

OWNER'S MANUAL
VRS2/VRS-3/VRS-4

Infinity[®]

Congratulations on purchasing the Infinity Video Reference Standard, one of the finest video monitor speakers available. These speakers are designed specifically for use with your video system but are equally suitable for use with your stereo system as high-quality, high fidelity loudspeakers. In order to obtain the maximum listening pleasure from these speakers it is recommended you read this manual thoroughly before connecting and operating them.

UNPACKING:

Check your speakers carefully as soon as you remove them from the carton. If they have been damaged in transit, call your dealer and/or whomever delivered them **immediately**. Keep the original packing materials in case of future need. The carton folds flat and can be stored easily in very little space.

ASSOCIATED COMPONENTS:

Your Infinity Video Reference Standard speakers will reproduce distortion just as well as music. The choice of associated components is, therefore, critical and should be made with great care. If you intend to use the internal audio amplifier of your video monitor (if it is so equipped), take care not to demand more from the amplifier than it is capable of producing. This may result in distorted sound which is not only unpleasant but may also cause damage to your speakers, or amplifier. If your video monitor's internal amplifier cannot supply adequate power we strongly recommend using the low-level (pre-amp) outputs of your video monitor and an external stereo amplifier. This will be explained in greater detail in the section entitled, "Connecting The System".

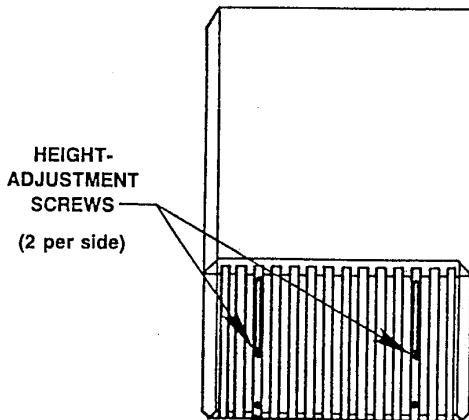
You should avoid operating your system with its bass, treble or loudness controls set to full boost. This always places unnecessary strain on the speakers as well as the amplifier.

Always turn down the volume when switching input modes (such as from your video monitor to your tape deck or other audio components). This will prevent loud transient noises (clicks or popping sounds) from damaging the speakers.

Whenever changing wires, pulling plugs, etc., always turn off all equipment to prevent transients from entering the speakers. It may be worthwhile to discuss proper speaker connection and component selection with your dealer prior to setting up your system.

POSITIONING:

All VRS speakers employ specially shielded drivers which enable you to place them adjacent to your video monitor without any distortion to the picture on the screen. The height of the VRS-3 speakers can be adjusted to match the height of your video monitor by using the adjustment screws located on the sides of the cabinet (see illustration below).



The VRS-3 speakers are shipped in their "lowest" position (18½" high); to adjust their height follow this simple procedure:

- 1) Gently lay the speaker on its back on a smooth, clean surface.
- 2) Loosen the four screws indicated above using the ⅜" allen wrench provided.
- 3) Slide the speaker up to the desired height. (Measure your monitor to achieve the desired results.)
- 4) Tighten the four screws securely. Be sure that the top surface of the speaker is level from front-to-back and from side-to-side.

Infinity also offers an optional pedestal base, designed specifically for the VRS 1, 2 and 3 speakers, which you may purchase from your dealer. These pedestals provide an additional 3½ inches of elevation (not adjustable).

The VRS-4 speakers are fixed-height and if they are to be elevated they should be placed on speaker pedestals which are specifically designed for this purpose. Your dealer can assist you in selecting the proper pedestals for your particular application.

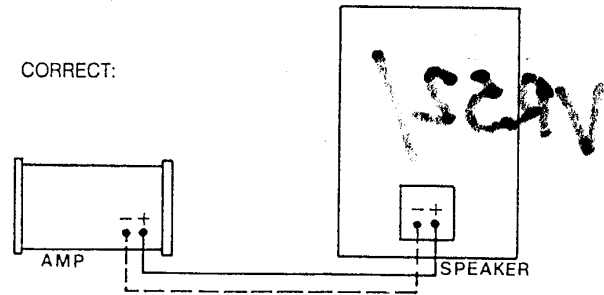
NOTE: In some instances you may choose to place your VRS speakers in a location other than adjacent to your video monitor. If this is the case, refer to the section entitled, "Positioning the Speakers For Audio Use."

CONNECTING THE SYSTEM:

Make sure the amplifiers/video monitors are switched off before making connection.

Connect your VRS speakers to your video monitor or stereo amplifier using 16 gauge (or heavier) two-conductor wire with polarity coding. This coding may be by color, or by a thin ridge or stripe along one conductor. It is important that the speakers are connected "in phase." Use the polarity coding to make sure that the "+" (red) terminal of each speaker is connected to the amplifier's "+" output. (It is sometimes coded "+", colored red, or sometimes labeled "positive.")

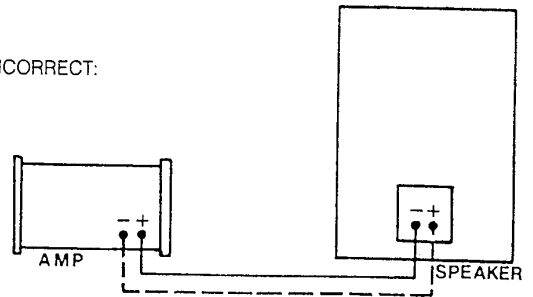
CORRECT:



Correct ("in-phase") connection:

- Plus (red) goes to plus. (This wire is usually ridged on its side.)
- Minus (black) goes to minus.

INCORRECT:



Incorrect ("out-of-phase") connection:

Plus-to-minus, and minus-to-plus. Results in distorted, "out-of-phase" sound.

The methods of connecting various video monitors to external speakers differs from manufacturer to manufacturer, so you should consult the owner's manual for your video monitor to ascertain which of the following methods best applies to your particular situation. If you still have any questions you may want to discuss the subject with your dealer.

Some video monitors employ powerful internal audio amplifiers which can be used to drive your VRS speakers, providing the power rating of the amplifier is adequate (2-3 watts must be considered inadequate; 5 watts and higher adequate). These monitors must have provisions for external speaker connection—usually in the form of a push-terminal connector (like the ones on the back of your VRS speakers), with an INTERNAL/EXTERNAL SPEAKER switch close-by. Connect the high-level (amplified) outputs of your video monitor to the inputs of your VRS speakers using heavy-gauge wire while observing proper polarity. Set the internal/external switch (if applicable) to the "EXTERNAL" position.

You may choose to connect your VRS speakers to your video monitor through your stereo system. This may be desirable in order to achieve greater amplifier power, better tone control, easier audio dubbing on your cassette deck, etc. Almost all video monitors have low-level (pre-amplified) audio outputs, whether mono or stereophonic (some may have this type of audio output only while others may have this type as well as external speaker outputs). For this type of application you should consider the audio outputs of your video monitor as another component of your stereo system, and connect the outputs of your stereo amplifier to your VRS speakers. (If your stereo system has "A/B" speaker-selection, connect your regular audio speakers to one set of speaker outputs and your VRS speakers to the other. This way you can select your regular audio speakers for listening to your stereo and your VRS speakers for watching your video monitor.)

Before turning on the power, check carefully to make sure that no stray or frayed strands of wire are touching both the "+" and "-" terminals at either the speaker or amplifier connections, as this will cause a short-circuit.

SETTING THE CONTROLS ON THE PASSIVE CROSSOVER:

The Infinity VRS-3 speakers employ a tweeter-level control to match room acoustics. The control is located on the rear of the speaker near the input terminals. The control should be set by listening to various types of program material and generally, once set, the control will remain at the chosen setting until the speakers are relocated.

The tweeter control varies the energy output of the high frequency driver. This affects the "bite" and lucidity of the sound. Adjust this control so high frequencies are present in proper balance and perspective.

A WORD ABOUT TONE CONTROLS:

The tone controls on your electronic components should be used with the utmost discretion—like a fine chef uses spices—delicately. This is true in all cases, bass, treble, and where available, midrange controls. Excessive boost can create severe power demands on your amplifier, particularly in the bass region. Maximum bass boost can create a demand for literally hundreds of *undistorted* watts, whereas, in the "flat" position, or with the tone controls switched out of the system, our average listening level may be realistically loud at less than 1 watt. The remaining power capacity required is in reserve for power peaks on sharp transients and powerful crescendos.

Your Infinity speakers will deliver unusually smooth response in a home listening environment well in excess of its conservative laboratory specifications.

NOMINAL IMPEDANCE refers to how much current is required, on the average, from an amplifier for a given voltage at its output terminals. A high impedance speaker will require less current than a low impedance speaker. Impedance is of an indication of quality or accuracy in a loudspeaker. Unless you listen to loud sustained organ music or choral works played at concert level, an amplifier rated at 8 ohms should have no difficulty driving a 4 ohm speaker.

Solid state amplifiers, properly designed and constructed will generally deliver more power at 4 ohms. Ask your dealer about the actual power and reliability of your prospective amplifier or receiver at this impedance.

UNDERSTANDING "MIN/MAX"

POWER RATINGS:

A word about power ratings:

The recommended power ratings are arrived at in the Infinity listening room and at the volume which we feel to be appropriate for musical reproduction.

Your needs may be different.

If you intend to use your speakers for background music, or at moderate levels in a small room, an amplifier or receiver with less than the recommended minimum power rating can be used. But it is important to be aware of the potential damage to tweeters that exists when a low-powered amplifier or receiver is played at volumes beyond its normal limits.

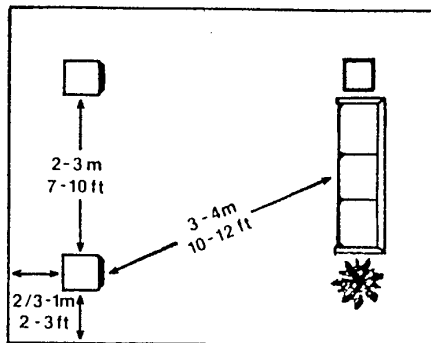
At some loud, "peak" listening level all amplifiers will "clip" the peaks of the musical signals. When this happens the resulting harsh distortion may contain considerable amount of supersonic energy, which is routed to the tweeters. This high-frequency energy can destroy your tweeters.

It is easier to damage any speaker with a low-powered amplifier than with a high-powered one. With a low-powered amplifier, we urge great discretion rather than high volume.

POSITIONING THE SPEAKERS FOR AUDIO USE:

In general, begin by placing your speakers about 2 to 3 meters (7 to 10 feet) apart. The distance between the speakers and the primary listening area should be slightly greater than the distance between the speakers. From this point some experimentation is usually necessary to obtain optimum results.

The proximity of your speakers to corners and walls can affect the tonal balance in the bass and lower middle frequencies. For this reason you should try to keep the speakers about 2/3 to 1 meter (2 to 3 feet) from these boundaries. If you find the sound is bass-light under these conditions, move the speakers slightly closer to one of these boundaries.



If your listening room is larger than average, and your listening position is farther away from the opposing wall, a wider placement may be desirable: around 4 to 5 meters (12-15 feet). Angle the speakers in slightly toward the listening position.

By choice or necessity, you may be placing your Infinity VRS speakers on a shelf directly against the wall. However, this is not optimum as you will sacrifice the depth of image which is characteristic of Infinity speakers. Remember to angle them in slightly, towards your listening position. Also, if you must mount the speakers above ear-level, place a shim under the rear of the cabinet to angle down the front plane of the speaker. If the speakers are mounted below ear-level, place the shim under the front of the cabinet, to tilt the front plane of the speaker slightly backwards, directing the sound upward.

FEEDBACK (AUDIO-USE):

If, after taking care in positioning your speakers, you find the bass response is "boomy" and lacking in "tightness," or you hear a rumble when playing records, or you notice excessive movement of the woofer cones, the cause may be acoustic feedback. This means that vibrations from the speakers are reaching the turntable. Because of the exceptionally low frequency response of Infinity speakers, isolating the turntable from these vibrations is an important consideration.

In general, make sure that the turntable is placed on a heavy, solid support, as far away as possible from the speakers. Some combinations of turntable, tonearm, and cartridge are much more apt than others to encounter feedback. If you continue to experience difficulties after some experimenting with placement, ask your Infinity dealer for assistance.

IN CASE OF TROUBLE IN YOUR SYSTEM:

Note that you can use your system's two channels of information for simple trouble-shooting. If the sound quality is distorted, listen to each speaker separately to check if the fault is present in both. If it is, then the trouble is likely to be elsewhere in your system. If the fault is in one channel only, reverse the outputs from your amplifier to the speakers (right-to-left and left-to-right). If the distortion moves to the other channel, the fault is not in the speaker. (This technique may also be used to locate a fault between signal source and preamp/receiver and between preamp and power amp.)

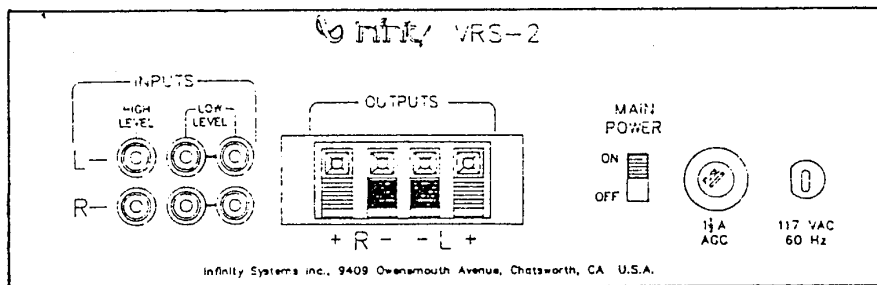
If, however, the distortion does not shift to the other speaker, make these inquiries in the following order:

- Consult the Infinity dealer from whom you purchased the speakers. Infinity dealers are audio specialists and can help . . .
- Get the name and address of the authorized Infinity service facility nearest you by writing or calling Infinity. You may be instructed to take or send the problem part to a service facility or the factory, for service under the terms of the warranty.

CONNECTION OF THE INFINITY VRS-2 SPEAKERS

The VRS-2 speaker system consists of two speakers and one stereo amplifier which is attached to the bottom of one of the speakers. The speaker with the amp can be used on either the right or left channel. Its placement will depend largely upon the location of an AC outlet to plug the speaker into.

If the amp-side is placed on the right-side of the audio/video system, use the supplied 10" speaker lead to connect the amplifier's right-channel outputs (see the illustration below) to the inputs of the speaker cabinet. Connect the amplifier's left-channel outputs to the inputs of the other (left) speaker with the supplied 8' speaker lead. Observe polarity at all connections.



REAR PANEL, VRS-2 AMPLIFIER

The amplifier has an input select switch, located on the front panel, to switch between low or high-level inputs. For example, if the audio outputs of the preamp of your VCR, laser-disk player, video monitor or stereo system are feeding the signal to the amp, connect them via RCA-to-RCA-type shielded cables to the LOW LEVEL inputs on the amplifier. Set the selector switch to the LOW position.

(NOTE: There are two sets of input jacks in parallel so you may connect two low-level components to the speaker system.)

If the amplified (speaker-level) outputs of your television or video monitor are to feed the signal, connect them via the RCA-to-tinned ends (supplied) to the HIGH LEVEL inputs. (The SILVER-colored wire is the POSITIVE lead, the COPPER-colored wire is the NEGATIVE.) Set the selector switch to the HIGH position.

Take care not to connect a high-level source to the low-level inputs, as this will damage the amplifier.

The amp's treble control is "flat" at the fully-clockwise position; rotating the control counterclockwise will decrease the high-frequency level. There are also tweeter level controls on the rear panels of each of the speakers. These are "flat" at the 12:00 (straight-up) position.

The amp has a 1-2 second delay from the time an input signal is sensed to the time the amp comes on. This muting circuit helps keep turn-on transients from your VCR, monitor, etc. from being reproduced through the speakers. There is a 45-60 second delay from the time the signal source is turned off until the muting circuit is reactivated and the LED on the amplifier goes out.

The main power switch on the amplifier's rear panel can be used as a "vacation switch", to be turned off whenever the speakers are not to be used for an extended length of time. Otherwise it may be left on continually.

Refer to the VRS-3/VRS-4 owner's manual for additional information on speaker placement, height adjustment, etc.

NOTE: DO NOT SHIP ANY PARTS OR WHOLE SPEAKERS FOR SERVICE WITHOUT PRIOR APPROVAL ("RETURN AUTHORIZATION"), AND DO NOT SHIP ANY PARTS OR WHOLE SPEAKERS WITHOUT ENCLOSING A COPY OF YOUR ORIGINAL BILL OF SALE.

If there is not authorized service facility near you, or in the highly unlikely case that the service facility cannot solve the problem . . .

- c. Write or phone the service department at Infinity Systems (address: Infinity Customer Service, 9409 Owensmouth Avenue, Chatsworth, CA 91311) Describe the difficulty as specifically as possible. The service department will advise you whether to send a part or a speaker to them, prepaid, or what other action you should take.

	The VRS-3:	The VRS-4:
Suggested for use with amplifiers or receivers having an output of:	20 through 100 watts RMS per channel.	15 through 65 watts RMS per channel.
Nominal Impedance:	4 ohms to 8 ohms.	4 ohms to 8 ohms.
Frequency Response:	45 Hz to 22 kHz, ± 3 dB.	59 Hz to 22 kHz, ± 3 dB.
Crossover Frequencies:	3000 Hz.	3000 Hz.
Drivers per Channel:	One 8" polypropylene woofer. One 1" POLYCELL™ tweeter.	One 6½" polypropylene woofer. One ¾" POLYCELL™ tweeter
Dimensions:	18½"-21½"H x 9½"W x 12"D.	13½"H x 8¾"W x 7¾"D

Infinity offers optional pedestal bases designed specifically for the VRS-3. These pedestals are available from your authorized Infinity dealer at additional cost.

LIMITED WARRANTY

Who is protected by the warranty?

Your Infinity warranty protects the original retail purchaser and all subsequent owners for a period of five (5) years (parts and labor) from any failure as a result of an original manufacturing defect so long as: (1) your Infinity loudspeakers were purchased within the fifty United States or by military personnel from an authorized military outlet and (2) the *original dated bill of sale* is presented whenever service is required during the warranty period. This warranty does not apply to products purchased elsewhere; other purchasers should contact their local Infinity distributor for warranty information.

What does the Infinity warranty cover?

Except as specified below, this warranty covers all defects in original materials and workmanship. The following are *not* covered: Damage caused by accident, misuse, abuse, neglect, product modification; damage occurring during shipment; damage caused by failure to follow instructions in the owners' manual, including failure to perform recommended periodic or routine maintenance; damage resulting from repairs by someone not authorized by Infinity; claims based upon any misrepresentations by the seller; and any Infinity product on which the serial number has been altered, defaced or removed.

Who pays for what?

During the period of this warranty, subject to the above conditions, Infinity will pay all of the labor and material expenses to repair a warrantable defect.

How can warranty service be obtained?

In the event that your Infinity loudspeaker(s) should require service, you should first contact the Infinity dealer from whom the product was purchased or, if this is not practical, contact Infinity directly (ATTN: Customer Service) at 9409 Owensmouth Avenue, Chatsworth, CA 91311 (818) 709-9400. We may direct you to an authorized service center for Infinity products or ask you to send them to us for repair. In either case you will have to present your *original dated bill of sale* to establish warranty coverage. Do not send your speaker(s) to us without prior *written* authorization! You are responsible for transporting your product for repair and for payment of any and all shipping charges; however, Infinity will pay the return shipping charges if the repairs are covered by this warranty. If you experience difficulty in transporting your speaker(s) or need adequate packing materials, please contact us and we may be able to suggest alternative procedures or provide adequate packing.

LIMITATION OF IMPLIED WARRANTIES: All implied warranties, including fitness for a particular purpose and merchantability are limited in duration to the length of this warranty.

LIMITATION OF INCIDENTAL OR CONSEQUENTIAL DAMAGES: Infinity is not responsible for any incidental or consequential damages of any kind. Our liability is limited to the repair or replacement, at our option, of a defective product. Some states do not allow limitations on how long an implied warranty lasts and/or do not allow the exclusion of incidental or consequential damages so the above limitations or exclusions may not apply to you. This warranty gives you specific legal rights and you may also have other rights which vary from state to state.

*Infinity strives always to update and improve existing products, as well as create new ones.
So the specifications and construction detail in this Infinity publication and others are subject to change without notice.*