ONKYO

AV Receiver

TX-SR706

AV Amplifier

TX-SA706

Instruction Manual

Thank you for purchasing an Onkyo AV Receiver/ AV Amplifier. Please read this manual thoroughly before making connections and plugging in the unit. Following the instructions in this manual will enable you to obtain optimum performance and listening enjoyment from your new AV Receiver/ AV Amplifier.
Please retain this manual for future reference.

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Manual abstract:

REFER SERVICING TO QUALIFIED SERVICE PERSONNEL. The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons. The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance. Important Safety Instructions 1. 2. 3. 4. 5. 6. 7.

8. Read these instructions. Keep these instructions. Heed all warnings. Follow all instructions.

Do not use this apparatus near water. Clean only with dry cloth. Do not block any ventilation openings. Install in accordance with the manufacturer's instructions. Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat. Do not defeat the safety purpose of the polarized or grounding-type plug. 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 are provided for your safety. @@@@Only use attachments/accessories specified by the manufacturer. 15. @@When the power-supply cord or plug is damaged, B. @@If the apparatus has been exposed to rain or water, D. If the apparatus does not operate normally by following the operating instructions. Adjust only those controls that are covered by the operating instructions as an improper adjustment of other controls may result in damage and will often require extensive work by a qualified technician to restore the apparatus to its normal operation, E.

If the apparatus has been dropped or damaged in any way, and F. When the apparatus exhibits a distinct change in performance this indicates a need for service. 16. Object and Liquid Entry Never push objects of any kind into the apparatus through openings as they may touch dangerous voltage points or short-out parts that could result in a fire or electric shock. The apparatus shall not be exposed to dripping or splashing and no objects filled with liquids, such as vases shall be placed on the apparatus. Don't put candles or other burning objects on top of this unit. 17. Batteries Always consider the environmental issues and follow local regulations when disposing of batteries. 18. If you install the apparatus in a built-in installation, such as a bookcase or rack, ensure that there is adequate ventilation.

Leave 20 cm (8") of free space at the top and sides and 10 cm (4") at the rear. The rear edge of the shelf or board above the apparatus shall be set 10 cm (4") away from the rear panel or wall, creating a fluelike gap for warm air to escape. 9. 10. 11.

12. Use only with the cart, stand, PORTABLE CART WARNING tripod, bracket, or table specified by the manufacturer, or sold with the apparatus. When a cart is used, use caution when moving the cart/ S3125A 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. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped. 2 Precautions 1. Recording Copyright--Unless it's for personal use only, recording copyrighted material is illegal without the permission of the copyright holder. 2. AC Fuse--The AC fuse inside the unit is not userserviceable. If you cannot turn on the unit, contact your Onkyo dealer. 3. Care--Occasionally you should dust the unit all over with a soft cloth.

For stubborn stains, use a soft cloth dampened with a weak solution of mild detergent and water. Dry the unit immediately afterwards with a clean cloth. Don't use abrasive cloths, thinners, alcohol, or other chemical solvents, because they may damage the finish or remove the panel lettering. 4. Power WARNING BEFORE PLUGGING IN THE UNIT FOR THE FIRST TIME, READ THE FOLLOWING SECTION CAREFULLY. AC outlet voltages vary from country to country. Make sure that the voltage in your area meets the voltage requirements printed on the unit's rear panel (e.g., AC 230 V, 50 Hz or AC 120 V, 60 Hz). The power cord plug is used to disconnect this unit from the AC power source.

Make sure that the plug is readily operable (easily accessible) at all times. Pressing the [ON/STANDBY] button to select Standby mode does not fully shutdown the unit. If you do not intend to use the unit for an extended period, remove the power cord from the AC outlet. Preventing Hearing Loss Caution Excessive sound pressure from earphones and headphones can cause hearing loss. Batteries and Heat Exposure Warning Batteries (battery pack or batteries installed) shall not be exposed to excessive heat as sunshine, fire or the like.

Never Touch this Unit with Wet Hands--Never handle this unit or its power cord while your hands are wet or damp. If water or any other liquid gets inside this unit, have it checked by your Onkyo dealer. Handling Notes · If you need to transport this unit, use the original packaging to pack it how it was when you originally bought it. · Do not leave rubber or plastic items on this unit for a long time, because they may leave marks on the case. · This unit's top and rear panels may get warm after prolonged use.

This is normal. · If you do not use this unit for a long time, it may not work properly the next time you turn it on, so be sure to use it occasionally. For U.S. models FCC Information for User CAUTION: The user changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment. NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures: · Reorient or relocate the receiving antenna.

· Increase the separation between the equipment and receiver. · Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.

· Consult the dealer or an experienced radio/TV technician for help. 5. For Canadian Models NOTE: THIS CLASS B DIGITAL APPARATUS COMPLIES WITH CANADIAN ICES-003. For models having a power cord with a polarized plug: CAUTION: TO PREVENT ELECTRIC SHOCK, MATCH WIDE BLADE OF PLUG TO WIDE SLOT, FULLY INSERT. 6. 7. Modèle pour les Canadien REMARQUE: CET APPAREIL NUMÉRIQUE DE LA CLASSE B EST CONFORME À LA NORME NMB-003 DU CANADA. Sur les modèles dont la fiche est polarisée: ATTENTION: POUR ÉVITER LES CHOCS ÉLECTRIQUES, INTRODUIRE LA LAME LA PLUS LARGE DE LA FICHE DANS LA BORNE CORRESPONDANTE DE LA PRISE ET POUSSER JUSQU'AU FOND.

8. 3 Precautions--Continued For British models Replacement and mounting of an AC plug on the power supply cord of this unit should be performed only by qualified service personnel. IMPORTANT The wires in the mains lead are coloured in accordance with the following code: Blue: Neutral Brown: Live As the colours of the wires in the mains lead of this apparatus may not correspond with the coloured markings identifying the terminals in your plug, proceed as follows: The wire which is coloured blue must be connected to the terminal which is marked with the letter N or coloured black. The wire which is coloured brown must be connected to the terminal which is marked with the letter L or coloured red. IMPORTANT The plug is fitted with an appropriate fuse. If the fuse needs to be replaced, the replacement fuse must approved by ASTA or BSI to BS1362 and have the same ampere rating as that indicated on the plug. Check for the ASTA mark or the BSI mark on the body of the fuse. If the power cord's plug is not suitable for your socket outlets, cut it off and fit a suitable plug. Fit a suitable fuse in the plug. For European Models Declaration of Conformity We, ONKYO EUROPE ELECTRONICS GmbH LIEGNITZERSTRASSE 6, 82194 GROEBENZELL, GERMANY declare in own responsibility, that the ONKYO product described in this instruction manual is in compliance with the corresponding technical standards such as EN60065, EN55013, EN55020 and EN61000-3-2, -3-3.

*GROEBENZELL, GERMANY K. MIYAGI ONKYO EUROPE ELECTRONICS GmbH 4 Supplied Accessories Make sure you have the following accessories: * Remote controller & two batteries (AA/R6) Power-plug adapter Only supplied in certain countries. Use this adapter if your AC outlet does not match with the plug on the AV receiver/AV amplifier's power cord (adapter varies from country to country). *How to mount the AC plug: Speaker setup microphone Indoor FM antenna (TX-SR706 only) * AM loop antenna (TX-SR706 only) In catalogs and on packaging, the letter at the end of the product name indicates the color. Specifications and operations are the same regardless of color. Power cord (not North American models) (Plug type varies from country to country.) Surround Back Left Surround Back Left Zone 2 Left Zone 2 Left Surround Back Left Surround Back Left Zone 2 Left Zone 2 Left Surround Back Right Surround Back Right Zone 2 Right Zone 2 Right Surround Back Right Surround Back Right Zone 2 Right Zone 2 Right Front Right Front Right SP-B / Zone 2 Right SP-B / Zone 2 Right Front Left Front Left SP-B / Zone 2 Left SP-B / Zone 2 Left Surround Left Surround Left Center Center Surround Right Surround Right Center Center Front Left Front Left SP-B / Zone 2 Left SP-B / Zone 2 Left Front Right Front Right SP-B / Zone 2 Right SP-B / Zone 2 Right Surround Left Surround Left 1 2 3 Speaker Cable Speaker cable labels Surround Right Surround Right 5 Features Amplifier 100 Watts/Channel (2ch Driven) @ 8 ohms (FTC) 160 Watts/Channel @ 6 ohms (IEC) 175 Watts/Channel @ 6 ohms (JEITA) WRAT-Wide Range Amplifier Technology (5 Hz-100 kHz bandwidth) · Optimum Gain Volume Circuitry · 3-Step Inverted Darlington Amplifier Design · H.C.P.S.*

*(High Current Power Supply) Massive High Power Transformer · · · · *1. THX and Select2 Plus are trademarks of THX Ltd. THX may be registered in some jurcountries. "x.v.Color" is a trademark of Sony Corporation. This product incorporates copyright protection technology that is protected by U.S. patents and other intellectual property rights. Use of this copyright protection technology must be authorized by Macrovision Corporation, and is intended for home and other limited consumer uses only unless otherwise authorized by Macrovision.*

Reverse engineering or disassembly is prohibited. 6 Contents Introduction Important Safety Instructions ....

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*..... 119 * To reset the AV receiver/AV amplifier to its factory defaults, turn it on and, while holding down the [VCR/DVR] button, press the [ON/STANDBY] button (see page 114). 7 Front & Rear Panels Front Panel TX-SR706 North American model 1 2 3 45 6 789 bk bl bm bn bo bp bqbrbs btck clcmcn co cp TX-SR706 other than North American model TX-SA706 cl clcmcn 8 Front & Rear Panels--Continued The page numbers in parentheses show where you can find the main explanation for each item.*

ON/STANDBY button (40) ZONE 2 LEVEL button (100) This button is used to set the AV receiver/AV ampliUsed when adjusting the volume level of Zone 2. fier to On or Standby. TONE, [] & [+] buttons (55) STANDBY indicator (40) Used to adjust the tone (bass and treble). This indicator lights up when the AV receiver/AV MOVIE/TV button (62) amplifier is in Standby mode, and it flashes while a Selects the listening modes intended for use with signal is being received from the remote controller.

movies and TV.
ZONE 2 indicator (99) MUSIC button (62) This indicator lights up when Zone 2 is selected. Selects the listening modes intended for use with Input selector buttons (54) music. These buttons are used to select from the following GAME button (62) input sources: MULTI CH, DVD, VCR/DVR, Selects the listening modes intended for use with CBL/SAT, GAME/TV, AUX, TAPE, TUNER, CD, video games. PHONO. DISPLAY button (55) The [MULTI CH] button selects the DVD analog This button is used to display various information multichannel input.
about the currently selected input source. Remote control sensor (14) DIGITAL INPUT button (96) This sensor receives control signals from the remote Selects the options for automatic audio input seleccontroller. tion setup. Display DIMMER or RT/PTY/TP button (55, 60) See "Display" on page 10. This button is used to adjust the display brightness. SETUP button On the European model, this is the [RT/PTY/TP] This button is used to access the onscreen setup button, and it's for RDS (Radio Data System). See menus that appear on the connected TV. "Using RDS (not North American model)" on page 59. Arrow, TUNING, PRESET and ENTER buttons MEMORY or Re-EQ button (58, 83) When the AM or FM input source is selected, the This button is used when storing or deleting radio TUNING [ ]/[ ] buttons are used to tune the tuner, presets. and the PRESET [ ]/[ ] buttons are used to select On the TX-SA706, this button is used to turn the radio presets (see page 58) (TX-SR706 only).

Re-EQ function on or off. When the onscreen setup menus are used, they work TUNING MODE or LATE NIGHT button (57, 83) as arrow buttons and are used to select and set This button is used to select the Auto or Manual items. The [ENTER] button is also used with the tuning mode. onscreen setup menus. On the TX-SA706, this button is used to turn the RETURN button Late Night function on or off. This button is used to return to the previously disSETUP MIC jack (49) played onscreen setup menu. The included speaker setup microphone is conMASTER VOLUME control (54) and indicator nected here for automatic speaker setup. This control is used to adjust the volume of the AV AUX INPUT receiver/AV amplifier to dB, 81.5 dB through This input can be used to connect a camcorder, +18.0 dB (relative display).
game console, and so on. There are jacks for The volume level can also be displayed as an absoS-Video, composite video, analog audio, and optical lute value. See "Volume Setup" on page 89. digital audio. PURE AUDIO button and indicator (62) Selects the Pure Audio listening mode.
The indicator lights up when this mode is selected. Pressing this button again selects the previous listening mode. PHONES jack (56) This 1/4-inch phone jack is for connecting a standard pair of stereo headphones for private listening. ZONE 2 and OFF buttons (99) The [ZONE 2] button is used to select the input source for Zone 2. The [OFF] button is used to turn off the output of Zone 2.
9 Front & Rear Panels--Continued Display 1 2 3 45 6 7 8 9 bk bl For detailed information, see the pages in parentheses. Speaker/channel indicators (73) Indicate the speaker configuration and channels used by the current input source. : A box is displayed for each speaker that's set in the Speaker Configuration. No box appears for speakers that are set to "No" or "None". The following abbreviations indicate which audio channels are included in the current input signal. FL: Front left C: Center FR: Front right SL: Surround left LFE: Subwoofer (Low Frequency Effects) SR: Surround right SBL: Surround back left SB: Surround back SBR: Surround back right ZONE 2 indicator (99) Lights up when Powered Zone 2 is being used. Listening mode and format indicators (62) Show the selected listening mode and audio input signal format. Tuning indicators (TX-SR706 only) (57) RDS (not North American model) (59): Lights up when tuned to a radio station that supports RDS (Radio Data System). AUTO (57): Lights up when Auto Tuning mode is selected for AM or FM radio. Goes off when Manual Tuning mode is selected.

TUNED (57): Lights up when tuned to a radio station. FM STEREO (57): Lights up when tuned to a stereo FM station. SLEEP indicator (56) Lights up when the Sleep function has been set. Audyssey indicator (49, 78) Flashes during automatic speaker setup. Lights up when the "Equalizer Settings" is set to "Audyssey". Headphone indicator (56) Lights up when a pair of headphones are plugged into the PHONES jack. Message area Displays various information. Audio input indicators Indicate the type of audio input that's selected as the audio source: HDMI, ANALOG, or DIGITAL. Volume level (54) Displays the volume level. MUTING indicator (56) Flashes while the AV receiver/AV amplifier is muted.
10 Front & Rear Panels--Continued Rear Panel TX-SR706 North American model 1 23 4 56 7 8 9bkblbm bobpbq 1 23 bs bt ck cl cm 4 cn co cp 9bk cq cr bn TX-SR706 other than North American model 56 7 8 bobpbq TX-SA706 bs bt ck cl cm 4 cn 56 7 co cp bk cq cr bn 1 23 bobpbq brbs bt ck cl cm cn co cp cq cr 11 Front & Rear Panels--Continued REMOTE CONTROL This (Remote Interactive) jack can be connected to an jack on another Onkyo AV component. The AV receiver/AV amplifier's remote controller can then be used to control that component. To use , you must make an analog audio connection (RCA) between the AV receiver/AV amplifier and the other AV component, even if they are connected digitally. PHONO IN This audio input is for connecting a turntable. COMPONENT VIDEO IN 1 and 2 These RCA component video inputs are for connecting components with a component video output, such as a DVD player, DVD recorder, or DVR (digital video recorder).
They're assignable, which means you can assign each one to an input selector to suit your setup. See "Component Video Setup" on page 43. COMPONENT VIDEO MONITOR OUT This RCA component video output is for connecting a TV or projector with a component video input. HDMI IN 14 and OUT HDMI (High Definition Multimedia Interface) connections carry digital audio and digital video. The HDMI inputs are for connecting components with an HDMI output, such as a DVD player, DVD recorder, or DVR (digital video recorder).
They're assignable, which means you can assign each one to an input selector to suit your setup. See "HDMI Input Setup" on page 42. The HDMI output is for connecting a TV or projector with an HDMI input. MONITOR OUT The S-Video or composite video jack should be connected to a video input on your TV or projector. IR IN A commercially available IR receiver can be connected to the IR IN jack, allowing you to control the AV receiver/AV amplifier while you're in Zone 2, or control it when it's out of sight, for example, installed in a cabinet. 12V TRIGGER OUT ZONE 2 This output can be connected to the 12-volt trigger input on a component in Zone 2.

When Zone 2 is turned on on the AV receiver/AV amplifier, a 12volt trigger signal is output. FM ANTENNA (TX-SR706 only) This jack is for connecting an FM antenna. AM ANTENNA (TX-SR706 only) These push terminals are for connecting an AM antenna. RS232 This is the RS232 port.

XM antenna (North American models only) This jack is for connecting an XM Mini-Tuner and Home Dock, sold separately (see the separate XM instructions). SIRIUS antenna (North American models only) This jack is for connecting a SIRIUS Satellite Radio antenna, sold separately (see the separate SIRIUS instructions). AC INLET (not North American models) The supplied power cord is connected here. The other end of the power cord should be connected to a suitable wall outlet. DIGITAL COAXIAL IN 1, 2, and 3 These coaxial digital audio inputs are for connecting components with coaxial digital audio outputs, such as CD and DVD players. They're assignable, which means you can assign each one to an input selector to suit your setup. See "Digital Input Setup" on page 44. DIGITAL OPTICAL IN 1 and 2 These optical digital audio inputs are for connecting components with optical digital audio outputs, such as CD and DVD players. They're assignable, which means you can assign each one to an input selector to suit your setup. See "Digital Input Setup" on page 44. GND screw This screw is for connecting a turntable's ground wire. TUNER IN (TX-SA706 only) This analog audio input is for connecting a tuner's analog audio output. CD IN This analog audio input is for connecting a CD player's analog audio output. TAPE IN/OUT This analog audio input and output are for connecting a recorder with an analog audio input and output (cassette, Mini Disc, etc.).

GAME/TV IN Here you can connect a game console, TV, etc. Input jacks include S-Video, composite video, and analog audio. CBL/SAT IN Here you can connect a cable/satellite receiver, settop box, etc. Input jacks include S-Video, composite video, and analog audio. 12 Front & Rear Panels--Continued VCR/DVR IN/OUT Here you can connect a VCR or DVR (digital video recorder).

Input and output jacks include S-Video, composite video, and analog audio. DVD V, S, FRONT L/R Here you can connect a DVD player. Input jacks include S-Video, composite video, and analog audio. You can connect a DVD player's 2-channel analog audio output. DVD FRONT L/R, CENTER, SUBWOOFER, SURR L/R, and SURR BACK L/R This analog multichannel input is for connecting a component with a 5.1/7.1-channel analog audio output, such as a DVD player, DVD-Audio or SACDcapable player, or an MPEG decoder. PRE OUT: FRONT L/R, CENTER, SUBWOOFER, SURR L/R, and SURR BACK L/R This 5.1/7.1 multichannel analog audio output can be connected to the analog audio input on a multichannel power amplifier for when you want to use the AV receiver/AV amplifier solely as a preamplifier.

The SUBWOOFER jack is for connecting a powered subwoofer. ZONE 2 LINE OUT L/R This analog audio output can be connected to a line input on an integrated amplifier in Zone 2. See "Connecting Zone 2" on page 97. FRONT L/R, CENTER, SURR L/R, and SURR BACK L/R speakers These terminal posts are for connecting the front L/R, center, surround L/R, and surround back L/R speakers. The FRONT L/R and SURR BACK L/R terminal posts can be used with front speakers and surround back speakers respectively, or used to bi-amp the front speakers. See "Bi-amping the Front Speakers" on page 19". cr ZONE 2 L/R speakers These terminals are for connecting speakers in Zone 2. See "Connecting Zone 2" on page 97. See pages 16-39 for connection information. 13 Remote Controller Installing the Batteries Aiming the Remote Controller To use the remote controller, point it at the AV receiver/AV amplifier's remote control sensor, as shown below.

Remote control sensor AV receiver/AV amplifier STANDBY indicator 1 To open the battery compartment, press the small lever and remove the cover. 2 Insert the two supplied batteries (AA/R6) in accordance with the polarity diagram inside the battery compartment. Approx. 16 ft. (5 m) 3 Replace the cover and push it shut.

Notes: · If the remote controller doesn't work reliably, try replacing the batteries. · Don't mix new and old batteries or different types of batteries. · If you intend not to use the remote controller for a long time, remove the batteries to prevent damage from leakage or corrosion. · Expired batteries should be removed as soon as possible to prevent damage from leakage or corrosion. Notes: · The remote controller may not work reliably if the AV receiver/AV amplifier is subjected to bright light, such as direct sunlight or inverter-type fluorescent lights.

Keep this in mind when installing. · If another remote controller of the same type is used in the same room, or the AV receiver/AV amplifier is installed close to equipment that uses infrared rays, the remote controller may not work reliably. · Don't put anything, such as a book, on the remote controller, because the buttons may be pressed inadvertently, thereby draining the batteries. · The remote controller may not work reliably if the AV receiver/AV amplifier is installed in a rack behind colored glass doors. Keep this in mind when installing. · The remote controller will not work if there's an obstacle between it and the AV receiver/AV amplifier's remote control sensor. · When the remote control codes have been registered and you want to operate another component (page 102), or when you want to operate an Onkyo component without connection, point the remote controller at the other component to use it. · When you want to operate an Onkyo component with connection or an -compatible component connected via HDMI (page 104), point the remote controller at the AV receiver/AV amplifier's remote control sensor. 14 Remote Controller--Continued Controlling the AV Receiver/AV Amplifier To control the AV receiver/AV amplifier, press the [RECEIVER] button to select Receiver mode. You can also use the remote controller to control your DVD player, CD player, and other components.

See page 102 for more details. MULTI CH button (55) Selects the multichannel DVD input. MACRO buttons (112) Used with the Macro function. Arrow [ ]/[ ]/[ ]/[ ] and ENTER buttons Used to select and adjust settings. SETUP button Used to change settings. 1 2 3 4 94 LISTENING MODE buttons (62) Used to select the listening modes. DIMMER button (55) Adjusts the display brightness. bk bl 5 bm bn DISPLAY button (55) Displays information about the current input source. MUTING button (56) Mutes or unmutes the AV receiver/AV amplifier. VOL [ ]/[ ] button (54) Adjusts the volume of the AV receiver/AV amplifier regardless of the currently selected remote controller mode.

RETURN button Returns to the previous display when changing settings. AUDIO button (83) Used to change audio settings.

*When the "Audio TV Out" setting is set to "On" (page 93), this button is disabled. SLEEP button (56) Used with the Sleep function. * SP A/B is not used in this AV receiver/AV amplifier.*

** 15 6 7 2 38 bo Controlling the tuner (TX-SR706 only) To control the AV receiver's tuner, press the [TUNER] (or [RECEIVER]) button. You can select AM or FM by pressing the [TUNER] button repeatedly. 1 2 3 For detailed information, see the pages in parentheses. ON/STANDBY button (40) Sets the AV receiver/AV amplifier to On or Standby. REMOTE MODE/INPUT SELECTOR buttons (54, 104110) Selects the remote controller modes and the input sources.*

Arrow [ ]/[ ] buttons Used to tune into radio stations. Number buttons (57) Used to select radio stations directly. D.TUN button (57) Selects the Direct tuning mode. DISPLAY button Displays information about the band, frequency, preset number, and so on. 4 5 CH +/ button (58) Used to select radio presets. Note: An Onkyo cassette recorder connected via can also be controlled in Receiver mode (see page 110). 15 About Home Theater Enjoying Home Theater Thanks to the AV receiver/AV amplifier's superb capabilities, you can enjoy surround sound with a real sense of movement in your own home--just like being in a movie theater or concert hall. With DVDs you can enjoy DTS and Dolby Digital. With analog or digital TV, you can enjoy Dolby Pro Logic IIx, DTS Neo:6, or Onkyo's original DSP listening modes.

You can also enjoy THX Surround EX (THX-certified THX speaker system recommended). Surround back left and right speakers These speakers are necessary to enjoy Dolby Digital EX, DTS-ES Matrix, DTS-ES Discrete, THX Surround EX, etc. They enhance the realism of surround sound and improve sound localization behind the listener. Position them behind the listener about 23 feet (60 100 cm) above ear level. Front left and right speakers These output the overall sound. Their role in a home theater is to provide a solid anchor for the sound image. They should be positioned facing the listener at about ear level, and equidistant from the TV. Angle them inward so as to create a triangle, with the listener at the apex. Center speaker This speaker enhances the front left and right speakers, making sound movements distinct and providing a full sound image. In movies it's used mainly for dialog.

Position it close to your TV facing forward at about ear level, or at the same height as the front left and right speakers. Corner Subwoofer The subwoofer handles the bass sounds of the LFE (Low-Frequency Effects) channel. The volume and quality of the bass output from your subwoofer will depend on its position, the shape of your listening room, and your listening position. In general, a good bass sound can be obtained by installing the subwoofer in a front corner, or at one-third the width of the wall, as shown. Tip: To find the best position for your subwoofer, while playing a movie or some music with good bass, experiment by placing your subwoofer at various positions within the room, and choose the one that provides the most satisfying results.

1/3 wall length Surround left and right speakers These speakers are used for precise sound positioning and to add realistic ambience. Position them at the sides of the listener, or slightly behind, about 23 feet (60100 cm) above ear level. Ideally they should be equidistant from the listener. 16 Connecting the AV Receiver/AV Amplifier Connecting Your Speakers Speaker Configuration For 7.1-channel surround-sound playback, you need seven speakers and a powered subwoofer.

The following table indicates the channels you should use depending on the number of speakers that you have. Number of speakers: Front left Front right Center Surround left Surround right Surround back Surround back left Surround back right * Connecting a Powered Subwoofer Using a suitable cable, connect the AV receiver/AV amplifier's PRE OUT: SUBWOOFER to an input on your powered subwoofer, as shown. If your subwoofer is unpowered and you're using an external amplifier, connect the PRE OUT: SUBWOOFER to an input on the amp. 2 3 4 5 6 7 LINE INPUT LINE INPUT Powered subwoofer If you're using only one surround back speaker, connect it to the SURR BACK L terminals. No matter how many speakers you use, a powered subwoofer is recommended for a really powerful and solid bass. To get the best from your surround sound system, you need to set the speaker settings. You can do this automatically (see page 49) or manually (see page 73). Attaching the Speaker Labels The AV receiver/AV amplifier's positive (+) speaker terminals are all red (the negative () speaker terminals are all black). Speaker Color White Red Green Blue Gray Brown Tan Using Dipole Speakers You can use dipole speakers for the surround left and right and surround back left and right speakers. Dipole speakers output the same sound in two directions.*

Dipole speakers typically have an arrow printed on them to indicate how they should be positioned. The surround left and right dipole speakers should be positioned so that their arrows point toward the TV/screen, while the surround back left and right dipole speakers should be positioned so that their arrows point toward each other, as shown. Dipole speakers TV/screen Front left, Zone 2 left Front right, Zone 2 right Center Surround left Surround right Surround back left Surround back right Normal speakers 1 TV/screen The supplied speaker cable labels are also color-coded and you should attach them to the positive (+) side of each speaker cable in accordance with the above table. Then all you need to do is to match the color of each label to the corresponding speaker terminal. 1 4 2 3 4 2 3 5 6 5 6 For North American model · If you are using banana plugs, tighten the speaker terminal before inserting the banana plug. · Do not insert the speaker code directly into the center hole of the speaker terminal. 7 8 7 8 1. Subwoofer 2. Front left speaker 3. Center speaker 4. Front right speaker 5. Surround left speaker 6. Surround right speaker 7. Surround back left speaker 8. Surround back right speaker 17 Connecting the AV Receiver/AV Amplifier--Continued Speaker Connection Precautions Read the following before connecting your speakers: · You can connect speakers with an impedance of between 4 and 16 ohms.

If the impedance of any of the connected speakers is 4 ohms or more, but less than 6 ohms, be sure to set the minimum speaker impedance to "4ohms" (see page 45). If you use speakers with a lower impedance, and use the amplifier at high volume levels for a long period of time, the built-in protection circuit may be activated. · Disconnect the power cord from the wall outlet before making any connections. · Read the instructions supplied with your speakers.

· Pay close attention to speaker wiring polarity.
In other words, connect positive (+) terminals only to positive (+) terminals, and negative () terminals only to negative () terminals. If you get them the wrong way around, the sound will be out of phase and will sound unnatural. · Unnecessarily long, or very thin speaker cables may affect the sound quality and should be avoided. · If you use 4 or 5 speakers, connect each of the two surround speakers to the SURR L/R terminals. Do not connect them to the SURR BACK L/R terminals. · Be careful not to short the positive and negative wires. Doing so may damage the AV receiver/AV amplifier. · Make sure the metal core of the wire does not have contact with the AV receiver/AV amplifier's rear panel. Doing so may damage the AV receiver/AV amplifier. · Don't connect more than one cable to each speaker terminal.

Doing so may damage the AV receiver/AV amplifier. · Don't connect one speaker to several terminals. Connecting the Speaker Cables 1 Strip about 5/8" (15 mm) of insulation from the ends of the speaker cables, and twist the bare wires tightly, as shown. Unscrew the terminal. 5/8"(15 mm) 3 Fully insert the bare wires. 2 4 Screw the terminal tight. The following illustration shows which speaker should be connected to each pair of terminals. If you're using only one surround back speaker, connect it to the SURR BACK L terminals. Front right speaker Center speaker Front left speaker Surround back right speaker Surround right speaker Surround left speaker Surround back left speaker 18 Connecting the AV Receiver/AV Amplifier--Continued Bi-amping the Front Speakers The FRONT L/R and SURR BACK L/R terminal posts can be used with front speakers and surround back speakers respectively, or bi-amped to provide separate tweeter and woofer feeds for a pair of front speakers that support bi-amping, providing improved bass and treble performance. · When bi-amping is used, the AV receiver/AV amplifier is able to drive up to 5.
1 speakers in the main room. · For bi-amping, the FRONT L/R terminal posts connect to the front speakers' woofer terminals. And the SURR BACK L/R terminal posts connect to the front speakers' tweeter terminals. · Once you've completed the bi-amping connections shown below and turned on the AV receiver/AV amplifier, you must set the "Speakers Type" setting to "Bi-Amp" to enable biamping (see page 45). Important: · When making the bi-amping connections, be sure to remove the jumper bars that link the speakers' tweeter (high) and woofer (low) terminals.
· Bi-amping can only be used with speakers that support bi-amping. Refer to your speaker manual. Bi-amping Speaker Hookup 1 Connect the AV receiver/AV amplifier's FRONT R positive (+) terminal to the right speaker's positive (+) Woofer (low) terminal. And connect the AV receiver/AV amplifier's FRONT R negative () terminal to the right speaker's negative () Woofer (low) terminal. Connect the AV receiver/AV amplifier's SURR BACK R positive (+) terminal to the right speaker's positive (+) Tweeter (high) terminal.
And connect the AV receiver/AV amplifier's SURR BACK R negative () terminal to the right speaker's negative () Tweeter (high) terminal. Connect the AV receiver/AV amplifier's FRONT L positive (+) terminal to the left speaker's positive (+) Woofer (low) terminal. And connect the AV receiver/AV amplifier's FRONT L negative () terminal to the left speaker's negative () Woofer (low) terminal. Connect the AV receiver/AV amplifier's SURR BACK L positive (+) terminal to the left speaker's positive (+) Tweeter (high) terminal. And connect the AV receiver/AV amplifier's SURR BACK L negative () terminal to the left speaker's negative () Tweeter (high) terminal. 2 3 4 Tweeter (high) Tweeter (high) Woofer (low) Right speaker Woofer (low) Left speaker 19 Connecting the AV Receiver/AV Amplifier--Continued Connecting Antenna (TX-SR706 only) This section explains how to connect the supplied indoor FM antenna and AM loop antenna, and how to connect commercially available outdoor FM and AM antennas. The AV receiver won't pick up any radio signals without any antenna connected, so you must connect the antenna to use the tuner. FM ANTENNA jack AM ANTENNA push terminals If you cannot achieve good reception with the supplied indoor FM antenna, try a commercially available outdoor FM antenna instead (see page 21). Connecting the AM Loop Antenna The supplied indoor AM loop antenna is for indoor use only. 1 Assemble the AM loop antenna, inserting the tabs into the base, as shown.

Connecting the Indoor FM Antenna The supplied indoor FM antenna is for indoor use only. 2 1 Attach the FM antenna, as shown. North American models Connect both wires of the AM loop antenna to the AM antenna push terminals, as shown. (The antenna's wires are not polarity sensitive, so they can be connected either way around.) Make sure that the wires are attached securely and that the push terminals are gripping the bare wires, not the insulation. Insert the plug fully into the jack. Other models Push Insert wire Release Insert the plug fully into the jack. Once your AV receiver is ready for use, you'll need to tune into an FM radio station and adjust the position of the FM antenna to achieve the best possible reception. 2 Use thumbtacks or something similar to fix the FM antenna into position. Once your AV receiver is ready for use, you'll need to tune into an AM radio station and adjust the position of the AM antenna to achieve the best possible reception.
Keep the antenna as far away as possible from your AV receiver, TV, speaker cables, and power cords. If you cannot achieve good reception with the supplied indoor AM loop antenna, try using it with a commercially available outdoor AM antenna (see page 21). Thumbtacks, etc. Caution: Be careful that you don't injure yourself when using thumbtacks. 20 Connecting the AV Receiver/AV Amplifier--Continued Connecting an Outdoor FM Antenna If you cannot achieve good reception with the supplied indoor FM antenna, try a commercially available outdoor FM antenna instead.
Connecting an Outdoor AM Antenna If good reception cannot be achieved using the supplied AM loop antenna, an outdoor AM antenna can be used in addition to the loop antenna, as shown. Outdoor antenna Insulated antenna cable AM loop antenna Notes: · Outdoor FM antennas work best outside, but usable results can sometimes be obtained when installed in an attic or loft. · For best results, install the outdoor FM antenna well away from tall buildings, preferably with a clear line of sight to your local FM transmitter.

· Outdoor antenna should be located away from possible noise sources, such as neon signs, busy roads, etc. · For safety reasons, outdoor antenna should be situated well away from power lines and other high-voltage equipment.

· Outdoor antenna must be grounded in accordance with local regulations to prevent electrical shock hazards. Using a TV/FM Antenna Splitter It's best not to use the same antenna for both FM and TV reception, as this can cause interference problems. If circumstances demand it, use a TV/FM antenna splitter, as shown. Outdoor AM antennas work best when installed outside horizontally, but good results can sometimes be obtained indoors by mounting horizontally above a window. Note that the AM loop antenna should be left connected. Outdoor antenna must be grounded in accordance with local regulations to prevent electrical shock hazards. TV/FM antenna splitter To AV receiver To TV (or VCR) 21 Connecting the AV Receiver/AV Amplifier--Continued About AV Connections · Before making any AV connections, read the manuals supplied with your other AV components. · Don't connect the power cord until you've completed and double-checked all AV connections. AV Connection Color Coding RCA-type AV connections are usually color-coded: red, white, and yellow. Use red plugs to connect right-channel audio inputs and outputs (typically labeled "R").

Use white plugs to connect left-channel audio inputs and outputs (typically labeled "L"). And use yellow plugs to connect composite video inputs and outputs. Left (white) Right (red) (Yellow) Composite video Analog audio Left (white) Right (red) (Yellow) Right! Optical Digital Jacks The AV receiver/AV amplifier's optical digital jacks have shutter-type covers that open when an optical plug is inserted and close when it's removed. Push plugs in all the way. Caution: To prevent shutter damage, hold the optical plug straight when inserting and removing. · Push plugs in all the way to make good connections (loose connections can cause noise or malfunctions). · To prevent interference, keep audio and video cables away from power cords and speaker cables. Wrong! AV Cables & Jacks Video Cable HDMI Jack HDMI Description HDMI connections can carry uncompressed standard- or high-definition digital video and audio and offer the best picture and sound quality. Component video separates the luminance (Y) and color difference signals (PR, PB), providing the best picture quality (some TV manufacturers label their component video sockets slightly differently). S-Video separates the luminance and color signals and provides better picture quality than composite video.

Y Component video cable Y PB/CB PR/CR PB/CB PR/CR S-Video cable Composite video cable V Composite video is commonly used on TVs, VCRs, and other video equipment. Audio Cable Optical digital audio cable Jack Description Offers the best sound quality and allows you to enjoy surround sound (e.g., Dolby Digital, DTS). The audio quality is the same as for coaxial.

Offers the best sound quality and allows you to enjoy surround sound (e.g., Dolby Digital, DTS). The audio quality is the same as for optical. L Coaxial digital audio cable Analog audio cable (RCA) R This cable carries analog audio.

It's the most common connection format for analog audio, and can be found on virtually all AV components. This cable carries multichannel analog audio and it's typically used to connect DVD players with a 7.1-channel analog audio output. Several standard analog audio cables can be used instead of a multichannel cable. Multichannel analog audio cable (RCA) Note: The AV receiver/AV amplifier does not support SCART plugs. 22 Connecting the AV Receiver/AV Amplifier--Continued Connecting Both Audio & Video By connecting both the audio and video outputs of your DVD player and other AV components to the AV receiver/AV amplifier, you can select both the audio and video simultaneously simply by selecting the appropriate input source on the AV receiver/AV amplifier. : Signal Flow Video Audio Video Audio TV, projector, etc. DVD player, etc. Speakers (see page 18 for connection information) Which Connections Should I Use? The AV receiver/AV amplifier supports several connection formats for compatibility with a wide range of AV equipment. The format you choose will depend on the formats supported by your other components.

Use the following sections as a guide. For video components, you must make two connections--one for audio, one for video. Video Connection Formats Video equipment can be connected to the AV receiver/AV amplifier by using any one of the following video connection formats: composite video, S-Video, component video, or HDMI, the latter offering the best picture quality. For optimal video performance, THX recommends that video signals pass through the system without upconversion (e.g., component video input through to component video output). It is also recommended that you set the "Immediate Display" preference to "Off" (see page 90), the "Picture Adjust" setting to the default (see page 88), and the "Output Resolution" setting to "Through" (see page 92). Video input signals flow through the AV receiver/AV amplifier as shown, with composite video, S-Video, and component video sources all being upconverted for the HDMI output. The composite video, S-Video, and component video outputs pass through their respective input signals as they are. When you connect audio equipment to an HDMI or COMPONENT input, you must assign that input to an input selector (see pages 42 and 43).

DVD player, etc. Video Signal Flow Chart Composite S-Video Component HDMI IN AV receiver/ AV amplifier MONITOR OUT Composite S-Video Component HDMI TV, projector, etc. 23 Connecting the AV Receiver/AV Amplifier--Continued Signal Selection If signals are present at more than one input, the inputs will be selected automatically in the following order of priority: HDMI, component video, S-Video, composite video. In the Signal Selection Example shown on the right, video signals are present at both the SVideo and composite video inputs, however, the S-Video signal is automatically selected as the source and video is output by the S-Video and HDMI outputs. DVD player, etc.

Signal Selection Example Composite S-Video Component HDMI IN AV receiver/ AV amplifier MONITOR OUT Composite S-Video Component HDMI TV, projector, etc. The onscreen setup menus appear only on a TV that is connected to the HDMI OUT. If your TV is connected to the composite video or S-Video MONITOR OUT, or the COMPONENT VIDEO MONITOR OUT, use the AV receiver/AV amplifier's display when changing settings. Audio Connection Formats Audio equipment can be connected to the AV receiver/AV amplifier by using any of the following audio connection formats: analog, optical, coaxial, analog multichannel, or HDMI.

When choosing a connection format, bear in mind that the AV receiver/AV amplifier does not convert digital input signals for analog line outputs and vice versa.

*For example, audio signals connected to an optical or coaxial digital input are not output by the analog TAPE OUT. DVD player, etc. Audio Signal Flow Chart Analog Multichannel Optical Coaxial HDMI IN AV receiver/ AV amplifier OUT Analog HDMI MD recorder, etc. *1 Depends on the "Audio TV Out" setting (see page 93). *2 Only the front L/R channels are output (There will be no down mix.). If signals are present at more than one input, the inputs will be selected automatically in the following order of priority: HDMI, digital, analog (including multichannel). You can specify which audio inputs the AV receiver/AV amplifier checks for the presence of a signal in the "Automatic Audio Input Selection Setup" on page 96. 24 Connecting the AV Receiver/AV Amplifier--Continued Connecting a TV or Projector See "Connecting Components with HDMI" on page 33 for HDMI connection information. Step 1: Video Connection Choose a video connection that matches your TV (A , B , or C), and then make the connection.*

Step 2: Audio Connection Choose an audio connection that matches your TV (a , b , or c), and then make the connection. The onscreen setup menus appear only on a TV that is connected to the HDMI OUT. If your TV is connected to the composite video or S-Video MONITOR OUT, or the COMPONENT VIDEO MONITOR OUT, use the AV receiver/AV amplifier's display when changing settings. · With connection a , you can listen to and record audio from your TV and listen in Zone 2. · To enjoy Dolby Digital and DTS, use connection b or c . (To record or listen in Zone 2 as well, use a and b , or a and c .) Connection A B C a b c AV receiver/AV amplifier COMPONENT VIDEO MONITOR OUT MONITOR OUT S MONITOR OUT V GAME/TV IN L/R DIGITAL COAXIAL IN 2 (VCR/DVR) DIGITAL OPTICAL IN 1 (GAME/TV) Signal flow TV Component video input S-Video input Composite video input Analog audio L/R output Digital coaxial output Digital optical output b C B c a A L COAXIAL OUT OPTICAL OUT PR Y PB COMPONENT VIDEO IN AUDIO OUT R S VIDEO IN VIDEO IN Connect one or the other Connection b must be assigned (see page 44) TV, projector, etc. Hint! If your TV has no audio outputs, connect an audio output from your VCR or cable or satellite receiver to the AV receiver/AV amplifier and use its tuner to listen to TV programs through the AV receiver/AV amplifier (see pages 28 and 30). 25 Connecting the AV Receiver/AV Amplifier--Continued Connecting a DVD Player See "Connecting Components with HDMI" on page 33 for HDMI connection information. Step 1: Video Connection Choose a video connection that matches your DVD player (A , B , or C), and then make the connection.

You must connect the AV receiver/AV amplifier to your TV via the same type of connection. Step 2: Audio Connection Choose an audio connection that matches your DVD player (a , b , or c), and then make the connection. · With connection a , you can listen to and record audio from a DVD and listen in Zone 2. · To enjoy Dolby Digital and DTS, use connection b or c . (To record or listen in Zone 2 as well, use a and b , or a and c .) · If your DVD player has main left and right outputs and multichannel left and right outputs, be sure to use the main left and right outputs for connection a . Connection A B C a b c AV receiver/AV amplifier COMPONENT VIDEO IN 1 (DVD) DVD S DVD V DVD FRONT L/R DIGITAL COAXIAL IN 1 (DVD) DIGITAL OPTICAL IN 1 (GAME/TV) Signal flow DVD player Component video output S-Video output Composite video output Analog audio L/R output Digital coaxial output Digital optical output b C B c a A L COAXIAL OUT OPTICAL OUT Y PB PR COMPONENT VIDEO OUT AUDIO OUT R S VIDEO OUT VIDEO OUT Connect one or the other Connection c must be assigned (see page 44) DVD player To connect a DVD player or DVD-Audio/SACD-capable player with a multichannel analog audio output, see page 27. 26 Connecting the AV Receiver/AV Amplifier--Continued Hooking Up the Multichannel DVD Input If your DVD player supports multichannel audio formats such as DVD-Audio or SACD, and it has a multichannel analog audio output, you can connect it to the AV receiver/AV amplifier's multichannel DVD input. Use a multichannel analog audio cable, or several normal audio cables, to connect the AV receiver/AV amplifier's DVD FRONT L/R, CENTER, SURR L/R, SURR BACK L/R, and SUBWOOFER jacks to the 7.1-channel analog audio output on your DVD player.

If your DVD player has a 5.1-channel analog audio output, don't connect anything to the AV receiver/AV amplifier's SURR BACK L/R jacks. To select the multichannel input, see "Using the Multichannel DVD Input" on page 55. To adjust the subwoofer sensitivity for the multichannel input, see "Hardware Setup" on page 91. 7.1 ch 5.1 ch FRONT L CENTER SURR SURR BACK L R SUBWOOFER DVD R L FRONT R CENTER SUB WOOFER L SURROUND R L SURR BACK R DVD player Note: When a signal from multichannel DVD input is output from HDMI OUT or analog audio output, only the front L/R channels will be output. There will be no down mix. 27 Connecting the AV Receiver/AV Amplifier--Continued Connecting a VCR or DVD Recorder for Playback Hint! With this hookup, you can use your VCR's tuner to listen to your favorite TV programs via the AV receiver/AV amplifier, useful if your TV has no audio outputs. Step 1: Video Connection Choose a video connection that matches your VCR or DVD recorder (A , B , or C), and then make the connection.

You must connect the AV receiver/AV amplifier to your TV via the same type of connection. Step 2: Audio Connection Choose an audio connection that matches your VCR or DVD recorder (a , b , or c), and then make the connection. · With connection a , you can listen to the VCR or DVD recorder even in Zone 2. · To enjoy Dolby Digital and DTS, use connection b or c . (To listen in Zone 2 as well, use a and b , or a and c .) Connection A B C a b c . AV receiver/AV amplifier COMPONENT VIDEO IN 2 (CBL/SAT) VCR/DVR IN S VCR/DVR IN V VCR/DVR IN L/R DIGITAL COAXIAL IN 2 (VCR/DVR) DIGITAL OPTICAL IN 1 (GAME/TV) Signal flow VCR or DVD recorder Component video output S-Video output Composite video output Analog audio L/R output Digital coaxial output Digital optical output b C B c a Connection A must be assigned (see page 43) A L COAXIAL OUT OPTICAL OUT Y PB PR COMPONENT VIDEO OUT AUDIO OUT R S VIDEO OUT VIDEO OUT Connect one or the other Connection c must be assigned (see page 44) VCR, DVD recorder 28 Connecting the AV Receiver/AV Amplifier--Continued Connecting a VCR or DVD Recorder for Recording Step 1: Video Connection Choose a video connection that matches your VCR or DVD recorder (A or B), and then make the connection.

The video source to be recorded must be connected to the AV receiver/AV amplifier via the same type of connection. Step 2: Audio Connection Make the audio connection a . Connection A B a AV receiver/AV amplifier VCR/DVR OUT S VCR/DVR OUT V VCR/DVR OUT L/R Signal flow VCR or DVD recorder S-Video input Composite video input Analog audio L/R input B C A B a L AUDIO IN R S VIDEO IN VIDEO IN VCR, DVD recorder Notes: · The AV receiver/AV amplifier must be turned on for recording.

Recording is not possible while it's in Standby mode. · If you want to record directly from your TV or playback VCR to the recording VCR without going through the AV receiver/AV amplifier, connect the TV/VCR's audio and video outputs directly to the recording VCR's audio and video inputs. See the manuals supplied with your TV and VCR for details. · Video signals connected to composite video inputs can only be recorded via composite video outputs. If your TV/VCR is connected to a composite video input, the recording VCR must be connected to a composite video output.

Similarly, video signals connected to S-Video inputs can only be recorded via S-Video outputs. If your TV/VCR is connected to an S-Video input, the recording VCR must be connected to an S-Video output. 29 Connecting the AV Receiver/AV Amplifier--Continued Connecting a Satellite, Cable, Terrestrial Set-top box, or Other Video Source Hint! With this hookup, you can use your satellite or cable receiver to listen to your favorite TV programs via the AV receiver/AV amplifier, useful if your TV has no audio outputs. Step 1: Video Connection Choose a video connection that matches the video source (A , B , or C), and then make the connection. You must connect the AV receiver/AV amplifier to your TV via the same type of connection.

Step 2: Audio Connection Choose an audio connection that matches the video source (a , b , or c), and then make the connection. · With connection a , you can listen to and record audio from the video source and listen in Zone 2. · To enjoy Dolby Digital and DTS, use connection b or c . (To listen in Zone 2 as well, use a and b , or a and c .) Connection A B C a b c AV receiver/AV amplifier COMPONENT VIDEO IN 2 (CBL/SAT) CBL/SAT IN S CBL/SAT IN V CBL/SAT IN L/R DIGITAL COAXIAL IN 3 (CBL/SAT) DIGITAL OPTICAL IN 2 (CD) Signal flow Video source Component video output S-Video output Composite video output Analog audio L/R output Digital coaxial output Digital optical output C b B c a A L COAXIAL OUT OPTICAL OUT Y PB PR COMPONENT VIDEO OUT AUDIO OUT R S VIDEO OUT VIDEO OUT Connect one or the other Connection c must be assigned (see page 44) Satellite, cable, set-top box, etc. 30 Connecting the AV Receiver/AV Amplifier--Continued Connecting a Game Console Step 1: Video Connection Choose a video connection that matches the game console (A , B , or C), and then make the connection. You must connect the AV receiver/AV amplifier to your TV with the same type of connection. Step 2: Audio Connection Choose an audio connection that matches the game console (a or b), and then make the connection. · With connection a , you can listen to and record audio from the game console or listen in Zone 2. · To enjoy Dolby Digital and DTS, use connection b .

(To record or listen in Zone 2 as well, use a and b .) Connection A B C a b AV receiver/AV amplifier COMPONENT VIDEO IN 2 (CBL/SAT) GAME/TV IN S GAME/TV IN V GAME/TV IN L/R DIGITAL OPTICAL IN 1 (GAME/TV) Signal flow Game console Component video output S-Video output Composite video output Analog audio L/R output Digital optical output C B b a Connection A must be assigned (see page 43) A L OPTICAL OUT Y PB PR COMPONENT VIDEO OUT AUDIO OUT R S VIDEO OUT VIDEO OUT Game Console 31 Connecting the AV Receiver/AV Amplifier--Continued Connecting a Camcorder or Other Device Step 1: Video Connection Choose a video connection that matches the camcorder (A or B), and then make the connection. Step 2: Audio Connection Choose an audio connection that matches the camcorder (a or b), and then make the connection. AUX INPUT DIGITAL b AUX INPUT S VIDEO AUX INPUT VIDEO AUX INPUT L AUDIO R A B a S VIDEO OUT VIDEO OUT L AUDIO R OUT OPTICAL OUT Camcorder, etc. Connection A B a b AV receiver/AV amplifier AUX INPUT S VIDEO AUX INPUT VIDEO AUX INPUT L-AUDIO-R AUX INPUT DIGITAL Signal flow Camcorder etc. S-Video output Composite video output Analog audio L/R output Digital optical output 32 Connecting the AV Receiver/AV Amplifier--Continued Connecting Components with HDMI About HDMI Designed to meet the increased demands of digital TV, HDMI (High Definition Multimedia Interface) is a new digital interface standard for connecting TVs, projectors, DVD players, set-top boxes, and other video components. Until now, several separate video and audio cables have been required to connect AV components. With HDMI, a single cable can carry control signals, digital video, and up to eight channels of digital audio (2-channel PCM, multichannel digital audio, and multichannel PCM). The HDMI video stream (i.e.

*, video signal) is compatible with DVI (Digital Visual Interface)*1, so TVs and displays with a DVI input can be connected by using an HDMI-to-DVI adapter cable. (This may not work with some TVs and displays, resulting in no picture.) The AV receiver/AV amplifier uses HDCP (High-bandwidth Digital Content Protection)*2, so only HDCP-compatible components can display the picture. The AV receiver/AV amplifier's HDMI interface is based on the following standard: Repeater System, Deep Color, Lip Sync, DTS-HD Master Audio, DTS-HD High Resolution Audio, Dolby TrueHD, Dolby Digital Plus, SA-CD, and Multichannel PCM Supported Audio Formats · 2-channel linear PCM (32192 kHz, 16/20/24 bit) · Multichannel linear PCM (up to 7.1 ch, 32192 kHz, 16/20/24 bit) · Bitstream (DSD, Dolby Digital, Dolby Digital Plus, Dolby TrueHD, DTS, DTS-HD High Resolution Audio, DTSHD Master Audio) Your DVD player must also support HDMI output of the above audio formats.*

*About Copyright Protection The AV receiver/AV amplifier supports HDCP (High-bandwidth Digital Content Protection)*2, a copy-protection system for digital video signals. Other devices connected to the AV receiver/AV amplifier via HDMI must also support HDCP. Commercially available HDMI cables (supplied with some components) should be used to connect the AV receiver/AV amplifier's HDMI OUT to the HDMI input on your TV or projector. *1 DVI (Digital Visual Interface): The digital display interface standard set by the DDWG*3 in 1999. *2 HDCP (High-bandwidth Digital Content Protection): The video encryption technology developed by Intel for HDMI/DVI.*

It's designed to protect video content and requires a HDCP-compatible device to display the encrypted video.