



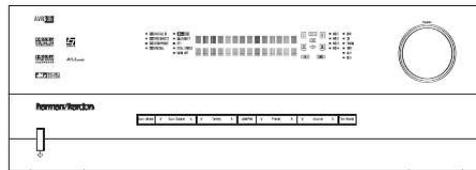
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You can read the recommendations in the user guide, the technical guide or the installation guide for HARMAN KARDON AVR 435. You'll find the answers to all your questions on the HARMAN KARDON AVR 435 in the user manual (information, specifications, safety advice, size, accessories, etc.). Detailed instructions for use are in the User's Guide.

User manual HARMAN KARDON AVR 435
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AVR 435
AUDIO/VIDEO RECEIVER
OWNER'S MANUAL



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Manual abstract:

Whether the text appears in all uppercase or upper- and lowercase characters, performance and operation remain the same. See trademark acknowledgements on page 55. 2 TABLE OF CONTENTS INTRODUCTION Thank You for Choosing Harman Kardon® With the purchase of a Harman Kardon AVR 435, you are about to begin many years of listening enjoyment. The AVR 435 has a wide range of features and options that accommodate virtually any combination of speakers, room size and program sources. It is as easy to operate as it is to set up, but in order to take maximum advantage of the many advanced technologies within your new AVR, it is strongly recommended that you take a few minutes to read this owner's manual. If you have any questions about this product, its installation or its operation, we recommend that you contact your dealer or installer, as they are your best source of local information. You may also access a wealth of information and assistance by visiting our Web site at www.harmankardon.com. Description and Features The AVR 435 is designed to serve as the hub of your home entertainment system, combining the flexibility to access the wide range of audio and video source options available today with the power to handle virtually any type of program material or surround mode.

Thanks to a state-of-the-art DA610 digital signal processor from Texas Instruments, the AVR 435 offers precision decoding of all currently available technologies from Dolby Laboratories and DTS®. In addition, older analog and two-channel program sources benefit from the latest version of Harman International's Logic 7® processing which creates a wider, more enveloping sound field with more defined channel positioning and the ability to create 7.1 sound fields from 5.1 sources. Additional processing and decoding options include MP3, Dolby* Virtual speaker and Dolby Headphone processing. An important addition to the AVR 435's impressive list of features is EzSet/EQ,™ which automates the configuration process to make it quicker, easier and more precise. Using the special microphone supplied with the unit, EzSet/EQ takes the guesswork out of entering speaker "size" and crossover information, delay times for all channels and output levels. In addition to the configuration settings, EzSet/EQ also includes room equalization so that the signals sent to each speaker are tailored to provide accurate sonic quality with your specific combination of speaker type, room size and other factors that influence room acoustics. With EzSet/EQ, your system is custom-configured in a few minutes with accuracy that previously required expensive and hard-to-use test equipment. In tandem with EzSet/EQ, the AVR 435 includes a full set of manual configuration settings for those who wish to custom-trim their system even further.

A Quadruple Crossover bass management system makes it possible to enter different crossover settings for each speaker group. Video connections and system integration is a snap with the AVR 435, thanks to three assignable, widebandwidth inputs that are renameable. To further enhance the viewing experience with digital sources or displays, the AVR 435's A/V Sync Delay feature allows you to compensate for the loss of lip sync due to digital video delays individually for each input. Full-carrier IR outputs, a bi-directional RS-232 port and a learning remote with a two-line display are among the many other features that make the AVR 435's power simple to use. The AVR 435's multizone options and a standard Zone II remote control make it possible to listen to a separate source in a room while the main home theater uses a different source. With assignable rear surround channel amplifiers, you may create a basic remote listening zone without any additional equipment. For one-wire multiroom connectivity, the AVR 435 is A-BUS Ready,® requiring only a single Category 5/5e cable and an optional remote module to power remote speakers while controlling volume and enabling full control over the program source and compatible IR-controlled devices. The unit's Multiroom outputs may also be used to feed an optional, external power amplifier and volume control. The AVR 435's seven-channel amplifier is our timehonored high-current, ultrawide-bandwidth design with the power to reproduce the loudest crescendos or cinema sound effects while remaining virtually free from distortion or system noise. Combining state-of-the-art circuitry, digital technology and proven performance with an elegant design that is compatible with the latest source components and video displays, the AVR 435 represents the culmination of Harman Kardon's fifty-year history of delivering the finest sonic performance.

I All popular digital and matrix surround modes, including Dolby* Digital, Dolby Digital EX, Dolby Pro Logic* IIx, DTS,® DTS-ES® Discrete and Matrix, DTS Neo:6® and DTS 96/24 I Seven channels of high-current, ultrawidebandwidth amplification with the surround back channels assignable to either main room or remote room use I Harman Kardon's exclusive Logic 7® processing, along with Dolby Virtual Speaker processing for use when only two speakers are available I Dolby Headphone to create spacious, open sound fields when using headphones I High-bandwidth, HDTV-compatible component video inputs may be assigned to any video input I Harman Kardon's advanced EzSet/EQ™ automatically configures speaker settings and sets room equalization for quick, easy and accurate system setup I Full bass management, including Quadruple Crossover and individual settings for each input I A/V Sync delay adjustable for each input delivers perfect lip sync with digital programs or video displays I Extensive Multiroom options, including a standard Zone II remote, assignable rearchannel amplifier channels and A-BUS Ready® capability for listening to a separate source in a remote zone INTRODUCTION 3 SAFETY INFORMATION Important Safety Information Verify Line Voltage Before Use Your AVR 435 has been designed for use with 120-volt AC current. Connection to a line voltage other than that for which it is intended can create a safety and fire hazard and may damage the unit. If you have any questions about the voltage requirements for your specific model, or about the line voltage in your area, contact your selling dealer before plugging the unit into a wall outlet. Do Not Use Extension Cords To avoid safety hazards, use only the power cord attached to your unit. We do not recommend that extension cords be used with this product. As with all electrical devices, do not run power cords under rugs or carpets or place heavy objects on them. Damaged power cords should be replaced immediately by an authorized service center with a cord meeting factory specifications. Handle the AC Power Cord Gently When disconnecting the power cord from an AC outlet, always pull the plug; never pull the cord. If you do not intend to use the unit for any considerable length of time, disconnect the plug from the AC outlet.



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Do Not Open the Cabinet There are no user-serviceable components inside this product.

Opening the cabinet may present a shock hazard, and any modification to the product will void your guarantee. If water or any metal object such as a paper clip, wire or a staple accidentally falls inside the unit, disconnect it from the AC power source immediately, and consult an authorized service center. CATV or Antenna Grounding If an outside antenna or cable system is connected to this product, be certain that it is grounded so as to provide some protection against voltage surges and static charges. Section 810 of the National Electrical Code, ANSI/NFPA No. 70-1984, provides information with respect to proper grounding of the mast and supporting structure, grounding of the lead-in wire to an antenna discharge unit, size of grounding conductors, location of antenna discharge unit, connection to grounding electrodes and requirements of the grounding electrode.

NOTE TO CATV SYSTEM INSTALLER: This reminder is provided to call the CATV (Cable TV) system installer's attention to article 820-40 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 possible. Installation Location I To ensure proper operation and to avoid the potential for safety hazards, place the unit on a firm and level surface. When placing the unit on a shelf, be certain that the shelf and any mounting hardware can support the weight of the product. I Make certain that proper space is provided both above and below the unit for ventilation. If this product will be installed in a cabinet or other enclosed area, make certain that there is sufficient air movement within the cabinet.

Under some circumstances, a fan may be required. I Do not place the unit directly on a carpeted surface. ence to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures: I Reorient or relocate the receiving antenna. I Increase the separation between the equipment and receiver. I Connect the equipment into an outlet on a circuit different from that to which the receiver is connected. I Consult the dealer or an experienced radio/TV technician for help. I Avoid installation in extremely hot or cold locations, or in an area that is exposed to direct sunlight or heating equipment. I Avoid moist or humid locations. I Do not obstruct the ventilation slots on the top of the unit, or place objects directly over them. I Due to the weight of the AVR 435 and the heat generated by the amelector K Optical 4 Digital Input B Headphone Jack G Delay Adjust Selector L Coaxial 4 Digital Input C Tone Mode Button H </> Buttons M Video 4 Audio/Video Jacks D Speaker Selector Button I Set Button E Channel Adjust Selector J EzSet/EQ Microphone Jack I Standby/On Switch: When the Main Power Switch A is "ON," press this button to turn on the AVR 435; press it again to turn the unit off.

Note that the illumination surrounding the switch will turn blue when the unit is on. 2 Surround Mode Group Selector: Press this button to select the top-level group of surround modes. Each press of the button will select one of the surround mode categories. Once the button is pressed so that the name of the desired surround mode category appears in the on-screen display and in the Lower Display Line \$, press the Surround Mode Selector 3 to cycle through the individual modes available. For example, press this button to select Dolby modes, and then press the Surround Mode Selector 3 to choose from the various mode options. 3 Surround Mode Selector: Press this button to select from among the available surround mode options for the surround mode category selected. The specific modes will vary based on the number of speakers available, the surround mode category and whether the input source is digital or analog. For example, press the Surround Mode Group Selector 2 to select a category such as Dolby or Logic 7, and then press this button to see the specific mode choices that are available. For more information on mode selection, see page 34. FRONT-PANEL CONTROLS 5 FRONT-PANEL CONTROLS 4 Tuning Selector: Press the left side of the button to tune lower-frequency stations and the right side of the button to tune higher-frequency stations.

When the tuner is in the MANUAL/MONO mode, each tap of the Selector will increase or decrease the frequency by one increment. When the tuner receives a strong-enough signal for adequate reception, MANUAL TUNED will appear in the Lower Display Line \$ and in the on-screen display. When the tuner is in the AUTO/STEREO mode, press the button once, and the tuner will scan for a station with acceptable signal strength. When the next higher- or lower-frequency station with a strong enough signal is tuned, the frequency scan will stop and the Lower Display Line \$ and the on-screen display will indicate AUTO TUNED. When an FM Stereo station is tuned, the display will read AUTO ST TUNED.

See page 37 for more information on using the tuner. 5 Tuner Band Selector: Pressing this button will automatically switch the AVR 435 to the Tuner mode. Pressing it again will switch between the AM and FM frequency bands. (See page 37 for more information on the tuner.) 6 Preset Station Selector: Press this button to scroll up or down through the list of stations that have been entered into the preset memory.

(See page 37 for more information on tuner programming.) 7 Input Source Selector: Press this button to change the input by scrolling up or down through the list of input sources. 8 Tuning Mode Selector: Press this button to select Auto or Manual tuning. When the button is pressed so that AUTO/STEREO appears in the Upper Display Line #, the tuner will search for the next station with an acceptable signal when the Tuning Selector 4wé is pressed. When the button is pressed so that MANUAL/MONO appears in the Upper Display Line #, each press of the Tuning Selector 4wé will increase the frequency. (See page 37 for more information on using the tuner.) This button may also be used to switch between Stereo and Mono modes for FM radio reception. When weak reception is encountered, select the Manual/Mono tuning mode. Press and hold again to switch back to Stereo mode. (See page 37 for more information on using the tuner.

) 9 Front-Panel Control Door: To open the door so that the front-panel jacks and controls behind this door may be accessed, gently pull the door down and towards you using either upper corner of the door.) Volume Control: Turn this knob clockwise to increase the volume, counterclockwise to decrease the volume. If the AVR 435 is muted, adjusting the volume control will automatically release the unit from the silenced condition. ! Input Indicators: One of these indicators will light to identify the currently selected input.



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Note that the entire list will light briefly each time the unit is turned on as a test. @ Speaker/Channel Input Indicators: These indicators are multipurpose, indicating both the speaker type selected for each channel and the incoming datasingal configuration. The left, center, right, right surround and left surround speaker indicators are composed of three boxes, while the subwoofer is a single box. The center box lights when a "small" speaker is selected, and the two outer boxes light when "large" speakers are selected. When none of the boxes are lit for the center, surround or subwoofer channels, no speaker has been assigned that position. (See page 26 for more information on configuring speakers.)

) The letters inside each box displays the active input channels. For standard analog inputs, only the L and R will light, indicating a stereo input. For a digital source, the indicators will light to display the channels being received at the digital input. When the letters flash, the digital input has been interrupted. (See page 36 for more information on the Channel Indicators.)

) # Upper Display Line: Depending on the unit's status, a variety of messages will appear here. In normal operation, this line will show the current input source and identify whether an analog or digital input is in use. When the tuner is selected as the input, this line will identify the station as AM or FM and show the frequency and preset number, if any. \$ Lower Display Line: Depending on the unit's status, a variety of messages will appear here. In normal operation, the current surround mode will appear on this line.

% Surround Mode Indicators: One of these indicators will light to show the surround mode in use. Depending on the specific combination of input sources and surround mode selected, more than one indicator may light. (See page 34 for more information.) ^ Remote Sensor Window: The sensor behind this window receives infrared signals from the remote control. Aim the remote at this area and do not block or cover it unless an external remote sensor is installed.

6 FRONT-PANEL CONTROLS FRONT-PANEL CONTROLS A B CDEFG HIH J K L M The following controls and jacks are located behind the front-panel door. To open the door, place the edge of a finger on the left or right edge of the panel and gently swing the door down towards you. A Main Power Switch: Press this switch to apply power to the AVR 435. When the switch is pressed in, the unit is placed in a Standby mode, as indicated by the amber illumination surrounding the Standby/On Switch 1. This button MUST be pressed in to operate the unit.

To turn the unit off and prevent the use of the remote control, this switch should be pressed until it pops out from the front panel so that the word "OFF" may be read at the top of the switch. NOTE: This switch is normally left in the "ON" position. B Headphone Jack: This jack may be used to listen to the AVR 435's output through a pair of headphones. Be certain that the headphones have a standard 1/4" stereo phone plug, or that you use an adaptor, as needed, to convert the plug on your headphones to the 1/4" jack used on the AVR. When the headphone jack is in use, the main room speakers will automatically be turned off and the unit will output a standard stereo signal. You may also use one of the Dolby Headphone modes for an enhanced listening experience. For more information on headphone listening, see page 33. C Tone Mode Button: This button controls the tone mode settings, enabling adjustment of the bass and treble boost/cut. You may also use it to take the tone controls out of the signal path completely for "flat" response. The first press of the button displays a TONE MODE message in the Lower Display Line \$ and in the on-screen display.

To take the controls out of the signal path, press either of the </> Buttons H until the display reads TONE OUT. To change the bass or treble settings, press the button again until the desired option appears in the Lower Display Line \$ and in the on-screen display and then press either of the </> Buttons H to enter the desired boost or cut setting. See page 32 for more information on the tone controls. D Speaker Selector Button: Press this button to begin the process of configuring the AVR 435 for the type of speakers it is being used with. For complete information on configuring the speaker settings, see page 26.

E Channel Adjust Selector: Press the button to begin the process of adjusting the channel level outputs using the source currently playing through your AVR. For complete information on adjusting the channel output level, see page 29. F Digital Input Selector: Press this button to begin the process of selecting a digital source for use with the currently selected input. Once the button has been pressed, use the </> Buttons H to choose the desired input and then press the Set Button I to enter the setting into the unit's memory. See page 33 for more information on digital audio.

G Delay Adjust Selector: Press this button to begin the process of adjusting the delay settings for Dolby surround modes. See page 28 for more information on delay adjustments. H </> Buttons: When making system configuration changes using the front-panel controls, press these buttons to scroll through the available choices for the option being adjusted. I Set Button: When making system configuration changes using the front-panel controls, press this button to enter a setting into the unit's memory. J EzSet/EQ Microphone Jack: Before starting the EzSet/EQ automated setup process, plug the microphone into this jack. The microphone does not need to be plugged in at other times. K Optical 4 Digital Input: Connect the optical digital output of an audio or video product to this jack. L Coaxial 4 Digital Input: Connect the coaxial digital output of a digital audio product such as a portable audio player or video game to this jack. M Video 4 Jacks: These audio/video jacks may be used for temporary connection to video games or portable audio/video products such as camcorders and portable audio players. FRONT-PANEL CONTROLS 7 REAR-PANEL CONNECTIONS 435 49 48 35 49 34 48 33 35 49 32 34 48 31 33 35 49 30 32 34 48 29 31 33 35 49 28 47 30 32 34 48 46 29 31 33 35 49 37 47 28 30 45 32 34 48 36 46 29 31 44 33 35 26 37 47 28 30 39 45 32 34 27 36 46 29 38 31 44 33 28 37 26 28 47 30 25 39 32 45 29 27 36 46 29 24 31 38 44 30 28 26 37 28 23 30 39 25 31 29 27 36 22 29 24 38 30 28 21 26 28 23 25 31 29 20 27 22 24 30 28 21 23 31 29 20 22 30 21 31 20 47 45 46 44 37 39 47 45 36 38 46 44 43 42 41 43 40 42 37 36 35 37 34 36 33 35 37 32 34 36 31 33 35 37 32 34 36 31 33 35 37 32 34 36 31 33 35 37 41 32 34 36 40 31 33 35 37 39 41 32 47 34 36 38 40 46 31 33 35 39 41 45 32 34 47 38 40 44 31 46 33 39 41 43 45 32 47 38 40 42 44 31 46 39 43 45 38 42 44 43 42 47 51 46 50 45 51 47 49 44 48 46 50 43 39 47 49 41 45 51 38 42 48 46 40 44 50 Multiroom 49 45 39 43 51 41 47 Audio Outputs Coaxial Digital Audio Inputs 38 42 48 46 40 44 50 CD Audio 51 45 39 43 Inputs 41 47 49 44 38 46 48 Optical Digital Audio Output 40 42 50 43 39 45 49 DVD Audio Inputs 41 51 51 47 47 38 44 40 46 Tape 42 48 Inputs 46 50 50 39 45 41 43 45 51 49 Outputs Tape 47 51 47 49 51 46 38 44 40 42 48 44 48 50 Optical Digital Audio Inputs 46 50 50 45 43 39 49 49 43 51 Audio Inputs 45 Video 42 47 1 49 51 38 42 50 48 44 44 46 48 Audio Outputs Video 43 48 1 50 43 51 45 49 47 2 Video 42 Audio Inputs 49 51 42 50 44 46 2 Video 48 Audio Outputs 48 50 43 49 45 8-Channel Direct Inputs 49 42 48 44 48 Video 3 Audio Inputs 43 42 41 40 39 41 38 40 j AM Antenna TM FM Antenna £ Preamp Outputs ¢ Subwoofer Output A-BUS Connector § Surround Speaker Outputs ¶ Front Speaker Outputs · Fan Vents ¨ Center Speaker Outputs , Surround Back/Multiroom Speaker Outputs / AC Power Cord ¯ Switched AC Accessory Outlet < Unswitched AC Accessory Outlet > Video Monitor Outputs fi DVD Video Inputs fl Video 1 Video Inputs Video 1 Video Outputs 49 ° Video 2 Video Inputs 48 · Video 2 Video Outputs 35 49 49 47 a Video 3 Video Inputs 34 48 48 46 b Component Video Monitor Outputs 33 35 49 35 47 37 49 32 c DVD Component Video Inputs 48 34 34 31 36 46 d Component Video 1 Inputs 48 35 33 33 49 26 35 30 37 49 32 47 e Component Video 2 Inputs 32 34 48 27 34 29 36 48 31 46 f Multiroom IR Input 31 33 35 28 33 30 28 26 35 32 37 g Remote IR Input 30 29 32 34 27 34 31 36 29 29 30 h Remote IR Output 31 33 28 33 30 28 26 28 32 31 i Remote IR Carrier Output 30 29 32 29 27 31 29 30 j RS-232 Port 31 28 28 28 30 31 k Coaxial Digital Audio Output 30 29 29 29 30 28 28 31 37 26 47 27 36 46 28 26 37 47 29 27 36 46 30 28 37 26 47 31 29 27 36 46 30 28 37 26 47 45 31 29 27 36 46 44 30 28 26 37 47 39 45 31 43 29 27 36 46 38 44 42 30 28 37 26 39 25 45 31 41 29 43 27 36 24 38 44 40 30 42 28 26 23 39 25 45 31 37 41 29 43 27 22 38 24 44 36 40 30 42 28 21 23 25 39 35 31 29 37 41 20 22 24 38 34 36 30 40 21 23 33 25 31 35 37 20 22 32 24 34 36 21 23 33 35 20 22 32 34 21 33 20 32 39 41 25 37 45 43 38 40 24 36 44 42 23 35 25 37 39 41 45 43 22 34 24 36 38 40 44 42 21 33 23 37 39 41 25 43 45 35 20 32 22 36 38 40 24 42 44 34 21 33 23 37 39 35 25 43 45 41 43 20 32 22 36 24 40 35 36 34 44 42 21 33 23 37 25 35 39 41 45 43 41 43 20 32 22 42 24 36 38 40 44 34 37 40 42 21 33 23 35 39 37 25 41 36 37 41 43 20 32 22 34 38 36 24 40 35 36 37 40 42 37 41 21 33 23 35 34 25 37 35 36 41 37 43 36 34 40 20 32 22 33 24 36 34 35 36 37 40 42 35 41 39 21 35 37 33 23 32 33 34 35 37 41 34 36 38 36 31 40 20 22 34 32 32 33 34 36 33 35 40 35 37 39 21 33 41 37 32 33 35 32 34 37 34 36 38 20 36 33 40 31 32 32 34 31 36 33 35 35 39 32 33 34 35 32 38 34 31 32

33 34 31 33 32 33 32 31 32 31 NOTE: To make it easier to follow the instructions that refer to this illustration, a larger copy may be downloaded from the Product Support section for this product at www.harmaninternational.com.



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harmankardon.com. NOTE: To assist in making the correct connections for multichannel input, output and speaker connections, all connection jacks and terminals are color-coded as follows: Front Left: White Front Right: Red Green Center: Surround Left: Surround Right: Surround Back Left: Surround Back Right: Subwoofer: Coaxial Digital Audio: Composite Video: Blue Gray Brown Tan Purple Orange Yellow Component Video "Y": Component Video "Pr": Component Video "Pb": Optical Digital In: Optical Digital Out: Green Red Blue Black Gray 8 REAR-PANEL CONNECTIONS REAR-PANEL CONNECTIONS

AM Antenna: Connect the AM loop antenna supplied with the receiver to these terminals. If an external AM antenna is used, make connections to the AM and GND terminals in accordance with the instructions supplied with the antenna. FM Antenna: Connect the supplied indoor or an optional external FM antenna to this terminal. Preamp Outputs: Connect these jacks to an optional, external power amplifier for applications where higher power is desired. Subwoofer Output: Connect this jack to the linelevel input of a powered subwoofer. If an external subwoofer amplifier is used, connect this jack to the subwoofer amplifier input. A-BUS Connector: Connect this jack to an optional A-BUS®-certified remote room product to extend the multiroom capabilities of your AVR 435. See page 17 for more information on A-BUS.

Surround Speaker Outputs: Connect these outputs to the matching + and - terminals on your surround channel speakers. In conformance with the CEA color-code specification, the blue terminal is the positive (+) terminal that should be connected to the red (+) terminal on the Surround Left speaker with older color-coding, while the gray terminal should be connected to the red (+) terminal on the Surround Right speaker with the older color-coding. Connect the black (-) terminal on the AVR to the matching black negative (-) terminals for each surround speaker. (See page 16 for more information on speaker polarity.)

Front Speaker Outputs: Connect these outputs to the matching + or - terminals on your left and right speakers.

When making speaker connections, always make certain to maintain correct polarity by connecting the color-coded (white for front left and red for front right) (+) terminals on the AVR 435 to the red (+) terminals on the speakers and the black (-) terminals on the AVR 435 to the black (-) terminals on the speakers. See page 16 for more information on speaker polarity.

Fan Vents: These ventilation holes are the output of the AVR 435's airflow system. To ensure proper operation of the unit and to avoid possible damage to delicate surfaces, make certain that these holes are not blocked and that there is at least 3 inches of open space between the vent holes and any wooden or fabric surface. It is normal for the fan to remain off at most normal volume levels. An automatic temperature sensor turns the fan on only when it is needed.

Center Speaker Outputs: Connect these outputs to the matching + and - terminals on your center channel speaker. In conformance with the CEA colorcode specification, the green terminal is the positive (+) terminal that should be connected to the red (+) terminal on speakers with the older color-coding. Connect the black (-) terminal on the AVR to the black negative (-) terminal on your speaker. (See page 16 for more information on speaker polarity.)

Surround Back/Multiroom Speaker Outputs: These speaker terminals are normally used to power the surround back left/surround back right speakers in a 7.1-channel system. However, they may also be used to power the speakers in a second zone, which will receive the output selected for a multiroom system. To change the output fed to these terminals from the default of the Surround Back speakers to the Multiroom Output, you must change a setting in the Advanced Menu of the OSD system. See page 41 for more information on configuring this speaker output.

In normal surround system use, the brown and black terminals are the surround back left channel positive (+) and negative (-) connections and the tan and black terminals are the surround back right positive (+) and negative (-) terminals. For multiroom use, connect the brown and black SBL terminals to the red and black connections on the left remote zone speaker and connect the tan and black SBR terminals to the red and black terminals on the right remote zone speaker.

AC Power Cord Jack: Connect the AC power cord to this jack when the installation is complete. To ensure safe operation, use only the power cord supplied with the unit. If a replacement is required, it must be of the same type and capacity.

Switched AC Accessory Outlet: These outlets may be used to power any device you wish to have turned on when the AVR 435 is turned on with the Standby/On Switch 1.

Unswitched AC Accessory Outlet: This outlet may be used to power any AC device. The power will remain on at this outlet, regardless of whether the AVR 435 is on or off. NOTE: The total power consumption of all devices connected to the accessory outlets should not exceed 100 watts.

Video Monitor Outputs: Connect these jacks to the composite or S-video input of a TV monitor or video projector to view the on-screen menus and the output of any standard video source selected by the receiver's video switcher.

DVD Video Inputs: Connect the composite or S-video outputs of a DVD player or other video source to these jacks.

Video 1 Video Inputs: Connect the composite or S-video PLAY/OUT jacks of a VCR or other video source to these jacks.

Video 1 Video Outputs: Connect the composite or S-video REC/IN jacks of a VCR or other video recording device such as a DVD recorder or PVR to these jacks.

Video 2 Video Inputs: Connect the composite or S-video PLAY/OUT jacks of a VCR or other video source to these jacks.

Video 2 Video Outputs: Connect the composite or S-video REC/IN jacks of a VCR or other video recording device such as a DVD recorder or PVR to these jacks.

Video 3 Video Inputs: Connect the composite or S-video PLAY/OUT jacks of a VCR or other video source to these jacks.

Component Video Monitor Outputs: Connect these outputs to the component video inputs of a video projector or monitor. When a source connected to one of the Component Video Inputs is selected, the signal will be sent to these jacks.

DVD Component Video Inputs: These inputs may be used with any source device equipped with analog Y/Pr/Pb or RGB component video outputs. The factory default is for these jacks to be linked to the DVD input, but you may change the setting at any time through the INPUT SETUP menu.

See page 21 for more information on configuring the component video inputs.

Component Video 1 Inputs: These inputs may be used with any source device equipped with analog Y/Pr/Pb or RGB component video outputs.



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The factory default is for these jacks to be linked to the DVD input, but you may change the setting at any time through the INPUT SETUP menu. See page 21 for more information on configuring the component video inputs. e Component Video 2 Inputs: These inputs may be used with any video source device equipped with analog Y/Pr/Pb or RGB component video outputs. The factory default is for these jacks to be linked to the Video 2 input, but you may change the setting at any time through the INPUT SETUP menu. See page 21 for more information on configuring the component video inputs. f Multiroom IR Input: Connect the output of an IR sensor in a remote room to this jack to operate the AVR 435's multiroom control system. REAR-PANEL CONNECTIONS 9 REAR-PANEL CONNECTIONS 35 37 39 41 34 36 38 40 33 26 25 37 32 47 24 36 49 27 45 43 31 28 44 42 48 46 23 35 g Remote IR Input: If the AVR 435's front-panel 34 30 37 22 41 35 29 39 29 other IR sensor is blocked due to cabinet doors or 36 21 33 34 30 38 40 28 obstructions, an external IR sensor may be used. 20 32 33 31 25 37 26 32 47 45 36 Connect the output of the sensor to this 49 27 24 43 jack.

31 28 23 42 48 46 44 35 30 29 22 h Remote IR Output: This connection permits the 34 35 37 39 41 29 IR sensor in the receiver to serve other remote36 38 33 con34 30 21 40 28 33 31 25 32 trolled devices. Connect this jack to the "IR IN"26 20 37 jack on 49 27 45 43 compatible Harman Kardon equipment. 32 47 24 36 31 28 44 42 48 46 23 35 30 29 i Remote IR Carrier Output: The output of37 22 34 this39 41 35 29 30 34 36 21 40 38 jack is the full signal received at the Remote Sensor 33 28 49 49 47 45 37 47 26 43 33 31 25 43 Input Window ^ or input through the Remote IR45 20 32 48 48 44 44 42 46 27 32 46 42 g including the carrier frequency that is removed 24 36 31 37 39 41 35 35 39 23 35 37 28 41 from signals at the Remote IR Output h. Use this 40 30 36 38 37 34 34 38 22 34 36 29 40 output to extend IR remote signals to33 33 26 21 37 the 29 30 25 33 input of 36 26 25 37 compatible products by direct connection 32 through 32 or 27 36 35 32 28 24 24 36 27 31 20 the use of optional, external IR "blasters". If you28 23 35 are in 34 31 31 23 35 28 30 29 30 jacks to use, 34 doubt as to which of the two IR Output 29 22 22 33 34 29 29 21 21 30 we recommend that you consult with49 28 45 or 33 your47 30 33 32 dealer 43 31 28 31 20 20 32 installer, or check with the manufacturer of46 44 32 31 the external 48 42 37 36 35 34 33 41 40 39 38 49 48 47 45 46 44 43 42 CD Connect these jacks to the 32 41 42 51 left/right analog audio output of a compact disc player 47 37 31 40 46 36 or CD changer50 other audio source. or 35 39 45 49 34

Optical Digital Audio Output: Connect this jack 38 44 48 43 33 to the optical digital input connector on a CD-R/RW, 42 32 37 41 47 51 MiniDisc or other compatible digital recorder. 31 36 40 46 50 35 DVD Audio Inputs: Connect the left/right analog 39 45 49 34 38 a 48 outputs of44 DVD player or other audio source to 43 33 47 51 46 50 45 49 44 48 43 Audio Inputs: these jacks. 7 45 6 44 7 39 6 38 6 7 8 7 9 6 0 7 1 6 25 24 23 45 22 44 21 39 20 38 43 42 41 40 37 36 35 43 34 42 33 41 32 40 6 7 8 9 0 1 25 24 23 22 21 20 37 36 35 34 33 32 35 37 39 41 34 36 38 40 j RS-232 Port: This jack may be used 26 control 33 to 25 37 32 27 24 the AVR 435 over a bi-directional RS-232 serial 36 49 47 45 43 31 28 23 42 control link to a compatible computer 48 programmable or 46 44 35 30 29 22 34 35 37 of remote control system. Due to the complexity 39 41 29 30 21 34 36 38 33 40 programming RS-232 commands, we strongly20 32 28 31 33 45 25 37 recommend that connections to 49 port for 43 this 47 26 49 44 45 43 48 32 47 24 36 46 27 42 control purposes be made by a trained and qualified 31 28 44 42 35 48 46 23 35 37 41 technician. This jack may also link to 30compatible 34 a 39 22 29 37 34 35 37 39 41 36 38 40 29 30 21 computer to upgrade the software and operating sys36 33 34 36 38 33 26 25 37 40 28 31 20 tem of the AVR 435 when upgrades 33 available.

3235 37 41 47 51 32 are 24 25 37 27 26 43 49 47 45 36 36 40 46 50 31 32 44 35 34 28 27 42 48 46 23 24 36 k Coaxial Digital Audio Output: Connect this jack33 35 39 45 49 30 31 22 23 35 28 29 39 34 35 37 41 34 coaxial 48 to the38 44 digital input of a CD-R/RW, MiniDisc or34 29 30 29 22 32 30 38 40 37 34 36 21 33 43 33 28 31 30 32 other compatible digital recorder. 33 29 20 21 33 31 36 26 25 37 28 31 20 32 42 32 35 32 27 24 36 31 41 47 51 Connect these jacks 37 Multiroom Audio Outputs:31 34 28 23 35 36 40 46 external audio power amplifier and 33 to the optional50 30 29 22 34 35 distribution 29 the 21 33 video39 45 49 system that delivers 30 source 32 34 38 44 48 28 selected for multizone distribution. 31 20 32 31 33 43 equipment you wish to control. 37 36 40 46 50 45 49 35 39 Video 1 Audio Inputs: Connect the left/right 34 38 44 48 PLAY/OUT audio output jacks on a VCR or other video 43 33 32 41 42 51 47 37 31 46 50 36 40 Video 1 Audio Outputs: Connect the left/right 35 39 45 49 REC/IN audio input jacks on a VCR or other video 34 38 44 48 source to these jacks. 43 33 41 47 51 32 41 42 51 47 37 46 Video 2 Audio Inputs: Connect the left/right 40 50 31 45 46 50 36 40 49 39 PLAY/OUT audio output jacks on a VCR or other video 35 44 45 49 39 48 38 source to these jacks.

34 43 44 48 38 33 42 43 41 47 Video 2 Audio Outputs: Connect the left/right 51 42 32 46 50 40 REC/IN audio input jacks on a VCR or other video 31 45 49 39 source to these jacks. 38 44 48 43 8-Channel Direct Inputs: These jacks are used 42 for connection to source devices such as DVD-Audio or SACD players with discrete analog outputs. Depending on the source device in use, all eight jacks may be used, though in many cases only connections to the front left/right, center, surround left/right and 47 51 LFE (subwoofer input) jacks will be used for standard 46 50 5.1 audio signals. cal digital output from a DVD player, HDTV receiver, 32 42 42 the S/P-DIF output of a compatible computer sound 31 card playing MP3 files or streams, LD player or CD player to these jacks. The signal may be a Dolby Digital 41 47 51 signal, a DTS signal or a standard PCM digital source. 32 41 42 51 37 47 31 Tape 46 50 Connect these jacks to the Play/Oout 36 40 Inputs: 35 of 45 49 jacks 39 an audio recorder. 34 38 44 48 37 Tape 47 51 33 47 43 41 41 51 Outputs: Connect these jacks to the 36 40 46 50 32 46 42 jacks of an audio recorder. 40 50 Record/Input 35 45 45 49 31 39 49 39 34 44 44 48 38 48 38 Optical Digital Audio Inputs: Connect the opti33 43 43 source to these jacks. 42 49 47 45 43 Coaxial Digital Audio Inputs: Connect the coax 48 receiver, 42 digital output from a DVD player, HDTV 46 44 the 35 37 39 card S/P-DIF output of a compatible computer sound 41 34 or 38 40 playing MP3 files or streams, LD player 36 CD player to 37 36 33 26 25 37 these jacks. The signal may be a Dolby Digital signal, 35 32 27 24 36 DTS signal or a standard PCM digital source.



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Do35 34 31 28 23 not connect the RF digital output of 30 LD player 34 33 an 29 22 to 29 30 21 33 32 these jacks. 28 31 20 32 31 32 31 41 40 39 45 49 38 44 Video 48 43 3 Audio Inputs: Connect the left/right PLAY/OUT audio output jacks on a VCR, PVR, cable 42 set-top, satellite receiver, HDTV receiver or other video source to these jacks. 10 REAR-PANEL CONNECTIONS MAIN REMOTE CONTROL FUNCTIONS 0 Power Off Button 1 Power On Button 2 LCD Information Display 3 Input Selectors 4 AVR Selector 5 Test Button 6 DSP Surround Mode Selector 7 Logic 7 Mode Select Button 8 Direct Button 9 Clear Button A Numeric Keys B Tuning Mode Button m Dim Button n Channel Select Button o Navigation Button F Digital Select Button G Set Button H Volume Up/Down Selectors I Transport Fast-Play/Scan Buttons J Main Transport Controls K Track Skip Up/Down Buttons L Preset Up/Down Button M Video Input Button N Disc Skip Button O Program Button P Light Button Q Multiroom Button R Macro Buttons S OSD Button T Night Mode Button U Tone Control Button V Sleep Button W AM/FM Button X Tuning Up/Down Button Y Channel Up/Down Selector Z Transport Play Buttons a Delay Select Button b Speaker Select Button c Memory Button d Stereo Mode Select Button e DTS Neo:6 Mode Select Button f DTS Digital Mode Select Button g Dolby Mode Select Button h 6/8-Channel Input Select i Mute Button j Lens j 0 1 2 3 4 5 6 7 8 9 A B C D F G H I J L N P K M O Q AVR 435 VDI TUNING MUTE i h f d g e c b E a Z Y X W V U T S R NOTES: · The function names shown here are each button's feature when used with the AVR 435. Most buttons have additional functions when used with other devices.

When a button is pressed, the function name will appear in the bottom line of the LCD Information Display c. · The jack on the upper right side of the remote is reserved for future use. Do not remove the plug provided or connect any device to the jack. · To make it easier to follow the instructions that refer to this illustration, a larger copy may be downloaded from the Product Support section for this product at www.harmankardon.com. MAIN REMOTE CONTROL FUNCTIONS 11 MAIN REMOTE CONTROL FUNCTIONS IMPORTANT NOTE: The AVR 435's remote may be programmed to control up to eight devices, including the AVR 435. Before using the remote, it is important to remember to press the Input Selector Button 3 that corresponds to the unit you wish to operate. In addition, the AVR 435's remote is shipped from the factory to operate the AVR 435 and most Harman Kardon CD or DVD players and cassette decks. The remote is also capable of operating a wide variety of other products using the control codes that are part of the remote.

Before using the remote with other products, follow the instructions on pages 43 46 to program the proper codes for the products in your system. It is also important to remember that many of the buttons on the remote take on different functions, depending on the product selected using the Input Selectors d. The descriptions shown here primarily detail the functions of the remote when it is used to operate the AVR 435. a Power Off Button: Press this button to place the AVR 435 or a selected device in the Standby mode. Note that this will turn off the main room functions, but if the Multiroom system is activated, it will continue to function.

I Power On Button: Press this button to turn on the power to a device selected by first pressing one of the Input Selectors 3. 2 LCD Information Display: This two-line screen displays various information depending on the commands that have been entered into the remote. 3 Input Selectors: Pressing one of these buttons will perform three actions at the same time. First, if the AVR 435 is not turned on, this will power up the unit. Next, it will select the source shown on the button as the input to the AVR 435.

Finally, it will change the remote control so that it controls the device selected. In normal operation, the remote will revert to controlling the AVR when no button is pressed for 6 seconds. This allows the remote to automatically return to control of important functions such as volume, mute and surround mode selection after you have used the remote to control another device. If you wish to change the length of time that the remote operates another device, or to have the remote remain active for control of the other device (such as a DVD player or set-top box) until you manually return control to the AVR by pressing the AVR Selector 4, follow the instructions on page 52. 4 AVR Selector: Pressing this button will switch the remote so that it will operate the AVR 435's functions. If the AVR 435 is in the Standby mode, it will also turn the AVR 435 on. 5 Test Button: Press this button to begin the sequence used to manually calibrate the AVR 435's output levels. (See page 29 for more information on calibrating the AVR 435.) g DSP Surround Mode Selector: Press this button to select one of the DSP surround modes, such as VMAx, Hall 1, Hall 2 or Theater. Each press of the button selects another mode.

(See page 34 for more information on surround modes.) 7 Logic 7 Mode Select Button: Press this button to select from among the available Logic 7 surround modes. (See page 34 for the available Logic 7 options.) 8 Direct Button: Press this button when the tuner is in use to start the sequence for direct entry of a station's frequency. After pressing the button, simply press the proper Numeric Keys A to select a station. (See page 37 for more information on the tuner.) 9

Clear Button: When programming the remote or using the EzSet feature, press this button to cancel the current function. When using the remote to enter frequencies for direct tuner access, press this button to clear previous entries. A Numeric Keys: These buttons serve as a 10button numeric keypad to enter tuner preset positions. They are also used to select channel numbers when TV, Cable or SAT has been selected on the remote, or to select track numbers on a CD, DVD or LD player, depending on how the remote has been programmed.

These buttons are also used to enter letters and numbers when renaming devices in the LCD Information Display. (See page 50 for more information on renaming devices and keys.) B Tuning Mode Button: Press this button to change the tuner mode between manual and automatic. When the button is pressed so that AUTO/STEREO appears in the Upper Display Line # and in the on-screen display, only stations with acceptable signal quality will be tuned, and the tuner will play FM stations in stereo, when available. In the AUTO mode, when the Tuning Up/Down Buttons 4X are pressed, the unit will automatically search for the next available station with good signal strength.

When this button is pressed so that MANUAL/MONO appears in the Upper Display Line # and in the on-screen display, each press of the Tuning Up/Down Buttons 4X will move the frequency up or down in single-step increments. When the FM band is in use, pressing the button so that the MANUAL mode is activated will enable you to tune stations with weak signals by changing to monaural reception.



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(See page 37 for more information on tuner operation.) **m Dim Button:** Press this button to activate the Dimmer function, which reduces the brightness of the front-panel display, or turns it off entirely. Press the button once to change the display to reduce the brightness by 50%, and press it again within 5 seconds and the main display will go completely dark.

Note that this setting is temporary; regardless of any changes, the display will always return to full brightness when the AVR is turned on. The blue illumination around the Standby/On Switch 1 will always remain at full brightness regardless of the setting to remind you that the AVR is still turned on. The blue accent lighting inside the volume control will also remain at full brightness when the panel is at 50%, but go out when the panel lights are fully dimmed. **n Channel Select Button:** This button is used to start the process of setting the AVR 435's output levels to an external source. Once this button is pressed, press the ↔ on the Navigation Button o to select the channel being adjusted, then press the Set Button q, followed by the ↔ on the Navigation Button o again, to change the level setting. (See page 38 for more information.) **o Navigation Button:** This single disc-like button is used to navigate through the on-screen configuration menus, to scroll through the options list and to select choices for the various settings such as delay, speakers, surround modes, digital inputs, etc. To use the button, simply press it left, right, up or down in the direction indicated by the ↔ / ↔ / ↔ / ↔ icons printed on the button disc. Depending on the menu being used, pressing the button will either change a specific menu or 49 47 45 choice, or it will change the option configuration 43 48 46 the on-screen or front-panel display. The shown in 44 42 35 37 39 41 sections in this manual describing the unit's individual 34 49 47 40 36 configuration 41 contain features and 38 45 43 37 options 47 51 specific 33 48 46 how the 36 40 46 50 are used.

26 25 37 information on 44 42 navigation controls p **Digital 23 38 Button:** 37 41 this 48 51 to assign Press button 31 34 36 35 40 34 38 44 47 28 Select 30 the 26 inputs 43 40 to source. one of 33 digital 25 37 33 36 KL 46 a 50 29 22 34 29 32 27 24 12 on (See page 33 for 33 36 information 42 45 49 30 21 more 32 35 39 using digital 28 31 20 32 inputs.) 31 28 23 35 31 34 38 44 48 q **Set Button:** This button is used 42 enter settings 29 30 21 33 32 12 to into the AVR 435's memory. It is also used in the 28 31 20 32 31 setup procedures for delay time, speaker configuration and channel output level adjustment. **H Volume Up/Down Buttons:** These controls share the common disc in the lower third of the remote. To raise the volume, press the button marked / by pressing towards the top of the remote. To lower the volume, press the button marked ↔ by pressing towards the bottom of the remote. The </> buttons on the left and right sides of this disc change channels up or down when the TV, cable box or satellite Input Selectors 3 have been pressed. 30 29 22 34 33 43 32 35 37 39 41 35 39 45 49 27 24 36 12 **MAIN REMOTE CONTROL FUNCTIONS MAIN REMOTE CONTROL FUNCTIONS s Transport Fast-Play/Scan Buttons:** These buttons have no direct function on the AVR 435, but they are used when the remote is programmed for a compatible DVD, CD or tape player. Pressing these buttons will transmit a fast-play forward, fast-play reverse, or fastforward or -reverse scan command, according to the capabilities of the player being controlled. In the factory default setting, these buttons are preprogrammed with the remote codes for Harman Kardon DVD players so that you may control a compatible player without having to switch devices. **J Main Transport Controls:** These buttons have no direct function on the AVR 435, but they are used when the remote is programmed for a compatible DVD, CD or tape player. Pressing these buttons will transmit a stop (I), record (I), or pause (\pm) command, according to the capabilities of the player being controlled. In the factory default setting, these buttons are programmed with the remote codes for Harman Kardon DVD players so that you may control a compatible player without having to switch devices. **K Track Skip Up/Down Buttons:** These buttons do not have a direct function with the AVR 435, but when used with a compatibly programmed CD or DVD changer will change the track or chapter currently being played. In the factory default setting, these buttons are programmed with the remote codes for Harman Kardon DVD players so that you may control a compatible player without having to switch devices. **L Preset Up/Down Button:** When the tuner is in use, press this button to scroll through the stations programmed into the AVR 435's memory. **w VDI Button:** This button does not have any function for the AVR, but is provided for your use in programming the codes that are used to scroll up or down through the available inputs on your video display. This allows you to switch video inputs that are directly connected to your video display. Alternatively, you may program any compatible remote code into the "up" and "down" portions of this button. For information on "learning" remote codes into a button on the AVR remote, follow the instructions shown on page 44. **N Disc Skip Button:** This button has no direct function for the AVR 435 but may be used to change the disc in a CD or DVD changer when the remote is programmed for that type of device. **O Program Button:** This button is used to begin the process of programming the remote. Press and hold this button for 3 seconds to place the remote in the programming mode. Once the red LED under the Set Button q lights, release the button. You may then select from the desired option. (See pages 43 53 for more information on configuring the remote.) **P Light Button:** Press this button to activate the remote's backlight for ease of use in darkened rooms. **Q Multiroom Button:** Press this button to begin the process of activating the multiroom system or to change the input or volume level for the second zone. (See page 41 for more information on the multiroom system.

) **R Macro Buttons:** Press these buttons to store or recall a "Macro", which is a preprogrammed sequence of commands stored in the remote. (See page 46 for more information on macros.) **S OSD Button:** Press this button to activate or turn off the On-Screen Display (OSD) system used to set up or adjust the AVR 435's parameters. **T Night Mode Button:** Press this button to activate the Night mode. This mode is available in specially encoded Dolby Digital sources, and it preserves dialogue (center channel) intelligibility at low volume levels. **U Tone Control Button:** This button controls the tone mode settings, enabling adjustment of the bass and treble boost/cut. You may also use it to take the tone controls out of the signal path completely for "flat" response.



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The first press of the button displays a TONE IN message in the Lower Display Line \$ and in the on-screen display. To take the controls out of the signal path, press either of the // Navigation Buttons o until the display reads TONE OUT. To change the bass or treble settings, press the button again until the desired option appears in the Lower Display Line \$ and in the on-screen display and then press either of the // Navigation Buttons o to enter the desired boost or cut setting.

See page 32 for more information on the tone controls. V Sleep Button: Press this button to place the unit in the Sleep mode. After the time shown in the display, the AVR 435 will automatically go into the Standby mode. Each press of the button changes the time until turn-off in the following order: X Tuning

Up/Down Button: Press this button when the tuner is in use to change the station to one with a higher or lower frequency. When the tuner is in the MANUAL/MONO mode, each tap of the Selector will increase or decrease the frequency by one increment.

When the tuner receives a strong enough signal for adequate reception, MANUAL TUNED will appear in the Lower Display Line \$ and in the on-screen display. When the tuner is in the AUTO/STEREO mode, press the button once, and the tuner will scan for a station with acceptable signal strength. When the next higher- or lower-frequency station with a strong-enough signal is tuned, the frequency scan will stop and the Lower Display Line \$ and the on-screen display will indicate AUTO TUNED. When an FM Stereo station is tuned, the display will read AUTO ST TUNED. See page 37 for more information on using the tuner.

Y Channel Up/Down Selector: This button has no function when the AVR is being controlled, but when programmed for use with a VCR, TV, cable box, satellite receiver or other similar product, it will change the channel up or down. See pages 43 53 for more information on programming the remote. Z Transport Play Buttons: These buttons have no direct function on the AVR 435, but they are used when the remote is programmed for a compatible DVD, CD or tape player. Pressing these buttons will transmit a forward- or reverse-play command, according to the capabilities of the player being controlled. In the factory default setting, these buttons are programmed for Harman Kardon DVD players so that you may control a compatible player without having to switch devices. a Delay Select Button: This button selects adjustments to the A/V Sync Delay and the individual channel displays. The first press of the button displays an A/V SYNC DELAY message in the Lower Display Line \$ and in the on-screen display, which means that you may change the amount of time that all channels are delayed together behind the video. This enables you to compensate for the loss of lip sync that may be caused by digital video processing in your display or by television stations. To change the A/V Sync Delay, press the Set Button q while the A/V SYNC DELAY message is visible and then use the // Navigation Button o to change the setting so that the sound and the video image are in sync. To change the delay for an individual output channel, press the // Navigation Button o until the desired channel name is shown, and then press the Set Button q.

Use the // Navigation Buttons o to change the delay amount. (See page 28 for more information on delay options.) When the Sleep timer is in use, the front-panel display indicators will dim to half brightness. W AM/FM Button: Press this button to select the AVR 435's tuner as the listening choice. Pressing this button when the tuner is already in use will select between the AM and FM bands. MAIN REMOTE CONTROL FUNCTIONS 13 MAIN REMOTE CONTROL FUNCTIONS b Speaker Select Button: Press this button to begin the process of configuring the AVR 435's bass management system. Then press the // Navigation Button o to select the channel you wish to set up. Press the Set Button q and then select another channel to configure. When all adjustments have been completed, press the Set Button q twice to exit the settings and return to normal operation. (See page 26 for more information on speaker setup.

) c Memory Button: Press this button to enter a radio station to the AVR 435's preset memory. First, tune the desired station, and then press this button. Within 5 seconds of when you see the station's frequency flash in the Upper Display Line # and in the on-screen display, press the numeric keys for the preset number between 01 and 30 that you wish to assign to the station. (See page 37 for more information.) d Stereo Mode Select Button: Press this button to select a stereo listening mode.

When the button is pressed so that SURROUND OFF appears in the Lower Display Line \$, the AVR will operate in a bypass mode with true, fully analog, two-channel left/right stereo mode with no surround processing or bass management, as opposed to other modes where digital processing is used. When the button is pressed so that SURROUND OFF appears in the Lower Display Line \$, and the DSP and Surround Off Surround Mode Indicators % are lit, you will enjoy a two-channel presentation of the sound, along with the benefits of bass management. Depending on whether your system is configured for 5.1 or 6.1/7.1 channels, the next press of the button will cause either 5 CH STEREO or 7 CH STEREO to appear, and the stereo signal will be routed to all five (or seven) speakers. (See page 34 for more information on stereo playback modes.) e DTS Neo:6 Mode Select Button: Press this button to select a DTS Neo:6 mode. (See page 34 for the available DTS Neo:6 options.) f DTS Digital Mode Select Button: When a DTS-encoded digital source is playing, each press of this button will scroll through the available DTS modes. The specific choice of modes will vary according to the type of encoding on the disc and your system's speaker configuration. When a DTS source is not in use, this button has no function. (See page 34 for the available DTS digital options.) g Dolby Mode Select Button: This button is used to select from the available Dolby Surround modes. Each press of this button will select one of the Dolby Pro Logic II, Pro Logic IIx or Dolby Virtual Speaker modes, as available for the number of speakers in your system.

When a Dolby Digital-encoded source is in use, the Dolby Digital mode may also be selected. (See page 34 for the available Dolby surround 49 mode 47 45 43 options.) h 37 39 41 35 6-Channel/8-Channel Input Select: Press this button to select 40 device 41 47 51 to the 6- or 8the 37 connected 34 36 38 46 page 36 33 26 Direct Channel 25 37 Inputs 40. (See 50 32 for more 32 27 24 information.) 36 35 39 45 49 31 30 Mute 34 i 29 22 Button: 33 this button to momentarily Press 43 29 30 21 33 silence the AVR 435 32 TV set being controlled, or 12 42 28 31 20 depending on 32 31 which device has been selected. 28 23 35 34 38 44 48 48 46 44 42 j Lens: The infrared emitters behind the plastic lens at the top of the remote communicate the remote codes to the AVR 435.



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Be certain that the lens is not covered when using the remote, and point the lens toward the AVR for best results. In learning mode, the remote receives IR codes to be learned through a sensor behind the lens. NOTE: DO NOT remove the rubber plug that covers the jack on the upper right side of the remote. The jack is not active and is reserved for future use.

14 MAIN REMOTE CONTROL FUNCTIONS ZONE II REMOTE CONTROL FUNCTIONS **POWER A OFF AVR VID1 MUTE K VID2 B AM/FM / VID3 VID4** **Power Off Button:** When used in the room where the AVR 435 is located, press this button to place the unit in Standby. When it is used in a remote room with a sensor that is connected to the Multiroom IR Input Jack f, this button turns the Multiroom system on and off. **AVR Selector Button:** Press this button to turn on the AVR 435. The input in use when the unit was last on will be selected. **AM/FM Tuner Selector:** Press this button to select the Tuner as the input to the Multiroom system.

Press it again to change between the AM and FM bands. **© Preset Up/Down Track Skip Buttons:** When the AVR 435's tuner is selected as the input source, these buttons will move up or down through the list of stations that have been stored in the preset memory. When a CD or DVD changer or player is selected, these buttons activate the Forward or Reverse Track or Chapter Skip functions. **C D E F G H DISC SKIP DVD CD TAPE DN TUNING UP Disc Skip Buttons:** Press these buttons to © change discs on compatible Harman Kardon CD or DVD changers or players. **I Volume Up/Down Buttons:** When the Zone II remote is used in the room where the AVR 435 is located, press this button to raise or lower the volume in that room.

When it is used in a remote room with a sensor that is connected to the Multiroom IR Input Jack f, this button will raise or lower the volume in the remote room. **DN PRESET UP J DISC SKIP I VOLUME Input Selectors:** When the AVR 435 is off, press one of these buttons to select a specific input and turn the unit on. When the unit is already in use, pressing one of these buttons will change the input. **Tuning Up/Down Fast Play Buttons:** When the Zone II remote is used in the same room as the AVR 435, these buttons may be used to change the frequency of the tuner. These buttons may also control the Fast Play or Fast Reverse functions of compatible Harman Kardon CD, DVD or cassette decks in the same room, or from a remote room when an IR link is connected to the AVR 435. **Record/Pause Button:** Press this button to activate the Record or Pause function on compatible Harman Kardon CD, DVD or cassette deck products. **Play Forward/Reverse/Stop Buttons:** Press these buttons to control compatible Harman Kardon CD, DVD or cassette players. **° Mute Button:** When the Zone II remote is used in the room where the AVR 435 is located, press this button to temporarily silence the unit. When it is used in a remote room with a sensor that is connected to the Multiroom IR Input Jack f, this button will temporarily silence the feed to the remote room only. Press the button again to return to the previous volume level.

â ç à ç © © I ° Power Off Button AVR Selector Button AM/FM Tuner Selector Input Selectors Tuning Up/Down Fast Play Buttons Record/Pause Button Preset Up/Down Track Skip Buttons Disc Skip Button Volume Up/Down Buttons Play Forward/Reverse/Stop Buttons Mute Button 49 48 47 45 46 44 43 42 35 37 39 41 NOTES: 34 36 is 40 · The Zone II remote may be used in either the same room where the AVR 435 38 located 37 in41 separate or a 47 51 36 40 46 50 33 26 25 37 room with an optional infrared sensor or A-BUS product that is connected to the AVR 435's Multiroom IR Input 35 39 45 49 32 27 36 Jack f. When it is used in the same room as the AVR 435, it will control the24 35 of the AVR 435 or any functions 34 38 44 48 31 28 23 compatible Harman Kardon products in that room. When it is used in 30separate room via33 sensor connected to a 29 22 34 a 43 29 30 21 33 will the Multiroom IR Input Jack f, the buttons for Power, Input Source, Volume and Mute32 control the source 42 28 31 20 32 and volume for the second zone, as connected to the Multiroom Audio Output Jacks 31 . (See page 41 for complete information on using the Multiroom system.) · To make it easier to follow the instructions that refer to the controls and connectors in this illustration, a larger copy may be downloaded from the Product Support section for this product at www.harmankardon.com. **ZONE II REMOTE CONTROL FUNCTIONS 15 INSTALLATION AND CONNECTIONS** System Installation After unpacking the unit, locating it in a place with adequate ventilation and placing it on a solid surface capable of supporting its weight, you will need to make the connections to your audio and video equipment. **IMPORTANT NOTE:** For your personal safety and to avoid possible damage to your equipment and speakers, it is always good practice to turn off and unplug the AVR 49 47 45 43 and ALL source equipment from the AC output before 48 46 44 42 making any audio or video system connections. 300-ohm-to-75-ohm adaptor to make the connection.

7. Connect the front, center, surround and surround back speaker outputs §¶, to the respective speakers. To ensure that all the audio signals are carried to your speakers without loss of clarity or resolution, we suggest that you use high-quality speaker cable. Many brands of cable are available and the choice of cable may be influenced by the distance between your 49 speakers and the receiver, the type of speakers you 48 use, personal preferences and other factors. Your 35 dealer or installer is a valuable resource to consult in 34 selecting the proper cable.

8. Connections to a subwoofer are normally made via a line-level audio connection from the Subwoofer Output ¶ to the line-level input of a subwoofer with a built-in amplifier. When a passive subwoofer is used, the connection first goes to a power amplifier, which will be connected to one or more subwoofer speakers. If you are using a powered subwoofer that does not have line-level input connections, follow the instructions furnished with the speaker for connection information. 47 9.

If an external multichannel audio source with 45 43 5.1 outputs such as an external digital processor/ 46 44 42 35 37 39 41 37 41 47 34 36 38 40 Audio Equipment Connections 51 36 40 46 50 33 26 25 37 We recommend that you use high-quality interconnect 35 39 45 32 27 24 making connections to 49 36 cables when source equipment 31 28 23 35 34 38 44 48 and recorders to preserve the integrity of the signals. 30 29 22 34 43 33 29 30 21 analog output of a CD player to the 42 1. Connect the 33 32 28 31 20 32 31 33 CD Audio Inputs . NOTE: If your CD player has both fixed and variable 47 outputs, audio45 43 it is best to use the fixed output unless 46 44 42 you find that the input to the receiver is so low that the 35 sound is noisy, or so high 49 it is distorted.



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