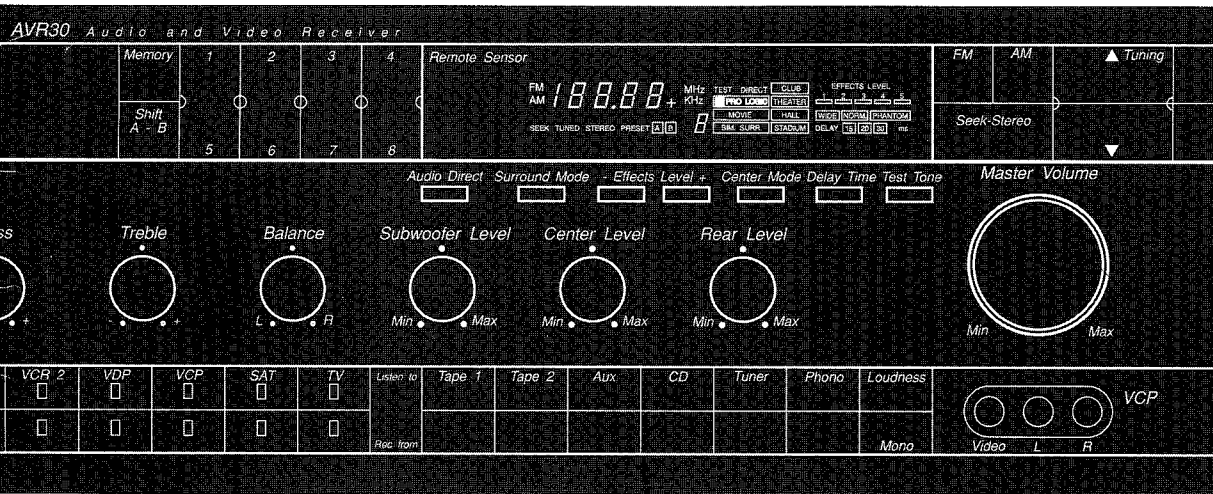


# AVR30




harman/kardon


Audio and Video Receiver

OWNER'S MANUAL



**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.

**CAUTION:** TO PREVENT ELECTRIC SHOCK, MATCH WIDE BLADE OF PLUG TO WIDE SLOT, FULLY INSERT.

**ATTENTION:** POUR EVITER LES CHOCS ELECTRIQUES, INTRODUIRE LA LAME LA PLUS LARGE DE LA FICHE DANS LA BORNE CORRESPONDANTE DE LA PRISE ET POUSSER JUSQU'AU FOND.

Manufactured under license from Dolby Laboratories Licensing Corporation. Additionally licensed under one or more of the following patents: U.S. numbers 3,632,886, 3,746,792 and 3,959,590; Canadian numbers 1,004,603 and 1,037,877. "Dolby" and the double-D symbol  are trademarks of Dolby Laboratories Licensing Corporation.

**Harman Kardon AVR30**

Date of purchase \_\_\_\_\_

Purchased from \_\_\_\_\_

Address of business purchased from \_\_\_\_\_

Installed by \_\_\_\_\_

Date installed \_\_\_\_\_

Serial No. \_\_\_\_\_

Thank you for choosing a Harman Kardon Audio/Video Receiver. Your new unit is an exceptionally well-engineered product that will give you years of superb performance. Save all packing material. It is essential for shipping should you move, or in the event the unit ever needs repair.

U. S. and Canadian customers should use 120 volt AC only. Other customers should use voltages appropriate to their area. Connecting the unit to an outlet supplying a higher voltage may create a fire hazard.



### **Handle the Power Cord Gently.**

- To disconnect the plug from the AC outlet, pull on the plug itself, not on the cord.
- Disconnect the plug from the AC outlet whenever the unit is to be left unused for an extended period of time.
- Do not place furniture or other heavy objects on the cord, and avoid dropping heavy objects on it. Also do not make a knot in the cord.

### **Place the unit on a firm and level surface.**

Avoid installing it:

- In moist or humid places;
- Close to heating equipment or in places exposed to direct sunlight;
- In a direct draft from an air conditioner or in other very cold locations;
- In places subject to excessive vibration or dust;
- In poorly ventilated places.

### **Moving the Unit.**

Before moving the unit, be sure to unplug the power cord from the AC outlet and disconnect all wires to antennas and other components.

### **Do Not Open the Cabinet.**

Do not attempt to service this unit. Tampering with internal components can cause fire or shock, and may void your guarantee. If water or small objects enter the unit, unplug the power cord immediately and consult an authorized Harman Kardon service center. Using the unit under such conditions may cause a fire or shock hazard.

### **Cleaning.**

Remove dust by wiping the unit with a soft, dry cloth. If necessary, use a soft cloth lightly dampened with mild soapy water; then wipe with a dry cloth. Never use benzene, thinner, alcohol or other volatile agents, and avoid spraying insecticides near the unit.

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# Special Features

The AVR30 is a very unique and versatile Audio and Video Receiver. It combines a special switching system for all your Audio and Video products with a complete Recording switching system into one unit that has five fully discrete amplifiers, Dolby Pro Logic Surround, a Digital Signal Processor, and a remote control that operates the AVR30 and many other products in your system.

## Feature Highlights

### ■ DOLBY Pro-Logic Surround\*

The AVR30 DOLBY PRO-LOGIC Decoding system brings the theater surround sound experience to your home. Dolby Pro-Logic creates four-channel surround sound plus a true Center Channel. Because of this center channel, listeners in less than ideal positions will still hear the movie dialogue coming from the screen.

### ■ Digital Signal Processor (DSP)

The AVR30 includes a custom programmed Digital Signal Processor for simulating the room ambience in a variety of performance arenas from the size of a large stadium to the closeness of a small club. Unlike many other Digital Signal processors

that sound artificial and unnatural, the AVR30 will sound true to life, subtle and never distracting. The system is easy to operate and will yield realistic natural sound with any of the available settings.

### ■ System Remote

The System Remote controls AVR30 functions using various one-push commands or the On Screen Menu System. The system remote also controls most Harman Kardon CD players and cassette players.

### ■ Home Theater Controller (HTC) Remote

The HTC is a remote control that operates the AVR30 through a TV screen menu system and is also preprogrammed to control various branded audio and video products.

### ■ On Screen Menu System

A convenient control system with visual conformation for selecting various components, modes and settings on to the AVR30.

### ■ Video Switching

When an audio/video source is selected for viewing or recording, both audio and video outputs are selected simultaneously.

### ■ Memory System

The AVR30 includes a unique memory system that remembers each Digital Signal Processor mode and setting last used and recalls the setting when selecting a "Listen To" source.

### ■ Ultrawide Bandwidth

The AVR30 circuitry is designed to deliver extended frequency response, while keeping phase shift well outside the audible spectrum. The result is stereo imaging and clarity with remarkably accurate spatial positioning of vocals and musical instruments.

### ■ Discrete Circuitry

For maximum design flexibility and highest possible performance, the amplifier circuitry has been designed using discrete electronic components, not off-the-shelf integrated circuits.

### ■ Low Negative Feedback

Conventional designs rely heavily on negative feedback to reduce Total Harmonic Distortion. This results, however, in excessive Transient Intermodulation Distortion, audible in the harsh, grating quality of the sound.

Harman Kardon keeps negative feedback low for smoother, clearer reproduction of complex musical sounds, such as those of stringed instruments.

### ■ HCC (High Instantaneous Current Capability)

This enables the AVR30 to maintain an undistorted output signal when driving Low Impedance or resistive speaker loads.

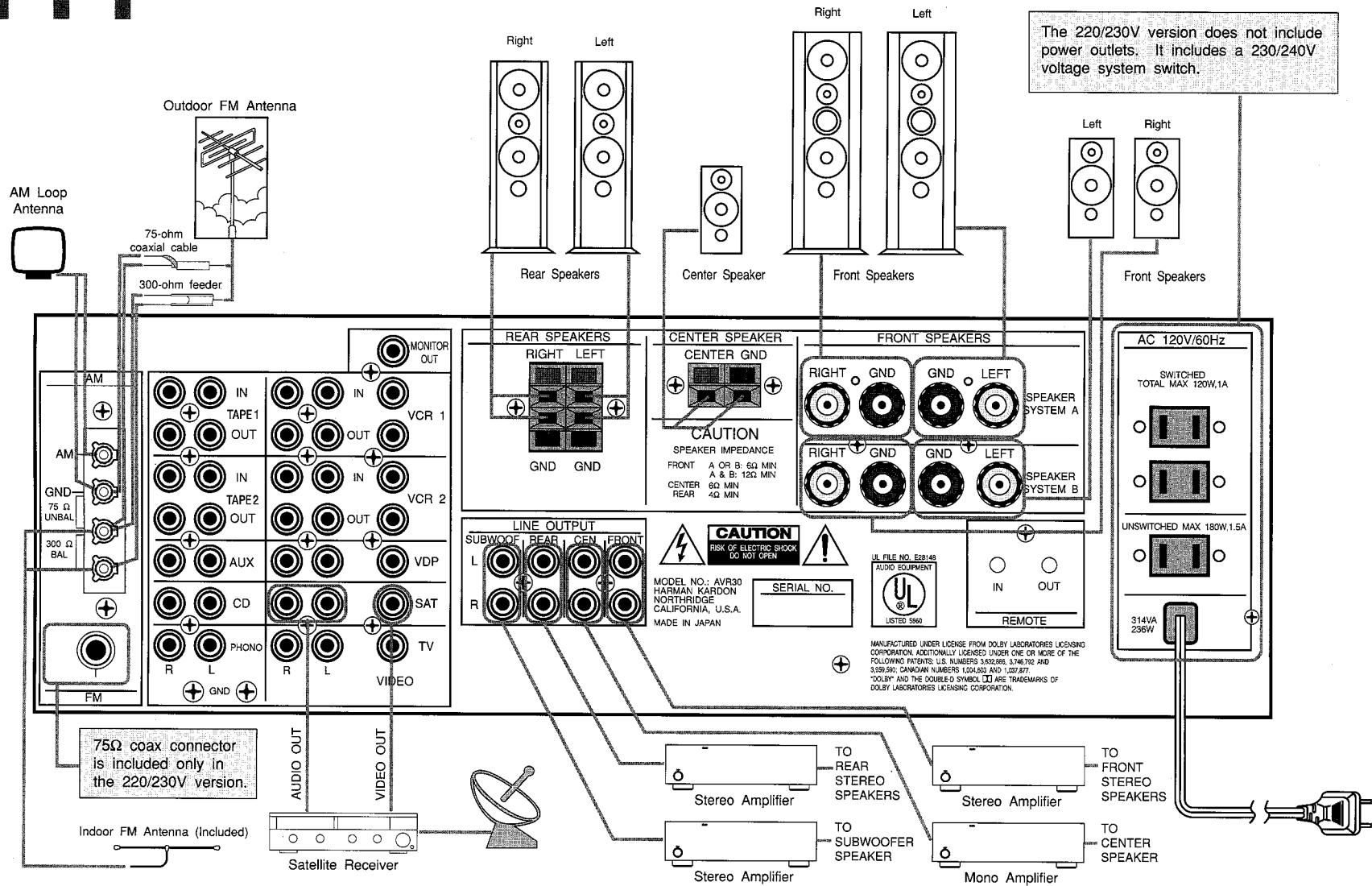
## Supplied Accessories/ Packing List

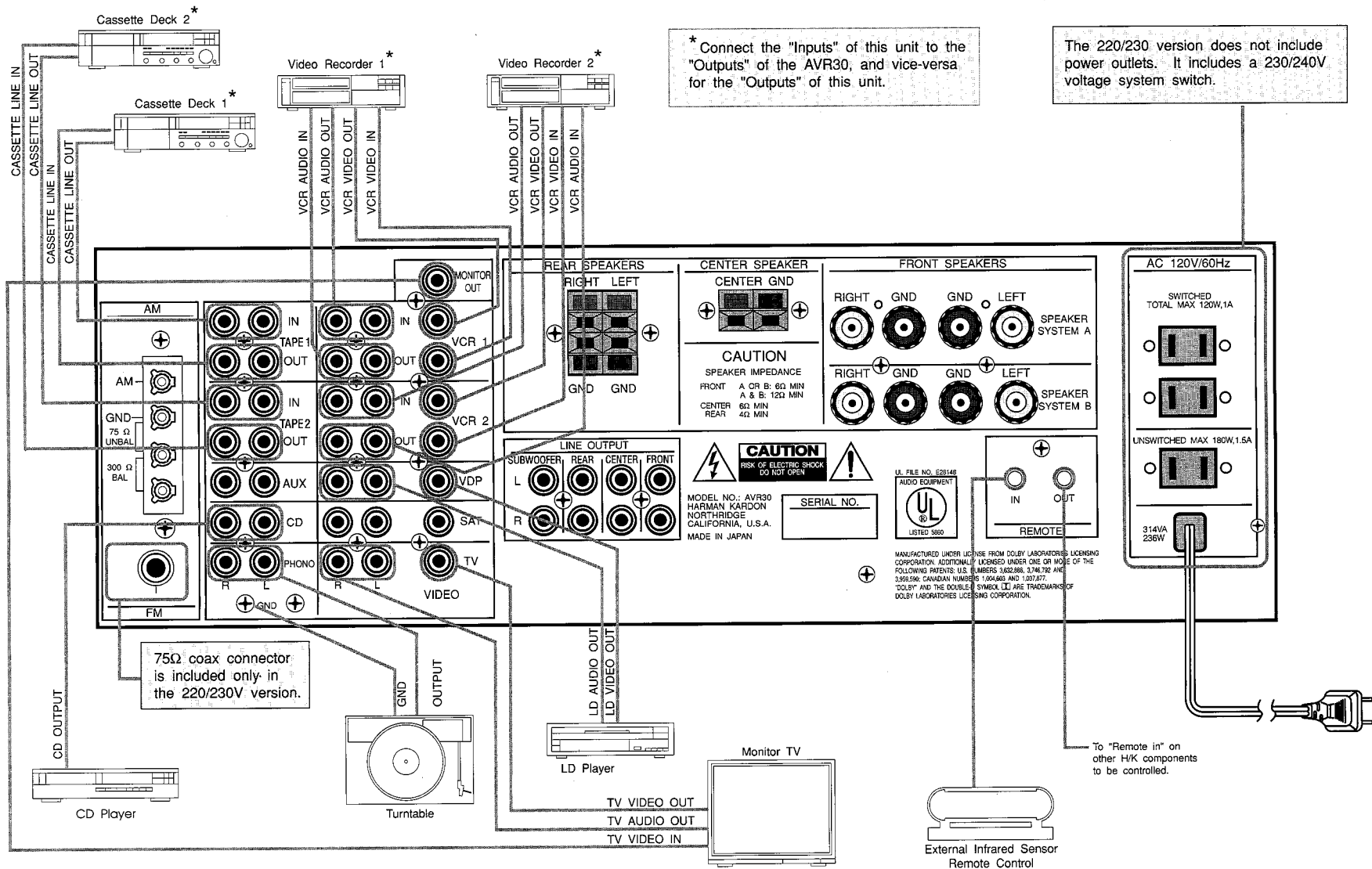
- System Remote Controller
- 2 Batteries (size "AA")
- Home Theater Controller (HTC)
- 4 Remote Batteries (size "AAA")
- AM Antenna
- FM Indoor Dipole Antenna
- Manual
- Safety Sheet
- Warranty Card
- Customer Response Card
- 2 IR Remote Connection Cables

\*Dolby Prologic Surround is a trademark of DOLBY LABORATORIES LICENSING CORPORATION.



# Installation and Connections





\* Connect the "Inputs" of this unit to the "Outputs" of the AVR30, and vice-versa for the "Outputs" of this unit.

The 220/230 version does not include power outlets. It includes a 230/240V voltage system switch.

75Ω coax connector is included only in the 220/230V version.

**CAUTION**  
RISK OF ELECTRIC SHOCK  
DO NOT OPEN

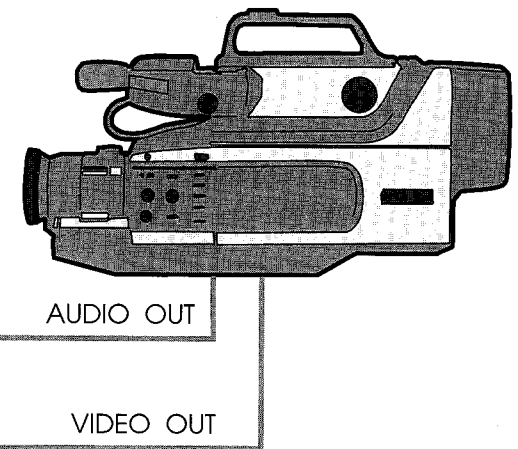
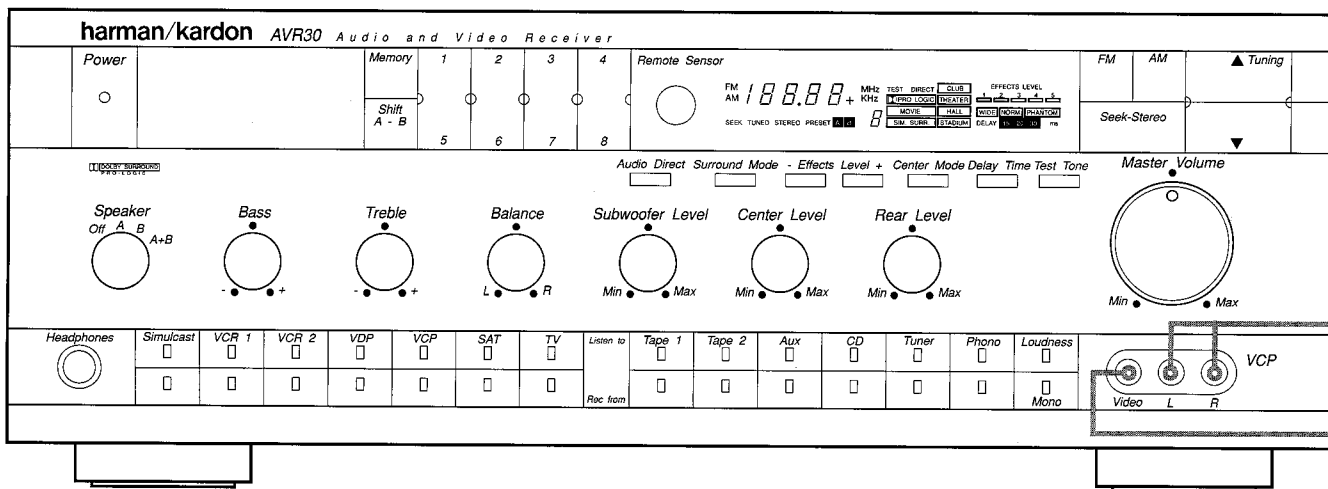
MODEL NO.: AVR30  
HARMAN KARDON  
NORTHBRIDGE  
CALIFORNIA, U.S.A.  
MADE IN JAPAN

SERIAL NO.

UL FILE NO. E28148  
AUDIO EQUIPMENT  
LISTED 5860

MANUFACTURED UNDER LICENSE FROM DOLBY LABORATORIES LICENSING CORPORATION. ADDITIONALLY LICENSED UNDER ONE OR MORE OF THE FOLLOWING PATENTS: U.S. PATENTS 3,933,366; 3,746,759 AND 3,959,596; CANADIAN NUMBERS 1,004,603 AND 1,037,677. "DOLBY" AND THE DOUBLE-D-SYMBOL ARE TRADEMARKS OF DOLBY LABORATORIES LICENSING CORPORATION.

To "Remote in" on other H/K components to be controlled.



## General Information

### Placement:

Unit may be placed on top of or beneath other stereo components, so long as its placement meets the cooling requirements of the component beneath it.

### AC Power

Plug the cord into a polarized wall socket, or polarized extension cord.

## AC Outlets (120 Volt Version Only)

### 2 SWITCHED OUTLETS and 1 UNSWITCHED OUTLET


Use these to connect the power cords from your components to this unit. The power to the SWITCHED outlets is controlled by this unit's POWER switch or the provided remote-control transmitter's POWER key. These outlets will supply power to any

component whenever this unit is turned on.

The power to the UNSWITCHED outlet **can not** be controlled by this unit's POWER switch or the provided remote-control transmitter's POWER key.

The maximum power (total power consumption of components) that can be connected to the SWITCHED AC OUTLETS is 120 watts.

The maximum power (total power consumption of components) that can be connected to the UNSWITCHED AC OUTLET is 180 watts.



**Connecting Audio Components (see the installation and connections diagram on page 4 for details)**

1. Make sure the AVR30 and other components are turned off.
2. Connect each component's Output jacks to the corresponding "In" jacks on the back of your receiver. Use the white, black or gray plugs to connect Left channel jacks; use the red plugs for Right jacks.

Connect your turntable to the jacks marked "Phono".

Also connect the ground wire from the turntable to the terminal marked "GND" next to the Phono jacks.

**Antenna Installation**

Select the FM antenna that best meets your needs.

1. An indoor dipole antenna is supplied with your AVR30. This will work well if you are located in a strong signal area.
2. Other indoor antennas are available which may improve reception by offering greater positioning flexibility.
3. If reception is unsatisfactory using indoor antennas, an outdoor antenna should be installed.
4. Alternatively, you may connect to an FM cable antenna, if available.

Connect the FM antenna.

Connect the two leads of the antenna to the two screw-down terminals marked "FM 300ΩBAL". If you wish to connect a cable antenna, connect it to the location marked "FM 75Ω UNBAL" (see antenna connection diagram for details).

Position the FM antenna for optimum reception.

Reception from all of the above antennas (except the cable antenna) may be improved by re-positioning them. Try your antenna in different positions to find the one in which most of your desired broadcast stations have high signal strength readings and good sound quality.

Connect the AM Antenna.

Your receiver comes with an AM loop antenna which provides good reception in most locations. For best results, place this antenna away from the unit and away from contact with any metal object.

In areas where AM signals are weak, an outdoor AM antenna may improve sound quality.

Connect the AM antenna leads to the screw-down terminals marked "AM" on the back of the AVR30 (see antenna connection diagram for details).

**SPEAKER INSTALLATION**


This unit is designed to work with 6 to 16 ohm impedance speakers in the front and 4 to 16 ohm speakers in the rear.

For best performance, use high quality speaker cables. However, ordinary copper wire can be used if the gauge meets the following requirements:

Wire Length	Gauge
Up to 8 feet	18 AWG
Up to 12 feet	16 AWG
Up to 20 feet	14 AWG
Over 20 feet	10-12 AWG custom speaker cable

NOTE: Avoid coiling excess wire with or near line level hook-up cords. Connect the first pair of front speakers to receiver terminals marked "Speaker System" "A".



- 
1. Note the difference between the two conductors in each cable: different colored insulation, ridged insulation, or colored yarn.
  2. Connect the front right-hand speaker to the receiver, being sure to connect the positive terminal on the speaker to the terminal marked "Front Speakers" "Right" on the receiver, and the negative or ground terminal on the speaker to the corresponding "GND" terminal on the receiver.
  3. Connect terminals on the front left-hand speaker to the "Front Speakers" "Left" and corresponding "GND" terminals on the receiver, again being careful to maintain correct polarity.

**To connect a second set of speakers:**

- IMPORTANT:** When connecting pairs of front speakers to speaker systems "A" and "B," determine the impedance of each pair by looking on the back of the speakers, or in your owner's manual, or by contacting your dealer or manufacturer. Speaker pairs A and B can be played simultaneously only when the impedance of speakers A and B are 12 $\Omega$  or greater.
- WARNING:** Do not play both sets of front speakers simultaneously except as recommended above. Receiver may overheat.
4. Connect terminals on the Center Speaker to the "Center" and corresponding "GND" terminals on the Receiver.
  5. Connect terminals on the Rear Left and Right Speakers to the corresponding Rear "Left," "Right" and "GND" terminals on the Receiver.

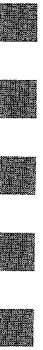
**Subwoofer Out**

Connect a powered subwoofer to these jacks. This output may also be used for any external component requiring a full bandwidth line-level input.

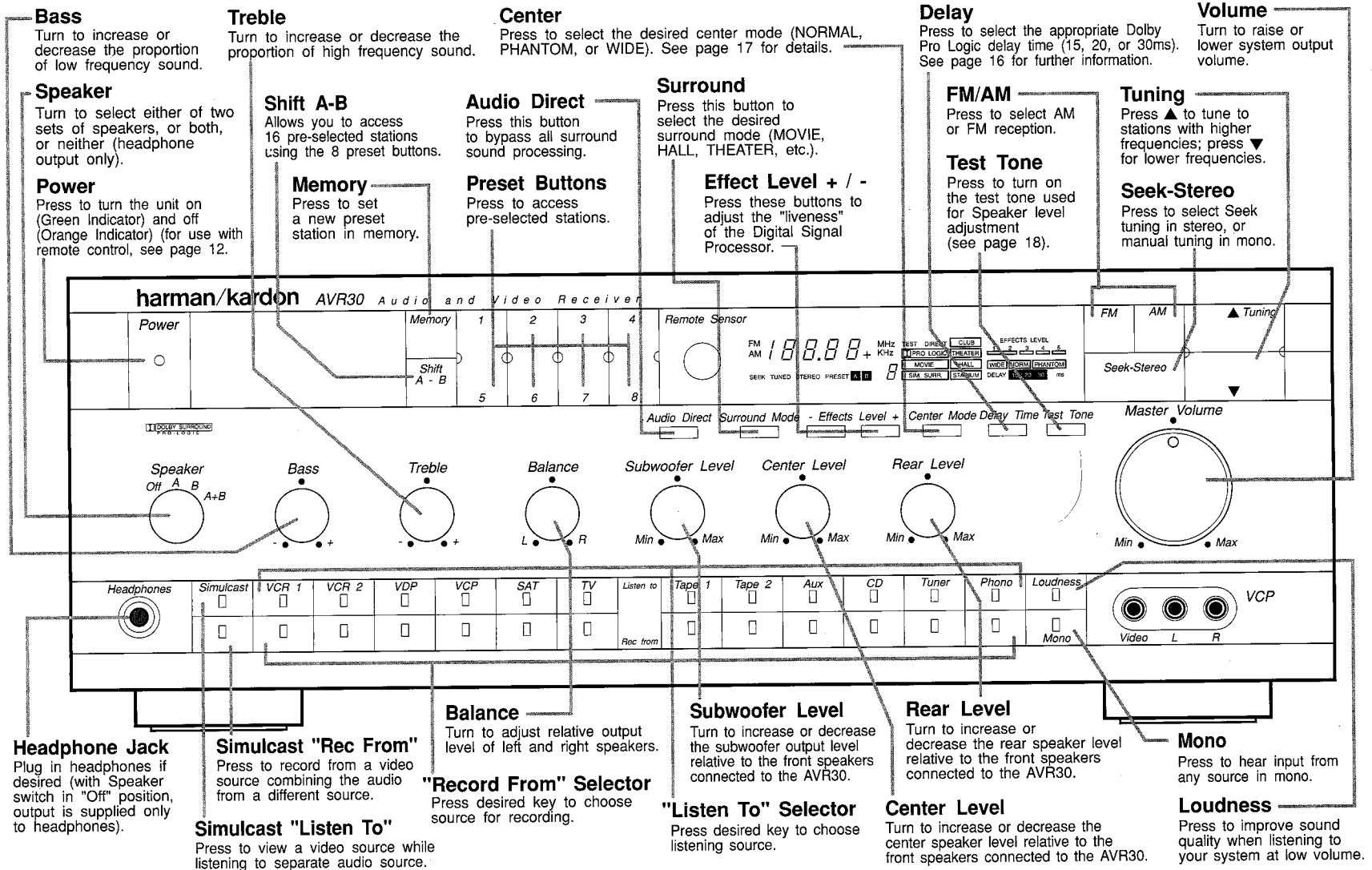
**Wired Remote Control**

To control your AVR30 with an external infrared remote sensor, connect the wire from the remote sensor to the "Remote In" jack on the back panel. Or, if you have a stereo component with a built-in infrared remote sensor and a "Remote Output" jack, it may be possible to connect this jack to the "Remote In" jack of your AVR30. All Harman Kardon products with "Remote In" and "Remote Out" jacks are compatible with one another, except for the HD7400 CD Player, Citation 22, Citation 24 and Citation 25. Other manufacturers' remote

sensors may not be compatible, but it will not hurt to experiment. A second wire may be used to connect your AVR30's "Remote Out" jack to the "Remote Input" of another stereo component. Continue this process to include additional components (if compatible). To control your AVR30, you may use one of the remote controls supplied with the AVR30. You may use the HTC to control other components, such as TVs, VCRs, laser disc players, etc.



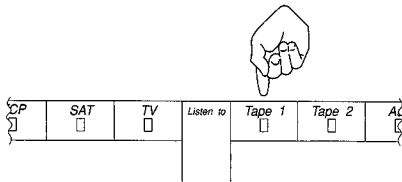
# Front Panel Controls



# Operating Instructions

## Listening to Audio or Video Sources

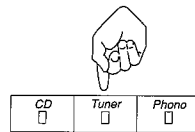
1. With Power on and the Master Volume knob at minimum level, select speaker setting A, B, both or neither (for headphone use).
2. Press the "Listen to" button that corresponds to the component you wish to hear.



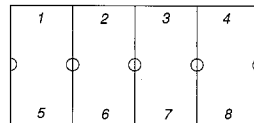
3. Begin playing the desired component.
4. Adjust the Master Volume to the desired level.
5. When listening at low volume, you may wish to activate the Loudness button. This boosts low frequencies to improve the apparent balance of low, mid and high frequencies.
6. Adjust Bass and Treble controls as desired.

## Adjusting the AM/FM Tuner

With the "Tuner" Listen to button selected:



1. Select AM or FM by pressing the corresponding button.
2. Use the ▲ and ▼ buttons to tune to desired frequency. Or use the station Preset buttons as shown below.



3. When tuning FM stations, begin with Seek-Stereo function on ("Seek" will light on the Display Panel). In this mode, pressing ▲ (or ▼) will tune your unit to the next higher (or lower) strong station. To tune to stations too weak to be received in Seek-Stereo mode, turn Seek-Stereo off. Then use ▲ and ▼ buttons to reach the desired frequency.

NOTE: With Seek-Stereo off, all broadcasts are received in mono (this eliminates the excessive noise that results when weak stations are received in stereo). When you tune to a new, stronger station, be sure to turn Seek-Stereo back on.

## Using the Preset Buttons

Your AVR30 allows you to store 16 station settings and quickly access them, using the 8 Preset buttons along with the Shift A-B button. The Preset stations are designated by the letter A or B, followed by a number from 1 to 8. Any AM or FM station can be stored in any preset button.

### To enter a station in "memory":

1. Tune to the desired station.
2. Be sure Seek-Stereo setting is the one desired.
3. Press the Shift A-B button to display the desired letter.
4. Press the Memory button ("Preset" will flash for about 8 seconds).


5. With "Preset" flashing, press the desired numbered Preset button.  
NOTE: When a station is set in memory, the Seek-Stereo setting is also saved. Subsequently, each time a station is recalled using a Preset button, the tuner automatically switches to the original Seek-Stereo setting for that station.

### To Change a preset station:

Simply enter the new station using the "To enter a station in memory" procedure above. The old station is automatically erased.

### To access a preset station:

Press the Shift A-B button to display the correct letter. Then press the desired numbered preset button.  
NOTE: Preset stations are stored indefinitely while the unit is connected to a live AC source, and for approximately 1 week when the unit is unplugged.



### **"Listen To" Simulcast**

The simulcast button allows the user to view a video source while listening to audio from a purely audio source. For example, suppose that a concert is broadcast on TV with a stereo FM radio simulcast. To listen to the simulcast select TV as the video source, press simulcast and press Tuner as the audio source. Any further press of the audio or video "listen to" buttons will cancel the simulcast operation automatically.

### **Making Recordings**

To make a recording on either a tape deck or VCR, simply press the "Rec From" button that corresponds to the piece of equipment you wish to record from. The "Rec From" output will be supplied to Tape 1 and Tape 2, and to VCR 1 and VCR 2 devices, enabling you to record on any, or all simultaneously.

(a) To record from one tape device to another, press the Rec From button corresponding to the "Rec From" (play) device.

(b) By selecting different sources for "Listen to" and Rec From, you may listen to one audio or video component, while recording from another.

(c) Make videotape recordings from TV, video disc player, video cassette player, satellite or second VCR in the same manner described above, simply by pressing the appropriate Rec From button. With equipment

installed as outlined in this booklet, both audio and video output are supplied to "VCR 1" and 2.

### **"Record From" Simulcast**

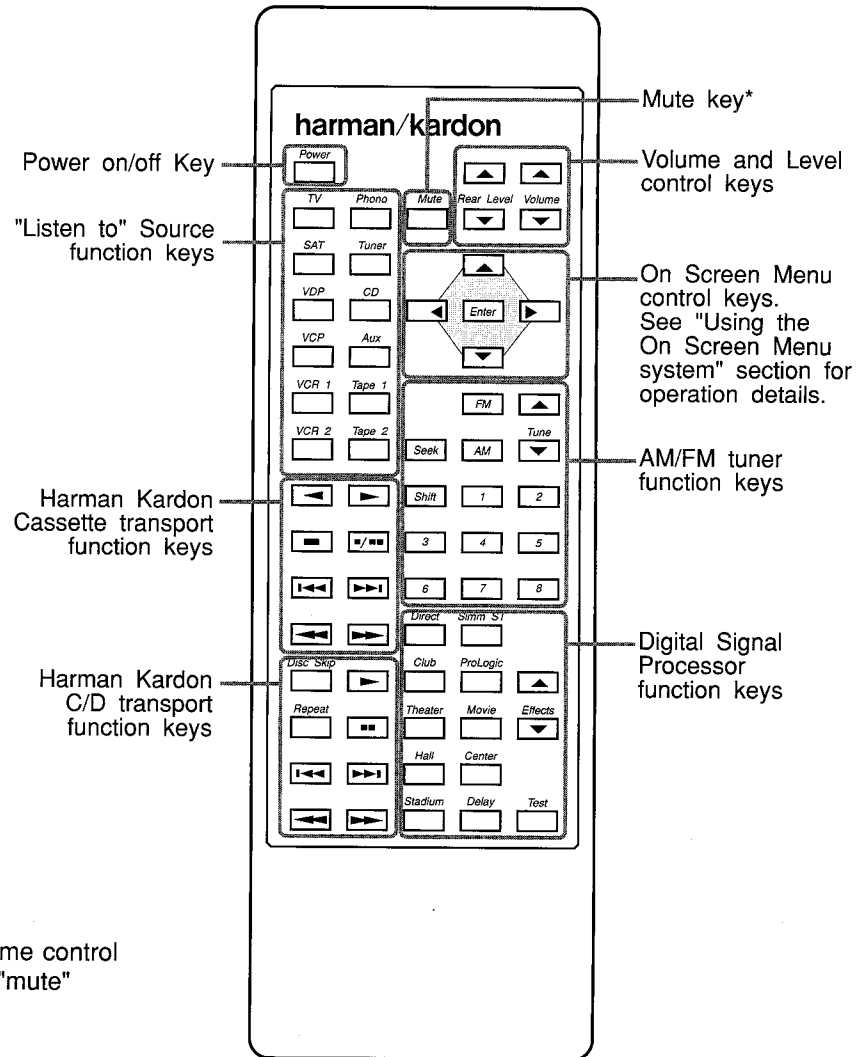
"Record From" Simulcast allows the user to record video from one source such as the Video Cassette Player (VCP) input, while adding audio from another source such as the CD player. To operate record simulcast, select a Rec From Video source such as "VCP", press the record "Simulcast" button and press the "Rec From" audio source such as "CD". Any further press of the "Rec From" buttons will cancel "Record From" "Simulcast" mode.

# System Remote Control

## The System Remote Control

The System Remote includes many one-touch keys that allow for easy control of the AVR30 and other Harman Kardon Cassette and CD Players.

The System Remote Control also includes five keys which allow all the major "On Screen" functions of the AVR30 to be controlled through the use of a menu system displayed on your Video Monitor. Operation of the On Screen Menu system is described on page 14.



**\*Note:** The AVR30 volume control LED will flash when the "mute" function is on.

# Home Theater Controller (HTC)

## The Home Theater Controller

The home theater remote is preprogrammed with the product codes necessary to operate almost all other remote controlled products that are connected to the AVR30, even if the units are not manufactured by Harman Kardon. The controller also operates the "On Screen Menu System" with equal ease and comfort. The device keys give access to the various components and allow them to be operated directly by the HTC.

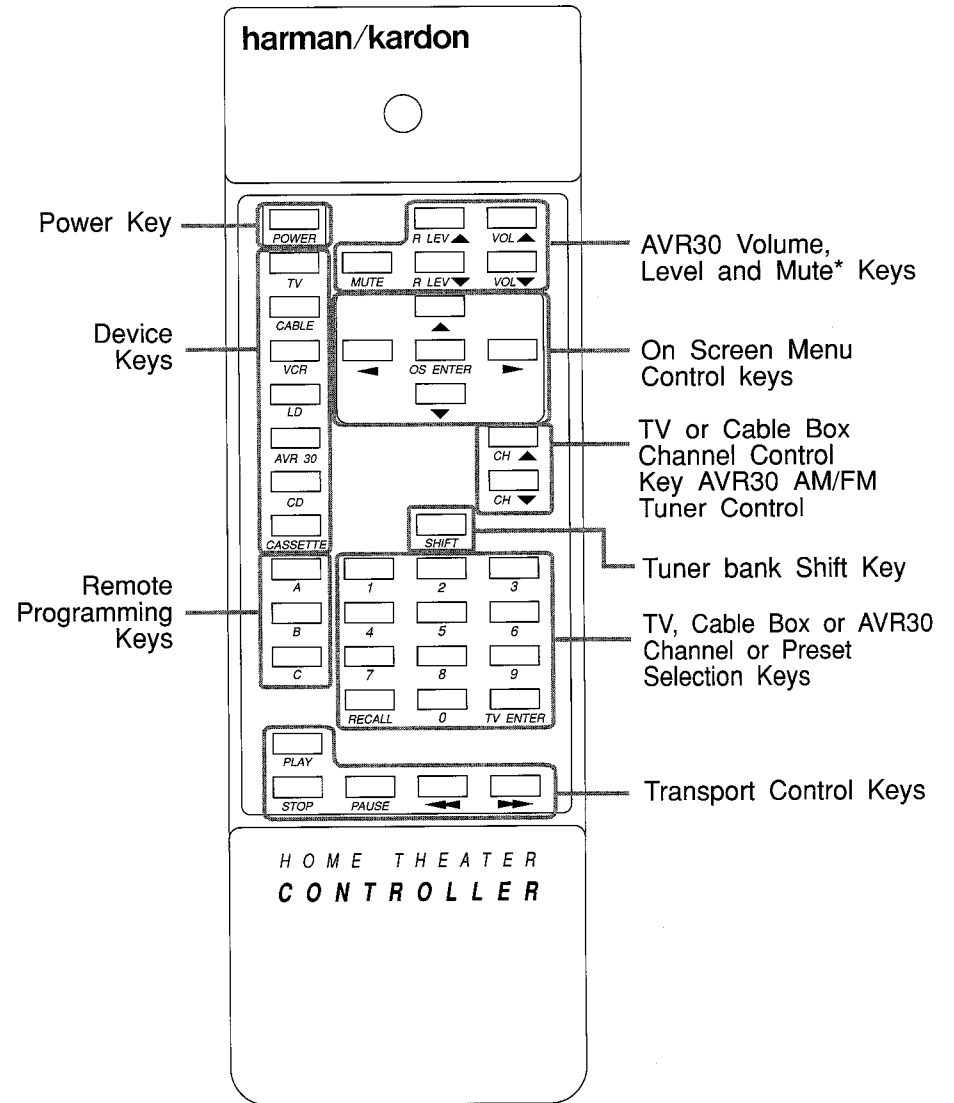
## Home Theater Controller Remote Operation

The operating and product code loading instructions for the HOME THEATER CONTROLLER remote are given in a **separate** booklet called the "Home Theater Controller Owner's Manual and product code book."

## Remote Operating Conditions

Both remote control units operate effectively within a distance of 7 meters (23 feet) and an angle of 30° from the AVR30. Using the control near fluorescent lights may shorten this range, as will any dust or dirt that accumulates on the front of the remote control, or the "Remote Sensor" area of the AVR30. Also avoid blocking the line of sight between the AVR30 and remote. The system remote control unit is powered by two (2) "AA" batteries, included in the carton with your AVR30. The Home Theater Controller is powered by four (4) "AAA" batteries, included in the carton with the AVR30. When you replace weak batteries, replace all at the same time. When the remote is to be unused for an extended period, remove the batteries to prevent damage from corrosion.

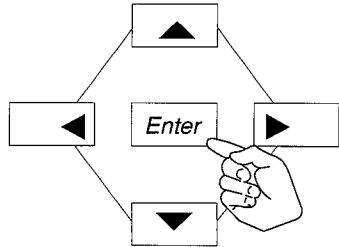
**\*Note:** The AVR30 volume control LED will flash when the "mute" button is on.



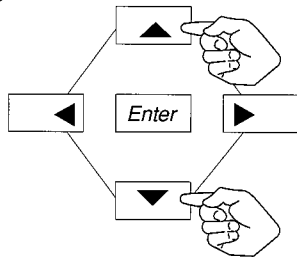
# Using the On Screen Menu System

## Starting the On-Screen Menu System

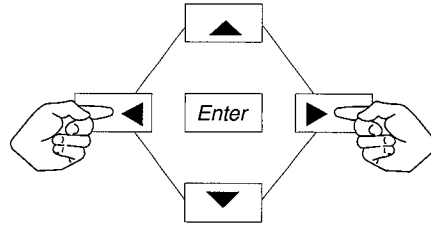
1. Connect the AVR30 to the TV and turn on the TV. Turn on the AVR30.
2. Press the remote control "Enter" button to display the on-screen "Menu" system.



3. Pressing the up/down keys highlights items to be selected or changed.



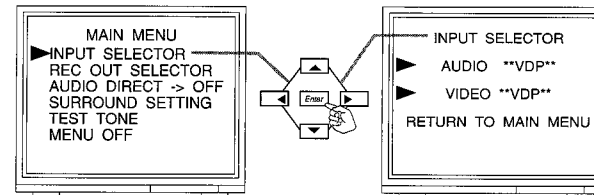
4. Some menu items use the left/right keys to step through the available options on the currently highlighted line.



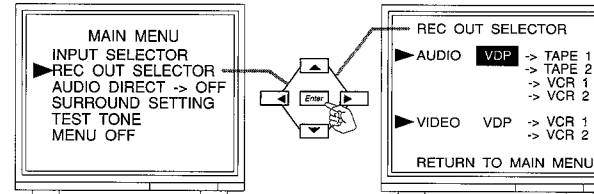
5. Press "Enter" to activate the desired highlighted option.

Note: Use the up/down keys to move the cursor to "Return to the Main Menu" or "Menu Off" and press "Enter" to return to the main menu or exit the menu system.

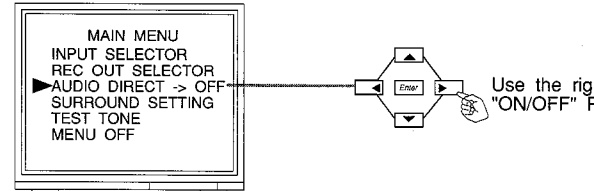
Note: "Surround Sound" and "Test Tone" screens can only be selected with "Audio Direct" in the "Off" mode.



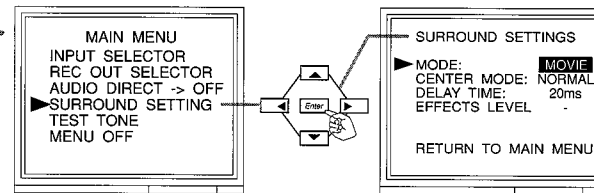
Use the left/right arrow keys to choose the component to be listened to (\*\* VDP\*\* (CD, VCR 1, TAPE 1, TAPE 2, VCP etc.). Press "Enter" to activate the highlighted item.



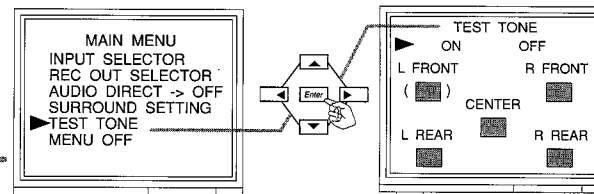
Use the left/right arrow keys to choose the component to be recorded from (CD, VCR 1, TAPE 1, TAPE 2, etc.). Press "Enter" to activate the highlighted item.



Use the right hand arrow key to move to the "ON/OFF" Position desired.



Use the up/down keys to highlight the surround mode or setting to be adjusted. Use the left/right arrow keys to choose the desired setting. Press "Enter" to activate the highlighted item.



Use the right hand arrow key to move the arrow to the "OFF" position and return to the main menu.

# Using the Digital Signal Processor (DSP)

## Purpose of the Digital Signal Processor

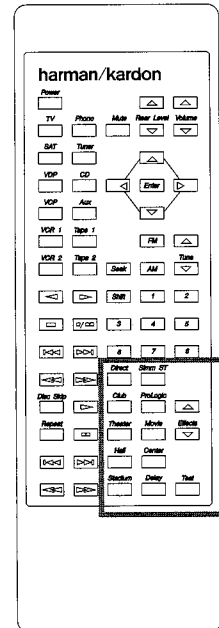
The AVR30 incorporates a sophisticated Digital Signal Processor which allows the user to expand and shape the soundfield from audio and video sources. The unit has 7 modes, two Dolby Pro Logic modes and five Digital Signal Processor modes. This unit simulates different size performance venues such as a small night club or a small movie theater or even a large stadium with a clarity and realism unheard in other processors.

## Description of Dolby Pro Logic Surround

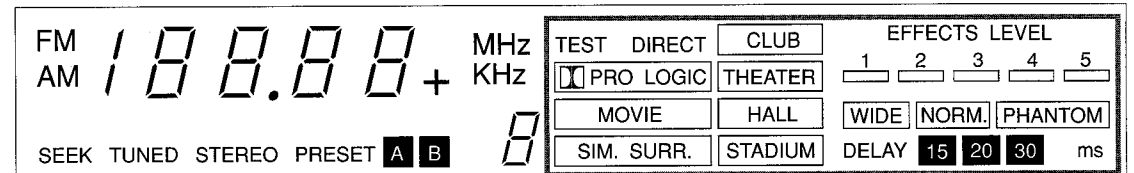
The Dolby Pro Logic in this system is similar to professional Dolby Stereo decoders used in movie theaters.

The Dolby Pro Logic Surround system employs four-channels: the left and right main channels, the center channel (to characterize dialogue), and the rear surround channels (to characterize sound effects, background and other ambient information).

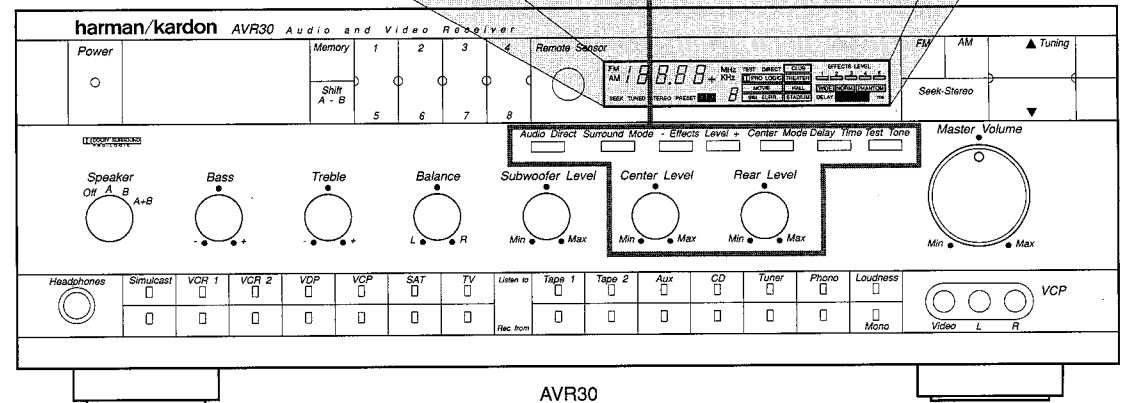
Dolby Surround is encoded on the sound track of commercially available video cassettes and video discs as well. When you play a



System Remote Control



DSP keys, controls and displays



AVR30

source encoded with Dolby Surround on your home theater system with the Dolby Pro Logic Surround mode on, the AVR30 decodes the signal and steers the surround-sound effects.

Dolby Pro Logic Surround mode is also most effective on not sources encoded with Dolby Surround.

## Notes on Operation of Surround Modes

- In the CLUB, THEATER, HALL and STADIUM modes the center speaker does not function.



- When a monaural (mono) sound source is played in the DOLBY PRO LOGIC mode, sound is heard only from the center speaker. However, if the PHANTOM mode is selected, the two front speakers both put out a monaural signal.

### Adjusting "Effects Level"

The effects level has 5 settings which can be changed with the remote control direct keys, on-screen menu, or the front panel key of the AVR30. The effects level setting alters the liveness or reflectivity of the listening space being simulated. An effect level setting of five is equivalent to a room with highly reflective surfaces that absorb little sound and thus produces more audible ambience. An effect level setting of 1 is equivalent to a room with walls which have coverings, such as drapes or acoustic tiles, that will quickly absorb sound reflections.

### Selecting Surround Mode

Surround modes can be selected by any of three methods:

- The direct "DSP" keys on the "System Remote Control"
- The "ON SCREEN" menu system.

- The "Surround Mode" push button on the front panel of the AVR30 itself.

Note: "Audio Direct" must be switched off before any of the surround modes can be used.

### Selecting Delay Time

The 15ms, 20ms and 30ms Time Delay can be selected with any of three methods:

- The direct "DSP" keys on the "System Remote Control"
- The "ON SCREEN" menu system.
- The "Delay Time" push button on the front panel of the AVR30 itself.

### Adjusting the Rear Level

In some surround modes it may be desirable to adjust the rear speaker level. This can be done by using the remote control's rear level keys or adjusting the rear level knob on the front panel. Note the rear channel does not function when Audio Direct mode is on.

## Description of each mode

MODE	FEATURES
DOLBY PRO LOGIC	This mode is effective for play of sources encoded with Dolby Surround. The AVR30 employs a digital surround processing system that improves separation and steers the sound in a smooth and natural manner.
MOVIE	This mode is effective for play of sources encoded with Dolby Surround. In addition to the normal Dolby Pro Logic surround features, this mode simulates the ambience of a 35mm movie theater, giving the sense of hearing the movie in a large space.
SIMULATED SURROUND	This mode is effective for creating a simulated surround field from a monaural input signal. It can be used to add excitement to monaural television broadcasts or movies.
CLUB	This mode provides the listener with the ambience of a small club with about 300 seats.
THEATER	This mode provides the listener with the sense of being in a 1200 seat theater. The sound is dynamic and rich in ambience.
HALL	This mode brings the experience of a 5000 seat concert hall to your home. The sound is expansive and rich in ambience.
STADIUM	This mode provides the ambience of a large 20,000 seat stadium. The sound will be largely ambient in a very big sounding space.

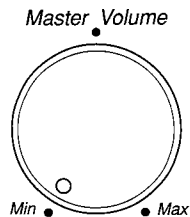
**Note:** The Audio Direct mode bypasses all surround effects and outputs unprocessed signal from the left and right front speakers. "Audio Direct" must be turned off before any of the surround modes can be used.

# Setup Adjustments

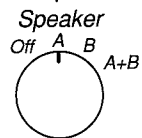
## SPEAKER BALANCE ADJUSTMENT

This procedure gives the steps necessary to adjust the sound output level balance between the front, center, and rear speakers. After the adjustment is correctly completed, the sound level heard at the listening position will be the same from each speaker. Taking the time to do this setup will yield the best performance possible out of the Digital Signal Processor.

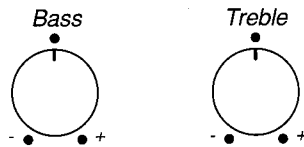
Set Master volume to the "Min" position.



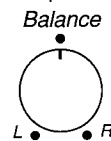
Select the front speakers to be used.



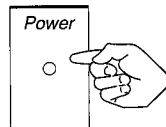
Set to the center position.



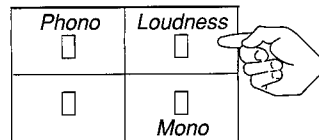
Set to the center position.



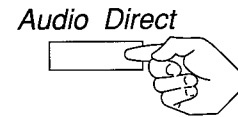
Power on.



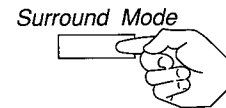
Loudness off.



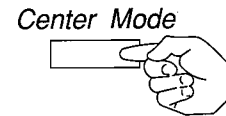
Audio Direct button off.



Set Surround Mode to Dolby "Pro Logic".



Select the Center Mode.



Select the center mode depending on your speaker configuration (see Speaker Configuration section on page 19). Details on the modes are give in the Note below.

## Notes for Center Mode Selection

5 speaker Configurations

**Normal:** Select this mode when the center speaker is smaller than the other front speakers. In this mode bass frequencies will come only from the left and right front speakers.

**Wide:** Select this mode when the center speaker is approximately the same size as the other front speakers. This mode sends bass tones to all of the front speakers.

4 speaker Configurations

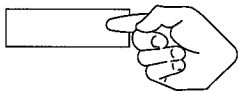
**PHANTOM:** Select this mode when you do not have a center speaker. In this mode, the center speaker information will come from the left and right front speakers.



## Balancing the Speaker System

Set Test Tone button to "On".

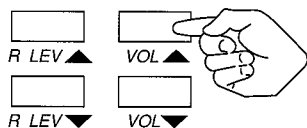
*Test Tone*



**Note:** The "Mute" function is inoperative during the "Test Tone" operation.

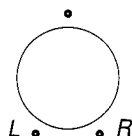
The following steps should be set with reference to your listening position.

Turn up the Volume by using the remote-control. You will hear a test tone (pink noise) that will continuously switch from speaker to speaker in a clockwise direction.



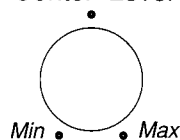
Adjust the balance control for equal sound level from the left and right front speakers at your normal listening position.

*Balance*

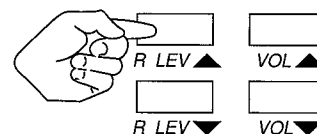


Adjust the center level control so that the sound from the center speaker is the same level at your normal listening position, as the sound from the left and right front speakers. The "Center" level cannot be adjusted if phantom mode is being used.

*Center Level*

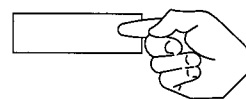


Adjust the rear speaker level to be equal to the level of the front speakers using the rear level keys.



Set Test Tone button to "Off".

*Test Tone*



### Notes:

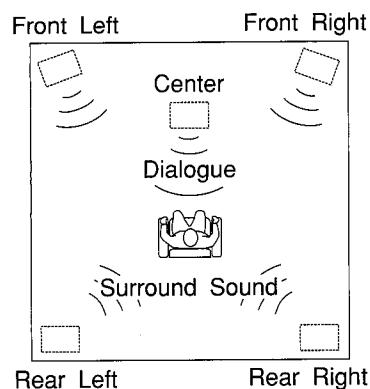
Once the setup is complete use the AVR30's Volume Control to adjust listening volume. The Volume Control adjusts the rear, center and front speakers simultaneously. The rear and center level controls should be used for relative level balance adjustments only.

## SPEAKER CONFIGURATION

### 5-Speaker Configuration

This is the most effective configuration. In the 5-speaker configuration the front left and right speakers are typical stereo speakers and the center speaker produces sounds that are common in both left and right channels and carries the dialogue for movie soundtracks. The two rear speakers provide surround and ambience information.

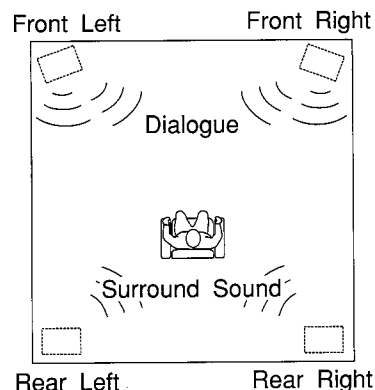
Set the center mode to the "NORMAL" or "WIDE" position. See "Notes for Center Mode Selection" on page 17 for details.



### 4-Speaker Configuration

The center speaker is not used in this configuration\*. If the digital signal processor is in the **DOLBY PRO LOGIC** or MOVIE mode, the center speaker sound is put out equally from the left and right front speakers, which results in a phantom center channel effect.

\*Be sure to set the center mode to the "PHANTOM" position.



## SPEAKER PLACEMENT

The 5-speaker configuration will require: **front speakers** (your normal stereo speakers), **rear speakers**, plus a **center front speaker**.

**Front speakers:** Place the left and right front speakers 6' to 8' apart angled slightly toward the center listening position.

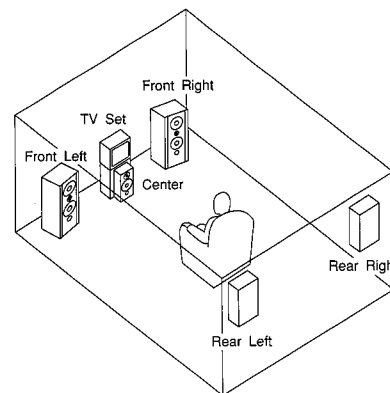
**Rear speakers:** Place the rear left and right speakers at the back of the listening room facing toward the front of the room.

Note: raising the height of the rear speakers improves the Surround Sound performance.

**Center speaker:** Locate the center speaker just below the center of the picture screen.

Note: magnetically unshielded speakers may cause interference if placed too close to the screen. Moving the speakers away will eliminate the interference but may degrade the Surround Sound performance.

Note: If you use a subwoofer, locate the speaker at any convenient location.



The AVR30 is designed to give you many years of trouble-free use. An AVR30 system brings the realism, depth, and clarity of the theater experience to your home as only Harman Kardon can. The ease of use and Harman Kardon's detailed attention to sound quality make the AVR30 something you will enjoy for many years.

\*\*Dolby Prologic Surround is a trademark of DOLBY LABORATORIES LICENSING CORPORATION.

# Troubleshooting

This unit is designed for trouble-free operation: most problems users encounter are due to operating errors. So if you have a problem, first check this list for a possible solution. If the problem persists, consult your authorized Harman Kardon service center.

## If the problem is...

No lights illuminate when Power switch is pressed.

No sound is heard

Dolby Surround does not work on center and rear channels.

Selecting video component produces sound but no picture.

The TV picture does not match the sound.

No output from one or more channels.

No center channel output.

Tuner sound has a large amount of interference.

OR, The "Stereo" display is not fully illuminated.

OR, Tuner sound distorts and/or volume level is too low.

Tuner is intermittent or continuously buzzing or hissing.

Stations cannot be preset.

Phono sound is too faint, has hum, ringing, or "howl".

## Make sure that the:

■ Unit is plugged into a live outlet.

■ Speaker selector is turned to the desired speakers

■ Correct "Listen to" function button has been pressed.

■ Volume is turned up.

■ Speakers are connected properly.

■ Source components are connected properly.

■ "Audio Direct" is "Off".

■ Rear and Center levels are turned up.

■ Video cables are connected properly.

■ Video sources are properly connected to receiver.

■ Video/Antenna Switch on TV is set to Video.

■ Cables are not defective: check/replace speaker cables.

■ The signal source is operating and providing proper signal output to the AVR30.

■ Dolby surround or movie mode is turned on.

■ "Phantom" mode is not active.

■ The antenna is properly connected.

■ The antenna is properly located.

■ The antenna is set in the proper direction.

■ The antenna is adequate to receive the desired station.

■ The unit is away from fluorescent lights, TVs, motors and other electrical appliances.

■ After pressing the Memory button, the Preset button is set while the "Preset" light is still flashing.

■ Turntable cartridge is moving magnet type, or step-up transformer is used.

■ Ground wire from turntable has been connected to ground terminal on receiver.

■ Cable from turntable is away from power cords and speaker cables.

■ Turntable is away from speakers.

■ Turntable is on a stable surface.

# Specifications

## Stereo Mode

Continuous Average Power (FTC)  
60 Watts from 20Hz-20kHz: @<0.09% THD,  
both channels driven into 6 Ohms

## Five Channel Surround Mode

Continuous average power per channel (FTC)  
Front L&R channels  
50 Watts from 20Hz-20kHz: @<0.09% THD,  
both channels driven into 6 Ohms  
Center channel  
50 Watts from 20Hz-20kHz: @<0.09% THD,  
driven into 6 Ohms  
Rear channels  
20 Watts from 200Hz-7kHz: @<0.3% THD,  
both channels driven into 4 Ohms

## Amplifier Section

High-Instantaneous Current Capability  
(HCC): ±40 Amps  
Negative Feedback: 20dB  
Frequency Response @1W (+0/-3dB): 0.5Hz - 200kHz  
Slew Rate: 80 Volts/μSec  
Rise Time: 2.0μSec  
Transient Intermodulation Distortion (TIM): Unmeasurable  
Signal-to-Noise Ratio (ref. rated power  
output, A-Wtd)  
Phono (MM): 78dB  
Video, CD: 98dB  
Input Sensitivity/Impedance  
Phono (MM): 2.5mV/47kΩ, 125pF  
Video, CD, Tape: 135mV/22kΩ  
Subwoofer Output Level/Load: 2.0 Volts/10kΩ  
Phono Overload: 120mV  
RIAA EQ Accuracy (20Hz-20kHz): ±0.5dB

Tone Control Range  
Bass @ 50Hz: ±10dB  
Treble @ 10kHz: ±10dB  
Loudness Counter @ -40dB, 50Hz/10kHz: ±10dB/+0dB

## Tuner Section: FM

Usable Sensitivity, Mono (dBf): 13.2  
50dB Quieting Sensitivity, Stereo (dBf): 38.2  
Signal-to-Noise Ratio @ 65dBf, mono/stereo: 80dB/70dB  
Capture Ratio: 1.5dB  
Selectivity, Adjacent/Alternate Channel: 5dB/65dB  
IF Rejection: 85dB  
AM Rejection @45dBf: 55dB  
Stereo Separation @ 1kHz, 65dBf: 45dB  
THD @ 1kHz, 65dBf, mono/stereo (%): 0.2/0.3

## Tuner Section: AM

Sensitivity, External Antenna: 18μV  
Alternate Channel Selectivity: 55dB  
Image Rejection: 40dB  
IF Rejection: 60dB  
Dimensions (WxHxD):  
inches: 17<sup>3</sup>/<sub>8</sub> x 5 x 13<sup>3</sup>/<sub>4</sub>  
mm: 443 x 126 x 349  
Weight (lbs/kgs): 19.8/9.0

Depth measurement includes knobs, buttons and antennas.  
Height measurement includes feet.

All features and specifications are subject to change without notice.

