OWNER'S MANUAL FOR YOUR
INFINITY REFERENCE STANDARD ID
SPEAKER SYSTEM



OWNER'S MANUAL FOR YOUR INFINITY REFERENCE STANDARD Ib SPEAKER SYSTEM

Congratulations on purchasing one of the finest audio products available, the Infinity Reference Standard Ib. :: In order to insure maximum enjoyment from these speakers, :: it is highly recommended you take the time to read this in-:: struction booklet thoroughly before installation. :: ::

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UNPACKING

Check your speakers and Electronic Crossover unit carefully. If they have been damaged in transit, contact your Infinity dealer and/or whoever delivered the cartons immediately.

RS Ib speakers are quite heavy, so it is recommended that you obtain the help of a sturdy friend before unpacking. Care should be exercised while unpacking to avoid scratching or otherwise damaging the speakers.

Keep the original cartons and packing material in case of future need. (The cartons fold flat for easy storage.) Protect the packing materials from exposure to moisture.

ASSOCIATED COMPONENTS

Your Reference Standard Ib speaker system will accurately reproduce whatever you put into it, be it fine music or distortion. For this reason the choice of associated components as well as listening material is critical.

The system may be used with either two stereo amplifiers or four mono amplifiers. One stereo amplifier (or two matched mono amps) will be used to power the midrange/tweeter sections while the other stereo amp (or two other matched mono amps) will power the woofer columns. The mid/high-frequency amplifier(s) should be rated between 75 and 300 watts-per-channel into 4 ohms. The low-frequency power amplifier(s) should be able to deliver between 100 and 500 watts-per-channel into four ohms. In all cases each amplifier must be able to deliver its full rated power into a four-ohm load at all audio frequencies with absolute stability. The RS Ib is a low-impedance speaker system and damage could result to the speakers and/or amplifiers if the power amps are unable to deliver the required, undistorted power. Your Infinity dealer will be able to assist you in acquiring a suitable amplifier.

With high-powered amplifiers, it is essential that all necessary measures are taken to avoid accoustic feedback (discussed on page 10) and other non-musical input signals. For example, make sure that each power amplifier is TURNED OFF before connecting or disconnecting your speakers or low-level cables, and always turn the amplifier (or preamp) volume control to minimum whenever the cartridge of a turntable is being raised from or lowered onto a record, or whenever a change is being made from one mode to another (ie, TAPE to PHONO), or when changing from station to station.

POSITIONING

Room acoustics vary almost as widely as personal tastes in music. Since even a slight change in the position of your speakers will affect the sound, it is worthwhile experimenting with different room positions, listening for the best results.

The RS Ib speaker system has a RIGHT and a LEFT mid/tweeter section. To identify the RIGHT section, look at it from the front with its grille removed. The three EMIT tweeters will be on the LEFT side. (When properly postioned, the EMIT tweeters will be towards the center of the room.) It is essential that the right and left speakers are properly located on their respective sides of the room.

For the best stereo image, the tweeters should be two to three meters (seven to ten feet) apart and not less than the same distance from the primary listening area. (Refer to figure 1 on page 15 for a

suggested starting position.)

The spacial relationship between the mid/tweeter sections and the woofer columns will affect how well the bass and middle frequencies blend together (the low-to-mid coherence of the system). Moving the mid/tweeter sections further away from the rear wall will give the sound more depth of image. Moving the woofer columns closer to corners and walls will add more bass.

For optimum results, avoid placing your RS Ib speaker system directly in front of an acoustically absorbant surfaces such as heavy

draperies, open windows, etc.

Because of the driver configuration the mid/tweeter sections may tend to be front-heavy. As a result they may lean forward a bit when placed on plush carpeting or similar surfaces. This can be compensated for by adjusting the levelers located under the front edge of the mid/tweeter bases.

CONNECTING THE SYSTEM

(Make sure that all components are turned off before making connections.)

All connections must be made with high-quality audio connector

cables only.

Connections from your amplifier(s) to the speakers should be made with very heavy-gauge (#14 or better) two-conductor stranded wire with a polarity coding (typically, a ridge or stripe along the insulation of one of the conductors). It is vital that the speakers are connected "in-phase". Use the polarity coding to ascertain that the "+" output of the power amplifier connects to the "+" (red) input terminal of the speaker, and the "-" output ("ground") connects to the "-" (black) input terminal.

Refer to figure 2 on page 16 for an illustration.

1) Connect the outputs of your preamp to the inputs of the Ib electronic crossover unit.

2) Connect the HIGH PASS outputs of the electronic crossover unit to

the inputs of your mid/high-frequency power amplifier.

3) Connect the outputs of the mid/high-frequency power amplifier to the RS Ib midrange/tweeter sections, observing polarity ("+" to "+", "-" to "-") and left/right orientation.

4) Connect the LOW PASS outputs of the electronic crossover unit to

the inputs of your low-frequency power amplifier.
5) Connect the outputs of the low-frequency amp to the AMP inputs of the electronic crossover unit (NOT to the inputs of the woofer columns). Observe polarity and channel orientation.

IMPORTANT NOTE: The length of these leads is not to exceed 2 meters

(6').

6) Connect the SPEAKER outputs of the electronic crossover unit to the RS Ib woofer columns. Observe polarity and channel orientation.

A WORD OF WARNING:

Improper connection of the low-frequency circuit and/or incorrect setting of the BASS AMP switch (on the electronic crossover unit) will cause full-power oscillation and possible damage to your audio system. For this reason, steps 5 and 6 of the preceding instructions must be followed verbatim. In addition, the BASS AMP switch on the electroninc crossover unit must be set in the proper position to accommodate your low-frequency power amplifier.

Consult the owner's manual (or manufacturer) of your low-frequency power amplifier to determine if the amp is INVERTING or NON-INVERTING (explained on page 6, "A Word About Absolute Phase). (If you are using two separate MONO amplifiers, they MUST be identical in this respect or the system will not operate properly, and subsequent damage will occur which is NOT covered by your warranty.) Set the BASS AMP switch (illustrated on page 18, item #14) to the correct position by loosening the two screws about a half-turn, setting the switch, and tightening the screws firmly.

If at any time a change is made in the low-frequency power amplifier(s), the preceding instructions MUST be repeated!

PLEASE NOTE: The bass feedback control system will not operate with a bridged or bridged-type power amplifier. Some amplifier outputs may be optionally bridged by the consumer, while some have been internally bridged by the manufacturer. If you have questions concerning the compatability of your amplifier(s), consult the amp's manufacturer. (Bridged and bridged-type power amplifiers WILL successfully power the mid/tweeter sections.)

A WORD ABOUT ABSOLUTE PHASE

Maintaining absolute phase is an essential factor in the proper performance of your Reference Standard Ib speaker system. For this reason, particular attention should be paid to the section which follows.

If all amplifiers were non-inverting (that is, if their outputs were in-phase with their inputs), then maintaining absolute phase would simply involve observing and following the polarity coding of the speakers' connecting cables. However, since some amplifiers are inverting (their output signals are 180 degrees out-of-phase with their inputs), some changes in the speakers' hookups may be required in order to accommodate them. Consult the owner's manual (or the manufacturer) of your audio components to determine if the equipment you are using is inverting or non-inverting.

If your low frequency power amplifier is inverting, the active crossover's BASS AMP switch MUST be set to the INVERTING position. (See figure 4, item #14, on page 18.) This allows the feedback control system to operate properly and maintains absolute phase in the woofer circuit.

If your mid/high frequency power amplifier is inverting, it will be necessary to reverse its "+" and "-" speaker leads (without crossing the left and right channels) to keep the system in absolute phase.

If your only inverting component is your preamp, the BASS AMP switch would be set to NON-INVERTING (to accommodate the non-inverting low frequency power amp) and all of the speaker leads (the four sets going to the RS Ib speakers) should be reversed ("+" to "-", "-" to "+" at the input terminals of the speakers); DO NOT cross the left and right channels.

If you are using a pre-preamp (head-amp) for your turntable's cartridge, and it is inverting, carefully reverse the "+" and "-" leads at the phono cartridge. This will produce an inverted cartridge output, which will be re-inverted by the pre-preamp, thus producing a non-inverted signal.

(BE SURE NOT TO REVERSE THE LEFT AND RIGHT CHANNELS.)

THE PASSIVE CROSSOVER

The passive crossover controls are located at the lower rear of each mid/tweeter section. Refer to figure 3 on page 17 for an illustration.

The "HIGH TWEETER" control varies the output level of the center front tweeter, in the frequency range of 6 kHz and higher.

The "LOW TWEETER" control varies the output level of the top and bottom front tweeters, in the frequency range of 2 kHz to 5 kHz.

bottom front tweeters, in the frequency range of 2 kHz to 5 kHz.

The "UPPER MIDRANGE" control varies the output level of the third midrange driver from the top in the frequency range of 850 to 2500 Hz.

The suggested starting position for the controls on the passive crossover is at the "12 o'clock" (straight-up) position.

The four fuses help provide protection against damage caused by overload conditions. The fuse under the HIGH TWEETER level control is for the high tweeter; the one under LOW TWEETER is for the low tweeter, etc. (The rear tweeter fuse is labeled accordingly since it has no level control.) The rating of each fuse is indicated directly beneath each fuseholder. Should any of the fuses blow (indicated by a loss of output from the corresponding driver), replace ONLY with the same size and type fuse. USING LARGER OR SLOWER FUSES THAN THOSE SPECIFIED WILL VOID YOUR WARRANTY.

The type and amount of furnishings in your listening room will have an effect on the tonal balance perceived by the ear, especially in the middle and upper-frequencies (vocals, symbols, etc.). After determining the most suitable location for your speakers (keeping in mind that your goal is acoustic realism as opposed to cosmetic appearances alone), use the two tweeter level controls to compensate for sound which seems dull or bright. Adjusting the midrange control will affect how near or distant the music appears.

Generally speaking, rooms with heavily upholstered furniture and thick draperies will require more output from the tweeters than lightly furnished, reflective rooms. Adjust the crossover controls in small increments, listening to a variety of your favorite material, until you establish the settings that are most suitable for you. Normally, once the controls are set, they are usually left alone until some changes are made in the listening room which affect its acoustics.

THE ELECTRONIC CROSSOVER UNIT

(Refer to figure 4 on page 18 for an illustration.)

The Reference Standard Ib electroninc crossover unit is used to divide the bass and the mid/high frequencies and feed the proper frequencies to their appropriate amplifiers and transducers. The unit contains an active low-frequency crossover (low-pass circuit), a lowfrequency feedback control circuit, and a passive midrange crossover (high-pass circuit). Additional equalization and level controls are also provided.

The electronic crossover unit connects into the signal path between your preamp and power amplifiers (refer to "Connecting the System" on page 4). This system MUST be properly connected to avoid damage to your amplifiers and/or speakers!

The functions of the front-panel controls are as follows:

The AMP INPUT IMPEDENCE (Z) control puts the appropriate value of capacitor in series with the input of your mid/high frequency power amplifier. This gives the proper crossover frequency for the midrange/tweeter sections. (This is necessary since the unit's high-pass section is passive.) If two MONO amplifiers are to be used to power the mid/tweeter sections they MUST have equal input impedences in order for the system to function properly. If the input impedences (listed in the amp's owner's manual or available from the manufacturer) is other than one of the values listed at the control (after allowing a 20% tolerance), call Infinity's customer service department for instructions.

The LOW CUT control (#2 of figure 4) sets the lower limit of the woofers: 22 Hz in position "1", 30 Hz in position "2", 36 Hz in

position "3".

The LOW PASS CUTOFF control (#3 of figure 4) sets the upper limit of the woofers: 100 Hz in the "LOW" position, 150 Hz in the "FLAT" position, 200 Hz in the "HIGH 1" position, 250 Hz in the "HIGH 2" position.

The LOW FREQ CONTOUR control (#4 of figure 4) affects the response of the woofers below 50 Hz: -3 dB at 30 Hz in position "1", +/- 0 dB

in the "FLAT" position, +3 dB at 30 Hz in position "2".

The LOW FREQ LEVEL control (#5 of figure 4) acts as a volume control for the bass response and allows the output level of the woofer columns to be adjusted independently from the mid/tweeter sections.

The POWER INDICATOR LED (#6 of figure 4) glows when the electronic crossover unit is on.

(Continued on next page)

THE ELECTRONIC CROSSOVER UNIT (con't.)

Refer to figure 4 on page 18 for an illustration.

On the rear panel of the unit, the A.C. LINE CORD (#7 of figure 4)

plugs into a suitable source of power.

The VOLTAGE SELECT switch (#8 of figure 4) allows for use at 100 through 125 volts A.C. or at 200 through 250 volts A.C. To change the setting of the switch, loosen its two screws about a half-turn, set the switch and tighten the screws firmly.

The FUSE (#9 of figure 4) protects the unit from current overload. REPLACE THE FUSE ONLY WITH THE SIZE AND TYPE SPECIFIED TO PROTECT YOUR WARRANTY. (If the fuse blows, the most likely cause is an incorrect setting of the voltage select switch. If the fuse blows repeatedly, and the switch is properly set, contact Infinity's customer service department for repair service immediately.)

The AMP and SPKR connectors (#10 through #13 of figure 4) connect the low-frequency feedback control circuit to the amplified low-frequency signal. (Refer to "Connecting the System" on page 4 for

complete instructions.

The BASS AMP switch (#14 of figure 4) accommodates both inverting and non-inverting low-frequency power amplifiers. Proper setting of this switch is an absolute must! Refer to "Connecting the System" (page 4) for instructions.

The INPUTS (#15 of figure 4) connect to the outputs of your preamp

to provide the system its program material.

The HIGH PASS outputs (#16 of figure 4) are comprised of two sets of inputs: one set connects to the inputs of your mid/high-frequency power amplifier, while the other set is to be used ONLY at the advice and instruction of Infinity's customer service department. (It makes no difference whatsoever as to which set of left/right jacks you use.)

The LOW PASS outputs (#17 of figure 4) connect to the inputs of your

low-frequency power amplifier.

FEEDBACK

If, after taking care in positioning your speakers, you find the bass response "boomy" and lacking "tightness", or you hear a rumble when using your turntable, or you notice excessive movement of the woofer cones, the cause may be acoustic feedback. This means that the vibrations radiating from your woofers are being picked up by your turntable's cartridge. Because of the extended low frequency response of the RS Ib, isolating the turntable from these vibrations calls for considerable care.

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

HUM

If you should experience an audible 50/60 cycle hum in your speakers, first check all cables and connections (especially your turntable's ground wire), and exchange the cables, one at a time, with ones that you are certain are functioning properly. If all of the cables and connections are proven to be okay, invert the two-prong A.C. plugs in their receptacles. If this does not solve the problem, you may try using a two-prong adapter (commonly called a cheater or a floater) on the A.C. power cords of your components that have three-prong plugs, one at a time, until the hum is eliminated. If floating is necessary, always keep AT LEAST ONE component grounded.

If the hum persists, and if none of the above suggestions seem to

help, consult your Infinity dealer.

TROUBLESHOOTING

If the sound from your Reference Standard Ib speaker system seems distorted, or if part of the system seems to be damaged or inoperative, you may be able to find the source of the problem and correct it. Try, following closely the numbered steps which follow.

Then, if you have been unsuccessful in locating the specific source of the trouble, or if you have been unable to correct it, start to make these inquiries in a-b-c order:

A: Consult the Infinity dealer from whom you purchased the speakers. Infinity dealers are audio experts and can help solve most problems. But, if the dealer cannot help...

B: Get the name and address of the authorized Infinity service facility nearest you by calling our factory at (818) 709-9400 or (if outside of the United States) by writing or calling the national distributor of Infinity products. You may be instructed to take or send the unsatisfactory part or speaker to a service facility, or the Infinity factory, for service under terms of the warranty. (A copy of the warranty statement is included with the speaker system, or may be obtained upon request from Infinity Systems, Inc.).

NOTE: UNDER NO CONDITIONS ARE YOU TO SHIP ANY PRODUCTS FOR SERVICE WITHOUT PRIOR APPROVAL (A "RETURN AUTHORIZATION"), AND DO NOT MAKE ANY SHIPMENTS WITHOUT ENCLOSING A COPY OF YOUR ORIGINAL BILL OF SALE.

If there is no authorized service facility near you, or in the highly unlikely case that the service facility cannot solve the problem...

C: Contact the customer service department at Infinity Systems (9409 Owensmouth Ave., Chatsworth, California, 91311, U.S.A.; (818) 709-9400). Describe the difficulty as specifically as possible. The service department will then advise you as to what action you should take.

If the dealer, service facility, or factory service department instructs you to remove a driver for service or replacement, before you disconnect any of its wires you should use a piece of tape to "flag" the wire leading to the "+" (red) terminal. (This will prove valuable when the time comes to reconnect the driver.) If necessary, also note which wires connect to each driver, and be sure not to rewire the system incorrectly when reconnecting it. The woofer clips have been soldered to their terminals; extra care must therefore be excercised if you should ever have to replace any of the woofers.

NOTE BEFORE REMOVING DRIVERS:

Each tweeter is held in place with two black hexagonal-head screws, each midrange driver with four, each woofer with six. DO NOT loosen or remove any screws of any other type.

(TROUBLESHOOTING, con't.)

Before you consult your Infinity dealer, service facility or factory service department, these are the tests that YOU can perform to help locate and solve a problem in your speakers.

If the rear or the center-front tweeter appears inoperative...

Step 1: Check the appropriate fuse (REAR TWEETER or HIGH TWEETER) and replace if necessary using ONLY the same size and type of fuse (1 1/4 AGC). If the problem is not with the fuses, be sure that the system is connected properly and go on to...

Step 2: Look through the slots of the drivers at the etched voice-coils (thin silver lines) and diaphragms (thin plastic films). Look for broken or burnt lines, punctured or torn plastic films, lines that have come loose from the films or any other apparent damage. If you find any damage at all, call your Infinity dealer for instructions. If you cannot find any damage, carefully remove the tweeter and check to see that the wires are properly connected. Tighten and/or reconnect the wires if necessary, and if the problem persists go on to...

Step 3: Remove the tweeters. (The rear and center front tweeters are held in place by common thru-bolts and nuts. Remove the nuts at the rear tweeter and pull the bolts out through the center front tweeter.) Connect the tweeters one at a time to a low-volume source of music (preferably one which is very light in the bass region). If the tweeters do not play, they are defective and must be repaired or replaced. If the tweeters play, the problem is likely to be in the passive crossover. Call your Infinity dealer and describe the problem.

If the top and bottom front tweeters appear inoperative...

NOTE: The top and bottom front tweeters are in a series circuit. Therefore if one tweeter is inoperative or disconnected, neither tweeter will function.

Step 1: Check the LOW TWEETER fuse and replace if necessary using ONLY the same size and type of fuse (1 1/4 AGC). If the problem is not with the fuses, be sure that the system is connected properly and go on to...

Step 2: Look through the slots of the drivers at the etched voice-coils (thin silver lines) and diaphragms (thin plastic films). Look for broken or burnt lines, punctured or torn plastic films, lines that have come loose from the films or any other apparent damage. If you find any damage at all, call your Infinity dealer for instructions. If you cannot find any damage, carefully remove the tweeters and check to see that the wires are properly connected. Tighten and/or reconnect the wires if necessary, and if the problem persists go on to...

Step 3: Remove the tweeters and connect them one at a time to a low-volume source of music (prefereably one which is very light in the bass region). If only one of the tweeters does not play it is defective and must be repaired or replaced. If both tweeters do not play they are both defective and must both be repaired or replaced. However, if both of the tweeters play the problem is likely to be in the passive crossover: call your Infinity dealer and describe the problem.

If the top, second, and fourth midrange drivers appear inoperative...

NOTE: These midrange drivers are in a series circuit. Therefore if one or more of the drivers are inoperative or disconnected, none of them will function.

Step 1: Look through the slots of the drivers at the etched voice-coils (thin silver lines) and diaphragms (thin plastic films). Look for broken or burnt lines, punctured or torn plastic films, lines that have come loose from the films or any other apparent damage. If you find any damage at all, call your Infinity dealer for instructions. If you cannot find any damage, look behind the speaker at the wiring harness and check to see that the wires are properly connected. Tighten and/or reconnect the wires if necessary, and if the problem persists go on to...

Step 2: Remove the wires from the affected drivers and connect each driver one at a time to a low-volume source of music (prefereably one which is very light in the bass region). If any of the drivers do not play they are defective and must be repaired or replaced. If all of the drivers play, the problem is likely to be in the passive crossover; call your Infinity dealer and describe the problem.

If the third midrange driver appears inoperative...

Step 1: Check the UPPER MIDRANGE fuse and replace if necessary using ONLY the same size and type of fuse (2 1/2 AGC). If the problem is not with the fuse, be sure that the system is connected properly and go on to...

Step 2: Look through the slots of the driver at the etched voice-coil (thin silver lines) and diaphragm (thin plastic film). Look for broken or burnt lines, punctured or torn plastic film, lines that have come loose from the film or any other apparent damage. If you find any damage at all, call your Infinity dealer for instructions. If you cannot find any damage, look behind the speaker at the wiring harness and check to see that the wires are properly connected. Tighten and/or reconnect the wires if necessary, and if the problem persists go on

Step 3: Remove the wires from the midrange driver and connect the driver to a low-volume source of music (preferably one which is very light in the bass region). If the driver does not play, it is defective and must be repaired or replaced. If the driver plays, the problem is likely to be in the passive crossover; call your Infinity dealer and describe the problem.

If the fifth, sixth, and bottom midrange drivers appear inoperative...

NOTE: These midrange drivers are in a series circuit. Therefore if one or more of the drivers is inoperative or disconnected, none of them will function.

Step 1: Look through the slots of the drivers at the etched voice-coils (thin silver lines) and diaphragms (thin plastic films). Look for broken or burnt lines, punctured or torn plastic films, lines that have come loose from the films or any other apparent damage. If you find any damage at all, call your Infinity dealer for instructions. If you cannot find any damage, look behind the speaker at the wiring harness and check to see that the wires are properly connected. Tighten and/or reconnect the wires if necessary, and if the problem persists go on to...

Step 2: Remove the wires from the affected drivers and connect each driver one at a time to a low-volume source of music (prefereably one which is very light in the bass region). If any of the drivers do not

play they are defective and must be repaired or replaced. If all of the drivers play the problem is likely to be in the passive crossover: call your Infinity dealer and describe the problem.

If the sound from all of the woofers on one woofer column appears distorted...

Step 1: Check all of the connections and cables in the low-frequency power amplifier/feedback control system. If the problem persists, go on to...

Step 2: Switch the left and right woofer column speaker leads. If the problem remains in the same column, call your Infinity dealer and describe the problem. If the problem moves to the other woofer column there is a malfunction in the low-frequency power amplifier and/or electronic crossover unit. To determine which is defective, replace the low-frequency power amplifier with an equivalent amp that is known to operate properly. If the problem is no longer apparent, your low-frequency power amplifier is malfunctioning. If the problem persists, the electronic crossover unit may be defective. Call your Infinity dealer for instructions.

If the sound from one woofer on a woofer column appears distorted... Step 1: Carefully remove the affected woofer and connect it to a low-volume source of music (preferably one that is heavy in the bass region). If the woofer sounds distorted or does not play, it is defective. If the woofer plays properly, the problem may be in the woofer column. Call your Infinity dealer and describe the problem.

If one of the woofers appears inoperative, or is moving in the opposite direction from the others...

Step 1: Remove the affected woofer and check the wiring connections. (The red wires connect to the terminals marked in red and the black wires connect to the unmarked terminals. A copy of the wiring diagram is available from Infinity's customer service department.) If the problem is not in the wiring, go on to...

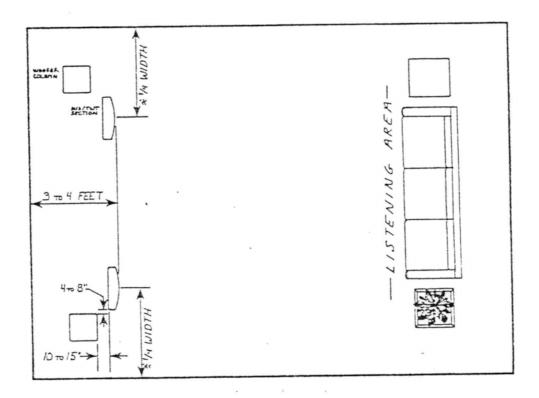
Step 2: Remove the woofer and connect it to a low-volume source of music (preferably one that is heavy in the bass region). If the woofer does not play, or if it makes a buzzing or scraping noise, it is defective. If the woofer plays properly there may be a problem in the woofer column. Call your Infinity dealer and describe the problem.

If the electronic crossover unit appears inoperative...

DO NOT ATTEMPT ANY REPAIRS. This unit is delicate and difficult to service; it is also light and easy to ship, if necessary. Opening the unit voids its warranty; consult your Infinity dealer for instructions.

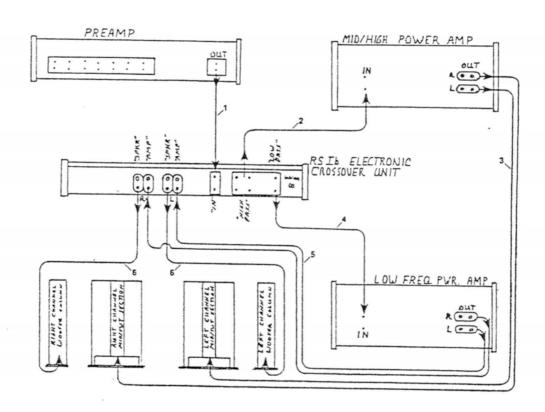
Infinity strives always to update and improve existing products, as well as create new ones. Therefore, the specifications and construction details of this Infinity publication and others are subject to change without notice.

(p/n .930...4856C)



The above diagram is to be used only as a suggested starting point in positioning your speakers. The actual positioning will depend largely upon the type and amount of furnishings in the room, as well as personal tastes. It is worthwhile experimenting from this point to determine the exact position which is most suitable for your application.

(See text on page 3 for further information.)



1) Connect the outputs of your preamp to the inputs of the 16 electronic crossover unit.

2) Connect the HIGH PASS outputs of the electronic crossover unit to

the inputs of your mid/high-frequency power amplifier.

3) Connect the outputs of the mid/high-frequency power amplifier the RS Ib midrange/tweeter sections, observing polarity ("+" to "+" "-" to "-") and left/right orientation.

4) Connect the LOW PASS outputs of the electronic crossover unit

the inputs of your low-frequency power amplifier.

5) Connect the outputs of the low-frequency amp to the AMP inputs of the electronic crossover unit (NOT to the inputs of the woofer columns). Observe polarity and channel orientation. (The lengths

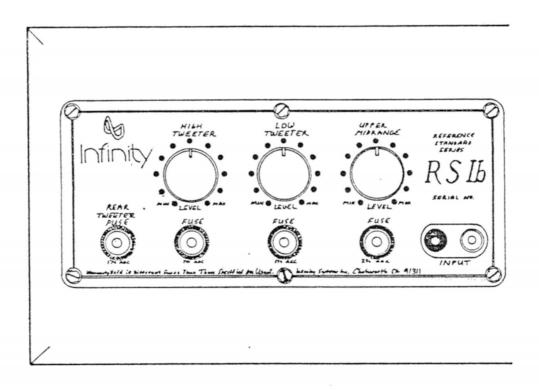
these leads is not to exceed 2 meters/6 feet.)

IMPORTANT NOTE: Be sure you have not inverted the phase or reversed the channels of the system. If this has occurred the system will not

operate properly and may produce full-power oscillation.

6) Connect the SPEAKER outputs of the electronic crossover unit the RS 1b woofer columns. Observe polarity and channel orientation.

(See text on page 4 for further information.)



The "HIGH TWEETER" control varies the output level of the center front tweeter, in the frequency range of 6 kHz and higher.

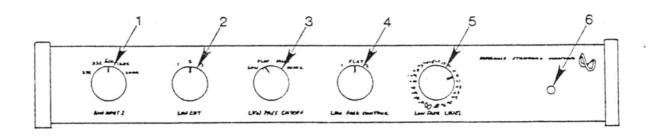
The "LOW TWEETER" control varies the output level of the top and bottom front tweeters, in the frequency range of 2 kHz to 5 kHz. The "UPPER MIDRANGE" control varies the output level of the third

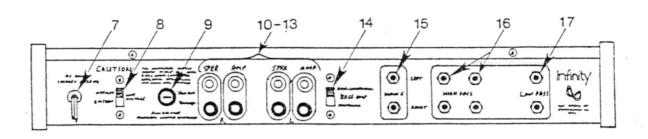
midrange driver from the top in the frequency range of 850 to 2500 Hz.

The suggested starting position for the controls on the passive crossover is at the "12 o'clock" (straight-up) position.

The four fuses help provide protection against damage caused by overload conditions. The fuse under the HIGH TWEETER level control is for the high tweeter; the one under the LOW TWEETER is for the low tweeter, etc. (The rear tweeter fuse is labeled accordingly since it has no level control.) The rating of each fuse is indicated directly beneath each fuseholder. Should any of the fuses blow (indicated by a loss of output from the corresponding driver), replace ONLY with the same size and type fuse. USING LARGER OR SLOWER FUSES THAN THOSE SPECIFIED WILL VOID YOUR WARRANTY.

(See text on page 7 for further information.)





- 1: Amp Input Impedence Control (for mid/high frequency power amp)
- 2: Low Cut Control
- 3: Low Pass Cutoff Control
- 4: Low Frequency Contour Control
- 5: Low Frequency Level Control
- 6: LED Indicator
- 7: A.C. Line Cord*
- 8: Voltage Select Switch
- 9: Fuseholder/Fuse
- 10: Right Speaker Connector (to right woofer tower)*
- 11: Right Amp Connector (from right channel of low frequency amp)*
 12: Left Speaker Connector (to left woofer tower)*
- 13: Left Amp Connector (from left channel of low frequency amp)*
- 14: Bass Amp Select Switch
- 15: Input Connectors (from preamp) *.
- 16: High-Pass Outputs (to mid/high frequency power amp)*
- 17: Low-Pass Outputs (to low frequency power amp)*

(See text on page 9 for further information.)

*(See figure 2 on page 16 and text on page 4 for instructions.)

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