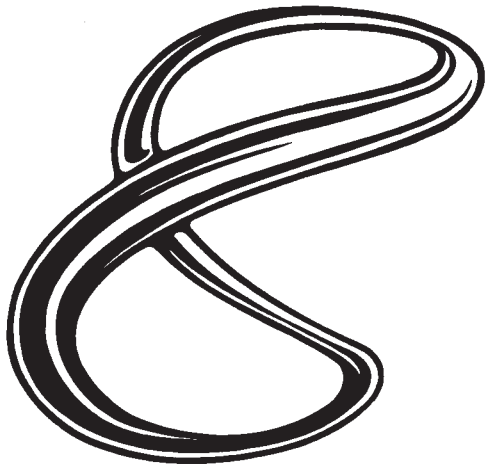


infinity®

OWNER'S MANUAL

NOTICE D'EMPLOI • BETRIEBSANLEITUNG

for your

SSW-10

Servo Subwoofer

ATTENTION!

This subwoofer is normally shipped with the power supply connected internally for 120 volt, 60 Hz A.C. operation. If you are located in a country where 120 volt, 60 Hz A.C. is the normal A.C. current, no changes are necessary before connecting your subwoofer to the A.C. line. However, if the line voltage is not 120 volts, 60 Hz, it will be necessary to change the voltage setting and fuse, as described in the “Installation” section.

Please read these instructions thoroughly before attempting to operate your Infinity Servo Subwoofer. Be sure to save this manual for future reference. Also save your bill of sale, as it is required for warranty service.

UNPACKING

Check your subwoofer carefully. If it has been damaged in transit, report the damage immediately by calling your dealer and/or the trucking firm that delivered it.

To prevent fire or shock hazard, do not expose this subwoofer system to rain or excessive moisture. To avoid electrical shock, **DO NOT OPEN THE SUBWOOFER!** There are no user serviceable parts inside. Observe all warnings and cautions.

A FEW SUGGESTIONS

It is recommended that you not operate your speakers or subwoofer with the bass, treble and loudness controls set to full boost. This will place undue strain on the speakers and could damage them.

The volume control setting on your preamplifier or stereo receiver is not a specific indication of the overall loudness level of the speakers. The only important consideration is the loudness level at which the system can be played regardless of where the volume control is set.

Always turn down the volume control when changing a record or switching inputs to AM or FM operation. Excessively loud transients (clicks or popping sounds) can damage the satellite speakers and possibly the subwoofer.

Whenever changing cables, pulling plugs, etc., ALWAYS TURN OFF ALL EQUIPMENT including the Servo Subwoofer. This prevents transients from entering the speakers and prevents electrical energy from reaching you. Keep all connections out of the reach of children.

ABOUT THIS PRODUCT

The Infinity Servo Subwoofer has been designed to enhance the bass frequencies of any audio system. The subwoofer may be used with speakers of any size. Obviously, the greatest bass enhancement will be achieved when the subwoofer is connected with speakers which do not have the capability to create deep bass. The subwoofer may be used individually, or combined with another Servo Subwoofer for even more impressive reproduction of bass frequencies (i.e., one subwoofer near the satellite speakers and a second subwoofer behind the primary listening area, or both subwoofers up front).

The Servo Subwoofer is a self-powered system utilizing a 100 watt, solid state, servo-controlled low frequency monophonic amplifier driving a specially designed 10" woofer mounted within a structurally rigid, tuned port enclosure. The amplifier's power supply can be used with various alternating current voltages and frequencies. A voltage selector plug is located on the amplifier plate to select the required voltage for your area. An A.C. line fuse, located within the voltage selector, will protect the electronics from damage in the event of an internal failure. A special thermal fuse is also employed within the power transformer to protect the electronics against heat buildup in the power supply. Once this internal fuse opens (only in rare cases), the entire transformer must be replaced. Contact the Infinity Customer Service Department if this happens.

POSITIONING

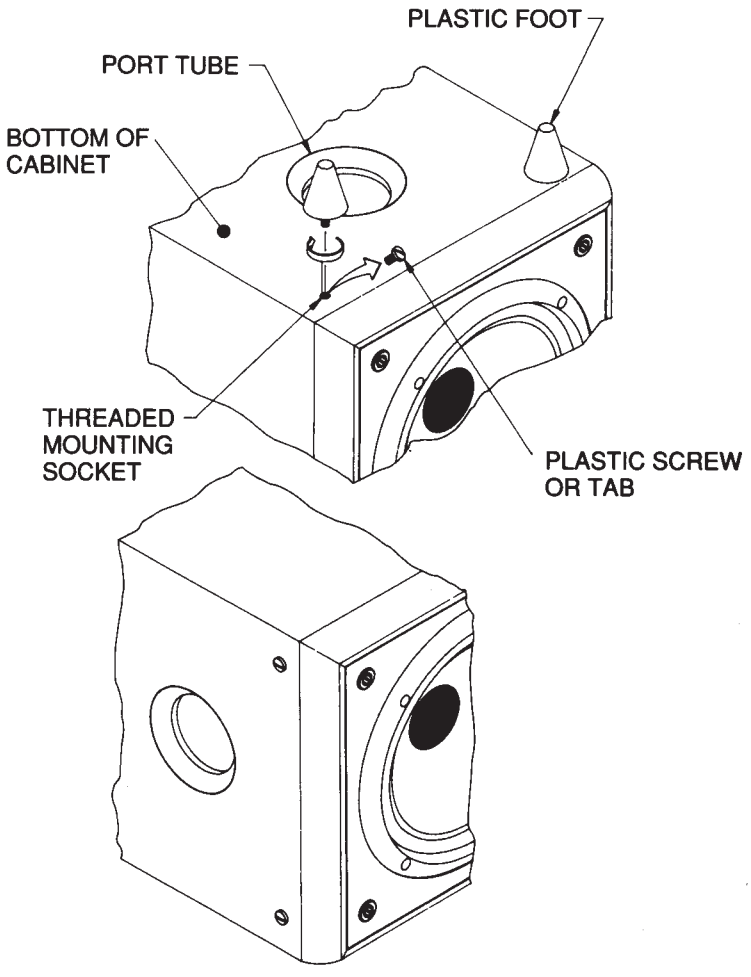
Since the installation of a subwoofer is somewhat more complicated than installing full range speakers, it is essential that you read this section very carefully prior to connecting the subwoofer to your system. Should you have questions relating to your installation, it is advisable to call either your dealer or Infinity Systems for advice.

The performance of the Servo Subwoofer is directly related to its placement in the listening room and how you align the subwoofer with its satellite speakers. Setting the volume of the subwoofer in relationship to the left and right speakers is also of critical importance because it is essential that the subwoofer integrates smoothly with the entire system. Setting the subwoofer's volume level too high will result in an overpowering, boomy bass. Setting the volume level too low will negate the effect of the subwoofer.

It is generally believed by most audio authorities that low frequencies (below 100-200 Hz) are non-directional and, therefore, placement of a subwoofer is not critical. While in theory it is true that extreme low frequencies are non-directional, the fact is when installing a subwoofer within the limited confines of a room, reflections, resonances, standing waves and absorptions generated by the room will strongly influence the performance of the subwoofer system. Moving the subwoofer as little as an inch or two from side–to–side or front–to–rear may add or detract from bass intensity, or clarity. Placement of the subwoofer in a corner may increase bass output enormously (the corner acting as an extension of the speaker essentially creating a low frequency horn) and may prove to be an undesirable location. If there is a necessity for increasing bass output, then a corner may prove to be a valuable aid.

This subwoofer may be installed using the four legs supplied, or it may be mounted on either one of its sides. Refer to figure 1.

Figure 1:



Placement will depend upon your room and the amount and quality of bass required. For example, if your room permits placement of the subwoofer near either satellite, the preferred position (using the four legs) is to position the bass port downward toward the floor. If bass response is too heavy, then removing the feet and placing the enclosure on its side will diminish some of the heaviness. (Be sure to plug all four mounting holes for the feet with the plastic screws supplied.) If you decide to place the subwoofer on its side, never place the port too close to a wall or piece of furniture as this will prevent the port from operating properly. Since the port is an integral part of the subwoofer's design, it should always be permitted free access to the listening room without obstruction to the pressure emerging from it. Careful experimentation will enable you to determine the best position for the subwoofer and whether you want it installed on its legs, or mounted on its side.

Here are some useful hints:

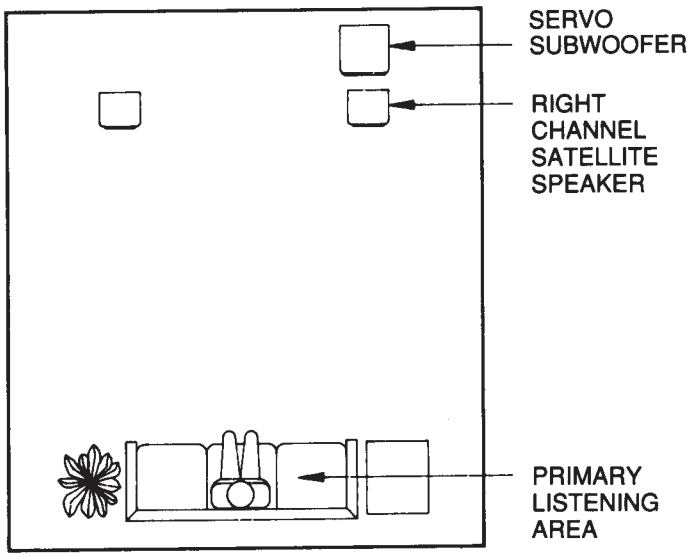
1. If you want maximum bass and there is about 2-2½ inches of clearance between the port and the floor or rug, mount the subwoofer on the four legs supplied.

2. If the clearance is less than 2-2½ inches, try placing the subwoofer on its side with the port directed toward the listening area. Experimentation with the port direction may be useful. At times directing the port away from the listening area (to the side) may be advantageous because this may create a better blend of bass within the listening room.

3. If bass response seems inadequate, place the subwoofer on its legs and move it closer to a wall or corner. If bass becomes too heavy, try turning the subwoofer on its side with the port facing away from the wall. This will tend to diminish bass output.

It will take time and patience to find the most pleasing acoustic location for your subwoofer. Testing for sonic balance and blending should always be made from your normal listening position using a wide range of source material. As a suggested starting point, begin with your Servo Subwoofer behind your right channel satellite speaker, about 3 or 4 inches from the wall. (We suggest trying this location first because in an orchestra the bass instruments are usually located in the back and to the right.) Refer to figure 2.

Figure 2:



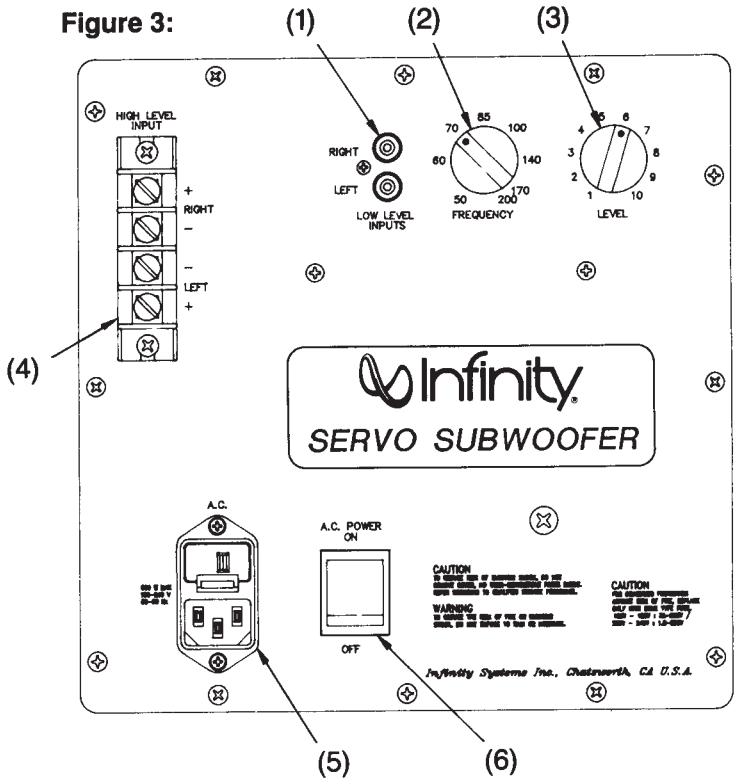
The metal plate acts as the heat sink for the subwoofer's internal amplifier. Do not place pillows or other objects against it.

It is recommended that the Servo Subwoofer be placed at least 2 to 3 feet away from a television or a computer's disc drive system to prevent smearing the colors of the T.V. picture or erasure of the magnetic disc.

INSTALLATION

Refer to figure 3 to identify the controls of the subwoofer's internal amplifier:

Figure 3:



(1) Low Level Input jacks: connect to preamp outputs
(2) Frequency: controls upper corner roll-off point
(3) Level: controls volume of subwoofer
(4) High Level Input terminal strip
(5) A.C. Line Cord
(6) A.C. power switch

Turn off your entire audio system prior to connecting your subwoofer. Make sure the subwoofer's On/Off Switch (6) is in the "off" position.

Verify the correct voltage (5) and fuse rating for your A.C. line current. (The subwoofer is shipped with the line voltage already set for 120 volts/60 Hz.) To change to another setting, simply pull the fuse drawer out of its socket and turn it until the proper voltage appears in the "window." Replace the fuse with the correct fuse size (see below). Then re-insert the fuse drawer into its receptacle. Ratings for the A.C. line voltage fuse are as follows:

VOLTAGE	FUSE SIZE
U.S.A. 120V/60 Hz	3 Amp slow–blow
100V/50/60Hz	3 Amp slow–blow
220V/50Hz	1.5 Amp slow–blow
240V/50 Hz	1.5 Amp slow–blow

GMC

Connect the subwoofer's A.C. Line Cord (5) to your preamplifier's or receiver's switched A.C convenience outlet.

If required, use a heavy-duty extension cord to reach the outlet. If the switched outlet is 2-prong, use a floater ("cheater") plug between the subwoofer's power cord and the outlet.

If using a switched outlet is not feasible, plug the subwoofer into any household A.C. outlet. The subwoofer draws very little current when it is not playing, so it may be left on without consequence. It is advised, however, to turn the subwoofer's power switch to OFF if the system is not to be used for more than a few days.

There are a number of ways to connect your subwoofer. Read these next few paragraphs carefully before you decide which method is most suitable for you.

1. The subwoofer can be fed directly by a low level signal from your preamplifier's output jacks by using a spare set of output jacks on your preamp, if it is so equipped (see figure 4a), or by using a "Y" connector if your preamp has only one set of outputs (see figure 4b). Use standard shielded leads terminated at each end with a male RCA connector. Connect one end of each stereo pair of leads to your preamplifier output (left and right) and connect the other end to the corresponding Left and Right Low Level Input jacks (1) on the subwoofer.

Note: When using an all-tube preamplifier, it is not recommended to use the low level method of connection if the leads going from the preamp to the subwoofer will be longer than 10 feet (3 meters). An all-tube preamplifier may not be able to handle the capacitance introduced by leads over 10 feet long.

Figure 4a:

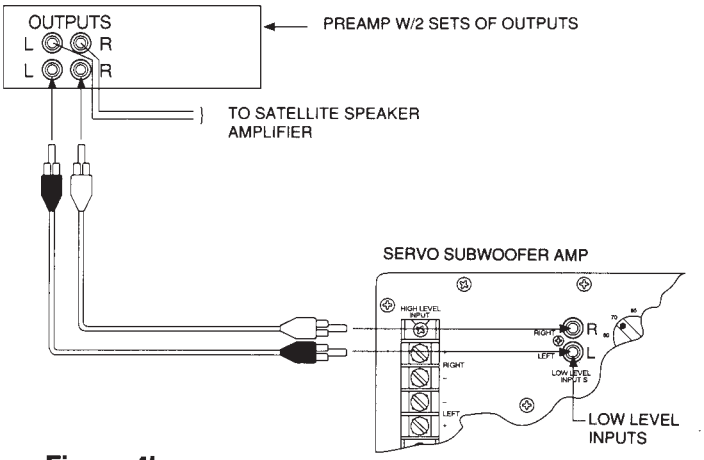
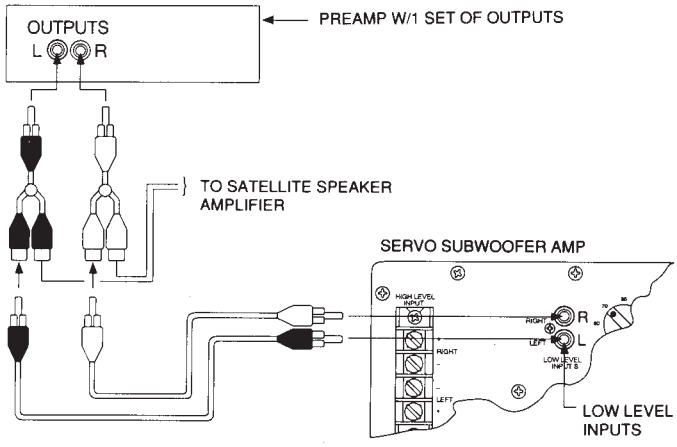
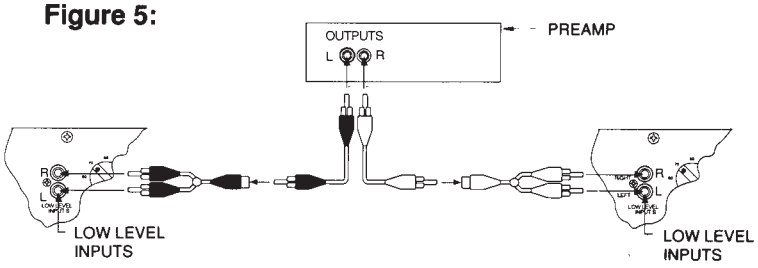


Figure 4b:



When using a single subwoofer, you must use a stereo pair of low-level leads from your preamp's outputs. When using two subwoofers, one for each channel, connect the left channel preamp out to both the Left and Right Low Level Input jacks of the subwoofer on the left by using a "Y" connector at the subwoofer's amplifier, and the right channel preamp out to both jacks of the subwoofer on the right in the same manner. See figure 5.

Figure 5:



2. The subwoofer may be connected by using its High Level Inputs (4) in either of two ways:

- **a.** If your subwoofer is near your power amplifier/receiver and the amplifier's speaker outputs are readily accessible, you can connect the speaker outputs to the high level inputs of the subwoofer (as shown in figure 6).
- **b.** Connect to the amplifier/receiver as stated above, while tapping off the high level outputs from the power source (as shown in figure 7).

You may use wires as thin as 22 gauge for these connections. Maintain proper polarity (+ to +, – to –) at all connections.

Figure 6:

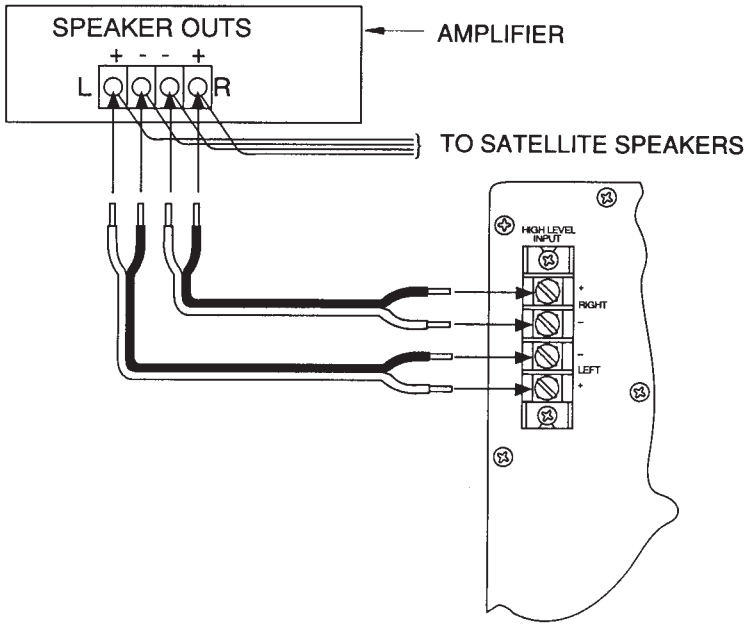
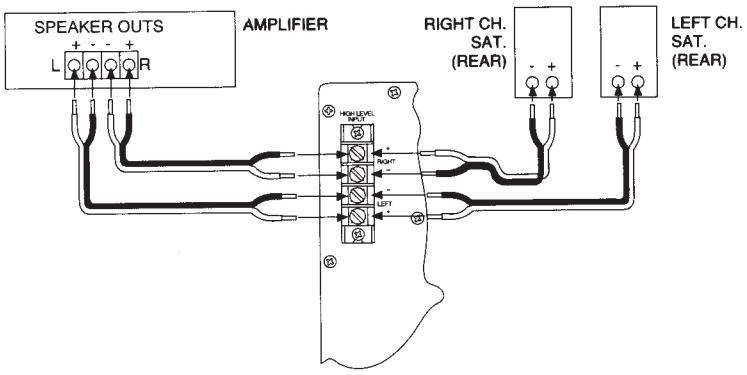


Figure 7:



OPERATION

1. Set the subwoofer's Level control (3) to 12 o'clock.
2. Set the subwoofer's Low Frequency Rolloff control (2) to 12 o'clock.
3. Switch the subwoofer's A.C. power switch (6) to the "ON" position.
4. Turn on your entire audio system.
5. Listen closely to the subwoofer. You should be able to hear a slight amount of noise coming from the speaker. If not, slightly increase the volume control of your preamplifier or receiver. Carefully turn up the subwoofer's Level control (3) until you hear noise, or a slight hum. Now turn the Level control on the subwoofer back to the 12 o'clock position. If you cannot hear noise or hum from the subwoofer, check the A.C. line cord. Is it connected to a "live" A.C. receptacle? Is it making proper contact?
6. Once you have confirmed the subwoofer is active, proceed by playing a CD, record, or cassette. Use a selection that has ample bass information.
7. Set the overall volume control of the entire system to a comfortable level. Begin with the subwoofer's Frequency (2) and Level (3) controls at the 12:00 position. Adjust the subwoofer's Level control (3) until you obtain a pleasing blend of bass. Bass response should not overpower the room but rather be adjusted so there is a harmonious blend across the entire musical range. Many users have a tendency to set the subwoofer level too loud following the belief that a subwoofer is there to produce lots of bass. This is not entirely true. A subwoofer is there to enhance bass, extending the response of the entire system so the bass can be felt as well as heard. However, overall balance must be maintained; otherwise, the music will not sound natural. An experienced listener will set the level of the subwoofer so its impact on bass response is always there but is never obtrusive.
8. The frequency control (2) sets the frequency at which the subwoofer rolls-off, adjustable from 50 to 200 Hz. The setting of this control depends on the low frequency capabilities of your satellite speakers, system placement, and other factors affecting the mid bass region. Turn the control UP (clockwise) until you feel there is too much mid bass information (around 100 Hz) then back the control down a bit until that area sounds more natural. If you are pleased with the mid bass but want to hear more low bass, turn the Frequency control DOWN a bit and the Level control UP by about the same amount. This will increase low bass while leaving the mid bass sounding the same as it did before the adjustment. To get a reduction in low bass without changing mid bass, turn the Frequency control UP and the Level control DOWN.
9. Room placement of the subwoofer is the most critical aspect of its installation. It will be necessary for you to try various locations in your listening room before you choose the final location. Some possible starting points include: behind the right channel satellite speaker, along the back wall between the satellites, along a side wall (but not too close to a corner), or behind a couch or a chair.

In general, the closer the subwoofer is to walls and corners, the greater the effect of low frequency enhancement. Experiment with the Frequency and Level controls in different locations until you are pleased with the results you obtain from your particular application.

A WORD OF ADVICE

The Low Frequency Rolloff and Level controls may be set anywhere within their rotation. However, it will be a most unusual circumstance if you have to set the Level control completely clockwise. This may Indicate an unbalanced condition in your system (too much bass) or an especially large room, or room placement may not be correct. It would, therefore, be worthwhile if you tried several other locations before concluding that the Level control must be set at maximum.

In the event that the subwoofer is located so far from the listening area that its effect is not as prominent as desired, you may find that reversing the phase of the high level input wires may help. Connect the "+" speaker output terminals to the "–" high level input terminals of the subwoofer on BOTH channels. (Reversing the phase on only one channel will cancel out the signal to the subwoofer's amplifier, resulting in NO output from the subwoofer.)

A WORD ABOUT TONE CONTROLS

The tone controls on your electronic components (preamp, receiver, etc.) should be used with the utmost discretion. Excessive boost can create severe power demands on your power amplifier. Maximum bass boost can create a demand for literally hundreds of watts in the bass region, whereas, in the "flat" position, or with the tone controls switched out of the system, your average listening level may be impressively and realistically loud at less than 10 watts. The remaining power capacity required is on reserve for power peaks on sharp transients and powerful crescendos.

CARE OF YOUR SUBWOOFER

Your Infinity subwoofer cabinet is finished with a heavy duty, high quality vinyl which requires very little maintenance. Keep the cabinet clean by dusting it occasionally with a damp cloth or use a good quality furniture polish to maintain its original luster. (When using aerosol products, always spray the cloth, not the speaker to help prevent any of the product from drifting onto the driver or amplifier.)

FEEDBACK

If the bass seems boomy, or you notice a rumbling sound when listening to record albums, the cause may be acoustic feedback. This means that low frequency vibrations from your speakers are reaching the turntable. To help isolate the turntable from these vibrations, place the turntable on a heavy, solid support, as far away as possible from the subwoofer. If you continue to experience difficulties after experimenting with placement, consult your Infinity dealer.

IN CASE OF TROUBLE WITH YOUR SUBWOOFER

If the subwoofer sounds distorted, stops playing, or otherwise seems to be malfunctioning, first determine if the problem is in the subwoofer or the wiring and/or other audio components. If the problem also affects the satellite speakers, the cause is most likely in your electronics. If it is only noticed in the subwoofer, make sure that all connecting cables are correct and in proper working condition. Make sure the subwoofer is plugged in and turned on, and check its A.C. line voltage fuse. If everything seems to be in good working order and the subwoofer still malfunctions, DO NOT ATTEMPT ANY REPAIRS! Contact your Infinity dealer and get the name of the authorized Infinity service center near you. If there is no facility near you, contact Infinity's Customer Service Department at (818) 407-0228, or write: Infinity Customer Service, 9409 Owensmouth Avenue, Chatsworth, California, 91311 (U.S.A.).

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

Infinity constantly strives to update and improve existing products, as well as create new ones. Therefore, the specifications and construction details in this and related Infinity publications are subject to change without notice.