs are used as part of a mixed-phase system with non-Vandersteen speakers, they should be connected in positive phase and the phasing of the other system speakers should be keyed to them. Try the other speakers in the system both in-phase and out-of-phase to determine which polarity provides better integration into the system. If you have difficulty determining the best polarity match with mixed-phase speakers, your dealer should be able to help you.

(Please do not call the factory with phase questions about a mixed-phase system. There is nothing regarding the proper connections for the VLRs in this type of system that can be determined over the phone. Someone from your dealer will need to come to your home and evaluate the possible configurations with their trained ears.)

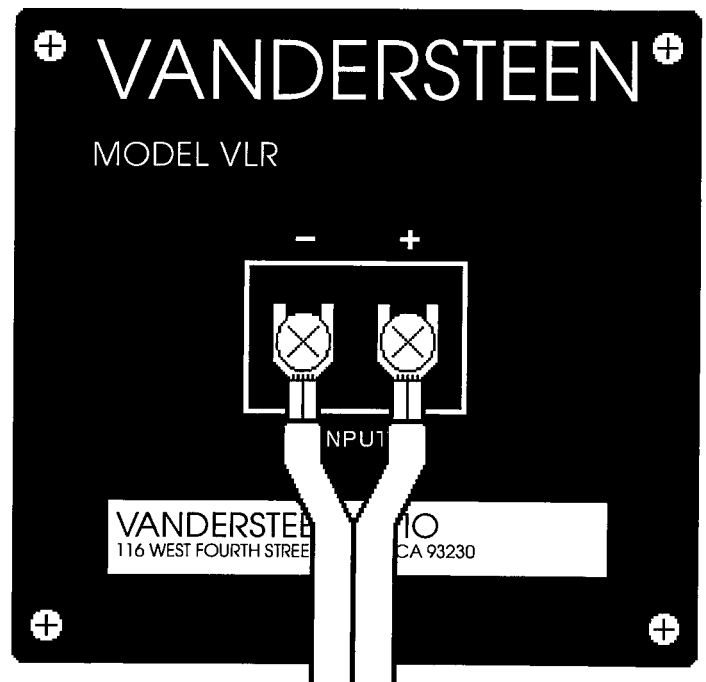


Illustration # 3

VLRs requires at least 50 hours at a moderate volume level before their performance and response stabilize. Higher volume levels will not shorten this break-in period.

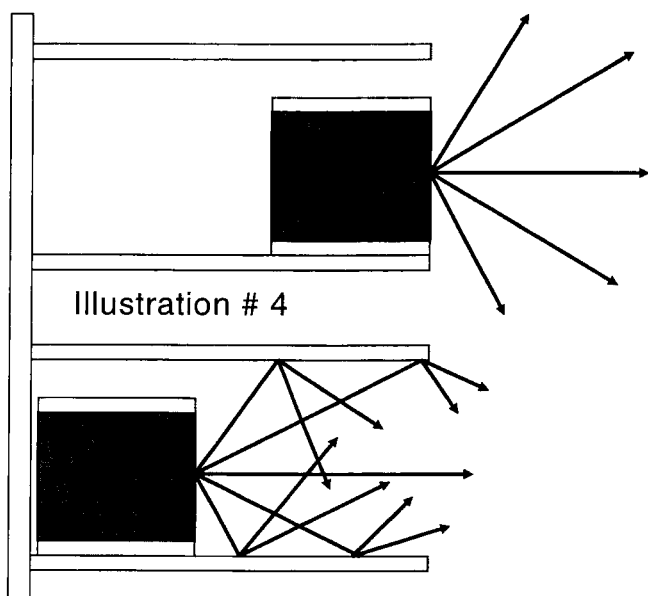
PLACEMENT (PLEASE NOTE THE EXAMPLES ON PAGE 4)

The VLRs can be mounted at any height or lateral position where they will work with your furniture and room layout. To insure soundfield stability, the two speakers should be mounted at the same height in locations where plants, furniture, or other objects will not obstruct their sound from the listening area.

Many listeners find that placing the speakers at or above ear level helps create a more expansive and natural soundfield. The speakers can be turned sideways to present a narrower, taller profile without affecting their performance.

BOOKSHELF PLACEMENT

When a VLR is placed on a deep shelf, it should be set at or near the front of the shelf to minimize secondary reflections from the surrounding flat surfaces as shown in the side view Illustration # 4 below.



Most wall units are about 24 inches deep so you will have a good amount of empty space behind the speakers when the speakers are mounted toward the front of the unit. Sonex or a similar acoustic material should be inserted into this space behind the speakers to minimize possible resonances.

The shelf you place the speaker on must be sturdy enough to support the weight of the speaker and provide a stable platform. A flimsy or poorly mounted shelf that does not hold the speaker still during playback will cause a loss of information and compromise detail and dynamics.

CUSTOM INSTALLATION

In many audio/video installations, the speakers will be built into custom cabinets or wall units and hidden behind decorative cloth. If the speaker cavities are a little wider and or taller than the speakers, fill the excess area with layers of Sonex or a similar sound absorbing material. The cloth fascia will hide the speakers and surrounding acoustic material.

MAGNETIC CLEARANCE

Unshielded VLRs need to be kept away from a direct view TV to avoid affecting the picture. (*Projection type TVs are not prone to magnetic interference and do not require separation from unshielded VLRs.*) While the exact amount of separation needed between the unshielded VLRs and a direct view TV to insure that there is no interference will vary depending on the make and model of TV, approximately 12 inches should be sufficient in most cases. In addition to affecting the picture of direct view TVs, unshielded speakers can also compromise data on computer disks, video tapes and audio tapes. Non-magnetically shielded speakers and subwoofers should not be placed next to areas where these magnetic storage medium are used or stored.

The magnetically shielded version of the VLR, the VLR-M, can be placed next to a direct view TV. While it is impossible to totally eliminate the magnetic field of a high-quality, large-magnet driver such as the one in the VLR-M, we use two stages of shielding to reduce it to a level where it will not present a problem in most applications. The VLR-M has a stronger magnetic field to the front and rear than it does to the top, bottom or sides. On a sensitive direct view TV, try to avoid exposing the TV to the VLR-M's front or rear magnetic field.

When the position of the VLR or VLR-M has been set, you should degauss the TV either by pushing its degauss button or turning the TV off and on several times. (Modern TVs automatically degauss after a set number of power cycles.) If the speakers are moved, the TV should be degaussed again.

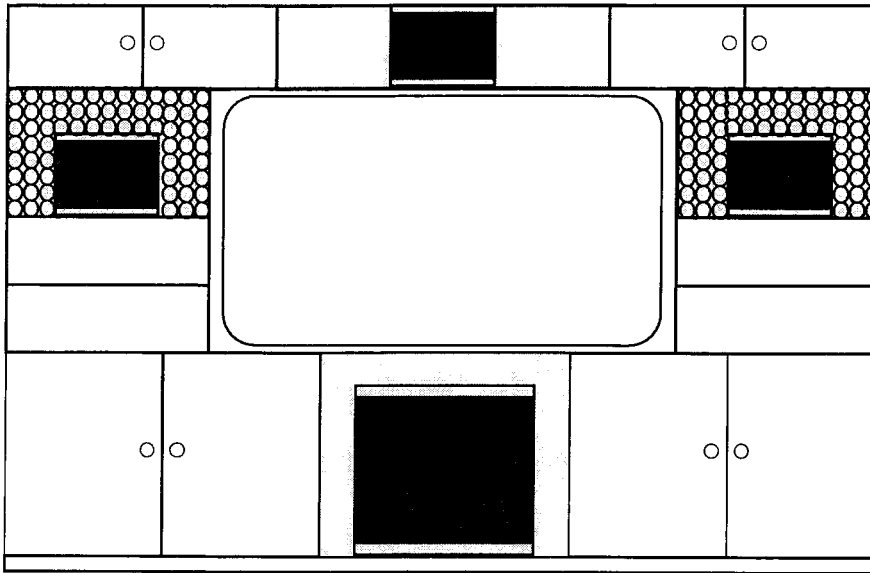
SETTING-UP THE SYSTEM

To achieve a realistic soundfield, all the speakers in the system must be level matched. It is impossible to properly balance the levels by ear so your surround processor has a built-in noise generator that is used in combination with a sound pressure level (SPL) meter to set the volume level of each of the speakers. In a surround system, an SPL meter is not an option or a toy. It is an indispensable tool required to correctly set-up the system. If you do not have a SPL meter, an accurate, inexpensive unit is available from Radio Shack. Once the levels of the speakers in the system have been balanced, they should not need to be readjusted unless the system components are changed or the listening area or speakers are moved.

THE SUBWOOFER

The VLRs are designed to integrate with a Vandersteen V2W subwoofer to augment their deep bass response and provide the low-frequency power and impact needed for home theater. The VLRs' low frequency roll-off is linear and predictable so it is easy to achieve a smooth transition between the VLRs and the V2W subwoofer. Follow the subwoofer's instructions regarding placement, connections, phase, and system interface.

The following illustrations show the versatility of the VLR and its many placement options. They are only examples of possible placements, not recommendations of preferred placements. You should place the VLRs where they work best with your furniture and room layout.

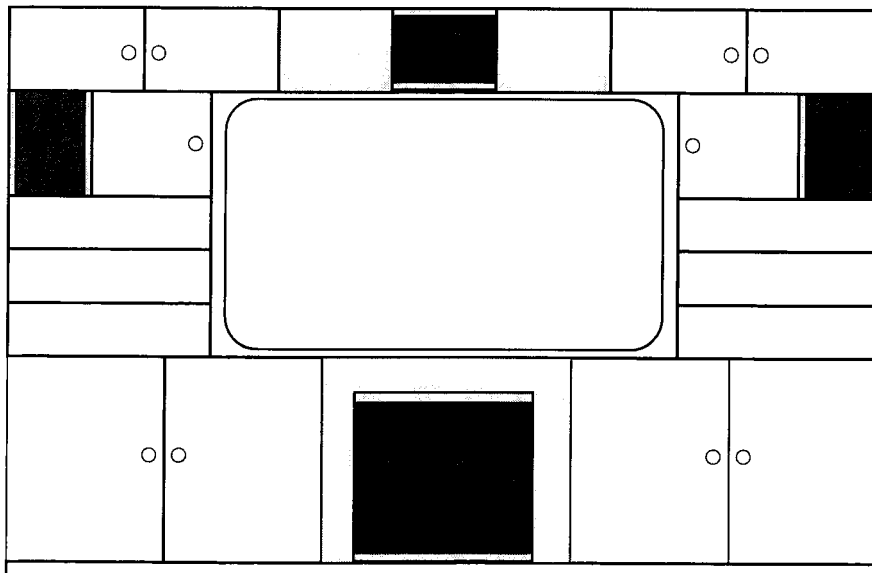
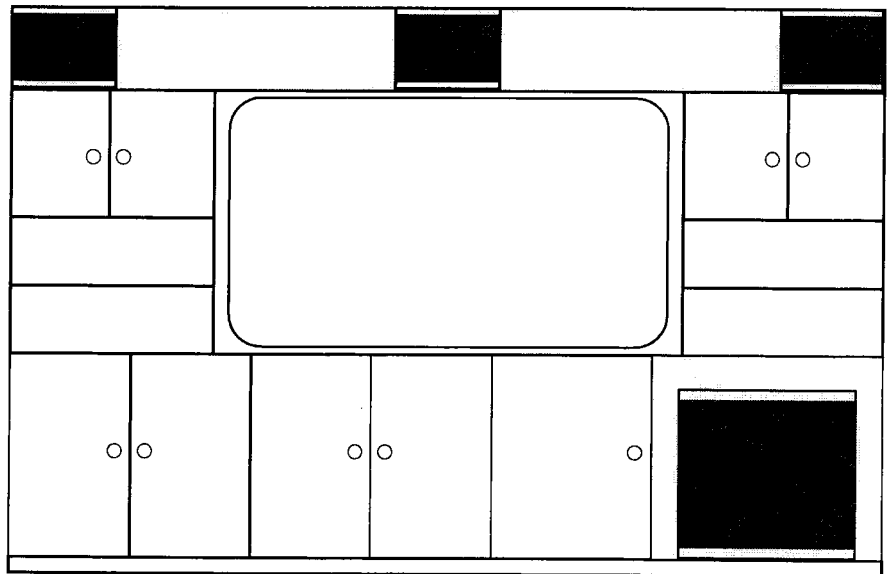


In the system illustrated to the left, a pair of VLRs is matched with a VCC-1 center speaker and a V2W subwoofer. The speakers and subwoofer are hidden behind fascias of decorative cloth. The enclosed space around the VLR's has been filled with Sonex or a similar acoustic material.

This basic configuration will also work well with wall mounted shelves or free-standing bookcases in place of the illustrated entertainment center. Since the wall mounted shelves or bookcases would not place the VLRs in an enclosed space, they would not need the surrounding acoustic material.

In the system illustrated to the right, the VLRs and VCC-1 have been put in a full-width cavity at the top of the cabinet and hidden behind a cloth fascia. The V2W subwoofer has been moved to the right side of the cabinet behind a cloth fascia.

As long as it is on the same wall as the VLRs, the placement of the V2W subwoofer relative to the VLRs is not critical.



In the system illustrated to the left, the VLRs are turned vertical and placed in a custom cavity just large enough to hold them. With its aligned, coaxial driver, the orientation of the VLR does not affect its performance.

**If your VLRs are not magnetically shielded, they should be placed at least 12 inches away from a direct view television set.
(VLR-M versions are shielded)**

The VLR contains protection circuitry that tracks voice coil temperatures and reduces the current to one or more of the driver elements if excessive temperatures are detected. When this happens, the sound of the speaker will change. If this occurs, immediately reduce the volume level to allow the speaker components to cool down. Please remember that no protection circuitry is 100% effective and that repeated activation could cause the circuits themselves to fail.

AMPLIFICATION

The VLR is designed for use with amplifiers rated between 30 to 160 watts per channel into 8 ohms. Amplifiers in this power range will provide ample power for realistic listening levels in most situations. Amplifiers with less than 30 watts per channel may not be able to drive the VLRs to normal listening levels, while amplifiers with more than 160 watts per channel must be used with caution due to the increased poten-

tial for speaker damage if they are misused or an accident occurs.

The VLR will perform well with a tube or transistor amplifier, revealing either type of amplifier's sonic characteristics. The even impedance of the VLR makes it an easy load for an amplifier, expanding the possible power choices to include high quality receivers and integrated amplifiers.

SERVICE

In the unlikely event that one of your VLRs should ever require servicing, please follow these procedures.

1. Verify that the problem is in the speaker by switching the left and right speakers. If the problem follows the speaker, it is in the speaker. If the problem does not follow the speaker, it is in the system before the speaker.
2. Contact Vandersteen Audio, describe the problem and the steps you have taken to isolate the problem to the speaker. A Return Authorization (RA) Form will be sent to you.
3. When you receive the Return Authorization Form, return the damaged or defective speaker and the completed RA Form to Vandersteen Audio packed in its original box.

SPECIFICATIONS

Driver:

Aligned coaxial design combining a 6½" die-cast basket polycone woofer with a 1" critically-damped, metal dome tweeter.

VLR-M is magnetically shielded.

Crossover:

3500Hz. First-order, 6dB per octave.

Phase:

The woofer and tweeter are both connected in positive phase.

Enclosure:

Medium Density Fiberboard. (MDF)

Impedance:

8 ohms nominal. 5 ohms minimum

Efficiency:

86dB at 1 meter with a 2.83 volt input.

Response:

62Hz to 21,000Hz ±3dB

The bass of the VLR is bandpass limited.

Amplification:

30 to 160 watts per channel into 8 ohms.

Physical:

12½" wide, 9" high, 10½" deep.

27# gross, 23# net.

VLR-M adds 2# each.

Specifications and design are subject to change without notice due to our continuous research and development program.

FOR FUTURE REFERENCE

Speaker Serial Numbers: _____

Dealer Address: _____

Purchase Date: _____

Dealer Name: _____

Dealer Contact: _____

Dealer Phone: _____