

VANDERSTEEN

Thank-you for choosing the Vandersteen Model V2W Subwoofer System. With proper care, your new subwoofer will provide many years of trouble free, high quality performance.

We recommend that you read this entire manual prior to connecting or using your Model V2W Subwoofer System.

Vandersteen Audio

The Model V2W Subwoofer System is the product of extensive research into the qualities required for realistic and satisfying film sound reproduction. The V2W's engineering, construction, and materials far exceed conventional industry standards and contribute to superior performance and reliability.

The V2W uses three eight-inch active drivers and a mass-loaded twelve-inch passive radiator. Each of the active drivers has a massive 1.5 inch, four layer voice coil and a forty-ounce magnet structure. The integral 300-watt amplifier does not current limit and has ample power for the most demanding situations. The V2W amplifier's feed forward error correction efficiently eliminates response and phase variations that would

compromise the subwoofer's performance.

The V2W Subwoofer will interface with a wide variety of A/V receivers, processors, main speakers, and listening environments. With the V2W's gain control, you can calibrate the output of the subwoofer to the main speaker then use the receiver/processor's level control to adjust the bass level for particular films or moods. The innovative phase control allows you to tailor the V2W for the best match to the main speakers, the room characteristics, and your personal tastes. The V2W's pleasing appearance allows it to visually complement your main speakers and the decor of your home.

The Vandersteen Model V2W Subwoofer System is designed and built in the United States of America.

With all the different processors and multi-channel audio modes available, there will inevitably be situations that are not covered in this manual. The manual for your receiver or processor contains specific information on how to connect the subwoofer and any additional programming the receiver or processor may require for optimum results. To insure compatibility, we recommend you carefully follow the instructions and observe all the precautions contained in the manual for your receiver or processor.

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MODEL V2W

ADJUSTABLE PHASE POWERED SUBWOOFER SYSTEM

OPERATION MANUAL

INTERCONNECT CABLE CONFIGURATION

With the added potential for a ground loop and hum when a powered subwoofer is added to a system, we recommend you connect the V2W to the receiver or processor with an interconnect cable that is configured to include a ground wire. In a cable with a twisted pair of conductors, a foil shield, and a drain wire, connect the twisted pair of conductors to the RCA plug's center pin and ground and the shield to the RCA plug's ground as

usual. Leave the drain wire long and take it outside of the cable at both ends to use as a ground wire. Connect the ground wire to the ground terminals on the V2W and the receiver or processor. In systems with more than one subwoofer, not all the subwoofers may need to be grounded.

In all installations, the subwoofer interconnect cable must be of adequate length to prevent pulling or stress at either end.

A/V RECEIVER CONNECTIONS AND SET-UP

The V2W subwoofer connects to the receiver's Subwoofer/LFE (Low Frequency Effects) output to reproduce the most intense sound effects with 300 watts of power and the effective cone area of an 18-inch driver. The V2W's amplifier is designed for a default 100Hz subwoofer crossover frequency, however unique self-compensating circuitry allows optimum performance at any crossover frequency between 70Hz and 125Hz.

1. The V2W should be placed in the corner on the same wall as the main speakers. Before you connect anything, turn the subwoofer over on a clean towel that will not scratch the top and install the spikes with the jam nuts tightened against the bottom. If the subwoofer will be on a hardwood floor, use $\frac{3}{8}$ -16 thread by $1\frac{1}{2}$ inch long round-headed carriage bolts—available from any hardware store—in place of the spikes to reduce the likelihood of damage to the floor. Turn the V2W back up-right and place it a few inches away from the walls.

Do not plug-in the V2W at this time.

2. The V2W should be connected to the Subwoofer/LFE (Low-Frequency Effects) output of your A/V receiver with an interconnect cable like the one described at the top of this page. The V2W has two RCA inputs; the upper one is the in-phase input and the lower one is the out-of-phase input. If you are using Vandersteen main speakers, connect the cable to the in-phase (upper) input.
(It is very important that you only use one input at a time. Do not connect cables to both inputs at the same time.)

3. Unless the V2W is replacing an existing subwoofer, your A/V receiver's programming needs to be updated to reflect the addition of a subwoofer. Carefully follow the instructions in the receiver's manual and configure the receiver to direct the bass to the subwoofer output. Set the receiver's subwoofer level about 10dB below maximum or to about 75% of maximum, whichever is higher. This leaves room to raise the bass level later.

4. With the subwoofer cable securely connected at

both ends and the receiver programed to accept a subwoofer in the system, the V2W should be plugged into a nonswitched AC outlet. As it is plugged-in, the subwoofer may produce a low-frequency thump.

5. Set the gain control on the V2W's rear input plate straight-up. Play a musical portion of a movie and adjust the phase control to the setting where you hear the most bass. If adjusting the phase control does not change the bass level, leave it straight up.

Instructions 6 and 7 are only for systems with non-Vandersteen main speakers. The V2W may need to be used out-of-phase to integrate into a non-Vandersteen system.

6. Stop the movie and unplug the V2W amplifier from the AC outlet. Wait at least 60 seconds then switch the subwoofer cable to the lower (out-of-phase) input. Plug the V2W amplifier back-in.
7. Repeat the experiment from step 5, once again noting the position of the phase control where you hear the most bass. In most systems, a control position on one of the inputs will clearly perform better than other positions. If you feel that two positions, one on each input, are equal in bass output, use the position on the upper (in-phase) input. If you need to switch back to the upper input, unplug the V2W amplifier from the AC outlet for at least 60 seconds before changing the input cable.
8. Play several different movies and adjust the V2W's gain control on its rear input plate for the desired amount of bass. Your V2W is now calibrated to your main speakers.
9. Some receivers have a bass contour control or bass boost circuit. Use these controls to raise the bass level for different films or to match your own bass mood on a particular day. When these controls are not available on your receiver, use the receiver's remote control to raise the subwoofer output level as desired. If you max-out the receiver's subwoofer level and you want even more bass, raise the V2W's gain control and lower the receiver's subwoofer level to recover some adjustment range.

SEPARATE PROCESSOR CONNECTIONS AND SET-UP

The V2W subwoofer connects to the processor's Subwoofer/LFE (Low Frequency Effects) output to provide powerful, satisfying bass on the most demanding modern blockbuster films. The V2W's amplifier is designed for a default 100Hz subwoofer crossover frequency, however unique self-compensating circuitry allows optimum performance at any crossover frequency between 70Hz and 125Hz.

1. The V2W should be placed in the corner on the same wall as the main speakers. Before you connect anything, turn the subwoofer over on a clean towel that will not scratch the top and install the spikes with the jam nuts tightened against the bottom. If the subwoofer will be on a hardwood floor, use $\frac{3}{8}$ -16 thread by 1½ inch long round-headed carriage bolts—available from any hardware store—in place of the spikes to reduce the likelihood of damage to the floor. Turn the V2W back up-right and place it a few inches away from the walls.
Do not plug-in the V2W at this time.
2. The V2W should be connected to the Subwoofer/LFE (Low-Frequency Effects) output of your A/V processor with an interconnect cable like the one described at the top of page 2. The V2W has two RCA inputs; the upper one is the in-phase input and the lower one is the out-of-phase input. If you are using Vandersteen main speakers, connect the cable to the in-phase (upper) input.
(It is very important that you only use one input at a time. Do not connect cables to both inputs at the same time.)
3. Unless the V2W is replacing an existing subwoofer, your A/V processor's programming needs to be updated to reflect the addition of a subwoofer. Carefully follow the instructions in the processor's manual and configure the processor to activate the Subwoofer/LFE output. If the processor's subwoofer level is calibrated in dB, set the level about 10dB below maximum. Set the processor's subwoofer level about 10dB below maximum or to about 75% of maximum, whichever is higher. This leaves room to raise the bass level later.
4. With the subwoofer cable securely connected at both ends and the processor programed to accept

a subwoofer in the system, the V2W should be plugged into a nonswitched AC outlet. As it is plugged-in, the subwoofer may produce a low-frequency thump.

5. Set the gain control on the V2W's rear input plate straight-up. Play a musical portion of a movie and adjust the phase control to the setting where you hear the most bass. If adjusting the phase control does not change the bass level, leave it straight up.

Instructions 6 and 7 are only for systems with non-Vandersteen main speakers. The V2W may need to be used out-of-phase to integrate into a non-Vandersteen system.

6. Stop the movie and unplug the V2W amplifier from the AC outlet. Wait at least 60 seconds then switch the subwoofer cable to the lower (out-of-phase) input. Plug the V2W amplifier back-in.
7. Repeat the experiment from step 5, once again noting the position of the phase control where you hear the most bass. In most systems, a control position on one of the inputs will clearly perform better than other positions. If you feel that two positions, one on each input, are equal in bass output, use the position on the upper (in-phase) input. If you need to switch back to the upper input, unplug the V2W amplifier from the AC outlet for at least 60 seconds before changing the input cable.
8. Play several different movies and adjust the V2W's gain control on its rear input plate for the proper amount of bass. Your V2W is now calibrated to your main speakers.
9. Some processors have a bass contour control or bass boost circuit. Use these controls to raise the bass level for different films or to match your own bass mood on a particular day. When these controls are not available on your processor, use the processor's remote control to raise the subwoofer output level as desired. If you max-out the processor's subwoofer level and you want even more bass, raise the V2W's gain control and lower the processor's subwoofer level to recover some adjustment range.

Important Note

With many processors, there are mode and setting combinations that do not send the bass information to the Subwoofer/LFE output. Should you encounter this situation, you should consult the processor's manual regarding the proper settings to insure that bass information is directed to the Subwoofer/LFE output.

The following connection methods require additional Vandersteen equipment and/or components not included with the V2W Subwoofer. They should only be used under the advice and with the assistance of your Vandersteen dealer.

ADVANCED SEPARATE PROCESSOR CONFIGURATIONS

There are several different methods of setting-up the V2W with a separate processor. Please choose the method that best matches the capabilities and program-mability of your processor.

1. Except in cases where there is a 2Wq subwoofer in each front corner, the V2W should be placed in the corner on the same wall as the main (front) speakers. Before you connect anything, turn the subwoofer over on a clean towel that will not scratch the top and install the spikes with the jam nuts tightened against the bottom. If the subwoofer will be on a hardwood floor, use $\frac{3}{8}$ -16 thread by 1½ inch long round-headed carriage bolts—available from any hardware store—in place of the spikes to reduce the likelihood of damage to the floor. Turn the V2W back up-right and place it a few inches away from the walls.

Do not plug-in the V2W at this time.

2. The V2W should be connected to the Subwoofer/LFE (Low-Frequency Effects) output of your A/V processor with a interconnect cable like the one described at the top of page 2. The V2W has two RCA inputs; the upper one is the in-phase input and the lower one is the out-of-phase input. If you are using Vandersteen main speakers, connect the cable to the in-phase (upper) input.

(It is very important that you only use one input at a time. Do not connect cables to both inputs at the same time.)

3. *One of the subsequent sections should cover the Vandersteen components in your system and the capabilities of your processor. Follow the instructions in the applicable section.*

WITH FIVE SUBWOOFERS [(1) V2W, (4) 2Wq]

- a. Set LFE as active. Set the main and surround speakers to run full-range. (Large speakers)
- b. Insert Vandersteen X-2 high-pass crossovers between the processor and the main and surround amplifiers. (See the instructions in the 2Wq manual regarding the selection of the proper X-2 crossovers for your amplifiers.)
- c. Connect the V2W to the processor's LFE output.
- d. Connect the four 2Wq subwoofers to the main and surround channels according to the instructions in the 2Wq manual.

WITH FOUR SUBWOOFERS [(1) V2W, (3) 2Wq]

- a. Set LFE as active. Set the main and surround

speakers to run full-range. (Large speakers)

- b. Insert Vandersteen X-2 high-pass crossovers between the processor and the main and surround amplifiers. (See the instructions in the 2Wq manual regarding the selection of the proper X-2 crossovers for your amplifiers.)
- c. Connect the V2W to the processor's LFE output.
- d. Connect the three 2Wq subwoofers to the main and surround channels according to the instructions in the 2Wq manual. (The main channels will have stereo subwoofers; the surround channels will be summed into a single subwoofer.)

WITH THREE SUBWOOFERS [(1) V2W, (2) 2Wq]

- a. Set LFE as active. Set the main speakers to run full-range. (Large speakers)
- b. Redirect the deep bass from the surround channels to the LFE output. (Small speakers)
- c. If programmable, set the subwoofer crossover frequency to 80Hz or the closest higher frequency.
- d. If programmable, select the shallowest high-pass slope for the surround channels. (A lower number is shallower.)
- e. Insert Vandersteen X-2 high-pass crossovers between the processor and the main amplifier. (See the instructions in the 2Wq manual regarding the selection of the proper X-2 crossovers for your amplifier.)
- f. Connect the V2W to the processor's LFE output.
- g. Connect the 2Wq subwoofers to the main channels according to the instructions in the 2Wq manual.

NOTE – With full-range surround speakers, (Vandersteen Model 1, 2, etc.) you can use $\frac{1}{4}$ value X-2 high-pass crossovers between the processor and the surround amplifier in place of the processor's high-pass crossover. The first-order X-2 crossovers provide better transient response and superior performance than the processor's integral high-order, high-pass crossover. The surround speakers effectively remain full-range with the $\frac{1}{4}$ value X-2 crossovers providing the necessary subsonic protection and shallow slope. In this scenario, the X-2 crossovers on the surround channels should be matched to approximately $\frac{1}{4}$ of the input impedance of the surround amplifier. (For example, if the amplifier

input impedance is 200k, you would use X-2s with a value of 50k.) Then disregard instructions b, c, and d and set the surround speakers to run full range. (Large speakers.)

NOTE – Vandersteen VLR and VSM series speakers have integral subsonic protection and do not require $\frac{1}{4}$ value X-2 crossovers when used as surround speakers in this scenario. Simply disregard instructions b, c, and d and set the surround speakers to run full range. (Large speakers.)

WITH ONE V2W SUBWOOFER AND LARGE, FULL-RANGE FRONT LEFT AND RIGHT SPEAKERS

- a. Set LFE as active. Set the front left and right speakers to run full-range. (Large speakers)
- b. Redirect the deep bass from the surround channels to the LFE output. (Small speakers)
- c. If programmable, set the subwoofer crossover frequency to 80Hz or the closest higher frequency.
- d. If programmable, select the shallowest high-pass slope for the surround channels. (A lower number is shallower.)
- e. Insert Vandersteen X-2 high-pass crossovers between the processor and the main amplifier. In this scenario, the X-2 crossovers should be matched to approximately $\frac{1}{4}$ of the input impedance of the main amplifier. (For example, if the amplifier input impedance is 200k, you would use X-2s with a value of 50k.)
(This unique configuration with first-order X-2 crossovers provides better transient response and superior performance than the processor's integral high-order, high-pass crossover. The main speakers effectively remain full-range with the $\frac{1}{4}$ value X-2 crossovers providing the necessary subsonic protection and shallow slope.)
- f. Connect the V2W to the processor's LFE output.

NOTE – If the surround speakers are full-range, (for example, Vandersteen Model 1, 2, etc.) they can be set-up the same way as the front speakers in this scenario. Simply set the surround speakers to full-range, (Large speakers) ignore instructions b, c, and d, and add $\frac{1}{4}$ value X-2 crossovers between the processor and the surround amplifier.

4. Set the processor's subwoofer level about 10dB below maximum or to about 75% of maximum,

whichever is higher. This leaves room to raise the bass level later.

5. With the subwoofer cable securely connected at both ends, the processor programed to activate the LFE output, and the appropriate X-2 high-pass crossovers in the system, the V2W should be plugged into a nonswitched AC outlet. As it is plugged-in, the subwoofer may produce a low-frequency thump.
6. Set the gain control on the V2W's rear input plate straight-up. Play a musical portion of a movie and adjust the phase control to the setting where you hear the most bass. If adjusting the phase control does not change the bass level, leave it straight up.

Instructions 7 and 8 are only for systems with non-Vandersteen main speakers. The V2W may need to be used out-of-phase to integrate into a non-Vandersteen system.

7. Stop the movie and unplug the V2W amplifier from the AC outlet. Wait at least 60 seconds then switch the subwoofer cable to the lower (out-of-phase) input. Plug the V2W amplifier back-in.
8. Repeat the experiment from step 6, once again noting the position of the phase control where you hear the most bass. In most systems, a control position on one of the inputs will clearly perform better than other positions. If you feel that two positions, one on each input, are equal in bass output, use the position on the upper (in-phase) input. If you need to switch back to the upper input, unplug the V2W amplifier from the AC outlet for at least 60 seconds before changing the input cable.
9. Play several different movies and adjust the V2W's gain control on its rear input plate for the proper amount of bass. Your V2W is now calibrated to your system.
10. Some processors have a bass contour control or bass boost circuit. Use these controls to raise the bass level for different films or to match your own bass mood on a particular day. When these controls are not available on your processor, use the processor's remote control to raise the subwoofer output level as desired. If you max-out the processor's subwoofer level and you want even more bass, raise the V2W's gain control and lower the processor's subwoofer level to recover some adjustment range.

COMMON V2W QUESTIONS

Is the V2W designed for use only with Vandersteen main and surround speakers?

The V2W will work well with almost any quality loudspeaker. With its multiple, moderately sized drivers, superior pitch definition and adjustable level and phase, the V2W subwoofer is an excellent match for quality electrostatic, planar, ribbon, and dynamic speakers. Our warranty records indicate that many different speakers have been successfully mated with Vandersteen subwoofers.

Will the V2W work in conjunction with previous Vandersteen subwoofer models (2W) as it does with the current model? (2Wq)

Yes, all of the instructions that apply to the 2Wq also apply to the 2W. However, due to response differences, you can not mix 2W subwoofers and 2Wq subwoofers in the same system. *(2W subwoofers can be upgraded to 2Wqs. Please contact Vandersteen Audio for additional details.)*

I have a 2W (or 2Wq) subwoofer as well as the V2W. What is the best way to use them together with my processor based system?

Use the 2W (2Wq) subwoofer to make the surround speakers full-range. Follow the instructions in the 2W (2Wq) manual regarding set-up. Follow the instructions in this manual to use the V2W for the LFE output as if it were the only subwoofer in the system.

For a significant performance improvement, consider adding a matching 2W or 2Wq subwoofer and configuring the system as described in the section on page 4 of this manual about systems with three subwoofers. Remember that you cannot mix 2Ws and 2Wqs in the same system.

The manual says to use a musical section of a movie to set the phase control. Can't I just use a test disc with test tones?

Single tones are not representative of the way we hear and can result in gross misadjustments. Adjusting the phase control using music has proven to be easy and reliable.

Most subwoofers just connect to the subwoofer output and you're done. Why are there so many adjust-

ments and configurations with the V2W?

Because we believe that anyone critical enough to appreciate the superior capabilities of Vandersteen products wants much more than just another "Me too, boom-boom" subwoofer. The V2W's adjustments and diverse configurations allow you to achieve integration, realism, and performance far above conventional subwoofers.

Why does the V2W subwoofer need a gain control when I can easily adjust the subwoofer level with my receiver/processor?

We found that many receiver/processors lose bass resolution when the subwoofer output level is set much below 75% of maximum. The V2W's gain control allows you to keep the receiver/processor's subwoofer level up where it sounds the best and independently adjust the V2W's level to match the other system speakers.

Can I use two V2Ws in the system?

Two subwoofers improve linearity by introducing the bass into the room at two points plus add 6dB of additional volume potential. With the basic receiver configuration covered on page 2, a second V2W connected with a Y-adapter is the best way to improve low-frequency performance. Advanced processors will benefit more from adding 2Wq subwoofers as covered on pages 4 and 5. But once the system is maxed-out with 2Wqs, another V2W will definitely make its presence felt.

Can I unplug the V2W when I'm not listening to the system?

The V2W amplifier uses less than 10 watts at idle. Constant plugging-in and unplugging the AC cord is inconvenient and will eventually cause wear and tear to the cord. We do recommend that you unplug the V2W — as well as all other household electrical equipment — when you are away from home for an extended period (ie. vacation) and during electrical storms or other events that may cause AC power problems.

What should I do if my processor will not allow me to select the combination of large and small speaker settings suggested in this manual?

Follow the instructions in the processor's manual for configuring the system.

TROUBLESHOOTING GUIDE

Subwoofer hums. Audible at the listening position.

Verify that the ground wire is connected between the V2W and the main amplifier. Try floating the ground connector on the V2W's or main amplifier's power cord.

Still hums.

Unplug the V2W from the AC outlet. Wait at least 60 seconds then disconnect the input from the V2W. Plug the V2W back into the AC outlet; if the hum is still evident at the listening position with no input con-

nected, please contact Vandersteen Audio. (It is normal for the amplifier's high-voltage transformer to produce a slight hum, but it should not be audible more than a few feet away from the subwoofer.) Remember to unplug the V2W from the AC outlet for at least 60 seconds before reconnecting the input cable.

Low output level.

Check the V2W's level and phase control settings. Check the programming and subwoofer level on the

receiver/processor. The receiver/processor's subwoofer level should be at 75% of maximum or higher to assure optimum performance.

No output.

Verify that the V2W is plugged into a live unswitched AC outlet. (The V2W should thump when you

plug it in after being unplugged for at least 60 seconds.) Check the programming and subwoofer level on the receiver/processor. (Verify that the Subwoofer/LFE channel is active.)

Verify that the subwoofer interconnect cable is connected properly and that it is not broken or damaged.

SERVICE

In the unlikely event that your V2W Subwoofer requires service, please follow these procedures:

1. Verify that the V2W has been set-up and connected according to the instructions in this manual. Review the troubleshooting guide on pages 6 and 7.
2. Contact Vandersteen Audio with your V2W's serial number, information on your associated components, a description of the problem, and the steps you have taken to isolate the problem to the V2W and correct it.
3. The V2W is a modular system to reduce the cost

of shipping. Should Vandersteen Audio determine that a module of the V2W needs to be returned to the factory for repair, you will be instructed on how to remove that module and a Return Authorization Form will be sent to you. All modules returned for repair must be accompanied by a completed Return Authorization Form.

4. Return the damaged or defective module and the completed Return Authorization Form to Vandersteen Audio. Any shipment of a complete V2W to the factory will be refused.

MAINTENANCE

All system connections should be cleaned periodically with alcohol or a solution made specifically for cleaning electrical contacts. The wood veneers are oiled at the factory and can be maintained with a light application of Pledge or a similar product. The grille can be vacuumed using a brush attachment that will

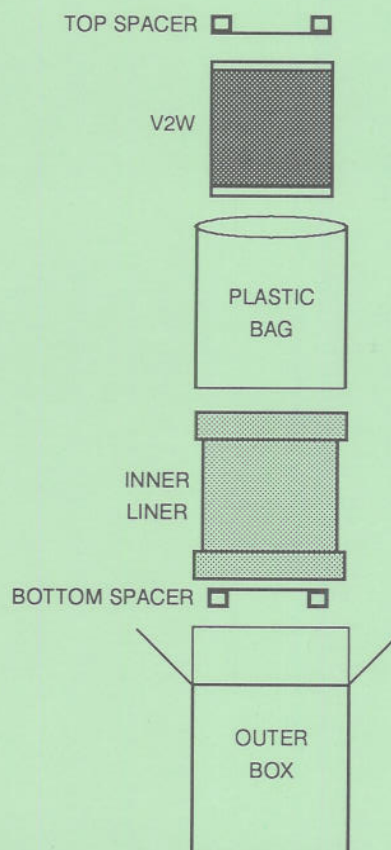
not snag the cloth. Care should be taken that objects that could mar the finish are not placed on top of the V2W. The subwoofer should not be exposed to excessive sunlight or heat which can damage the fit and finish of the veneer.

The V2W weighs over 90 pounds in its box. Please use the cut-out hand holds and proper lifting techniques to prevent strain or injury.

PACKING THE V2W

To prevent physical or cosmetic damage, always pack the V2W in its original box with complete inner packing prior to transportation or shipment. The proper method of packing the V2W is shown in the illustration to the right. When you pack the V2W, be sure that the top and bottom spacers are oriented as shown in the illustration.

A replacement box and packing is available from Vandersteen Audio.



VANDERSTEEN AUDIO

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LIMITED ONE YEAR WARRANTY

VANDERSTEEN AUDIO loudspeakers are warranted to the original purchaser to be free from defects in materials or workmanship, SUBJECT TO THE FOLLOWING CONDITIONS, for one (1) year from the date of purchase from an authorized VANDERSTEEN AUDIO dealer.

THIS WARRANTY IS SUBJECT TO THE FOLLOWING CONDITIONS AND LIMITATIONS:

This warranty is void and inapplicable if the loudspeaker has:

- a. not been used in accordance with the instructions contained in the operation manual.
- b. been subject to misuse or abuse; examples of which would be burned driver voice coils.
- c. been modified, repaired, or tampered with by anyone not specifically authorized to do so by Vandersteen Audio.
- d. been subject to inputs in excess of the maximum rating, or inputs from an unstable or clipped amplifier.
- e. suffered physical damage to the structure or components due to accident, neglect, or transportation.

IF A VANDERSTEEN AUDIO LOUDSPEAKER FAILS TO MEET THE ABOVE WARRANTY AND THE ABOVE CONDITIONS HAVE BEEN MET, THEN THE CUSTOMER'S SOLE REMEDY SHALL BE TO RETURN THE PRODUCT TO VANDERSTEEN AUDIO WHERE THE DEFECT WILL BE REPAIRED WITHOUT CHARGE FOR PARTS OR LABOR. THIS WARRANTY APPLIES ONLY TO PRODUCTS RETURNED TO VANDERSTEEN AUDIO IN HANFORD, CA USA.

(Returning the product to Vandersteen Audio from some countries other than the United States may involve considerable time and expense. The customer is responsible for all fees and duties and for providing instructions and all the paperwork required to return the product after it is serviced.)

The speaker must be packed in the original packing and returned to VANDERSTEEN AUDIO via insured freight by the customer at his or her own expense. A returned product must be accompanied by a Return Authorization Form, (available from VANDERSTEEN AUDIO upon request) which includes a written description of the defect and return shipping information.

ANY IMPLIED WARRANTIES RELATING TO THE ABOVE PRODUCT SHALL BE LIMITED TO THE DURATION OF THE ABOVE WARRANTY. THIS WARRANTY DOES NOT EXTEND TO ANY INCIDENTAL OR CONSEQUENTIAL COSTS OR DAMAGES TO PURCHASER.

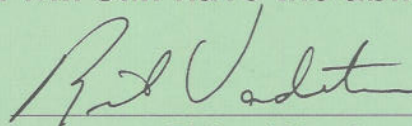
Some states do not allow limitations on how long an implied warranty lasts, or an exclusion of incidental or consequential damages so the above limitations or exclusions may not apply. This warranty gives you specific legal rights, you may also have other rights in your state.

VANDERSTEEN AUDIO reserves the right to modify the design of any product without any obligation to previous purchasers and/or to change the prices or specifications without notice or obligation to anyone.

A PERSONAL NOTE

I have been doing volunteer work for several years with elderly people with severe hearing losses, and I have seen the frustration and anger that are brought on by these losses. We now know that many of these people developed their hearing problems because of exposure to high noise levels when younger.

Many home stereo systems, as well as audio/video, personal, and automobile sound systems are capable of volume levels potentially damaging to your hearing. Please use common sense, and listen to your music and movies at safe levels now so you will still have the ability to hear and enjoy them in the future.



Richard Vandersteen