REMOTE CONTROL FUNCTIONS

The AVR 247 remote is capable of controlling 11 devices, including the AVR itself and an iPod docked in the optional The Bridge accessory. During the installation process, you may program the codes for each of your source components into the remote. Each time you wish to use the codes for any component, first press the Selector button for that component. This changes the button functions to the appropriate codes for that product.

NOTE: Several of the Input Selectors are shared between two devices. The selector button will light in red when the remote is in the device mode printed on the button, and it will light in green for the device mode printed above the button. To switch between the two device modes, press the selector *twice* quickly in succession. The selector will remain in the last-selected mode until the next time you press the selector twice quickly.

For example, the first time you press the DVD button, the button will light up in red, indicating that the remote is in DVD mode. If you press another selector, such as the VID3 selector, and then press the DVD button again, the DVD button will remain red, indicating the remote is still in DVD mode. Now press the DVD button twice quickly. At the first press the button will light red, indicating that the remote is in DVD mode. On the second press the button will turn green, indicating that the remote is now in CD mode. If you press a different selector and return to the DVD/CD Selector, you will observe that the remote is still in CD mode.

Each Input Selector has been preprogrammed to control certain types of components, with only the codes specific to each brand and model changing, depending on which product code is programmed. The device types programmed into each selector may not be changed. However, you may program the HDMI 1 and 2 Selectors with the DVD, cable/satellite or VCR/PVR device type.

DVD: Controls DVD players and recorders.

CD: Controls CD players and recorders.

Tape: Controls cassette decks.

Video 1: Controls VCRs. TiVo® and PVRs.

Video 2: Controls cable and satellite television set-top boxes.

Video 3: Controls televisions and other video displays.

Video 4: Controls televisions and other video displays.

HDMI 1 and 2: Each code set controls a source device (VCR/PVR, DVD player or cable/satellite set-top box) connected to one of these two inputs.

XM: Controls the AVR functions for XM Satellite Radio.

The Bridge/DMP: Controls an iPod docked in The Bridge.

For example, if you have inserted a disc in your CD player and you would like to skip ahead three tracks, but you then find that the volume is too loud, you would follow this procedure:

1. Press the CD Input Selector to switch to the codes that control your CD player. If the remote is in DVD mode, press the selector twice quickly to switch to CD mode, indicated by the selector lighting in green.

- 2. Press the Play Button (in the Transport Controls section) if the disc is not already playing.
- 3. Press the Skip Up Button three times to advance three tracks.
- 4. Press the AVR Button so that you can access the Volume Controls.
- 5. Press the Volume Down Button until the volume level is satisfactory.

Any given button may have different functions, depending on which component is being controlled. Some buttons are labeled with these functions. For example, the Sleep and DSP Surround Buttons are labeled for use as Channel Up/Down Buttons when controlling a television or cable box. See Table A8 in the appendix for listings of the different functions for each type of component.

IR Transmitter Lens: As buttons are pressed on the remote, infrared codes are emitted through this lens. Make sure it is pointing toward the component being operated.

Power On Button: Press this button to turn on the AVR or another device. The Master Power Switch on the AVR 247's front panel must first have been switched on.

Mute Button: Press this button to mute the AVR 247's speaker and headphone outputs temporarily. To end the muting, press this button or adjust the volume. Muting is also canceled when the receiver is turned off.

Program Indicator: This LED lights up or flashes in one of three colors as the remote is programmed with codes.

Power Off Button: Press this button to turn off the AVR 247 or another device.

AVR Selector: Press this button to switch the remote to the codes that operate the receiver.

Input Selectors: Press one of these buttons to select a source device, which is a component where a playback signal originates, e.g., DVD, CD, cable TV, satellite or HDTV tuner, or an iPod docked in the optional The Bridge. This will also turn on the receiver and switch the remote's mode to operate the source device.

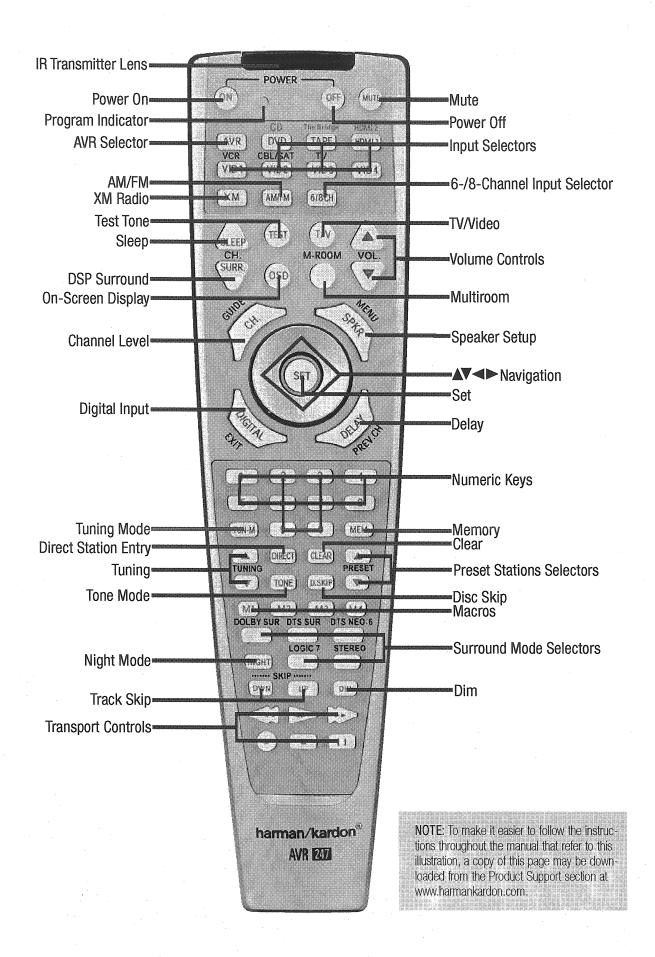
XM Radio Button: Press this button to select XM Satellite Radio as the source. You will need to have purchased and activated an XM antenna module, and you will also need to subscribe to the XM Radio service. Visit www.xmradio.com for more information.

AM/FM Button: Press this button to select the tuner as the source, or to switch between the AM and FM bands, or XM Radio.

6-/8-Channel Input Selector: Press this button to select the 6-/8-Channel Inputs as the audio source. The receiver will use the video input and remote control codes for the last-selected video source.

Test Tone: Press this button to activate the test tone for manual output-level calibration.

TV/Video: This button has no effect on the receiver, but is used to switch video inputs on some video source components.



REMOTE CONTROL FUNCTIONS

Sleep Button: Press this button to activate the sleep timer, which turns off the receiver after a programmed period of time of up to 90 minutes.

Volume Controls: Press these buttons to raise or lower the volume, which will be shown in decibels (dB) in the Message Display.

DSP Surround: Press this button to select a DSP surround mode (Hall 1, Hall 2, Theater).

On-Screen Display (OSD): Press this button to activate the on-screen menu system.

Multiroom: Press this button to control the multiroom system. Three settings are available: MULTI ON/OFF, which is used to turn the multiroom system on or off; MULTI LEVEL, which adjusts the volume of the remote zone only; and MULTI INPUT, which is used to select the source input for the remote zone. See Multiroom Operation in the Advanced Functions section for more information on using the AVR 247's multiroom system.

Channel Level: Press this button to adjust the output levels for each channel so that all speakers sound equally loud at the listening position. Usually this is done while playing an audio selection, such as a favorite CD, after you have calibrated the levels using EzSet/EQ, as described in the Initial Setup section.

Speaker Setup: Press this button to configure speaker sizes, that is, the low-frequency capability of each speaker. Usually this is done using the on-screen menu system, as described in the Initial Setup section.

Navigation (▲/▼/◄/▶) and Set Buttons: These buttons are used to make selections within the on-screen menu system, or when accessing the functions of the four buttons surrounding this area of the remote — Channel Level, Speaker Setup, Digital Input or Delay.

Digital Input Select: Press this button to select the specific digital audio input (or analog audio input) you used for the current source.

Delay: Press this button to set delay times that compensate for placing the speakers at different distances from the listening position, or to resolve a "lip sync" issue that may be caused by digital video processing. This may also be done using the on-screen menu system, as described in the Initial Setup section.

Numeric Keys: Use these buttons to enter radio station frequencies or to select station presets. When the AM or FM band is in use, press the Direct Button before entering the station frequency.

When listening to XM Radio, you may enter channel numbers without first pressing the Direct Button; however, to access the preset stations, you will need to use the Preset Stations Selectors. To access another bank of XM presets, press the Set Button repeatedly until PRESET SEARCH appears, then use the ▲/▼ Buttons to select the letter of the desired bank.

Tuning Mode: When listening to AM or FM radio, this button toggles between manual (one frequency step at a time) and automatic (seeks frequencies with acceptable signal strength) tuning mode. It also toggles between stereo and mono modes when an FM station is tuned.

When listening to XM Radio, press the Tuning Mode Button once to view the category name of the current channel. Additional presses will display the artist, song title and channel name.

Memory: After you have tuned a particular radio station, press this button, then the numeric keys, to save that station as a radio preset.

For XM Radio, the procedure for saving a preset is a little different. To save the current channel in one of the 40 available preset locations, press the Set Button repeatedly until PRESET SEARCH appears. Use the ▲/▼ Buttons to select a letter (A through E) representing one of the five banks of preset memory slots. Then press the Memory Button, followed by a Numeric Key (1 through 8) for the precise preset memory location you wish to save the channel in.

Tuning: Press these buttons to tune a radio station or XM Radio channel. For the AM and FM bands, and depending on whether the tuning mode has been set to manual or automatic, each press will either change one frequency step at a time, or seek the next frequency with acceptable signal strength.

Direct: Press this button before using the Numeric Keys to directly enter a radio station frequency (AM or FM bands only).

Clear: Press this button to clear a radio station frequency you have started to enter.

Preset Stations Selector: Press these buttons to select a preset radio station.

For XM Radio, first press the Set Button repeatedly until PRESET SEARCH appears and then use the \triangle/∇ Buttons to select the letter of the desired bank of presets.

Tone Mode: Press this button to access the tone controls (bass and treble). Use the Navigation Buttons to make your selections.

Disc Skip: This button has no effect on the receiver, but is used with some optical disc changers to skip to the next disc.

Macros: These buttons may be programmed to execute long command sequences with a single button press. They are useful for programming the command to turn on or off all of your components, or for accessing specialized functions for a different component than you are currently operating.

Surround Mode Selectors: Press any of these buttons to select a type of surround sound (e.g., multichannel) mode. Choose from the Dolby modes, DTS modes, Logic 7 modes or Stereo modes. Each press of a button will cycle to the next available variant of that mode. Not all modes or mode groups are available with all sources.

Night Mode: Press this button to activate Night mode with specially encoded Dolby Digital discs or broadcasts. Night mode compresses the audio so that louder passages are reduced in volume to avoid disturbing others, while dialogue remains intelligible.

Track Skip: These buttons have no effect on the receiver, but are used with many source components to change tracks or chapters.

Dim: Press this button to partially or fully dim the front-panel display.

Transport Controls: These buttons have no effect on the receiver, but are used to control many source components. By default, when the remote is operating the receiver, these buttons will control a DVD player.

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out so that the word OFF appears on its top. Gently press the button to turn the switch off. This will prevent the possibility of damaging the AVR in case of a transient power surge.

Step Seven – Insert Batteries in Remote

The AVR 247 remote control uses three AAA batteries, which are included.

To remove the battery cover located on the back of the remote, firmly press the ridged depression and slide the cover toward the top of the remote.

Insert the batteries, as shown in Figure 34, making sure to observe the correct polarity.

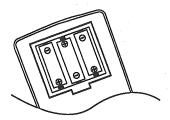


Figure 34 - Remote Battery Compartment

When using the remote, remember to point the lens toward the front panel of the AVR 247. Make sure no objects, such as furniture, are blocking the remote's path to the receiver. Bright lights, fluorescent lights and plasma video displays may interfere with the remote's functioning. The remote has a range of about 20 feet, depending on the lighting conditions. It may be used at an angle of up to 30 degrees to either side of the AVR.

If the remote seems to operate intermittently, or if pressing a button on the remote does not cause the AVR Selector or one of the Input Selectors to light up, then make sure the batteries have been inserted correctly, or replace all three batteries with fresh ones.

Step Eight - Program Sources Into the Remote

The AVR 247 remote not only is capable of controlling the receiver, but it may also be programmed to control many brands and models of VCRs, DVD players, CD players, cable boxes, satellite receivers, cassette decks and TVs, as well as an iPod docked in The Bridge.

It may help to think of the remote as a book with pages. Each "page" represents the button functions for a different device. In order to access the functions for a particular device, you first need to turn to that page; that is, switch the remote to that device mode. This is done by pressing the AVR Button to access the codes that control the receiver, or the Input Selector Buttons to access the codes for the devices programmed into the remote.

You may have noticed that three of the Input Selectors look different from the others (see Figure 35). For the DVD/CD, TAPE/The Bridge and HDMI 1/HDMI 2 Selectors, there is a primary source, the name of which is printed on the button, and a secondary source, the name of which is printed in green above the button.

When the remote is in the device mode for the primary source, e.g., DVD, pressing the device selector will cause it to light up in red. When the remote is in the secondary source's device mode, the selector will light up in green when pressed.

To switch between the primary and secondary device modes, press the selector twice quickly in succession. The selector will retain this selection until the next time you toggle between the primary and secondary device modes. That is, if you press the DVD/CD Selector twice quickly so that the CD source is activated, then press another source selector, such as Video 1, the next time you press the DVD/CD Selector, the remote will return to the CD device mode.

The AVR 247's remote is factory-programmed to control an iPod docked in The Bridge and many Harman Kardon DVD and CD players. If you have other source devices in your system, follow these steps to program the correct codes into the remote.

- Using the codes in Tables A9—A16 of the Appendix, look up the product type (e.g., DVD, cable TV box) and the brand name of your source. The number(s) listed is/are potential candidates for the correct code set for your particular device.
- 2. Turn on your source device.
- 3. This step places the remote in program mode, and varies slightly, depending on which Input Selector is being programmed. Refer to Figure 35.
 - a) DVD, Tape, Video 1, Video 2, Video 3 and Video 4 Sources: Press and hold the Input Selector until the Program Indicator LED starts to flash, then release it. Follow the directions in Step 4, below.
 - b) CD Source: Press the DVD/CD Input Selector twice quickly so that it turns green, hold it until the Program LED starts to flash, then release. Follow the directions in Step 4, below.
 - c) HDMI 1 Source: Press and hold the Input Selector until it turns red and the Program LED starts to flash, then release it. Next, press the Input Selector that corresponds to the device type you want to program into the HDMI 1 mode, i.e., DVD, VCR/PVR or CBL/SAT. Then follow the directions in Step 4, below.
 - d) HDMI 2 Source: Press and release the Input Selector once, then quickly press the Input Selector again so that it turns green. Hold it until the Program LED starts to flash, then release it. Next, press the Input Selector that corresponds to the device type you want to program into the HDMI 2 mode, i.e., DVD, VCR/PVR or CBL/SAT. Then follow the directions in Step 4, below.



Figure 35 - Input Selectors

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- 4. Enter a code from Step 1, above.
 - a) If the device turns off, then press the Input Selector again to accept the code; it will flash. The remote will exit the Program mode.
 - b) If the device does not turn off, try entering another code. If you run out of codes, you may search through all of the codes in the remote's library for that product type by pressing the ▲ or ▼ Button repeatedly until the device turns off. When the device turns off, enter the code by pressing the Input Selector, which will flash. The remote then exits Program mode.
- 5. Once you have programmed a code, it's a good idea to try using some other functions to control the device. Sometimes, manufacturers use the same Power code for several different models, while other codes will vary. You may wish to repeat this process until you've programmed a satisfactory code set that operates most of the functions you frequently use.
- 6. You may find out which code number you have programmed by pressing and holding the Input Selector to enter the Program mode. Then press the Set Button, and the LED will flash in the code sequence. One flash represents "1", two flashes for "2", and so forth. A series of many fast flashes represents "0". Record the codes programmed for each device in Table 3.

Table 3 - Remote Control Codes

Source Input	Product Type (circle one)	Remote Control Code
Video 1	VCR, PVR	
Video 2	Cable, Satellite	
Video 3	TV	
Video 4	TV	
HDMI 1	DVD, VCR, PVR, CBL, SAT	
HDMI 2	DVD, VCR, PVR, CBL, SAT	
DVD	DVD	
CD	CD, CDR	

If you are unable to locate a code set that correctly operates your source device, it will not be possible to use the AVR remote to control that device. However, you may still connect the source to the AVR 247 and operate it using the device's original remote control. Alternatively, you may wish to consider purchasing Harman Kardon's optional TC 30 activity-based remote, which is programmed by accessing a large database of product codes on the Internet. The TC 30 is also capable of "learning" codes from your device's original remote.

Most of the button labels on the remote describe the button's function when used to control the AVR 247. However, the button may perform a very different function when used to control another device. Refer to the Remote Control Function List, Table A8 in the Appendix, for a list of each button's functions with the various product types.

If you wish, you may program Macros, which are preprogrammed code sequences that execute many code commands with a single button press. You may also program "punch-through" codes, which allow the remote to operate the volume, channel or transport controls of another

device without having to switch the remote's device mode. See pages 58–59 for instructions on these advanced programming functions.

NOTE: The AVR 247 remote is preprogrammed to operate the transport controls of Harman Kardon DVD players when the AVR, the Video 2 (cable/satellite) or the Video 3 (TV) source is selected. You may change this punch-through programming at any time.

Step Nine - Remote IR Inputs and Output (Optional)

The AVR 247 is equipped with a Remote IR Input, a Multiroom IR Input and a Remote IR Output to facilitate use of your system with a remote control in a variety of situations, See Figure 36.



Figure 36 - IR Inputs and Outputs

When the AVR 247 is placed in such a way that aiming the remote at the front-panel IR sensor is difficult, such as inside a cabinet or facing away from the listener, you may connect an external IR receiver, such as the optional Harman Kardon HE 1000, to the Remote IR Input jack. When you are using the AVR 247 in multiroom mode, you may connect an optional IR receiver, keypad or other control device to the Multiroom IR Input for remote control of the AVR 247 (and any sources connected to the AVR's Remote IR Output) from the remote zone. Any signals transmitted through the Multiroom IR Input will only control source selection and volume for the remote zone. If a source device is being shared with the main listening area, then any control commands issued to that source will also affect the main room.

If any of your source devices are equipped with a compatible Remote IR Input, you may use a 1/8" mini-plug interconnect cable (not included) to connect the AVR's Remote IR Output to the source device's Remote IR Input, which will pass any applicable remote signals transmitted through the AVR to the source device. This enables you to control your sources even when the AVR itself is controlled via an external IR receiver.

Check with the manufacturer of the source device for more information on the type of IR signal expected. The AVR 247 will output a "stripped carrier" IR signal through the Remote IR Output.

To control more than one source device using the Remote IR Output, connect all sources in "daisy chain" fashion, with the AVR's Remote IR Output connected to the first device's Remote IR Input, the second device's Remote IR Output connected to the next device's Remote IR Input, and so forth.

Step Ten - Install a Multiroom System (Optional)

The AVR 247 offers several methods of distributing music to other listening areas in your home. As indicated in the subheading, a multi-room system is not required to enjoy the home theater experience. If you prefer not to install a multiroom system at this time, skip to Step Eleven to turn on the AVR 247 and configure it.

IMPORTANT SAFETY NOTE: Installing a multiroom system very often requires running various cables inside walls. Always comply with the appropriate safety codes when installing concealed wiring. The AVR 247's multiroom connections should be installed per the

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when turned on. This feature avoids discomfort for listeners in case the last user turned the volume very high.

Press the OSD Button to remove the display from the screen so that you may adjust the volume to a desired level while a source is playing. Make a note of the number that appears in the display, and return to the System Setup menu. At the Default Volume Set line, select the desired volume setting, and activate the feature by setting Volume Default to ON,

NOTE: Although volume is normally displayed in 0.5dB increments, the default volume setting only allows whole numbers.

Semi OSD Timeout: At this line, you may program the amount of time (2 to 5 seconds) the two-line semi-OSD on-screen messages remain visible, or you may deactivate the semi-OSD display altogether if you find it distracting. These messages will continue to appear on the front panel of the receiver.

NOTE: The semi-OSD displays are not available when a 1080i or 1080p high-definition video source is in use.

Full OSD Timeout: At this line, you may program the amount of time (20, 30, 40 or 50 seconds) the full-OSD menus remain visible on screen. The full-OSD system may not be deactivated.

Default Surround Mode: This setting determines how the AVR 247 will handle Dolby Digital and DTS sources. For the purposes of this setting, the "default surround mode" means the mode encoded in the program, such as Dolby Digital 5.1. With this setting ON, the receiver will always use the default surround mode encoded in the program. When this setting is changed to OFF, the receiver will use the surround mode you selected the last time this type of audio stream was detected.

Dolby Digital 2.0 signals default to the Dolby Pro Logic II Movie mode, but you may select another Dolby surround mode manually. For PCM and analog sources, the factory default surround mode is Logic 7 Music. In general, the receiver will use the surround mode selected the last time that type of signal was received.

Dim Function

Some people find the front-panel messages distracting and would prefer to dim them or turn them off altogether. When the display is dimmed or darkened, it will return to full brightness for five seconds any time a command is received before dimming or darkening again.

To dim the display:

 Press the Dim Button on the remote. Each button press will cycle through the three settings of:

VFD FULL: Normal brightness

VFD HALF: Display is dimmed but still visible; the light inside the volume knob goes dark

VFD OFF: Display goes completely dark except for the Power Indicator to remind you that the receiver is turned on

2. Press the Set Button on the front panel and hold it for about five seconds. A message indicating the current brightness setting (see above) will appear in the display. Use the front-panel ◀/▶ Buttons to change the setting and press the Set Button to select it.

Advanced Remote Control Functions

The AVR 247 remote control not only operates the AVR 247, but it also serves as a universal remote that may be programmed to operate many other home theater components, as described in the Installation section. Each time you select one of your other components, the AVR remote switches to the control functions for that component. Since many buttons have unique functions for each component, refer to the Function List in the Appendix for assistance in operating your other components. The function of each button will not necessarily correspond to the label printed on the button.

Punch-Through Programming

The AVR 247 remote's punch-through feature allows you to select one component for the remote to operate, while simultaneously setting certain groups of controls to operate another component. For example, while using the AVR to control surround modes and other audio functions, you may operate the transport controls of your DVD player. Or while using the remote to control video functions on your TV, you may use your cable box to change channels and the AVR to control the volume.

NOTE: It is not necessary to program the remote to control your DVD player's transport controls while the AVR, VID2 or VID3 devices are in use, as the remote is preprogrammed at the factory with this function.

To program punch-through control while operating any device:

- 1. Press and hold the Input Selector (or AVR selector) for the main device the remote will be operating until the Program LED flashes and the remote enters Program mode.
- 2. Select the type of punch-through programming.
 - a) To program volume control punch-through, press the Volume Up Button.
 - b) To program channel control punch-through, press the Volume Down Button.
 - c) To program transport control punch-through, press the Play Button.
- Press the Input Selector (or AVR selector) for the device whose volume, channel or transport controls you would like to be active while operating the device you selected in the first step. The LED will flash green to confirm the programming.

For example, if you wish to watch your TV (programmed into the Video 3 Button) while changing channels using your cable box (Video 2), first press the Video 3 Button until the Program LED flashes. Then press the Volume Down Button, followed by the Video 2 Button.

To undo punch-through programming, follow the same steps as above, but press the same Input (or AVR) Selector in Steps 1 and 3.

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You may reassign the transport control punch-through programming for the AVR, VID2 and VID3 devices to other devices, such as CD. If you wish to remove transport control punch-through altogether for the AVR, VID2 or VID3 device, follow the same procedure as for programming punch-through, but in Step 3 press either of the other two of these three special selector buttons. For example, to remove punch-through transport control from the VID3 device so that pressing any of the transport controls will have no effect in that device mode, press and hold VID3 until the Program Indicator Program LED flashes in amber, then press the Play button, followed by either the AVR or VID2 Button.

Macros

Macros are used to program sequences of up to 19 commands that are executed with a single button press. Macros are well suited for power on and off commands, or to send out a favorite multidigit channel number with one button press, or to have the ability to send out a code sequence to control another device while the remote is operating one device, but with more flexibility than the built-in punch-through controls.

Some commands may not be programmed into macros: Mute, Dim, Channel Up/Down, or any of the surround mode commands.

NOTE: Use caution when programming complicated macros. It isn't possible to program a pause or delay before sending commands after Power On, and the component may not be ready to respond to commands instantaneously after powering on.

To program, or "record" a macro, follow these steps:

- 1. Simultaneously press and hold one of the four Macro Buttons (or the Power On Button) and the Mute Button to enter Program mode.
- 2. Press the Input (or AVR) Selector for each device before you enter commands to be transmitted to that device. This step counts as one of the 19 commands allowed for each macro.

NOTE: Even if you previously switched one of the dual-source Input Selectors (DVD/CD, TAPE/THE BRIDGE, HDMI 1/HDMI 2) to the primary or secondary source prior to programming the macro, the remote always requires you to press any of these selectors *once* to program the macro to select the primary source and *twice* for the secondary source.

- 3. For the Power On command, DO NOT press the Power On Button. Press the Mute Button instead.
- 4. Press the Power Off Button to program the Power Off command.
- 5. Press the Sleep Button to end the programming process.

It isn't possible to "edit" a command within a macro. However, you may erase the macro as follows:

- 1. Simultaneously press and hold the Mute Button and the Macro Button containing the macro until the Program LED flashes.
- 2. Press the Surround Button to erase the macro.

Resetting the Remote

To reset the remote to its factory defaults, simultaneously press and hold any Input Selector and the "0" Numeric key. When the Program LED flashes in amber, enter the code "333". When the green LED goes out, the remote will have been fully reset.

Processor Reset

There may be instances when you wish to fully reset the AVR 247 to its factory defaults, or the unit may behave erratically after a power surge.

To correct erratic behavior, first try turning the Master Power Switch off and unplugging the AC power cord for at least three minutes. Plug the cord back in and turn the receiver back on. If this doesn't help, try a system reset.

NOTES:

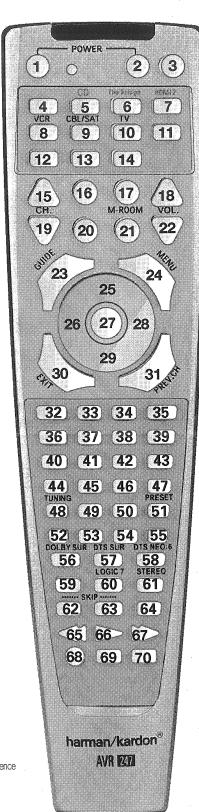
- A system reset erases all user configurations, including speaker and level settings and tuner presets. After a reset, you will need to reenter all of these settings.
- The RS-232 Reset Button on the rear panel of the AVR 247 does not perform a system reset. DO NOT press the RS-232 Reset Button.

To reset the AVR 247, place the receiver in Standby mode (press the front-panel Standby/On Switch so that the Power Indicator turns amber). Then press and hold the front-panel Tone Mode Button for at least five seconds until the RESET message appears in the display.

If the receiver still does not function correctly after a processor reset, contact an authorized Harman Kardon service center for assistance. Authorized service centers may be located by visiting our Web site at www.harmankardon.com.

Memory

If the AVR 247 is unplugged or experiences a power outage, it will retain user settings for up to four weeks.



Refer to the numbered buttons in Figure 92 when using the Function List.

Figure 92 - Remote Control Function List Reference

Table A8 - Remote Control Function List

No.	Button Name	AVR Function	DVD	CD/CD-R	Tape	VCR (VID1)	TiVo (VID1)	CBL (VID2)	SAT (VID2)	TV (VID3/VID4)	.™Bridge∿ (DMP)	XM	HDMI 1/2
1	Power On	Power On	Power On	Power On		Power On	Power On/Off	Power On	Power On	Power On		Power On	Power On
2	Power Off	Power Off	Power Off	Power Off		Power Off	TV Power	Power Off	Power Off	Power Off		Power Off	Power Off
3	Mute	Mute	Mute	Mute	Mute	Mute	Mute	Mute	Mute	Mute		Mute	Mute
4	AVR	AVR Select	AVR Select	AVR Select	AVR Select	AVR Select	AVR Select	AVR Select	AVR Select	AVR Select	AVR Select	AVR Select	AVR Select
5	DVD/CD	DVD Input Select	DVD Select	DVD Select	DVD Select	DVD Select	DVD Select	DVD Select	DVD Select	DVD Select	DVD Select	DVD Select	DVD Input Select
		CD Input Select	CD Select	CD Select	CD Select	CD Select	CD Select	CD Select	CD Select	CD Select	CD Select	CD Select	CD Input Select
6	Tape/ >Bridge	Tape Select	Tape Select	Tape Select	Tape Select	Tape Select	Tape Select	Tape Select	Tape Select	Tape Select	Tape Select	Tape Select	Tape Select
		The Bridge (DMP) Select	The Bridge (DMP) Select	The Bridge (DMP) Select	The Bridge (DMP) Select	The Bridge (DMP) Select	The Bridge (DMP) Select	The Bridge (DMP) Select	The Bridge (DMP) Select	The Bridge (DMP) Select	The Bridge (DMP) Select	The Bridge (DMP) Select	The Bridge (IMF) Select
7	HDMI1/HDMI 2	HDMI 1 Select	HDMI 1 Select	HDMI 1 Select	HDMI 1 Select	HDMI 1 Select	HDMI 1 Select	HDMI 1 Select	HDMI 1 Select	HDMI 1 Select	HDMI 1 Select	HDMI 1 Select	HDMI 1 Select
		HDMI 2 Select	HDMI 2 Select	HDMI 2 Select	HDMI 2 Select	HDM 2 Select	HDMI 2 Select	HDMI 2 Select	HDMI 2 Select	HDMI 2 Select	HDM 2 Select	HDMI 2 Select	HDMI 2 Select
8	VID 1 (VCR)	Video 1 Select	VCR Select	VCR Select	VCR Select	VCR Select	VCR Select	VCR Select	VCR Select	VCR Select	VCR Select	VCR Select	VCR Select
9	VID 2 (CBL/SAT)	Video 2 Select	CBL/SAT Select	CBL/SAT Select	CBL/SAT Select	CBL/SAT Select	CBL/SAT Select	CBL Select	SAT Select	CBL/SAT Select	CBL/SAT Select	CBL/SAT Select	CBL/SAT Selec
10	VID 3 (TV)	Video 3 Select	TV Select	TV Select	TV Select	TV Select	TV Select	TV Select	TV Select	TV Select	TV Select	TV Select	TV Select
11	VID 4	Video 4 Select	Video 4 Select	Video 4 Select	Video 4 Select	Video 4 Select	Video 4 Select	Video 4 Select	Video 4 Select	Video 4 Select	Video 4 Select	Video 4 Select	Video 4 Select
12	XM	XM Select	XM Select	XM Select	XM Select	XM Select	XM Select	XM Select	XM Select	XM Select	XM Select	XM Select	XM Select
13	AM/FM	Tuner Select	Tuner Select	Tuner Select	Tuner Select	Tuner Select	Tuner Select	Tuner Select	Tuner Select	Tuner Select	Tuner Select	Tuner Select	Tuner Select
14	6/8CH	6/8 Ch. Input Select	6/8 Ch. Input Select	6/8 Ch. Input Select	6/8 Ch. Input Select	6/8 Ch. Input Select	6/8 Ch. Input Select	6/8 Ch. Irput Select	6/8 Ch. Input Select				
15	Sleep/CH+	Sleep				Channel +			Channel +				
16	Test Tone	Test Tone											
17	T/V		TV/DVD or V. OFF	Input Select		TV/VCR	TV Input	TV/CBL	TV/SAT	TV/VCR			TV/Video
18	Vol Up	Volume Up	Volume Up	Volume Up		Volume Up	Volume Up		Volume Up	Volume Up	Volume Up		Volume Up
19	Surr/CH-	DSP Surround Mode Select	Disc Menu or Title	COR Select		Channel –			Channel -				
20	OSD	OSD		Program		OSD	Live TV	OSD	OSD	OSD			OSD
21	M-Room	Multiroom	HD Mode										
22	Vol Down	Volume Down	Volume Down	Volume Down		Volume Down	Volume Down		Volume Down	Volume Down	Volume Down		Volume Dow
23	CH./Guide	Channel Trim	Title or Disc Menu	Continuous Play			Guide	Info/Guide	Info/Guide				Guide
24	Speaker/Menu	Speaker Setup	Menu or Setup	Intro Scan		Menu	Menu	Menu	Menu	Menu	Menu		Menu
25	A	Move/Adjust Up	Up			Up	Up	Up	Up	Up .		Úp	Up
26	4	Move/Adjust Left	Left			Left	Left	Left	Left	Left	Scroll –	Left	Left
27	Set	Set	Enter			Enter	Select	Enter	Enter	Enter	Select	Set	Set/Enter
28	>	Move/Adjust Right	Right			Right	Right	Right	Right	Right	Scroll +	Right	Right
29	▼	Move/Adjust Down	Down .			Down	Down	Down	Down	Down		Down	Down
30	Digital/Exit	Digital Input Select	Open/Close				Return/Exit						
31	Delay/Prev. Ch	Delay Adjust	Return or Status	Open/Close				Prev Channel	Prev Channel	Prev Channel			Prev. Chann
32	1	1	1	1		1	1	1	1	1		1	1
_33	2	2	2	2		2	2	2	2	2		2	2
34	3	3	3	3		3	3	3	3	3		3	3
35	4	4	4	4		4	4	4	4	4		4	4
36	5	5	5	5		5	5	5	5	5		5	5
37	6	6	6	6		6	6	6	6	6		6	6
38	7	7	7	7.		7	7	7	7.	7		7	7
39	8	8	8	8		8	8	8	8	8		8	8
40	Tun-M	Turing Mode	Chapter+ or Zoom	Repeat								Tuning Mode	
41	9	.9	9	9		9	9	9	9	9		9	9
42	0	.0	0	0		0	0	0	0	0		0	0

Table A8 – continued

No.	Button Name	AVR Function	DVD	CD/CD-R	Tape	VCR (MD1)	TiVo (VID1)	CBL (VID2)	SAT (VID2)	TV (VID3/VID4)	.>Bridge√ (DMP)	XM	HDMI 1/2
43	Memory	Memory	Audio or Playlist	Time								Memory	
44	Tuning Up	Tuning Up	Next Chapter	Track Direct		Cancel			Cancel	Sleep		Tuning Up	
45	Direct	Direct Tuner Entry	Angle	Random Play				FAV/Angle	FAV				Angle/FAV
46	Clear	Clear	Clear	Clear		Clear	Clear		Next			Clear	
47	Preset Up	Preset Tune Up	Slow Forward	+10					Alt			Preset Up	
48	Tuning Down	Tuning Down	Prev Chapter	Track Increment								Tuning Down	
49	Tone	Tone mode		Program	-								
50	D. Skip	Disc Skip (DVD)	Disc Skip	Disc Skip			Skip			,			
51	Preset Down	Preset Down	Slow Rev									Preset Down	
52	M1	Macro 1	Macro 1	Macro 1	Macro 1	Macro 1	Macro 1	Macro 1	Macro 1	Macro 1		Macro 1	Macro 1
53	M2	Macro 2	Macro 2	Macro 2	Macro 2	Macro 2	Macro 2	Macro 2	Macro 2	Macro 2		Macro 2	Macro 2
54	M3	Macro 3	Macro 3	Macro 3	Macro 3	Macro 3	Macro 3	Macro 3	Macro 3	Macro 3		Macro 3	Macro 3
55	M4	Macro 4	Macro 4	Macro 4	Macro 4	Macro 4	Macro 4	Macro 4	Macro 4	Macro 4		Macro 4	Macro 4
56	Dolby Surround	Dolby Modes											
57	DTS Surround	DTS Digital Modes											
58	DTS Neo:6	DTS Neo:6 Select											
59	Night	Night Mode Select	Subtitle On/Off	CDP Select									
60	Logic 7	Logic 7 Select										-	
61	Stereo	Stereo Mode Select											
62	Skip Down	Skip — (DVD)	Step —	Skip –		Scan -	Thumbs Down	Skip – (DVD)	Skip – (DVD)	Skip – (DVD)			
63	Skip Up	Skip + (DVD)	Step +	Skip +		Scan +	Thumbs Up	Skip + (DVD)	Skip + (DVD)	Skip + (DVD)			
64	Dim	Dimmer											
_66	Rewind (◀◀)	R. Search (DVD)	R. Search	R. Search	Rewind	Rewind	R. Search	R. Search (DVD)	R. Search (DVD)	R. Search (DVD)	Skip-/R. Search		R. Search
66	Play (◀▶)	Play (DVD)	Play	Play	R. Play/F. Play	Play	Play	Play (DVD)	Play (DVD)	Play (DVD)	Play		Play
67	FF(▶ ▶)	F. Search (DVD)	F. Search	F. Search	Fast Fwd	Fast Fwd	F. Search	F. Search (DVD)	F. Search (DVD)	F. Search (DVD)	Skip+/F. Search		F. Search
68	Record			Record	Record/Pause	Record.	Record						Record
69	Stop	Stop (DVD)	Stop	Stop	Stop	Stop	Slow	Stop (DVD)	Stop (DVD)	Stop (DVD)			Stop
70	Pause	Pause (DVD)	Pause	Pause		Pause	Pause	Pause (DVD)	Pause (DVD)	Pause (DVD)	Pause		Pause

NOTE: When any of the transport controls are pressed while the remote is in AVR, Video 2 or Video 3 mode, the remote will automatically switch to DVD mode and the command will be applied to the DVD player. If you then press a button native to the original mode, e.g., Volume Down for the AVR, the remote will revert to the original mode. See Punch-Through Programming, described in the Advanced Functions section, for more information.

Refer to Tables A9 through A16 when programming the codes for your components into the remote. Table A9 - Remote Control Product Codes - **TV**

TV Manufacturer/Bran	nd Setup	Code	Numbe	er			
AIWA	027						
A MARK	122	132					
ADMIRAL	192						
AKAI	123	160					
AMPRO	164						
ANAM	045	106	109	112	122		
AOC	122	123	128				-
BLAUPUNKT	084						
BROKSONIC	205	206					
CANDLE	123	128					
CAPEHART	059						
CENTURION	123	171					
CENTRONIC	045						
CITIZEN	045	123	128	132		· · · · · · · · · · · · · · · · · · ·	
CLASSIC	045						
CONCERTO	128						
CONTEC	045						
CORANDO	172					•	
CORONADO	132						
CRAIG	045	157	158	159			
CROWN	045	132					
CURTIS MATHES	123	128	132				
CXC	045	120	102				
DAEWOO	045	087	102	105	106	108	111
DI LETTOO	114	116	119	127	128	132	
DAYTRON	128	132	110		120	102	
DIGI LINK	200	102					
DYNASTY	045						
DYNATECH	063						
ELECTROHOME	115	132					
EMERSON	045	123	128	132	139	157	158
LIVILITOOIY	159	162	205	102	100	107	100
FUNAI	045	102					
FUTURETECH	045						
GE	029	087	121	123	128	133	145
	159	163	141	120	120	100	170
GOLDSTAR/LG	101	110	122	128	132		
GRUNDIG	193	110	144	120	104		
HALL MARK	128				· · · · ·		
HARMAN KARDON	201						
HITACHI	123	128	132	144	147		
INFINITY	148	140	102	144	14/		· · · · · · · · · · · · · · · · · · ·
INKEL	120						
JBL	148						
JC PENNEY	115	100	100	100	1 // E		
		.123	128	132	145		
JENSEN .	019	007	104				
JVC KANAA CLIO	. 079	087	134				
KAWASHO	173						
KEC	045	00.1					
KENWOOD	123	204					
KMC	132						

TV Manufacturer/Brand	Setup	Code	Numbe	er				
KTV	045	123	132	162				
LLOYTRON	172	173						
LODGENET	069							
LOGIK	069							
LUXMAN	128							
LXI	077	145	148					
MAGNAVOX	030	123	128	132	145	148		
MARANTZ	115	123	148					
MATSUI	148							
MEMOREX	069	128						
METZ	084							
MGA	115	123	128					
MINERVA	084							
MITSUBISHI	077	115	123	128	160	167	168	
MTC	175	176						
NATIONAL	148	177	179	180	181	182		
NEC	115	121	123	125				
NIKEI	045							
ONKING.	045							
ONWA	045							
OPTONICA	077							
ORION	207	208	209	210	211			
PANASONIC	087	148	169					
PHILCO	045	115	123	128	132	148		
PHILIPS	033	034	035	036	123	128	132	
	145	148						
PIONEER	024	123	128					
PORTLAND	128	132						
PROSCAN	133							
PROTON	059	122	128	132	165			
QUASAR	032	087						
RADIO SHACK	045	128	132	180	196	197		
RCA	021	115	123	128	133	145	161	163
REALISTIC	045	167	196					
RUNCO	152	153						
SAA	183						1	
SAMPO	059	123	128					
SAMSUNG	020	022	124	128	132	145		
SANYO	026	054						
SCOTT	045	128	132					
SEARS	128	132	145					
SHARP	077	128	132					
SIEMENS ·	084							
SIGNATURE	069							
SONY	028	031	117	130	136	194	212	
SOUNDESIGN	045	128						
SPECTRICON	122				-,			
SSS	045							
SYLVANIA	025	123	128	145	148			
SYMPHONIC	184							
TANDY	077							

Table A9 - continued

TV Manufacturer/Brand	Setup	Code N	Number					
LOGIK	069							***************************************
LUXMAN	128							
LXI	077	145	148	····				
MAGNAVOX	030	123	128	132	145	148		
MARANTZ	115	123	148	102	1-10	170		
MATSUI	148	120	170					
MEMOREX	069	128						
METZ	084	120						
MGA	115	123	128					
MINERVA	084	120	120					
MITSUBISHI	077	115	123	128	160	167	168	
MTC	175	176	120	120	100	101	100	
NATIONAL	148	177	180	181	182			
NEC	115	121	123	125	102			
NIKEI	045	121	123	120				
ONKING	045							
ONWA	045							
OPTONICA	077							
ORION	207	208	209	210	011			
PANASONIC	087	148		210	211			
PHILCO			169	100	100	1.40		
	045	115	123	128	132	148	1.45	1.40
PHILIPS	033	035	036	123	128	132	145	148
PIONEER	024	123	128					
PORTLAND	128	132						
PROSCAN	133	100	100	400	105			
PROTON	059	122	128	132	165			
QUASAR	032	087	100	100	100	107		
RADIO SHACK	045	128	132	180	196	197	404	100
RCA	021	115	123	128	133	145	161	163
REALISTIC	045	167	196					
RUNCO	152	153						
SAA	183	100	100					
SAMPO	059	123	128	100	100			
SAMSUNG	020	022	124	128	132	145		
SANYO	026	054	400					
SCOTT	045	128	132					
SEARS	128	132	145					
SHARP	077	128	132					
SIEMENS	084	***			*			
SIGNATURE	069	004	447	400	400	404	04.0	
SONY	028		117	130	136	194	212	
SOUNDESIGN	045	128						
SPECTRICON	122							
SSS	045	100	100	4.45	1.10			
SYLVANIA	025	123	128	145	148			
SYMPHONIC	184							
TANDY	077							
TATUNG	063							
TECHNICS	181							-
TECHWOOD	128		4					
TEKNIKA	045	069	115	123	128	132		
TELERENT	069							

TV Manufacturer/Brand	Setup	Code	Numbe	r		
TERA	156					
THOMSON	190	191				
TMK	128					
TOSHIBA	063	129	202			
TOTEVISION	132					
VIDEO CONCEPTS	160					
VIDTECH	128					
WARDS	069	128	132	148		
YAMAHA	123	128				
YORK	128					
YUPITERU	045					
ZENITH	069	090		-		
ZONDA	122					

Table A10 - Remote Control Product Codes - VCR

VCR Manufacturer/Brand	Setup	Code N	lumber				
AIWA	040						
AKAI	048	108	109	126			
AMPRO	076						
ASA	134						
AUDIO DYNAMICS	018	048					
BROKSONIC	110	147					
CANDLE	134	135					
CANON	135	140					
CAPEHART	094	- 110					
CITIZEN	134						
CRAIG	045	116					
DAEWOO	017	094	104				
DAYTRON	094	004	104				
DBX	018	048					
DYNATECH	040	040					
EMERSON	013	040	042	110	112		
FISHER	017	040	042	110	112		****
FUNAL							
GE	040	005	104				
	076	095	124				
GO VIDEO	113	107					
GOLDSTAR/LG	018	107	010				
HARMAN KARDON	002	003	018	049			
HITACHI	040	048					
JC PENNEY	018	045					
JENSEN	048						
JVC	018	048	111	132			
KENWOOD	020	048					
LLOYD	040						
LXI	020	040					
MAGIN	045						
MAGNAVOX	040						
MARANTZ	018						
MEMOREX	017	020	040	052	053	054	076
MGA	049						
MITSUBISHI	049	131					
MULTITECH	040						
NAD	139						
NATIONAL	140						
NEC	018	048					
NORDMENDE	048						
OPTIMUS	159						,
ORION	147						
PANASONIC	125	150	167	172			
PHILCO	040						
PHILIPS	040	075					
PORTLAND	094						
PULSAR	076						
QUASAR	001	125					
RADIO SHACK	055	134	140	142	158	159	
RCA	095	124	125	157	172		
REALISTIC	017	020	040	045	159		
SALORA	020						
	1						

VCR Manufacturer/Brand	d Setup Code Number									
SAMSUNG	045	051	095	105	109					
SANSUI	048	116	147							
SANYO	017	020								
SCOTT	110	112			-					
SEARS	017	020								
SHARP	129	156								
SONY	080	129								
SOUNDESIGN	040									
SYLVANIA	040									
SYMPHONIC	040									
TANDY	017	040								
TASHICO	134									
TATUNG	048									
TEAC	040	048								
TEKNIKA	040									
THOMAS	040									
TiVo	002	003	004	005	007	800	012			
TMK	013									
TOSHIBA	112	155					-			
TOTEVISION	045									
UNITECH	045									
VECTOR RESEARCH	018									
VIDEO CONCEPTS	018	040								
MDEOSONIC	045									
WARDS	040	045	112							
YAMAHA	018	040	048							
ZENITH	040	050	076	083						

Table A11 — Remote Control Product Codes — CD

CD Manufacturer/Brand	Setup Code Number									
ADCOM	063	069								
AIWA	072	111	118	156	170					
AKAI	050	177	184			-				
AUDIO TECHNICA	053									
AUDIOACCESS	125									
AUDIOFILE	211									
BSR	044									
CALIFORNIA AUDIO	109									
CAPETRONIC	070									
CARRERA	087									
CARVER	136	140	141	143	144	145	185	186		
CASIO	117	166								
CLARINETTE	166						·			
DENON	187	188	213							
EMERSON	052	093	108							
FISHER	055	095								
FRABA	117									
FUNAI	126									
GE .	164									
GENEXXA	108									
GOLDSTAR/LG	016	087								
HAITAI	099	214								
HARMAN KARDON	001	002	025	054	190			····		
HITACHI	093	002	020	004	130					
INKEL	216									
JC PENNEY	098	147								
JENSEN	153	17/								
JVC	176	195	196					·		
KENWOOD	030	062	078	079	148	151	176			
NLINWOOD .	178	181	070	019	140	.101	170			
LOTTE	108	101				-				
LUXMAN	077	102								
LXI	164	102								
MAGNAVOX	039	113					-			
MARANTZ	058	084	191	192	193					
MCINTOSH	194	004	131	132	190					
MCS	080	098								
MITSUMI	152	030	,							
MODULAIRE	166									
NAD	013	074	197	198						
NAKAMICHI	199	200	201	190						
NEC	069	200	201							
NIKKO	053	055								
ONKYO	037	038	045	046	171	175	202	202		
OPTIMUS						175		203		
PANASONIC	065	089 109	091 119	092	183	104	212			
PHILIPS				158	183	204				
PIONEER	039	138	149	209	100	101	101			
IONLLI	071	094	100	112	123.	131	161			
PROTON	210	215								
QUASAR .										
	109	100	010							
RADIO SHACK	126	166	213							

CD Manufacturer/Brand	Setup Code Number										
RCA	024	081	093	150							
RCX	169										
REALISTIC	058	093	095	104	105	108	164	166			
SANSUI	.047	081	134	157	172						
SANYO -	033	082	095								
SCOTT	108										
SHARP	058	105	114	151	159	167	180	181			
SHERWOOD	003	041	058	105	133						
SONY	103	115	116	118	132	139	163	205			
	206	207	208	212	217		-				
SOUNDSTREAM	124										
SYMPHONIC	059	110									
TAEKWANG	177										
TEAC	011	058	085	086	106	107	110	121			
	137	146	154								
THETA DIGITAL	039										
TOSHIBA	013	074	097	151	155	173					
VECTOR RESEARCH	087										
VICTOR	120	130									
WARDS	095										
YAMAHA	019	031	053	061	135	169					
YORK	166										

Table A12 - Remote Control Product Codes - DVD

Tomoto Control Founds Cougg By B										
DVD Manufacturer/Brand	Setup	Code I	Numbe	r						
APEX DIGITAL	061									
DENON	019	051								
GE	003	004								
GOLDSTAR/LG	005	055	064	066						
HARMAN KARDON	001	002	068							
JVC	006									
MAGNAVOX	056									
MARANTZ	059									
MITSUBISHI	023									
NAD	062									
ONKYO	009	048								
PANASONIC	024	030	044							
PHILIPS	056									
PIONEER	041	065								
PROCEED	060									
PROSCAN	003	004								
RCA	003	004			•					
SAMSUNG	053	054								
SHARP	028									
SONY	043	045								
THOMSON	003	004								
TOSHIBA	009	058	067							
YAMAHA	030	063								
ZENITH	005	055	064							

Table A13 - Remote Control Product Codes - **SAT**

SAT Manufacturer/Brand	Setup	Code i	umber					
ALPHASTAR	472							
ALPHASTAR DBS	450							
ALPHASTAR DSR	442							
BIRDVIEW	425							
CHANNEL MASTER	320	321	325	361				
CHAPARRAL	315	316	451					
CITOH	360							
DRAKE	313	317	318	413	481			
DX ANTENNA	331	352	379	483				
ECHOSTAR	395	397	452	453	463	477	478	
	484	485						
ELECTRO HOME	392							
FUJITSU	324	329	.334					
GENERAL INSTRUMENT	303	311	323	365	403	454	468	474
HITACHI DBS	455							
HOUSTON TRACKER	463							
HUGHES	437	489						
JANIEL	366		***********					
JERROLD	454	468	484					
KATHREIN	410	100	10 1					
LEGEND	453							
MACOM	317	365	369	370	371			
MAGNAVOX	461	473		0,0	071			
MEMOREX	453	710						
NEXTWAVE	423							
NORSAT	373							
OPTIMUS	466							
PACE DSS	487							
PANASONIC	366	469		.,				
PANASONIC DBS	457	400						
PANSAT	420					-		
PERSONAL CABLE	418							
PHILIPS	375							
PICO	407							
PRESIDENT	381	404						
PRIMESTAR	412	454	468	475	·····			
RCA	301	439	465	490				
RCA DSS	458	439	400	490				
REALISTIC REALISTIC	349	400						
SAMSUNG	442	480	1					-
SATELLITE SERVICE CO	335	200						
		388						
SCIENTIFIC ATLANTA	339							
SONY STAD CLICICE DDS	405							
STAR CHOICE DBS	459							
STARCAST SUIDE	347	400						
SUPER GUIDE	327	423	000	001	000	400		
TELECOM	330	333	390	391	393	409		
TOSHIBA	302	426	460	461	462	470	05.1	057
UNIDEN	323	332	348	349	350	351	354	355
7EMITI I	381	383	389	403	466	479	480	
ZENITH	384	385	387	394	419	488		

Table A14 - Remote Control Product Codes - TAPE

Tape Manufacturer/Brand	Setup Code Number
HARMAN KARDON	001

Table A15 - Remote Control Product Codes - CBL

CBL Manufacturer/Brand	Setup	Code N	lumber					
ABC	001	011						
ALLEGRO	111							
AMERICAST	212							
ARCHER	112							
BELCOR	113							
CABLE STAR	033	113						
CITIZEN	111							
COLOUR VOICE	085	090						
DIGI	114							
EAGLE	186							
EASTERN	066	070						
ELECTRICORD	039							
EMERSON	112							
FOCUS	116							
G.I.	001	011	017	096	097			
GC ELECTRONICS	113							
GEMINI	032	060						
GENERAL	210							
GENERAL INSTRUMENT	210							
GOODMIND	112							
HAMLIN	056	099	100	101	117	175	208	
HITACHI	001	188						
JASCO	111							
JERROLD	001	002	011	017	073	096	097	162
	188	210						
LINDSAY	118							
MACOM	191							
MAGNAVOX	017	019	068					
MOVIE TIME	035	039						
NSC	035	190						
OAK	197	220						
PACE	179							
PANASONIC	053	176	177	189	214			
PANTHER	114							
PHILIPS	013	019	020	085	090			
PIONEER	001	041	119	171	209	215	216	
POPULAR MECHANICS	116							
PRELUDE	120							
PRIMESTAR	162							
RADIO SHACK	111	112	213					
RCA	053	214						
RECOTON	116							
REGAL	056.	099	100	101	208			
REMBRANT	032							
SAMSUNG	003	072	186					

CBL Manufacturer/Brand	Setup	Code I	Number	-			
SCIENTIFIC ATLANTA	183	203	221	222			
SEAM	121						
SIGNATURE	001	188					
SPRUCER	053	081	177	189			
STARCOM	002	011	163				
STARGATE	120						
TANDY	024						
TELECAPATION	028						
TEXSCAN	036						
TFC	122						
TIMELESS	123						
TOCOM	170	205					
UNITED CABLE	011						
UNIVERSAL	033	034	039	042	113		
VIDEOWAY	124	211					
VIEWSTAR	019	025	086	089	190		
ZENITH	065	125	211	219			
ZENTEK	116						

Table A16 — Remote Control Product Codes — **THE BRIDGE/DMP**

Manufacturer/Brand	Setup Code Number
HARMAN KARDON	001
TEN TECHNOLOGIES	002