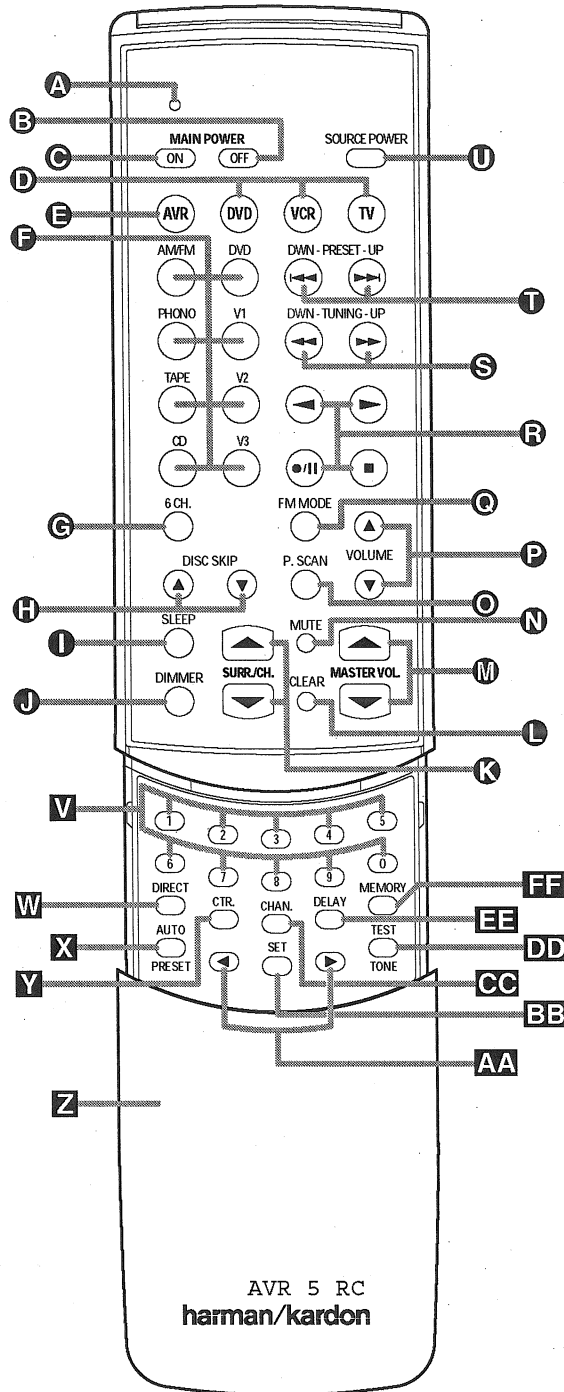


Remote Control Functions

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- A** LED Indicator
- B** Main Power Off
- C** Main Power On
- D** Device Control Selectors
- E** AVR Selector
- F** Source Selectors
- G** 6-Channel Direct
- H** Disc Skip
- I** Sleep Button
- J** Dimmer
- K** Surround/Channel Selectors
- L** Clear Button
- M** Master Volume
- N** Mute
- O** P-Scan
- P** Volume
- Q** FM Mode
- R** Transport Controls
- S** Tuning Up/Down
- T** Preset Up/Down
- U** Source Power
- V** Numeric Keys
- W** Direct
- X** Auto Preset
- Y** Center
- Z** Secondary Control Cover
- AA** </> Buttons
- BB** Set Button
- CC** Channel Button
- DD** Test Tone
- EE** Delay
- FF** Memory

AVR 5 RC
harman/kardon

Remote Control Functions

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IMPORTANT NOTE: The AVR5's remote may be programmed to control up to three additional devices, including the AVR5. Before using the remote, it is important to remember to press the **Device Control Selector** button **D** **E** that corresponds to the unit you wish to operate. The remote is capable of operating a wide variety of products using the control codes that are part of the remote. Before using the remote with other products, follow the instructions on pages 23–26 to program the proper codes for the products in your system.

It is also important to remember that many of the buttons on the remote take on different functions, depending on the product selected using the Device Control Selectors. The descriptions shown here primarily detail the functions of the remote when it is used to operate the AVR5. (See page 24 for information about alternate functions for the remote's buttons.)

A LED Indicator: This indicator will flash whenever a button is pressed to confirm that a remote command is being transmitted. It will also flash while the remote is being programmed to assist in entering or reading remote codes. Note that this is NOT a standard remote button, and has no function when pressed.

B Main Power Off: When the AVR5 is turned on, press this button to place it in the Standby mode. Note that in this condition, the unit is still connect to AC Power.

C Main Power On: When the AVR5 is in the Standby mode, as indicated by the **Power Indicator** **3** glowing green, press this button to turn the AVR5 on.

D Device Control Selectors: Press one of these buttons to use the remote to control the functions of another audio/video device. Note that the button will briefly turn red after it has been pressed to confirm your selection. (See pages 23–25 for information on programming the AVR5's remote to operate these devices.)

E AVR Selector: Press this button to use the remote control for operation of the AVR5. Note that the button will briefly turn red after it has been pressed to confirm your selection.

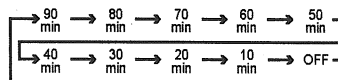
F Source Selectors: Press these buttons to select an input source for the AVR5. The AM/FM button is also used to switch between frequency bands when the tuner is in use.

NOTE: Pressing one of these buttons selects the source only. In order to control the actual source machine using the remote you must press the **Device Control Selector** button **E** for the desired product.

G 6-Channel Direct: Press this button to use the output of an optional, external digital decoder as the AVR5's input source.

H Disc Skip: These buttons do not have any functions when controlling the AVR5, but they operate the Disc Skip functions of compatible Harman Kardon compact disc changers. The Disc Skip Up button will also function as the Open/Close button for certain DVD and LD equipment when the remote is properly programmed to control them.

I Sleep Button: Press this button to place the unit in the Sleep mode. After the time shown in the display, the AVR5 will automatically go into the Standby mode. Each press of the button changes the time until turn-off in the following order:



J Dimmer: Press this button once to reduce the brightness of the front panel display to half the normal intensity. Press it again to turn the front panel display completely off. When the display is completely off, press the button to return to normal brightness.

K Surround/Channel Selectors:

Press these buttons to check or change the current Surround mode. When either one of these two buttons is first pressed, the **Information Display** **30** will show the current Surround mode. Press either button again to change the current Surround mode by scrolling the list of available modes as they appear in the **Information Display** **30**. When the remote is being used to control a VCR or TV set, these buttons are used to change channels. These buttons are also used when the remote is being programmed to "find" the correct codes via the Search mode. (See page 23 for more information on programming the remote.)

L Clear Button: This button is used to clear preset memory information for the AVR5's tuner. (See pages 21–22 for more information on tuner presets.)

M Master Volume: Press these buttons to raise or lower the AVR5's volume. These buttons are also used to obtain the IR code numbers for a device that has been programmed into the remote. (See page 23 for more information on programming the remote.)

N Mute: Press this button to momentarily silence the AVR5. When the AVR5 remote is being programmed to operate another device, this button is pressed with the **Device Control Selector** button **D** to begin the programming process. (See page 23 for more information on programming the remote.)

O P-Scan: Press this button to automatically scan through the list of stations that are programmed into the AVR5's tuner memory. When the button is pressed, each preset station will play for five seconds before the next station is selected. Press the button again when the desired station is heard to stop the preset scan.

Remote Control Functions

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P Volume: When the remote has been properly programmed for a compatible device, these buttons may be used to raise or lower the volume of a TV. Note that they DO NOT change the volume of the AVR5. That is done with the **Master Volume** button **M**.

Q FM Mode: Press this button when the tuner is in use in the FM band to switch to monaural reception if the station is weak and noisy. When the **MONO** indicator is on, FM reception will be monaural regardless of the strength of the tuned FM station. (See page 21 for more information.)

R Transport Controls: These buttons are used to control Play, Play Forward, Play Reverse, Stop, Pause and Record functions on compatible Harman Kardon compact disc players/changers and cassette tape decks. When the remote has been programmed to control an external device, such as a VCR, DVD or LD, these buttons may be used to control the standard Forward, Reverse, Stop and Pause functions, as well. (See page 23 for information on programming the remote.)

S Tuning Up/Down: When the tuner is in use, these buttons will tune up or down through the selected frequency band. A brief (1/2 second) press of the button will manually tune to the next frequency increment, while pressing and holding the button for a longer period will automatically tune to the next station with a signal strong enough for acceptable reception. These buttons will also control Fast Forward and Fast Reverse (or Rewind) for compatible Harman Kardon compact disc players/changers and cassette tape decks, as well as controlling these functions on a DVD or VCR, if the remote has been properly programmed.

T Preset Up/Down: When the tuner is in use, these buttons scroll through the stations that have been programmed into the AVR5's memory. These buttons also control the track Skip Up and Down on compatible Harman Kardon compact disc players/changers as well as controlling the

similar functions on a DVD if the remote has been properly programmed.

U Source Power: When the remote has been properly programmed to control another product, and the **Device Control Selector** **D** for that device has been pressed, press this button to turn the product on or off.

V Numeric Keys: These buttons serve as a ten-button numeric keypad to enter tuner preset positions. They are also to be used to select channel numbers when **TV** or **VCR** has been selected on the remote, or to select track numbers on a DVD player, depending on how the remote has been programmed.

W Direct: Press this button to select a radio station by entering its frequency using the **Numeric Keys** **V**. (See page 21 for more information.)

X Auto Preset: When the tuner and FM band have been selected, this button may be used to automatically program the tuner presets for all active stations. To start the auto preset scan, press and hold the button. Note that the **MEMO** and **PRESET** indicators will flash. After a few seconds, the tuner will start to "look" for active stations, as shown by increasing frequency numbers in the Information Display. Release the button and note that the tuner will briefly stop at each active station and add a preset number to the memory. If the FM tuner found less than 30 FM stations with acceptable signal strength, the Auto Preset tuning will scan two more cycles or until the remaining vacant preset memory spaces have been filled with those found in the first scan. The scan will stop when all 30 preset memory spaces have been filled or when three scans through the band have been completed.

Y Center: Use this button to configure the AVR5 for the type of center channel speaker being used. (See page 15 for more information.)

Z Secondary Control Cover: This sliding cover normally is in the "up" position so that it hides the secondary controls. To access these

controls, place your thumb on the small recessed area at the top center of the control, and gently press the cover down and towards you.

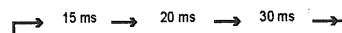
AA </> Buttons: These buttons are used to change settings during the level output adjustments with either the test tone or an external audio source. (See page 16 for information on output level adjustment with the test tone, or page 22 for level trim adjustment with an external source.)

BB Set Button: This button has two functions. If this button is pressed while in normal operation, the **Information Display** **30** will show the Surround mode for three seconds. This button is also used to enter an output level setting when using the **Test Tone** and **Selector** buttons **21 29**. (See pages 15-17 for more information on setting output levels.)

CC Channel Button: Use this button to adjust the AVR5's output levels using an external audio source, rather than the internal test signal generator. Each press of the button will select a channel for adjustment. To trim the output level, use the **</>** buttons **AA**. (See page 22 for more information.)

DD Test Tone: Press this button to start the procedure for adjusting the AVR5's output levels. (See page 16 for more information.)

EE Delay: Press this button to change the AVR5's delay settings. To change the settings, first make certain that the Pro Logic mode has been selected. Then, each press of the button will change the delay setting in the following order:



(See page 17 for more information on delay settings.)

FF Memory: Press this button to open a memory position that stores a preset location for the AVR5's tuner. (See page 21 for more information on tuner presets.)

Programming the Remote

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The AVR5 is equipped with a powerful remote control that will control not only the receiver's functions, but many popular brands of video equipment, including TV sets, VCRs and DVD players. Once the AVR5's remote is programmed with the codes for the products you own, it is possible to eliminate most other remotes and replace them with the convenience of a single, universal remote control.

Programming the Remote

Direct Code Entry

This method is the easiest way to program your remote to work with different products.

1. Use the tables in the following pages to determine the three-digit code or codes that match both the product type (e.g., VCR, TV), but also the specific brand name. If there is more than one number for a brand, make note of the different choices.
2. Turn on the component you wish to program into the AVR5 remote.
3. Press and hold both the **Device Control Selector** **D** for the type of product to be entered (e.g., VCR, TV) and the **Mute** button **N** at the same time. Hold both buttons until the **LED Indicator** **A** lights to a red color. Note that the next step must take place while the red light is on, and it must begin within 20 seconds after the light illuminates.
4. Point the AVR5's remote towards the unit to be programmed, and enter the first three-digit code number using the

Numeric buttons **V**. If the unit turns off, the correct code has been entered. Press the **Device Control Selector** **D** again, and note that the red light will flash twice to confirm the entry before going dark.

5. If the device to be programmed in does NOT turn off, continue to enter the three-digit code numbers until the equipment turns off. At this point, the correct code has been entered. Press the **Device Control Selector** **D** again, and note that the red light will flash twice to confirm the entry before going dark.
6. Try all of the functions on the remote to make certain that the product operates. Keep in mind that many manufacturers use a number of different combinations of codes, and it is a good idea to make certain that not only the Power control works, but the volume, channel and transport controls, as appropriate. If all functions do not work properly, you may need to use a different remote code.
7. If a code cannot be entered to turn the unit off, if the code for your product does not appear in the tables in this manual, or if all functions do not operate properly, try programming the remote with the Auto Search Method.

Auto Search Method

If the unit you wish to include in the AVR5's remote is not listed in the code tables in this manual, or if the code does not seem to operate properly, you may wish to program the correct code using the Auto Search method as shown below.

1. Turn on the component that you wish to program into the AVR5 remote.
2. Press the **Device Control Selector** **D** for the type of product to be entered (e.g., VCR, TV) and the **Mute** button **N** at the same time. Hold both buttons until the **LED Indicator's** **A** red light stays lit. Note that the next step must take place while the red light is on, and it must begin within 20 seconds after the light illuminates.
3. Point the AVR5 remote towards the unit to be programmed, and press and hold one of the **Surround/Channel** buttons. This will send out a series of codes from the remote's built-in data base, with each flash of the **LED Indicator's** **A** red light indicating that a code has been sent. When the device to be programmed turns off, IMMEDIATELY release the **Surround/Channel** button.
4. Press the **Device Control Selector** **D** again, and note that the **LED Indicator's** **A** red light will flash twice to confirm the entry before going dark.
5. Try all of the functions on the remote to make certain that the product operates. Keep in mind that many manufacturers use a number of different combinations of codes, and it is a good idea to make certain that not only the Power control works, but the Volume, Channel and Transport controls, as appropriate. If all functions do not work properly, you may need to Auto-Search for a different code, or enter a code via the Direct Code Entry method.

Programming the Remote

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Code Readout

When the code has been entered using the Auto Search method, it is always a good idea to find out the exact code so that it may be easily reentered if necessary. You may also read the codes to verify which device has been programmed to a specific Control Selector button.

1. Press and hold both the **Device Control Selector** **D** for the type of product to be entered (e.g., VCR, TV) and the **Mute** button **N** at the same time. Hold both buttons until the **LED Indicator's** **A** red light stays lit. Note that the next step must take place while the red light is on, and it must begin within 20 seconds after the light illuminates.
2. Press the **Master Volume Up or Down** button **M**. The **LED Indicator's** **A** red light will blink in a sequence that corresponds to the three-digit code, with a one-second pause between each digit. Count the number of blinks between each pause to determine the digit of the code. One blink is the number 1, two blinks is the number 2, and so forth. Ten blinks are used to indicate a "0".

Example: One blink, followed by a one-second pause, followed by six blinks, followed by a one-second pause, followed by ten blinks indicates that the code has been set to 160.

For future reference enter the Setup Codes for the equipment in your system here:

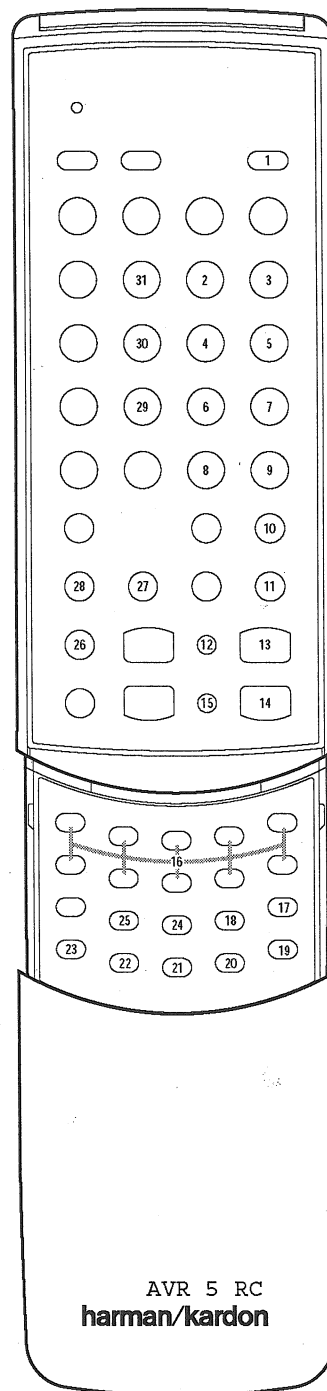
TV _____ VCR _____
DVD _____

Programmed Device Functions

Once the AVR5's remote has been programmed for the codes of other devices, press the appropriate **Device Control Selector** **D** to change the remote from control over the AVR5 to the additional product. When you press any of the **Device Control Selectors**, the **LED Indicator** **A** will briefly flash in red to indicate that you have changed the device being controlled.

When operating a device other than the AVR5, the controls may not correspond exactly to the function printed on the remote or button. Some commands, such as the volume control, are the same as with the AVR5. Other buttons will change their function so that they correspond to a secondary label on the remote. For example, the Surround Mode selector buttons also function as the Channel Up and Channel Down buttons when operating most TV sets or VCRs. The Channel Up/Down indication is printed directly on the remote. The same is true for standard VCR and DVD functions, which follow the standard function icons printed on top of the buttons.

For some products, however, the function of a particular button does not follow the command printed on the remote. In order to see which function a button controls, consult the Function List tables printed in this manual. To use those tables, first check the type of device being controlled (e.g., TV, VCR). Next, look at the remote control diagram pictured on the following page. Note that each button has a number on it.



Programming the Remote

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To find out what function a particular button has for a specific device, find the button number on the Function List and then look in the column for the device you are controlling. For example, button number 19 is the Test Tone button for the AVR5, but it is the "Display" button for many TV sets. Button number 2 is the Preset Tune Down button for the AVR5, and it is the "Reverse Skip" button for DVD or LD players but has no function for VCRs or TV sets.

NOTE: Only those buttons shown on the diagram and table have functions with products other than the AVR5. In addition, some products may differ from the functions shown in the table, and other buttons may not function with some products.

Notes on Using the AVR5 Remote With Other Devices.

- Manufacturers may use different code sets for the same product category. For that reason, it is important that you check to see if the code set you have entered operates as many controls as possible. If it appears that only a few functions operate, check to see if another code set will work with more buttons.
- When a button is pressed on the AVR5 remote, the **LED Indicator A** will flash briefly. If it flashes for some, but not all buttons for a particular product, it does **NOT** indicate a problem with the remote, but rather that no function is programmed for the button being pushed.

Programming the Remote

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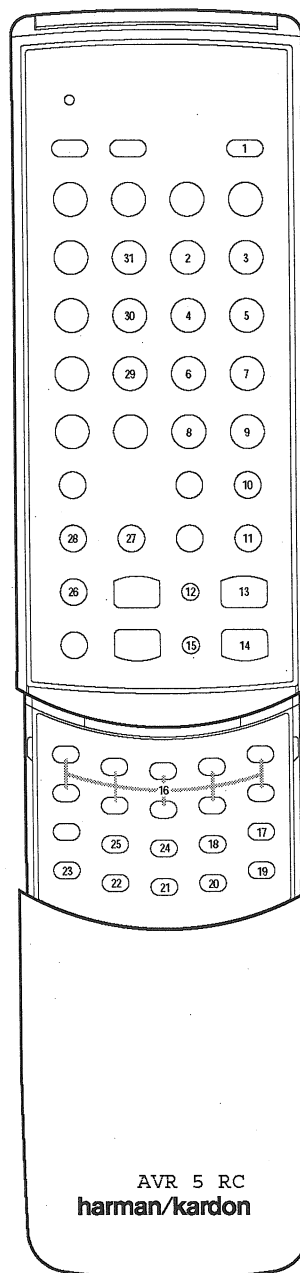
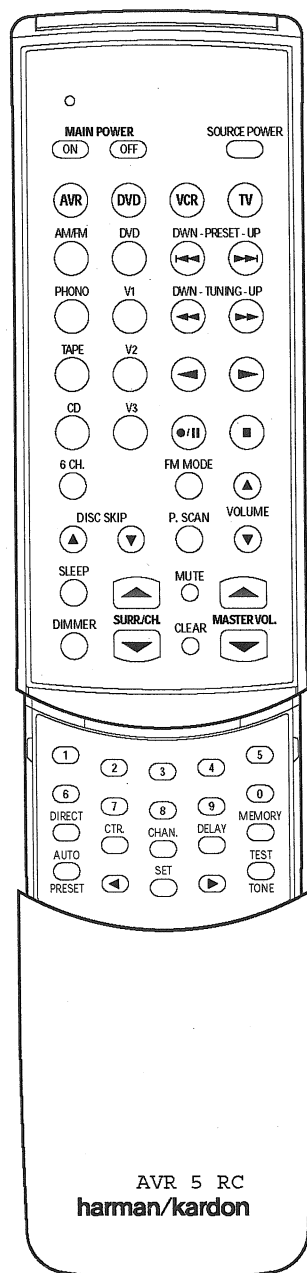
Function List

No.	AVR5	DVD	VCR	TV
1	No Function	Power On/Off	Power On/Off	Power On/Off
2	Preset Tune Down	Skip ◀◀	No Function	No Function
3	Preset Tune Up	Skip ▶▶	No Function	No Function
4	Tune Down	Search ◀◀	Rewind	No Function
5	Tune Up	Search ▶▶	Fast Forward	No Function
6	No Function	No Function	No Function	No Function
7	No Function	Play Forward	Play Forward	No Function
8	No Function	Pause	Record	No Function
9	No Function	Stop	Stop	No Function
10	No Function	Volume Up	Volume Up	Volume Up
11	No Function	Volume Down	Volume Down	Volume Down
12	Mute	AVR5 Mute	AVR5 Mute	AVR5 Mute
13	Master Volume Up	AVR5 Volume Up	AVR5 Volume Up	AVR5 Volume Up
14	Master Volume Down	AVR5 Volume Down	AVR5 Volume Down	AVR5 Volume Down
15	Clear	Clear	No Function	No Function
16	Numeric Keys	Numeric Keys	Numeric Keys	Numeric Keys
17	Memory	Enter	No Function	Enter
18	Delay	Down	No Function	Down
19	Test Tone	No Function	No Function	Display
20	▶	Right	No Function	Right
21	Set	Select	No Function	Select
22	◀	Left	No Function	Left
23	Auto Preset	Menu	No Function	Menu
24	Channel	Return	No Function	Previous Channel
25	Center	Up	No Function	Up
26	Sleep	No Function	No Function	Sleep
27	Disc Skip Down	No Function	No Function	No Function
28	Disc Skip Up	Open/Close	No Function	No Function
29	Video 2 Select	AVR5 Video 2 Select	AVR5 Video 2 Select	AVR5 Video 2 Select
30	Video 1 Select	AVR5 Video 1 Select	AVR5 Video 1 Select	AVR5 Video 1 Select
31	DVD Select	AVR5 DVD Select	AVR5 DVD Select	AVR5 DVD Select

Programming the Remote

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Reference for Function List



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Manufacturer/Brand	Setup Code Number															
A MARK	096	124														
AKAI	006	145														
AMPRO	067	152														
AMSTRAD	051															
ANAM	043	053	055	073	088	092	096	099	102	105	115					
AOC	006	009	096													
BLAUPUNKT	079															
CANDLE	006	007	008	009												
CAPEHART	057															
CENTRONIC	043															
CITIZEN	006	007	008	009	043	085	087	124								
CLASSIC	043															
CONCERTO	009															
CONTEC	039	043	049	050												
CORONADO	124															
CRAIG	043	053														
CROWN	043	124														
CURTIS MATHES	006	085	100	124												
CXC	043															
DAEWOO	009	020	021	036	043	044	054	065	070	087	091	095	098	101	104	107
	109	111	112	119	124											
DAYTRON	100	124														
DYNASTY	043															
DYNATECH	061															
ELECTROHOME	071	124														
EMERSON	006	010	031	043	046	047	049	050	084	100	124	128	129	130	147	
FISHER	011	056														
FUNAI	031	043														
FUTURETECH	043															
GE	006	012	013	036	055	067	068	100	114	125	130	132	149	150		
GOLDSTAR	009	086	090	096	097	100	103	106	111	120	124					
HALL MARK	100															
HITACHI	006	009	013	014	015	016	027	041	069	124	131	133	151			
INFINITY	134															
INKEL	113															
JBL	134															
J C PENNEY	006	009	012	013	028	033	085	124	132							

Programming the Remote

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Setup Code Tables: TV (Continued)

Manufacturer/Brand	Setup Code Number													
JENSEN	017													
JVC	036	038	076	126										
KEC	043													
KENWOOD	006													
KLOSS	007	058												
KMC	124													
KTV	006	043	124	147										
LODGENET	066													
LOGIK	066													
LUXMAN	009													
LXI	011	019	051	074	132	134	151							
MAGNIVOX	006	008	009	058	059	060	062	063	111	124	132	134		
MARANTZ	006	071	134											
MATSUI	134													
MEMOREX	011	066	100											
METZ	079													
MGA	006	009	031	042	048	071	100							
MINERVA	079													
MITSUBISHI	006	009	028	031	040	042	093	100	108	145				
NAD	019	029												
NEC	006	011	020	023	028	040	055	114	116	118				
NIKEI	043													
ONKING	043													
ONWA	043													
OPTONICA	023	074												
PANASONIC	036	055	073	081	134									
PHILCO	006	008	009	028	043	055	058	059	062	063	111	124	134	
PHILIPS	006	008	009	038	058	064	082	124	132	134				
PIONEER	006	022	027	029	030	100								144
PORTLAND	009	124												
PROSCAN	125													
PROTON	057	100	115	124	153									
QUASAR	036	055	081											
RADIO SHACK	023	043	046	100	111	124								
RCA	006	009	027	028	055	068	125	132	146	149	150			

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[illegible]

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[illegible]

Programming the Remote

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Setup Code Tables: VCR (Continued)

Manufacturer/Brand	Setup Code Number												
OPTONICA	051	052											
PANASONIC	064	068	072	080	108	116							
PENTAX	016	022	032	034	061								
PHILCO	032	034	035	065									
PHILIPS	032	034	035	052	065	069	081						
PILOT	081												
PIONEER	016	023	046										
PORTLAND	088												
PULSAR	070												
QUARTZ	006	017											
QUASAR	034	064	073	116									
RCA	016	022	034	060	061	087	089	115	116	118			
REALISTIC	007	012	014	017	032	034	035	040	051	052	081		
RICO	056												
RUNCO	119												
SALORA	017												
SAMSUNG	033	040	082	084	085	087	089	092	093	095	099	100	103
SANSUI	024	042	046	110									
SANYO	007	011	014	017	109								
SCOTT	020	038	092	104	106								
SEARS	007	012	013	014	016	017	022	032	041	071	078	081	
SHARP	032	052	120										
SHINTOM	026												
SONY	007	013	032	050	054	055	056	074	075	076	120		
SOUNDESIGN	035												
STS	016												
SYLVANIA	032	034	035	057	065								
SYMPHONIC	035												
TANDY	014	035											
ATATUNG	039	042											
TEAC	035	039	042										
TECHNICS	032	034											
TEKNIKA	021	032	034	035	081								
THOMAS	035												
TMK	010												
TOSHIBA	012	016	041	045	057	079	092	106					
TOTEVISION	040	081											
UNITECH	040												
VECTOR RESEARCH	015												
VICTOR	046												
VIDEO CONCEPTS	015	035	044										
VIDEOSONIC	040												
WARDS	007	016	020	026	032	034	035	040	051	052	106		
YAMAHA	015	035	039	042									
ZENITH	035	046	054	056	070	077	081						

Programming the Remote

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Setup Code Tables: DVD

<i>Manufacturer/Brand</i>	<i>Setup Code Number</i>		
CALIFORNIA AUDIO	001		
DENON	002	019	022
GE	003	004	
GOLDSTAR	005		
JVC	006		
KENWOOD	007		
LOTTE	008	034	
MAGNAVOX	009		
mitsubishi	023		
NAD	010		
ONKYO	015		
OPTIMUS	011		
PANASONIC	024	025	032
PIONEER	012	020	
RCA	018		
RUNCO	027		
SAMSUNG	031		
SANYO	013		
SHARP	021	028	
SONY	014	029	
TECHNICS	026		
THOMSON	003	004	
TOSHIBA	033		
YAMAHA	016	017	030

Programming the Remote

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Setup Code Tables: LD

<i>Manufacturer/Brand</i>	<i>Setup Code Number</i>			
CARVER	101	102	105	
DENON	106	107		
DISCO VISION	108			
HITACHI	108			
MAGNAVOX	101	107	109	
MARANTZ	102			
MITSUBISHI	110			
NAD	110			
NEC	111			
PANASONIC	112			
PHILIPS	102			
PIONEER	108	110		
QUASAR	112			
RCA	113			
SAMSUNG	105			
SEGA	108			
SONY	114	115	116	
THETA DIGITAL	101			
YAMAHA	109			