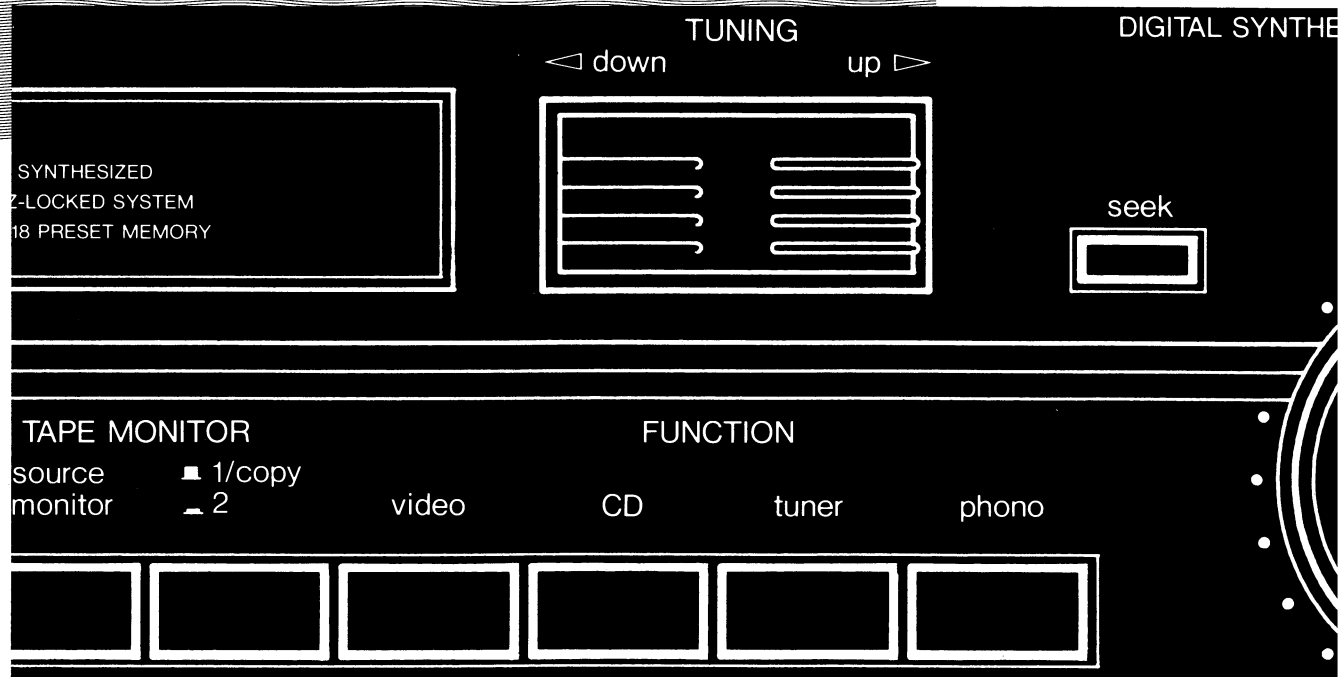


hk330 Vi



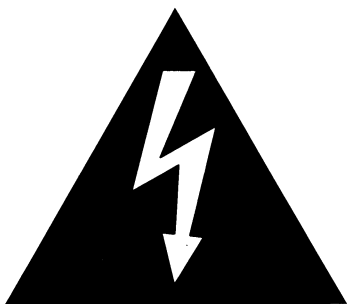
*Digital Synthesized Quartz-Locked Stereo Receiver  
Instruction Manual*

**harman/kardon**

## Rear Panel Safety Precautions



**CAUTION:** TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK). NO USER-SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

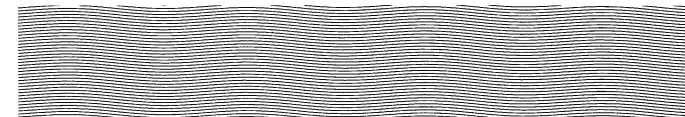


The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of uninsulated “dangerous voltage” within the product’s enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.



The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

**WARNING:** TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE.



1. Read instructions — all safety and operation instructions should be read before using the receiver.
2. Retain instructions for future reference.
3. Heed warnings — all warnings on the receiver and in its operations instructions should be adhered to.
4. Follow all instructions.
5. Water and moisture — do not use the receiver around water, for example near a swimming pool, sink or in a wet basement.
6. Ventilation — The receiver should be situated so that its location or position does not interfere with its proper ventilation.

- 7.** Heat — The receiver should be situated away from heat sources such as radiators, fireplaces, stoves, electric popcorn poppers or other appliances that produce heat. Also avoid prolonged contact with direct sunlight and extremely low temperatures.
- 8.** Power sources — The receiver should be connected **ONLY** to a power supply of 120 volts, 60 cycles.
- 9.** Power cord protection — Power supply cords should be routed so that they are not likely to be walked on or pinched by items placed upon or against them, paying particular attention to cords at plugs, convenience receptacles and the point at which the cord exits from the receiver. Also never pull or stretch the cord.
- 10.** Cleaning — Do not use volatile solvents such as alcohol, gasoline, benzine etc. to clean the receiver cabinet. Use only a clean dry cloth. If you must use a wet cloth, wet only the cloth lightly with water.

- 11.** Object and liquid entry — Care should be taken so that objects (including excessive dust) do not fall into the unit, and that liquids are not spilled into the inside of the receiver.
- 12.** Abnormal smells — If an abnormal smell or smoke is detected, immediately turn the receiver power OFF and pull out the power cord. Contact your dealer or nearest Harman Kardon Service station.
- 13.** Damage requiring service — The receiver should be serviced by qualified service personnel when:
- A.** The power supply cord or the plug have been damaged; or
  - B.** Objects have fallen, or liquid has been spilled into the receiver; or
  - C.** The receiver has been exposed to rain; or
  - D.** The receiver does not appear to operate normally in performance; or
  - E.** The receiver has been dropped or the cabinet damaged.

- 14.** Servicing — The user should not attempt to service the receiver beyond those means described in this manual. All other servicing should be referred to qualified service personnel.

**15.**

**IMPORTANT SAFETY PRECAUTION FOR AC PLUG**

**CAUTION:** TO PREVENT ELECTRIC SHOCK, DO NOT USE THE hk330 Vi's POLARIZED PLUG WITH AN EXTENSION CORD, RECEPTACLE OR OTHER OUTLET UNLESS THE BLADES CAN BE FULLY INSERTED TO PREVENT BLADE EXPOSURE.

**BRANCHEMENT DE LA FICHE SECTEUR**

**ATTENTION:** POUR PREVENIR LES CHOCs ELECTRIQUES NE PAS UTILISER CETTE FICHE POLARISEE AVEC UN PROLONGATEUR, UNE PRISE DE COURANT OU UNE AUTRE SORTIE DE COURANT, SAUF SI LES LAMES PEUVENT ETRE INSEREES A FOND SANS EN LAISSER AUCUNE PARTIE A DECOUVERT.

# hk330 Vi Receiver Controls

Thank you for choosing Harman Kardon.

You now own a superb piece of high fidelity equipment. Used properly, it will provide you with thousands of hours of musical enjoyment.

Even if you have experience with high fidelity components, we nevertheless ask you to read and carefully follow the instructions in this manual. It will insure a successful partnership between you and your new Harman Kardon receiver.

The following is a short explanation of the operating controls and features on the front panel of your receiver.

## 1. Power

Beginning on the far lower left hand side is the **POWER** button. It turns your hk330 Vi on and off.

## 2. Headphone Jack

Here you may plug a pair of headphones for listening independent of either set of speaker outputs. The hk330 Vi allows you to turn off your speakers so that you can listen to the **HEADPHONE** output only.

## 3. Speaker Buttons

Independent selection buttons are provided for two sets of loudspeakers. You may press one or the other, or both. See page 8 before selecting both sets of loudspeakers.

## 4. Tone Controls

**BASS** and **TREBLE** tone controls have been designed to only affect the sound below 300Hz and above 3000Hz, respectively. Their design allows corrective adjustments of up to +10dB at lowest and highest octaves without affecting midrange performance.

The tone controls are recommended primarily as a method of gently correcting tonal deficiencies (or overabundances) in the overall sound of your system.

Thus an overly shrill recording or "boomy" room acoustic may be improved with a slight decrease in treble and bass, respectively. Smaller loudspeakers lacking in low end may be enhanced with bass boost. An indistinct vocal may be made more clear by "boosting" midrange through the reduction of both treble and bass controls. Another excellent tone control use is for the enhancement of video sound from your VCR or TV tuner.

## 5. Balance Control

The **BALANCE** control is used to distribute sound between right and left speakers. It is especially useful if your main listening position is closer to one speaker than the other. In this case, rotate the control so more sound is coming from the speaker farthest away from you.

## 6. Tape Monitor

The two switches marked **TAPE MONITOR** allow you to monitor up to two tape decks connected to the hk330 Vi. The **source/monitor** switch, when in the "monitor" position, defeats the **FUNCTION** selector to the right. In this position, you will be able to listen only to signals from the tape deck which has been selected with the second switch (1 or 2). Also, the second 1/2 switch is used to duplicate the tape in the tape deck connected to the **TAPE 1 OUT** jacks onto the tape in the tape deck connected to the **TAPE 2 IN** jacks.

You may record onto a tape deck from a source selected with the **FUNCTION** selector, but note that when the **source/monitor** switch is in the "monitor" position, the sound you will be hearing is not the original sound, but the sound as processed by the tape deck.

The "monitor" position should be chosen for normal playback of tape material. Remember that the **source/monitor** switch should be in the "source" position if listening to any other material.

## 7. Function

To the right of the **TAPE MONITOR** switches are the **FUNCTION** buttons. They let you choose which sound source you wish to listen to. All settings but the **tuner** are used to select the inputs of other components such as a Compact Disc player or turntable.

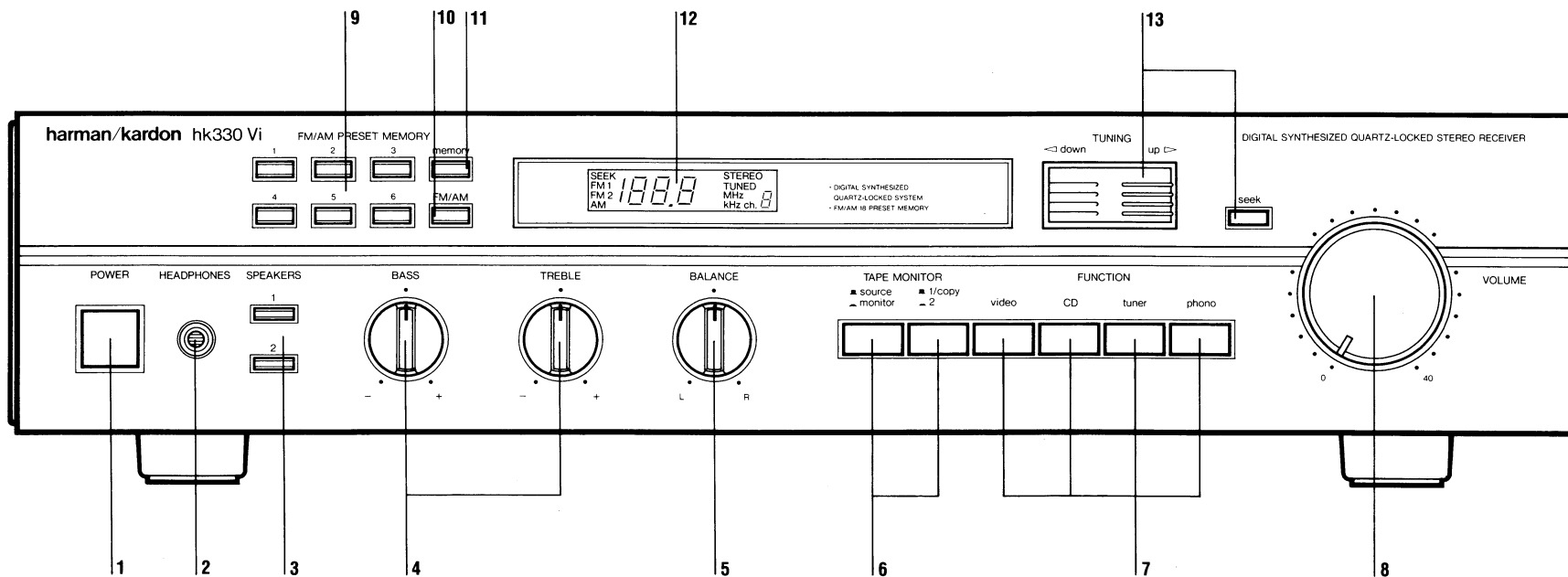


Figure 1, hk330 Vi Front Panel

Of particular interest is the **VIDEO** input.

The **VIDEO** source input allows you to connect the stereo or mono audio output(s) of a VCR, TV tuner, Laser Disc player, MTS adaptor or stereo TV output into your hi-fi system. If your source is high quality (such as Beta/VHS Hi-Fi VCR or MTS stereo broadcast), and it is possible to position your television set between your stereo speakers, the enhanced sound field will contribute greatly to your video enjoyment.

Note that **VIDEO**, **CD** and both **TAPE** inputs can all accept inputs from any line level component. You may use any of these to connect program sources (such as an additional VCR or third tape deck).

### 8. Volume Control

The extent to which the **VOLUME** can be increased control is determined by several factors. One is how loud you listen to music. Another is the fact that each speaker model has different power consumption and power handling characteristics. If you hear audible distortion while operating the hk330 Vi at high sound pressure levels or when bass boost has been added by the **BASS** controls, reduce the volume to prevent possible speaker damage.

### 9. FM/AM Presets

The **FM/AM PRESET MEMORY** section is used to set and recall up to 12 FM and 6 AM stations. How can you select 18 stations with just 6 buttons?

### 10. Band Selection

At the lower right of the numbered preset buttons is a selection button marked **FM/AM**. This selector cycles the operation of the presets from FM 1 (the first 6 FM presets) to FM 2 (the second 6 FM presets) to AM and then back to FM 1, depending on how many times you press it. In each case, an appropriate indicator lights up in the tuner section display next to the selector button.

### 11. Memory

Above the FM 1 / FM 2 / AM selector is a **memory** button which is used to enter station memory presets. You do not need to use all of the presets. Full instructions on entering memory presets are in the **Operation** section of this manual.

# hk330 Vi Set - Up

## 12. Tuner Section Display

Next to the FM/AM PRESET MEMORY section, is the hk330 Vi's LCD display panel. First are indicators for the 3 groups of presets: FM 1, FM 2 and AM. Next is the digital station frequency display. Depending on whether an FM or AM station has been selected it will read in MHz (FM) or kHz (AM). The panel includes an FM stereo indicator and a digital display that tells you which preset has been selected. Note that it also displays the *second* set of FM presets as 1-6.

## 13. Up, Down and Seek Tuning

The large square **TUNING** buttons and the smaller one to their right marked **seek** work together to select stations from FM and AM broadcast bands. The **seek** button determines the action of the large **up** and **down TUNING** buttons.

When the **seek** button is pushed, the receiver's tuner circuitry is in SEEK mode and the word "SEEK" will light up in the LCD display area. Pressing either the **up** or **down TUNING** buttons causes the tuner to scan across the broadcast band "seeking" (and stopping) at the next strong signal. In the SEEK mode, the scanning circuit will automatically jump to the opposite end of the tuning band and begin searching again.

When the **seek** button is pushed again (**MANUAL**), the **up** and **down TUNING** buttons function much like a tuning knob on a simple radio. Pushing UP moves "up" the FM or AM broadcast bands; DOWN tunes "down". This allows you to locate weak or adjacent stations which might be skipped over while in the SEEK mode.

When you reach the top or bottom limit of either band, you must press the opposite direction button to begin moving back across the broadcast band.

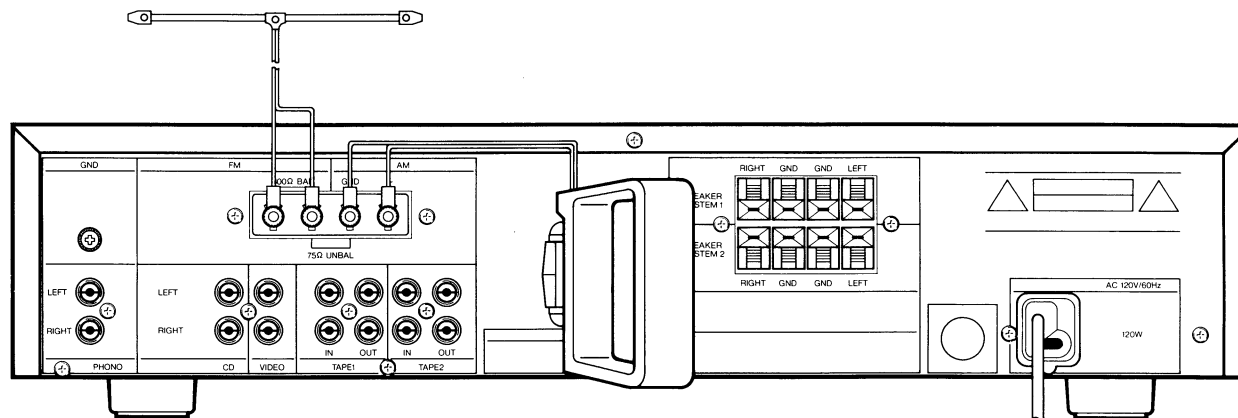


Figure 2, hk330 Vi Rear Panel

## Packing and Paperwork

Save all packing material from your new receiver. While the box is quite large and may be a nuisance to store, it is essential for shipping if you move or should the unit ever need repair.

Also be sure to fill out the customer profile card and save your sales receipt in a safe place. It is necessary to establish the date on which your warranty begins, and as proof of ownership in the event of something drastic such as fire or theft.

## Placement

The hk330 Vi is fully shielded and may be placed on top of or under other stereo components, provided that its 3/8-inch "feet" provide sufficient clearance for the cooling needs of the component below.

## Ground (GND) Connection

At the far left of the receiver is a **GROUND** terminal. It should be connected to the ground wire on your turntable cable to prevent audible hum.

## Input Connections

First make sure that the receiver and all other components are switched off.

Take care to match left and right component plugs with the left and right input jacks on the back of the receiver. Common practice is to treat the *red* plug as *right* and the *grey* (or black or white) plug as *left*.

The **PHONO** input is designed for moving magnet cartridges only. If you are using a moving coil cartridge, you will need a step-up transformer between the cartridge and your Harman Kardon receiver.

**TAPE 1** and **TAPE 2** inputs and outputs (tape monitor loops) correspond to their opposite sockets on your tape deck(s). That is, *out* on the cassette deck connects to *in* on the receiver.

When employing signal processing devices such as an equalizer, expander, dynamic noise suppressor, or special speaker equalization box, connect them through one or the other of the receiver's tape monitor loops.

If you have such components and one cassette deck, connect all outboard signal processing devices to the **TAPE 1** inputs and outputs on the hk330 Vi. Your tape deck is then connected to the tape monitor loop of the last outboard signal processing device (see Fig. 4 on next page). Switching the receiver's **TAPE MONITOR source/monitor** switch to "monitor" and 1/2 switch to "1" now switches in your signal processor(s). To use the cassette deck, press the Tape Monitor buttons on the outboard components.

The VIDEO input may be used for any line level source including VCR's, audio output from a TV, etc.

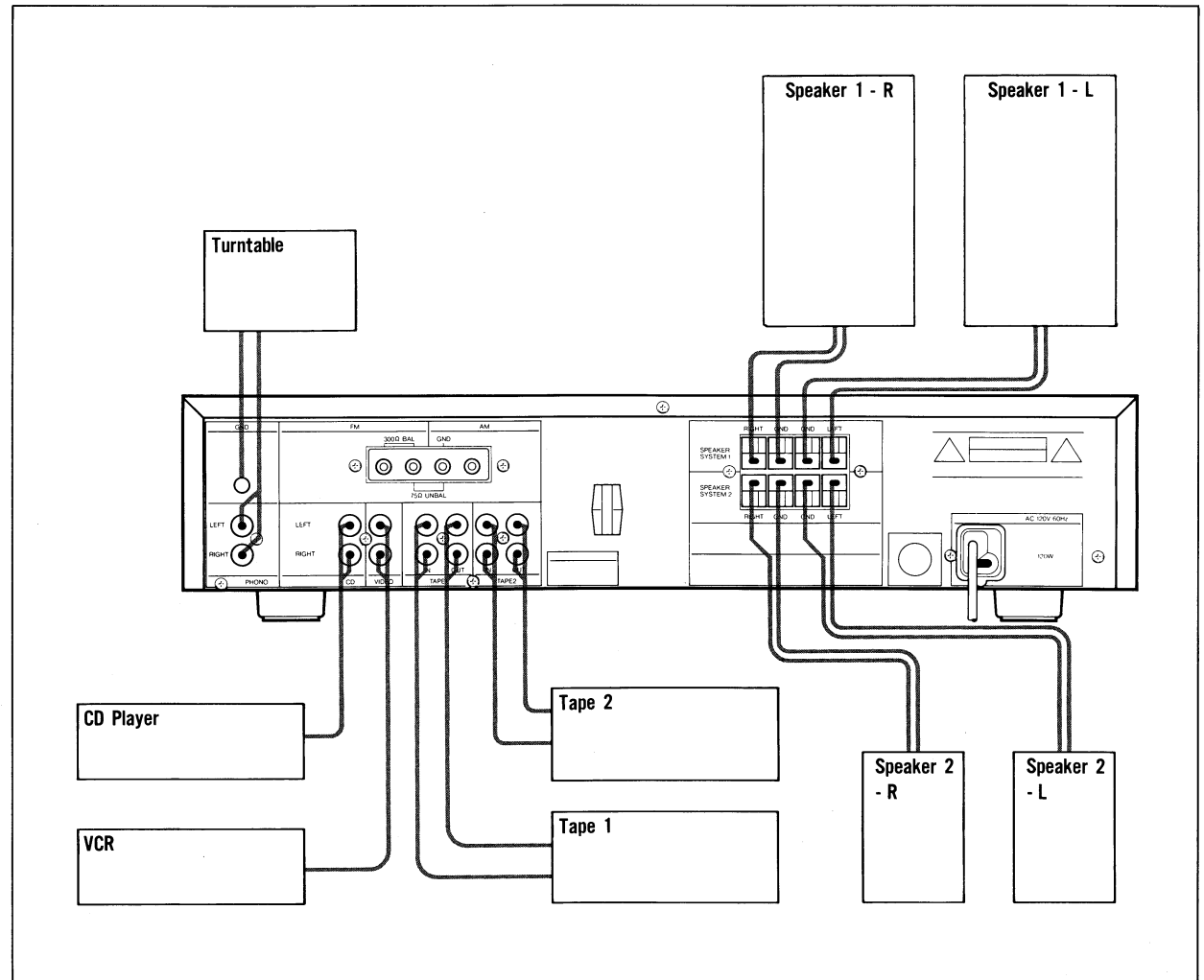


Figure 3, Connection Diagram

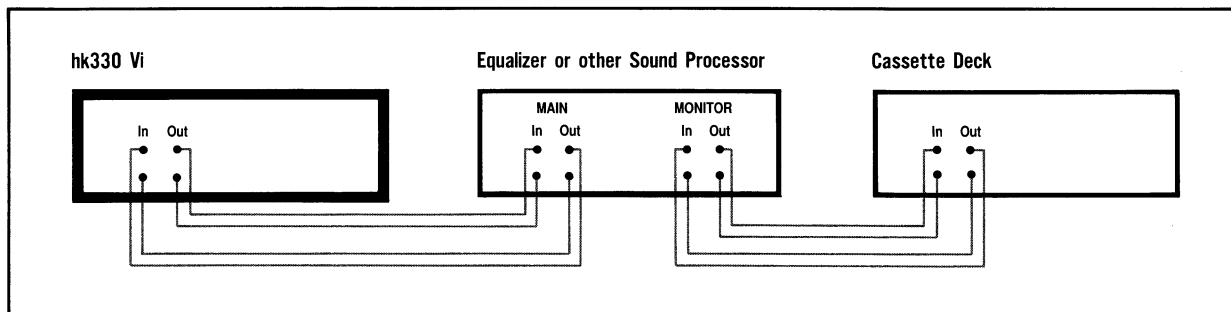


Figure 4

### Antenna Connections

Depending on the type of antenna connector, attach your FM antenna to either the terminals marked **300Ω BAL** or **75Ω UNBAL** at the left side of the chassis back. The flexible dipole FM antenna supplied with your receiver should be sufficient for reception of most stations.

If you are adding an external AM antenna, connect a ground wire to the terminal marked **GND** next to the **300Ω BAL**.

**NOTE:** Roof top FM antenna mast should be grounded directly to the earth ground using 10-gauge or heavier wire, stand-off insulators and a metal stake. The FM antenna should then be connected to the ground mast via an antenna discharge unit.

The quality of your FM and AM reception is directly proportional to the quality of the antenna you use. If you live in a “problem” area or are simply interested in better reception, please refer to **APPENDIX I** in this manual.

### Speaker Connections

**Cabling.** For optimal sonic performance, you should use the highest quality speaker cables you can afford. However, common “zip cord” from a hardware store can be employed if care is taken to use the proper gauge. This will depend on the distance from your receiver to your speakers. Use the

following chart as a guide:

WIRE LENGTH	GAUGE OF COPPER WIRE
Up to 8 ft.	18 gauge
Up to 12 ft.	16 gauge
Up to 20 ft.	14 gauge
Almost any distance	Special speaker cable

Make sure that both right and left speaker wires are the same length, even if the distance from amp to each speaker is different. Also, avoid coiling any excess wire near or with line level hook-up cords, especially the sensitive cable from your turntable to the receiver.

**Connection.** First, determine the polarity of your speaker wires. If you are using zip cord, they may 1) be different colors, such as silver and copper-colored, 2) have a series of ridges on one conductor, or 3) include a strand of yarn with one conductor.

Note that the terminals for both **SPEAKER SYSTEM 1** and **SPEAKER SYSTEM 2** are marked **LEFT** and **RIGHT** with **GND** (ground) terminals in between. A good practice is to use the red/copper/ridged/yarn conductor for the **LEFT**/**RIGHT** (positive) conductors on both receiver and speaker terminals. Use the black/silver/non-ridged/no-yarn conductor for the **GND** (negative) connection.

1. Strip 1/2 inch of conductor off each speaker conductor.
2. Twist the individual strands together so that no loose strands stick out.

3. Taking care to maintain proper polarity (positive to positive/negative to negative), insert 1/2" of conductor into the hole in each speaker terminal connector. Remember, even one loose strand touching another connector can cause a short circuit.
4. If you're using two sets of speakers, repeat these connections for the second pair of loudspeakers, using **SPEAKER SYSTEM 2** terminals.
5. Recheck the polarity of both sets of speaker wires, making sure that you have connected “red to red” and “black to black”.

### EXTREMELY IMPORTANT: Speaker Impedance

The hk330 Vi allows up to two sets of speakers to be connected. It is important that the correct impedance speakers are selected to avoid possible damage to the amplifier and/or the speakers.

When using only one set of speakers, their impedance must be 8 ohms or greater. When using two sets of speakers, their impedance must be 16 ohms or greater. If you don't know the impedance rating of your speakers, it may be: **A)** printed on the back of the speaker, **B)** noted on the speaker's owner's manual, **C)** available by calling your dealer or the speaker manufacturer.

### Plugging in Your Receiver

Finally, plug in the hk330 Vi's own power cord after reading the warnings at the beginning of this manual. We recommend that your receiver be plugged directly into a polarized wall socket. If you must use an extension cord or power strip, check that it is terminated in a polarized plug and rated in excess of the power to be drawn as printed on the back panel of your hk330 Vi.



# hk330 Vi Operation

After checking all connections one final time, you're ready to turn on your new receiver and begin enjoying its convenient features and great sonic performance.

A good habit to get into is to **FIRST** power up any signal sources (CD player, turntable, tape deck etc.). Then the hk330 Vi. This will protect your speakers and ears from turn-on thumps (transients).

## A Test Run

After turning the **FUNCTION** selector to the appropriate input, play a record or Compact Disc to check out the performance of your new receiver. If you don't get any sound, consult

**APPENDIX II - Troubleshooting.**

## Setting FM and AM Presets

Being able to recall your favorite stations is an extremely convenient feature. The hk330 Vi will "remember" the last station preset that you were listening to and tune to that station when you turn the receiver back on.

You can add or change presets any time you want.

There is no "right" or "wrong" way to use presets. Some people only set a couple of them. Others assign a station to every one. There are, however, several common approaches which you might consider. You might 1) rank stations in order of how often you listen to them, assigning preset 1 to your most listened-to station; or 2) give stations preset numbers that correspond to their position on the AM or FM dial, with a station "low on the dial" occupying a low preset number, etc.

To set a preset:

1. Press the **tuner FUNCTION** button.
2. Press the **FM/AM** selector to choose the broadcast and preset "bank".
3. Tune in a station you wish to preset using the **TUNING up & down** buttons and tuning **seek** selector.
4. When the station is tuned in as well as possible, press the **memory** button.

5. You have eight seconds in which to press a preset button. Push one of them. The appropriate channel (preset) number will light on the tuning section display. If you had previously set that particular preset number with another station, the old preset will be erased.
6. Repeat steps 2-5 for any other FM or AM presets you wish to add at this time.

## Selecting and Playing a CD, Phonograph Record, FM or Video Component

1. Turn on the source component and then the hk330 Vi.
2. Select the appropriate input (video, CD, tuner, phono) with the **FUNCTION** selector (7).
3. Activate the source component.
4. Adjust the master **VOLUME** control.

## Playing a Tape

1. Turn on the tape deck and then the hk330 Vi.
  2. Set the **TAPE MONITOR source/monitor** switch to the "source" position and select the appropriate tape input using the **TAPE MONITOR 1/2** switch (6).
  3. Activate the source component.
  4. Adjust the master **VOLUME** control.
- Make sure to reset the **TAPE MONITOR source/monitor** switch to the "source" position again before listening to the tuner, turntable or compact disc player.

## Recording to a Tape Deck

1. Select the recording source with the **FUNCTION** selector (7).
2. Press **RECORD** on the cassette deck.
3. To monitor the recording, set the **TAPE MONITOR source/monitor** switch to the "source" position and select the appropriate tape monitor position using the **TAPE MONITOR 1/2** switch (6).

- To compare source to recording, simply alternate between the source position and the monitor position using the **TAPE MONITOR source/monitor** switch.
- If you wish to make more than one copy, simply engage record on both tape decks and set the **TAPE MONITOR 1/2** switch to the "2" position. Then, the same signal will be routed to both tape decks.

## Copying From #1 Tape Deck To #2 Tape Deck

1. Set the **TAPE MONITOR 1/2** switch to the "1/copy" position (button out).
2. After setting the #1 Tape Deck connected to the **TAPE 1** jacks for playback and the #2 Tape Deck connected to the **TAPE 2** jacks for recording, dubbing will begin.
3. To monitor the sound being duplicated, press the **TAPE MONITOR source/monitor** switch to the "monitor" position.
- 3A. To listen to another source (such as FM while you're dubbing a tape), press the **TAPE MONITOR source/monitor** switch to the "source" position and select another input using the **FUNCTION** selector (7).

## Cleaning

When cleaning your receiver, avoid direct use of dusting sprays, abrasive cleaners or caustics (such as dilute ammonia window cleaning solutions). Use only a mild soap and water solution, applied to a soft cloth, rather than sprayed directly onto the component.

# APPENDIX I – Antennas for Your hk330 Vi

## The Role of Your Antenna

While it may seem obvious that an antenna is critical to good reception, it is not often given sufficient consideration. The results can be significantly reduced tuner performance (a classic example of “garbage in, garbage out”). The question of just how elaborate an antenna installation you need can be determined by considering the following:

- 1. How good is reception in your area?** If you live in an area with a moderate number of strong FM and AM stations, you may not need as large an antenna as you would if you live in a rural area or an urban area with many adjacent stations.
- 2. Are you interested in receiving weak or distant stations?** Some very interesting programming (ethnic, classical, college formats, for example) is often on stations with very low transmitting power. Or you may simply live in an area far removed from *all* stations. If so, you should consider a more elaborate antenna installation.
- 3. Is stereo separation, bandwidth and freedom from interference critical?** If you often tape broadcasts, or own a system where you can hear critical differences in broadcast quality, investing in a better antenna can increase the overall fidelity of many stations.
- 4. Does your living environment allow a large antenna, either indoor or outdoor?** Sometimes space, physical layout (such as living in an apartment house) or even city ordinances can affect your decision in this respect.
- 5. Do you have access to FM through a TV cable system?** The benefits of using commercial cable as a high-quality FM source are many and you should investigate this option if it is available.

In general, the higher the antenna, the better it will perform. Radio waves travel better in straight lines from the transmitter, and if your antenna is free and clear of obstructions, it will perform better and you will enjoy greater signal strength.

## Indoor FM Antennas

An indoor antenna, such as the one included with your new receiver will work well if you enjoy good “line of sight” with the area’s FM transmitters or live in the upper stories of a building. Remember, however, that indoor antennas cannot provide height and may be prone to receiving interference from cars on the street or small appliances in the kitchen.

If you are satisfied with the performance of an indoor antenna (or are limited in this respect), your first choice is the half-wave dipole antenna included with the hk330 Vi. It will work well in many situations and can be used until you decide whether or not you need a more extensive antenna system. Because it is basically bi-directional, it may be prone to interference or may limit your ability to “fine tune” certain stations that are not on its axis.

The next choice is a pair of “rabbit ears” like the ones often used with television sets. While they have some of the same drawbacks as a flexible dipole, “rabbit ears” are easier to adjust manually for a given station. Make sure that they are not equipped with an FM trap, which would remove the FM signal from TV stations received.

The best possible indoor antenna is a table top model specially designed for FM reception. There are many brands on the market including some powered designs, and models with manual fine-tuning adjustments. Check with your Harman Kardon dealer for advice on which is most appropriate for your needs and budget.

## Outdoor FM Antennas

Properly set up, an outdoor FM antenna can provide significantly better reception than any indoor design. Options range from simple, omni-directional dipoles to elaborate directional designs with rotators that can give you the best possible reception of any given station.

If you are plagued by severe localized noise and multipath interference, you should consider a directional Yagi-style antenna if possible. Consult with your Harman Kardon dealer or a local radio/television supply shop, since this decision must be made on the basis of your individual area.

## Feedline Considerations

Just as the cables used to connect your system contribute to its sound quality, so the feedlines running from your antenna to your new receiver play an important part in good reception.

300Ω twin lead-in is inexpensive and has relatively low signal losses (1.25dB per 100 ft. at 100MHz), but if improperly installed, can act as an antenna itself, picking up unwanted signals. It also suffers signal losses when it becomes wet. Twin lead should be routed to avoid gutters, electrical wiring, pipes and other metal objects.

75Ω coaxial cable is more expensive and has slightly higher signal losses (3.5dB per 100 ft. at 100MHz) but is far less prone to external noise, interference and weather, due to its shielding and design. You will need to use a matching transformer at the antenna end.

### Note to CATV system Installer:

This reminder is provided to call the CATV system installer’s attention to Article 820-22 of the NEC that provides guidelines for proper grounding and, in particular, specifies that the cable ground shall be connected to the grounding system of the building, as close to the point of cable entry as practical.

## **APPENDIX II – Troubleshooting**

Checking these possibilities first may save you time and effort getting your unit serviced. Your Harman Kardon dealer will also be able to answer questions and help you discover the problem.

### **No light from any receiver indicators.**

1. Receiver is not plugged into wall socket.
2. Wall socket or extension cord is faulty. Check for poor connections and/or blown fuse.

### **No sound.**

1. Speakers are connected to wrong set of speaker terminals.
2. **SPEAKERS** buttons have not been switched to the correct speakers.
3. **FUNCTION** selector hasn't been switched to the source currently playing.
4. **TAPE MONITOR source/monitor** switch is switched to "monitor" while attempting to listen to CD, PHONO, TUNER or VIDEO.
5. Speaker wires are touching one another, causing a short circuit, which activates protection circuits within the receiver.

### **No sound from cassette deck when in "PLAY".**

1. **TAPE MONITOR** switches set on wrong position.
2. Cassette deck plugged into wrong set of inputs.
3. Output of cassette deck plugged into **OUT** instead of **IN** on back of receiver.

### **Phono sound is extremely faint.**

1. Phono output has been plugged into the wrong receiver input.
2. Turntable cartridge is a low output Moving Coil type. A step-up transformer is needed.

### **Phono input has hum mixed with sound.**

1. Ground wire from turntable has not been connected to receiver's ground terminal.
2. Cable from turntable is too close to power cords or speaker cables.

### **Speakers lack bass.**

1. Polarity of one speaker cable has been reversed. Check connections.

### **Low frequency ringing, oscillating or "howling" especially in phono mode.**

1. Too much bass boost is being applied. Reduce the amount of **BASS** tone control boost.
2. Turntable is too close to speakers.
3. Turntable is placed on unstable surface.

## **Warranty and Service**

If you have followed the suggestions in this manual and are reasonably sure that your stereo receiver requires service, call the Harman Kardon dealer from which you purchased your hk330 Vi. It is important that service be carried out only by a designated Harman Kardon Service agent to insure both proper service and to comply with the terms of the hk330 Vi Limited Warranty.

Remember to keep your sales slip or receipt in a safe place since you will be required to show it for service during the duration of the Limited Warranty.

# hk330 Vi Specifications

## AMPLIFIER SECTION

Continuous Average Power (FTC) (20Hz-20kHz, both channels driven, 8 Ohms):	25 Watts @ 0.09% THD
Dynamic Power (IHF 1kHz toneburst) – 8 Ohms:	35 Watts
4 Ohms:	55 Watts
2 Ohms:	70 Watts
HCC (High instantaneous Current Capability):	±18 Amps
Negative Feedback (overall):	20dB
Power Bandwidth:	<10Hz—100kHz
Frequency Response:	0.5Hz—150kHz
Slew Rate:	90Volts/μsec.
Rise Time:	2.0μsec
TIM:	unmeasurable
Damping Factor:	60
Signal-to-Noise Ratio (ref rated power output) – Phono (MM):	78dB
Video/CD:	98dB
Input Sensitivity/Impedance – Phono (MM):	2.2mV/47k Ohms, 125pF
Video/CD:	135mV/22k Ohms
Phono Overload (MM):	130mV
RIAA EQ Accuracy:	±0.5dB
Tone Control Range, Bass (50Hz)/Treble (10kHz):	±10dB/±10dB
Loudness Contour (– 40dB) at 50Hz/10kHz:	+10dB/+3dB

## TUNER SECTION

FM	
Usable Sensitivity, Mono :	11.2dBf
50dB Quieting Sensitivity, Stereo:	38.2dBf
Signal-to-Noise Ratio, Mono/Stereo @65dBf:	80dB/72dB
Capture Ratio:	1.5dB
Selectivity (Adjacent/Alternate Channel):	5dB/70dB
IF Rejection:	80dB
AM Rejection (45dBf):	45dB
Stereo Separation (1kHz, 65dBf):	40dB
THD (1kHz, 65dBf), Mono/Stereo:	0.15%/0.20%

AM	
Sensitivity, Ext. Antenna:	15μV
Alternate Channel Selectivity:	45dB
Image Rejection:	40dB
IF Rejection:	50dB
Dimensions (W x H x D):	17-3/8" x 4" x 14-1/2" (443 x 103 x 368 mm)
Weight:	12.5lbs. (5.7kg)

All features and specifications subject to change without notice.