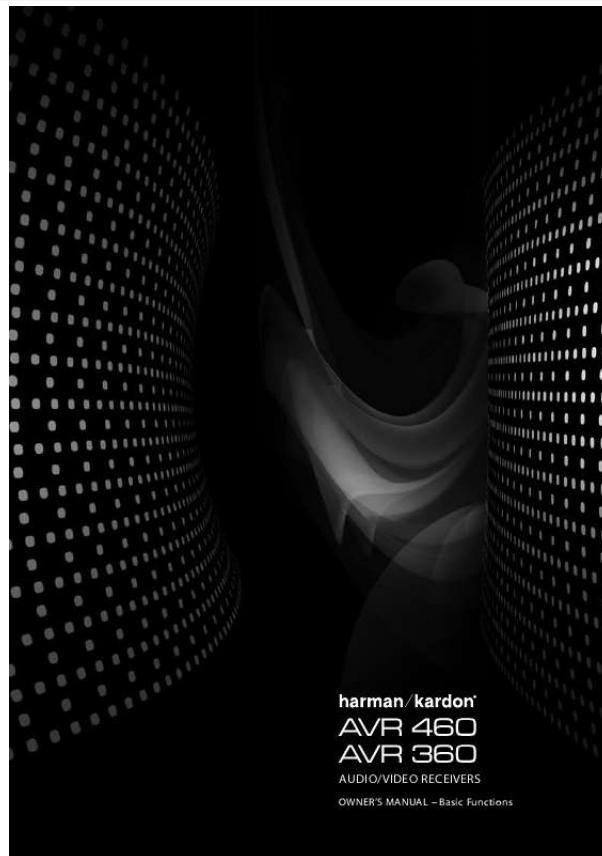




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You can read the recommendations in the user guide, the technical guide or the installation guide for HARMAN KARDON AVR 460. You'll find the answers to all your questions on the HARMAN KARDON AVR 460 in the user manual (information, specifications, safety advice, size, accessories, etc.). Detailed instructions for use are in the User's Guide.

User manual HARMAN KARDON AVR 460
User guide HARMAN KARDON AVR 460
Operating instructions HARMAN KARDON AVR 460
Instructions for use HARMAN KARDON AVR 460
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Manual abstract:

2. Keep these instructions. 3. Heed all warnings. 4. Follow all instructions. 5. Do not use this apparatus near water. 6. Clean only with a dry cloth.

7. Do not block any ventilation openings. Install in accordance with the manufacturer's instructions. 8. @ @9.

@ @A polarized plug has two blades with one wider than the other. A grounding-type plug has two blades and a third grounding prong. The wide blade or the third prong is provided for your safety. @ @10. Protect the power cord from being walked on or pinched, particularly at plugs, convenience receptacles and the point where they exit from the apparatus.

11. Only use attachments/accessories specified by the manufacturer. 12. Use only with the cart, stand, tripod, bracket or table specified by the manufacturer or sold with the apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over. 13. Unplug this apparatus during lightning storms or when unused for long periods of time. 14. Refer all servicing to qualified service personnel. @ @15.

@ @16. @ @17. @ @18. Do not expose batteries to excessive heat such as sunshine, fire or the like. 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 product. WARNING: To reduce the risk of fire or electric shock, do not expose this apparatus to rain or moisture. We, Harman Consumer Group, Inc. 2, Route de Tours 72500 Château-du-Loir, FRANCE declare in our own responsibility, that the product described in this owner's manual is in compliance with technical standards: EN 60065:2002; A1EN 55013:2001; A1; A2 EN 55020:2007 EN 55022:2006 (Class B) EN 61000-3-2:2006 EN 61000-3-3:1995; A1; A2 Jurjen Amsterdam Harman Consumer Group, Inc. 07/09

Important Safety Information Verify Line Voltage Before use Your AVR 460/AVR 360 has been designed for use with 230-240 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 supplied with 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. **DECLARATION OF CONFORMITY 2 SAFETY INFORMATION** 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 warranty.

If water or any metal object such as a paper clip, wire or staple accidentally falls inside the unit, disconnect it from the AC power source immediately, and consult an authorized service center. moving the unit Before moving the unit, be certain to disconnect any interconnection cords with other components, and make certain that you disconnect the unit from the AC outlet. unpacking The carton and shipping materials used to protect your new receiver during shipment were specially designed to cushion it from shock and vibration. We suggest that you save the carton and packing materials for use in shipping if you move, or should the unit ever need repair. To minimize the size of the carton in storage, you may wish to flatten it. This is done by carefully slitting the tape seams on the bottom and collapsing the carton. Other cardboard inserts may be stored in the same manner. Packing materials that cannot be collapsed should be saved along with the carton in a plastic bag. If you do not wish to save the packaging materials, please note that the carton and other sections of the shipping protection are recyclable. Please respect the environment and discard those materials at a local recycling center.

It is important that you remove the protective plastic film from the frontpanel lens. Leaving the film in place will affect the performance of your remote control. **ENGLISH Installation Location** · 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. · 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. · Do not place the unit directly on a carpeted surface. · Avoid installation in extremely hot or cold locations, or in an area that is exposed to direct sunlight or heating equipment. · Avoid moist or humid locations. · Do not obstruct the ventilation slots on the top of the unit, or place objects directly over them. · Due to the weight of the AVR 460/AVR 360 and the heat generated by the amplifiers, there is the remote possibility that the rubber padding on the bottom of the unit's feet may leave marks on certain wood or veneer materials. Use caution when placing the unit on soft woods or other materials that may be damaged by heat or heavy objects. Some surface finishes may be particularly sensitive to absorbing such marks, due to a variety of factors beyond our control, including the nature of the finish, cleaning materials used, and normal heat and vibration caused by the use of the product, or other factors. We recommend that caution be exercised in choosing an installation location for the component and in normal maintenance practices, as your warranty will not cover this type of damage to furniture.

cleaning When the unit gets dirty, wipe it with a clean, soft, dry cloth. If necessary, and only after unplugging the AC power cord, wipe it with a soft cloth dampened with mild soapy water, then a fresh cloth with clean water. Wipe it dry immediately with a dry cloth. NEVER use benzene, aerosol cleaners, thinner, alcohol or any other volatile cleaning agent. Do not use abrasive cleaners, as they may damage the finish of metal parts.



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Avoid spraying insecticide near the unit. 3 TABLE OF CONTENTS 2 5 7 9 11 13 14 15 15 15 15 16 16 16 17 17 17 17 18 19 21 25 25 25 26 SAFETY INFORMATION INTRODUCTION FRONT-PANEL CONTROLS REAR-PANEL CONNECTIONS MAIN REMOTE CONTROL FUNCTIONS ZONE 2 REMOTE CONTROL FUNCTIONS (AVR 460 only) INTRODUCTION TO HOME THEATER CONNECTIONS Speaker Connections Subwoofer Connecting Source Devices to the AVR Audio Connections Digital Audio Analog Audio Video Connections Digital Video Analog Video Antennas RS-232 Serial Port SPEAKER PLACEMENT GETTING STARTED INSTALLATION INITIAL SETUP Using the On-Screen Menu System Configure the AVR 460/AVR 360, Using EzSet/EQTM Technology Set Up Sources 29 29 29 29 30 30 30 30 30 31 31 32 32 34 35 35 35 36 37 37 OPERATION Turning On the AVR 460/AVR 360 Volume Control Dolby Volume Mute Function Sleep Timer Audio Effects Video Modes Headphones Source Selection Using the Radio RDS Functions Recording Using Docking Station Selecting a Surround Mode Processor Reset Memory TROUBLESHOOTING GUIDE APPENDIX TECHNICAL SPECIFICATIONS Trademark Acknowledgments NOTE: This Owner's Manual is the Basic version. It describes all functions essential for the use of the unit. For more in-depth information, please download the Advanced Functions Manual from the [harmankardon.com](http://www.harmankardon.com) web site. All references to the Advanced Functions Manual in the Basic Manual refer to the web-only, additional manual which explains functions that go beyond the basic use of the receiver. This Advanced Functions Manual also contains more worksheets and the remote control function list. 4 INTRODUCTION Please register your AVR 460/AVR 360 at www.harmankardon.com.

NOTE: You'll need the product's serial number. At the same time, you can choose to be notified about new products and/or special promotions. Harman Kardon aVr 460/aVr 360 7.1-channel audio/video receivers Audio Section · AVR 460: 80 Watts x 7, seven channels driven at full power at 8 ohms, 20Hz - 20kHz, <0.07% THD, 560 watts total. AVR 360: 65 Watts x 7, 455 watts total. · High-current capability, ultrawide-bandwidth amplifier design with low negative feedback · All-discrete amplifier circuitry · Quadruple-crossover bass management · Dual 32-bit Cirrus Logic® DSP processors · 192kHz/24-bit A/D and D/A conversion · Sampling upconversion to 96kHz · Dolby® Volume processing ENGLISH 5 thank you for choosing a Harman Kardon® product! For more than fifty years, the Harman Kardon® mission has been to share a passion for music and entertainment, using leading-edge technology to achieve premium performance. Harman Kardon, Inc., invented the receiver, a single component designed to simplify home entertainment without compromising performance. Over the years, Harman Kardon products have become easier to use, while offering more features and sounding better than ever. The AVR 460/AVR 360 multizone 7.1-channel digital audio/video receivers continue this tradition with some of the most advanced audio and video processing capabilities yet, and a wealth of listening and viewing options. To obtain the maximum enjoyment from your new receiver, please read this manual and refer back to it as you become more familiar with its features and their operation. If you have any questions about this product, its installation or its operation, please contact your Harman Kardon retailer or custom installer, or visit the Web site at www.harmankardon.com.

Surround Modes · Dolby Digital EX, Dolby Digital Plus, Dolby TrueHD · Dolby Pro Logic® II and IIx (Movie, Music and Game), up to 96kHz · Harman Virtual Speaker · Harman Headphone · DTS-HD High Resolution AudioTM, DTS-HD Master AudioTM · DTS® (5.1; DTS Stereo; DTS-ES® 6.1 Discrete and Matrix) · DTS 96/24TM (DTS Stereo) · DTS Neo:6® (Cinema 5-,6- or 7-channel; Music 5-, 6- or 7-channel), up to 96kHz · Logic 7® (Movie, Music and Game), up to 96kHz · 5- or 7-Channel Stereo, up to 96kHz · Surround Off (DSP or Analog Bypass) INTRODUCTION audio Inputs · AM/FM tuner · Analog Audio 1 through 5 · Front-panel Analog Audio · 6-/8-Channel Analog Audio ease of use · EzSet/EQTM automated setup (microphone supplied) · Full-color user interface and setup menu, generated in high-definition video · Two-line dot-matrix front-panel display · Color-coded connections · Programmable, learning eight-device main remote control (includes AVR control over The Bridge III) · Source input renaming · Lip Sync Delay (up to 180msec) · USB port for system upgrades · Switched accessorycessary, after you have adjusted the picture settings using the video display or TV. Surround Modes: Press this button to select a surround sound (e.

g., multichannel) mode. The Surround Modes menu will appear on screen, and the menu line will appear in the front-panel display. See the Advanced Functions Manual for more information on surround modes. Source List: Press this button to select a source device, which is a component where a playback signal origi is blocked, connect an optional IR receiver to the Remote IR Input jack. The Remote IR Output may be connected to the Remote IR Input of a compatible product to enable remote control through the AVR. Remote IR Carrier Output(AVR 460 only): This output is similar in function to the Remote IR Output, with the difference that this jack outputs the full infrared signal as received by the AVR's IR sensor or the Remote IR Input, while the Remote IR Output jack outputs a "stripped" signal that has no carrier frequency. HDMI Inputs and Output: HDMI (High-Definition Multimedia Interface) is a connection for transmitting digital audio and video signals between devices. Connect up to four HDMI-equipped source devices to the HDMI inputs using a single-cable connection. When you connect the HDMI Output to your video display, the AVR 460/AVR 360 will automatically transcode analog video signals to the HDMI format, upscaling to as high as 1080p.

NOTES: When connecting a DVI-equipped display to one of the HDMI Outputs: · Use an HDMI-to-DVI adapter. · Make sure the display is HDCP-compliant. If it isn't, do not connect it to an HDMI Output; use an analog video connection instead. · Always make a separate audio connection. Analog 1 5 Inputs: Connect the left and right analog audio outputs of a source device to any of these inputs. These inputs may be paired with any video inputs. NOTES: The Analog 2 and 4 inputs are each associated with a set of outputs. Consider using these connectors for an audio or video recorder. You may optionally connect a source to both an analog and digital audio input. This is useful for making recordings, for multizone applications or simply as a backup. 9 ENGLISH AM Antenna REAR-PANEL CONNECTIONS Analog 2 and 4 Outputs: Connect either of these analog audio outputs to the analog audio inputs of a recording device.



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A signal is available at these outputs whenever an analog audio source is playing. **Zone 2 Audio Outputs (AVR 460 only):** Connect these jacks to an external amplifier to power the speakers in the remote zone of a multizone system. **Subwoofer Output:** If you have a powered subwoofer with a line-level input, connect it to the Subwoofer Output. **The Bridge III Input:** Connect the Harman Kardon docking station to this input for use with most docking iPod models, 4G and later (not included).

Turn the receiver off (Standby mode) when connecting The Bridge III. **Fan Vents:** This area contains vents used by the AVR 460/AVR 360's fan to cool the system. Maintain a clearance of at least 8 cm from the nearest surface to avoid overheating the unit. 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.

IMPORTANT NOTE: Never block the fan vents, as doing so could allow the AVR to overheat to dangerous levels. **Composite 1, 2 and 3 Video Inputs:** Use these jacks to connect your video-capable source components (e.g., VCR, DVD player, cable TV box) to the receiver. Use only one type of video connection for each source. **Composite Video 2 Output:** Connect this analog video output to the composite inputs of a recording device. A signal is available at this output whenever an analog video source is playing. **Composite Monitor Output:** If any of your sources use composite connections, connect this monitor output to the corresponding input on your video display. If your video display is equipped with HDMI or component video inputs, this connection is unnecessary, as the AVR 460/AVR 360 will convert the composite video source signal to the correct format for a single video-cable connection to the TV. **Component Video 1/2 Inputs:** If a video source has analog component video (Y/Pb/Pr) capability, and if you are not using an HDMI connection, connect the component video outputs of the source to one of the sets of component video inputs.

Do not make any other video connections to that source. **Component Video Monitor Outputs:** If you are using one of the Component Video Inputs and your television or video display is component-video-capable (but does not have HDMI), connect these jacks to the video display. **NOTES:** · Due to copy-protection restrictions, there is no output at the Component Video Monitor Outputs for copy-protected sources. · Composite signals is upscaled to as high as 1080i and available at these outputs. If your video display's best connection is component video, it is the only video connection required from the AVR to the display. **AM and FM Antenna Terminals:** Connect the included AM and FM antennas to their respective terminals for radio reception. **Preamp Outputs (AVR 460 only):** Connect these jacks to an external amplifier if more power is desired. **The Surround Back/Zone 2 Preamp Outputs** may be used with an external amplifier to power the remote zone of a multizone system. **A-BUS Port (AVR 460 only):** Use a Category 5/5e cable to connect this port to optional A-BUS equipment for multizone operation. When the A-BUS system is used, it is possible to have a full 7.

1-channel system in the main listening room at the same time the multizone system is in use. **A-BUS IR Output (AVR 460 only):** This is an additional IR output that may only be controlled through the A-BUS system. Use it as a dedicated connection to sources used only with the A-BUS system. **Front, Center and Surround Speaker Outputs:** Use two-conductor speaker wire to connect each set of terminals to the correct speaker. Remember to observe the correct polarity (positive and negative connections).

Surround Back/Zone 2 Speaker Outputs: These speaker outputs are used for the surround back channels in a 7.1-channel home theater, or may be reassigned to a remote room for multizone operation. **Switched AC Accessory Outlet:** You may plug the AC power cord of one source device into this outlet, and it will turn on whenever you turn on the receiver. Do not use a source that consumes more than 50 watts of power. **AC Power Input (AVR 460 only, AVR 360 has a fixed power cord):** After you have made all other connections, plug the AC power cord into this receptacle and into an unswitched wall outlet.

10 REMOTE CONTROL FUNCTIONS IR Transmitter Lens AVR Power Off AVR Power On Device Power On Device Power Off Source Selectors Video Modes Audio Effects Alphanumeric Keys Surround Modes Last Back/Exit Activity Menu IR Transmitter KLM N Navigation OK Light Soft Keys Disc Menu Power Off OFF Mute Not used Info Source Selectors Volume Channel AVR Back/Exit Menu Back/Exit Mute Transport Controls Volume Controls Record Info Settings Setup Zone Selector SETUP INFO SLEEP LEARN Sleep Settings AVR Settings Menu KLM N Navigation OK Transport Controls Sleep Settings Zone Selector Learn (AVR 460 only) ZR 60 Zone Indicator MAIN REMOTE CONTROL ZONE 2 REMOTE CONTROL (AVR 460 only) The AVR 460/AVR 360 remote is capable of controlling 8 devices, including the AVR itself and an iPod docked in The Bridge III. During the installation process, you may program the codes for your source components into the remote. To operate a component, press its Selector button to change the device mode. Each Source Selector has been preprogrammed to control certain types of components, with only the codes specific to each brand and model changing, depending on which product code is programmed. The AUX and Cable/ SAT Source Selectors may be used for multiple device types. Other Source Selectors may be reassigned to other device types (see Initial Setup section). **AUX Source Selector:** CD player, VCR, HDTV set-top box, PVD or TiVo® set-top box. Refer to page 23 for details on Source Selection. **Cable/SAT Source Selector:** Cable set-top box or satellite set-top box. **IMPORTANT NOTE:** All of the AVR 460/AVR 360's audio and video inputs are independently assignable.

Select the inputs to which the device is physically connected during Initial Setup. Any device may be connected to any compatible input and given any name (e.g., DVD or Game). Most of the buttons on the remote have dedicated functions, although the precise codes transmitted vary, depending on the device mode.

Due to the wide variety of functions for various source devices, only a few of the most often used functions on the remote have been included: alphanumeric keys, transport controls, television-channel control, menu access, and power on and off. **11 ENGLISH REMOTE CONTROL FUNCTIONS** Buttons dedicated to the AVR are available at any time, even in another device mode: AVR Power On and Off, Audio Effects, Video Modes, Surround Modes, Volume, Mute and Sleep Settings. Press the AVR Settings Button near the bottom of the remote to return it to AVR mode. A button's function depends on which component is being controlled. See Table in the Advanced Functions Manual for listings of the functions for each type of component.



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IR Transmitter Lens: As buttons are pressed on the remote, infrared codes are emitted through this lens. *AVR Power On Button:* Press to turn on the AVR. *The Master Power Switch on the rear panel must be on.* *AVR Power Off Button:* Press to turn off the AVR. *Device Power On Button:* Press a device's Source Selector, then press this button to turn on the device.

Device Power Off Button: Press a device's Source Selector, then press this button to turn off the device. *Source Selectors:* Press one of these buttons to select a source device, e.g., Blu-ray Player, CS, Cable TV, DVD or satellite tuner. This will also turn on the receiver and switch the remote's device mode to operate the source.

The first press of the Radio Selector switches the AVR to the last-used tuner band (AM or FM). Each successive press changes the band. *Audio Effects:* Press to directly access the Audio Effects submenu, which allows adjustment of the AVR's tone and other audio controls. See the Initial Setup section for more information. *Video Modes:* Press for direct access to the Video Modes submenu, which contains picture settings to be used after you have adjusted the picture settings on the video display or TV. See the Advanced Functions Manual for more information. *Surround Modes:* Press to directly access the Surround Modes submenu. Select a Surround Mode category: Auto Select, Virtual Surround, Stereo, Movie, Music or Video Game. The surround mode will change when the menu line is highlighted. To change the surround mode for the selected category, press the OK Button when the menu line is highlighted, and select one of the available surround mode options using the KL Buttons.

Press the OK Button, or press the Back/Exit Button to exit the Surround Modes menu and display the next higher menu in the hierarchy. See the Advanced Functions Manual for more information on surround modes. *Alphanumeric Keys:* Use these buttons to enter numbers for radio station frequencies or channels, or to select station presets. *Last Channel:* When controlling a cable, satellite or HDTV set-top box or a TV, press this button to return to the previous station or channel. *Activity:* With this button, up to 11 Activities may be programmed to transmit a series of commands with a single press. Execute an Activity by pressing this button, then the Alphanumeric Key (or the AVR Power On or Off Button by themselves) into which it was programmed. See the Advanced Functions Manual for more information on Activities. *Back/Exit:* Press to return to the previous menu or to exit the menu system. *Menu Button:* This button is used within the Now Playing menu for the tuner, The Bridge III and to display the main menu on some source devices. To display the AVR's main menu, press the Setup Button.

Navigation (KLM N) and OK Buttons: These buttons are used to make selections within the menu system and to operate the tuner. *Light:* Press to illuminate the buttons on the remote. Press it again to turn the back light off, or wait 10 seconds after the last button press for the light to turn off on its own. *Disc Menu:* While a DVD is playing, press the DVD Source Selector, then this button, to display the disc's menu. *Soft Keys:* These buttons are used with some source devices.

See Table A14 in the Advanced Functions Manual for details. They are also used with a Teletext-capable television if your broadcast, cable or satellite provider offers Teletext service. *Volume Control:* Press to raise or lower the volume. *12 REMOTE CONTROL FUNCTIONS Mute Button:* Press to mute the AVR's speaker and headphone outputs. To end the muting, press this button, adjust the volume, or turn off the receiver.

Channel/Page Control: When the tuner has been selected, this control changes a preset radio station. While operating a cable, satellite or HDTV settop box or a television, press these buttons to change channels. *Transport Controls:* These buttons are used to control source playback and The Bridge III. *Record Button:* Use this button to make recordings when an audio or video recorder is in use. *Setup Button:* Press to display the AVR's Main Menu, or to switch the remote to AVR device mode. *Info Settings Button:* Press to display the AVR's Info Menu, which contains the settings for the current source. *Sleep Settings Button:* Press to activate the sleep timer, which turns off the receiver after a programmed period of time of up to 90 minutes. Each press decreases the timer by 10 minutes, ending with the "Sleep Off" message. *Zone Selector:* Use this switch to select whether AVR commands will affect the main listening area (Zone 1) or the remote zone of a multizone system (Zone 2). For normal operation, leave the switch in the Zone 1 position.

Learn (AVR 460 only): The AVR remote is capable of "learning" individual IR codes from the original remote that came with a source device. See page 24 in the Installation section. *Zone 2 remote control (AVR 460 only)* The Zone 2 remote control is used in the remote zone of a multizone system with an IR receiver connected to the Zone 2 IR Input or an A-BUS device. It may be used to control the power, volume and mute functions or to select a source input for the remote zone, and to control a Harman Kardon source connected to one of the AVR's Remote IR Outputs or the A-BUS IR Output. The Zone 2 remote may also be used in the main listening room to directly control the AVR 460 and Harman Kardon DVD, CD or tape players. When the Zone Selector is pressed to switch the remote to Zone 1 mode (the Zone Indicator will turn green), the power, volume and mute controls will only affect the main listening area. To control operation for the remote zone, press the Zone Selector so that the Zone Indicator turns red. The Zone 2 remote requires two AAA batteries (included) that are installed in the battery compartment on the back of the remote. Make sure to observe proper polarity by matching the + and - symbols on the batteries to the symbols printed inside the compartment. The following explanations describe the buttons that are not similar in function to the main remote control, or are found on the Zone 2 remote control only.

For explanations of all other Zone 2 remote control functions, see the descriptions above that cover functions that are common to the two Remote Controls as well as functions available on the Main Remote Control only. *Power:* Press to turn the AVR 460 on or off. The AVR also turns on its multizone system automatically when any of the Input Selectors is pressed, even if the AVR itself is in Standby mode. When in the main listening room, press any Input Selector or the AVR Selector to turn on the AVR 460. *Zone Selector and Zone Indicator:* Each press of the Zone Selector determines whether the AVR commands will affect the main listening area (Zone 1) or the remote zone (Zone 2).

The Zone Indicator will turn green when Zone 1 has been selected, and red for Zone 2. The Zone Indicator will also light briefly whenever any button is pressed.



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Instructions for users on removal and disposal of used batteries. Specification of included battery types. These symbols shown on the product, the packaging or in the manual or separate information sheet mean that the product itself, as well as the batteries included or built into the product, should never be thrown away with general household waste.

Take them to suitable collection points, where proper treatment, recycling and recovery take place, in accordance with national or local legislation, or European Directives 2002/96/EC and 2006/66/EC. Correct handling of the product and batteries to be disposed of helps to save resources and prevents possible negative effects on the environment or human health. The batteries included with your equipment may be Alkaline, Carbon Zinc/ Manganese or Lithium (button cells) type. All types should be disposed of according to the above instructions. To remove the batteries from your equipment or remote control, reverse the procedure described for inserting batteries in the Owners Manual. For products with a built-in battery that lasts for the lifetime of the product, removal may not be possible for the user. In this case, recycling or recovery centers handle the dismantling of the product and the removal of the battery. If, for any reason, it becomes necessary to replace such a battery, this procedure must be performed by authorized service centers. 13 ENGLISH INTRODUCTION TO HOME THEATER This introductory section will help you to familiarize yourself with some basic concepts unique to multichannel surround sound receivers, which will make setup and operation smoother. Surround modes There are different theories as to the best way to present surround sound and to distribute information to the speakers.

A variety of algorithms have been developed in an effort to reproduce the way we hear sounds in the real world, resulting in a rich variety of options. Several companies have taken surround sound in different directions: · Dolby Laboratories Dolby TrueHD, Dolby Digital Plus, Dolby Digital, Dolby Digital EX, Dolby Pro Logic II and IIx · DTS DTS-HD High Resolution Audio, DTS-HD Master Audio, DTS, DTS-ES (Discrete and Matrix), DTS Neo:6, DTS 96/24 · Harman International (the Harman Kardon parent company) Logic 7, Harman Virtual Speaker, Harman Headphone · Stereo Modes Generic modes that expand upon conventional 2-channel stereo, including 5- and 7-channel stereo Table A13 in the Advanced Functions Manual contains detailed explanations of the mode groups and the mode options available within each group. Digital modes, such as Dolby Digital and DTS, are only available with specially encoded programs, such as HDTV, Blu-ray Disc media and digital cable or satellite television. Other modes may be used with digital and analog signals to create a different surround presentation, or to use a different number of speakers. Surround Mode selection depends upon the number of speakers in your system, the materials you are watching or listening to, and your personal tastes. typical Home theater System A home theater typically includes an audio/video receiver, which controls the system; a disc player; a source component for television broadcasts (cable box, satellite dish receiver, HDTV tuner or antenna connected to the TV); a video display (television); and loudspeakers. multichannel audio The main benefit of a home theater system is the placement of loudspeakers around the room to produce "surround sound." Surround sound immerses you in the presentation for increased realism. The AVR 460/AVR 360 may have up to seven speakers connected directly to it (plus a subwoofer). Each main speaker is powered by its own amplifier channel inside the receiver.

A system with more than two speakers is called a multichannel system. · Front Left and Right The main speakers are used as in a 2-channel system. In many surround modes, these speakers are secondary, while the main action, especially dialogue, is moved to the center speaker. · Center The center speaker is used for dialogue in movies and television programs, allowing the dialogue to originate near the actors' faces, for a more natural sound. · Surround Left and Right The surround speakers improve directionality of ambient sounds.

In addition, more loudspeakers play dynamic soundtracks without risk of overloading any one speaker. · Surround Back Left and Right Additional surround speakers may be placed behind the listening position, improving the precision of ambient sounds and allowing for more realistic pans. The surround back speakers are used with surround modes designed for 7.1-channel systems, such as Dolby Digital EX, Dolby Digital Plus, Dolby TrueHD, DTS-ES (Discrete and Matrix), DTS-HD High Resolution Audio, DTS-HD Master Audio and Logic 7 (7.1 mode).

The surround back speakers are optional, and the AVR 460/AVR 360 may be set up with a 5.1- system in the main listening area, and the surround back channels reassigned to a multizone system, where the surround back channels power loudspeakers located in another room. Many people expect the surround speakers to play as loudly as the front speakers. Although all of the speakers in the system will be calibrated to sound equally loud at the listening position, most artists use the surround speakers for ambient effects only, and they program their materials to steer very little sound to these speakers. · Subwoofer A subwoofer is designed to play only the lowest frequencies (the bass). It augments smaller, limited-range satellite speakers used for the other channels. Many digital-format programs, such as movies recorded in Dolby Digital, contain a low-frequency effects (LFE) channel which is directed to the subwoofer. The LFE channel packs the punch of a rumbling train or airplane, or the power of an explosion, adding realism and excitement to your home theater. Some people use two subwoofers, for additional power and even distribution of the sound. 14 CONNECTIONS There are different types of audio and video connections used to connect the receiver, the speakers, the video display, and the source devices.

The Consumer Electronics Association has established the CEA® color-coding standard. See Table 1. Subwoofer The subwoofer is dedicated to the low frequencies (bass), which require more power. To obtain the best results, most speaker manufacturers offer powered subwoofers that contain their own amplifier. Usually, a line-level (nonamplified) connection is made from the receiver's Subwoofer Output to a corresponding jack on the subwoofer, as shown in Figure 3. Although the purple subwoofer outputs look similar to full-range analog audio jacks, they are filtered to allow only the low frequencies to pass.

Don't connect these outputs to any other devices. ENGLISH 15 Table 1 Connection Color Guide Audio Connections Front (FL/FR) Center (C) Surround (SL/SR) Surround Back (SBL/SBR) Subwoofer (SUB) Digital Audio Connections Coaxial Optical Video Connections Component Composite S-Video HDMI Connections (digital audio/video) HDMI Y Green Pb Blue Yellow Pr Red Input Orange Output Blue Brown Purple Left White Green Gray Tan Right Red Preout Subwoofer Figure 3 Subwoofer connectInG Source DeViceS to tHe AVR Audio and video signals originate in "source devices," including your Blu-ray Disc or DVD player, CD player, DVR (digital video recorder) or other recorder, tape deck, game console, cable or satellite television box, an iPod or iPhone docked in The Bridge III docking station or an MP3 player.



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The AVR's tuner also counts as a source, even though no external connections are needed, other than the FM and AM antennas. Separate connections are required for the audio and video portions of the signal, except for digital HDMI connections.

The types of connections used depend upon the capabilities of the source device and video display. Figure 1 Speaker connections Speaker cables carry an amplified signal from the receiver's speaker terminals to each loudspeaker. They contain two wire conductors, or leads, inside plastic insulation, that are differentiated in some way, such as with colors or stripes. The differentiation preserves polarity, without which low-frequency performance can suffer. Each speaker is connected to the receiver's speakeroutput terminals using two wires, one positive (+) and one negative (-).

Always connect the positive terminal on the speaker, which is usually colored red, to the positive terminal on the receiver, which is colored as indicated in the Connection Color Guide above (Table 1). The negative terminals are both black. The AVR 460/AVR 360 uses binding-post speaker terminals that can accept bare-wire cables. Bare wire cables are installed as follows (see Figure 2): 1. Unscrew the terminal cap until the pass-through hole is revealed.

2. Insert the bare end of the wire into the hole. 3. Hand-tighten the cap until the wire is held snugly. audio connections There are two types of audio connections: digital and analog. Digital audio signals are required for listening to sources encoded with digital surround modes, such as Dolby Digital and DTS, or for noncompressed PCM digital audio. There are three types of digital audio connections: HDMI, coaxial and optical. Do not use more than one type of digital audio connection for each source device. However, it's okay to make both analog and digital audio connections to the same source. NOTE: HDMI signals may carry both audio and video.

If your video display device has an HDMI input, make a single HDMI connection from each source device to the AVR. Usually, a separate digital audio connection is not required. Turn the volume on your television all the way down. Figure 2 Binding-Post Speaker Terminals With Bare Wires CONNECTIONS Digital audio The AVR 460/AVR 360 is equipped with four HDMI (High-Definition Multimedia Interface) inputs, and one output. HDMI technology enables digital audio and video information to be carried using a single cable, delivering the highest quality picture and sound. The AVR 460/AVR 360 uses HDMI (V.1.3a with Deep Color) technology and is capable of processing both the audio and video components of the HDMI data, minimizing the number of cable connections in your system. The AVR 460/AVR 360 implements Deep Color, which increases by an order of magnitude the shades of color that can be displayed, and the latest lossless multichannel audio formats, including Dolby TrueHD and DTS-HD Master Audio. NOTE: Some DVD-Audio, SACD, Blu-ray Disc and HD-DVD players only output multichannel audio through their multichannel analog outputs.

Make a separate analog audio connection in addition to the HDMI connection, which is still used for video and to listen to Dolby Digital, DTS or PCM materials that may be stored on the disc. The AVR 460/AVR 360 converts analog video signals to the HDMI format, including its on-screen menus, upscaling to high-definition 1080p resolution. The HDMI connector is shaped for easy plug-in (see Figure 4). If your video display has a DVI input and is HDCP-compliant, use an HDMI-to-DVI adapter (not included). A separate audio connection is required.

HDMI cable runs are limited to about 3 meter. analog audio Two-channel analog connections require two cables, one for the left channel (white) and one for the right channel (red). These two cables are often attached to each other. See Figure 7. For sources that are capable of both digital and analog audio, you may make both connections.

The analog audio connection is required for multizone operation, as the AVR 460/AVR 360's multizone system is not capable of converting a digital signal to analog format. Use the analog audio connections even with the Surround Back/Zone 2 speaker outputs, in case another 2-channel digital audio source is in use in the main listening area. The AVR 460/AVR 360 is only capable of processing one PCM source at a time. You may only record materials from DVDs or other copy-protected sources using analog connections. Remember to comply with all copyright laws, if you choose to make a copy for your own personal use.

Analog audio cable (RCA) L R Figure 7 Analog Audio The 6/8-Channel Inputs are multichannel analog connections that are used with high-definition sources that decode the copy-protected digital content, such as some DVD-Audio, SACD, Blu-ray Disc and HD-DVD players (See Figure 8). The multichannel analog audio connection is not required for players compliant with HDMI version 1.1 or better, or that output linear PCM signals via an HDMI connection. Consult the owner's guide for your disc player for more information. Front Multichannel analog audio cable (RCA) White Surround Blue Center Green Subwoofer Red Gray Purple Figure 4 HDMI Connection If your video display or source device is not HDMI-capable, use one of the analog video connections (composite or component video) and a separate audio connection.

Coaxial digital audio jacks are usually color-coded in orange. Although they look similar to analog jacks, you should not connect coaxial digital audio outputs to analog inputs or vice versa. See Figure 5. Coaxial digital audio cable Coaxial Figure 8 Multichannel Analog Audio Figure 5 Coaxial Digital Audio Optical digital audio connectors are normally covered by a shutter to protect them from dust. The shutter opens as the cable is inserted. Input connectors are color-coded using a black shutter, while outputs use a gray shutter. See Figure 6. Optical digital audio cable Optical Figure 6 Optical Digital Audio The AVR 460/AVR 360 also includes a proprietary, dedicated audio connection for The Bridge III docking station for iPod or iPhone. If you own a docking iPod (most models, 4G or later), iPhone or iPhone 3G, connect The Bridge III to The Bridge III port on the receiver. See Figure 9.

Dock your iPod or iPhone (not included) in The Bridge III, and you may listen to your audio materials through your high-performance audio system. You may view still images or video materials stored on a photo- or video-capable iPod that supports video browsing, or an iPhone. Use the AVR 460/AVR 360 remote to control the device, with navigation messages displayed on the front panel and on a video display connected to the AVR. The Bridge III outputs analog audio to the AVR 460/AVR 360, and is available to the multiroom system. Figure 9 The Bridge III port 16 CONNECTIONS Video connections Many sources output both audio and video signals (e.



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g., Blu-ray Disc or DVD player, cable television box, HDTV tuner, satellite box, VCR, DVR). In addition to the audio connection, make one type of video connection for each of these sources (only one at a time for any source). antennas The AVR 460/AVR 360 uses separate terminals for the included FM and AM antennas. The FM antenna uses a 75-ohm F-connector.

See Figure 12. Digital Video If you have already connected a source device to one of the HDMI inputs, you have automatically made a video connection, as the HDMI signal includes both digital audio and video components. Figure 12 FM Antenna There are two types of analog video connections: composite video and component video. Composite video is the basic connection most commonly available. The jack is usually color-coded yellow, and looks like an analog audio jack. Do not plug a composite video cable into an analog or coaxial digital audio jack, or vice versa. Both the chrominance (color) and luminance (intensity) components of the video signal are transmitted using a single cable. See Figure 10. Composite video cable Figure 13 AM Antenna Figure 10 Composite Video Component video separates the video signal into three components one luminance ("Y") and two sub-sampled color signals ("Pb" and "Pr") that are transmitted using three separate cables. See Figure 11.

Y Component video cable Green Pb Blue Pr Red uSB port The USB Port on the AVR is used only for software upgrades. If an upgrade for the receiver's operating system is released in the future, it may be downloaded to the AVR using this port. Complete instructions will be provided at that time. Figure 11 Component Video If it's available on your video display, an HDMI connection is recommended as the best quality connection, followed by component video and then composite video. NOTES: · HDCP-copy-protected sources are not available at the Component Video Monitor Outputs. · Standard and high-definition analog video signals may be upscanned to 1080i resolution for the Component Video Monitor Outputs. For improved video performance, consider upgrading to an HDMI-capable video display with 1080p resolution. 17 ENGLISH Analog Video The AM loop antenna needs to be assembled. Connect the two leads to the spring terminals on the receiver. The AM antenna leads have no polarity, and you may connect them to either terminal.

See Figure 13. SPEAKER PLACEMENT Optimally, the speakers should be placed in a circle with the listening position at its center. The speakers should be angled so that they directly face the listening position. Green Purple White SUB C FR Red 30° 30° front Speaker placement The center speaker is placed either on top of, below or mounted on the wall above or below the video display screen. The front left and right speakers are placed along the circle, about 30 degrees from the center speaker and angled toward the listener.

Place the front left/right and center speakers at the same height, preferably at about the same height as the listener's ears. The center speaker should be no more than approx. 60 cm above or below the left/right speakers. If you're using only two speakers with the AVR 460/AVR 360, place them in the front left and right positions. Placement of the surround speakers depends on the number of speakers in your system.

Green Purple White SUB FL 90° 150° 150° 90° SL SR Blue Gray Brown SBL SBR Tan C FR Red 30° 30° Figure 15 Speaker Placement (7.1- Channel System) FL 110° 150° 150° 110° NOTE: Some speaker manufacturers offer 6.1-channel speaker systems, for 6.1-channel surround sound formats, such as Dolby Digital EX, DTS-ES Discrete and Matrix modes and DTS Neo:6 mode. Using the AVR 460/ AVR 360 in a 6.1-channel configuration is not recommended. The 6.1-channel formats will sound better when played through a 7.1-channel system. The same surround back channel information is played through both surround back speakers, but with twice the power and clarity.

To use the AVR 460/AVR 360 with a 6.1-channel speaker system, place the single surround back speaker directly behind the listener, but do not connect it until after you have run the EzSet/EQTM procedure for a 5.1-channel system. After the EzSet/EQTM process finishes, connect the surround back speaker to the Surround Back Left Speaker Output. Then follow the directions in the Advanced Functions Manual for manual setup of the surround back speaker. SL SR Blue Gray Alternate placement for Side Surround Left Speaker (Blue) Alternate placement for Side Surround Right Speaker (Gray) Subwoofer placement Placement of the subwoofers is less critical, since low-frequency sounds are omnidirectional. Placing each subwoofer close to a wall or in a corner will reinforce the low frequencies, and may create a "boomy" sound. Temporarily place one subwoofer where the listener normally sits, then walk around the room until the low frequencies sound best. Place the subwoofer in that spot. NOTE: Your receiver will sound its best when the same model or brand loudspeaker is used for all positions.

Figure 14 Speaker Placement (5.1- Channel System) placement of Surround Speakers in a 5.1-channel System The side surround speakers should be placed 110 degrees from the center speaker, slightly behind and angled toward the listener. Alternatively, place them behind the listener, with each surround speaker facing the oppositeside front speaker. See Figure 14.

The surround speakers may be placed a little higher than the listener's ears. placement of Surround Speakers in a 7.1- channel System In a 7.1- channel system, the side surround speakers are placed 90 degrees from the center speaker, directly to either side of the listening position. The surround back left and right speakers are placed 150 degrees from the center speaker, or directly facing the opposite-side front speaker.

See Figure 15. 18 GETTING STARTED Installing the AVR 460/AVR 360 and connecting it to the other system components can be complex. To simplify installation, it is suggested that you design your system before you begin connecting wires and cables. Although the rear-panel jacks allow for a variety of audio and video connections to other components, the AVR's software organizes the connections into 6 conventional sources: Cable/SAT, DVD, TV, Game, Media Server and AUX. The internal sources (The Bridge III dock for iPod and the Radio) will be explained later. Table A1 in the appendix indicates the default device types for each source, and the default audio/video connection assignments. If the defaults suit your system, then connect your devices to the audio/video inputs shown. Otherwise, design your system as explained below. 1. Best video connection type for your system: Examine the video inputs on your TV or video display.



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Write down the best available video connection type here: _____. The options, in order of preference, are: HDMI, DVI (must be HDCP-compliant), component video or composite video. This is the "systembest" video connection for your system. 2. Decide which source will be used for each device: Match up to 6 devices to the 6 conventional sources listed in the Table 2 worksheet below. Use the AUX source for any of these device types: CD player, HDTV set-top box, personal video recorder (PVR), TiVo device or VCR. NOTE: You may match any device type to any source. The device type is only relevant for programming control codes into the handheld remote and, as explained on page 23, you may reassign any Source Selector's device type. Any audio or video source may be connected to any matching jack on the AVR, regardless of device type. 3.

Best video connection for each source: Examine each source device and write down the best available type of video connection, but not better than the system-best connection. Leave blank audio-only sources, such as a CD player. 4. Best audio connection for each source: For each source device, write down the best available type of audio connection. See the note below, and if the HDMI connection may be used for audio, it is the best option.

The other options, in order of preference, are: optical digital audio, coaxial digital audio, 2-channel analog audio. ENGLISH NOTES: · For multichannel disc players, if both the device and the TV use HDMI connections for video, then check the owner's manual for the device to determine whether it transmits multichannel audio via its HDMI output. If it does, then no separate audio connection is required. If not, write down the multichannel analog audio connection in addition to any other audio type. · If the device uses an HDCP-compliant DVI output for video, then connect it to one of the AVR's HDMI Inputs using an HDMI-to-DVI adapter, but a separate audio connection will always be required.

table 2 Source assignment Worksheet Best Video Connection (HDMI, DVI, Component, Composite) Best Audio Connection (HDMI, Optical, Coaxial, 2-Ch Analog, 6-/8Ch Analog) Audio Input Assigned (may be one digital plus one or more analog) Source Cable/SAT DVD TV Game Media Server AUX Device Type Video Input Assigned Analog Audio Input for Recording or Multizone Operation 19 GETTING STARTED 5. Decide which sources to connect to each of the video inputs: Assign only one unique video input to each source. Use the best type of video connection available for each source. · If your system-best video connection is "HDMI", select up to four HDMI source devices and assign them to one of the four numbered HDMI Inputs. · If your system-best video connection is "Component", or if you have source devices with component video outputs that weren't assigned to one of the HDMI Inputs, assign up to two devices to one of the two numbered Component Video Inputs. · If your system-best video connection is "Composite Video", or if you have source devices with composite video outputs that have not been assigned to any other video input, then assign up to three devices to one of the three numbered composite video Inputs. NOTE: If the source device is a video recorder that will be used to record from other devices connected to the AVR, assign the recorder to the Composite Video 2 Input, which has a recording output. Any of the Coaxial or Optical Digital Inputs may be assigned to the recorder for audio, if it is capable of making digital audio recordings. To make analog recordings, assign either the Analog 2 or 4 Audio Inputs to the recorder, as both have recording outputs. It is not necessary to connect TiVo or Video Recorder devices that will only record from their direct cable or satellite television signals to the AVR's recording outputs.

6. Decide which audio inputs to connect to each source: Assign only one unique digital audio input to each digital source. Assign analog audio inputs to analog sources, or as secondary connections for digital sources for backup, for recording or to make the source available to the multizone system. · Any source using an HDMI Input requires no additional connection for audio unless: The source doesn't output multichannel audio through its HDMI output. Make a second connection to the 6-/8-Channel Analog Audio Inputs. The source has an HDCP-compliant DVI output for video only. Assign a digital or analog audio input. · For any source whose best audio connection is optical or coaxial digital audio, assign one of the three Optical (AVR 360: two Optical Inputs) or two Coaxial Digital Audio Inputs. Do not connect both types of digital audio to the same source device. · You may assign one of the 2-Channel Analog Audio Inputs to a digital source.

· You may also assign the 6-/8-Channel Analog Audio Inputs, if available, to a digital source. · Assign one of the five 2-channel Analog Audio Inputs to an analog source. NOTE: If the source device is a digital audio recorder, it may be used with any of the Coaxial or Optical Digital Audio Inputs and the Coaxial Digital Audio Output. Both coaxial and optical signals are available at either digital audio output. To make analog recordings, assign either the Analog 2 or 4 Audio Inputs to the recorder, as both have recording outputs.

20 INSTALLATION You are now ready to begin installing the AVR. Before beginning to connect the various components to the receiver, turn off all devices, including the AVR 460/AVR 360, and unplug their power cords. Don't plug in any of the power cords until you have finished making all of your connections.

The receiver generates heat. Select a location that leaves several centimeters of space on all sides.

@@@Some shelf surface finishes are delicate. Try to select a location with a sturdy surface finish. @@@@Signals transmitted through the Zone 2 Input will control source selection and volume for the main or remote zone, depending on the setting of the remote's Zone Selector. @@@@Use the Remote IR Output for devices expecting a stripped signal. C. @@@@D. @@@@A hub may distribute audio to many remote rooms. @@@@Failure to do so may present a safety hazard. @@@@An A-BUS system does not require a separate IR control connection. @@For digital sources, make a second, analog audio connection.

@@@It is recommended that you place the amplifier in the same room as the AVR so that a shorter length of interconnect cable is used with a long run of speaker wire to the remote room. A long run of interconnect cable would be subject to signal degradation. Depending on your amplifier, distribute the audio signal to a single pair of speakers, or to several pairs placed in different rooms. The Zone 2 Audio Outputs offer the benefit of 7.1-channel audio in the main room simultaneously with multizone operation. However, the benefit is achieved with the expense of an additional component, i.



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e., the amplifier. B. Connect the remote room's speakers directly to the Surround Back/Zone 2 Speaker Outputs.

Reassign the Surround Back amplifier channels to power the speakers (see Advanced Functions Manual). Your main system will be limited to 5.1 channels, affecting playback of programs recorded in 6.1 or 7.1 channels, which will be downmixed.

22 INSTALLATION Step nIne plug in ac power cords Before plugging the AVR into an unswitched electrical outlet, make sure the Main Power Switch on the rear panel is off, to prevent the possibility of damaging the AVR in case of a transient power surge. You may plug one device that draws no more than 50 watts into the AC Switched Accessory Outlet on the rear panel. Turn on the device's mechanical or master power switch, and that device will power on any time the AVR 460/AVR 360 is turned on (some devices may require additional steps to power on from their standby mode). If the device has a clock or must always be on (such as a cable set-top box programmed to make recordings), do not plug it into this outlet. The AVR 460 is equipped with a detachable power cord, allowing you to fully wire your system before installing the AVR.

Plug the male end of the cord into an AC outlet, and the female end into the AVR 460. The Advanced Manual available for download from the harman/kardon web site contains a Table A5 designed for you to enter the information from Table 2 for future reference. Step eLeVen program Sources Into the remote The AVR 460/AVR 360 remote may be programmed to control many brands and models of DVD players, cable boxes, satellite receivers, the Harman Kardon DMC 1000 digital media center and TVs. It is also preprogrammed to operate your iPod when docked in The Bridge III. To access the functions for a particular device, switch the remote's device mode. Press the Setup Button to access the codes that control the receiver, or the Source Selector Buttons to access the codes for the devices programmed into the remote. HK Blu-ray codes in DVD Button. How to toggle between HK Blu-ray and HK DVD control codes. Main Remote Control: Press and hold the DVD Button until it blinks and goes out again. Then enter code 001 for HK Blu-ray or 002 for HK DVD.

Press the DVD Button once more. It blinks 3 times to confirm entry. Zone 2 Remote Control (AVR 460 only): To toggle between HK Bluray and DVD remote codes, press and HOLD the DVD button. After 2 seconds, the LED will blink twice to confirm entry. Note that out of the box, when first powered up, the default mode is HK Bluray, and when the DVD button sequence is run, it toggles to the other option of standard HK DVD. Step ten Insert Batteries in remote The AVR 460/AVR 360 remote control uses four AAA batteries (included). To remove the battery cover located on the back of the remote, squeeze the tab and lift the cover. @@@@The first digit of the product code indicates the device type. 2. Turn on your source device.

3. @@Then release it. @@@@The remote has a range of about 7 meter, depending on the lighting conditions. It may be used at an angle of up to 30 degrees to either side of the AVR. Leave the Zone Selector Switch at the bottom in the Zone 1 position for normal use.

If the remote seems to operate intermittently, or if pressing a button on the remote does not cause the Setup Button or one of the Source Selectors to light, check or replace the batteries. 23 ENGLISH INSTALLATION 4. Enter a code from Step 1, above. a) If the device turns off, press the Source Selector again to save the code. It will flash and the remote will exit Program mode.

b) If the device does not turn off, enter another code. If you run out of codes, search through all of the codes in the remote's library for that product type by pressing the K or L Button repeatedly until the device turns off. When the device turns off, save the code by pressing the Source Selector. It will flash, and the remote will exit Program mode. 5. Check that other functions control the device correctly. Sometimes manufacturers use the same Power code for several models, while other codes vary. Repeat this process until you've programmed a satisfactory code set that operates most functions. 6. Find out which code number you have programmed by pressing and holding the Source Selector to enter the Program mode.

Press the OK Button, and the Source Selector will flash in the code sequence. One flash represents "1", two flashes for "2", and so forth. A series of many fast flashes represents "0". Record the codes programmed for each device in Table A9 in the appendix. Most of the button labels on the remote describe the button's function when used to control the AVR. However, the button may perform a different function when used to control another device. Refer to the Remote Control Function List, Table A13 in the Appendix. Activities are preprogrammed code sequences that execute many code commands with a single button press. "Punch-through" programming allows the remote to operate a device's channel or transport controls with the remote in another device's mode.

See the Advanced Functions Manual for instructions on these advanced programming functions.

Step tWeLVe turn on the aVr 460/aVr 360 Two steps are required the first time you turn on the AVR 460/AVR 360. 1. Flip the rear-panel Main Power Switch to the "On" position. The Power Indicator on the front panel will turn amber, indicating that the AVR is in Standby mode and is ready to be turned on.

Normally, you may leave the Main Power Switch on, even when the receiver is not being used.

2. There are several ways to turn on the AVR from Standby mode. a) Press the Standby/On Switch on the front panel. b) Using the remote, press the AVR Power On Button or any of the Source Selectors. NOTES: · Any time you press one of the Source Selectors on the remote, the remote will switch device modes.

To control the receiver, press the Setup Button. Some AVR functions are available in all device modes: Volume Controls (including Mute), Audio Effects, Video Modes, Surround Modes, Setup, Info Settings, Sleep Settings and AVR Power On and Off. · If you do not see a picture within about 1 minute, refer to the

Video Troubleshooting Tips on page 30. to "learn" individual key codes (aVr 460 only): You may reprogram individual keys from the device's original remote by following this procedure: a) Place the two remotes with their IR transmitters facing each other, about 2,5 cm apart. See Figure 18. Figure 18 AVR and Device Remotes "Head to Head" b) Press the destination Source Selector, then press and hold the Learn Button until the Source Selector lights up. c) Press the destination button, and the Source Selector will flash once. You may learn a new code into the following buttons: Device Power On/Off, Alphanumeric Keys, Last Button, Back/Exit Button, Menu Button, KLM N Navigation Buttons, OK Button, Disc Menu Button, the four Soft key Buttons, Channel Up/Down, Volume Up/Down, Mute and the Transport Controls (including Record).



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