



QUANTUM LINE SOURCE--I

OWNERS MANUAL

Congratulations! With the purchase of your Infinity Quantum Line Source Speaker System, you have joined the elite of sophisticated music and sound perfectionists. Infinity has put years of experience and hundreds of hours of work into the development of this system enabling us to bring you the finest in sound reproduction.

For you to realize the full potential of your new Quantum Line Source System, attention should be paid to proper installation.

After opening the cartons, carefully examine your speakers checking for possible freight damage. If there is damage, contact your dealer immediately.

Related Components

Selection of related components for use with the Quantum Line Source is important, as they will be the limiting factor in the performance of the system. It will be those components you will hear, not your Quantum Line Source. It is possible that recordings that sounded acceptable on previously used equipment might now be unlistenable. So beware that your new Quantums are ruthless in revealing so-called "weak links" in your sound system.

Questions regarding component compatibility can be answered by your dealer. Do not, however, hesitate to contact the people at the factory.

Set-up Suggestions

Installation of your Quantum Line Source System is simple, straight forward, and follows most of the rules outlined in the manual provided for the owners of our standard line of speakers. It is included for your convenience. In addition, you will find a copy of a technical paper explaining the major advancements made during the design of the Quantum Line Source.

You will notice that your speakers are constructed symetrically and that the packing boxes were marked with an "L" beside the serial number ending with an odd number and an "R" beside the one ending in an even number. The speakers should be placed with the tweeters in the center.

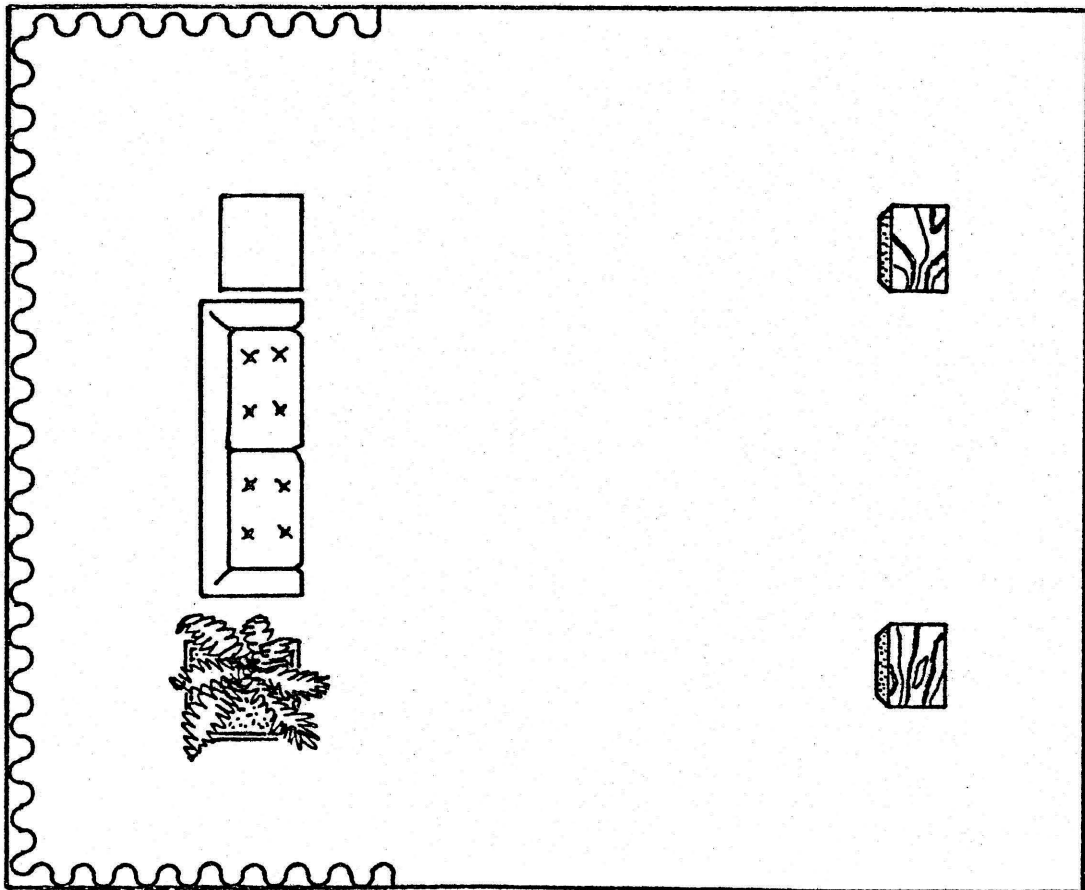


Figure 1

Proper tweeter operation depends on what is called a "quarter wave plate", which is included in the grill assembly. Without this plate, due to the way high frequencies emanate from the slot in the tweeter, there tends to be a slight dip in frequency response around 10KHz. If you desire to listen to your system without the grills, we recommend that this "plate" be provided. A piece of masonite 1.5" x 42" x .25" thick attached so that it runs flush and parallel to the tweeters will provide a substitute. Permanent mounting is not recommended as that would preclude further use of the grill.

As you can see from figure 1, the best placement of your system is not against the wall. It has been found that increasingly better depth of image is realized as the speakers are moved further from the wall. Figure 1 puts the speakers three feet from the rear wall and four feet from the side walls. This particular arrangement is the combination that works best in the greater number of environments and we suggest that you start there, if possible. As always, experimentation is in order and will eventually lead to the best possible sound.

With your speakers tentatively placed, a short word on speaker wire is in order. Experience has shown a significant drop in low-end energy and tightness with use of small gauge wire, with 16 gauge or heavier providing the best results.

The Quantum Line Source has one of the most complicated crossover assemblies ever designed, enabling compensation for nearly all acoustic environments. For this reason, detailing all the possible

acoustic vs. crossover combinations is made considerably more difficult, if not impossible. Therefore, the following procedure is suggested:

Begin by setting the speakers up in what could be called an "optimum practicality", that is, compromising the position where they have to go relative to where they should go.

All crossovers are adjusted at the factory so that the speaker will sound identical to our reference speaker in our soundroom, so adjustment initially should not be necessary. In no way will your room match ours, of course, hence that complicated X-over.

Pick out three or four recordings of varying material that you feel will best demonstrate your system's capabilities, and then listen.

In all, there are five adjustments available on the crossovers; a rear tweeter on/off switch, a tweeter crossover point control, and three level controls; for the tweeter, midrange and mid bass coupler.

During the system's development it was found that, with certain source material and/or acoustic environments, the sense of depth could be improved with the addition of a rear tweeter. Because the apparant improvements are room and source affected, a switch is provided for its addition or removal. As the rear tweeter is wired in parallel with the front tweeters, changes in the tweeter crossover and level controls will affect the rear tweeter also.

The three level controls can be adjusted to suit your particular acoustic environment or tastes.

The tweeter crossover point control is unusual and enables changes in the crossover frequencies relative to the midrange. For example: if the upper midrange/lower tweeter seems heavy or to "up front", then raising the crossover point (by pulling the plug out and rotating it to the next higher position) should effect a slight thinning of the sound in that area. However, it might then be necessary to bring the tweeter level up slightly to compensate for the loss of low frequency (relative to the tweeter) energy. This, in turn, may require corresponding changes in midrange and mid bass coupler levels. Changing room positions may also require similar adjustment. It quickly becomes apparent that a prodigious amount of experimentation may be necessary if you happen to be the unlucky possessor of a "difficult" acoustic environment.

At times, during the Quantum's development, the Watkins woofer's power requirements, with its virtually flat impedance curve, proved quite impressive. In larger rooms, at loud levels, this lead to periodic power shortages, even with some of the most powerful amplifiers available today. Eventually, this lead to biamplification, utilizing two identical amplifiers. The best configuration found was using one amplifier on one speaker, with the left channel driving the lows, and the right channel driving the highs. This allows the amplifier's power supply to concentrate its current on the channel with the low frequencies, while the other coasts along handling the highs only.

The preceding procedure of bi-amplification may seem a little unorthodox in that there is no electronic crossover required.

After a considerable amount of research, the sonic value of an expensive electronic crossover proved questionable when compared with the passive system.

If you do decide to bi-amp your system, make very sure that the straps on the binding post are removed as there is no more effective way of destroying two expensive amplifiers than driving their outputs in parallel!

With the capacitor coupled Watkins woofer system it was decided that only the mid bass coupler, midrange and tweeters need be fused. It is, therefore, extremely difficult to blow the fuse. In the event that you do blow the fuse, please check the related components of your system for possible malfunction. Replacing the fuse with other than 3 AGC will, in the event of damage, void the warranty.

In case you have problems

Infinity's Quantum Line goes through Quality Control checks unparalleled in our industry. In the QLS-I, each and every electrical component is rigidly tested and in some cases custom matched and balanced to assure the utmost in uniformity. Every QLS-I is AB'ed to our reference standard with each woofer measured to absolutely guarantee uniform response. In many cases, these tests are performed twice! In addition, power handling of the six series paralleled midrange and eight series paralleled tweeters (each capable of handling 35 watts rms) is many times that of normal design. This

means the chance of malfunction is infinitesimally small, and if there is a system malfunction or defect in the sound, the cause will probably be elsewhere in the link, so check there first. If questions remain concerning the performance of your system, have it checked by your dealer.

If it does become necessary to return a speaker to the factory, follow the instructions on the warranty card. It should be packed in the original packing material. If it is no longer available, write directly to Infinity for packing. Please expect an average of two weeks repair time from the day of receipt at the factory.

DO NOT ship by bus, or Parcel Post. We recommend that individual speakers be returned by truck or Air Freight, and addressed to :

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