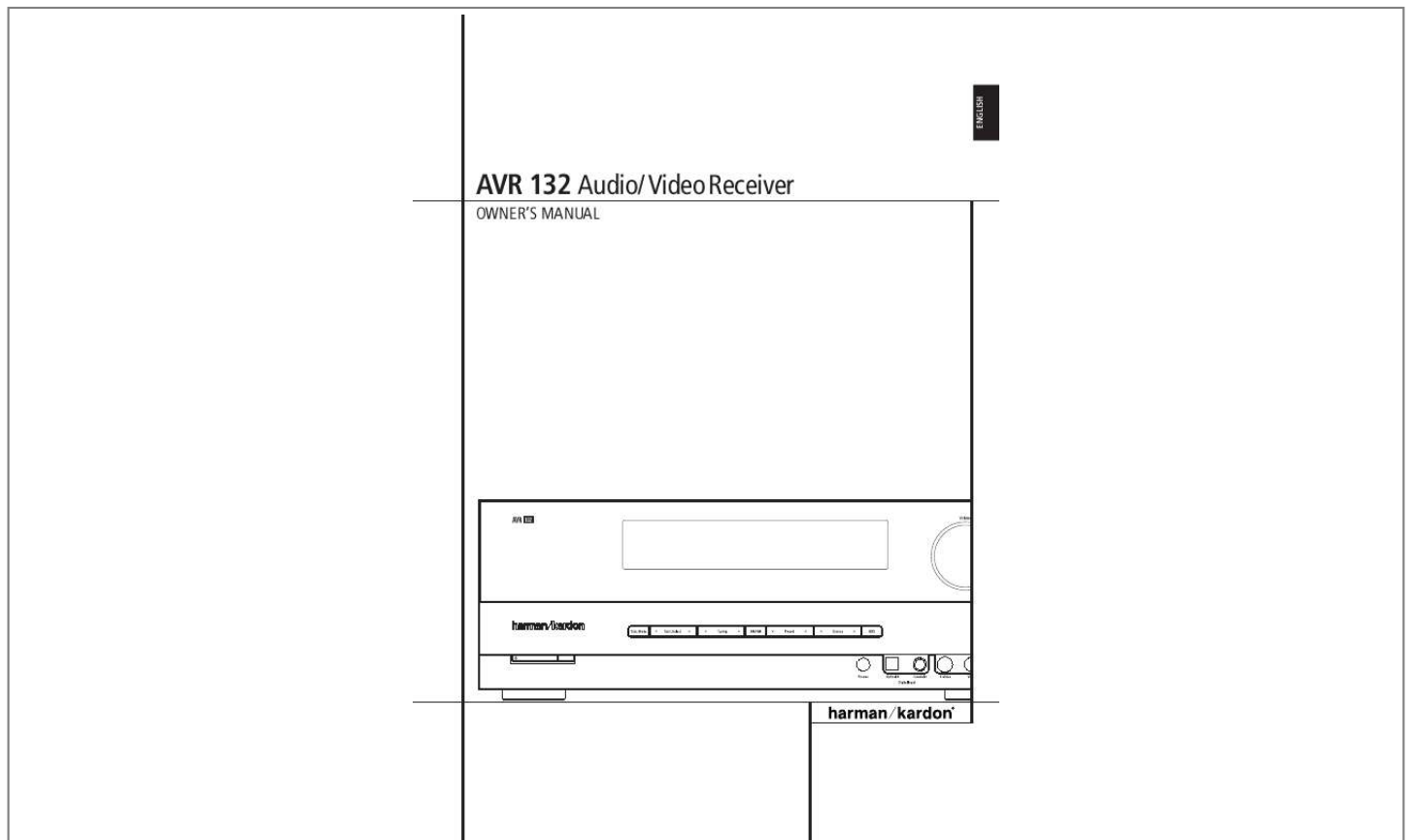# Your PDF Guides

You can read the recommendations in the user guide, the technical guide or the installation guide for HARMAN KARDON AVR 132. You'll find the answers to all your questions on the HARMAN KARDON AVR 132 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 132
User guide HARMAN KARDON AVR 132
Operating instructions HARMAN KARDON AVR 132
Instructions for use HARMAN KARDON AVR 132
Instruction manual HARMAN KARDON AVR 132

ENGLISH

AVR 132 Audio/Video Receiver
OWNER'S MANUAL

harman/kardon

Manual abstract:

While complex digital systems are hard at work within the AVR 132 to make all of this happen, hookup and operation are simple. Color-keyed connections and a programmable remote control make the AVR easy to use. To obtain the maximum enjoyment from your new receiver, we urge you to take the time to read through this manual. @@@@@@He is your best local source of information. @@In addition to Dolby Digital and DTS decoding for digital sources, a broad choice of analog surround modes are available for use with sources such as CD, VCR, TV broadcasts and the AVR's own FM/AM tuner. Along with the latest Dolby ProLogic II® decoding technology, Dolby 3 Stereo, 5 Ch Stereo and custom Hall and Theater modes, only Harman Kardon receivers offer Logic 7® to create a wider, more enveloping field environment and more defined fly-overs and pans. In addition to providing a wide range of listening options, the AVR 132 is easy to configure so that it provides the best results with your speakers and specific listening-room environment. A Stereo-Direct mode bypasses the digital processor to preserve all of the subtleties of older analog, two-channel materials, while bass management, available in the surround and Stereo-Digital modes,improves your ability to tailor the sound to suit your room acoustics or taste. For the ultimate in flexibility, the AVR 132 features connections for four video devices, all with both composite and S-Video inputs, including the front-panel inputs. Two additional audio inputs are available, and a total of six digital inputs make the AVR 132 capable of handling all the latest digital audio sources.

A video recording output and a six-channel input make the AVR 132 virtually future-proof, with everything needed to accommodate tomorrow's new formats right on board. The AVR 132's powerful amplifier uses traditional Harman Kardon high-current design technologies to meet the wide dynamic range of any program selection. Harman Kardon invented the high-fidelity receiver fifty years ago. With state-of-the-art circuitry and time-honored circuit designs, the AVR 132 is one of the finest receivers ever offered by Harman Kardon within its price range. Onboard Dolby Digital and DTS Decoding Using Crystal® Chip Technology Harman Kardon's exclusive Logic 7® processing, along with a choice of Dolby Virtual Speaker processing for use when only two speakers are available Dolby Headphone to create spacious, open sound fields when using headphones Dolby Laboratory's latest ProLogic II decoding technology. Stereo-Direct Mode for Two-Channel Sources Bypasses DSP Processing to Preserve the Integrity of Analog Materials Stereo-Digital Mode for Programmable Bass Management of Low Frequencies Between Main Speakers and Subwoofer Front panel digital inputs for easy connection to portable digital devices and the latest video game consoles Multiple Digital Inputs 6-Channel Direct Input for Use With DVD-Audio or SACD Players and Other Products With Internal Surround Decoders Color-Coded Input,Output and Speaker Terminals Comply With CEA Standards for Easy Installation Remote with Internal Codes Capability High-bandwidth, HDTV-compatible component video switching Input titling for all input sources (except tuner) ENGLISH INTRODUCTION 3 Safety Information Important Safety Information READ THIS BEFORE OPERATING YOUR UNIT. Do not install this equipment in a confined space such as a case or similar away from direct sunlight, heat sources, vibration, dust, moisture, and/or cold. Avoid installing this unit where foreign object may fall onto this unit and/or this unit may be exposed to liquid dripping or splashing. On the top of this unit, do not place: Burning objects (i.e.

candles), as they may cause fire, damage to this unit, and/or personal injury. Containers with liquid in them, as they may fall and liquid may cause electrical shock to the user and/or damage to this unit. Do not cover this unit with a newspaper, tablecloth, curtain, etc. in order not to obstruct heat radiation. If the temperature inside this unit rises, it may cause fire, damage to this unit, and/or personal injury. Install this unit near the AC outlet and where the AC power plug can be reached easily. This unit is not disconnected from the AC power source as long as it is connected to the wall outlet, even if this unit itself is turned off. This state is called the standby mode. In this state, this unit is designed to consume a very small quantity of power. WARNING TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE.

Verify Line Voltage Before Use Your AVR 132 has been designed for use with 220-240-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 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 depot 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. 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 station. Installation Location To assure 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 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. Cleaning When the unit gets dirty, wipe it with a clean, soft, dry cloth.

If necessary, wipe it with a soft cloth dampened with mild soapy water, then a fresh cloth with clean water. Wipe 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. Avoid spraying insecticide near the unit. 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. 4 SAFETY INFORMATION Front Panel Controls E D F 5 J I ENGLISH DIGITAL PRO LOGIC 3 STEREO DSP LOGIC 7 VID 1 VID 2 VID 3 DVD CD FMAM TAPE 6 CH 5 CH. STEREO SURR. OFF 1 2 6 C 7 8 9 B A3 4 G H 0 1 2 3 4 5 6 Main Power Switch System Power Control Power Indicator Headphone Jack Digital Optical 3 Input Speaker/Channel Input Indicator Surround Mode Group Selector 7 Tuning 8 Tuner Band Selector 9 Preset Stations Selector A Input Source Selector B RDS Select Button C Surround Mode Selector D Surround Mode Indicators E Remote Sensor Window F Main Information Display G Digital Coax 3 Input H Video 3 input jacks I Volume Control J Input Indicators 0 Main Power Switch: Press this button to apply power to the AVR. When the switch is pressed in, the unit is placed in a Standby mode, as indicated by the orange LED 2.
This button MUST be pressed in to operate the unit. To turn the unit off completely and prevent the use of the remote cont for more information on RDS). C Surround Mode Selector: Press this button to select from among the available surround mode options for the mode group selected. The specific modes will vary based on the number of speakers available, the mode group and if the input source is digital or analog. For example, press the Surround Mode Group Selector 6 to select a mode grouping such as Dolby or Logic 7, and then press this button to see the mode choices available.
For more information on mode selection, see page 21. D Surround Mode Indicators: Indicator will illuminate in front of the surround mode that is currently in use. E 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. F Main Information Display: This display delivers messages and status indications to help you operate the receiver.
G Digital Coax 3 Input: This jack is normally used for connection to the output of portable digital audio devices, video game consoles or other products that have a coax digital jack. H Video 3 Input 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. I Volume Control: Turn this knob clockwise to increase the volume, counterclockwise to decrease the volume. If the AVR is muted, adjusting volume control will automatically release the unit from the silenced condition. J Input indicators: Indicator will illuminate in front of the input that is currently being used as the source for the AVR. 6 FRONT PANEL CONTROLS Rear Panel Connections ¢ ¶ a d flª £§ ° B b· fi ENGLISH ·TM ¡ / 0 1 2 3 4 5 6 7 8 Tape Inputs Tape Outputs Video 1 Audio Inputs AM Antenna Video 1 Audio Outputs DVD Audio Inputs FM Antenna CD Inputs Video 2 Component Video Inputs < 9 A B C D E F G H e > < , c I J K L M N Video 1 Video Outputs Video 2 Audio Inputs Video 2 Video Inputs Optical Digital Inputs Video 1 Video Inputs 6-Channel Direct Inputs Coaxial Digital Inputs Subwoofer Output Video Monitor Outputs Front/Center Speaker Outputs Surround Speaker Outputs Component Video Outputs Video 1 Component Video Inputs AC Power Cord DVD Video Inputs 0 Tape Inputs: Connect these jacks to the PLAY/OUT jacks of an audio recorder. 1 Tape Outputs: Connect these jacks to the RECORD/INPUT jacks of an audio recorder. 2 Video 1 Audio Inputs: Connect these jacks to the PLAY/OUT audio jacks on a VCR or other video source. 3 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 GNffected.

N 6-Channel Direct Inputs: These jacks are used for connection to source devices such as DVD-Audio or SACD players with discrete analog outputs. 8 REAR PANEL CONNECTIONS Remote Control Functions 0 1 2 3 4 5 6 7 8 9 A B C D E F G H I J K L M N O P Q R S T U V W X Y Z a b c d e Power On Button IR Transmitter Window Program Indicator Power Off Button Input Selectors AVR Selector AM/FM Tuner Select Test Button Sleep Button Surround Mode Selector Night Mode Channel Select Button K/ L Buttons A Button Set Button Digital Select Numeric Keys Tuner Mode Direct Button Tuning Up/Down Macro Buttons Transport Controls Skip Up/Down Buttons RDS Select Button Preset Up/Down Clear Button Memory Button Delay/Prev. Ch. B Button Speaker Select Tone Mode Button Volume Up/Down TV/Video Selector Mute Dim Button Dolby Mode Select Button DTS Digital Mode Select Button Logic 7 Mode Select Button Stereo Mode Select Button DTS Neo:6 Mode Select Button 6-Channel Direct Input c bdX a e f g Y 8 e W V 7 j l T S R m n o p q s u r t U `z y x d c b Z a k w v NOTE: The function names shown here are each button's feature when used with the AVR. Most buttons have additional functions when used with other devices. See page 32 and 33 for a list of these functions. REMOTE CONTROL FUNCTIONS 9 ENGLISH Remote Control Functions IMPORTANT NOTE: The AVR's remote may be programmed to control up to seven devices, including the AVR. Before using the remote, it is important to remember to press the Input Selector button 4 that corresponds to the unit you wish to operate. In addition, the AVR's remote is shipped from the factory to operate the AVR 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 page 29 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. The descriptions shown here primarily detail the functions of the remote when it is used to operate the AVR. (See page 32 and 33 for information about alternate functions for the remote's buttons.) 0 Power On Button: Press this button to turn on the power to a device selected by pressing one of the Input Selectors 4 (except Tape).

1 IR Transmitter Window: Point this window towards the AVR when pressing buttons on the remote to make certain that infrared commands are properly received. 2 Program Indicator: This three-color indicator is used to guide you through the process of programming the remote. See page 29 for information on programming the remote. 3 Power Off Button: Press this button to place the AVR or a selected device unit in the Standby mode. 4 Input Selectors: Pressing one of these buttons will perform three actions at the same time.

First, if the AVR 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. Finally, it will change the remote control so that it controls the device selected. After pressing one of these buttons you must press the AVR Selector button 5 again to operate the AVR's functions with the remote. 5 AVR Selector: Pressing this button will switch the remote so that it will operate the AVR's functions. If the AVR is in the Standby mode, it will also turn the AVR on. 6 AM/FM Tuner Select: Press this button to select the AVR's tuner as the listening choice. Pressing this button when the tuner is in use will select between the AM and FM bands. 7 Test Tone: Press this button to begin the sequence used to calibrate the AVR's output levels. (See page 19 for more information on calibrating the AVR.

) 8 Sleep Button: Press this button to place the unit in the Sleep mode. After the time shown in the display, the AVR will automatically go into the Standby mode. Each press of the button changes the time until turn-off in the following order: 90 min 40 min 80 min 30 min 70 min 20 min 60 min 10 min 50 min OFF D A Button: This button does not have a function with the AVR. When a DVD player or TV is selected, it may be used to navigate the menus of those devices. E Set Button: This button is used to enter settings into the AVR 's memory. It is also used in the setup procedures for delay time, speaker configuration and channel output level adjustment. F Digital Select: Press this button to assign one of the digital inputs 4G9 L to a source. (See page 25 for more information on using digital inputs.) G Numeric Keys: These buttons serve as a ten-button numeric keypad to enter tuner preset positions. They are also used to select channel numbers when TV, VCR or Sat receiver 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.

H Tuner Mode: Press this button when the tuner is in use to select between automatic tuning and manual tuning. When the button is pressed so MANUAL appears in the Main Information Display F, pressing the Tuning buttons J7 will move the frequency up or down in single-step increments. When the FM band is in use and AUTO appears in the Main Information Display F, pressing this button will change to monaural reception making even week stations audible. (See page 27 for more information.) I 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 G to select a station (See page 27 for more information on the tuner). J Tuning Up/Down: When the tuner is in use, these buttons will tune up or down through the selected frequency band. If the Tuner Mode button H has been pressed or the Band button 8 on the front panel was held pressed so that AUTO appears in the Main Information Display F, pressing either of the buttons will cause the tuner to seek the next station with acceptable signal strength for quality reception. When the MANUAL appears in the Main Information Display F, pressing these buttons will tune stations in single-step increments. (See page 27 for more information.

) Hold the button pressed for two seconds to turn off the Sleep mode setting. Note that this button is also used to change channels on your TV, VCR and SAT receiver when selected. 9 Surround Mode Selector: Press this button to begin the process of changing the surround mode. After the button has been pressed, use the K/L buttons C to select the desired surround mode (See page 21 for more information). Note that this button is also used to tune channels when the TV, VCR and SAT receiver is selected using the Input Selector 4. A Night Mode: Press this button to activate the Night mode. This mode is available only with Dolby Digital encoded digital sources, and it preserves dialog (center channel) intelligibilty at low volume levels (See page 26 for more information). B Channel Select Button: This button is used to start the process of setting the AVR 's output levels with an external source. Once this button is pressed, use the K/L buttons C to select the channel being adjusted, then press the Set button E, followed by the K/L buttons again, to change the level setting. (See page 27 for more information.

) C K/L Buttons: These are multi-purpose buttons. They will be used most frequently to select a surround mode. These buttons are also used to increase or decrease output levels when configuring the unit, to select speaker configuration or to select the digital inputs. They are also used to enter delay time settings after the Delay button T has been pressed. When the AVR remote is being programmed for the codes of another device, these buttons are also used in the "Auto Search" process (See page 29 for more information on programming the remote.) 10 REMOTE CONTROL FUNCTIONS Remote Control Functions K Macro Buttons: Press these buttons to store or recall a "Macro", which is a pre-programmed sequence of commands stored in the remote. (See page 30 for more information on storing and recalling macros.) L Transport Buttons: These buttons do not have any functions for the AVR, but they may be programmed for the forward/reverse play operation of a wide variety of CD or DVD players, and audio or video- cassette recorders. (See page 29 for more information on programming the remote.) M Skip Up/Down Buttons: These buttons do not have a direct function with the AVR, but when used with a compatibly programmed CD or DVD changer they will change the tracks on the disc currently being played in the changer.

N RDS Select Button: Press this button to display the various messages that are part of the RDS data system of the AVR 's tuner.

(See page 28 for more information on RDS). O Preset Up/Down: When the tuner is in use, press these buttons to scroll through the stations programmed into the AVR 's memory. When CD or DVD is selected using the Input Selector button 4, these buttons may function as Slow Fwd/Rev (DVD) or "+10" (CD). P Clear Button: Press this button to clear incorrect entries when using the remote to directly enter a radio station's frequency.

Q Memory Button: Press this button to enter a radio station into the AVR 's preset memory. Two underline indicators will flash at the right side of the Main Information Display F, you then have five seconds to enter a preset memory location using the Numeric Keys G. (See page 27 for more information.) R Delay/Prev Ch.: Press this button to begin the process for setting the delay times used by the AVR when processing surround sound.

After pressing this button, the delay times are entered by pressing the Set button E and then using the K/L buttons C to change the setting. Press the Set button again to complete the process. (See page 19 for more information.) S B Button: This button does not have a function with the AVR. When a DVD player or TV is selected, it may be used to navigate the menus of those devices. T Speaker Select: Press this button to begin the process of configuring the AVR's Bass Management System for use with the type of speakers used in your system. Once the button has been pressed, use the K/L buttons C to select the channel you wish to set up. Press the Set button E and then select the speaker type (see page 16 for more information.) U Tone Mode: Pressing this button enables or disables the Balance, Bass and Treble tone controls. When the button is pressed so that the words TONE I N appear in the Main Information Display F, the settings of the Bass and Treble controls and of the Balance control will affect the output signals.

When the button is pressed so that the words TONE OUT appear in the Main Information Display F, the output signal will be "flat, " without any balance, bass or treble alteration. V Volume Up/Down: Press these buttons to raise or lower the system volume. W TV/Video Button: This button does not have a direct function on the AVR, but when used with a compatibly programmed VCR, DVD or satellite receiver that has a "TV/Video" function, pressing this button will switch between the output of the player or receiver and the external video input to that player. Consult the Owner's Manual for your specific player or receiver for the details of how it implements this function. X Mute: Press this button to momentarily silence the AVR or TV set being controlled, depending on which device has been selected. When the AVR remote is being programmed to operate another device, this button is pressed with the Input Selector button 4 to begin the programming process. (See page 29 for more information on programming the remote.) NOTE: As any of the remote buttons pressed is active with the device selected, the corresponding Selector button 45 will briefly flash red to confirm your selection. Y Dim Button: Press this button to activate the Dimmer function, which reduces the brightness of the front panel display, or turn it off entirely. The first press of the button shows the default state, which is full brightness by indicating VFD FULL in the Main Information Display F.

Press the button again within five seconds to reduce the brightness by 50%, as indicated by VFD HALF. Press the button again within five seconds and the main display will go completely dark. Note that this setting is temporary; the display will always return to full brightness when the AVR is turned on. In addition,both the Power Indicator 2 and the blue accent lighting inside the volume control will always remain at full brightness regardless of the setting. This is to remind you that the AVR is still turned on.

Z Dolby Mode Selector: This button is used to select one of the available Dolby Surround processing modes. Each press of this button will select one of the Dolby Pro Logic II modes, Dolby 3 Stereo or Dolby Digital. Note that the Dolby Digital mode is only available with a digital input REMOTE CONTROL FUNCTIONS 11 selected and the other modes only as long as a Dolby Digital source is not playing. See page 22 for the available Dolby surround mode options. a DTS Digital Mode Selector: When a DTS source is in use the AVR will select the appropriate mode automatically and no other mode will be available.

Pressing this button will display the mode currently selected by the AVR´s decoder, depending on the surround material played and the speaker setting. b Logic 7 Selector: Press this button to select one of the available Logic 7 surround modes. (See page 22 for the available Logic 7 options). c Stereo Mode Selector: Press this button to select a stereo playback mode. When the button is pressed so that DSP SURR OFF appears in the Main Information Display F, 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 Main Information Display F, you may enjoy a two-channel presentation of the sound along with the benefits of bass management. When the button is pressed so that 5 C H STEREO appears, the stereo signal is routed to all five speakers, if installed.(See page 18 for more information on stereo playback modes). d DTS Neo:6 Mode Selector: Pressing this selector button cycles the AVR through the various DTS Neo:6 modes, which extract a fivechannel surround field from two-channel program material (from PCM source or analog input signal). The first press selects the last DTS Neo:6 surround mode that was in use, and each subsequent press selects the next mode in the following order: ENGLISH DTS Neo:6 MUSIC DTS Neo:6 CINEMA e 6-Channel Direct Input: Press this button to select the component connected to the 6-Channel Direct Input N as the audio.

Note that when you wish to use the Six Channel Direct Input in conjunction with a video source, you must first select the video source by pressing one of the Input Selectors 4. Then press this button to choose the 6-Channel Direct Input N as the audio source. Installation and Connections After unpacking the unit, 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. We also recommend that the length of cable used to connect speaker pairs be identical. For example, use the same length piece of cable to connect the front-left and front-right or surround-left and surround-right speakers, even if the speakers are a different distance from the AVR. 5. Connect the supplied FM antenna to the FM (75 ohm) connection 6. The FM antenna may be an external roof antenna, an inside powered or wire lead antenna or a connection from a cable system.

Note that if the antenna or connection uses 300-ohm twin-lead cable, you must use a 300-ohm-to-75-ohm adapter to make the connection. 6. Connect the front, center and surround speaker outputs CD to the respective speakers. To assure 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 speakers and the receiver, the type of speakers you use, personal preferences and other factors. Your dealer or installer is a valuable resource to consult in selecting the proper cable. Regardless of the brand of cable selected, we recommend that you use a cable constructed of fine, multistrand copper with an area greater than 2 mm2.

Cable with an area of 1.5 mm2 may be used for short runs of less than 4 m. We do not recommend that you use cables with an area less than 1mm2 due to the power loss and degradation in performance that will occur. Cables that are run inside walls should have the appropriate markings to indicate listing with UL, CSA or other appropriate testing agency standards. Questions about running cables inside walls should be referred to your installer or a licensed electrical contractor who is familiar with the applicable local building codes in your area.

When connecting wires to the speakers, be certain to observe proper polarity. Remember to connect the "negative" or "black" wire to the same terminal on both the receiver and the speaker. Similarly, the "positive" or "red" wire should be connected to like terminals on the AVR and speaker. NOTE: While most speaker manufacturers adhere to an industry convention of using black terminals for negative and red ones for positive, some manufacturers may vary from this configuration. To assure proper phase and optimal performance, consult the identification plate on your speaker or the speaker's manual to verify polarity. If you do not know the polarity of your speaker, ask your dealer for advice before proceeding, or consult the speaker's manufacturer. 7. Connections to a subwoofer are normally made via a line level audio connection from the Subwoofer Output A 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.

Note: Speaker sets with two front satellites and a passive subwoofer must be connected to the front speaker outputs C only rather than to the Subwoofer Output A. 8. If an external multi-channel audio source with 5.1 outputs such as an external digital processor/decoder, DVD-Audio or SACD player is used, connect the outputs of that device to the 6-Channel Direct Inputs N. Audio Equipment Connections We recommend that you use high-quality interconnect cables when making connections to source equipment and recorders to preserve the integrity of the signals. When making connections to audio source equipment or speakers it is always a good practice to unplug the unit from the AC wall outlet. This prevents any possibility of accidentally sending audio or transient signals to the speakers that may damage them. Important Note : In order to clearly identify all connectors and simplify nstallation, as per the new EIA/CEA-863 standard, all connections are colour coded as follows: For Speakers and Audio In/Outputs: White (Left, speakers front) and Red (Right, speakers front). For Speakers: Green (Center), Blue (Left Surround) and Grey (Right Surround). For Audio Output: Purple (Subwoofer).

For Composite Video In/Outputs: Yellow. For Digital Audio In/Outputs: Orange. 1. Connect the analog output of a CD player to the CD inputs 7. NOTE: When the CD player has both fixed and variable audio outputs it is best to use the fixed output unless you find that the input to the receiver is so low that the sound is noisy, or so high that the signal is distorted.

2. Connect the analog Play/Out jacks of a cassette deck, MD, CD-R or other audio recorder to the Tape Input jacks 0. Connect the analog Record/In jacks on the recorder to the Tape Output jacks 1 on the AVR. 3. Connect the output of any digital sources to the appropriate input connections on the AVR rear panel. Note that the Optical and Coaxial digital inputs L9 4G may be used with a Dolby Digital or DTS source or the output of a conventional CD, MD or LD player's PCM (S/P-DIF) output. 4. Assemble the AM Loop Antenna supplied with the unit as shown below. Connect it to the AM and GND screw terminals 3. 12 INSTALLATION AND CONNECTIONS Installation and Connections Video Equipment Connections Video equipment is connected in the same manner as audio components. Again, the use of highquality interconnect cables is recommended to preserve signal quality. To ensure best video performance S-Video sources should be connected to the AVR only with their S-Video In/Outputs, not with their composite video connectors too. 1. Connect a VCR's audio and video Play/Out jacks to the Video 1 2 M or Video 2 In jacks JK on the rear panel. The Audio and Video Record/In jacks on the VCR should be connected to the Video 1 Out jacks 4 I on the AVR.

2. Although any video device may be connected to these jacks, we recommend connecting your video recorder to the Video 1 Audio/Video Input Jacks 2 M so that you may take advantage of the fact that the remote control is preprogrammed with video recorder product codes for the Video 1 device. For the same reason, we recommend connecting your cable TV converter or satellite receiver to the Video 2 Audio/Video Input Jacks JK, and your television to the Video 3 Audio/Video Input Jacks H. IMPORTANT: If you are only using the television as a display device (i.e., if you receive your television programs through a cable box or satellite receiver), do not connect the TV's outputs to the Video 3 Audio/Video and S-Video Input Jacks H, or to any other inputs on the AVR. 3. Connect the analog audio and video outputs of a DVD or laser disc player to the DVD jacks 5C. 4. Connect the digital audio outputs of a CD, MD or DVD player, satellite receiver, cable box or HDTV converter to the appropriate Optical or Coaxial Digital Inputs 9L4G.

Remember that the DVD source defaults to the Coaxial 1 Digital Input L. All other sources default to their analog inputs, although any source may be assigned to any digital audio input on the receiver. 5. Connect the Composite and S-Video (if S-Video device is in use) Monitor Output B jacks on the receiver to the composite and S-Video input of your television monitor or video projector. 6.

If your DVD player and monitor both have component video connections, connect the component outputs of the DVD player to the Video 1 Component Video Inputs F.

Note that even when component video connections are used the audio connections must still be made to either the analog DVD Audio Inputs 5 or any of the Coaxial or Optical Digital Input jacks 9L. 7. If another component video device is available, connect it to the Video 2 Component Video Input jacks 8. The audio connections for this device should be made to either the Video 2 Input jacks J or any of the Coaxial or Optical Digital Input jacks 9L.

8. If the component video inputs are used, connect the Component Video Output E to the component video inputs of your TV, projector or display device. 9. If you have a camcorder, video game or other audio/video device that is connected to the AVR on a temporary, rather than permanent basis, connect the audio, video and digital audio outputs of that device to the Front Panel Inputs 4GH. A device connected to the Video 3 jacks H is selected as the Video 3 input, and connected to the digital jacks 4G it is selected as "Optical 3" or "Coaxial 3" input. (See page 16 for more information on input configuration.) Video Connection Notes: · Y/Pr/Pb Component, RGB (see page 14), or Composite video signals may only be viewed in their native formats and will not be converted to the other formats. · All component inputs/outputs can be used for RGB signals too, in the same way as described for the Y/Pr/Pb signals, then connected to the jacks with the corresponding color. But this is only correct as long as only the three RGB video signals are output by the video source, with a sync signal in the "G" signal only, without any sync signal output separately by the source. ENGLISH INSTALLATION AND CONNECTIONS 13 Installation and Connections SCART A/V Connections For the connections described above your video device needs RCA (cinch) connectors or/and SVideo connectors for all Audio and Video signals: Any normal video device (Not SVHS or High 8) for only playback needs 3 RCA jacks, VCRs for record and playback even 6 RCA jacks.

Any S-Video device (SVHS, High 8) needs 2 RCA (Audio) and 1 S-Video jack (Video), if it´s a playback unit, or 4 RCA (Audio In/Out) and 2 S-Video (Video In/Out) jacks, if it´s a recording VCR. Many european video devices are equipped with RCA (Cinch) or S-Video jacks only partially, not with all audio and video in/outputs needed as described above, but with a so called Scart or Euro-AV connector (almost rectangular jack with 21 pins, see drawings on this page). In that case the following Scart to Cinch adapters or cables are needed: · Units for playback, such as satellite receivers, camcorders, DVD or LD players, need an adapter from Scart to 3 RCA plugs, see fig. 1 (normal video devices) or from Scart to 2 RCA+1 SVideo plugs, see fig. 4 (S-Video devices). · HiFi VCRs need an adapter from Scart to 6 RCA plugs, see fig. 2 (normal video), or from Scart to 4 Audio+2S-Video jacks, see fig. 5 (S-Video VCR). Read carefully the instruction attached to the adapter to find which of the six plugs is used for the record signal to the VCR (connect with the AVR´s Out jacks) and for the playback signal from the VCR (connect with the AVR´s In jacks). Do not misconnect Audio and Video signals.

Don´t hesitate to consult your dealer, if you are uncertain. · If you use only normal video devices the TV monitor needs an adapter from 3 RCA plugs to Scart (fig. 3) only. If also S-Video devices are used an adapter from 2 RCA+1S-Video plugs to Scart is needed additionally (fig. 6), connected to the SCART input on your TV that is provided for S-Video.

Note that only the video plugs (the "yellow" cinch plug in fig. 3 and the S-Video plug in fig. 6) must be connected to the TV Monitor Output B, and the volume on the TV must be reduced to minimum. Important Note for Adapter Cables: If the cinch connectors of the adapter you'll use are labeled, connect the Audio and Video "In" plugs with the corresponding Audio and Video "In" jacks on the AVR (and with a VCR connect the "Out" plugs to the "Out" jacks on the AVR). Note that with some adapter types it may be just turned around: If no signal is audible/ visible when the VCR is playing connect the "Out" plugs to the "In" jacks on the AVR and turned around.

If the adapter plugs are not labeled in that way, pay attention to the signal flow directions as 14 INSTALLATION AND CONNECTIONS Figure 1: SCART/Cinch-Adapter for playback; signal flow: SCART Cinch Black Black Yellow Yellow Red Red Black Black Red Red Blue Blue1 Figure 2: SCART/Cinch-Adapter for record and playback; signal flow: SCART Cinch Black Black Yellow Yellow Green Green1 White White Figure 3: Cinch/SCART-Adapter for playback; signal flow: Cinch SCART Figure 4: SCART/S-Video Adapter for playback; signal flow: SCART Cinch Yellow Yellow Red Red Rot Red Schwarz Black S-Video In S-Video In Schwarz Black Rot Red Blau Blue1 Figure 5: SCART/S-Video Adapter for record and playback; signal flow: SCART Cinch Rot Red Gelb Yellow S-Video In S-VideoIn S-Video Out S-VideoOut Figure 6: SCART/S-Video Adapter for playback; signal flow: Cinch SCART 1 Schwarz Black S-Video Out S-VideoOut Also other colours possible, e.g. brown and grey. shown in the diagrams above and in the instruction attached to the adapter. If uncertain, don't hesitate to consult your dealer. Important Notes for S-Video connections: 1. Only the S-Video In/Out of S-Video devices must be connected to the AVR, NOT both, normal video and S-Video In/Outputs (except the TV, see item 2). 2. Like most common AV units the AVR does not convert the Video signal to S-Video or vice versa. Thus both connections must be made from the AVR to the TV if both, Video and S-Video sources, are used, and the appropriate input on the TV must be selected.

Important Note for the Use of SCART-Cinch Adapters: When video sources are connected to the TV directly with a SCART cable, specific control signals apart from Audio/Video signals will be fed to the TV. These specific signals are: With all video sources, the signal for automatic input selection that switches the TV automatically to the appropriate input as soon as the video source is started. And with DVD players, the signals automatically turning the TV to 4:3/16:9 format (with 16:9 TVs or 4:3 TVs with 16:9 capability) and turning the RGB video decoder of the TV on or off, depending on the DVD player´s setting. With any adapter cable, these control signals will be lost and the appropriate setting of the TV must be made manually. Installation and Connections Speaker Selection No matter which type or brand of speakers is used, the same model or brand of speaker should be used at least for the front-left, center and front-right speakers. This creates a seamless front soundstage and eliminates the possibility of distracting sonic disturbances that occur when a sound moves across mismatched front-channel speakers.

They should also be at least 0.5 meter from your TV set unless the speakers are magnetically shielded to avoid colourings on the TV screen. Note that most speakers are not shielded, even with complete surround sets only the Center speaker may be. Depending on the specifics of your room acoustics and the type of speakers in use, you may find that imaging is improved by moving the front-left and front-right speakers slightly forward of the center-channel speaker. If possible, adjust all front loudspeakers so that they are aimed at ear height when you are seated in the listening position. Using these guidelines, you'll find that it takes some experimentation to find the correct location for the front speakers in your particular installation. Don't be afraid to move things around until the system sounds correct. Optimize your speakers so that audio transitions across the front of the room sound smooth. Surround speakers should be placed on the side walls of the room, at or slightly behind the listening position.

The center of the speaker should face you. If side-wall mounting is not practical, the speakers may be placed on a rear wall, behind the listening position. The speakers should be no more than two meters behind the rear of the seating area. Subwoofers produce largely nondirectional sound, so they may be placed almost anywhere in a room. Actual placement should be based on room size and shape and the type of subwoofer used.

One method of finding the optimal location for a subwoofer is to begin by placing it in the front of the room, about 15cm from a wall, or near the front corner of the room. Another method is to temporarily place the subwoofer in the spot where you will normally sit, and then walk around the room until you find a spot where the subwoofer sounds best. Place the subwoofer in that spot. You should also follow the instructions of the subwoofer's manufacturer, or you may wish to experiment with the best location for a subwoofer in your listening room. Center Front Speaker No more than 60cm Left Front Speaker Right Front Speaker Speaker Placement The placement of speakers in a multichannel home-theater system can have a noticeable impact on the quality of sound reproduced. Depending on the type of center-channel speaker in use and your viewing device, place the center speaker either directly above or below your TV, or in the center behind a perforated frontprojection screen. Once the center-channel speaker is installed, position the left-front and right-front speakers so that they are as far away from one another as the center-channel speaker is from the preferred listening position. Ideally, the front-channel speakers should be placed so that their tweeters are no more than 60cm above or below the tweeter in the center-channel speaker. A) Front Channel Speaker Installation with Direct-View TV Sets or Rear-Screen Projectors 5.1-Channel System B) The distance between the left and right speakers should be equal to the distance from the seating position to the viewing screen.

You may also experiment with placing the left and right speakers slightly forward of the center speaker. INSTALLATION AND CONNECTIONS 15 ENGLISH System Configuration Once the speakers have been placed in the room and connected, the remaining steps are to program the system configuration memories. With the AVR two kind of memories are used, those associated individually with the input selected, e.g. surround modes, and others working independently from any input selected like speaker output levels, or delay times used by the surround sound processor. Settings to be Made With Each Input Used The AVR features an advanced memory system that enables you to establish different settings for the speaker configuration, digital input, surround mode, delay times and output levels for each input source. This flexibility enables you to custom tailor the way in which you listen to each source and have the AVR memorize them. This means, for example, that you may associate different surround modes and analog or digital inputs with different sources, or set different speaker configurations with the resultant changes to the bass management system or the use of the Center speaker. Once these settings are made, they will automatically be recalled whenever you select an input. The default settings for the AVR, as it is shipped from the factory, have all inputs set for an analog source (except for the DVD input, which has the Coaxial Digital Input 1 9 as the default), with Logic 7 Music as the surround mode, all speaker positions set to "small", and a subwoofer connected.

Before using the unit, you will probably want to change these settings for most inputs so that they are properly configured to reflect the use of digital or analog inputs, the type of speakers installed and the surround mode associated with the input. Input Setup The first step in configuring the AVR is to select an input. This may be done by pressing the front panel Input Source Selector A until the desired input's name appears in the Main Information Display F, and Indicator will illuminate next to the input's name in the front panel Input Indicators J. The input may also be selected by pressing the appropriate Input Selector on the remote control 46. The second step is to associate one of the digital inputs with the selected input source (if this is needed, otherwise the selected analog input will remain).

Press the Digital Input Select button F on the remote. Within five seconds, make your input selection using the K/L buttons C on the remote until the desired digital or analog input is shown in the Main Information Display F. Then press the Set button E to enter the new digital input assignment. After the setting has been made with one input, repeat as described above with all inputs in use. The digital input associated with the input selected can also be changed at any time later and the AVR's memory system will keep the settings until they are changed again.

Speaker Setup This setup tells the AVR which type of speakers are in use. This is important as it adjusts the settings that determine which speakers receive low frequency (bass) information and whether a First Turn On You are now ready to power up the AVR to begin these final adjustments. 1. Plug the Power Cable G into an unswitched AC outlet. 2. Press the Main Power Switch 0 in until it latches and the word "OFF" on the top of the switch disappears inside the front panel. Note that the Power Indicator 2 will turn orange, indicating that the unit is in the Standby mode. 3. Remove the protective plastic film from the front-panel lens. If left in place, the film may affect the performance of your remote control.

4. Install the three supplied AAA batteries in the remote as shown. Be certain to follow the (+) and () polarity indicators that are on the bottom of the battery compartment. Center speaker should be used or not, separately for each input used.

For each of these settings use the L A R G E setting if the speakers for a particular position are traditional full-range loudspeakers that are capable of reproducing sounds below 100Hz. Use the S M A L L setting for smaller, frequency-limited satellite speakers that do not reproduce sounds below 100Hz. Note that when "small" front (left and right) speakers are used, a subwoofer is required to reproduce low frequency sounds. If you are in doubt as to which category describes your speakers, consult the specifications in the speakers' owner's manual, or ask your dealer. With the AVR turned on, follow these steps to configure the speakers: 1. Press the Speaker button T on the remote.

The words SPEAKER SIZE will appear in the Main Information Display F. 2. Press the Set button E. 3. When FRONT SPEAKER appears in the Main Information Display F press the Set button E to continue.

4. Press the K/L buttons C on the remote until either FRONT LARGE or FRONT SMALL appears, matching the type of speakers you have at the left-front and right-front positions, as described by the definitions shown in preceding section. When SMALL is selected, low frequency front channel sounds will be sent only to the subwoofer output. Note that if you choose this option and there is no subwoofer connected, you will not hear any low frequency sounds from the front channels. This setting is not available with stereo mode to ensure purest sound by bypassing the crossovers of the DSP´s.

When LARGE is selected, a full-range output will be sent to the front left and front right outputs. Depending on the subwoofer configuration (see below), the front left and right bass information may also be directed to a subwoofer. Important Note: When a speaker set with two front satellites and a passive subwoofer is used, connected to the front speaker outputs C, the fronts must be set for LARGE. 5. When you have completed your selection for the front channels, press the Set button E, and then press the K/L buttons C on the remote to change the display to CENTER SPEAKER. K/L 5. Turn the AVR on either by pressing the System Power Control 1 or the Input Source Selector A on the front panel, or via the remote by pressing the AVR Selector 5 or any of the Input Selectors 46 on the remote. The Power Indicator 2 will turn blue to confirm that the unit is on, and the Main Information Display F will also light up. NOTE: After pressing one of the Input Selector buttons 4 to turn the unit on, press the AVR Selector 5 to have the remote control the AVR functions. 6.

Press the Set button E again, and use the buttons C on the remote to select the option that best describes your system based on the Center speaker definitions shown in preceding section. When SMALL is selected, low frequency center channel sounds will be sent to the Fronts, if they 16 SYSTEM CONFIGURATION System Configuration are set for LARGE and Sub is turned off. When Sub is on, low frequency center channel sounds will be sent to the subwoofer only. When LARGE is selected, a full-range output will be sent to the center speaker output, and with analog and digital surround modes (except with the Pro Logic II Music mode) NO center channel signal will be sent to the subwoofer output. When NONE is selected, no signal will be sent to the center channel output. The receiver will operate in a "phantom" center channel mode and center channel information will be sent to the left and right front channel outputs and its bass will be sent to the subwoofer output too as long as SUB L/R+LFE is selected in the SUBWOOFER line in this menu (see below). This mode is needed if no Center speaker is used. Note that for the use of Logic 7C surround mode a Center speaker is needed, but Logic 7M works well without a Center too. 7. When you have completed your selection for the center channel, press the Set button E, and then press the K/L buttons C on the remote to change the display to SURR SPEAKER.

8. Press the Set button E again, and then use the K/L buttons C on the remote to select the option that best describes your system based on the Surround speaker definitions shown in preceding section. When SMALL is selected, with all digital surround modes low frequency surround channel sounds will be sent to the Fronts, when Sub is turned off, or to the subwoofer output when Sub is on. With the analog surround modes the rear bass feed depends on the mode selected and the setting of the sub and front speakers. When LARGE is selected, a full-range output will be sent to the surround channel outputs (with all analog and digital surround modes), and, except with Hall and Theater modes, NO surround channel bass will be sent to the subwoofer output.

When NONE is selected, surround sound information will be split between the front-left and front-right outputs. Note that for optimal performance when no surround speakers are in use, the Dolby 3 Stereo mode should be used instead of Dolby Pro Logic. 9. When you have completed your selection for the surround channel, press the Set button E, and then press the K/L buttons C on the remote to change the display to S-W SPEAKER. 10.

Press the Set button E, and then press the K/L buttons C on the remote to select the option that best describes your Subwoofer system. The choices available for the subwoofer position will depend on the settings for the other speakers, particularly the front left/right positions. If the front left/right speakers are set to SMALL, the subwoofer will automatically be set to S U B, which is the "on" position. If the front left/right speakers are set to LARGE, three options are available: · If no subwoofer is connected to the AVR, press the arrow buttons C so that SUB NONE appears in the display. When this option is selected, all bass information will be routed to the front left/right "main" speakers. · If a subwoofer is connected to the AVR, you have the option to have the front left/right "main" speakers reproduce bass frequencies at all times, and have the subwoofer operate only when the AVR is being used with a digital source that contains a dedicated Low Frequency Effects, or LFE soundtrack. This allows you to use both your main and subwoofer speakers to take advantage of the special bass created for certain movies. To select that option press the arrow buttons C so that S U B LFE appears in the display. · If a subwoofer is connected and you wish to use it for bass reproduction in conjunction with the main front left/right speakers, regardless of the type of program source or surround mode you are listening to, press the arrow buttons C so that SUB L/R+LFE appears in the display. When this option is selected, a "complete" feed will be sent to the front left/right "main" speakers, and the subwoofer will receive the front left and right bass frequencies under the crossover frequency 80 Hz, additionally to the LFE soundtrack (see above).

11. When all speaker selections have been made for the input selected, press the Set button E twice or simply wait for three seconds until the display returns to the normal mode.

To assist in making these settings, the icons in the Speaker/Channel Input Indicators 5 will change as the speaker type is selected at each position. When only the inner icon box is lit, the speaker is set for "small. When the inner " box and the two outer boxes with circles inside them are lit, the speaker is set for "large." When no indicator appears at a speaker location, that position is set for "none" or "no" speaker. As an example, in the Figure below, the left front and right front speakers are set for "large," the center, left surround and right surround speakers are set for small, and a subwoofer is set. L SL C R LFE SR Surround Setup Once the speaker setup has been completed, the next setup step is to set the surround mode you wish to use with each input. Since surround modes are a matter of personal taste, feel free to select any mode you wish you may change it later. The Surround Mode chart on page 22 may help you select the mode best suited to the input source selected.

However, to make it easier to establish the initial parameters for the AVR, it is best to leave the default setting of Logic 7 Music mode for most analog inputs and Dolby Digital for inputs connected to digital sources. In the case of inputs such as a CD Player, Tape Deck or Tuner, you may wish to set the mode to Stereo, if that is your preferred listening mode for standard stereo sources, where it is unlikely that surround encoded material will be used. To set the surround mode you wish to use with the input selected, press the Surround Mode Selector button 6 on the front or 9 and the K/L buttons C on the remote until the desired surround mode´s name appears in the Main Information Display F. As the modes are changed, Indicator will illuminate next to the mode names in the Surround Mode Indicators D on the front panel. Note that Dolby Digital and DTS will only appear as choices when a digital input has been selected. SYSTEM CONFIGURATION 17 ENGLISH System Configuration After the surround mode setting has been made with the current input, repeat the setting with all inputs you will use. The surround mode can also be changed at any time later, and the AVR's memory system will keep the settings for the input selected, until they are changed again. Stereo-Digital Mode When the Stereo-Direct (Bypass) mode is in use a full range signal is always sent to the front left/right speakers. By its nature, that option does not pass the signal through the AVR's digital signal processing, creating the requirement for fullrange speakers. If your front speakers are bandwidth limited, "satellite"speakers, we recommend that you do NOT use the Bypass mode, but rather use the DSP SURROUND OFF mode for stereo listening.

To listen to programs in the two-channel stereo mode while taking advantage of the bass management system, press the Stereo Mode Selector c until SURROUND OFF appears in the Main Information Display F and the DSP and SURR. OFF Surround Mode Indicators D both light up. When only the SURR. OFF Surround Mode Indicators D is lit you are in the Stereo-Direct (Bypass) mode. When this mode is in use, the front left/right speakers and subwoofer may be configured to meet the requirements of your specific speakers using the steps shown in the Speaker Setup section on page 16. Delay Settings Only for the Dolby or DTS modes, you will need to adjust the delay time setting. Note that the delay time is not adjustable for any other modes. Due to the different distances between the listening position for the front channel speakers and the surround speakers, the amount of time it takes for sound to reach your ears from the front or surround speakers is different. You may compensate for this difference through the use of the delay settings to adjust the timing for the specific speaker placement and acoustic conditions in your listening room or home theater. The factory setting (see Surround Mode Chart page 22) is appropriate for most rooms, but some installations create an uncommon distance between the front and surround speakers that may cause the arrival of front channel sounds to become disconnected from surround channel sounds.

To resynchronize the front, center and surround channels, follow these steps: 1. Measure the distance from the listening/ viewing position to the front speakers in meters. 2. Measure the distance from the listening/ viewing position to the surround speakers. 3. Press the Delay Button R. 4. When FRONT DELAY appears in the Main Information Display F press the Set Button E. 5. Press the K/L Buttons C on the remote to enter the distance from the front left/right speakers to your listening position.

Press the Set Button E when this is complete. 6. Press the K/L Buttons C on the remote so that CENTER DELAY appears in the Main Information Display F and press the Set Button E. 7. Press the the K/L Buttons C on the remote to enter the distance from the center speaker your listening position.

Press the Set Button E when this is complete. Configuring the Surround Off (Stereo) Modes For superior reproduction of two-channel program materials, the AVR offers two Stereo modes: an analog Stereo-Direct mode that bypasses the digital signal processing circuitry for a completely analog signal path that preserves the purity of the original signal, and a digital mode that is capable of providing bass management for optimal distribution of the low frequencies between smaller speakers and a subwoofer. Stereo-Direct (Bypass) Mode When the analog Stereo-Direct mode is selected by pressing the Stereo Mode Selector c until SURROUND OFF appears in the Main Information Display F and the Surround Mode Indicator D for Surround Off is lit, the AVR will pass the analog source material directly through to the front left and right speakers, bypassing the digital processing circuitry. In this mode, the front left and right speakers will automatically be configured as LARGE; it is not possible to configure these speakers as SMALL. When the AVR is in the Stereo Bypass mode you may still configure the subwoofer output so that it is either turned off, with a full-range signal going to the front left/right speakers, or you may configure it so that the subwoofer feed is activated.

The factory default setting is to have the subwoofer turned off for this mode, but you may change that setting by following these steps: 1. Press the Speaker Button T. 2. Press the Set Button E to activate the configuration menu. 3. Press the K/L Buttons C on the remote to select the desired option. SUB NONE turns off the feed to the subwoofer, while SUB <L+R> turns it on. 4. When the desired setting has been entered, press the Set Button E to return to normal operation. 18 SYSTEM CONFIGURATION System Configuration 8.

Press the K/L Buttons C on the remote so that SURR DELAY appears in the Lower Display Line and press the Set Button E. 9. Press the the K/L Buttons C on the remote to enter the distance from the surround speakers to your listening position.