



INSTRUCTIONS

KLH* MODEL TWELVE ACOUSTIC-SUSPENSION LOUDSPEAKER SYSTEM

The KLH Model Twelve is a full-range, moving-coil loudspeaker system that aims at the highest level of performance. In addition to providing exceptionally smooth and wide frequency coverage with notably low distortion, it offers the listener an unprecedented opportunity to make subtle adjustments of overall sound quality to account for differences in program material, associated equipment, room acoustics, and personal musical judgments.

The unique Contour Control provided with the Model Twelve is designed to be placed where you can use it most conveniently and effectively to judge and adjust sound quality. It will be of greatest usefulness, particularly for adjusting very-high-frequency response to suit the quality of varied program material, if you can keep it within easy reach of your favorite chair. If this is not feasible, we suggest that you take time to experiment with adjustments of musical balance from your usual listening location before you place the Contour Control elsewhere.

Connection To Amplifier

The Model Twelve is designed to be connected to an amplifier only by way of its Contour Control. You should not attempt to connect an amplifier directly to any of the four terminals on the rear of the loudspeaker cabinet. Severe damage may result.

The terminals marked "GND" and "8 OHMS" on the Contour Control's rear panel should be connected to the corresponding speaker terminals on your amplifier. Use ordinary two-conductor "lamp cord" for a cable run of up to sixty feet. For a run of thirty feet or less, you may use the lighter-gauge speaker wire often provided by audio dealers.

Connection of Contour Control to Loudspeaker

Two lengths of thin, four-conductor cable are provided for your convenience in connecting the Contour Control to the Model Twelve.

If you want to place the control box out of sight on the rear of the speaker cabinet after making initial adjustments with it, the short cable will avoid an excess of wire behind the cabinet. The long (40-foot) cable is for permanent or temporary use of the control box in a remote position.

The four lugs at either end of both cables are color-coded to correspond to the terminals on the rear of the speaker cabinet and the Contour Control. Terminal "A" is coded Black, "B" Red, "C" White, and "D" Yellow. In the event that the color-coding is ever removed from the cables, or if you wish to splice the cable and re-establish the proper coding, one of the wires is silver in color under its insulation, the other three copper. The silver wire is the "A" wire, coded Black, and the others follow in sequence (BCD: Red, White, Yellow) across the cable.

Make sure to connect the four wires in the cable to the proper terminals at speaker and control box. If you have reason to doubt that the wires are connected in correct sequence, listen to the Model Twelve at low volume levels until you are sure that the low-frequency output from the Contour Control is not connected to the high-frequency speaker, which could be damaged at normal listening levels by such a misconnection.

Using The Contour Control

The frequency ranges covered by the four switches on the Model Twelve's Contour Control are those that effectively determine the octave-to-octave musical balance of any loudspeaker. The final choice of the relative balance of any of these ranges is always open to some question, and the more serious the listener's interest in reproduced sound, the more likely he is to notice these choices (whether or not he can identify them as such) and judge them against his own listening requirements. We at KLH feel that the final useful step in the design of an ambitious, "perfectionist" loudspeaker system is to open these areas of choice to a meaningful degree to the listener.

Although you may first believe otherwise, there are no easy labels (such as "presence" or "brilliance") for the ranges covered by the four adjustments, and there is no easy description of their musical effect. We suggest that you begin by tuning an FM tuner to the random noise between stations and listening to the effect that various switch positions on the Contour Control have on the

quality of the noise. Listen to the effect both of individual switches and of two or more neighboring switches in combination. Then repeat the process with music — using some familiar recordings of orchestral, instrumental, and solo musical material. After you have a good idea of the overall effect of the adjustments, you can begin to sort out the ones that seem to be pertinent to your own requirements. You may want to establish a usual setting of a particular switch at either a "Plus" or "Minus" position and vary it from that point with different kinds of music. Or you may want to leave all or most of the controls in the center position and vary them only occasionally.

Once you have established an overall "contour" that seems best suited to most of your listening requirements, the greatest change you probably will want to make for a given recording will be in the 7000-20,000 cps area. Generally, you will not be able to set this switch to advantage in its full "Plus" position because of the high-frequency noise and distortion content of most recordings. With an exceptional recording, however, or with a "live" FM broadcast of unusual quality, you may be able to obtain breathtaking results by turning this switch all the way up.

Again, we suggest that you keep the Contour Control near your usual seating area to get its maximum benefit. If it is inconvenient to do so for reasons of decor, the control box may be mounted on the rear of the speaker enclosure simply by lining up the Velcro hook-and-pile strips on the underside of the control and the rear of the cabinet and pressing the Contour Control into place. The Control may be mounted panel-up near the top of the cabinet to make occasional adjustments convenient.

Amplifier Requirements

Like all high-performance loudspeakers, the Model Twelve will generally profit from the use of an amplifier of moderately high power, especially for undistorted reproduction at high volume of peak orchestral levels. We suggest an amplifier of high quality capable of at least 25 watts RMS output per channel into 8 ohms. The Model Twelve's power-handling ability is such that it may safely be used for home music reproduction with the highest-powered amplifiers available for home use.

The KLH Model Sixteen amplifier is fully suitable for use with the Model Twelve.

FIVE-YEAR WARRANTY

In designing, manufacturing, and setting performance standards for our products, we at KLH feel an obligation to go beyond the customary standards for home-entertainment products. As a result, all KLH products are guaranteed well beyond the point usually considered adequate for products designed for the home.

The KLH Model Twelve Loudspeaker is fully guaranteed against all defects in materials and workmanship for five years from the date of purchase from an Authorized KLH Dealer. During that period, through a specifically authorized service facility, KLH will replace any defective part and correct any defect in workmanship without charge either for parts or for labor.

For this warranty to apply, the Model Twelve must be installed and used according to its written instructions. The warranty card must be filled out in full and returned within ten days of purchase. In the event of difficulty, servicing must be accomplished by a factory-authorized service agency. Servicing information should be obtained from the dealer from whom the purchase was made or from the KLH Customer Service Department.

Accidental damage, including that resulting from incorrect connection of the system to an amplifier, and shipping damage are not considered defects under this warranty, and KLH assumes no responsibility for defects resulting from abuse or from servicing attempted by any person or agency not specifically authorized by KLH.

IMPORTANT:

Do not attempt to return the Model Twelve or any part thereof to the KLH factory without first requesting and receiving a Return Authorization form and sticker. Shipments received at the factory without the proper Return Authorization and sticker must be refused by the shipping department.

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