

# HARMAN-KARDON MODEL HK12 OMNIDIRECTIONAL SPEAKER SYSTEM

## *Introduction*

Welcome to the wonderful world of Harman-Kardon Omnidirectional sound.

The new Omnidirectional HK-12 represents the ultimate in air suspension speaker design. It has been developed to take maximum advantage of either transistor or tube amplifiers and will deliver absolute realism in music and voice reproduction.

The Harman-Kardon credo is quite basic: faithfulness in music reproduction is not merely a compilation of impressive specifications. The final judgment comes from listener appreciation and the ability to enjoy many hours of music without strain and fatigue.

The strict application of this principle has resulted in the design of a unique speaker system that is impressive in its unobtrusiveness. It is neither brilliant nor deep-throated. In fact, it offers no characteristic sound of its own. The HK-12 offers superlative instrument definition realistically reproducing the shimmer of violins, the snarl of the brasses and the impact of the tympani with amazing lifelike clarity. These performance capabilities are the result of Harman-Kardon's uncompromising approach to sound reproduction.

This manual explains the placement and installation of the HK-12 speaker systems. Please read it thoroughly before connecting your new Harman-Kardon speakers. Taking a few moments now may save time and future problems.

Happy listening!

## *General Information*

### **UNPACKING**

After unpacking your HK-12 speaker system, inspect it carefully for signs of transit damage. This speaker was subject to numerous rigid quality control inspections and therefore should be in perfect operating condition. If damage is visible, notify your dealer at once. If the speaker was shipped to you, notify the transportation company. Harman-Kardon will cooperate with you in such instances, but please note that only you can recover from the carrier for damages incurred during shipment.

### **WARRANTY and SERVICE POLICY**

#### **POLICY**

We warrant each speaker to be free from defects in material and workmanship under normal use and service, and in accordance with the conditions set forth below. Should a defect occur within the periods specified, and provided that the unit is returned to either HARMAN-KARDON or an authorized HARMAN-KARDON warranty station, transportation prepaid, and which our examination shall disclose to our satisfaction to be defective, we will:

a) For a period of one (1) year from date of purchase either replace or repair and install any defective parts of the speaker free of charge.

b) After the first (1st) year and for a period of five (5) years from date of purchase replace or repair and install any defective parts charging only for labor.

### **REGISTRATION**

To obtain service under the terms of this policy, it is necessary to return the enclosed warranty card for "factory validation" within ten (10) days from the date of purchase.

This card will be assigned a "warranty registration number" and returned to you. If service is required within the warranty period, it is mandatory that the validated card or the warranty registration number be presented or your warranty will not be honored.

### **EXCEPTIONS**

This warranty does not include any obligation as to:

a) Repair or replacement of the wooden enclosure or the grille cloth due to damage incurred after initial delivery.

b) Transportation charges to and from the factory or an authorized warranty station.

This warranty is not applicable to any instrument which shall have been repaired or altered in any way so as, in our judgment, to affect its stability or reliability or has been subject to neglect, misuse, abuse, negligence, or accident; or which has had the serial number altered, effaced or removed. Neither shall this warranty apply to any instrument which has been connected other than in accordance with instructions furnished by us.

### **SERVICE**

HARMAN-KARDON has a special customer service division to answer all questions pertinent to the installation and operation of your unit. Please feel free to write to us at any time and we shall endeavor to offer prompt and complete advice.

If your problem cannot be resolved through our combined efforts, we may wish to refer you to a local authorized repair agency or we may prefer to authorize the return of your unit to the factory. In the event it must be returned, an authorization form and proper packing instructions will be forwarded to you. This authorization form, together with the warranty registration number, **MUST BE RETURNED** with your unit.

**UNDER NO CIRCUMSTANCES SHOULD YOUR UNIT BE SHIPPED TO THE FACTORY WITHOUT PRIOR AUTHORIZATION.**

This warranty is in lieu of all other warranties, expressed or implied, and of all other obligations or liabilities on our part, and we neither assume nor authorize any representative or other person to assume for us any other liability in connection with the sale of this instrument.

## CONNECTING THE SPEAKERS FOR STEREO OPERATION

## OMNIDIRECTIONAL DISPERSION

### WHAT DOES IT MEAN?

### HOW DOES IT WORK?

### CAN ONE HEAR THE DIFFERENCE?

### WHY IS IT SUPERIOR?

A simple practical guide to omnidirectional sound is to state that the common light bulb used in the home is "Omnidirectional". Conversely, an automobile headlight is directional.

The sonic beam from conventional loud speakers is similar to the light beam of an automobile headlight: It is narrow and direct. This bears little relationship to the beam or wave shape produced by musical instruments, which is radial, spherical, omnidirectional.

Sonically, there is no front or back to a flute, piano violin, french horn, kettledrum, triangle, tuba or bassoon. The sound pattern produced by musical instruments is omnidirectional, similar to the light pattern produced by the ordinary light bulb which produces light over its entire surface.

Approximately 80% of the sound one hears in the concert hall is generated in this way; the sound on stage being bounced and reflected off the floor, walls and ceiling, result in a full frequency response in all seating areas of a concert hall. The sound may not be absolutely uniform, but it spreads out the full width, depth, and height of the hall. Which is what happens with your little light bulb in a room, and sonically is what happens with the new Harman Kardon HK-12 omnidirectional speaker.

Illustration #1 indicates the sound pattern produced by the HK-12.

Imagine trying to light your room with a headlight. You'd have one bright spot. Conventional speakers set up for stereo are not much better. They produce two bright hot spots of sound. The measured sound pattern of the HK-12 however, is much like the light bulb. As a result you are no longer bound by old rules as to "absolute", or "correct" placement for stereo. In most cases you may suit convenience and in some situations solve problems where suggested placement is impossible. Don't regard the HK-12's as separate left and right speakers, but as a continuous left-all-the-way-to-right sound front; a spacious distribution of all frequencies in all planes to fill your room with natural sound.

Illustration #2 shows a cutaway view of the HK-12 indicating the position of the twin cone speaker which is located just below the reflector.

Illustration #3 on page 4 shows a few diagrams that suggest possible placement and installation of your HK-12's.

The HK-12 is a twin cone speaker system mounted in the horizontal plane firing vertically onto a unique reflector which causes the sound to literally escape from the eight grill openings.

In order to achieve the best stereo performance, proper speaker positioning is important. The room diagrams will give you some idea of where the speakers should be placed with relation to the main seating area. The speakers should be approximately 9 feet or more apart. Since all rooms are different in size or shape a little experimenting with placement will be worthwhile. You will notice that rooms 2 and 3 have alternate suggested positions. As a general guide you should be seated opposite the speakers for maximum spaciousness and concert hall effect. There should never be the impression of two separated sound sources, neither should the speakers be so close to each other that you never experience the depth and separation of stereo.

If you should require further help in solving a specific unusual room problem please write and include a simple drawing of your room layout and it's dimensions and we will advise you of the best location for your speakers.

## SPEAKER CONNECTIONS

We have provided two types of speaker connections—the screw type and the phono type for your convenience in connecting any model music system to your speakers.

If your music system has screw type terminals, use the screw type terminal strips on the rear of your speakers for connecting them to your unit using the following procedure:

1. Measure the length of speaker cable required to connect the speaker to the amplifier.
2. Strip and tin each wire at the ends of the (2) conductor speaker cable.
3. Connect one end of this cable (one wire) to the (+) output terminal and the other wire to the (—) terminal of your amplifier. The other end of this cable should be connected to the appropriate (+) and (—) terminals on the rear of your speaker.
4. Repeat the above procedure when connecting your second speaker to your system.

To connect your Harman Kardon speakers to an amplifier using RCA Plug type connectors the following procedure should be followed:

1. Remove the Black rubber plug that has been inserted into each of the RCA jacks on the rear of your Harman Kardon speakers.
2. Plug one end of the speaker cable into the receptacle on the rear of your left speaker (this is the speaker on the left as you face the speakers).
3. Plug the other end of the speaker cable into the LEFT speaker receptacle on the rear of the receiver.
4. Similarly connect the other speaker cable to your right speaker.
5. Attach the other end of the speaker cable to the receptacle marked RIGHT on the rear of the receiver.
6. Your receiver is now connected for stereo operation.

ILLUSTRATION No. 1

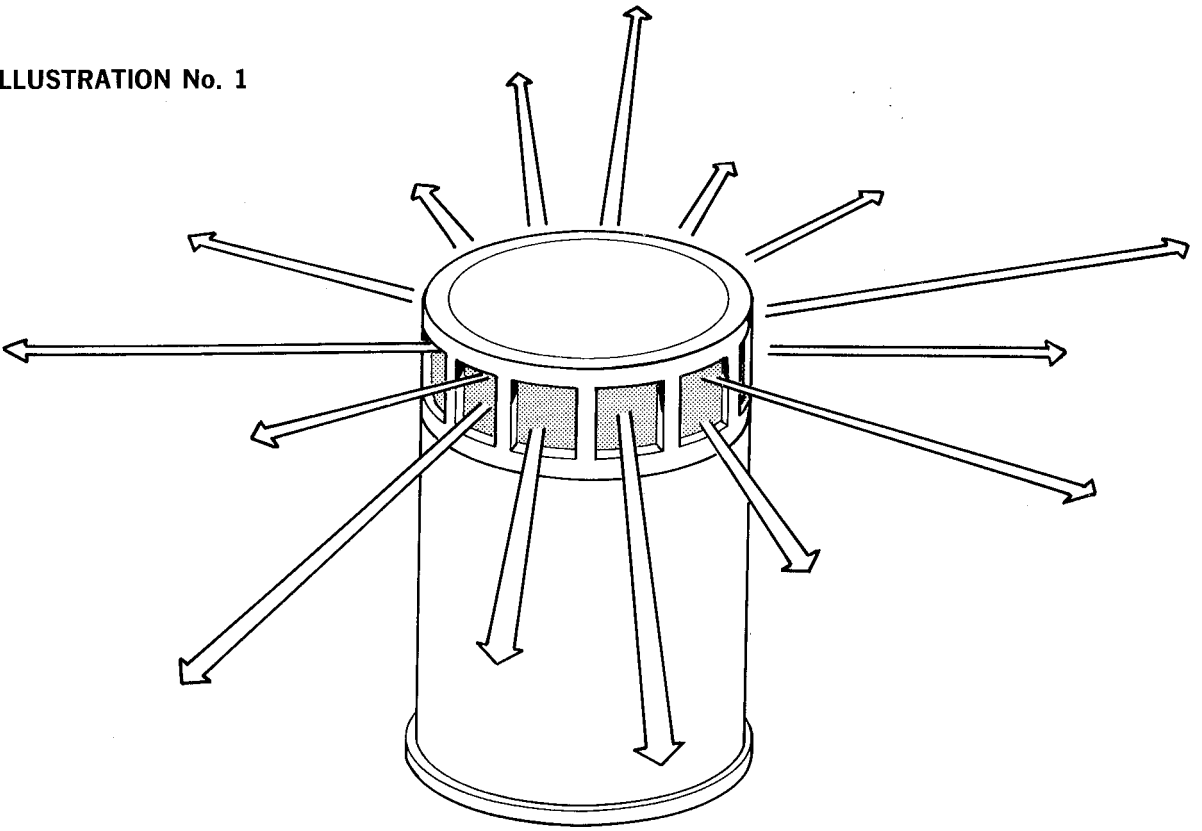


ILLUSTRATION No. 2

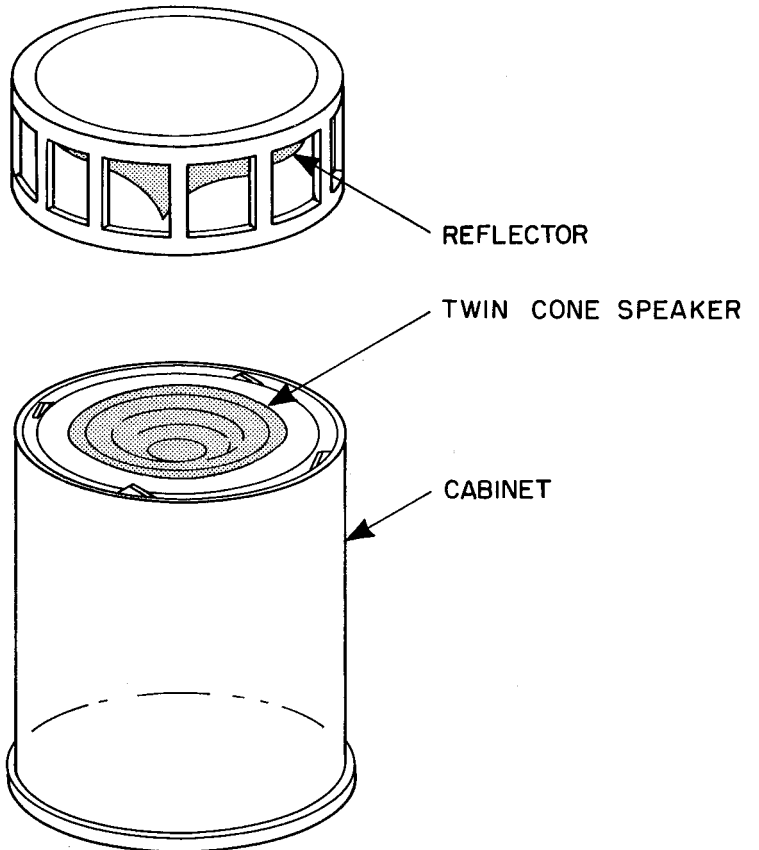
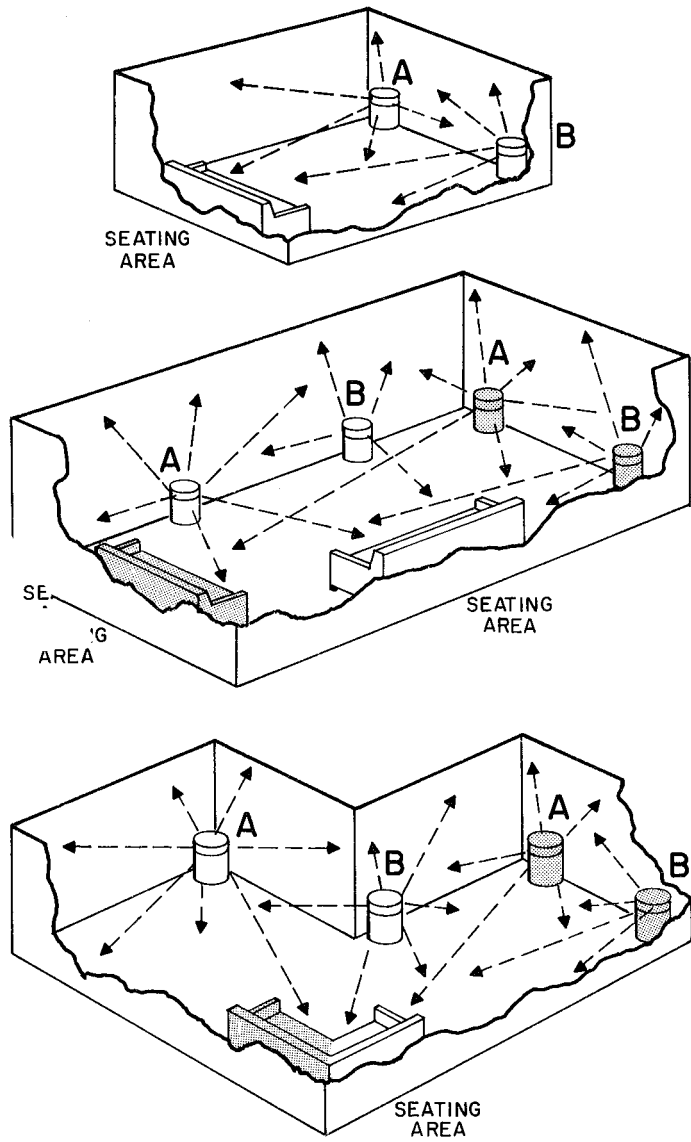


ILLUSTRATION No. 3



*Specifications*

Frequency Response	50hz-16khz
Power Handling Capability	20 watts
Impedance	8 ohms
Dimensions	13¾" H 9½" Dia.
Shipping Weight	15 lbs.

**harman kardon**

INCORPORATED

55 AMES COURT, PLAINVIEW, N.Y. 11803  
A SUBSIDIARY OF JERVIS CORPORATION