Lexicon®

MV-5 Processor

User Guide

IMPORTANT SAFETY INSTRUCTIONS

1. Read these instructions.
2. Keep these instructions.
3. Heed all warnings.
4. Follow all instructions.
5. Do not use this apparatus near water.
6. Clean only with a dry cloth.
7. Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.
8. Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
9. 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. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
10. Protect the power cord from being walked on or pinched, particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.
11. Only use attachments/accessories specified by the manufacturer.
12. Use only with the cart, stand, tripod, bracket or table specified by the manufacturer, or sold with the apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over.

13. Unplug this apparatus during lightning storms or when unused for long periods of time.
14. Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as when a 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.
15. Do not expose this apparatus to dripping or splashing and ensure that no objects filled with liquids, such as vases, are placed on the apparatus.
16. To completely disconnect this apparatus from the AC Mains, disconnect the power supply cord plug from the AC receptacle.
17. The MAINS cord is intended to be the safety disconnect device for this apparatus and shall remain readily operable at all times.
18. Do not expose batteries to excessive heat, such as sunshine, fire, or the like.
19. This product shall be connected to a MAINS socket outlet with a protective earthing connection.

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and radiates radio frequency energy and, if not installed and used in accordance with the instructions, may 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:

- Re-orient or relocate the receiving antenna.
- Increase the separation between the equipment and the 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/television technician for help.

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept interference received, including interference that may cause undesired operation.

CAUTION
Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

Canada
This Class B digital apparatus complies with Canadian ICES-003.

Cet appareil numérique de la classe B est conforme à la norme NMB-003 du Canada.

WARNING

To reduce the risk of fire or electric shock, do not expose this apparatus to rain or moisture.

The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.

The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the product.

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Part No. 070-18137 | Rev 0 | 07/07

DOCUMENTATION CONVENTIONS

This document contains general safety, installation and operation instructions for the MV-5 Processor. It is important to read this user guide before attempting to use the product. Pay particular attention to safety instructions.

Note: This manual is not intended as a general reference guide for home theater systems. If you're uncertain how to proceed in setting up or maintaining your system, seek the advice of a professional installer or ask your dealer for their recommendations.

All graphics of the product are included for reference only and may not completely reflect the physical product that is shipped.

The following symbols are used in the document:

Appears on the component to indicate the presence of uninsulated, dangerous voltage inside the enclosure – voltage that may be sufficient to constitute a risk of shock.

Appears on the component to indicate important operating and maintenance instructions in the accompanying literature.

WARNING Calls attention to a procedure, practice, condition or the like that, if not correctly performed or adhered to, could result in injury or death.

CAUTION! Calls attention to a procedure, practice, condition or the like that, if not correctly performed or adhered to, could result in damage or destruction to part or all of the product.

Note: Calls attention to information that is essential to highlight.

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Getting Started

ABOUT THE MV-5

Thank you for purchasing the MV-5 Processor, a multi-faceted audio and video preamplifier with built-in processing. In addition, the MV-5 can accommodate a pair of HDMI source devices and can connect directly to a PC via USB, enabling the control and playback of streaming audio files. With the optional dock accessory, iPod owners can even connect and play their iPod through the MV-5.

The MV-5 is designed to serve as the control center for your home theater system. A landmark product for Lexicon, the MV-5 offers capabilities never before offered as well as breaking ground with several brand new features. The MV-5 represents a new age in audio and video processing equipment from Lexicon.

We hope you enjoy your Lexicon experience!

PRODUCT REGISTRATION

Please register your MV-5 Processor online at www.harmanspeciatlygroup.com/registration/ within 15 days of purchase. Retain the sales receipt as proof of warranty coverage.

HIGHLIGHTS

- 12 configurable inputs, 8 channels, 2 audio zones
- Logic 7 audio processing
- Automatic EQ and speaker calibration (microphone included)
- HDMI inputs and output
- Faroudja® video processing
- RS-232 control, rear panel IR input, 2 trigger outputs
- 7.1-channel analog input array
- Universal pre-programmed and learning remote control
- PC-compatible media player support via USB connector
- iPod support (with optional accessory
- RF remote control (with optional accessory)

WHAT'S IN THE BOX

The following items are included with the MV-5 Processor:

One User Guide (this document)

One Remote Control

Four AAA Batteries (for use with Remote Control)

One Microphone

One Microphone Rod

One North American Power Cord

Two Export Power Cords

AVAILABLE OPTIONS

The following accessories are available for purchase as options to the MV-5 Processor:

- D-1 iPod Docking Station, Part No. 021-18138, allows an iPod to be connected and controlled by the MV-5 Processor.
- RF-1 Receiver, Part No. 021-18005, allows the remote control to operate via RF (Radio Frequency), giving the remote a broader operating range.

D-1 iPOD DOCKING STATION OPTION

The optional D-1 iPod Docking station allows you to enter a new world of listening enjoyment made possible by combining the increased storage capacity and playback flexibility of an iPod® (not included) with the sonic power of your Lexicon Processor. Just one simple connection and you're ready to go!

- Single connection to your Lexicon Processor
- Plays audio from an iPod through your Lexicon Processor
- Controls your iPod through your Lexicon Processor
- Simple track selection with on-screen navigation
- Charges the iPod

RF-1 RECEIVER OPTION

The optional RF-1 Receiver utilizes the RF feature of the Lexicon remote control, allowing you to control components that are completely out-of-sight, up to 100-feet away. Since the RF-1 Receiver picks up the RV-5's remote control radio frequency signal, the remote control no longer needs to be pointed directly at the components to control them. Now you can close your entertainment center doors, hide your components, and still control them with ease.

The RF-1 Receiver accessory requires no setup to the Lexicon remote control in order for the feature to work - you need only place the RF-1 Receiver in the rack or cabinet, or attach an emitter to the MV-5 front panel over the IR receiver. Every time a command is sent from the remote control, it sends both a standard IR and an RF signal. The RF-1 Receiver automatically receives the remote's radio signals and translates them into the infrared commands that control the components.

INSTALLATION CONSIDERATIONS

The MV-5 requires special care during installation to ensure optimal performance. Pay particular attention to the instructions below and to other precautions that appear throughout this user guide.

Do install the MV-5 on a solid, flat, level surface such as a table or shelf.

Do select a dry, well-ventilated location out of direct sunlight.

Do Not expose the MV-5 to high temperatures, humidity, steam, smoke, dampness or excessive dust. Avoid installing the MV-5 near radiators or stacking the MV-5 over other heat-producing equipment such as a power amplifier.

Do Not place the MV-5 on a thick rug or carpet, or cover the RV-5 with a cloth, as this might prevent proper cooling.

Do Not place the MV-5 on a windowsill or any location exposed to direct sunlight.

Do Not obstruct the front panel IR receiver window. The remote control must be in line of sight with the IR receiver for proper operation (unless using the optional RF-1 Receiver).

Do Not install the MV-5 on a surface that is unstable or unable to support all four feet.

CAUTION!

Before moving the MV-5, power the unit off using the rear panel power switch and unplug the power cord from the wall outlet.

REMOTE CONTROL BATTERY INSTALLATION

The remote control requires four AAA batteries. The batteries should be replaced as needed. Alkaline batteries, which last longer without leaking, are recommended. When battery power is low, the remote control enters a low-voltage condition, preventing it from operating the MV-5. When this occurs, replace the batteries. Normal operation will resume when new batteries are installed.

Note: The Remote Control will not lose any custom settings if the batteries run out. All custom settings are stored in non-volatile FLASH memory.

To replace the remote control batteries:

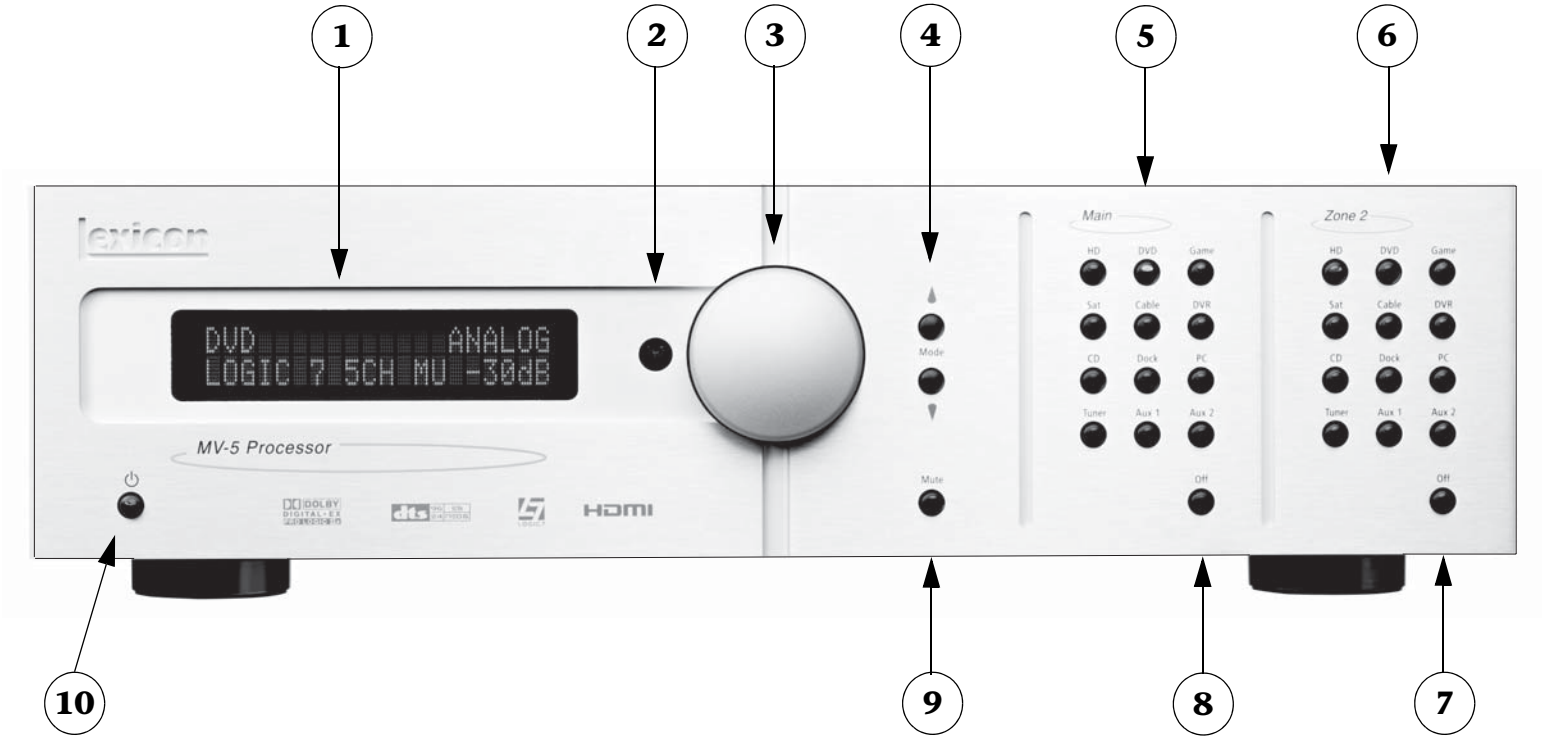
1. Locate the battery compartment on the back of the remote control. Press the tab and lift the cover away from the remote control.
2. Remove old batteries, if applicable.
3. Observing the proper polarity, insert four AAA batteries.
4. Align the cover over the battery compartment and gently press down until it snaps back into place.
5. Properly dispose of the old batteries.

2

Basic Operation

FRONT PANEL OVERVIEW

The MV-5 is shown below. The numbers in the front panel illustration correspond with the numbered items in the text.



1. Front Panel Display
2. IR Receiver
3. Volume Knob
4. Mode Buttons
5. Main Zone Input Selection Buttons
6. Zone 2 Input Selection Buttons
7. Zone 2 Off Button
8. Main Zone Off Button
9. Mute Button
10. ON/Standby Button

1. FRONT PANEL DISPLAY

Use the front panel 2-line display to view the current input source, input type, listening mode, and volume level. The 2 x 20 character display also functions as a display for messages and menus, one line at a time.

2. IR RECEIVER

The IR receiver receives infrared commands from the MV-5 remote control. Blocking the IR receiver will prevent the remote control from functioning properly (unless using the optional RF-1 Receiver).

3. VOLUME KNOB

Use the volume knob to adjust the volume level. The adjustable volume range is -80 dB to +10 dB in 1 dB increments.

Note: The maximum volume level may be lower than +10 dB due to the output level settings of the speakers. Refer to Section 3: Setup *for more information on setting the speaker output levels.*

To adjust the Main Zone volume level:

Rotate the volume knob clockwise to increase or counter-clockwise to decrease the volume level in 1dB increments. The current volume level is indicated on the bottom right side of the 2-line front panel display.

To adjust the Zone 2 volume level:

1. Press and hold the front panel Zone 2 input selection button that corresponds with the current input source. For instance, if DVD is the current Zone 2 input source, press and hold the DVD input selection button in the Zone 2 area of the front panel.
2. While holding down the Zone 2 input button, rotate the volume knob clockwise to increase the volume or counter-clockwise to decrease the volume. On the front panel 2-line display, the bottom left side displays that Zone 2 is selected and the bottom right side indicates the current volume level.

Note: If you attempt to set the volume higher than the maximum or lower than the minimum volume levels, the displayed volume level flashes.

4. MODE BUTTONS

Use the Mode buttons to scroll to the previous (▲) or next (▼) available listening mode. Scrolling the Mode button reveals the entire list of listening modes available for the currently selected input and mode family. For more information on selecting listening modes, refer to *Section 3: Setup.*

5. MAIN ZONE INPUT SELECTION BUTTONS

Individually select each of the twelve inputs available in the Main Zone. When an input is selected, a blue LED lights in the corresponding input selection button. When the Main Zone is deactivated, pressing a Main Zone input selection button activates the corresponding input in the Main Zone.

When the MV-5 is in Standby, pressing a Main Zone input selection button powers on the MV-5, selects the input in the Main Zone, and turns off Zone 2.

6. ZONE 2 INPUT SELECTION BUTTONS

Individually select each of the twelve inputs available in Zone 2. When an input is selected, an amber LED lights on the corresponding input selection button. When Zone 2 is deactivated, pressing a Zone 2 input selection button activates the corresponding input in Zone 2.

When the MV-5 is in Standby, pressing a Zone 2 input selection button powers on the MV-5, selects the input in Zone 2, and turns off the Main Zone.

7. ZONE 2 OFF BUTTON

Deactivates Zone 2. When Zone 2 is off, the Zone 2 OFF button on the front panel lights red.

8. MAIN ZONE OFF BUTTON

Deactivates the Main Zone. When the Main Zone is off, the Main Zone OFF button on the front panel lights red.

Note: Activating the Main Zone OFF button on the front panel turns off the audio, however the video continues to be output through both the analog and HDMI video outs. If using the HDMI Video In connection, only the HDMI video is output. If the analog Video In is used, then both analog and HDMI video is output. Main Zone OSD (On-Screen Display) menus are also still available.

9. MUTE BUTTON

Mutes the Main Zone and Zone 2 volumes. Press the MUTE button to mute the Main Zone volume level; "MUTE ON" appears in the 2-line and OSD displays. Press the MUTE button again to restore the volume to its original level. If a front panel Zone 2 input button is held down, then pressing the MUTE button on the front panel will mute the Zone 2 output.

On the remote control, pressing the volume button once while the volume is muted, turns off mute. Pressing and holding the Volume button, while the sound is muted, resets to the original pre-mute volume level and then increases or decreases the volume from that point, turning off mute.

The LED in the MUTE button lights red when the Main Zone mute is active, green when the Zone 2 mute is active, and amber when both Zones are muted. The volume can also be muted by using the MUTE button on the remote control, which functions in the same manner. However, the remote only mutes Zone 2 if the touch screen is in the "Zone 2" menu layer.

10. ON/STANDBY BUTTON

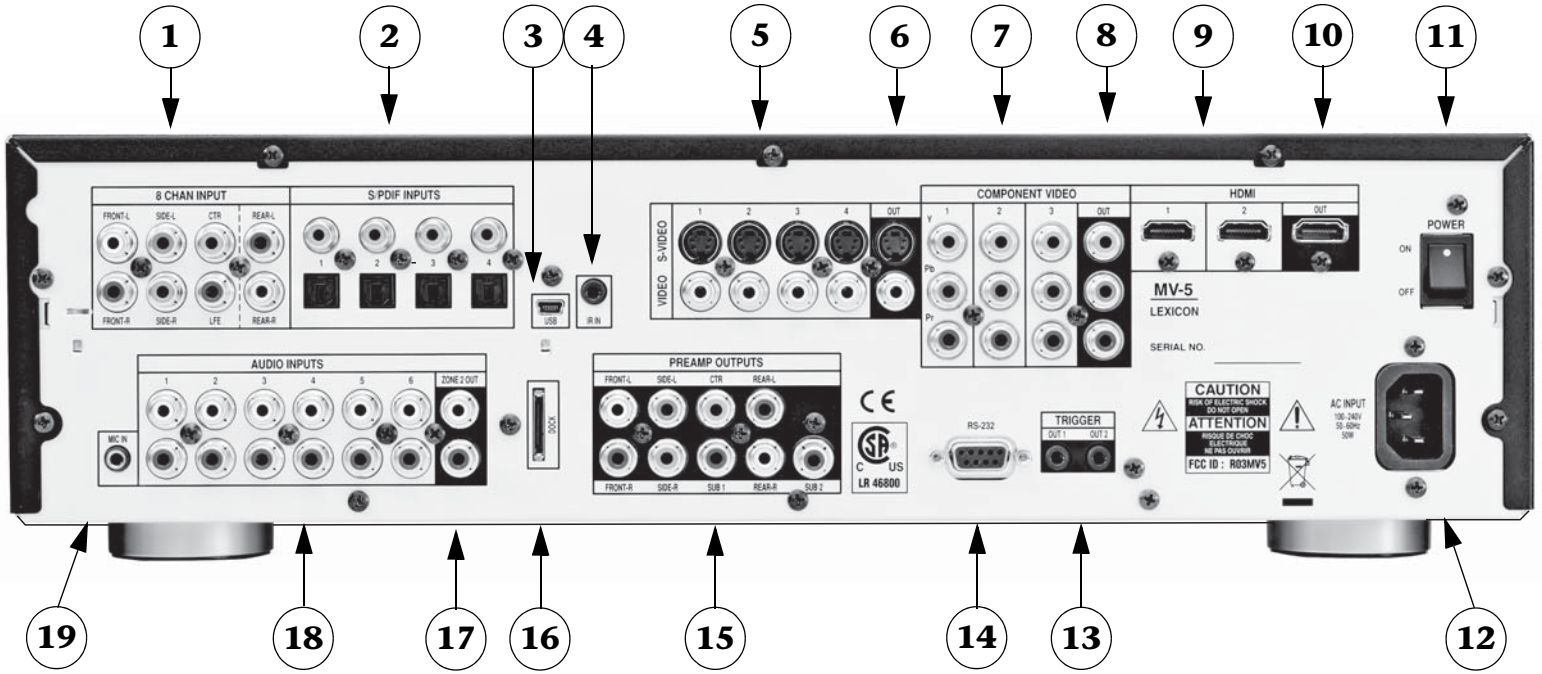
Toggles the MV-5 between On and Standby. The rear panel Power Switch must be set to the ON position for the Standby button to be active. When the MV-5 is in the standby mode, pressing the Standby button turns the unit on and changes the light in the Standby button from red to blue. **Power is still supplied to the MV-5 when standby mode is activated.**

When the rear panel Power Switch is set to the ON position or AC power is applied or restored, the MV-5 automatically enters the standby mode.

Note: When taken out of standby, the MV-5 activates the Zone inputs that were active in the previous operating session.

REAR PANEL OVERVIEW

The MV-5 rear panel is shown below. The numbers in the rear panel illustrations correspond with the numbered items in the text.



1. 8-CH Analog Audio Input Connector Array
2. Digital Audio Input Connectors
3. USB Connector
4. IR Input Connector
5. S-Video/Composite Input Connectors
6. S-Video/Composite Ouput Connectors
7. Component Video Input Connectors
8. Component Video Output Connector
9. HDMI Input Connectors
10. HDMI Output Connector
11. Power Switch
12. AC Input Connector
13. Trigger Output Connectors
14. RS-232 Connector
15. Preamplifier Outputs
16. Dock Connector
17. Zone 2 Audio Output Connectors
18. Stereo Analog Audio Input Connectors
19. Microphone Input Connector

CAUTION!

Never make or break connections to the MV-5 unless the MV-5 and all associated components are powered off.

1. 8-CH ANALOG AUDIO INPUT CONNECTOR ARRAY

Provides 8-channel analog audio input via eight RCA connectors labeled Front L/R, Center, LFE, Side L/R and Rear L/R. These inputs are used to connect source devices such as high-resolution DVD players, DVD-Audio, or SACD players with discrete analog audio outputs. Depending on the source device in use, all eight connectors may be used, although only the Front L/R, Center, Side L/R, and LFE are required for 5.1 analog audio signals.

2. DIGITAL AUDIO INPUT CONNECTORS

Provide digital audio input via four S/PDIF optical (TOSLINK) and four S/PDIF coaxial (RCA) input connectors. Connectors are compatible with most PCM, Dolby Digital, and DTS sources.

3. USB CONNECTOR

Provides a USB port to connect to a PC computer, enabling the user to listen to audio from the computer through the MV-5 Processor. The USB connector port is a "mini B" connector and requires a USB cable (not included). See *Section 5: PC & Dock Controls* for more information on the playback of computer audio.

4. IR INPUT CONNECTOR

Accepts input of IR signals from infrared distribution equipment via one 3.5mm jack that accepts a stereo plug (Tip/Ring/Sleeve connection) or mono plug (Tip/Sleeve connection).

5. S-VIDEO/COMPOSITE INPUT CONNECTORS

Provide the S-Video & Composite analog video inputs. Four composite video connectors labeled 1 to 4 and four S-Video connectors labeled 1 to 4 are available.

6. S-VIDEO/COMPOSITE OUTPUT CONNECTORS

Provide the S-Video & Composite video outputs. One composite video connector and one S-Video connector are available.

7. COMPONENT VIDEO INPUT CONNECTORS

Provide inputs that can be used with any source device that is equipped with analog Y/Pr/Pb or RGB component video outputs. Three inputs, labeled Component Video 1 to 3, are supplied.

8. COMPONENT VIDEO OUTPUT CONNECTOR

Provides one component output that can be used with any device that is equipped with analog Y/Pr/Pb or RGB component video intputs.

9. HDMI INPUT CONNECTORS

Provide two HDMI inputs for devices such as a DVD player or HDTV tuner.

10. HDMI OUTPUT CONNECTOR

Provides one HDMI output for HDMI-equipped video monitors.

11. POWER SWITCH

Use the Power Switch to connect or disconnect power from the AC Input connector to the MV-5 Processor. When the MV-5 is powered on, the front panel Standby button or remote control ON & OFF buttons can be used to activate and deactivate standby mode. When the MV-5 is powered off via the rear panel switch, the standby and ON modes are not available.

12. AC INPUT CONNECTOR

Provides power to the MV-5 through the supplied power cord.

13. TRIGGER OUTPUT CONNECTORS

Provide a 12V DC output to control connected components. Two trigger output connectors are available as 3.5 mm mono mini phone jacks. The OUT 1 connector is the power trigger and is not configurable; it is activated when the MV-5 is powered on or taken out of Standby mode, and deactivated when the MV-5 is powered off, either from the rear panel or by putting the MV-5 into Standby mode. The OUT 2 connector can be configured independently for each input, refer to *Section 3: Setup* for more information on how to configure the OUT 2 trigger.

Note: The OUT 2 trigger is referred to as "TRIGGER 2" in the Input Setup menu.

14. RS-232 CONNECTOR

The RS-232 serial connector provides serial remote control through a standard RS-232 connection. Refer to the Lexicon website (www.lexicon.com) for more details on controlling the MV-5 Processor via the RS-232 connection.

15. PREAMPLIFIER OUTPUTS

Provide output for external power amplifiers for applications that require them.

16. DOCK CONNECTOR

Provides an interface for an iPod, which can then be accessed through the MV-5 rear panel. To use this feature, the D-1 Dock option must be installed to the DOCK connector. With a compatible iPod connected to the MV-5, selecting the DOCK input allows you to play audio files from the iPod. You can view and navigate through the iPod menus using the MV-5 remote control. For more information on the Dock option and how to use your MV-5 with an iPod, refer to *Section 5: PC & Dock Controls*.

17. ZONE 2 AUDIO OUTPUT CONNECTORS

Provide preamplifier audio outputs for Zone 2.

18. STEREO ANALOG AUDIO INPUT CONNECTORS

Provide stereo analog audio input. Six stereo analog audio input RCA connectors labeled 1 to 6 are available.

19. MICROPHONE INPUT CONNECTOR

Provides a microphone input for system calibration. The microphone input is only for use with the supplied microphone during the system calibration process. See *Section 3: Setup* for more information regarding system calibration and setup.

PC & DOCK OVERVIEW

The PC & Dock inputs are the only "hard-wired" inputs in the MV-5 Processor. Unlike the other inputs, both have very specific audio-only functionality.

The PC input is tied to the USB input on the rear panel and is for use with media player software on a connected PC computer. The Dock input is for use with the optional D-1 Dock accessory and is tied to the DOCK input on the rear panel. This input is only for use with iPod players.

While both of these inputs have devoted Remote Control menu controls, there are NO front panel controls for use with the PC and DOCK inputs.

For more information about the PC & Dock operation, refer to *Section 5: PC & Dock Controls*.

REMOTE CONTROL OVERVIEW

The MV-5 Processor remote control provides full operation of the MV-5 including commands, such as menu navigation, that are not available from the front panel. It is also designed to provide control for the entire home theater system. This section provides a brief overview of the remote control functions used to control the MV-5 Processor. For detailed universal remote control operation, programming instructions, and manufacturing codes, refer to *Appendix C*.

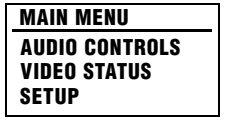
OPERATION CONSIDERATIONS

The following factors can improve or impede remote control operation.

Note the following before operating the MV-5 remote control:

- The remote control must be in line-of-sight with the front panel IR receiver (unless using the optional RF-1 Receiver). Eliminate obstructions between the remote control and the IR receiver. The remote control may become unreliable if strong sunlight or fluorescent light shines on the MV-5 IR receiver.
- For optimal performance, position the remote control within a 30-degree angle no more than 40 to 60 feet (12.2m to 18.3m) from the MV-5. Placing the MV-5 inside a smoked glass cabinet will reduce the remote control range.
- Remote controls for different components can interfere with one another. Avoid using remote controls for different components at the same time.
- Remote control batteries should be replaced as needed.
- To control the MV-5, the touch screen of the remote control must be in the "LEX" or "ZONE 2" menu layers. The Volume +/- and Mute controls, however, are always active, regardless of the active menu layer. The remote control ships from the factory set to the "MAIN" menu layer.

MV-5 MENU OVERVIEW



When the remote control touch screen is in the "LEX" or "ZONE 2" menu layers, pressing MENU or SELECT on the MV-5 remote control accesses the menu controls for the MV-5 Processor. The MAIN MENU is the root directory of the MV-5 menu structure and has three branches: AUDIO CONTROLS, VIDEO STATUS, and SETUP.

Note: The DVD menu layer of the touch screen controls the Lexicon RT-20 and RT-10, if installed.

The AUDIO CONTROLS menu controls the audio-specific parameters, such as treble and bass, as well as providing an audio status menu. Refer to *Section 4: Audio Controls & Video Status* for more information.

The VIDEO STATUS menu is an information-only menu identifying the current video status of the MV-5 Processor. For more information, refer to *Section 4: Audio Controls & Video Status*.

The SETUP menu controls all aspects of setting up the MV-5 Processor. Refer to *Section 3: Setup* for more information.

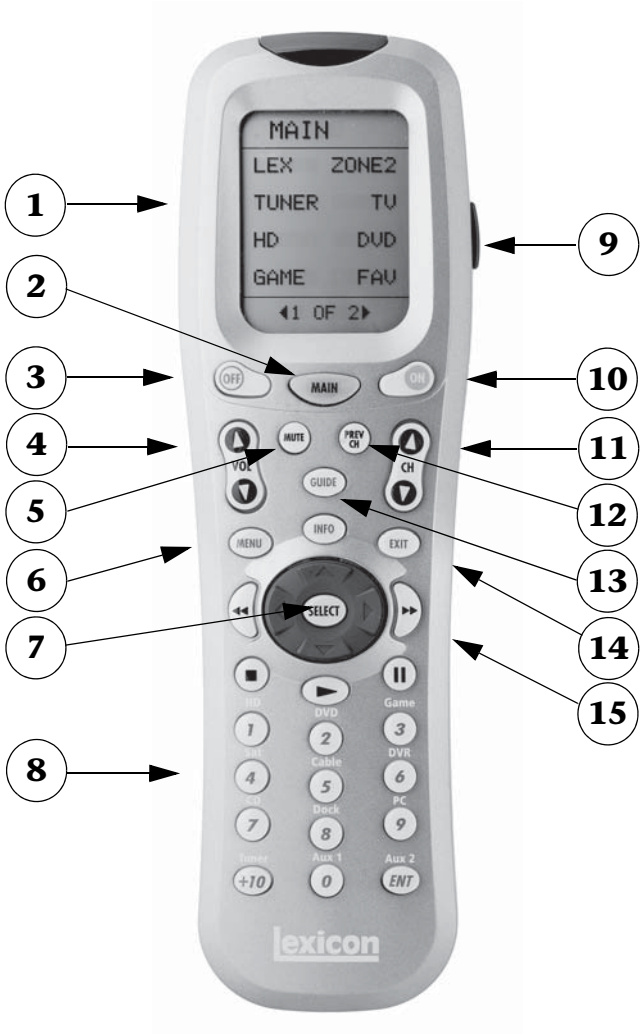
The MV-5 menu structure can be viewed on the OSD (On-Screen Display), which is a 480i or 480p video output signal to your monitor, or on the front panel 2-line display, which displays the menus one line at a time using the remote control navigation controls. The front panel 2-line display can also be viewed on the OSD, in 480i resolution only.

Note: When the MV-5 menu structure is entered, most front panel buttons and the remote control buttons are disabled until the menu structure is exited. The exceptions are the Volume Knob and Standby Button on the front panel and the remote control Volume, Mute, and OFF buttons. Note also that the disabled condition of the remote control only affects the "LEX" and "ZONE 2" menu layers.

MENU NAVIGATION

Use the remote control arrow buttons to navigate the MV-5 menu structure, shown in detail in *Appendix B*. The Command Matrix Table located later in this chapter indicates the navigation commands that the remote control buttons perform when the MV-5 command bank is activated by selecting the "LEX" or "ZONE 2" options on the remote control touch screen.

Arrow	Navigation Functions *(for "LEX" and "ZONE2" menu layers)*
▶	When a menu is open, press the remote control ▶ arrow to select the highlighted menu parameter. The menu parameter will blink to indicate that it is selected.
◀	When a menu is open, press the ◀ arrow to close the current menu and, in most cases, open the previous menu. Subsequent presses continue to close the current menu and open the previous menu until the MAIN MENU is closed.
▲ ▼	When a menu is open, press the ▲ and ▼ arrow buttons to scroll upward and downward through the complete list of menu parameters. The highlighted menu item appears in the front panel display. All menu items appear in the OSD. The cursor automatically wraps to the next menu parameter when the first or last menu item is passed. When a menu parameter is selected and blinking, press the ▲ and ▼ arrow buttons to scroll through the available parameter options.
SELECT	Press the SELECT button to open the menu structure, open a menu branch, or select a menu parameter.
MENU	Press the MENU button to open the menu structure.
EXIT	When the menu is open, press the EXIT button to leave the menu. Unlike the ◀ arrow button which closes a menu layer, the EXIT button completely closes the menu structure.



Note: The number call-outs on the figure above correlate with the numbers listed to the right.

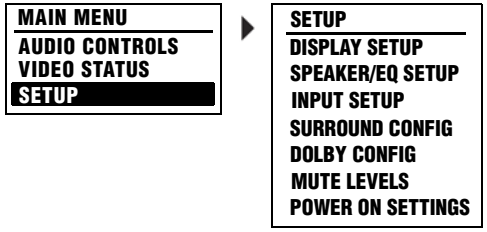
REMOTE CONTROL BUTTONS

1. Touch Screen (component and function buttons)
2. MAIN remote control touch screen menu
3. OFF
4. VOLUME (+/-)
5. MUTE
6. MENU
7. SELECT & Navigation (left, right, up, & down)
8. Number Keypad & ENT (Enter)
9. LIGHT (back light for the remote control)
10. ON
11. CHANNEL (+/-)
12. PREV CH (Previous Channel)
13. GUIDE & INFO
14. EXIT
15. Transport functions (PLAY ⏵, STOP ■, RW ⏴⏴, PAUSE ||, & FF ⏵⏵) for source components

Note: These are the names and functions for the universal remote control. For the MV-5 specific remote control functions, refer to the Command Matrix on the following page.

MENU OPTIONS

Selecting a menu option can open another menu within the menu structure. For example, selecting SETUP from the MAIN MENU opens the SETUP menu.



MENU ITEM SELECTION

Use the remote control arrows to navigate the menu structure.

To select a menu item in an open menu:

1. Press the Menu or Select buttons to enter the Menu structure.
2. Navigate to the desired menu.
3. Press the remote control ▲ and ▼ arrows to highlight the desired menu item.
4. When the desired menu item is highlighted, press the ▶ arrow or SELECT button to select the highlighted item. If an option is selected, another menu opens. When an adjustable parameter is selected, the current selection will blink to indicate that it is selected. Use the ▲ and ▼ arrows to scroll through the available options for the selected parameter. When the desired parameter option is highlighted, press the ◀ arrow on the remote control to select the option.

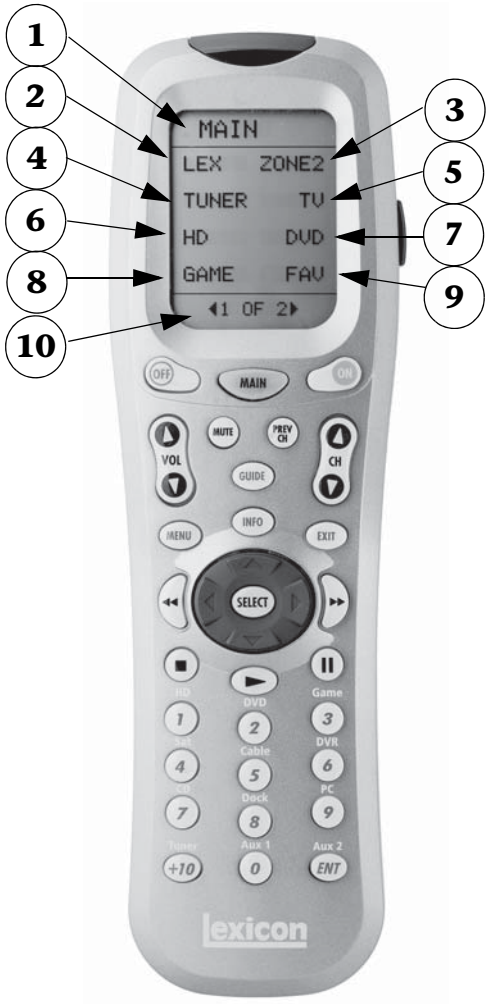
REMOTE CONTROL LIGHT BUTTON

The remote control is fully back lit, making it very useful in low-light conditions. Press the LIGHT button on the right side of the remote to back light all of the buttons and the LCD touch screen. To turn off the back light, press the LIGHT button again or wait. Ten seconds after the last button is pressed, the back light will automatically shut off.

COMMAND MATRIX

The command matrix table, starting on the next page, lists the commands that each remote control button performs in each menu setting.

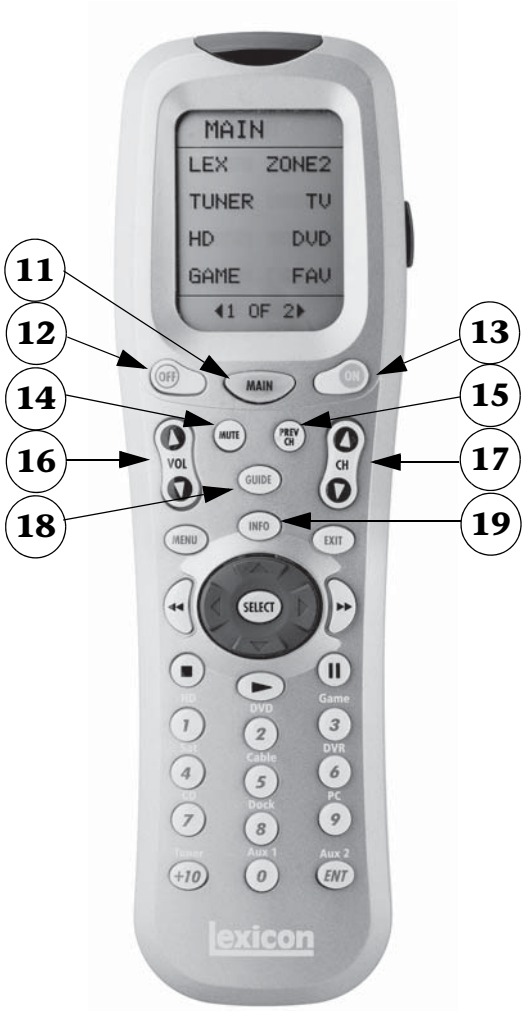
Note: A brief description of each function is given in the table but refer to the Table of Contents *for additional information on each function. For additional information on using and programming the remote control, refer to* Appendix C.



Note: The number call-outs on the figure above correlate with the numbers in the adjoining table.

	MAIN	LEX PAGE1	LEX PAGE2	LEX PAGE3	LEX PAGE4
1	Menu Name - MAIN*	Menu Name - LEX	Menu Name - LEX	Menu Name - LEX (iPod controls)	Menu Name - LEX (PC controls)
2	LEX Enters the Lexicon MV-5 menu layer	L7 Selects the Logic 7 listening mode family	EQ Toggles the Auto EQ parameter between ON & OFF.	IPOD- iPod ⏮	PC- PC ⏮
3	ZONE2 Enters the Lexicon MV-5 Zone 2 menu layer	STER Selects the Stereo listening mode family	PRE1 Sets the MV-5 to the Autocal Preset 1 saved values	IPOD+ iPod ⏭	PC+ PC ⏭
4	TUNER (Does not affect the MV-5)	DOLBY Selects the Dolby listening mode family	PRE2 Sets the MV-5 to the Autocal Preset 2 saved values	CLIK ◂ iPod wheel click, counterclockwise	PC ▸ II PC Play/Pause
5	TV (Does not affect the MV-5)	DTS Selects the DTS listening mode family	PRE3 Sets the MV-5 to the Autocal Preset 3 saved values	CLIK ▸ iPod wheel click, clockwise	(unused)
6	HD (Does not affect the MV-5)	DSP Selects the DSP listening mode family	TREB- Lowers the Treble parameter	MENU iPod MENU button	(unused)
7	DVD Enters the Lexicon RT-10/RT-20 menu	AUDIN Selects either Digital or Analog Audio.	TREB+ Raises the Treble parameter	SEL iPod SELECT button	(unused)
8	GAME (Does not affect the MV-5)	TONE Toggles the Tone Control parameter between ON & OFF.	BASS- Lowers the Bass parameter	▸ II iPod Play/Pause button	(unused)
9	FAV (Does not affect the MV-5)	ZOOM (unused)	BASS+ Raises the Bass parameter		(unused)
10	MENU PAGE - <ACTIVE PAGE> OF <TOTAL PAGES> Touch ◂ or ▸ to scrolll between the menu pages				

**The Menu Name is not a functional command. It is simply a label identifying which menu or sub-menu the touch screen currently displays.*



Note: The number call-outs on the figure above correlate with the numbers in the adjoining table.

	MAIN*	LEX PAGE1-4	ZONE 2 PAGE 1-3
11	MAIN* Returns to the Main layer of the remote control		
12	OFF	Puts the MV-5 Processor into Standby	
13	ON	Turns on the MV-5 Processor from Standby	
14	MUTE	Mutes the Main Zone Volume	Mutes the Zone 2 Volume
15	PREV CH	(unused)	
16	VOL ▲ or VOL ▼	Main Zone VOL ▲ or VOL ▼	Zone 2 VOL ▲ or VOL ▼
17	CH ▲ or CH ▼	Main Zone MODE ▲ or MODE ▼	(unused)
18	GUIDE	Steps through the VIDEO STATUS menu	
19	INFO	Steps through the AUDIO STATUS menu	

**The MAIN menu level does NOT control the MV-5. The remote control touch screen heading must read "LEX" or "ZONE 2" in order to control the MV-5 Processor.*

Note: The number call-outs on the figure above correlate with the numbers in the adjoining table.

	MAIN*	LEX PAGE1-4	ZONE 2 PAGE 1-3
20	MENU	Enters OSD menu	
21	EXIT	Exits OSD menu	
22	◂◂ REWIND	(unused)	
23	SELECT	Enters OSD menu, While in OSD menu, selects menu items	
24	◂ ▸ ▴ ▾ Arrows	Used for OSD menu navigation If not in the OSD menu structure, no function.	
25	▸▸ FAST FORWARD	(unused)	
26	■ STOP	Main Zone OFF	Zone 2 OFF
27	II PAUSE	Changes Front panel display illumination	(unused)
28	▸ PLAY	(unused)	

**The MAIN menu level does NOT control the MV-5. The remote control touch screen heading must read "LEX" or "ZONE 2" in order to control the MV-5 Processor.*

Note: The number call-outs on the figure above correlate with the numbers in the adjoining table.

	MAIN*	LEX PAGE1-4	ZONE 2 PAGE 1-3
29	1	Main Zone HD input	Zone 2 HD input
30	2	Main Zone DVD input	Zone 2 DVD input
31	3	Main Zone Game input	Zone 2 Game input
32	4	Main Zone Sat input	Zone 2 Sat input
33	5	Main Zone Cable input	Zone 2 Cable input
34	6	Main Zone DVR input	Zone 2 DVR input
35	7	Main Zone CD input	Zone 2 CD input
36	8	Main Zone Dock input	Zone 2 Dock input
37	9	Main Zone PC input	Zone 2 PC input
38	+10	Main Zone Tuner input	Zone 2 Tuner input
39	0	Main Zone Aux 1 input	Zone 2 Aux 1 input
40	ENT Enter	Main Zone Aux 2 input	Zone 2 Aux 2 input

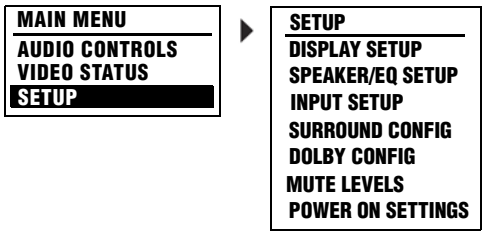
**The MAIN menu level does NOT control the MV-5. The remote control touch screen heading must read "LEX" or "ZONE 2" in order to control the MV-5 Processor.*

3

Setup

SETUP

Selecting SETUP from the MAIN MENU opens the SETUP menu.



DISPLAY SETUP

SETUP ▸ DISPLAY SETUP

Opens the DISPLAY SETUP menu, which is used to customize the OSD and front panel display, as well as other display-related parameters. See the "Display Setup" section on the following page for more information.

SPEAKER/EQ SETUP

SETUP ▸ SPEAKER/EQ SETUP

Opens the SPEAKER/EQ SETUP menu, which is used to configure the Main Zone and Zone 2 audio output connectors for the desired speaker setup, set speaker cross-overs, and calibrate distances and output levels. See the "Speaker/EQ Setup" section found later in this chapter for more information.

INPUT SETUP

SETUP ▸ INPUT SETUP

Opens the INPUT SETUP menu, which is used to change input names, assign audio and video input connectors, select preferred listening modes and configure Main Zone and Zone 2 settings. See the "Input Setup" section found later in this chapter for more information.

SURROUND CONFIGURATION

SETUP ▸ SURROUND CONFIG

Opens the SURROUND CONFIG menu, which is used to customize the listening modes that are available for the currently selected input. See the "Surround Configuration" section found later in this chapter for more information.

DOLBY CONFIGURATION

SETUP ▸ DOLBY CONFIG

Opens the DOLBY CONFIG menu, which is used to customize the Dolby listening modes to your personal preferences. See the"Dolby Configuration" section found later in this chapter for more information.

MUTE LEVELS

SETUP ▸ MUTE LEVELS

Opens the MUTE LEVELS menu, which is used to set the mute level controls. See the "Mute Levels" section found later in this chapter for more information.

POWER ON SETTINGS

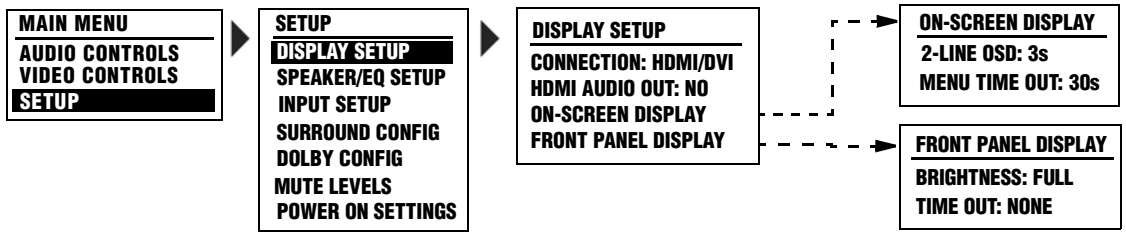
SETUP ▸ POWER ON SETTINGS

Opens the POWER ON SETTINGS menu, which is used to configure the power on volume level and the Dock auto power feature. See the "Power On Settings" section found later in this chapter for more information.

Note: When a source is active, changing some audio or video parameters may cause the Main Zone audio to briefly mute the incoming source. If Zone 2 is set to DOWN MIX, the Zone 2 audio will also briefly mute.

DISPLAY SETUP

Selecting the SETUP menu DISPLAY SETUP option opens the DISPLAY SETUP menu, which is used to customize the OSD and front panel display and setup other display-related features.



CONNECTION ANALOG, HDMI/DVI

SETUP ▸ DISPLAY SETUP ▸ CONNECTION

Selects the CONNECTION parameter, which identifies the active video output connectors on the MV-5 rear panel. The following list of conditions identify the behavior of this parameter.

- If ANALOG is selected, only the analog video connectors are available and will output the video signal.
- If HDMI/DVI is selected, both the analog and HDMI video connectors are available and will output the video signal.
- If the video input is set to HDMI and the CONNECTION parameter is set to ANALOG, then no video is output.
- If the HDMI video input is copy-protected (HDCP), no video is output on the analog output connectors. This is a requirement of HDCP and not a limitation of the MV-5 Processor.

HDMI AUDIO OUT YES, NO

SETUP ▸ DISPLAY SETUP ▸ HDMI AUDIO OUT

Selects the HDMI AUDIO OUT parameter, which identifies if audio is sent on the HDMI output. If the HDMI AUDIO OUT parameter is set to YES, then a two-channel DOWN MIX of the source audio is sent over the HDMI connection at the maximum bit rate of the display's audio system. This audio stream is in addition to the normal audio outputs. If the parameter is set to NO, this audio is not sent.

2-LINE OSD OFF, 3, 4, 5, 6 SECONDS

SETUP ▸ DISPLAY SETUP ▸ ON-SCREEN DISPLAY ▸ 2-LINE OSD

Selects the 2-LINE OSD parameter from the On-Screen Display (OSD) menu. The 2-Line OSD parameter identifies the length of time that the 2-line OSD is displayed and can be set to display from three to six seconds in one-second increments. If OFF is selected, then the 2-line OSD is not displayed.

Note: If OFF is selected, the menu screens are still displayed. This parameter only affects the 2-line OSD display, which is identical to the front panel 2-line display.

MENU TIME OUT NONE, 30, 40, 50, 60 SECONDS

SETUP ▸ DISPLAY SETUP ▸ ON-SCREEN DISPLAY ▸ MENU TIME OUT

Selects the MENU TIME OUT parameter from the On-Screen Display (OSD) menu. This parameter identifies the length of time before the OSD menu times out and can be set from 30 to 60 seconds in ten-second increments. If NONE is selected, then the OSD will not turn off automatically.

CAUTION!

The NONE selection should only be used with caution. If the system includes a plasma display, or other display types sensitive to image burn-in, and the OSD Menu Time Out parameter is set to NONE, the OSD menu image can be burned into the monitor display.

BRIGHTNESS FULL, HALF, OFF

SETUP ▸ DISPLAY SETUP ▸ FRONT PANEL DISPLAY ▸ BRIGHTNESS

Selects the BRIGHTNESS parameter from the Front Panel Display menu, which selects the brightness of the 2-line front panel display. The parameter can be set to FULL, HALF, or OFF. If set to OFF, then the front panel display is off.

On the remote control, this parameter is controlled by the || (Pause) button while in the touch screen "LEX" menu layer.

Note: When the MV-5 is powered off or put into Standby mode, any changes to the BRIGHTNESS parameter are not saved. So when the MV-5 is powered on or taken out of Standby mode again, the BRIGHTNESS parameter will be set to FULL.

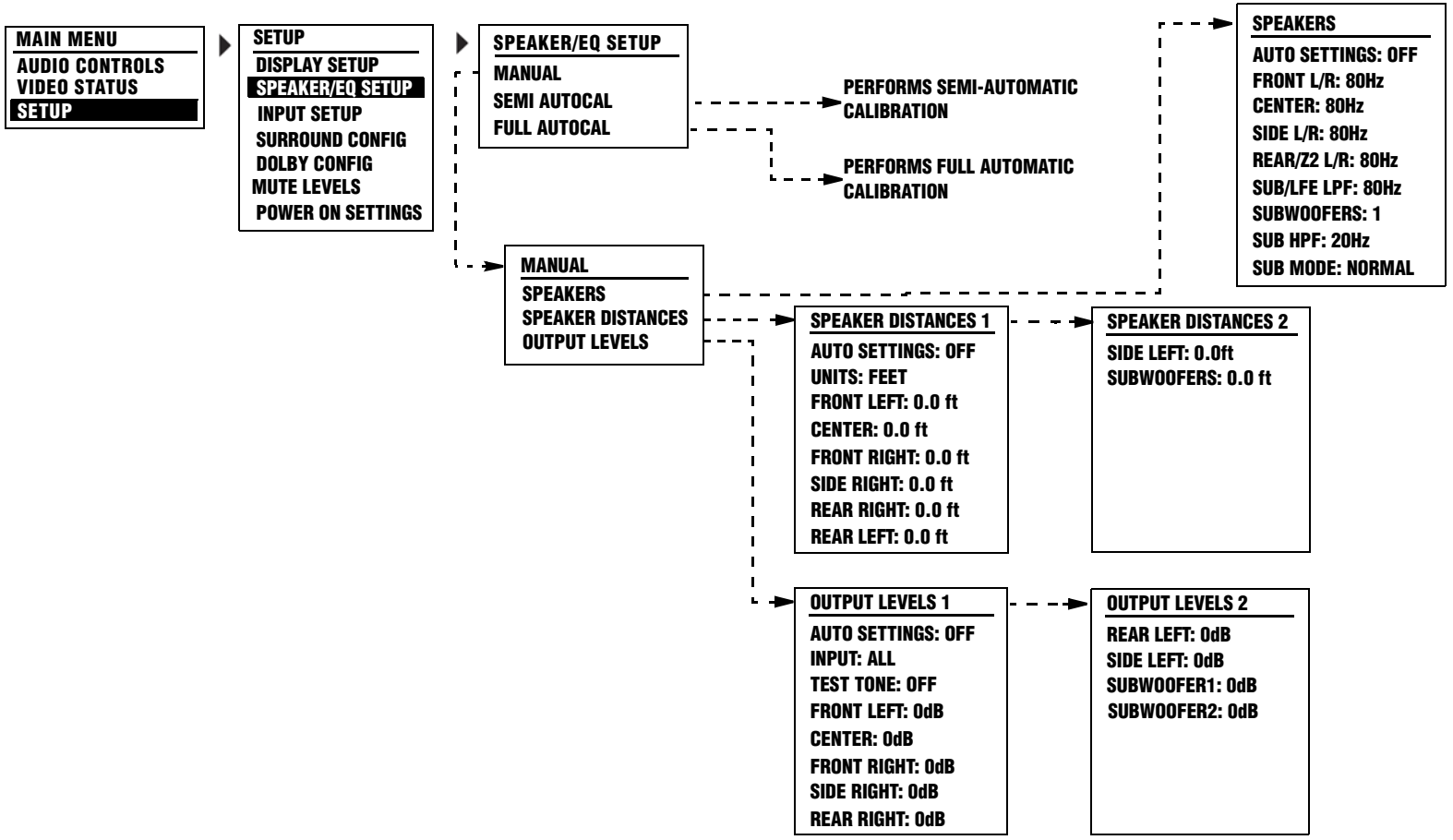
TIME OUT NONE, 1 TO 10 SECONDS

SETUP ▸ DISPLAY SETUP ▸ FRONT PANEL DISPLAY ▸ TIME OUT

Selects the TIME OUT parameter from the Front Panel Display menu. This parameter identifies the length of time before the front panel 2-line display times out. The parameter can be set from 1 to 10 seconds in one-second increments. If NONE is selected, then the 2-line front panel display is always on when the MV-5 is on.

SPEAKER/EQ SETUP

Select the SPEAKER/EQ SETUP menu to configure the Main Zone audio output connectors for the desired speaker setup. The Main Zone includes eight audio output connectors labeled Front L/R, Center, Subwoofer, Side L/R and Rear L/R.



MANUAL

SETUP ▸ SPEAKER/EQ SETUP ▸ MANUAL

Opens the MANUAL speaker setup menu, which allows the manual selection of the speaker distances, cross-over points, and output levels. See the next section, "Manual Speaker Set-Up", for more details.

SEMI AUTOCAL

SETUP ▸ SPEAKER/EQ SETUP ▸ SEMII AUTOCAL

Selects the SEMI AUTOCAL procedure, which automatically sets the speaker distances and output levels, as well as performing system equalization adjustments. The cross-over points for each speaker must be manually set before this procedure can be run. See the next section, "Manual Speaker Set-Up", for more information on how to set the cross-over points.

Performing the Semi Autocal Procedure:

In order to perform this test, the following initial setup is required:

- All of the speakers are connected to the MV-5 and positioned in the listening space.
- The cross-over points for each speaker are set through the MANUAL setup menu. See the following section, "Manual Speaker Setup", for information on how to manually set the cross-over points.
- A monitor is connected to the MV-5 for viewing the OSD during the procedure.
- The microphone, included with the MV-5, must be connected to the rear panel Microphone input connector and positioned in the primary listening position.

  For best results, install the microphone onto the accompanying rod by threading the two parts together and hold or place it in the primary listening position. Use a microphone stand or tripod if necessary.

The Semi Autocal procedure is performed in the same manner as the Full Autocal procedure. Refer to the "Performing the Full Autocal Procedure" for more details.

CAUTION!

DO NOT place the microphone too close to the speakers during the autocal procedure. If the microphone is within one foot of the speaker, the test tones that are output during the autocal procedure could cause a feedback loop which may damage the speaker. Harman Specialty Group assumes no responsibility for speaker damage.

FULL AUTOCAL

SETUP ▸ SPEAKER/EQ SETUP ▸ FULL AUTOCAL

Selects the FULL AUTOCAL procedure, which automatically sets the speaker distances, cross-over points, and output levels, as well as performing system equalization adjustments.

Note: The Full or Semi Autocal settings that are saved to the Preset locations include the system equalization adjustment values. However, even if the Auto EQ setting is active, the autocal settings for the system EQ do NOT apply to certain high bit-rate incoming data streams, such as 176 kHz and 192 kHz PCM.

Performing the AUTOCAL Procedure:

Before beginning the AUTOCAL procedure, set the MV-5 to an input that does not have a currently active source. **There should NOT be an active audio track playing when the AUTOCAL procedure is started.**

In order to perform this test, the following initial setup is required:

- All of the speakers are connected to the MV-5 and positioned in the listening space.

- A monitor is connected to the MV-5 for viewing the OSD during the procedure.
- The microphone, included with the MV-5, must be connected to the rear panel Microphone input connector and positioned in the primary listening position.

  Note: For best results, install the microphone onto the accompanying rod by threading the two parts together and hold or place it in the primary listening position. Use a microphone stand or tripod if necessary.

CAUTION!

DO NOT place the microphone too close to the speakers during the autocal procedure. If the microphone is within one foot of the speaker, the test tones that are output during the autocal procedure could cause a feedback loop which may damage the speaker. Harman Specialty Group assumes no responsibility for speaker damage.

The Full Autocal procedure is comprised of three parts, the Far Field Test, the Near Field Test, and the Subwoofer Test. Each part provides directions on the OSD at the start of the test, for volume level and microphone positioning, and each test sends test tones to the speakers.

Note: Before activating the calibration, ensure that the MV-5 is NOT muted. If Mute is active, then the test tone calibrations will not be accurate.

For the Far Field test, the test tones sent to each speaker follow a specific order. The order of testing is Front Left, Front Right, Center, Side Left, Side Right, Rear Left, and Rear Right.

Note: The test tones may be loud. Be prepared before starting the Full or Semi Autocal procedures.

The Far Field test sets the speaker distances, cross-over points, and output levels. The microphone is stationed in the center of the preferred listening area and a test tone is sent to each speaker.

Note: If the Far Field test is skipped, the Near Field test must also be skipped.

The Near Field test adjusts the MV-5, performing system equalization to compensate for speaker performance and placement. The procedure seeks to give the system a consistent tonal balance between the front left, front right, center, side left, side right, rear left, and rear right speakers, if applicable. The test calibrates each speaker separately, and the user individually selects each speaker to calibrate. The microphone should be held within two feet of the speaker baffle as a test tone is sent to the speaker.

The Subwoofer test is done in two parts. The user is instructed to hold the microphone to the left of the primary listening position and then to the right of the primary listening position. Two test tones are sent out to all connected subwoofers during each of the two test phases. Two tones are sent to ensure that subwoofers with auto power settings are active during the procedure.

Note: If there are no subwoofers in the system, then this test will not pass and must be skipped.

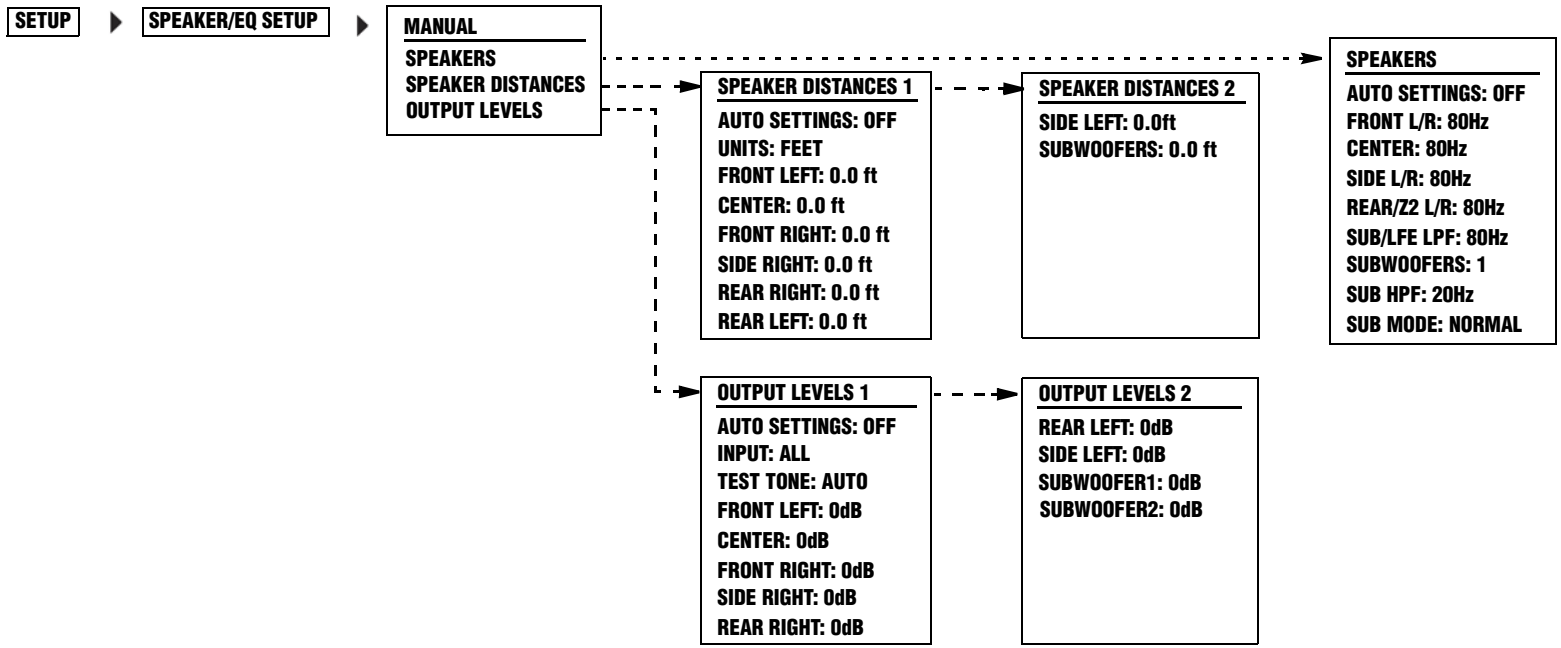
For optimum results, all noise generators in the room should be removed before performing the full or semi autocal procedure. However, air conditioners and similar steady-state background noise should have minimum impact on the test and can be left on.

When the procedure is complete, the user will be prompted to save the settings. These settings can be saved in one of three Preset locations. See *Section 4: Audio Controls & Video Status* for more information on the Preset locations.

Note: When calibration is complete, the volume level is set to a relatively high level. Before playing an audio track, be sure to turn the volume down to avoid potentially offensive or damaging volume levels.

MANUAL SPEAKER SETUP

Selecting the SETUP menu SPEAKER/EQ SETUP menu MANUAL option opens the MANUAL menu, which is used to manually set the speaker distances, cross-over points, and output levels.



AUTO SETTINGS OFF, ON

SETUP ▸ SPEAKER/EQ SETUP ▸ MANUAL ▸ AUTO SETTINGS

Loads the values from the active preset into the speaker cross-over points, distances, or output level parameters. The Speakers (cross-over points), Speaker Distances, and Output Levels menus all have an Auto Settings parameter. All three are the same parameter, but each affects the individual sub-menus separately and independently of each other.

If the Auto Settings parameter is set to ON, the parameters in that menu cannot be manually changed until the Auto Settings parameter is set to OFF.

Note: Any manual settings will be lost if the active preset settings are loaded; if Auto Settings is set to ON in the Speakers, Speaker Distances, or Output Levels menus, then previous parameter values will be overwritten.

SPEAKERS MENU

SETUP ▸ SPEAKER/EQ SETUP ▸ MANUAL ▸ SPEAKERS

Selecting the MANUAL SETUP menu SPEAKERS option opens the SPEAKERS menu, which assigns independent cross-over points for each Main Zone audio output connector. Front cross-over selections affect the Sub Mode parameter options.

Manual Speaker Setup Considerations:

- Select the cross-over point closest to the -3dB low frequency rating of the associated speakers. For example, set the FRONT L/R parameter to the cross-over point closest to the -3dB low-frequency rating of the front speakers.
- Select the subwoofer cross-over point equal to the lowest cross-over point of any of the other speakers.

Manual Subwoofer Speaker Setup Considerations:

All low frequencies below the speaker's cross-over point are redirected from the speaker to the subwoofer(s). If the cross-over point is FULL, low-frequency signals, excluding LFE information, are not redirected to the subwoofer.

Low frequencies between the Subwoofer and Front L/R speaker channels can be duplicated. However, making this selection can result in excessive bass. Refer to the "Sub Mode" description found later in this chapter for more information.

Note: The Semi Autocal and Full Autocal procedures leave the Subwoofer distance value at a default of 0.0 feet. Refer to the "Speaker Distances" section found later in this chapter to manually set the correct Speaker Distance for the subwoofers.

FRONT L/R FULL, 40 to 120HZ

Allows the manual selection of a cross-over point for the Main Zone audio output connectors labeled Front L/R. Available selections include FULL, 120 Hz, 100 Hz, and 80 Hz to 40 Hz in 10 Hz increments.

Select FULL to send a full-range signal to the front speakers. Otherwise, select the cross-over point closest to the -3dB low-frequency rating of the front speakers.

CENTER FULL, 40 to 120HZ, NONE

Allows the manual selection of a cross-over point for the Main Zone audio output connector labeled Center. Available selections include NONE, FULL, 120 Hz, 100 Hz, and 80 Hz to 40 Hz in 10 Hz increments.

- Select FULL to send a full-range signal to the center speaker. Otherwise, select the cross-over point closest to the -3dB low-frequency rating of the center speaker.
- When the speaker setup does not include a center speaker, select NONE because some listening modes are not intended to be used without a center channel.

SIDE L/R FULL, 40 to 120Hz, NONE

Allows the manual selection of a cross-over point for the Main Zone audio output connectors labeled Side L/R. Available selections include NONE, FULL, 120 Hz, 100 Hz, and 80 Hz to 40 Hz in 10 Hz increments.

- Select FULL to send a full-range signal to the Side L/R speakers. Otherwise, select the cross-over point closest to the -3dB low-frequency rating of the Side L/R speakers.
- When the speaker setup does not include side speakers, select NONE to redirect side channel signals to the Front L/R output connectors. If the Rear L/R parameter is also set to NONE, the MV-5 will redirect surround channel signals to the Front L/R output connectors.

REAR L/R FULL, 40 to 120Hz, NONE

Allows the manual selection of a cross-over point for the Main Zone audio output connectors labeled REAR/Z2 L/R. Available selections include NONE, FULL, 120 Hz, 100 Hz, and 80 Hz to 40 Hz in 10 Hz increments.

- Select FULL to send a full-range signal to the Rear L/R speakers. Otherwise, select the cross-over point closest to the -3dB low-frequency rating of the Rear L/R speakers.
- When the speaker setup does not include rear speakers, select NONE to redirect rear channel signals to the Side L/R output connectors. If the Side L/R parameter is also set to NONE, the MV-5 will redirect surround channel signals to the Front L/R output connectors.

Note: When the Rear L/R parameter is set to NONE, Dolby Digital PLIIx modes and DTS(-ES) decoding are not available.

SUB/LFE LPF (LOW-PASS FILTER) 40 to 120 Hz

Identifies the cross-over frequency setting below which sounds that may be available from an LFE track are sent to the subwoofer. Available selections are 120 Hz, 100 Hz, and 80 Hz to 40 Hz in 10 Hz increments.

SUBWOOFERS 0, 1, 2

Selects the number of subwoofers in the system. Available selections are 0, 1, or 2. The 0 selection is only available if the Front Left & Right speakers are set to FULL.

SUB HPF (HIGH-PASS FILTER) 15, 20, 30, 38 Hz

Identifies the cross-over frequency setting above which sounds are sent to the subwoofer. As a general rule of thumb, the larger the subwoofer driver, the lower the frequency should be of the Sub HPF parameter. The available selections are 15, 20, 30, and 38 Hz.

SUB MODE NORMAL, LFE+FL/FR, LFE ONLY

Selects options that are available to control bass redirection. Available settings are NORMAL, LFE+FL/FR and LFE ONLY.

NORMAL is the default setting when Front L/R cross-overs are set to any value other than FULL, and it is not user adjustable. In this mode, all frequencies below the cross-over point of any main speakers (Front, Center, Side, or Rear) are sent to the subwoofer. In addition, if the incoming audio stream contains an LFE (.1) channel, all frequencies in that channel which are below the SUB/LFE LPF cross-over point are also sent to the subwoofer(s).

When the Front L/R cross-over is set to FULL, the user has the choice of LFE+FL/FR or LFE ONLY.

The default setting, LFE+FL/FR, steers all Front L/R sounds below a fixed cross-over point of 80Hz to BOTH the subwoofer(s) and the Front L/R speakers. In addition, it redirects all frequencies below the cross-over points of the Center, Side, and Rear speakers to the subwoofer(s). Finally, if the incoming audio stream contains an LFE (.1) channel, all frequencies in that channel which are below the SUB/LFE LPF cross-over point are also sent to the subwoofer(s).

The LFE ONLY setting does not send any sound to the subwoofer(s) other than the LFE (.1) channel, if available.

SPEAKER DISTANCES MENU

SETUP ▸ **SPEAKER/EQ SETUP** ▸ **MANUAL** ▸ **SPEAKER DISTANCES**

Selecting the MANUAL SETUP menu SPEAKER DISTANCES option opens the SPEAKER DISTANCES menu, which allows the user to manually set the distances for each speaker. The adjustable range is 0.0 ft (0.0 m) to 30.0 ft (9.00 m) at 0.2 ft (0.06 m) increments.

The distances for each speaker - Front Left, Center, Front Right, Side Right, Rear Right, Rear Left, Side Left, and Subwoofers - can be set individually.

Note: When the speaker distance for the Front Left speaker is adjusted above 20.0 feet from the shortest speaker distance, all speaker distances will move in conjunction from the 20.2-feet parameter point. When the Front Left speaker is adjusted to 20.2 feet, all other speaker distances that are set to 0 feet will now move to 0.2 feet. If the Front Left speaker distance is increased to 22 feet, all other speaker distances will move to 2 feet (unless they are set to a higher value). If the Front Left speaker distance is then decreased, all other speaker distances will not change.

UNITS FEET, METERS

Identifies the units of measure of the speaker distances. FEET and METERS are the available selections.

OUTPUT LEVELS MENU

SETUP ▸ SPEAKER/EQ SETUP ▸ MANUAL ▸ OUTPUT LEVELS

Selecting the MANUAL SETUP menu OUTPUT LEVELS option opens the OUTPUT LEVELS menu, which allows the user to manually set the output levels for each speaker. The output levels can be set independently for each input. The adjustable range is -15 dB to +5 dB in 1 dB increments.

The output levels for each speaker - Front Left, Center, Front Right, Side Right, Rear Right, Rear Left, Side Left, Subwoofer1, and Subwoofer2 - can be set individually.

Note: The speaker output level settings may affect the maximum volume level of the MV-5 Processor. The maximum volume level is +10 dB minus the maximum output level setting of any speaker. Thus, if your Front L/R output levels are set to +3.0 dB, then the maxium allowable volume level is +10 dB minus 3 dB, or +7.0 dB.

INPUT

Identifies the input that the currently displayed output levels will be applied to. The Input selection toggles between the currently selected front panel input and ALL. If the front panel input is selected, then only that input's output levels are adjusted.

Note: To set a specific input's output levels, the input front panel button must be selected before the Input selection in the Output Levels menu is available for that specific input.

The ALL selection functions as a virtual input – it holds values that can be assigned to all inputs. Each input can override the ALL value with its own custom settings. To assign the ALL input, it must be selected individually for each front panel input selection.

Note: If the input is set to ALL and the auto settings are turned to ON, then ALL takes the preset values for its settings. The Auto Settings, if set to ON, apply to whatever INPUT is currenly selected.

TEST TONE OFF, AUTO, MANUAL

Provides a noise signal to each speaker through either the AUTO or MANUAL setting. AUTO sends a rotating noise signal to each speaker, in the order listed in the menu. If set to AUTO, the test tone moves in a clockwise order around the speakers, starting from the front left. MANUAL sends the pink noise signal only to the speaker selected by the user. The OFF selection turns off the noise signal. Any active input source is muted while the Test Tone parameter is active and until the Test Tone parameter is set to OFF.

The available test tones are dependent upon the current listening mode. For example, if a 5.1 channel listening mode is active, then the rear speakers are not accessible to the Test Tone parameter.

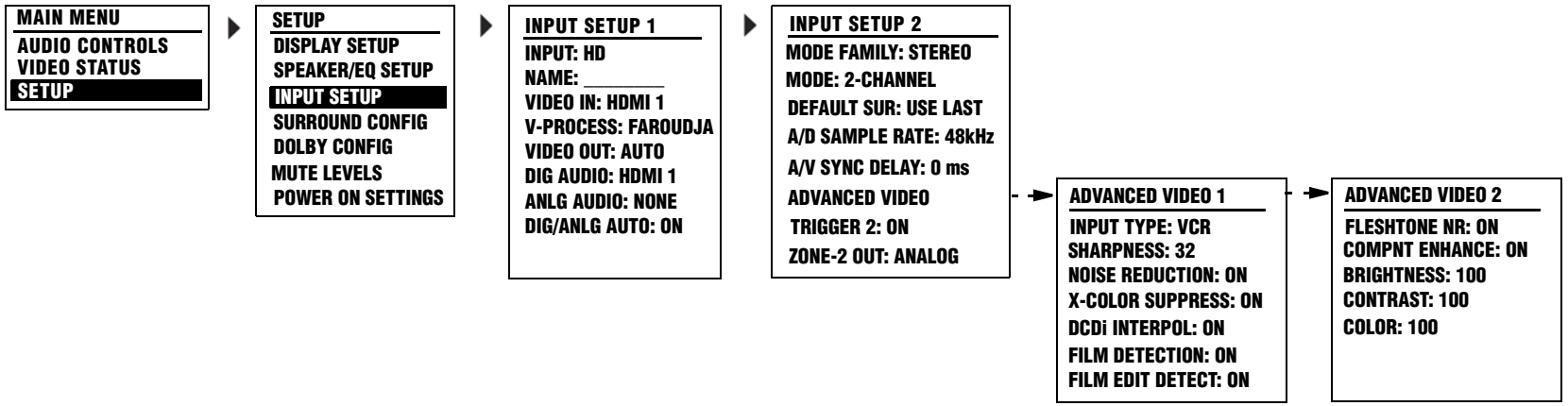
Note: Before activating the test tones, ensure that the MV-5 is NOT muted. If Mute is active, then the test tone calibrations will not be accurate.

To activate the Test Tone:

1. Press the Menu or Select button to enter the Menu structure.
2. Select Setup from the Main menu.
3. Select Speaker/EQ Setup.
4. Select Manual.
5. Select Output Levels.
6. Press the remote control ▲ and ▼ arrows to highlight the Test Tone parameter.
7. Press the remote control SELECT or ▶ arrow button to select the Test Tone parameter.
8. Press the remote control ▲ arrow to select manual test tones. The Test Tone parameter displays MANUAL and the highlighted parameter is now Front Left. You should hear the test tone in the Front Left speaker.
9. Press the remote control ▼ arrow to select automatic test tones. The Test Tone parameter displays AUTO and the highlighted parameter is now Front Left. You should hear the test tone in the Front Left speaker, then in the Center speaker, and so on through the list. After the last speaker, the test tone will return to the Front Left speaker and continue down the list again.
10. To stop the Test Tone, use the remote control ▲ and ▼ arrows to highlight the Test Tone parameter. The parameter will change to OFF. The test tone can no longer be heard through any of the speakers.

INPUT SETUP

Selecting the SETUP menu INPUT SETUP option opens the INPUT SETUP menu, a two-screen menu which sets up the input type and name, the digital and analog inputs for both audio and video, the listening mode, and other advanced input settings.



INPUT

SETUP ▸ INPUT SETUP ▸ INPUT

Selects between the twelve different inputs available. The input selected in this parameter identifies the input that is currently being setup or modified. Inputs can be scrolled through and modified without leaving the input setup menu. However, most input setup changes do not take affect until after the OSD menu is exited.

Note: Selecting a different input in the input setup menu will also change the front panel input selection to match. For example, if the Tuner input is selected on the front panel and you change the Input parameter to HD, the front panel HD input is also selected.

Most of the inputs are interchangeable, with the exception of the Dock and PC inputs. These two inputs are "hard-wired" and do not allow for user selection of the Audio In parameters. For more information on these two inputs, refer to *Section 5: PC & Dock Controls*.

Note: When a source is active, changing some audio or video parameters may cause the Main Zone audio to briefly mute the incoming source. If Zone 2 is set to DOWN MIX, the Zone 2 audio will also briefly mute.

NAME

SETUP ▸ INPUT SETUP ▸ NAME

Allows the user to customize the name of the selected input. Custom input names can include up to eight characters.

Note: A custom name cannot be assigned to the Tuner input.

To Customize the Name of the Selected Input:

1. Select the input and enter the Input Setup menu.
2. Select the Name parameter. Note that a blinking square appears in the first letter position.

3. Using the ▲ and ▼ arrows, scroll through the letter list until you find the first desired letter.

   The letter list is arranged with Uppercase letters > lowercase letters > numbers > symbols. The letters are listed in alphabetical order and the numbers in numerical order. Most standard ASCII characters are included.

4. Press the SELECT button or ▶ arrow to save the first letter and move to the next letter. A blinking square appears in the second letter position.
5. Repeat Steps 2 through 4 until the complete name is entered.

Note: The ◀ arrow saves the custom name. The ▶ arrow allows you to move forward, one space per one button press. To add a space to your custom name, press the SELECT button or ▶ arrow without choosing a letter.

Use the same procedure to edit a previously saved name.

VIDEO IN

SETUP ▶ **INPUT SETUP** ▶ **VIDEO IN**

Selects the VIDEO IN parameter, which assigns one of the rear panel video input connectors to the current input. Available selections include NONE, HDMI 1-2, Component 1-3, S-Video 1-4, and Composite 1-4.

The HDMI Audio & Video inputs, HDMI 1 & HDMI 2, are mutually exclusive inputs - only one input is available at a time for each input location. For example, while setting up the DVD input, if HDMI 2 is selected for the Video Input, then HDMI 1 is not a selectable option for the Digital Audio Input.

V-PROCESS FAROUDJA, CONV ONLY, BYPASS

SETUP ▶ **INPUT SETUP** ▶ **V-PROCESS**

Selects the V-PROCESS parameter, which identifies the type of video processing or conversion, if any, that is applied to the selected input source. Explanations of the available selections are listed below.

Faroudja - Activates the Faroudja video processing feature. The video signals can be handled in several different ways, depending upon the input source.

- A standard-definition (480i or 576i) analog signal (composite, S-video, or component) is digitized and sent to the Faroudja video processor for enhancement. The signal is available as both an analog component and an HDMI signal.
- An analog component signal is digitized and sent to the Faroudja video processor for enhancement. The signal is available as both an analog component and an HDMI signal, but not at the analog composite or S-video monitor outputs.
- Any HDMI signal other than 1080i is sent to the Faroudja video processor for enhancement and is available as an output at both the HDMI and analog component outputs. Program material that carries HDCP (High-Bandwidth Digital Content Protection) encoding is only available through the HDMI output.
- HDMI signals in 1080i resolution are sent directly to the HDMI and analog component outputs without processing. Program material that carries HDCP encoding is only available through the HDMI output.

The Faroudja selection delivers the best image quality when a digital video display is in use but it requires the use of a video display capable of accepting high-resolution (480p up to 1080i) signals through either an HDMI or component video connection.

Conv Only - Does not apply any video enhancement or processing to the incoming video signal, but outputs the signal in one of the following ways, depending on the input source.

- A standard-definition (480i or 576i) analog signal (composite, S-video, or component) is converted so that it is available as an HDMI signal at its input resolution, as well as at the standard S-video, composite, or component analog video outputs.
- An analog component signal is digitized and output at its input resolution through the HDMI outputs and as an analog component signal, but not through the analog composite or S-video monitor outputs.
- HDMI signals are output through both the HDMI and analog component outputs. Program material that carries HDCP encoding is only available through the HDMI output.

Bypass – Does not apply any video enhancement or processing to the incoming video signal, but outputs the signal in one of the following ways, depending on the input source.

- Analog signals (composite, S-video, or component) is output only in the resolution and format that matches the input.
- HDMI signals are output through the HDMI and analog component outputs. Program material that carries HDCP encoding is only available through the HDMI output.

Note: If you are not getting the expected resolution options for your video monitor, it may be caused by an incompability between the input setup selections and the incoming signal. Refer to the Video Resolutions Table in Section 6: Troubleshooting and Maintenance *for more detailed information.*

VIDEO OUT

SETUP ▸ INPUT SETUP ▸ VIDEO OUT

VIDEO OUT is a multi-purpose parameter; the function of the parameter depends upon the input source and the setting of the V-PROCESS parameter.

When the V-PROCESS parameter is set to BYPASS or CONV ONLY, the VIDEO OUT parameter is a non-adjustable status display of the video resolution of the output signal, as determined by the input.

When the Faroudja video processing is selected for the V-PROCESS parameter and the output is set to HDMI or component format, VIDEO OUT becomes an active user-selectable parameter which identifies the video output resolution. Available selections are AUTO, 1080i, 720p, and 480p.

For HDMI inputs, the AUTO option automatically selects the highest output resolution supported by the HDMI-equipped monitor. For component inputs with copy protection, the component output is restricted to the resolution format of the incoming component signal.

Note: If VIDEO OUT is set to AUTO when the component input is not copy protected, the component output is always set to 1080i format. If the video monitor does not support 1080i format, the signal will not display correctly.

DIG AUDIO

SETUP ▸ INPUT SETUP ▸ DIG AUDIO

Selects the DIG AUDIO parameter, which assigns one of the rear panel digital audio input connectors to the current input. Available selections include NONE, Optical 1-4, Coaxial 1-4, and HDMI 1-2.

The HDMI Audio & Video inputs, HDMI 1 & HDMI 2, are mutually exclusive inputs - only one input is available at a time for each input location. For example, while setting up the DVD input, if HDMI 2 is selected for the Video Input, then HDMI 1 is not a selectable option for the Digital Audio Input.

Note: Digital audio is not selectable for the PC and Dock inputs. Refer to Section 5: PC & Dock Controls *for more information.*

ANLG AUDIO

SETUP ▸ INPUT SETUP ▸ ANLG AUDIO

Selects the ANLG AUDIO parameter, which assigns one of the rear panel analog audio input connectors to the current input. Available selections include NONE, Analog 1-6, 7.1 Analog, and 5.1 Analog.

Note: Analog audio is not selectable for the Dock and PC inputs. Refer to Section 5: PC and Dock Controls for more information.

DIG/ANLG AUTO OFF, ON

SETUP ▸ INPUT SETUP ▸ DIG/ANLG AUTO

Selects the DIG/ANLG AUTO parameter, which identifies if the MV-5 should switch to an analog signal source for an input where the digital input source has been interrupted. This feature is particularly useful with certain cable set-top boxes where the signal is normally digital but occasionally changes to analog.

The parameter, when set to ON, identifies if there is both a digital and analog signal present to the input. If this condition is true, then the MV-5 prioritizes the digital signal over the analog signal. When the digital signal is interrupted, then it switches to the analog signal.

Note: Digital/analog auto switching is not selectable for the Dock and PC inputs. Refer to Section 5: PC and Dock Controls for more information.

MODE FAMILY LOGIC 7, DOLBY, DTS, DSP, STEREO

SETUP ▸ INPUT SETUP ▸ MODE FAMILY

Identifies the Surround Mode Family that is initially applied to the incoming audio streams for the currently selected input. Other surround mode families may still be applied. For more information, refer to the "Listening Modes" section found later in this chapter.

Note: The Mode Family and Modes are connected. The Modes are driven by the Mode Family selection as well as by the incoming audio source. The current running data stream dictates what Mode Family options are available for selection.

MODE

SETUP ▸ INPUT SETUP ▸ MODE

Identifies the Listening Mode that is initially applied to the incoming audio streams for the currently selected Mode Family. Other listening modes may still be applied. For more information, refer to the "Listening Modes" section found later in this chapter.

Note: The Mode Family and Modes are connected. The Modes are driven by the Mode Family selection as well as by the incoming audio source. The current running data stream dictates what Mode Family options are available for selection.

DEFAULT SUR STANDARD, USE LAST

SETUP ▸ INPUT SETUP ▸ DEFAULT SUR

Identifies the Default Surround Mode that is activated when a digital source is selected. The STANDARD parameter activates the "standard" decoder of the source input. The USE LAST selection allows the MV-5 software to "remember" the last used listening mode for any given input source. Once selected, that mode will always be active on the corresponding input until another listening mode is selected. This parameter affects all inputs.

Note: If the LOGIC 7 DEFAULT parameter in the SURROUND CONFIG menu is set to ON, the USE LAST selection is defeated and the listening mode will always switch to a LOGIC 7 mode. For normal functionality with the USE LAST selection, make sure that the LOGIC 7 DEFAULT parameter is set to OFF.

A/D SAMPLE RATE 48 KHZ, 96 KHZ

SETUP ▸ INPUT SETUP ▸ A/D SAMPLE RATE

The MV-5 converts the incoming analog audio signals to digital audio for all audio processing. The A/D SAMPLE RATE parameter allows you to select the sample rate of the A/D converters. Some surround processing modes, such as those in the DSP Mode Family, are only available at the 48 kHz sampling rate. This setting is only available for incoming analog audio streams and does not apply to any of the ANALOG BYPASS modes.

A/V SYNC DELAY 0 TO 180 mS

SETUP ▸ INPUT SETUP ▸ A/V SYNC DELAY

Delays the audio until it matches the on-screen video. Select a value to activate an audio signal delay to compensate for video that is delayed relative to the audio. The A/V sync delay range is 0 to 180 ms in 1 ms increments. Each input has an independent A/V Sync Delay parameter.

ADVANCED VIDEO

SETUP ▸ INPUT SETUP ▸ ADVANCED VIDEO

Selects the ADVANCED VIDEO menu, which provides fine-tuning adjustments to the video output. For more information, refer to the next section, "Advanced Video".

Note: Most of the Advanced Video parameters are only available when the V-Process parameter is set to FAROUDJA.

TRIGGER 2 OFF, ON

SETUP ▸ INPUT SETUP ▸ TRIGGER 2

Selects the TRIGGER 2 parameter, which configures the Trigger OUT 2 connector on the rear panel. This trigger output can be configured independently for each input so that a trigger voltage signal is sent to the Trigger Out 2 connector when a specific input is selected. If the Trigger 2 parameter is set to ON, it will output its voltage when the associated input is activated in the Main Zone. It is not activated by Zone 2 input switching. The default for the Trigger 2 parameter is OFF.

ZONE-2 OUT ANALOG, DOWN MIX

SETUP ▸ INPUT SETUP ▸ ZONE-2 OUT

Identifies the type of audio that is sent to the Zone 2 outputs. The ANALOG setting is a straight bypass of the Main Zone stereo analog audio to the Zone 2 outputs. DOWN MIX provides a stereo DOWN MIX of the incoming audio to the Zone 2 outputs. DOWN MIX, which should be selected for digital or multi-channel analog sources, is only available if the Main Zone has an input selected that will accept a down mixed source. The ZONE 2 OUT parameter is NOT input-specific; a selection made for one input will be reflected in ALL inputs.

Note: If you have 5.1-channel or 7.1-channel ANALOG AUDIO assigned to an Input using the BYPASS listening mode, only the Front Left and Front Right channels will be sent to Zone 2 OUT with the ANALOG setting. In this condition, DOWN MIX is not available.

The Main Zone and Zone 2 inputs are inter-related. For example, there is only one HD input that is accessible in both the Main Zone and Zone 2; there are NOT two separate HD inputs. Therefore, to set the ZONE 2 OUT in a Main Zone input, the same Zone 2 input must also be selected.

DOWN MIX is only available if the following conditions exist:

- Zone 2 is ON (or the Zone 2 OFF button is not lit).
- Zone 2 has the same input selected as the Main Zone.
- If the Main Zone audio is ANALOG, it is not set to a BYPASS listening mode.

If the ZONE-2 OUT parameter is set to ANALOG and an input has stereo analog audio assigned to it (ANALOG 1 to ANALOG 6 connectors), then choosing that input in Zone 2 will allow it to play the assigned ANALOG audio, regardless of what is playing in the Main Zone.

If the ZONE-2 OUT parameter is set to DOWN MIX, selecting an input in Zone 2 will have one of the following results:

- If the Zone 2 input is the same as the Main Zone input, then Zone 2 will output a DOWN MIX of the Main Zone audio.
- If the Zone 2 input is NOT the same as the Main Zone input, but the Zone 2 DIG AUDIO IN parameter is the same as the selected Main Zone input, then Zone 2 will output a DOWN MIX of the Main Zone audio.
- If the Zone 2 input is NOT the same as the Main Zone input, but the Zone 2 ANLG AUDIO IN parameter is set to 5.1 ANALOG or 7.1 ANALOG, then Zone 2 will output a DOWN MIX of the Main Zone audio.
- If the Zone 2 input is NOT the same as the Main Zone input, but the Zone 2 ANLG AUDIO IN parameter is set to any of the six stereo analog input connectors, then Zone 2 will output the independent analog audio for that input.

The PC & Dock inputs are special cases that do not quite function exactly as noted above. The ZONE-2 OUT parameter is preset to ANALOG and cannot be changed to DOWN MIX.

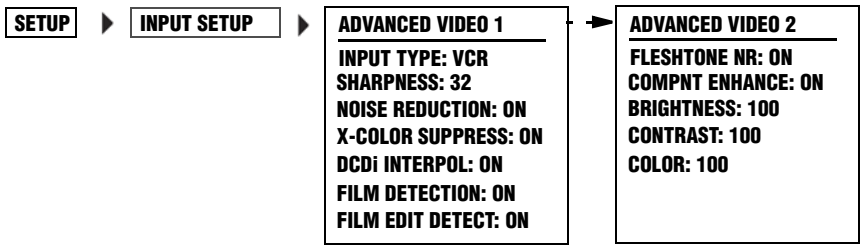
Since the PC & Dock inputs operate independently of all other inputs...

- Either may be selected in Zone 2 regardless of what is playing in the Main Zone.
- Any combination of these two inputs can be selected in the Main Zone and Zone 2, including selecting either of them for both Zones simultaneously.
- If either of these inputs is playing in the Main Zone, the other ANALOG input can be chosen for Zone 2.

ADVANCED VIDEO

Selecting the SETUP menu INPUT SETUP menu ADVANCED VIDEO option opens the ADVANCED VIDEO menu, a two-screen menu which provides user-adjustable controls for sharpness, noise reduction, brightness, and other video fine-tuning.

Note: Most of the Advanced Video parameters are only available when the V-Process parameter is set to FAROUDJA.



INPUT TYPE

SETUP ▸ INPUT SETUP ▸ ADVANCED VIDEO ▸ INPUT TYPE

Identifies the type of device being used for the input source. Once the selection is made, the advanced video settings will change to default settings that are best suited for that type of device. Manual changes to these settings may also be made. The input types available for selection are:

- DVD – Use with the output signal of a typical DVD player.
- VCR – Use with the output signal of an analog videocassette recorder.
- DIG CABLE – Use with digital cable set-top boxes. Even when a digital cable system is in use, there may be a mix of digital and analog channels. Start with this configuration and then change the advanced video options as needed to tailor the output to your preferences.
- DIG SAT – Use with digital satellite system set-top boxes.
- ANLG CABLE – Use with analog cable set-top boxes.
- ANLG SAT – Use with analog satellite system set-top boxes.
- DIG CAM – Use with digital camcorders or still-image cameras.
- ANLG CAM – Use with analog camcorders.

Refer to the table on the following page for the default video source settings.

SHARPNESS 0 TO 100

SETUP ▸ INPUT SETUP ▸ ADVANCED VIDEO ▸ SHARPNESS

Adjusts the degree to which the enhancement circuits that adjust the high-frequency content of the signal are applied. The setting acts on the vertical and horizontal as well as luminance and chrominance parameters to offer an enhanced depth in the picture as well as greater small object detail. In general, the lower settings are applicable for digital displays and sources, while the higher settings may be preferred for CRT-based displays and digital sources. The Sharpness adjustment range is 0 to 100 in single increments.

Most of the following Advanced Video parameters are simple ON/OFF toggle switches that apply to each input independently.

FEATURE	DVD	VCR	DIG CABLE	DIG SAT	ANLG CABLE	ANLG SAT	DIG CAM	ANLG CAM
Noise Reduction	OFF	ON	OFF	OFF	ON	ON	OFF	ON
X-Color Suppressor	ON	ON	ON	ON	ON	ON	ON	ON
DCDi Interpolation	ON	ON	ON	ON	ON	ON	ON	ON
Film Mode Detect	ON	ON	ON	ON	ON	ON	ON	ON
Film Mode Edit Detect	ON	ON	ON	ON	ON	ON	ON	ON
Component Video Enhancement	ON	ON	ON	ON	ON	ON	ON	ON
Fleshtone NR	ON	ON	ON	ON	ON	ON	ON	ON

NOISE REDUCTION OFF, ON

SETUP ▸ INPUT SETUP ▸ ADVANCED VIDEO ▸ NOISE REDUCTION

Reduces the video noise often present in analog input sources.

X-COLOR SUPPRESS OFF, ON

SETUP ▸ INPUT SETUP ▸ ADVANCED VIDEO ▸ X-COLOR SUPPRESS

Reduces the cross-color interference that typically appears in composite video sources as moire' in finely detailed objects. Moire' effect is a visual perception that occurs when viewing a set of lines or dots superimposed upon another set of lines or dots, where the sets differ in relative size, angle, or spacing.

DCDi INTERPOL OFF, ON

SETUP ▸ INPUT SETUP ▸ ADVANCED VIDEO ▸ DCDi INTERPOL

Directional Correlation De-interlacing (DCDi) Interpolation is a Faroudja technology that examines each pixel for the optimal direction from which to interpolate the video information, with regard to local edges. This adaptive process prevents the appearance of staircasing and the jagged edges that are often visible with other means of de-interlacing.

FILM DETECTION OFF, ON

SETUP ▸ INPUT SETUP ▸ ADVANCED VIDEO ▸ FILM DETECTION

Detects the presence of film-originated material so that the original film-frame sequence may be recovered by weaving together the appropriate video fields.

FILM EDIT DETECT OFF, ON

SETUP ▸ INPUT SETUP ▸ ADVANCED VIDEO ▸ FILM EDIT DETECT

Applies additional processing when film-based material is detected so that any disruption in the frame sequence of film-based material due to video edits or overlay of video text over film is compensated for by processing, before artifacts such as feathering may appear.

FLESHTONE NR OFF, ON

SETUP ▸ INPUT SETUP ▸ ADVANCED VIDEO ▸ FLESHTONE NR

Selects the Fleshtone NR (Noise Reduction) parameter, which preserves the detail in faces and flesh tones while reducing noise in the total picture.

COMPNT ENHANCE OFF, ON

SETUP ▸ INPUT SETUP ▸ ADVANCED VIDEO ▸ COMPNT ENHANCE

Selects the Component Video Enhance parameter, which processes incoming component video signal to adjust the high-frequency content of the signal resulting in enhanced depth in the picture as well as greater small object detail.

BRIGHTNESS 50 TO 150

SETUP ▸ INPUT SETUP ▸ ADVANCED VIDEO ▸ BRIGHTNESS

Changes the video level to a darker or brighter setting. The BRIGHTNESS adjustment range is 50 to 150 in single increments.

CONTRAST 50 TO 150

SETUP ▸ INPUT SETUP ▸ ADVANCED VIDEO ▸ CONTRAST

Changes the black level of the video to compensate for poor contrast. The CONTRAST adjustment range is 50 to 150 in single increments.

COLOR 50 TO 150

SETUP ▸ INPUT SETUP ▸ ADVANCED VIDEO ▸ COLOR

Changes the color of the video to compensate for over- or under-color saturation conditions. The COLOR adjustment range is 50 to 150 in single increments.

LISTENING MODES

The MV-5 has a large selection of listening modes to choose from. The list of available listening modes is broken into two parts - the Mode Family and the Mode. The available listening modes vary depending upon the Mode Family selections, the input setup, and the incoming audio signal.

The MV-5 features the ability to turn off selected listening mode families so that those options do not appear in the list of available listening modes. See the following section, "Surround Configuration", for more information. The MV-5 also features the ability to modify elements of the Dolby listening modes, PLIIx and PLII, to better suit your listening preference. See the "Dolby Configuration" section found later in this chapter for more information.

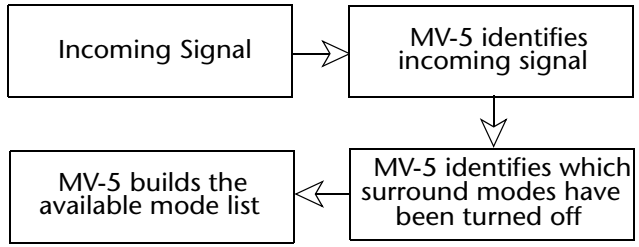
SELECTING A LISTENING MODE

The Input Setup menu allows the user to select the initial listening mode and mode family that will be applied to any incoming data stream on that specific input. However, setting the input Mode Family and Mode parameters does not prevent other listening modes from being available through the Mode buttons.

The Front Panel Mode ◂ and ▸ buttons allow the user to quickly scan through the available listening modes in the selected family for a given input or incoming data stream. The Remote Control Channel ▴ and ▾ buttons perform the same function.

To select a different Mode Family, the remote control touch screen must be set to the first page of the LEX menu. Then selecting the DOLBY, DTS, DSP, or STER from the touch screen of the remote control switches the Mode button selections to any listening modes available for each of those families, respectively.

The MV-5 process of signal identification and listening mode selection is shown below:



DTS + DOLBY LISTENING MODES

When a DTS soundtrack is playing, the Mode Family menu for DTS contains two options. The DTS selection provides the currently available DTS listening modes. The Dolby selection contains two additional listening modes: DTS + PLIIx Film and DTS + PLIIx Music.

Note: These DTS + Dolby listening modes are ONLY available when the incoming data stream is DTS.

AVAILABLE LISTENING MODES

The following table provides a complete listing of the listening modes available for each of the incoming audio or video formats currently available. Shaded cells indicate that there are no available modes in that Mode Family for that specific incoming data stream.

Note: The table identifies all of the possible formats, but depending upon the Input setup and the Surround Configuration of the MV-5, all of these modes may not be available for selection .

<table>
<tr><th>Incoming PCM Datastream</th><th>Dolby</th><th>DTS</th><th>Logic 7</th><th>DSP</th><th>Stereo</th></tr>
<tr><td>PCM 32kHz</td><td rowspan="2">PLIIx Film, Music, & Game
PLII Film, Music, & Game
Pro Logic
VS 2-SP REF & WIDE
VS 3-SP REF & WIDE
VS 4-SP WIDE
VS 5-SP WIDE</td><td rowspan="4">Neo 6: 6ch Cinema
Neo 6: 6ch Music
Neo 6: 5ch Cinema
Neo 6: 5ch Music
Neo 6: 3ch Cinema</td><td></td><td rowspan="2">Hall 1 5ch
Hall 1 6ch
Hall 2 5ch
Hall 2 6ch</td><td rowspan="4">2-ch Stereo
5-ch Stereo
7-ch Stereo</td></tr>
<tr><td>PCM 44.1/48kHz
2-channel</td><td>Logic 7 7CH FILM
Logic 7 7CH MUSIC
Logic 7 5CH FILM
Logic 7 5CH MUSIC</td></tr>
<tr><td>PCM 88.2kHz
2-channel</td><td rowspan="2">PLIIx Film, Music, & Game
PLII Film, Music, & Game
Pro Logic</td><td></td><td></td></tr>
<tr><td>PCM 96kHz
2-channel</td><td>Logic 7 7CH FILM
Logic 7 7CH MUSIC
Logic 7 5CH FILM
Logic 7 5CH MUSIC</td><td></td></tr>
<tr><td>PCM 176.4/192kHz
2-channel</td><td></td><td></td><td></td><td></td><td>2-ch Stereo
5-ch Stereo
7-ch Stereo</td></tr>
<tr><td>PCM 44.1/48kHz
5.1-channel</td><td rowspan="3">PLIIx Film & Music</td><td></td><td>Logic 7 7CH FILM
Logic 7 7CH MUSIC</td><td></td><td rowspan="3">PCM MULTI**</td></tr>
<tr><td>PCM 88.2kHz
5.1-channel</td><td></td><td></td><td></td></tr>
<tr><td>PCM 96kHz
5.1-channel</td><td></td><td>Logic 7 7CH FILM
Logic 7 7CH MUSIC</td><td></td></tr>
</table>

***With PCM 5.1 audio input, one additional listening mode is available - the AUDIO STATUS menu indicates that the audio is PCM 3/2.1, the mode family is PCM MULTI, and the mode is STANDARD, which applies only bass management and tone controls to the incoming PCM 5.1 audio.*

Incoming DOLBY Datastream	Dolby	DTS	Logic 7	DSP	Stereo
Dolby Digital 1.0	VS 2-SP REF & WIDE DOLBY DIGITAL DOLBY D STEREO		Logic 7 7CH FILM Logic 7 7CH MUSIC Logic 7 5CH FILM Logic 7 5CH MUSIC		
Dolby Digital 2.0	PLIIx Film, Music, & Game PLII Film, Music, & Game Pro Logic VS 2-SP REF & WIDE VS 3-SP REF & WIDE VS 4-SP WIDE VS 5-SP WIDE DOLBY DIGITAL				
Dolby Digital 4.1	PLIIx Film & Music Digital EX DOLBY DIGITAL DOLBY D STEREO VS 2-SP REF & WIDE VS 4-SP WIDE				
Dolby Digital 5.0	D+PLIIX Film & Music Digital EX DOLBY DIGITAL DOLBY D STEREO VS 2-SP REF & WIDE VS 3-SP REF & WIDE VS 4-SP WIDE VS 5-SP WIDE				
Dolby Digital 5.1	D+PLIIX Film & Music Digital EX DOLBY DIGITAL DOLBY D STEREO VS 2-SP REF & WIDE VS 3-SP REF & WIDE VS 4-SP WIDE VS 5-SP WIDE				

Incoming DTS Datastream	Dolby	DTS	Logic 7	DSP	Stereo
DTS 5.1 MATRIX	DTS+PLIIx Film & Music* *These modes are only available when a DTS source is playing and the Dolby Mode Family button is pressed on the remote.*	DTS-ES MATRIX DTS DTS STEREO	Logic 7 7CH FILM Logic 7 7CH MUSIC Logic 7 5CH FILM Logic 7 5CH MUSIC		
DTS 96/24		DTS 96/24 DTS 96/24 ST DTS NEO:6			
DTS 6.1 DISCRETE		DTS-ES DISCRETE DTS DTS STEREO			
DTS 5.1 and DTS 20-bit 5.1 ch CD		DTS NEO:6 DTS DTS STEREO			

Incoming ANALOG Datastream	Dolby	DTS	Logic 7	DSP	Stereo
Analog, 2-channel 48kHz sample rate	PLIIx Film, Music, & Game PLII Film, Music, & Game Pro Logic VS 2-SP REF & WIDE VS 3-SP REF & WIDE VS 4-SP WIDE VS 5-SP WIDE	Neo 6: 6ch Cinema Neo 6: 6ch Music Neo 6: 5ch Cinema Neo 6: 5ch Music Neo 6: 3ch Cinema	Logic 7 7CH FILM Logic 7 7CH MUSIC Logic 7 5CH FILM Logic 7 5CH MUSIC	Hall 1 5ch Hall 1 6ch Hall 2 5ch Hall 2 6ch	2-ch Stereo 2-ch Bypass* 5-ch Stereo 7-ch Stereo *The 2-ch Bypass mode is ONLY available if the Tone Controls parameter is set to OFF.*
Analog, 2-channel 96kHz sample rate	PLIIx Film, Music, & Game PLII Film, Music, & Game Pro Logic				
Analog, 5-channel 48kHz & 96kHz sample rate	PLIIx Film & Music		Logic 7 7CH FILM Logic 7 7CH MUSIC		5-CHANNEL 5.1-ch Bypass
Analog, 7-channel 48kHz & 96kHz sample rate					5-CHANNEL 5.1-ch Bypass 7-CHANNEL 7.1-ch Bypass

LISTENING MODE DESCRIPTIONS

The following table provides a brief description of each listening mode.

Logic 7 Film Logic 7 Music	A proprietary Lexicon technology, Logic 7 is an advanced mode that extracts the maximum surround information from either surround-encoded programs or conventional stereo material. Film 7.1 and Music 7.1 are tailored specifically for use with rear speakers, while Film 5.1 and Music 5.1 are specifically formatted for use without rear speakers. The Film modes should be used with any source that contains Dolby Surround or similar matrix encoding to experience increased center channel intelligibility and more accurate placement of sounds with fades and pans. The Music modes enhance the listening experience by presenting a wider front soundstage and greater rear ambience. Both Logic 7 modes also direct low-frequency information to the subwoofer (if installed and configured) to deliver maximum bass impact. Logic 7 adds additional bass enhancement that circulates low frequencies in the 40 Hz to 120 Hz range to the front and surround speakers to deliver a less localized soundstage that seems broader and wider than when the subwoofer is the sole source of bass energy. *Note: Logic 7 Film is designed for use with a center channel. If your speaker system does not have a center channel, then use Logic 7 Music.*
Dolby Digital	Available only with digital input sources encoded with Dolby Digital data. It provides up to five separate main audio channels and a special dedicated low-frequency effects channel. This mode does not use the rear speakers.
Dolby Digital EX	Available when the receiver is configured for 7.1-channel operation, Dolby Digital EX is an extended version of Dolby Digital. When used with movies or other programs that have special encoding, Dolby Digital EX reproduces specially-encoded soundtracks so that a full 7.1 sound field is available. Even if a source does not contain specific EX encoding, the special algorithm may be used to derive a 7.1-channel output.
Dolby Pro Logic II Film Music Game Pro Logic	Dolby Pro Logic II decodes full-range, discrete, left, center, right, right surround, and left surround channels from matrix surround-encoded programs and conventional stereo sources. The Dolby Pro Logic II Film mode is optimized for movie soundtracks, while the Pro Logic II Music mode should be used with musical selections. The Pro Logic II Game mode is designed to enhance the soundtrack of video games for either dedicated consoles or computers. The Pro Logic mode re-creates the original Pro Logic processing for those who prefer that presentation format.
Dolby Pro Logic IIx Film Music Game	Dolby Pro Logic IIx is the latest extension of Dolby Laboratory's benchmark matrix surround technology, which creates a discrete 7.1 sound field from matrix surround or two-channel stereo sources when your system is configured for surround back speakers. Film, Music, and Game versions are available that customize the processing to the type of source in use. These modes may also be used to create 7.1 sound fields from 5.1 digital soundtracks.
Dolby Virtual Speaker Reference Wide	Dolby Virtual Speaker technology uses a next-generation advanced algorithm to reproduce the dynamics and surround sound effects of a precisely placed 5.1-channel speaker system using only front left and right speakers. In the Reference mode, the apparent width of the sound across the front image is defined by the distance between the two speakers. The Wide mode provides a wider, more spacious front image when the two speakers are close together. Depending upon the number of speakers available in your system, a variety of different sound field options are available for both the Reference and Wide modes.
DTS 5.1	When the speaker configuration is set for 5.1-channel operation, the DTS 5.1 mode is available when DVD, audio-only music, or laser discs encoded with DTS data are played. DTS 5.1 provides up to five separate main audio channels and a special dedicated low-frequency effects channel.
DTS-ES 6.1 Matrix DTS-ES 6.1 Discrete	When the speaker configuration is set for 7.1-channel operation, playback of a DTS-encoded program source will automatically trigger the selection of one of the two DTS-ES modes. Newer discs with special DTS-ES Discrete-encoding will be decoded to provide six discrete, full-bandwidth channels plus a separate low-frequency effects channel. All other DTS discs will be decoded using the DTS-ES Matrix mode, which creates a 6.1-channel sound field from the original 5.1-channel soundtrack.

DTS Neo:6 Cinema DTS Neo:6 Music	These two modes are available when any analog source is playing to create a three-channel, five-channel, or six-channel surround presentation from conventional Matrix-encoded and traditional Stereo sources. Select the Cinema version of the Neo:6 when a program with any type of Matrix surround encoding is present. Select the Music version of Neo:6 for optimal processing when a non-encoded, two-channel stereo program is being played.
DTS Neo:6	The DTS Neo:6 mode is designed for use with matrix-encoded digital signals. This mode is available when Digital DTS 96/24, DTS 5.1, and DTS 20-bit 5.1 CH CD data streams are active. DTS Neo:6 derives six channels when both side and rear speakers are present (rear speakers will be in parallel). It derives five channels when only side speakers are present.
DTS 96/24	DTS 96/24 is available on specially-encoded (and labeled) optical discs that offer five channels of audio with a 96kHz sampling rate that delivers greatly improved audio performance. When a DTS 96/24 disc is in use and the player is connected with a digital link, the mode is selected automatically.
Hall 1 & Hall 2	The Hall modes, for both 5-channel and 7-channel systems, create sound fields that resemble a small-(Hall 1) or medium-sized (Hall 2) concert hall.
5-Channel Stereo 7-Channel Stereo	This mode takes advantage of multiple speakers to place a stereo signal at both the front and back of a room. Ideal for playing music in situations such as a party, it places the same signal at the front-left and surround-left, and front-right and surround-right speakers. The center channel is fed a summed mono mix of the in-phase material of the left and right channels. If the MV-5 has been configured for 6.1-/7.1-channel operation, both of these options are available for selection. If the MV-5 has been configured for 5.1-channel operation, only the 5-Channel Stereo option is available.
2-Channel Stereo	This mode turns off all surround processing and presents pure left- and right-channel stereo programs. The bass management processing that routes low frequencies to the subwoofers is still active.
2-Channel Stereo Bypass	This mode turns off all surround processing and present pure left- and right-channel stereo programs. The bass management processing that routes low frequencies to the subwoofers is still active. This mode does not allow any user modification of the audio, such as Bass or Treble adjustments. *Note: This mode is only available when the Tone Controls are set to OFF.*

5.1-CHANNEL & 7.1-CHANNEL DIRECT INPUTS

There are four listening modes available for use with surround sources such as DVD-Audio, SACD, HD-DVD, or Blue-ray players. These listening modes are for use when the MV-5 8-channel direct inputs are in use. We recommend you use these listening modes under the following conditions:

- 5.1 BYPASS - Use this listening mode when the Surround Back L/R inputs are NOT in use and the input source device has its own internal bass management system. The incoming audio stream passes from the source directly through to the volume control without any analog-to-digital conversion. This mode also mutes the unusued input jacks to prevent unwanted noise from interfering with system performance.
- 5-CHANNEL - Use this listening mode when the Surround Back L/R inputs are NOT in use and the input source device does NOT have its own internal bass management system. In this mode, the analog source is converted to digital so that it uses the same bass management options for the direct input as used for all other inputs. This mode also mutes the unusued input jacks to prevent unwanted noise from interfering with system performance.
- 7.1 BYPASS - Use this listening mode when the 8-channel direct inputs are in use and the input source device has its own internal bass management system. The incoming audio stream passes from the source directly through to the volume control without any analog-to-digital conversion.
- 7-CHANNEL - Use this listening mode when the 8-channel direct inputs are in use and the input source device does NOT have its own internal bass management system. In this mode, the analog source is converted to digital so that it uses the same bass management options for the direct input as used for all other inputs.

DTS & DOLBY STATUS DISPLAYS

The upper right-hand corner of the front panel 2-line display may indicate status information regarding the incoming source. If a Dolby or DTS source is input and the MV-5 is configured to a surround system, the following status indicators may be displayed to indicate the state of the incoming source:

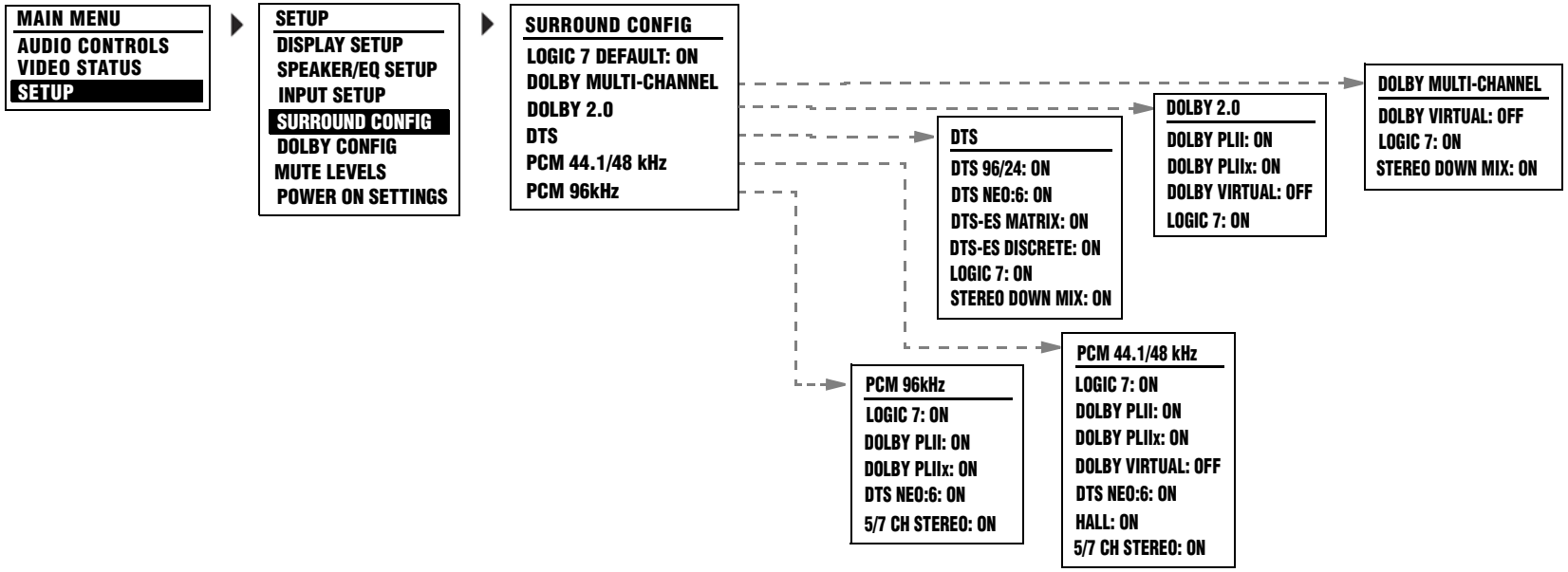
- ES-ON: Indicates when an encoded DTS signal, discrete or matrix, is input to the surround back channels. “ON” indicates that the condition exists, or is active; “OF” indicates that the condition does not exist, or is off.
- DS-ON: Indicates when the input signal is encoded with Dolby Surround under the Dolby 2.0 standard. “ON” indicates that the condition exists, or is active; “OF” indicates that the condition does not exist, or is off.
- EX-ON: Indicates when Dolby Surround EX is input with the digital stream, if a surround channel (3/2 or 2/2) exists. “ON” indicates that the condition exists, or is active; “OF” indicates that the condition does not exist, or is off.

SURROUND CONFIGURATION

Selecting the SETUP menu SURROUND CONFIG option opens the Surround Configuration menu, which is used to customize the list of available listening modes that can be applied to incoming signals. Each Mode Family has a subset of available listening modes that can be turned off. If the listening mode is set to OFF, then the applicable listening modes in that family are not available for selection from the mode buttons. If the listening mode is ON, then the applicable listening modes in that family are available for selection.

These are not input-specific settings; if a Mode Family option is turned off, it is removed from the list of available listening modes for ALL inputs, and regardless of the incoming data stream. Some modes, such as Dolby Digital, DTS, and the Stereo modes in the PCM menus, cannot be excluded from the mode selections.

Note: The Logic 7 Default parameter is the one exception in the Surround Configuration menu - this parameter has different functionality, as described on the following page.



LOGIC 7 DEFAULT OFF, ON

SETUP ▸ **SURROUND CONFIG** ▸ **LOGIC 7 DEFAULT**

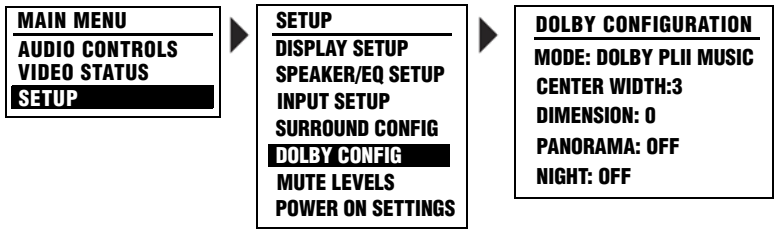
Allows the user to choose Logic 7 as the default surround mode for all incoming audio signals. If this parameter is OFF, then the MV-5 selects the native format of the incoming signal as the default listening mode. If set to ON, then all incoming audio signals are defaulted to the Logic 7 listening modes.

Setting the Logic 7 Default to ON does not prevent other listening modes from being available through the Mode buttons. Selecting the DOLBY, DTS, DSP, or STER soft button on the remote control switches the Mode menu selections to any listening modes available for those families.

Note: The Logic 7 Default is the only menu item in the Surround Config menu that has different functionality.

DOLBY CONFIGURATION

Selecting the SETUP menu DOLBY CONFIG option opens the Dolby Configuration menu, which is used to configure the Dolby surround modes for optimum performance.



Note: The Dolby Configuration only applies to the Dolby PLII Music and Dolby PLIIx Music listening modes. The Dolby Pro Logic IIx mode requires a 7.1-channel configured system.

MODE

PLII, PLIIx

SETUP ▸ DOLBY CONFIG ▸ MODE

Selects the MODE parameter, which chooses between the Dolby PLII Music and Dolby PLIIx Music listening modes.

CENTER WIDTH

0 TO 7

SETUP ▸ DOLBY CONFIG ▸ CENTER WIDTH

Adjusts the balance of the vocal information in the front soundstage between the center and front left/right speakers. The higher settings spread the center channel sound more broadly into the left and right channels while a lower number produces a tigher center channel presentation. The Center Width range is 0 to 7 in single increments.

DIMENSION

R-1, R-2, R-3, O, F-1, F-2, F-3

SETUP ▸ DOLBY CONFIG ▸ DIMENSION

Alters the perceived depth of the surround field by creating a shallower presentation (F-1 to F-3) that appears to move the center of the sound field towards the front of the room or a deeper presentation (R-1 to R-3) that appears to move the sound field towards the rear of the room.

PANORAMA

OFF, ON

SETUP ▸ DOLBY CONFIG ▸ PANORAMA

Appears to increase the sound presentation along the sides of the room by extending the stereo image to include surround channel signals, which enhances the sense of surround sound by creating a "wraparound" effect with side wall imaging.

NIGHT

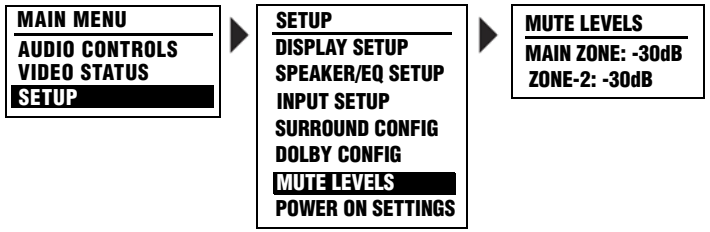
OFF, MID, MAX

SETUP ▸ DOLBY CONFIG ▸ NIGHT

Adjusts the audio settings for Night mode. The Night mode uses special processing to preserve the dynamic range and full intelligibility of a movie soundtrack while reducing the peak level. This prevents abruptly loud transitions from disturbing others, without reducing the sonic impact of a digital source. Use the MID setting for mild compression and the MAX setting for more severe compression.

MUTE LEVELS

Selecting the SETUP menu MUTE LEVELS option opens the Mute Levels menu, which is used to adjust the mute levels of both the Main Zone and Zone 2 audio outputs.



MAIN ZONE

FULL, -10, -20, -30, -40dB

SETUP ▸ MUTE LEVELS ▸ MAIN ZONE

Allows you to choose different levels of attenuation for Main Zone audio muting. The FULL setting completely mutes the box. The other available settings perform incremental muting.

ZONE 2

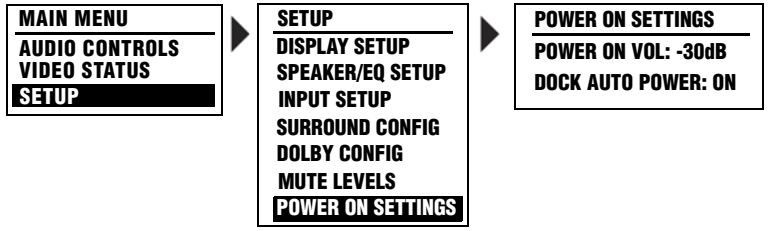
FULL, -10, -20, -30, -40dB

SETUP ▸ MUTE LEVELS ▸ ZONE-2

Allows you to choose different levels of attenuation for Zone 2 audio muting. The FULL setting completely mutes the box. The other available settings perform incremental muting.

POWER ON SETTINGS

Selecting the SETUP menu POWER ON SETTINGS option opens the Power On Settings menu, which provides user preferences to the Power On Volume and Dock Auto Power settings.



POWER ON VOL

LAST, -80dB TO -10dB

SETUP ▸ POWER ON SETTINGS ▸ POWER ON VOL

Identifies the starting volume level when the MV-5 is powered on. The Last parameter sets the volume to the same volume that existed when the unit was put into Standby or powered off from the rear panel switch. The Power On Volume can be set from –80dB to –10dB in 1dB increments.

DOCK AUTO POWER

OFF, ON

SETUP ▸ POWER ON SETTINGS ▸ DOCK AUTO POWER

If the Dock Auto Power parameter is set to ON, then if an iPod is playing when plugged into the Dock, it will take the MV-5 out of Standby mode and select the Dock input. If the Dock Auto Power parameter is set to OFF, then the MV-5 does not respond when a running iPod is plugged into the Dock. For more information about the Dock input & controls, refer to *Section 5: PC & Dock Controls*.

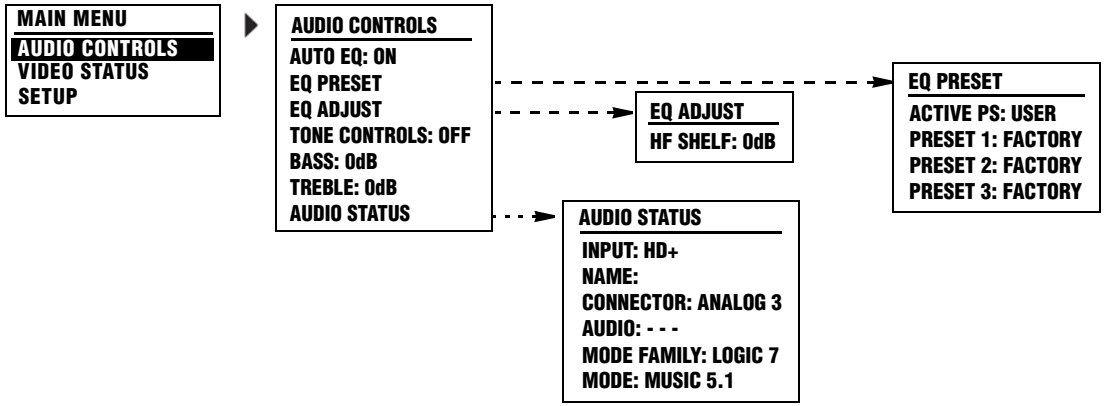
Note: If the Main Zone is OFF when the MV-5 is put into Standby, when the iPod is plugged into the Dock, the MV-5 will power up but the Main Zone will remain OFF. The user will need to manually select the DOCK input at that point.

4

Audio Controls & Video Status

AUDIO CONTROLS

Selecting AUDIO CONTROLS opens the AUDIO CONTROLS menu. All of the Audio Controls interact with the AUTOCAL settings, except for the Audio Status parameter.



AUTO EQ

OFF, ON

AUDIO CONTROLS ▶ AUTO EQ: ON

If the AUTOCAL process is performed and the settings are saved, then the Auto EQ parameter identifies if the saved AUTOCAL settings are being actively applied to the system. When the Auto EQ parameter is OFF, the AUTOCAL settings are not applied.

Note: When the AUTO EQ parameter is set to OFF, the EQ ADJUST parameter is also not applied.

EQ PRESET

PRESET 1, PRESET 2, PRESET 3, USER

AUDIO CONTROLS ▶ EQ PRESET

Identifies the three preset locations where the AUTOCAL settings are saved, and displays the state of each preset (saved or unused). The Active PS, or Active Preset, parameter identifies the preset location that is currently active if the AUTO EQ parameter is set to ON for any input. The Active Preset can be set to any of the three saved preset locations.

The Preset locations cannot be selected and are present only to identify the current state of each location. If the location indicates "SET" then the preset location has AUTOCAL settings saved to it. If the location indicates "FACTORY", then the preset location has not been used and remains at the default factory settings.

Note: If all three Preset locations indicate "FACTORY", then the AUTOCAL procedure has not yet been done, or at the least, the settings have not been saved.

For more information on the AUTOCAL process, refer to *Section 3: Setup*.

To load a different saved EQ Preset into the system:

1. Decide which saved Preset location you want to load.
2. Select ACTIVE PS from the EQ PRESET menu.
3. Use the ▲ or ▼ cursors to select the Preset location you want to load.
4. Press the ◀ cursor to save the selection.

When the Active PS is set to "USER", this indicates a factory default condition.

Note: Once a Preset location has been selected and saved, the factory default "USER" option is no longer available for selection. Before a preset location is saved, toggling the EQ on & off results in a noticeable change in the subwoofer output level. This is normal behavior.

HF SHELF +8dB to -8dB

AUDIO CONTROLS ▶ **EQ ADJUST** ▶ **HF SHELF**

Located in the EQ ADJUST menu, the HF SHELF control acts as a high-frequency shelf filter, which boosts or cuts frequencies above 1kHz. The HF SHELF parameter can be adjusted from +8dB to -8dB in 1dB increments.

Note: The HF SHELF parameter does not adjust the timbre of the rear speakers in the 7-CHANNEL listening mode.

TONE CONTROLS OFF, ON

AUDIO CONTROLS ▶ **TONE CONTROLS: OFF**

Activates or deactivates the Bass and Treble Tone Controls. Bass and Treble controls are only active when the Tone Control parameter is set to ON.

Note: When the Tone Controls are OFF, the incoming audio datastream is stereo analog, and the Mode Family is set to STEREO, four different listening modes are available: 7CH STEREO, 5CH STEREO, 2CH STEREO, and 2CH BYPASS. Refer to the "Listening Modes" section of Section 3: Setup *for more information.*

BASS +6dB to -6dB

AUDIO CONTROLS ▶ **BASS**

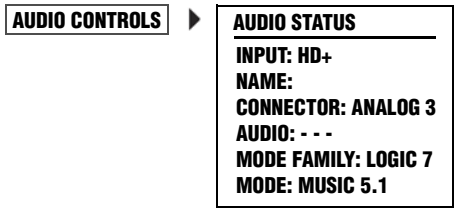
Controls the amount of low-frequency boost or cut applied to all of the audio outputs. Bass is an independent setting for each input, NOT a global setting. The BASS parameter can be adjusted from +6dB to -6dB in 1dB increments.

TREBLE +6dB to -6dB

AUDIO CONTROLS ▶ **TREBLE**

Controls the amount of high-frequency boost or cut applied to all of the audio outputs except for the subwoofers. Treble is an independent setting for each input, NOT a global setting. The TREBLE parameter can be adjusted from +6dB to -6dB in 1dB increments.

AUDIO STATUS

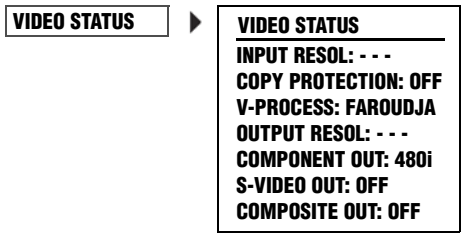


The AUDIO STATUS menu is an information-only menu identifying the current audio status of the MV-5.

- INPUT identifies the currently selected input.
- NAME identifies the customer-chosen name, if any, for the currently selected input.
- CONNECTOR identifies the current audio connector in use.
- AUDIO identifies what type of audio signal is in use.
- MODE FAMILY identifies the currently selected mode family.
- MODE identifies the currently selected listening mode.

Note: The Audio line is dashed out if the audio input is analog.

VIDEO STATUS



The VIDEO STATUS menu is an information-only menu identifying the current video status of the MV-5.

- INPUT RESOL identifies the current input resolution setting.
- COPY PROTECTION identifies the current status of copy protection.
- V-PROCESS identifies the current setting of the video processor.
- OUTPUT RESOL identifies the current output resolution setting of the HDMI and Component outputs.

  Note: The HDMI and component output resolution values are always the same, unless copy protection is active. In some cases, copy protected inputs can restrict the component output format options.
- COMPONENT OUT identifies the currently selected component output status as described below.
- S-VIDEO OUT identifies the currently selected S-video output status as described below.
- COMPOSITE OUT identifies the currently selected composite output status as described below.

The Component, S-Video, and Composite Out parameters all reflect the interaction between the input type (which is not listed in the Video Status menu), the copy protection status, the video process parameter setting, and the current output resolution.

Therefore...

- COMPONENT OUT displays “OFF” if the component output is disabled for the current video input and processing configuration. Otherwise, it displays “Enabled”.
- S-VIDEO OUT displays “OFF’ if the S-video output is disabled for the current video input and processing configuration. Otherwise, it displays the current output resolution.
- COMPOSITE OUT displays “OFF’ if the composite output is disabled for the current video input and processing configuration. Otherwise, it displays the current output resolution.

5

PC & Dock Controls

PC & DOCK OVERVIEW

Unlike the other ten inputs of the MV-5 Processor, the PC and Dock inputs are NOT interchangeable. These two inputs have specific audio-only functionality that is exclusive to these individual inputs.

The PC input is tied to the USB jack on the rear panel and is only for use with media software on a computer. The Dock input is tied to the DOCK connector on the rear panel and is only for use with iPod players that are connected to the DOCK input via the optional D-1 Dock accessory. The Dock controls and features are discussed in later sections of this chapter.

While both of these inputs have devoted touch screen menu controls using the remote control, there are NO front panel controls for use with the DOCK or PC inputs.

Note: The audio input for the PC and Dock inputs is not user-adjustable. However, the video input for these two inputs can be set to any of the available rear panel video inputs and are as fully customizable as any of the other ten inputs.

In addition to these Main Zone differences, the PC and DOCK inputs also behave differently in Zone 2 operation. Unlike the other inputs, the PC and DOCK inputs in Zone 2 operate independently of both each other and the other ten inputs, regardless of what is playing in the Main Zone. Any combination of these two inputs may be selected in the Main Zone and Zone 2, including the selection of one input playing simultaneously in both Zones. In addition, if one of these inputs is playing in the Main Zone, you can freely choose any other Analog input in Zone 2.

PC CONTROLS

The MV-5 is capable of direct connection to a computer for audio playback. Once connected, playback of audio streams from a computer are possible through your MV-5 Processor, with all the power and performance of your own speakers and the enhanced multi-channel playback made possible through the use of Logic 7, Dolby Pro Logic II/IIx, or DTS Neo:6 processing.

SETTING UP TO PLAY

The MV-5 Processor connects to a PC-compatible computer through the USB jack on the rear panel. Connect one of the available USB jacks on your computer to the USB jack on the MV-5 rear panel using a cable with one standard USB connector and one USB "Mini B" connector. Only the PC input can be used with computer media players.

Note: The PC Input setup displays Digital Audio as USB, Analog Audio as NONE, and the Dig/Anlg Auto parameter is dashed out. These three parameters cannot be changed for the PC Input.

The MV-5 may be used with PC-compatible computers running Microsoft Windows 2000® with Service Pack 4 or higher installed, Vista®, Windows XP®, or Windows XP Media Center Edition with Service Pack 1 or higher installed. In addition, you will need to have a media player installed on the computer. The MV-5 has been tested for operation with Windows Media Player® Version 8.0 and above, but it is also compatible with many other popular players such as iTunes®, WinAmp®, and Real Player®. Always verify that you have the latest version of the player installed to ensure the best compatibility and performance.

When the connection between a computer and the MV-5 is made for the first time, or if the USB connection is plugged into a different USB jack on a computer or hub that has not been previously connected to the MV-5, you will see a series of pop-up messages from Windows to indicate that the computer is configuring itself for the new device. Since the MV-5 provides a number of different functions, you may see the "Found New Hardware" message up to four times, one each for "A/V Receiver," "Compatible Device," "Audio Receiver", and "Human Interface Device."

CAUTION!

Do NOT power cycle the computer while connected to the MV-5 with the PC input selected. The computer MUST be on and connected to the MV-5 rear panel USB jack BEFORE selecting the PC input on the MV-5. Selecting the PC input first may cause a burst of loud noise that may be damaging to the speakers or the listener's hearing. Harman Specialty Group assumes no responsibility for damage caused in this manner.

PLAYING PC MEDIA

Before selecting the PC input on the MV-5, **make certain that the media player has been opened on the computer and is the "top" or active screen.** The remote control PC input commands will not operate the media player if it is minimized or "behind" other programs.

You are now ready to begin playing music. The MV-5 remote control or the computer media player program can be used to control the play, pause, skip forward, and skip back features of the media player.

Using the MV-5 remote control:

- Page 4 of the "Lex" touch screen menu provides media player controls for use with the PC input.
- The **PC ▸ ||** option mimics the Pause/Play control. If the playlist is not active, pressing this option starts the playlist. If the playlist is already playing, then pressing this option pauses it.
- The **PC-** option mimics the Skip Back control. Pressing this option causes the media player to skip back a track in the playlist.
- The **PC+** option mimics the Skip Forward control. Pressing this option causes the media player to skip forward a track in the playlist.

Once playback is started, the audio from a USB source is treated the same as any other 2-channel audio source, and you may apply any of the appropriate surround processing modes.

Note: Whenever the USB jack is connected to the computer, the RV-5 will be selected as the sound card for the computer, **even while the MV-5 is in Standby**.

DOCK FUNCTIONALITY

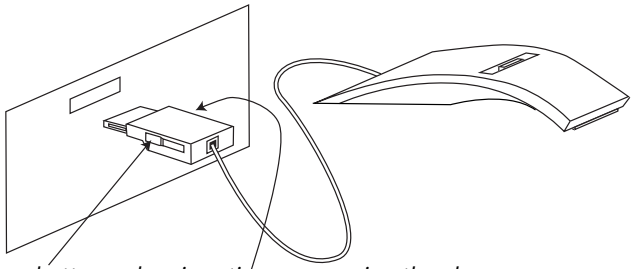
The optional D-1 iPod Docking Station allows you to enter a new world of listening enjoyment made possible by combining the storage capacity and playback flexibility of an iPod® (not included) with the sonic power of your MV-5 Processor. Operation is easy, you can use your MV-5 remote control to access and control your iPod selections. Just one simple connection and you're ready to go!

Note: This functionality is ONLY available if you have purchased the optional D-1 iPod Docking Station. Refer to Section 1: Getting Started *for ordering details.*

CONNECTING THE DOCK TO THE MV-5

Before connecting the Dock, turn the MV-5 off using either the main power switch or the Standby button.

With the MV-5 off, press the button on each side of the connector at the end of the Dock cable and insert this plug into the DOCK connector on the rear panel of the MV-5. The connector is keyed to only connect in one way. If you inadvertently try to plug the connector in the wrong way, do not force it. Simply invert the connector and try again.



Press buttons when inserting or removing the plug.

Once the DOCK connector is attached to the D-1 Dock accessory, select the DOCK input. The MV-5 front panel 2-line front panel display indicates that the input is "UNPLUGGED...". The status remains as "UNPLUGGED" until an iPod is actually docked.

Note: The DOCK Input setup displays Digital Audio as NONE, Analog Audio as DOCK (or "UNPLUGGED" if there is no iPod connected to the MV-5), and the Dig/Anlg Auto parameter is dashed out. These three parameters cannot be changed for the DOCK Input.

When the iPod is initially plugged into the MV-5, the iPod goes to the top of its music menu. When the iPod is removed, the iPod menu goes to the root menu.

If the MV-5 is in Standby mode with the DOCK AUTO POWER parameter set to ON and the iPod currently playing a track when it is plugged into the Dock, the track will continue to play and the 2-line front panel display will show the current track information.

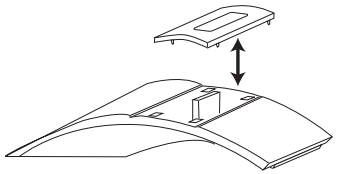
SELECTING THE CORRECT iPOD INSERT

Each iPod model is a slightly different size, making it necessary to use an insert that matches your specific iPod to the Dock. The Dock is shipped with the insert for the color screen and photo models already installed; if you own one of those models, no further changes are necessary.

If you own a different iPod, first select the insert that matches your model. The model identification is printed on the back of each of the four extra inserts supplied with the Dock.

Note: The iPod Shuffle is not supported by the optional D-1 iPod Docking Station.

To remove the factory installed insert, hold the Dock with one hand as you grab the edges of the insert in the Dock with your other hand, then pull straight up. Use the following as a guide to determine which insert is correct for your iPod model:



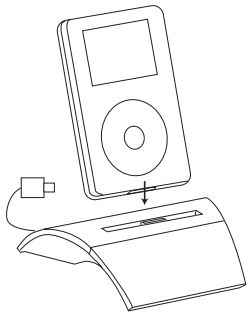
- For any iPod with a color screen, including all iPod photo models, use the insert with "COLOR/PHOTO" on the back. This insert is already installed in the Dock at the factory.
- For 20GB or 30GB iPod photo models *only*, remove the insert marked "COLOR/PHOTO" and attach the two included foam pads to the rear inside wall in the well of the insert before replacing it.
- For iPods with a black & white screen and a 10GB, 15GB, or 20GB hard drive, use the insert with "10GB/15GB" on the back.
- For iPods with a black & white screen and a 30GB or 40GB hard drive, use the insert with "30GB/40GB" on the back.
- Use the insert with "mini" on the back for *all* iPod mini models.
- Use the insert with "Universal" on the back for iPod models that come with a special insert.

Once you have selected the correct insert, place it over the well in the center of the Dock and gently press it down so that it snaps into place.

Note: Do not place an iPod in the Dock unless an insert is installed; otherwise the iPod will not connect properly and damage may occur to the Dock and/or your iPod that is not covered by the warranty for either product.

DOCKING THE iPOD

After placing the appropriate insert in the center well of the Dock and connecting the Dock to your receiver, dock your iPod by placing it into the insert, gently pressing it down until the connectors mate between the iPod and the Dock.



Note: If you normally keep your iPod in a protective case, or "skin", you will need to remove it before docking your iPod.

When the iPod is plugged into the Dock, the iPod navigation controls are no longer accessible and the iPod screen will read "Connected and ready to be unplugged".

DOCK 2-LINE DISPLAY CHARACTERISTICS

When the DOCK input is selected, the 2-line front panel display changes so that the left side of the display reflects the current iPod information. Initially, the 2-line display on the MV-5 displays "Menu" on the left side of the top line. "Playlists" and the number of playlists available are displayed on the left side of the bottom line. The ANLG signal type is identified on the top right side and the current volume setting of the MV-5 is identified on the bottom right side of the display, as shown:

MENU	ANLG
PLAYLISTS 11	-39dB

Note: The name of the iPod is always included as the first playlist.

As the menus on the iPod are scrolled through, the top left side indicates the menu item selected and the bottom left side indicates the menu items as they are scrolled through, as shown:

PLAYLIST 4	ANLG
DINNER MIX	-39dB

Note: The allotted space for iPod navigation descriptions is 14 characters. If a menu item is longer that this limitation, the displayed name is simply cut off at the 14-character point.

When a song is playing, the bottom of the 2-line display identifies the track counter, the time left on the song, and whether the song is in PLAY or PAUSE mode. The top left side of the display continuously scrolls through the song title, artist, and album title, as shown:

Title: Everybod...	ANLG
0:57 ▸ -2:08	-32dB

CONTROLLING THE iPOD WITH THE MV-5

To control the iPod once it is docked and connected to the MV-5, use the remote control. Page 3 of the "LEX" menu layer of the remote control touch screen is devoted to controlling the iPod.

Note: The following functionality is available only if there is a valid device connected to the DOCK connector on the rear panel and the DOCK input has been selected.

Using the MV-5 remote control:

- Page 3 of the "Lex" touch screen menu provides iPod controls for use with the DOCK input.
- The IPOD- option mimics the Skip Back control. Pressing this option causes the iPod to skip back a track in the playlist.
- The IPOD+ option mimics the Skip Forward control. Pressing this option causes the iPod to skip forward a track in the playlist.
- The CLIK ◂ option mimics a counter-clockwise click on the iPod.
- The CLIK ▸ option mimics a clockwise click on the iPod.
- The MENU option mimics the MENU button on the iPod. The Menu button backs out of the menu structure, one level at a time, each time it is pressed.
- The SEL option mimics the SELECT button on the iPod. The SELECT button acts as a play button at the song level. The select button drills deeper into the menu structure, one level a time, each time it's pressed.
- The ▸ || options mimic the Pause/Play control of the iPod. If the playlist is not active, pressing either of these options starts the playlist. If the playlist is already playing, then pressing this option pauses it.

CHARGING THE iPOD

You may leave your iPod in the Dock even when you are not using it as a playback source. Whenever the iPod is docked and the MV-5 is turned on, the Dock will charge the battery in the iPod.

REMOVING THE iPOD

To remove the iPod from the Dock, grasp the sides of the iPod and pull it straight up, away from the Dock.

ZONE 2 iPOD CONTROLS

The MV-5 Processor allows the DOCK input, and attached iPod, to be accessed and output to either the Main Zone or the Zone 2 location. However, for the DOCK inputs, the OSD and front panel display reflect ONLY the Main Zone activity. Therefore, if the iPod is accessed in Zone 2, there is no visible indication on the MV-5 that a change has been made.

To control the iPod in Zone 2 via the remote control:

1. From the "Zone 2" menu layer, select the DOCK input (number pad key 8).
2. Page 1 of the "Zone 2" menu layer touch screen provides the iPod controls.

6

Troubleshooting & Maintenance

TROUBLESHOOTING

The MV-5 does not power on.

1. Make sure the rear panel power switch is set to the ON position.
2. Attempt to power on the MV-5 with the front panel Standby button and remote control ON button.
3. Examine the power cord to ensure a good connection between the rear panel AC input connector and the wall outlet.
4. Check the electrical circuit and breaker.

The remote control does not work.

1. Make sure that the remote control touch screen is in the "LEX" or "Zone 2" menu layers. The remote control is a universal control designed to operate all of the home theater equipment in your system. In order to control the MV-5, the remote control must be in the "LEX" or "Zone 2" menu layers.
2. Eliminate obstructions between the remote control and the front panel IR receiver. When the rear panel IR IN connector is not in use, the remote control must be in line of sight with the front panel IR receiver for proper operation. The remote control might also become unreliable if strong sunlight or fluorescent light is shining on the MV-5's IR receiver.
3. Make sure the remote control batteries are correctly inserted with the proper polarity.
4. Replace the remote control batteries. When the batteries are low on power, the remote control enters a low-voltage condition that prevents it from operating the MV-5.
5. If using the optional RF-1 Receiver, ensure that it is properly connected to the MV-5 rear panel.

The MV-5 is powered on, but there is no audio.

1. Make sure that the source device is powered on, playing audio, and set to the right output connector.
2. Make sure the volume level is audible. Volume level can be adjusted with the front panel volume knob or the remote control VOL ▲ and ▼ buttons.
3. Make sure the audio has not been muted. The message "MUTE ON" is displayed on the on-screen and front panel displays when audio has been muted in the Main Zone. In addition, the MUTE button on the front panel lights red when the Main Zone mute is active and green when the Zone 2 mute is active. If both Zones are muted, the Mute button lights amber. To deactivate mute, press the MUTE button or adjust the volume level.
4. Verify that all rear panel input and output connections are correct.
5. Check the INPUT SETUP menu DIG AUDIO and ANLG AUDIO parameters to ensure the appropriate audio connector is assigned to the selected input.
6. Verify that the incoming audio signal is compatible with the input chosen.

   Note: The rear panel input connectors marked S/PDIF INPUTS (RCA & TOSLINK connectors) are not compatible with MP3 sources.

The Subwoofer(s) distorts frequently.

The likely cause for the subwoofer(s) to distort is either an incorrectly set output level or the subwoofer high-pass filter is set too low. Verify that the SUB/LFE LPF setting (subwoofer cross-over point) is set correctly. If correct, try setting the SUB HPF setting to a higher value to resolve the issue. Refer to *Section 3: Setup* for more information.

A humming sound is present in the audio.

1. If a cable TV connection is present, disconnect the cable from the wall outlet. If this eliminates the humming sound, a ground loop isolation device is required. Contact your dealer or cable provider for assistance.
2. Disconnect components one at a time to isolate the problem. Once the problem is identified, make sure the associated component is properly grounded and connected to the same electrical circuit as the MV-5 Processor.

RF interference is present in the audio or video.

1. Make sure the MV-5 is not positioned too close to RF-emitting devices.
2. Move such items one at a time to isolate which device is causing the problem.
3. Replace unshielded cables with shielded cables wherever possible.

Audio sounds distorted when using analog audio inputs.

The likely cause for distorted audio while using the analog audio inputs is that the input voltage is too high. The MV-5 analog inputs have a maximum rating of 2 Vrms. Any input voltages higher than this limit will exhibit audible distortion.

To correct the problem, reduce the analog audio output from the connected device using the volume or level control. If neither is available, an intermediate device may be required. Contact your Lexicon dealer for assistance.

In the SEMI AUTOCAL Test, the Far Field Test keeps failing.

1. Ensure that the microphone is placed in your preferred seating location.
2. Ensure that the volume is set to -20dB.
3. In the Speakers Menu, ensure that none of the speakers connected to the system have a cross-over selection of NONE.

   During the Far Field Test, test tones are sent to ALL speaker locations, regardless of the settings identified in the Speakers menu. Therefore, every speaker that is plugged in MUST have a cross-over setting other than NONE for the Far Field test to be successul. If a cross-over is set to NONE but the speaker is plugged in, the test will fail because it will "see" a speaker that is identified as having no cross-over point.
4. Refer to the "AUTOCAL Error Messages" section found later in this chapter for more information about specific error messages related to the AUTOCAL process.

The volume won't go to the +10 dB maximum level.

The speaker output level settings may affect the maximum volume level of the MV-5 Processor. The maximum volume level is +10 dB minus the maximum output level setting of any speaker. Thus, if your front L/R output levels are set to +3 dB, the maxium allowable volume level is +10 dB minus 3 dB, or +7 dB.

The picture on the video monitor is all one color.

This is a synchonization problem when using HDMI. When the source device and video monitor do not sync correctly, the color spacing may not load correctly. When the monitor color is all red, or all green, it means that only half of the color spacing data was loaded into the video monitor.

To correct the problem, simply enter the OSD menu and then exit out again. This will resync the video and should clear the error.

The MV-5 is powered on, but there is no video.

1. Examine the video cables – particularly the S-Video cables – to ensure a good connection to the associated component.
2. Check the INPUT SETUP menu VIDEO IN parameter to ensure the appropriate video connector is assigned to the selected input.
3. Set the V-PROCESS parameter to BYPASS. This setting doesn't apply any video processing and outputs the signal in the same resolution and format as the incoming signal.
4. Refer to the "Video Error Messages" section found later in this chapter for more information about specific video-related error messages.
5. Verify that the selected output is not analog with a HDCP (High-Bandwidth Digital Content Protection) input source. Source material that carries HDCP encoding is only available through the HDMI output. No video is output on the analog output connectors.
6. Verify that the input type selected on the video monitor matches the selected output on the MV-5.

Video is shifted to the left.

When the MV-5 has both component and HDMI cables connected to a video monitor with the Faroudja processing active, the Faroudja processing may cause the video to shift to the left when the component output is selected, particularly at higher resolution settings.

To correct the issue, change the Display CONNECTION parameter from HDMI/DVI to ANALOG, or unplug the HDMI cable.

To change the CONNECTION parameter:

1. Enter the OSD menu by pressing MENU on the remote control.
2. Use the ▲ or ▼ cursors to highlight SETUP and then press the ▶ cursor, or press the SELECT button, to select the menu option.
3. Using the cursors, highlight and select DISPLAY SETUP.
4. Then select CONNECTION. The parameter selection starts to flash.
5. Use the ▲ or ▼ cursors to select ANALOG and then press the ◀ cursor to save the selection.
6. Press EXIT to close the OSD menu.

The MV-5 is exhibiting erratic behavior.

1. Change to a different input, then return to the original input. This may clear the discrepency.
2. Put the MV-5 into Standby mode. Wait 10 seconds. Then take the MV-5 out of Standby mode.
3. Set the rear panel power switch of the MV-5 to the OFF position. Wait 10 seconds. Then set the rear panel power switch to the ON position.
4. With the MV-5's rear panel power switch set to OFF, power-cycle all other devices that are connected to the MV-5, such as DVD & CD players, projectors, and monitors. When finished, restore power to the MV-5 by setting the rear panel power switch to the ON position and then taking the MV-5 out of Standby mode.
5. If the steps above do not resolve the behavior, document all user-defined settings on the Installation Worksheet that begins on page D-2. Then, follow the instructions found later in this chapter to restore factory default settings.

VIDEO IN is set to NONE, but the monitor has a video error, or is showing a blue screen.

When the VIDEO IN parameter is set to NONE, the MV-5 outputs a blue screen at 480i resolution. This blue screen cannot be disabled. If the monitor does not support 480i resolution, the monitor may display an error message.

Note: This condition can also exist when the VIDEO IN parameter has been setup, but there is no active incoming signal.

The 2-line OSD display does not appear on the video monitor.

- Verify that the 2-line OSD parameter under the Setup -> Display Setup -> On-Screen Display menu is not set to OFF.
- Verify the video input source. The 2-line OSD is supported only at 480i and 576i resolutions when the incoming video source is digital.

While using HDMI connections, the video monitor is behaving oddly.

Connecting together all the components of your home theater system with HDMI depends upon every piece of equipment functioning in synchronization. If the timing of any one piece is out of sync, then odd results can occur. For example, an out-of-sync source might cause incorrect colors to appear on the screen, or to shift all of the video to the left or towards the top of the screen. If the video monitor sync is off, it might load the color spacing incorrectly so that the screen appears to be all one color, instead of displaying normal color. In short, an out-of-sync signal can cause a number of very odd results.

To correct the problem, the system needs to resync, which should clear the error. Some out-of-sync issues are easier to clear than others. Typically, power cycling the MV-5 will clear it, but some sync issues don't need a power cycle to re-sync correctly. We suggest that you try the following:

1. Enter the OSD menu and then exit out again. This will resync the video.
2. Put the MV-5 into Standby mode. Wait 10 seconds. Then take the MV-5 out of Standby mode.
3. Power cycle the MV-5 by turning off the rear panel power switch, wait at least 10 seconds, and then turn the rear panel power switch to the ON position.
4. With the MV-5's rear panel power switch set to OFF, power-cycle all other devices that are connected to the MV-5, such as DVD & CD players, projectors, and monitors. When finished, restore power to the MV-5 by setting the rear panel power switch to the ON position and then taking the MV-5 out of Standby mode.

The MV-5 is connected via USB to the PC but the computer is playing with the sound card, not the MV-5.

This condition may exist if the media player was already active when the USB cable was connected between the computer and the MV-5 Processor. With the media player actively playing, it may not "see" the USB connection. Close the media player, check the cable connections, and then launch the media player again. Now it should see the USB connection and switch control to the MV-5.

Using the PC input, the remote control commands on page 4 of the LEX menu and page 2 of the ZONE 2 menu do not work.

1. Make sure that the computer is properly connected to the USB input of the MV-5 Processor.
2. Make sure that PC is selected as the active input on the MV-5 Processor.
3. Make sure that the media player has been opened on the computer and is playing audio.
4. Make sure the media player is the "top" or active screen on the computer. The MV-5 remote control will not operate the media player if it is minimized or "behind" other programs.

CAUTION!

Do NOT power cycle the computer while connected to the MV-5 with the PC input selected. The computer MUST be on and connected to the MV-5 rear panel USB jack BEFORE selecting the PC input on the MV-5. Selecting the PC input first may cause a burst of loud noise that may be damaging to the speakers or the listener's hearing. Harman Specialty Group assumes no responsibility for damage caused in this manner.

The iPod does not play or respond to commands from the MV-5 remote control.

1. Make sure that the Dock is properly connected to the MV-5 Processor.
2. Make sure that the Dock is selected as the active input on the MV-5 Processor.
3. Make sure that the touch screen of the MV-5 remote control is in an iPod control page of the "LEX" or "ZONE 2" menu layer.

The iPod's front panel display and controls do not operate when the iPod is docked and the DOCK input is selected as the MV-5's active input.

This is normal behavior and does not indicate a problem with the iPod, the Dock, or the MV-5 Processor. Use the MV-5 remote control to navigate the iPod functions. Refer to *Section 5: PC & Dock Controls,* for further information.

The iPod does not seem to be functioning correctly.

Verify the video input setting of the Dock input in use. If the video input is set to an HDMI input source, the functionality of the iPod may be hindered.

If all else fails...

1. Document all user-defined settings on the Installation Worksheet that begins on page D-2. Then, refer to the "Restoring Factory Default Settings" section found later in this chapter to reset the MV-5 to the factory settings.

   Note: If you want to save your settings before restoring the factory defaults, you must save them manually. The Installation Worksheet in Appendix D has been provided to assist you.
2. Contact an authorized Lexicon dealer.
3. Contact Lexicon customer service at www.lexicon.com or 781-280-0300.

Note: Visit the knowledgebase at http://www.lexicon.com/kbase for answers to frequently asked questions and additional troubleshooting information.

MV-5 ERROR MESSAGES

MV-5 error messages are displayed on the OSD when certain error conditions exist. This section explains what each of these error messages means and how to fix each problem.

VIDEO ERROR MESSAGES

The following error messages apply specifically to video issues.

VIDEO PROCESS ERROR

This error message will display when the incoming datastream is at a higher resolution than the resolution of the VIDEO OUT parameter. The MV-5 can up-sample a lower resolution to a higher resolution. However it can not down-sample to a lower resolution setting.

To correct the problem, right click to return to the VIDEO OUT Setup parameter and change the VIDEO OUT parameter to AUTO or to a resolution setting that is higher than that of the incoming datastream.

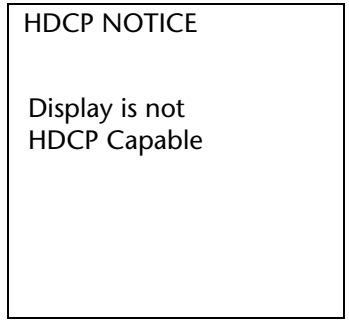
VIDEO FORMAT OUTPUT ERROR

This error message will display when the MV-5 is connected to an HDMI video monitor but the VIDEO OUT parameter is set to a resolution that is not supported by the HDMI video monitor.

To correct the problem, right click to return to the VIDEO OUT Setup parameter and change the VIDEO OUT parameter to AUTO or to a resolution setting that is supported by the video monitor.

HDCP VIDEO ERROR

This error message will display when the video monitor is not HDCP compliant and the incoming datastream requires HDCP compliance. Typically, any HDMI source will require a HDCP compliant video monitor.



To correct the problem, change the incoming datastream to a non-HDCP source or change the video monitor to one that is HDCP compliant.

CHANGE MONITOR MESSAGE

```
CHANGE MONITOR TO
ANALOG IN
```

This error message flashes on the 2-line OSD and front panel display when an analog signal is being sent to an HDMI monitor.

To correct the problem, change the video monitor setting to an analog input source.

AUTOCAL ERROR MESSAGES

The following error messages apply specifically to error conditions that exist during the AUTOCAL or SEMI AUTOCAL procedures, or that pertain to the saved AUTOCAL settings.

MICROPHONE OVERLOAD ERROR

```
MICROPHONE OVERLOAD

Verify microphone
position and
lower volume 6dB.


REPEAT TEST
BACK TO SPK/EQ SETUP
```

This error message will display when the microphone is placed too close to the speaker grille of the speaker under test during the Far Field, Near Field, or Subwoofer Tests.

CAUTION!

If the microphone is too close to the speaker during testing, damage to the speaker or microphone may result.

To correct the problem, move the microphone further away from the speaker under test and repeat the test.

FAR FIELD ERROR

```
FAR FIELD ERROR
Speakers detected:
FRT-L: NO      SIDE-R: NO
CENTER: YES  REAR-R: YES
FRT-R: YES     REAR-L: YES
                SIDE-L: YES
Verify mic position
and spkr connections.
If OK, raise volume 5dB.
REPEAT TEST
BACK TO SPK/EQ SETUP
```

This error message will display when the microphone does not detect sound from a speaker that has a cross-over setting other than "NONE" during the Far Field Test.

To correct the problem, check the microphone position, verify the speaker cables are connected properly, verify that the volume level is correct, and repeat the test.

NEAR FIELD ERROR

```
NEAR FIELD AUTOCAL
ERROR

Verify mic position
and spkr connections.
If OK, raise volume 5dB.


REPEAT TEST
BACK TO SPK/EQ SETUP
```

This error message will display when the Near Field test has failed. Typically, this failure occurs because the microphone is not in the proper position or the volume setting is too low.

To correct the problem, verify that the microphone is within two feet of the speaker under test, verify the speaker cables are connected properly, verify that the volume level is correct, and repeat the test.

SUBWOOFER CAL ERROR

This error message will display when the Subwoofer test has failed. Typically, this failure occurs because the microphone is not in the proper position or the volume setting is too low.

To correct the problem, check the microphone position, verify the subwoofer cables are connected properly, verify that the volume level is correct, and repeat the test.

SUBWOOFER CAL ERROR
Subwoofers detected:

SUBWOOFER 1: NO
SUBWOOFER 2: NO
Verify mic position
and sub connections.
If OK, raise volume 5dB.

REPEAT TEST
BACK TO SPK/EQ SETUP

Note: If you are using a powered subwoofer, verify that it is powered on.

CROSS-OVER CHANGE WARNING

This warning message will display the first time each speaker or subwoofer cross-over is manually changed from the AUTOCAL or SEMI AUTOCAL settings.

Press the ◂ cursor button on the remote control to clear the warning message. When cross-over changes are complete, run the SEMI AUTOCAL procedure.

CAUTION

Changing these
settings will affect
the autocalibration.

Run SEMI AUTOCAL
after changes are made.

RETURN TO MENU

VIDEO RESOLUTIONS TABLE

The MV-5 Processor is designed to allow flexibility in the selection of video output resolutions. However, there are restrictions on what resolutions can be made available due to incoming signal limitations.

If you are not getting the expected resolution options for your video monitor, it is possible that there is an incompatability between the input setup selections and the incoming signal. The table below describes those formats that are possible, given a specific input source and input setup conditions.

Notes:

The following notes refer to the "Note" column in the table.

1. *If the incoming HDMI signal is copy-protected (HDCP), all analog video output is blocked. All the available outputs that may be affected by copy protection are noted in the table by a double asterix (**).*
2. *If the incoming analog video signal is Macrovision protected, a form of copy protection for analog sources, then the component video output must be either 480i or 480p resolution. If the output resolution setting has a value that is higher than 480p resolution, then no analog signal is output.*
3. *If the HDMI is not connected when the incoming signal is a Macrovision protected analog video, then the VIDEO OUT parameter changes automatically to 480p resolution and only component video is output.*
4. *The difference between BYPASS and CONVERSION options is where the video encoder is used (CONVERSION) or not (BYPASS) when the S-video or composite video input is selected. In CONVERSION mode, digital video from the analog input is provided to the video encoder and the S-video and composite video outputs are encoded. In BYPASS mode, the analog input signal goes to the video output directly, with no encoding.*

INPUT		Video Mode	OUTPUT				
Source	**Format**		**HDMI**	**Component**	**S-Video**	**Composite**	**Note**
HDMI	480i	FAROUDJA ON	480p ~ 1080i	480p ~ 1080i**	480i**	480i**	1
	480p		480p ~ 1080i	480p ~ 1080i**	-	-	1
	720p		720p ~ 1080i	720p ~ 1080i**	-	-	1
	1080i		1080i	1080i**	-	-	1
Component Analog	480i		480p ~ 1080i	480p ~ 1080i	480i	480i	2, 3
	480p		480p ~ 1080i	480p ~ 1080i**	-	-	2, 3
	720p		720p ~ 1080i	720p ~ 1080i**	-	-	2, 3
	1080i		1080i	1080i	-	-	2, 3
S-Video, Composite Analog	S-480i		480p ~ 1080i	480p ~ 1080i**	480i (from S)	480i (from S)	2, 3
	C-480i		480p ~ 1080i	480p ~ 1080i**	480i (from C)	480i (from C)	2, 3
	S&C - 480i		720p ~ 1080i	720p ~ 1080i	480i (from S)	480i (from S)	2, 3

INPUT		Video Mode	OUTPUT				
Source	Format		HDMI	Component	S-Video	Composite	Note
HDMI	480i	BYPASS	480i	480i**	480i**	480i**	1
	480p		480p	480p**	-	-	1
	720p		720p	720p**	-	-	1
	1080i		1080i	1080i**	-	-	1
Component Analog	480i		480i	480i	-	-	2, 3
	480p		480p	480p	-	-	2, 3
	720p		720p	720p	-	-	2, 3
	1080i		1080i	1080i	-	-	2, 3
S-Video, Composite Analog	S-480i		480i	480i**	480i (from S)	480i (from S)	2, 3, 4
	C-480i		480i	480i	-	480i (from C)	2, 3, 4
	S&C - 480i		480i	480i	480i (from S)	480i (from S)	2, 3, 4
HDMI	480i	CONVERSION	480i	480i**	480i**	480i**	1
	480p		480p	480p**	-	-	1
	720p		720p	720p**	-	-	1
	1080i		1080i	1080i**	-	-	1
Component Analog	480i		480i	480i	480i**	480i**	2, 3
	480p		480p	480p	-	-	2, 3
	720p		720p	720p	-	-	2, 3
	1080i		1080i	1080i	-	-	2, 3
S-Video, Composite Analog	S-480i		480i	480i	480i (from S)	480i (from S)	2, 3, 4
	C-480i		480i	480i	480i (from C)	480i (from C)	2, 3, 4
	S&C - 480i		480i	480i	480i (from S)	480i (from S)	2, 3, 4

ROUTINE MAINTENANCE

The bulleted items below describe routine maintenance that should be performed on a periodic basis.

- Clean the MV-5 exterior surface with a soft, lint-free cloth. Do not use alcohol, benzene, acetone-based cleaners or strong commercial cleaners. Do not use a cloth made with steel wool or metal polish. If the MV-5 is exposed to a dusty environment, a low-pressure blower can be used to remove dust from its exterior surface.
- Replace the remote control batteries as needed. The remote control requires four AAA batteries. When these batteries are low on power, the remote control enters a low-voltage condition that prevents it from operating the MV-5. Normal operation will resume when new batteries are installed.

  Note: The Remote Control will not lose any custom settings if the batteries run out. All custom settings are stored in non-volatile FLASH memory.

RESTORING FACTORY DEFAULT SETTINGS

It is possible to reset the MV-5 Processor to its factory settings. However, doing so will permanently delete any user-defined or manually-entered settings, including parameters such as speaker setup changes and input names.

Before performing a factory reset, be sure to use the worksheets in Appendix D to record all of the input and setup information. The factory reset WILL delete all custom settings except for the saved EQ Presets.

To restore the factory default settings:

1. Record all parameters and user-defined settings on the Installation Worksheet that begins on page D-2.
2. Put the MV-5 into Standby.
3. Press and hold the MUTE and ST/MON buttons at the same time.

After several seconds, the MV-5 will turn on. The front panel display will state "RESET" and then it will return to the normal display. All parameters and user-defined values will now reflect the factory default settings, with the exception of any saved EQ Presets.

Note: If you want to save your settings before restoring the factory defaults, you must record them manually. The Installation Worksheet in Appendix D has been provided to assist you.

A

Appendix

SPECIFICATIONS

Inputs	
HDMI (Version 1.1)	2 HDMI Type A, 19-pin connectors
Analog Video	• Three component video, RCA connectors • Four S-Video connectors • Four composite video, RCA connectors
Digital Audio	• Four S/PDIF coaxial (RCA) and four S/PDIF optical (Toslink) connectors • Coaxial & optical input connectors conform to IEC-958, S/PDIF standards • One USB mini-B connector
Analog Audio	• One 8-channel input array, RCA connectors • Six Stereo RCA connectors • One microphone, 3.5mm mono mini plug • 1 DOCK 30-pin connector (for optional docking station)
Control	• One RS-232, 9-pin, D-sub connector • One IR receiver, on front panel • One 3.5mm IR IN jack: Input Voltage: 3V - 15V Input Current: 10mA Frequency: 20Hz - 1KHz Accepts either stereo plug (Tip/Ring/Sleeve) or mono plug (Tip/Sleeve)

Outputs	
HDMI (Version 1.1)	One HDMI Type A, 19-pin connector
Analog Video	• One component video, RCA connector • One S-Video connector • One composite video, RCA connector
Analog Audio	• One 8-channel preamplifier plus additional subwoofer, RCA connectors • Zone2 Analog Out: 1 RCA Stereo connector
Control	Two triggers - one power on/off & one programmable 3.5mm mono mini plugs 12VDC, 300mA maximum output draw

HDMI Performance	
HDMI Input	Video: 480i/p, 576i/p, 720p, or 1080i Audio: Dolby Digital, DTS, & PCM (32, 44.1, 48, 88.2, 96kHz, 176.4kHz, and 192kHz)
HDMI Output	Video: 480i/p, 576i/p, 720p, or 1080i Audio: Dolby Digital, DTS, & PCM (32, 44.1, 48, 88.2, 96kHz, 176.4kHz. and 192kHz)

S-Video& Composite Video Performance	
Compatibility	NTSC, PAL, and SECAM
A/D converter	12-bit, 110MHz
D/A converter	12-bit, 74.25MHz
Input Level / Impedance	1V peak-to-peak/75Ω
Output Level / Impedance	1V peak-to-peak/75Ω
Frequency Response	Composite: 10Hz to 8MHz, -3dB S-Video: 10Hz to 8MHz, -3dB Component: 10Hz to 100MHz, -3dB
Signal-to-Noise Ratio	>65dB
Differential Gain	<0.2%
Differential Phase	<0.5 degrees
Gain	+/- 0.15dB

Component Video Performance	
Compatibility	3-channel (Y, Pr, Pb), format-independent
Impedance	75Ω
Insertion Loss	<3dB
Bandwidth	>100MHz

Main Zone & Zone 2 Audio Performance	
A/D conversion	24-bit, 96kHz, dual-bit ΔΣ
D/A conversion	24-bit, 44.1 to 192kHz, multi-bit ΔΣ
Input Sensitivity	200mV for Analog 1 to 6, and 200mV for 8-ch input max input level: 2Vrms
Input Impedance	98.5kΩ for Analog 1 to 6, and 32kΩ for 8-ch input
Frequency Response	10Hz to 40kHz, +0, -2dB
THD + Noise	<0.05%, 20Hz to 20kHz
Dynamic Range	100dB typical, 22 kHz bandwidth
Signal-to-Noise Ratio	100dB typical, 22kHz bandwidth min 100dBA, 103dBA typical
Output Level	200mV typical, 6Vrms maximum
Output Impedance	570Ω

General	
Power Requirements	90-250VAC, 50-60Hz, 50W (Universal line input) IEC detachable power cords (supplied)
Power Consumption	3.76W at Power on, idle 47.2W at rated power output (HDMI in/out mode)
Dimensions	• Height (with feet): 5.0 inches (127 mm) • Height (without feet): 4.3 inches (109 mm) • Width: 16.8 inches (426 mm) • Depth*: 16.7 inches (423 mm)
Weight	• Net Weight: 17.6 lb (8 kg) • Gross Weight: 26.5 lb (12 kg)
Rack-Mounting	Lexicon built rack mount kit not available. Please seek alternative.
Operating Environment	• Operating temperature: 0 to 45 C (32 to 113 F) • Storage temperature: -20 to 60 C (-4 to 140 F) • Relative humidity: 93% max without condensation
Remote Control	Hand-held, back-lit, IR/RF** pre-programmed and learning remote control (requires 4 AAA batteries – included)

**Depth measurement includes knobs, buttons, and terminal connections.*

***For use with optional RF-1 Receiver.*

Specifications are subject to change without notice.

DECLARATION OF CONFORMITY

Application of Council Directive(s):
2004/108/EEC and 73/23/EEC as amended by 93/68/EEC

Standard(s) to Which Conformity is Declared:
EN 55013:2001 + A1:2003
EN 55020:2002 + A1:2003 + A2:2005

EN 61000-3-2:2000 + A2:2005
EN 61000-3-3:1995 + A1:2001

EN 60065:2002

Manufacturer: Harman Specialty Group
3 Oak Park
Bedford, MA 01730-1413 USA

The equipment identified here conforms to the Directive(s) and Standard(s) specified above.

Type of Equipment: Digital Receiver
Model: Lexicon MV-5
Date: June 2007

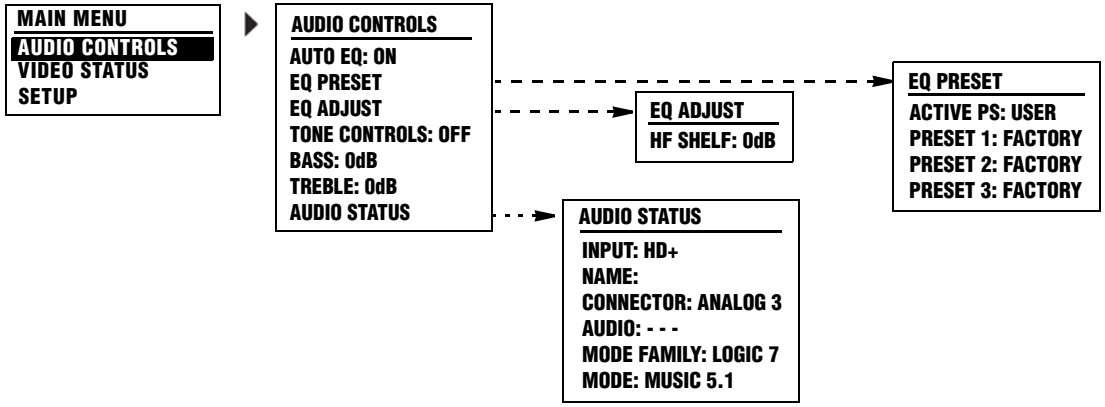
Harman Specialty Group
Vice President of Engineering
3 Oak Park
Bedford, MA 01730-1413 USA
Tel: 781-280-0300
Fax: 781-280-0490

B

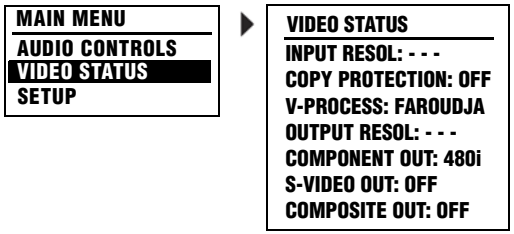
Appendix

Note: All parameter values shown in the following menu trees indicate the default parameter value if the MV-5 is restored to its factory default state.

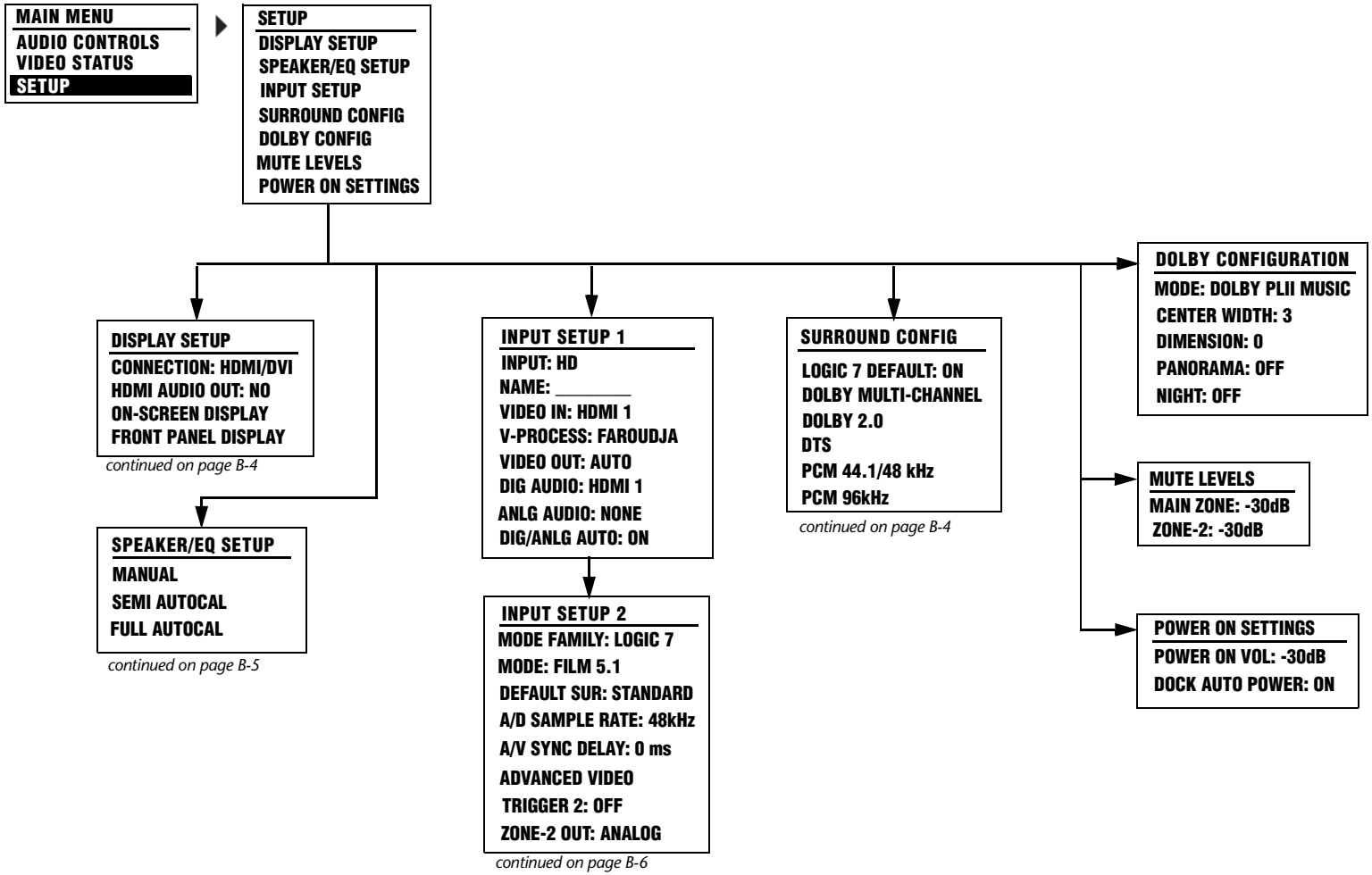
MAIN MENU: AUDIO CONTROLS



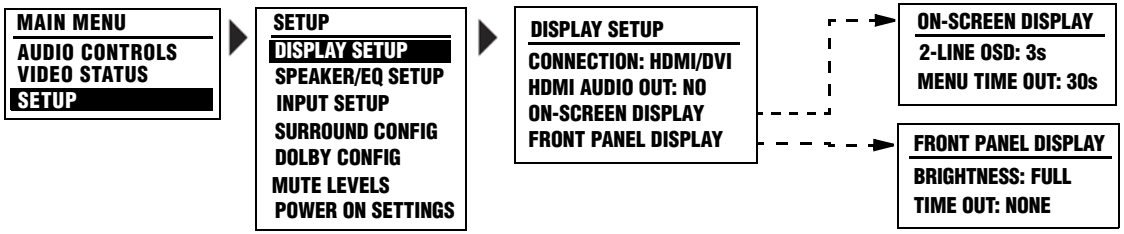
MAIN MENU: VIDEO STATUS



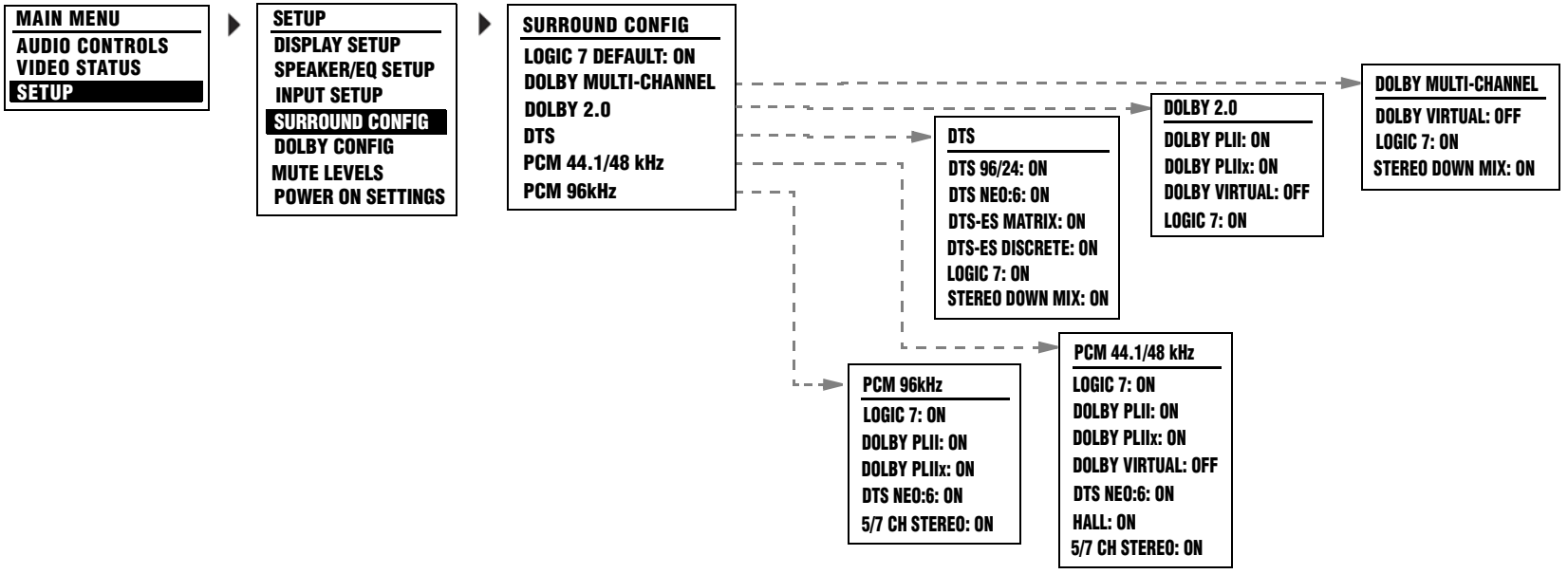
MAIN MENU: SETUP



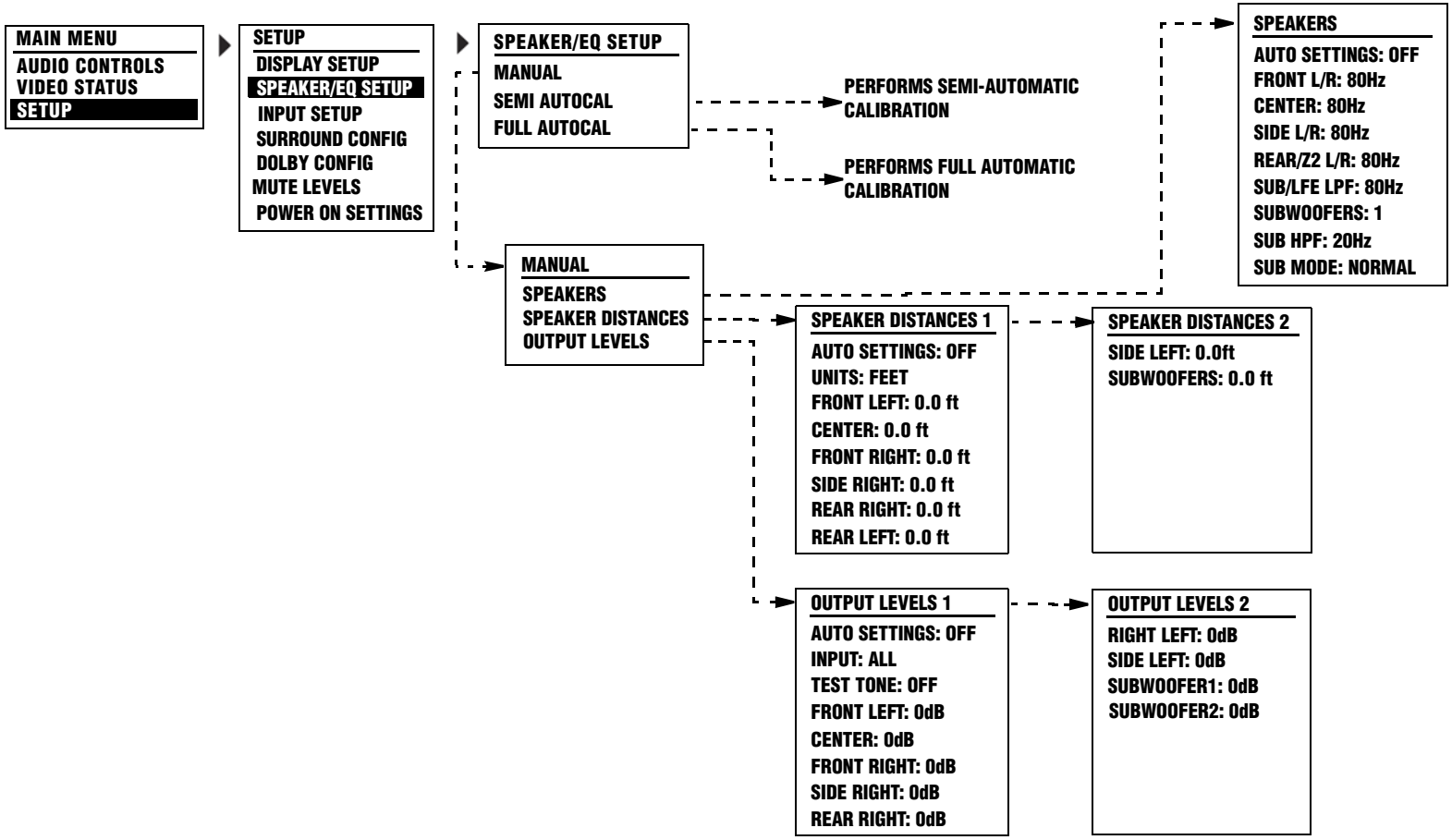
SETUP MENU: DISPLAY SETUP



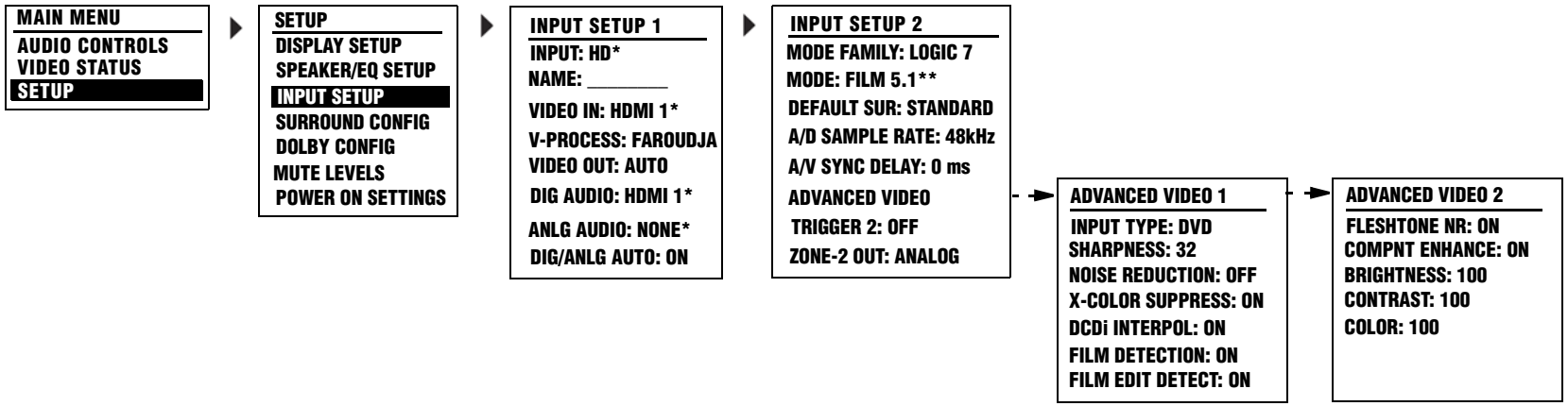
SETUP MENU: SURROUND CONFIG



SETUP MENU: SPEAKER/EQ SETUP



SETUP MENU: INPUT SETUP



**Audio/Video Input Factory Default Settings:*

PARAMETER	HD	DVD	GAME	SAT	CABLE	DVR	CD	DOCK	PC	TUNER	AUX 1	AUX 2
VIDEO IN	HDMI 1	Component 1	S-Video 1	Component 2	HDMI 2	Component 3	None	None	None	None	S-Video 2	S-Video 3
DIG AUDIO IN	HDMI 1	Coaxial 1	Optical 1	Coaxial 2	HDMI 2	Coaxial 3	Coaxial 4	None	USB	None	Optical 2	Optical 3
ANLG AUDIO IN	None	None	None	None	None	None	None	Unplugged	None	None	None	None

***Mode Input Factory Default Settings for Each Mode Family:*

LOGIC 7 (L7)	DOLBY	DSP	STEREO (STER)	DTS
FILM 5.1	PLII MOVIE	HALL 1 5CH	2-CHANNEL	NEO:6 5CH CINEMA

C

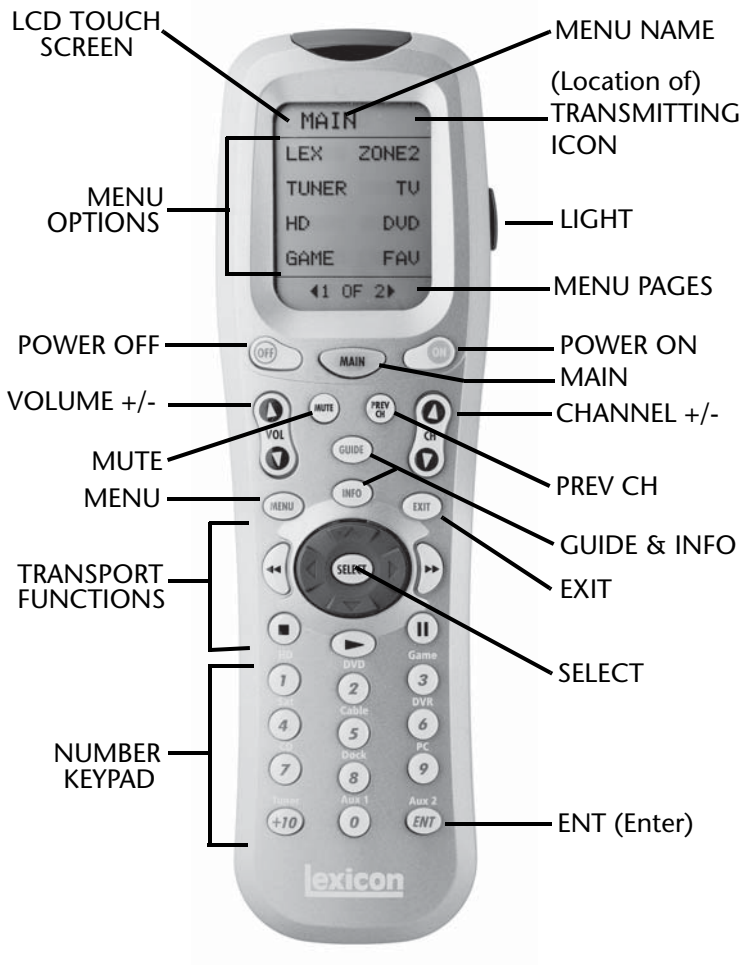
Appendix

REMOTE CONTROL PROGRAMMING

The MV-5 remote control is a very powerful and flexible pre-programmed and learning remote control, designed to be the universal controller of your home theater system.

The MV-5 remote control can operate up to 14 home entertainment and home automation components by using the remote control's pre-programmed code library, or by letting the remote control "learn" from another remote, one button at a time. The MV-5 remote control has many additional operating features to add convenience and enjoyment to the operation of any home entertainment system. You can create your own button labels on the LCD screen; program forty favorite channel buttons; operate the volume, channel and transport buttons from one device when you are controlling another device; and perform multiple tasks with the press of a single button.

The MV-5 remote control features extensive pre-programmed IR codes for practically all major audio and video equipment. It can set up and operate various components by simply entering a 3-digit code.



REMOTE CONTROL LIGHT BUTTON

The remote control is fully back lit, making it easy to use in low lighting conditions. Press the LIGHT button on the right side of the remote to back light all of the keypad buttons and the LCD touch screen. To turn off the back light, press the LIGHT button again or just stop pushing buttons. Ten seconds after the last button or touch screen selection, the back light automatically shuts off.

TRANSMITTING ICON

When a command is transmitted by the remote control, a transmit icon appears in the top right corner of the LCD touch screen. This indicates that a signal is being sent by the remote control.

SETTING UP THE REMOTE CONTROL

The MV-5 remote control can be set up so that it controls all of the components of your home entertainment system, making remote access simple and efficient. There are two ways to set up the remote control:

- Pre-programmed Codes - Allows you to set up all of the buttons at once, by entering the pre-programmed 3-digit codes of the component manufacturers.
- Button Learning - Allows you to transfer functions from other remotes, both old and new, one button at a time.

Of the two methods, the pre-programmed codes method is the fastest, since all functions are programmed at the same time. However, it's possible that a 3-digit code may not be available for your component. We recommend that you start with the pre-programmed code method and then perform the button learning method as necessary.

Pre-Programming Your Remote Control:

Follow the steps below to set up your MV-5 remote control using the pre-programmed manufacturers' codes.

The pre-programmed 3-digit codes for each component and manufacturer can be found at the back of this Appendix. The codes are listed by Component Category, such as TV, VCR, and DVD; then by brand name, such as Lexicon and Samsung.

1. Find the code listing for the component that you want to set up in the Pre-Programmed Codes library, found later in this chapter. If there is more than one code, be sure to note all of them as your component will only fully respond to one of them, so you may have to try multiple codes.

   Note: 305 is the factory default setting for the Lexicon RT-20 Universal Disc Player.

2. Turn on the component that you want to setup for remote control.

3. On the remote control, press and hold the MAIN and ENT (Enter) buttons at the same time. After about 3 seconds, "SETUP" is displayed in the Menu name area at the top of the LCD touch screen. This is the Setup mode of the remote control.

   NOTE: You now have 30 seconds to perform the next step while the remote is in the Setup mode. If a button is not pressed within 30 seconds, the SETUP menu name will revert to MAIN, indicating that the remote control is no longer in Setup mode. If this occurs, you will need to repeat this step to re-enter the Setup mode.

4. Touch the P-PRO option to select the Pre-Programmed Method. The menu name changes to "P-PRO" and the menu options area now contains seven component options.

   Note: While in the Setup mode, the MAIN button acts as an escape button. Each time the MAIN button is pushed, it will back out of one menu layer.

5. Select the component that you want to program. If the component you wish to setup is not on this page, touch the menu page ▸ arrow to select from the components on page 2.

   Once a selection is made, the bottom of the screen flashes "FROM TABLE".

6. Confirm your component selection by pressing the button again for the type of component you want to program.

   Note: This step is necessary because the selection may not be the same for Steps 5 and 6. For example, if you are setting up the SAT option to be a second TV, then the first press in Step 5 would have been SAT and the second press in Step 6 would then be TV.

7. Point the remote control at the component you want to program and enter the first of the 3-digit manufacturer's codes using the number keypad on the remote.

   If the 3-digit code that you entered is the correct one, the component will turn off. If the component does not turn off, continue entering code numbers from your list until the component turns off.

Note: The DOWN and UP buttons on the touch screen can be used to scroll the code number one digit at a time. If you hold your finger over the UP or DOWN button, the code number will scroll until your finger is removed.

8. When the component turns off, press the ON button on the remote to turn the component back on. Test several functions to ensure that the component responds correctly to the remote commands. If any of the buttons do not work properly, you may not have the right code - enter the next code option on your list until you find the best match for the component.

   Note: If you are unable to find a code that will accurately control your component, then you'll need to use the Button Learning procedure, which follows this procedure, to program the component.

9. Once you've found the right code, touch the SAVE option on the touch screen. The screen will blink "SAVED" two times, indicating that the code has been successfully saved.

10. Exit the Setup mode by pressing the MAIN button until the touch screen displays MAIN in the menu heading area. The remote control is in normal operation mode again.

11. Repeat Steps 1 through 10 to program all other components in your home theater system. For any components that do not have a valid 3-digit code, continue to the Button Learning procedure to program those components.

Recalling Pre-Programmed Setup Code Numbers:

In case you didn't write down the pre-programmed code numbers that you used when you set up your Lexicon remote controls, these 3-digit manufacturers' numbers can be recalled. Perform the following procedure to recall the pre-programmed 3-digit code for any component.

1. On the remote control, press and hold the MAIN and ENT (Enter) buttons at the same time. After about 3 seconds, "SETUP" is displayed in the Menu name area at the top of the LCD touch screen. This is the Setup mode of the remote control.

   NOTE: You now have 30 seconds to perform the next step while the remote is in the Setup mode. If a button is not pressed within 30 seconds, the SETUP menu name will revert to MAIN, indicating that the remote control is no longer in Setup mode. If this occurs, you will need to repeat this step to re-enter the Setup mode.

2. Touch the RECAL option. The touch screen now shows a four-page menu that lists each component name and the 3-digit code that was assigned to it.

3. Write down the code number for each component for future reference. Appendix D of this manual provides a convenient table for you to record the 3-digit pre-programmed code numbers.

4. Exit the Setup mode by pressing the MAIN button until the touch screen displays MAIN in the menu heading area. The remote control is in normal operation mode again.

Button Learning Procedure For Your Remote Control:

Follow the steps below to set up your MV-5 remote control using the Button Learning procedure. The MV-5 remote control can "learn" commands from other remote controls, both old and new, one button at a time. Follow the steps below to allow your MV-5 remote control to learn the button commands from other remote controls in your home theater system.

Note: We recommend that you use this procedure only after you've determined that no 3-digit manufacturers' codes exist for the component in question.

1. Line up the MV-5 remote control with the other remote control, head-to-head, one or two inches apart.

2. On the MV-5 remote control, press and hold the MAIN and ENT (Enter) buttons at the same time. After about 3 seconds, "SETUP" is displayed in the Menu name area at the top of the LCD touch screen. This is the Setup mode of the remote control.

   NOTE: You now have 30 seconds to perform the next step while the remote is in the Setup mode. If a button is not pressed within 30 seconds, the SETUP menu name will revert to MAIN, indicating that the remote control is no longer in Setup mode. If this occurs, you will need to repeat this step to re-enter the Setup mode.

3. Touch the LEARN option to select the Button Learning Method. The menu name changes to "LEARN" and the menu options area now contains seven component options. The bottom of the screen flashes "SELECT".

4. Select the component that you want to program. If the component you wish to setup is not on this page, touch the menu page ▸ arrow to select from the components on page 2.

   Once a selection is made, the menu name changes to the selected component name.

   If you want to teach any command to a component button on the MV-5 remote control, press the component button when the menu name says "LEARN". The menu name will change to "READY" and the menu page area indicates the button that you pressed. If you pressed the wrong button, press the MAIN button to return to the Setup menu where you can start again (return to Step 3). Once "READY" is displayed, skip ahead to Step 6.

5. Select the component option that you want to teach the command to - everything except for the MAIN button and the menu page arrows can be taught. The menu name will change to "READY" and the menu page area indicates the button that you pressed.

6. Press and hold the button on the other remote control that you want to teach to the MV-5 remote. When the menu name on the touch screen of the MV-5 remote control changes to "GOOD" or "FAILD", release the button.

   If "GOOD" is displayed, the bottom of the screen flashes "SAVED". The learning procedure is complete and was successful.

   If "FAILD" is displayed, try teaching the same button once again by repeating Steps 5 & 6.

7. Repeat Steps 4 through 6 to teach the MV-5 remote control any additional button commands from the component's remote. To return to Step 4, press the MAIN button once.

8. When you are done teaching the Lexicon remote control, exit the Setup mode by pressing the MAIN button until the touch screen displays MAIN in the menu heading area. The remote control is in normal operation mode again.

Test all your new commands. If any of them don't work, try the button learning procedure again, keeping in mind the following suggestions:

- Move to another room. Plasma TVs, sunlight, halogen, or quartz lighting can interfere with the learning process.
- Even though the old remote seems to be working fine, replace the current batteries with fresh alkaline batteries.
- Gradually vary the distance between the remote controls. Try 1-inch, 2-inches, and so on up to 4-feet.
- Try tapping the button on your old remote instead of just pressing and holding it during the learning process.

The following list provides additional information regarding the button learning procedure and how the MV-5 remote control behaves when taught.

- Learned functions override any existing pre-programmed functions on the remote control.
- All buttons can be taught except for the menu page arrows, MAIN button, and LIGHT button on the side of the remote.
- Learned functions are automatically erased when a new function is learned on the same button.
- Learned functions are retained even after a different pre-programmed 3-digit manufacterer's code is entered and saved to the remote.
- To return to an original pre-programmed function, the learned function must be erased.

LOCK FEATURE

The MV-5 remote control has a locking feature, which prevents unauthorized use of the remote control. When the locking feature is active, all operations of the remote control are blocked. This feature can be used as a "child-lock" to prevent children from having unmonitored access to the home theater system.

To Activate the Lock Feature:

Press and hold the +10 and ENT (Enter) buttons at the same time. After 3 seconds, the bottom of the touch screen will blink "LOCKED" three times and then "LOCKED" will remain displayed. The Lock is now active.

To Return to Normal Operation:

While the remote is in the LOCKED condition, press and hold the +10 and ENT (Enter) buttons at the same time. After 3 seconds, the "LOCKED" message is replaced by the last used mode is displayed. The Lock is now deactivated.

ADVANCED CUSTOMIZING TOOLS

Once the basic setup to your remote is complete, you can use the advanced features to further customize your MV-5 remote control. The advanced customizing tools include:

- back light Options - Customize the back light feature to suit your preferences.
- Touch Screen - Customize the displayed text for each device menu on the LCD touch screen.
- Favorite Channels - Set up your favorite channel list. Once this list is set up, up to 40 favorite channels can be selected by the press of a button - all without needing to remember or type in a channel number.
- Macros - Power all of your components ON or OFF at the same time, with the press of one button.
- Remote Cloning - Clone other MV-5/RV-5 remote control from an already setup remote.
- Punch Throughs - Force buttons to work for specific devices, regardless of the device currently selected on the MV-5 remote control.
- Hiding & Adding Pages - Customize the visible pages on the touch screen display.

back light Time Out:

The back light feature lights the touch screen area and illuminates the buttons whenver the LIGHT button is pressed. The amount of time the back light remains on before timing out can be adjusted to your preferences. Follow the instructions below to change the back light time out setting.

1. On the remote control, press and hold the MAIN and ENT (Enter) buttons at the same time. After about 3 seconds, "SETUP" is displayed in the Menu name area at the top of the LCD touch screen. This is the Setup mode of the remote control.

   NOTE: You now have 30 seconds to perform the next step while the remote is in the Setup mode. If a button is not pressed within 30 seconds, the SETUP menu name will revert to MAIN, indicating that the remote control is no longer in Setup mode. If this occurs, you will need to repeat this step to re-enter the Setup mode.

2. Touch the menu page ▸ arrow to access the second page of the SETUP menu.
3. Press the LIGHT button to customize the back light time out setting. A new screen now displays ON, 10, SAVE, and EXIT. The bottom of the touch screen says "SECOND" and there's a flashing box over the "1" digit. The current setting for the back light time out is "10" seconds.
4. Use the number keypad to enter a new time. The setting range is 01 to 99 seconds. To turn the back light feature off, which saves battery life, touch the ON option. The ON button changes to OFF and the time is dashed out.
5. Touch the SAVE option to save the new setting. Touching the EXIT option will leave the menu without saving any changes.
6. When finished, exit the Setup mode by pressing the MAIN button until the touch screen displays MAIN in the menu heading area. The remote control is in normal operation mode again.

Adjusting the Touch Screen Contrast:

You can make the text in the touch screen area darker by pressing the MAIN and cursor ▲ buttons at the same time. To make the text appear lighter, press the MAIN and cursor ▼ buttons at the same time.

Customizing the Touch Screen:

The LCD touch screen component names and commands can be customized to your preferences. Follow the instructions below to change the text in a selected touch screen menu.

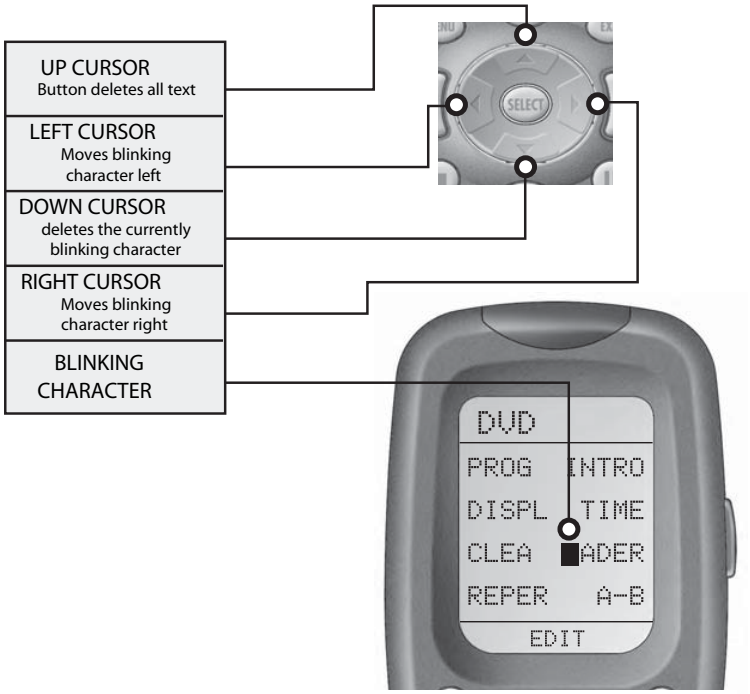
1. On the remote control, press and hold the MAIN and ENT (Enter) buttons at the same time. After about 3 seconds, "SETUP" is displayed in the Menu name area at the top of the LCD touch screen. This is the Setup mode of the remote control.

   NOTE: You now have 30 seconds to perform the next step while the remote is in the Setup mode. If a button is not pressed within 30 seconds, the SETUP menu name will revert to MAIN, indicating that the remote control is no longer in Setup mode. If this occurs, you will need to repeat this step to re-enter the Setup mode.

2. Touch the EDIT option to customize the touch screen option names. The menu name changes to "EDIT" and the bottom of the screen flashes "SELECT BUTTON".
3. Touch the TEXT option. The menu name still reads "EDIT" but now the component options are displayed.

   Once the TEXT option is pressed, the bottom of the screen flashes "SELECT".
4. Using the menu page arrows, navigate to the menu page where you want to edit the text. You can edit either the component names or the specific component controls. The menu name will reflect the actual menu heading, "EDIT" will no longer be displayed.

5. Now touch the text that you want to edit. The first letter will start flashing with a black box.



6. Changing the text requires the dual use of the number keypad and the up/down/left/right cursors. The number keypad has specific letters, numbers, and symbols defined for each key, as shown. Pressing the ▲ and ▼ cursors will scroll through the defined characters of each number keypad button. Pressing the ◀ and ▶ cursors changes the position of the cursors in the text being edited.

7. When you are finished editing, touch the text that you just edited. “SAVED” flashes at the bottom of the display and then “SELECT” will blink again.

   To edit any other menu options in the same menu, touch the next button when “SELECT” is displayed again. Repeat Steps 5 through 7.

   To edit a menu option in a different menu, press the MAIN button once and then repeat Steps 4 to 8.

8. When finished, exit the Setup mode by pressing the MAIN button until the touch screen displays MAIN in the menu heading area. The remote control is in normal operation mode again.

Favorite Channel Access:

To access the Favorite Channel listings, press the MAIN button to display page 1 of the Main menu. Touch the FAV (Favorite Channel) button on the touch screen. A list of favorite TV & cable stations is now displayed. Each option can be set to instantly select the channel on your TV. There are five pages of eight favorite channels for a total of forty buttons.

Favorite Channel Setup:

Before the Favorite Channels can be selected, they must be setup for your home theater. Follow the instructions to setup your favorite channel listing.

1. On the remote control, press and hold the MAIN and ENT (Enter) buttons at the same time. After about 3 seconds, "SETUP" is displayed in the Menu name area at the top of the LCD touch screen. This is the Setup mode of the remote control.

   NOTE: You now have 30 seconds to perform the next step while the remote is in the Setup mode. If a button is not pressed within 30 seconds, the SETUP menu name will revert to MAIN, indicating that the remote control is no longer in Setup mode. If this occurs, you will need to repeat this step to re-enter the Setup mode.

2. Touch the FAV option to setup your favorite channels. The menu name changes to "FAV" and the bottom of the screen flashes "SELECT".

3. Navigate through the FAV menus until you find the favorite channel that you want to setup.

   Note: You can customize the name of each favorite channel, if desired. Refer to the "Customizing the Touch Screen" procedure, found previously in this chapter.

4. Touch the favorite channel that you want to setup. The menu name will change to display the channel name that was selected. The bottom of the touch screen displays "STEP 0", indicating that you have not yet entered the channel number.

5. Touch the menu option for the component that you will use to enter the channel number (typically either TV, SAT, or CABLE).

6. Enter the channel number using the number keypad buttons on the remote.

   Note: Some brands of televisions require an ENT (Enter) command after the channel numbers are entered.

   If a number is repeated when setting the channel, for example channel 522, it is usually best to set a half second delay in between the identical numbers by pressing the PAUSE (||) button. Each press of the PAUSE button increases the delay by half a second.

7. Press the LIGHT button after you enter the channel number. A new screen now displays with the options: SAVE, UNDO, and EXIT.

8. To save the channel you just entered, touch the SAVE option. The UNDO option allows you to erase the last entry. The EXIT option erases all entries for this channel.

9. To setup additional favorite channels, repeat Steps 3 through 6.

10. When finished, exit the Setup mode by pressing the MAIN button until the touch screen displays MAIN in the menu heading area. The remote control is in normal operation mode again.

Macro Power ON Setup:

Any of the touch screen menu options can be setup as Macro buttons. Follow the instructions below to setup a macro button that will power ON several components at once.

1. On the remote control, press and hold the MAIN and ENT (Enter) buttons at the same time. After about 3 seconds, "SETUP" is displayed in the Menu name area at the top of the LCD touch screen. This is the Setup mode of the remote control.

   NOTE: You now have 30 seconds to perform the next step while the remote is in the Setup mode. If a button is not pressed within 30 seconds, the SETUP menu name will revert to MAIN, indicating that the remote control is no longer in Setup mode. If this occurs, you will need to repeat this step to re-enter the Setup mode.

2. Touch the MACRO option to setup a macro to power ON several components at the same time. The menu name changes to "MACRO" and the bottom of the screen flashes "SELECT".
3. Press the ON button. The menu name changes to "P-ON" and the bottom of the touch screen flashes "STEP 0", indicating that no macro steps have been entered yet.
4. Touch a component option that you want the macro to turn ON. Use the menu page arrows to navigate to the other menu pages, if required. The menu name changes to the name of the component option that you touched and the bottom of the screen now flashes "STEP 1".
5. Press the ON button again to confirm the action. The Step Indicator now displays "STEP 2".

   Note: The Step Indicator is a macro step counter. Every button that is pressed will increase the Step Indicator by one. Each macro can store up to 190 steps.

6. Press the MAIN button to return to the Main component listing.
7. Repeat Steps 4 through 6 until all of the components that you want to power ON at once have been added to the macro.

   Note: If desired, you can also program delays into the macro between the commands, by pressing the PAUSE (||) button. Each press adds half a second to the delay.

8. When all of the components have been added to the macro, press the LIGHT button. The menu name changes to "MACRO" as a new screen is displayed with the options: SAVE, UNDO, and EXIT.
9. To save the macro you just entered, touch the SAVE option. The UNDO option allows you to erase the last step. The EXIT option erases all steps for the macro.
10. When finished, exit the Setup mode by pressing the MAIN button until the touch screen displays MAIN in the menu heading area. The remote control is in normal operation mode again.

    Note: There is no touch screen menu listing for the macro you just saved. However, when you press the ON button on the remote for one of the included components, MACRO is displayed in the bottom of the touch screen area.

Macro Power OFF Setup:

To create a macro which will turn OFF several components at the same time, just follow the same steps as listed above, but press the OFF button instead of the ON button.

Macro Using Component Button Setup:

To setup a macro to use a component, in Step 2 of the procedure above, after pressing MACRO, press the page ▸ button twice. The menu name changes to MAIN. Touch the component option that you want to set as the macro button. You can navigate to page 2 if necessary. Now continue in the procedure to Step 3 and follow the rest of the procedure to completion.

Setting a "Press & Hold" Macro:

Another option for the component button macros is to only send the macro if the component button is held down. The advantage of this option is that a normal press of the component button will simply

switch components without triggering the macro. Only holding down the component button will trigger the macro.

To set the "Press & Hold" macro, enter a delay as the first step of the macro by pressing the PAUSE (||) button. Each press adds half a second to the delay. The amount of delay determines how long the user must hold down the button before the macro is sent.

Cloning other Lexicon MV-5 Remote Controls:

If you happen to own more than one MV-5 remote control, you can copy and transfer the setup from one remote to the other. Follow the instructions below to clone your MV-5 remote control.

1. On both the programmed remote control and the remote that you want to program, press and hold the MAIN and ENT (Enter) buttons at the same time. After about 3 seconds, "SETUP" is displayed in the Menu name area at the top of the LCD touch screen. This is the Setup mode of the remote control.

   NOTE: You now have 30 seconds to perform the next step while the remote is in the Setup mode. If a button is not pressed within 30 seconds, the SETUP menu name will revert to MAIN, indicating that the remote control is no longer in Setup mode. If this occurs, you will need to repeat this step to re-enter the Setup mode.

2. Touch the CLONE button on both remotes. The menu name changes to "CLONE" and the bottom of the screen flashes "SELECT BUTTON". A new screen now displays with the options: SEND, RECV, and EXIT.

   Touching the EXIT option will leave the menu without making any changes or triggering the cloning process.

3. Line up the "master" remote control with the "slave" remote control, head-to-head, one or two inches apart.

4. On the "slave" remote, touch the RECV option. The SEND/RECV options are replaced with "START" and the bottom of the touch screen flashes "PRESS START".

5. On the "master" remote, touch the SEND option. The SEND/RECV options are replaced with "START" and the bottom of the touch screen flashes "PRESS START".

6. First on the "slave" remote and then on the "master" remote, touch the START option to begin the cloning process.

   Note: Cloning typically takes about 40 seconds. After a successful cloning is complete, the newly cloned remote will flash "GOOD".

7. When finished, exit the Setup mode by pressing the MAIN button until the touch screen displays MAIN in the menu heading area. The remote control is in normal operation mode again.

Setting System Volume Control & Other Punch Throughs:

The MV-5 remote control provides the option of setting up the volume control over all of the components in your home theater system, even with components that don't have their own built-in volume controls, such as TiVo. This is a very powerful feature as, once it's setup, it will save you the constant hassle and inconvenience of switching between component modes to individually adjust volume controls. This feature is called a "Punch Through" and is not limited to strictly volume control. Follow the instructions to set the system volume control. Then see the note following the instructions to learn what other punch through features are available.

1. Since a home theater system may use the MV-5 for its sound source, first you must identify which component you want to use for the system sound/volume control.

2. On the remote control, press and hold the MAIN and ENT (Enter) buttons at the same time. After about 3 seconds, "SETUP" is displayed in the Menu name area at the top of the LCD touch screen. This is the Setup mode of the remote control.

   NOTE: You now have 30 seconds to perform the next step while the remote is in the Setup mode. If a button is not pressed within 30 seconds, the SETUP menu name will revert to MAIN, indicating that

the remote control is no longer in Setup mode. If this occurs, you will need to repeat this step to re-enter the Setup mode.

3. Touch the PUNCH option to setup the system volume control. The menu name changes to "PUNCH" and the bottom of the screen flashes "SELECT BUTTON". A new screen now displays with the options: VOL, PLAY, CH, and VOD.
4. Touch the VOL (Volume) option. The menu name changes to "VOL" and the component options are displayed. The VOL option sets up the group of three buttons - Volume Up, Volume Down, and Mute - all in one action.

   The bottom of the touch screen flashes "PUNCH TO". Touch the option for the component that doesn't have volume control commands yet (like the DVD). This is the component you are going to PUNCH TO for the volume and mute commands.

   Note: If you want to PUNCH TO the MAIN component, press the POWER OFF button at this time.
5. The bottom of the display will then flash "PUNCH FROM". Now select the MAIN component that has the volume commands that you want to use (for example, "LEX" for the MV-5 Processor). The bottom of the touch screen flashes "SAVED".
6. Repeats Steps 4 & 5 to add all of the components that you'd like to control through the system volume control.
7. When finished, exit the Setup mode by pressing the MAIN button until the touch screen displays MAIN in the menu heading area. The remote control is in normal operation mode again.

The Punch Through feature is NOT limited to volume and can also be applied to channel selection and other functions. If you find yourself switching to a particular component frequently to use a group of controls, consider using Punch Through for another group. The available punch through features, and the controls that the punch through operates, are:

- VOL - Volume Up, Volume Down, and Mute
- CH - Channel Up, Channel Down, Previous Channel, and Channel (0 to 9 Number Keypad) buttons
- PLAY - Play, Stop, Pause, Rewind, and Fast Forward
- VOD - Guide, Menu, Info, Exit, Up, Down, Left, Right, and Select

To set any of the other punch through features, perform the Steps for the System Volume control, but in Step 4, touch the desired alternate control option (CH, PLAY, or VOD).

Hiding and Adding Pages:

Each of the component touch screen menus actually contains five pages. However, in most cases, only two to four pages are visible in the factory default settings; the rest of the menu pages are hidden. If you wish to use the hidden pages, you can ADD them. If you don't want to use some of the existing pages, you can HIDE them. Follow the instructions below to add or hide pages in both the component and favorite menus.

1. On the remote control, press and hold the MAIN and ENT (Enter) buttons at the same time. After about 3 seconds, "SETUP" is displayed in the Menu name area at the top of the LCD touch screen. This is the Setup mode of the remote control.

   NOTE: You now have 30 seconds to perform the next step while the remote is in the Setup mode. If a button is not pressed within 30 seconds, the SETUP menu name will revert to MAIN, indicating that the remote control is no longer in Setup mode. If this occurs, you will need to repeat this step to re-enter the Setup mode.
2. Touch the EDIT option to add and hide touch screen menu pages. The menu name changes to "EDIT" and the bottom of the screen flashes "SELECT BUTTON".

   A new screen now displays with the options: TEXT, PAGE, and EXIT. Touching the EXIT option will leave the menu without saving any changes.

Note: The TEXT option allows the text of each menu to be changed. Refer to the "Customizing the Touch Screen" procedure, found earlier in this chapter, for instructions.

3. Touch the PAGE option. The menu name changes to "PAGE" and the component options are displayed. The bottom of the touch screen flashes "SELECT".
4. Navigate to the menu and page that you want to HIDE or ADD. When you select a page, the top of the screen indicates whether you want to "ADD?" or "HIDE?" the displayed page.
5. When you're ready to change a page's visibility, to ADD or HIDE it, press the LIGHT button.
6. Repeat Steps 4 and 5 to ADD or HIDE any menu pages desired on other components or the favorites pages.
7. When finished, exit the Setup mode by pressing the MAIN button until the touch screen displays MAIN in the menu heading area. The remote control is in normal operation mode again.

ERASING COMMANDS

You can erase an individual button with a learned command, a macro, or a favorite channel. You can erase an ENTIRE component's learned command or macro buttons. You can also erase ALL of your learned commands on ALL components, or all your macros and favorite channels everywhere.

Note: To erase everything and return the remote control to its factory default settings, refer to the "Restoring Factory Default Settings" procedure, which follows this secton.

1. On the remote control, press and hold the MAIN and ENT (Enter) buttons at the same time. After about 3 seconds, "SETUP" is displayed in the Menu name area at the top of the LCD touch screen. This is the Setup mode of the remote control.

   NOTE: You now have 30 seconds to perform the next step while the remote is in the Setup mode. If a button is not pressed within 30 seconds, the SETUP menu name will revert to MAIN, indicating that the remote control is no longer in Setup mode. If this occurs, you will need to repeat this step to re-enter the Setup mode.

2. Touch the ERASE option to erase learned buttons, macros, or favorite channels. The menu name changes to "ERASE" and the bottom of the screen flashes "SELECT BUTTON".

   A new screen now displays with the options: LEARN, FAV, MACRO, and EXIT. Touching the EXIT option will leave the menu without making any changes.

3. Touch either the LEARN, MACRO, or FAV option. A new screen now displays with the following options:

   ALL - Erases ALL of the specified LEARNED, MACRO, or FAV buttons everywhere in the remote.

   DEVICE - Erases all the LEARNED or MACRO buttons in a SINGLE component. This option is not available for FAV (Favorite) channels since they are not tied specifically to a component.

   KEY - Erases one button only.

4. If you touch ALL, the remote will prompt you by displaying "SURE?". After the SURE prompt is touched, all the buttons will be erased.
5. If you touch DEVICE, a list of component options are displayed. Touch the component option that you wish to erase. The bottom of the screen will flash "ERASE" twice, then "ERASED".
6. If you touch KEY, you'll need to navigate to the component that you want. Touch a button to erase it. The bottom of the screen will flash "ERASE" twice, then "ERASED".
7. When finished, exit the Setup mode by pressing the MAIN button until the touch screen displays MAIN in the menu heading area. The remote control is in normal operation mode again.

RESTORING FACTORY DEFAULT SETTINGS

If you're afraid you've accidently overwritten functions that you wanted, or want a "clean-slate" to start from, the remote control can be reset to its factory default settings. Follow the instructions below to restore the factory default settings.

Note: Restoring the Factory Default Settings will ERASE all customized features, including renamed components, learned buttons, and macros.

1. On the remote control, press and hold the MAIN and STOP buttons at the same time. The bottom of the touch screen flashes "WARNING!".

   NOTE: You now have 3 seconds to perform the next step. If a button is not pressed within 3 seconds, the RESET heading will revert to MAIN, indicating that the remote control is no longer in Reset mode. If this occurs, you will need to repeat this step to re-enter the Reset mode.

2. After about 10 seconds, "RESET" is displayed in the Menu name section at the top of the LCD touch screen.

   A new screen now displays with three options: ALL, PROG, and EXIT. Touching the EXIT option will leave the menu without making any changes.

3. Touch the ALL option. The remote will prompt you by displaying "SURE?". After the SURE prompt is touched, the factory default settings are restored.

4. When the remote is done restoring the factory default settings, the menu heading reverts to MAIN. When the touch screen displays MAIN in the menu heading area, then the remote control is in normal operation mode again.

OPTIONAL RF-1 RECEIVER

The optional RF-1 Receiver utilizes the RF feature of the Lexicon remote control, allowing you to control components that are completely out-of-sight, up to 100-feet away. Since the RF-1 Receiver picks up the RV-5's remote control radio frequency signal, the remote control no longer needs to be pointed directly at the components to control them. Now you can close your entertainment center doors, hide your components, and still control them with ease.

The RF-1 Receiver accessory requires no setup to the Lexicon remote control in order for the feature to work - you need only place the RF-1 Receiver in the rack or cabinet, or attach an emitter to the MV-5 front panel over the IR receiver. Every time a command is sent from the remote control, it sends both a standard IR and an RF signal. The RF-1 Receiver automatically receives the remote's radio signals and translates them into the infrared commands that control the components.

Note: The Lexicon remote control radio signals will not control components directly. You must have the RF-1 Receiver installed to receive the remote's radio signals. Components that came with "no pointing" radio remote controls cannot be operated by the Lexicon remote unless the component can be switched to standard IR via its internal menus. Some remote control ceiling fans are radio only and cannot be operated by the Lexicon remote.

USING THE 3-DIGIT CODE LIBRARY

The following pages contain the code library for the 3-digit pre-programmed manufacturers' codes for most home theater equipment. The code library is divided into categories, such as TV and VCR. Each category may include several different types of components.

The categories, and the types of components each category includes, are:

- TV - TVs, Plasmas, Projectors, and Monitors
- CABLE - Cable TVs and Web TVs
- DVD - DVD Players and TV/DVD combos
- VCR - VCRs and TV/VCR combos
- AUDIO - Amps, Preamps, A/V Receivers, and XM Radios
- SAT - Satellite Receivers
- CD - CD Players and CD Changers
- DVR - TiVo, Replay, and other DVRs
- LDP - Laser Disc Players
- LIGHT - Lighting Systems and Dimmers
- TAPE - Tape Decks
- PHONO - Phonographs
- AUX - Multimedia PCs, Xbox, iPod Controls, and Custom Installation Products

Within each category, the code numbers are listed in rows by brand, such as Lexicon and Samsung. Some brands have more than one 3-digit code for you to try.

3-DIGIT PRE-PROGRAMMED CODES

AUDIO

Manufacturer	Codes
ADC	007
ADCOM	082 092 161 225 269 355 356 366
AIWA	018 104 170 188 202 203 211 213
AKAI	138 189
AMC	038 125 126 127 128 258 281 282
AMEND	054
AMX	196
ANGSTROM	142
ANTHEM	335 336 337 338 339
ARCAM	141 418 419
ATLANTIC TECHNOLOGY	342
AUDIO ACCESS	147
AUDIO ALCHEMY	135
AUDIO DESIGN	011 194 221
AUDIO EASE	021 196 207
AUDIO FILE	071
AUDIO MATRIX	167
AUDIO SOURCE	273
AUDIO TECHNICA	134
B & K	096 097
BOSE	070 170 224 347 409 459 460 532
BOSTON ACOUSTICS	447
BRYSTON	023
CAMBRIDGE AUDIO	522
CARVER	006 022 028 029 061 071 077 180 185 201 214 226 284
CASIO	076
CHIRO	140
CINEMA SOUND	034 134
CITATION	148 272
CLARION	026
CLASSE	537
COMPAQ	382
CURTIS MATHES	076
DELPHI	415 515
DENON	002 027 034 037 109 215 229 230 234 259 330 340 341 349 350 400 401 402 444 564

AUDIO

Manufacturer	Codes
EAD	466
EIGER	149
ELAN	057 290
ENLIGHTENED AUDIO	099 098
ESCIENT	368 381 451 452 453 454
FANFARE	352
FISHER	047 180 182 214 297
FLEXTRONICS	378
FOSGATE	062 231
FOSGATE AUDIONICS	342
GE	056 260
GOLDSTAR	008
HAFLER	174
HARMAN KARDON	118 121 153 154 227 231 233 254 277 317 318 365
HITACHI	020
IMERGE	371
INKEL	197
INTEGRA	354 438
JAMO	398
JBL	263
JCPENNY	076 216
JEFF ROWLAND	206
JENSEN	058
JVC	114 163 191 240 266 279 291
KENWOOD	005 026 066 145 146 151 180 181 182 190 192 197 199 222 280 374 550
KINERGETICS	140 220
KLH	331
KOSS	216 573
KRELL	072 150 376 384
KYOCERA	007
LEXICON	120 235 236 237 357 358 359 360 361 362 363 364
LINN	124 377
LUXMAN	004 009 052 115 137 139 165
LXI	056 076
MAGNAVOX	086 152 164 208
MARANTZ	006 028 031 040 063 119 185 186 251 265 289 296 492

AUDIO

Manufacturer	Codes
MCINTOSH	238 286
MCS	076
MERIDIAN	012 013 100
MITSUBISHI	204 242 243
MONDIAL	042 043 081 112 157 158
MYRYAD	276 293
NAD	113 186 283 478 479
NAKAMICHI	111 172 183 244 245 287
NEC	176
NIRO	343
NILES	403
ONKYO	017 046 064 079 080 090 107 108 187 179 209 270 275 438
OPTIMUS	026 041 138
OUTLAW	342
PANASONIC	032 177 195 219 292 383 516
PARASOUND	129 130 132 261 294 295 333 334
PHAST	196
PHILIPS	063 119 249 250 251
PIONEER	014 033 035 039 044 045 050 069 078 116 159 168 198 480
POLKAUDIO	029 515
PRIMARE	464
PROCEED	144 268
RCA	010 048 067 117 156 288
REALISTIC	019 056 073 075 095
REQUEST	351
REVOX	162
ROTEL	074 083 085
RUSSOUND	379 391 392
SAMSUNG	016 571
SANSUI	040 048 065 110 119 228
SANYO	047 059
SCOTT	019 091
SEARS	076
SHARP	026 094 131 175 181
SHERWOOD	024 030 038 051 055 102 103 105 106 447
SONY	015 018 093 101 160 166 184 218 223 247 248 271 353 369 372 380 417 421
SOUNDESIGN	036

AUDIO

Manufacturer	Codes
SOUNDMATTERS	375
SOUNDSTREAM	084 088
SSI	068
SUMO	171
SUNFIRE	344 345 346 494
TAEKWANG	138
TEAC	005 019 049 111 212 217
TECHNICS	122 176 177 178 193 200 219 257 262
THETA DIGITAL	136
TOSHIBA	060 087 198 278
WARDS	180
YAMAHA	026 067 089 169 173 205 232 253 264 274 285 332 373 432 433
ZENITH	143 210

AUDIO-XM Radios & Tuners

BOSE	170 532
DELPHI	415 515
FANFARE	352
KENWOOD	550
POLKAUDIO	515
SONY	380

CABLE/WEB TV

Manufacturer	Codes
ABC	003 004 039 042 046 053 103
ADELPHIA	043 074
ADVANCED NEWHOUSE	043
ALTRIO	043
AMERICAST	099
ARCHER	005 007 014
ARMSTRONG	074
AT&T BROADBAND	074
ATLANTIC BROADBAND	043 074
BELL SOUTH	099
BLUE RIDGE	043 074
BRESNAN	074
BRIGHT HOUSE	043 110
BUCKEYE COMM	074
CABLEVISION	043 074 108
CENTURION	092
CENTURY	007
CHARTER	043 074
CITIZEN	007
COGECO	074
COMBANO	080 081
COMCAST	043 074 110
COMSAT	074
COX DIGITAL	043 074
DIGICABLE	101
EAGLE	020 030 040
EASTERN	057 066
ECHOSTAR	106
ELECTRICORD	032
GEMINI	008 054
GENERAL ELECTRIC	072
GENERAL INSTRUMENT	074 103 104
GNC	099

CABLE/WEB TV

Manufacturer	Codes
GOLDEN CHANNEL	030
HAMLIN	049 050 055
HITACHI	055 103
INSIGHT	074
JERROLD	002 003 004 008 009 010 069 074 103
MAGNAVOX	010 012 064 079 094 095
MASSILLON	074
MEDIA ONE	107
MEDICOM	074
MEMOREX	052
MITSUBISHI	102
MOTOROLA	074 109 110 111
MOVIE TIME	028 032
MOXI	111
NCTC	074
NSC	015 028 038 071
OAK	031 037 053
PACE	043 074
PANASONIC	044 047
PARAGON	052
PHILIPS	006 012 013 020 085 095
PIONEER	034 043 051 063 076 103 105
PRUCER	059
PULSAR	052
RCA	047
RCN	074
RECOTON	098
REGAL	049 050
REGENCY	057
RODGERS	043
SAMSUNG	030
SCIENTIFIC ATLANTA	003 011 041 042 043 045 046
SEREN	043

CABLE/WEB TV

Manufacturer	Codes
SERVICE ELECTRIC	074
SHAW	074
SIGECOM	043
SONY	096 108
SPRUCER	047 078
STARCOM	002 004 008 009
STARGATE	008 030 097 104
SUSQUEHANNA	043 074
TIME WARNER	043 074
TOCOM	039 040 056
TOSHIBA	052
UNITED CABLE	004 053
UNIVERSAL	005 007 014 032 035
VIDEOTRON	043
VIEWSTAR	012 015 018 086 087 088 089
WIDE OPEN WEST	043 099
ZENITH	052 060 093 100

CD

Manufacturer	Codes
ADCOM	042 062
AIWA	059 065 088 089 105 122 170 187
AKAI	085 195 202
AMC	231 232
AMEND	118
ARCAM	238
AUDIO ACCESS	119 147
AUDIO EASE	165
AUDIO TECHNICA	046
BSR	037 057
CALIFORNIA AUDIO	008 103
CAPETRONIC	063
CARRERA	057 080
CARVER	041 044 050 086 107 130 134 135 138 139 167 185 203 204
CASIO	111 182
CLARINETTE	182
CREEK	159
CROWN	035
DENON	002 123
EMERSON	042 069 102
FISHER	008 050 134 185
FRABA	111
GENEXXA	010 069 102
GOLDSTAR	080
HAITAI	093
HARMAN KARDON	018 033 047 208
HITACHI	042 175
INKEL	130 143 144
JC PENNEY	014 061 092 141
JENSEN	158
JVC	004 022 136 163 213 214 242 243
KENWOOD	007 023 055 071 072 137 142 185 254

CD

Manufacturer	Codes
KOSS	061
KRELL	241
KYOCERA	005
LOTTE	102
LUXMAN	011 028 070 076 249 252
LXI	059
MAGNAVOX	044 107
MARANTZ	027 041 044 051 077 107 209 246
MCINTOSH	212 247
MCS	014 073 092
MEMOREX	010
MISSION	044 107
MITSUBISHI	179
MITSUMI	153
MODULAIRE	182
MONDIAL	147
MYRYAD	155 244
NAD	005 006 067 178
NAKAMICHI	095 217 218 219
NEC	014 062
NIKKO	046
NSM	044 107
ONKYO	030 038 039 168 169
OPTIMUS	010 050 057 058 081 082 083 085 093 195
PANASONIC	008 068 103 172 201 248
PARASOUND	233 240
PHILIPS	041 044 107 246 253
PIONEER	010 020 025 056 174 175 176
PROCEED	239
PROTON	044 107 228
QUASAR	008 103
RADIO SHACK	182
RCA	017 042 150

CD

Manufacturer	Codes
REALISTIC	042 050 051 102 181 182 187
ROTEL	044 107 161 178 250
SAE	044 107
SANSUI	044 069 107 125 128 171 190
SANYO	050
SCOTT	069 102
SHARP	026 031 051 066
SHERWOOD	003 019 051 096 112 115 119 166
SIGNATURE	033
SONY	048 081 097 126 133 164 177 225 226
SOUNDESIGN	251
SUMO	155
SYLVANIA	044 107
SYMPHONIC	052 181
TAEKWANG	085 195
TANDY	010
TEAC	015 034 036 051 052 079 101 131 140
TECHNICS	008 060 068 103 172 184 200
TECHWOOD	076
THETA DIGITAL	234 235
TOSHIBA	006 067 091 148 160
VECTOR RESEARCH	080
VICTOR	004 022 114 124
WARDS	033 185
YAMAHA	024 046 054 183 186 245
YORX	182

DVD

Manufacturer	Codes
AIWA	146
ALPINE	098
APEX DIGITAL	087 111 112 115 116
ARCAM	122
CAMBRIDGE AUDIO	215
CARY AUDIO DESIGN	174
CLASSE	167
COBY	258
DENON	007 080 173
FUNAI	143
GATEWAY	175
GE	026 027
GO VIDEO	137 218 220 221 222
HARMAN KARDON	084 140
HITACHI	101
ILO	268
INTEGRA	142 180
JVC	012
KENWOOD	151
KISS	179 279
KLH	135
KRELL	104
LEXICON	148 305
Note: 305 is factory default setting for Lexicon RT-20	
LG	057 074 091
LITEON	264 265
MAGNAVOX	066 096
MALATA	267
MARANTZ	083 095
MERIDIAN	153
MITSUBISHI	017
MYRYAD	102 134
NAD	088 155

DVD

Manufacturer	Codes
NAKAMICHI	103
ONKYO	035 076 180
OPPO	266
PANASONIC	021 042 138 139 144 150
PHILIPS	066 083 095 105 166
PIONEER	023 092 099 107 108 131
POLAROID	233 234 237
PRIMARE	193 194
PROCEED	086
PROSCAN	026 027
RCA	026 027
RJTECH	269
ROTEL	204
SAMSUNG	056 070 119 137 159 165 170
SANSUI	154
SANYO	147
SENSORY SCIENCE	222 223
SHARP	094
SONY	033 118 126 145 191
SYLVANIA	143
SYMPHONIC	143
TAG MCLAREN	156
TATUNG	102
TEAC	270
THOMPSON	026 027
THULE	177
TOSHIBA	034 035 130 141 164 188
VENTURER	149
VINC	161
YAMAHA	042 089 166 195 197
ZENITH	057 074 091

DVD

Manufacturer	Codes

DVD-TV/DVD Combos

AIWA	146
FUNAI	143
SAMSUNG	165
SYLVANIA	143
SYMPHONIC	143
TOSHIBA	130

DVD-TV/DVD/VCR Combos

MAGNAVOX	143
PANASONIC	144
SYLVANIA	143
TOSHIBA	164

DVD-DVD/VCR Combos

GO VIDEO	137 218
PANASONIC	150
PHILIPS	105 (VCR Functions for VCR, 067)
POLAROID	234
SAMSUNG	137 159
SANSUI	154
SONY	145 191
TOSHIBA	141
ZENITH	091 (VCR Functions for VCR, 171)

DVD

Manufacturer	Codes
DVD-DVD Recorders	
GATEWAY	175
GO VIDEO	220 221 222
ILO	268
KISS	279
LITEON	265
PANASONIC	139
SENSORY SCIENCE	222
SONY	191
TOSHIBA	188

DVR-PVR/TIVO

Manufacturer	Codes
DISH	122
ECHOSTAR	122
HUGHES	108 117
HUMAX	117 118
JVC	122
PHILIPS	090 108 117
RCA	109
REPLAY NETWORKS	075
SONY	104 105
TIVO	090 117 118
TOSHIBA	117

LIGHT

Manufacturer	Codes
LITE-TOUCH	208 212
LUTRON	077 158 159
X-10	093 183

LD

Manufacturer	Codes
DENON	206 207
FUNAI	120
KENWOOD	013 152
MAGNAVOX	032 121
MARANTZ	211
MITSUBISHI	121
NAD	121
OPTIMUS	013 049
PANASONIC	113
PHILIPS	032
PIONEER	106 117 121
RADIO SHACK	120
RCA	002
REALISTIC	049
RUNCO	127
SANYO	075
SHARP	013 152
SONY	053 110
TECHNICS	113
THETA DIGITAL	032
TOSHIBA	106 152
YAMAHA	043 129

PHONO

Manufacturer	Codes
JVC	004
KENWOOD	005
PIONEER	003
YAMAHA	001 002

SAT

Manufacturer	Codes
CABLEVISION/VOOM	148
DIRECTV	173
ECHOSTAR/DISH	122 167 168
EXPRESSVU	122
GENERAL ELECTRIC	106 150 151
GENERAL INSTRUMENT	148
GOI	122
HITACHI	139 140
HTS	122
HUGHES	068 108 117 154 161 162 165 166
JVC	122
LG	170
MAGNAVOX	136
MEMOREX	136
MITSUBISHI	068 154
MOTOROLA	148
NEXT LEVEL	148
PANASONIC	142 160
PANSAT	172
PAYSAT	136
PHILIPS	068 108 117 136 152 153 154 156
PROSCAN	106 150 151
RADIO SHACK	148
RCA	106 150 151
SAMSUNG	123 155 163 169 175
SKY	164
SONY	103
STAR CHOICE	148
TOSHIBA	068 127 154 157 158
UNIDEN	136
ZENITH	159

TAPE

Manufacturer	Codes
AIWA	015 071 100 114
CARVER	006 008 024 027 036
DENON	105 227 229
FISHER	064
GOLDSTAR	011
HARMAN KARDON	233
JVC	106 116 239 240
KENWOOD	005 013 023 026 064 145 146 181 190
LINN	124
LUXMAN	035 137 139
MAGNAVOX	027
MARANTZ	014 027 056 065 087
MCINTOSH	238
MITSUBISHI	242 243
NAD	029 048
NAKAMICHI	025 244 245
ONKYO	002 012 016 017 018 019 115
OPTIMUS	026 054 055
PANASONIC	007 010 032 088 195
PHILIPS	027 087
PIONEER	003 039 047 050 066 098 222
QUASAR	007 088
SANSUI	027 113 119 224
SHARP	026 057 131 175 181
SHERWOOD	004 028 030 033 034 038
SONY	020 022 052 084 089
TEAC	009 059 212
TECHNICS	007 010 076 088 109 122 193
TOSHIBA	112
VICTOR	106
YAMAHA	021 026 031 040 067

TV

Manufacturer	Codes
ADMIRAL	072 081 160 161
ADVENT	247
AKAI	146 197 248
A MARK	112 143
AMPRO	073 157 167 183
AMSTRAD	052
ANAM	043 054 056 080 112 131
AOC	004 058 112 197
APEX DIGITAL	006 310
AUDIOVOX	076 273
BARCO	233
BLAUPUNKT	088
BROKSONIC	238
CAIRN	201
CANDLE	002 003 004 197
CAPEHART	058
CETRONIC	043
CITIZEN	002 003 004 043 101 103 143 197
CLASSIC	043
CONCERTO	004
CONTEC	043 050 051
CORONADO	143
CRAIG	043 054
CROWN	043 143
CURTIS MATHES	004 101 143 197
CXC	043
DAEWOO	004 016 043 044 076 103 114 125 127 143
DAYTRON	004 143
DELL	319 320 321
DREAMVISION	235 345
DWIN	177 257
DYNASTY	043
DYNATECH	062

TV

Manufacturer	Codes
EIKI	187
ELECTROHOME	024 076 143 196
EMERSON	004 005 028 043 047 048 050 051 076 096 143 151 153 154 155 197
EPSON	324
ESA	323
FISHER	007 057
FUJITSU	198 246 346
FUNAI	028 043
FUTURETECH	043
GATEWAY	242 268
GE	004 008 009 034 056 073 074 091 130 144 155 157 160 161 165 183 197
GOLDSTAR	004 102 106 112 113 116 119 127 143
HALL MARK	004
HANNSPREE	381
HITACHI	004 009 010 011 012 023 072 075 143 158 163 166
HP	316 327 378
HYUNDAI	337 338
INFINITY	164
INFOCUS	230 330 333
INSIGNIA	350
JBL	164
JCPENNEY	004 008 009 024 030 065 101 143 156 160 197
JENSEN	013
JVC	034 038 070 083 145 199 210 240 241
KEC	043
KENWOOD	070 197
KLOSS	002 059
KMC	143
KTV	043 143 154 197
LG	004 102 106 112 113 116 119 127 143 243 284 363 365
LODGENET	072

TV

Manufacturer	Codes
LOEWE	164
LOGIK	072
LUXMAN	004
LXI	007 015 052 081 160 164 166
MAGNAVOX	003 004 022 059 060 061 063 064 094 127 160 164 197 226 239 273
MARANTZ	164 184 197
MATSUI	164
MAXENT	242
MEMOREX	004 007 072
METZ	088
MGA	004 024 028 042 197
MINERVA	088
MITSUBISHI	004 024 028 040 042 109 124 146 191
MTC	004 062 101 197
NAD	015 025
NEC	016 019 024 040 056 130 132 134 197 236 237 262 272
NIKEI	043
NUVISION	351
ONKING	043
ONWA	043
OPTOMA	265 270
OPTONICA	019 081
ORION	096
PANASONIC	034 056 080 092 164 208
PHILCO	003 004 024 056 059 060 063 064 164 197
PHILIPS	003 004 005 038 059 093 127 164 184 197 206 239 259
PIONEER	018 023 025 116 135 190 197 234 335
POLAROID	138 268 328 353 354 356 388
PORTLAND	004 143
PROSCAN	144 160 161 165 167
PROTON	004 058 131 143 171 173 193
QUASAR	034 056 092

TV

Manufacturer	Codes
RADIO SHACK	004 019 043 127 143
RCA	004 023 024 056 065 074 144 152 156 160 161 165 197 333
REALISTIC	007 019 043 047
ROCTEC	186
RUNCO	073 157 168 169 178 179 180 181 182 183 340
SAMPO	004 058 197 202
SAMSUNG	004 050 089 101 105 127 143 160 228 229 258
SANYO	007 020 053 057 082 166 187
SCEPTRE	276
SCOTT	004 028 043 048 143
SEARS	004 007 015 028 030 057 082 094 143 160 165 166
SELECO	189 200 205 227
SHARP	004 014 019 022 028 029 081 143 170 175 251
SIEMENS	088
SIGNATURE	072
SIM2	189 200 205 227
SOLE	231 232
SONY	070 085 126 139 147 185 194 213 277 279
SOUNDESIGN	003 004 028 043
SPECTRICON	112
SSS	004 043
SUPRE MACY	002
SVA	328
SYLVANIA	003 044 059 060 063 064 127 160 164 197
SYNTAX OLEVIA	376
TANDY	081
TATUNG	056 062
TECHNICS	034 080
TECHWOOD	004
TEKNIKA	002 003 004 024 028 043 072 101 143
TELEFUNKEN	037 046 086 087
TELERENT	072

TV

Manufacturer	Codes
TERA	172
TMK	004
TOSHIBA	007 015 030 040 062 101 138 325
TOTEVISION	143
UNIVERSAL	008 009
VIDEO CONCEPTS	146
VIDIKRON	174 184 188 192 340
VIDTECH	004
VIEWSONIC	242
VIZIO	386 387
WARDS	004 008 009 019 028 034 060 061 063 064 072 074 143 164
WESTING HOUSE	076 280
WINBOOK	339
YAMAHA	004 197
YORK	004
YUPITERU	043
ZENITH	072 073 095 103 157 183 243 284
ZONDA	112

VCR

Manufacturer	Codes
AIWA	034 161
AKAI	016 043 046 124 125 142 146
AMPRO	072
ANAM	031
AUDIO DYNAMICS	012 023 039 043
BROOKSONIC	035 037 129
CANON	028 031
CAPEHART	108
CRAIG	003 040 135
CURTIS MATHES	031 041
DAEWOO	005 007 010 065 108 110 111 112 116 117 119
DAYTRON	108

VCR

Manufacturer	Codes
DBX	012 023 039 043
DYNATECH	034 053
ELECTROHOME	059
EMERSON	006 017 025 027 029 031 034 035 036 037 046 101 116 129 131 138 153 162
FISHER	003 008 009 010
FUNAI	034
GE	031 063 072 107 109 144 147
GO VIDEO	040 115 132 136 155
GOLDSTAR	012 013 020 101 106 114 123
HARMAN KARDON	012 045
HITACHI	004 013 018 026 034 043 063 137 150 160
INSTANTREPLAY	031
JCL	031
JCPENNY	012 013 015 040 066 101
JENSEN	043
JVC	012 031 043 048 050 055 060 130 150 152 166
KENWOOD	014 034 047 048
LG	012 013 020 101 106 114 123
LLOYD	034
LXI	003 009 017 034 106
MAGIN	040
MAGNAVOX	031 034 041 067 068 156 164
MARANTZ	012 031 067 069 156
MARTA	101
MATSUI	027 030
MEI	031
MEMOREX	003 010 014 031 034 053 072 101 102 134 139
MGA	045 046 059
MINOLTA	013 020
MITSUBISHI	013 020 045 046 049 051 059 061 142 151 168
MTC	034 040
MULTITECH	024 034
NEC	012 023 039 043 048
NORDMENDE	043
OPTONICA	053 054

VCR

Manufacturer	Codes
ORION	025
PANASONIC	066 070 074 083 133 140 145 157 163 167
PENTAX	013 020 031 063
PHILCO	031 034 067
PHILIPS	031 034 054 067 071 101 156
PILOT	101
PIONEER	013 021 048
PORTLAND	108
PULSAR	072
QUARTZ	002 014
QUASAR	066 075 145
RADIO SHACK	123
RCA	013 020 034 040 041 107 109 140 144 145 147 158
REALISTIC	003 008 010 014 031 034 040 053 054 101
RICO	058
RUNCO	148
SALORA	014
SAMSUNG	032 040 066 102 104 107 109 112 113 115 120 122 125
SANSUI	022 043 048 135
SANYO	003 007 010 014 102 134
SCOTT	017 037 112 129 131
SEARS	003 008 009 010 013 014 081 101 017 073 112
SHARP	031 054 149 159 165
SHINTOM	024
SIGNATURE	034
SONY	003 031 052 056 057 058 076 077 078 149 154
SOUNDESIGN	034
STS	013
SYLVANIA	031 034 059 067
SYMPHONIC	034
TANDY	010 034
TATUNG	039 043
TEAC	034 039 043

VCR

Manufacturer	Codes
TECHNICS	031 070
TEKNIKA	019 031 034 101
THOMAS	034
TMK	006
TOSHIBA	008 013 042 047 059 079 081 082 112 131
TOTEVISION	040 101
UNITECH	040
VECTOR RESEARCH	012
VICTOR	048
VIDEO CONCEPTS	012 034 046 141
VIDEOSONIC	040
WARDS	003 013 017 024 031 034 040 053 054 131
YAMAHA	012 034 039 043
ZENITH	034 048 056 058 072 080 101

VCR-TV/VCR Combos

DAEWOO	005 117
EMERSON	153
FUNAI	034
GOLDSTAR	101 123
HITACHI	034
JCPENNEY	101
LG	101 123
LLOYD	034
MAGNAVOX	034 067
MEMOREX	101
PANASONIC	070 167
PHILIPS	034 067
RADIO SHACK	123
RCA	034
SEARS	101
SONY	057 154
SYLVANIA	067
SYMPHONIC	034
THOMAS	034
ZENITH	034

AUX

Manufacturer	Codes
3M	152
AIWA	164
APPLE	401
ARCHER	155
AURORA MULTIMEDIA	220
AUTON	191
BOSE	409
CELADON	221
CRESTRON	213 214 215 216 217 218
DELL	261 262
DMX	156
DRAPER SCREEN	204
DREAMVISION	097
DWIN	080 253
EVERQUEST	206
EXTRON	151
FAROUDJA	184
FUJI	209
GATEWAY	261 262
HAUPPAUGE	294 295
HP	261 262
HUNTERDOUGLAS	219
JERROLD	153
JVC	185
KENSINGTON	406
KENWOOD	185
KEYSPAN	297
MAKITA	186 201
MICROSOFT	107 408
MINDPATH	205
NILES	160 187
NSM	161
PIANO DISC PLUS	085

AUX

Manufacturer	Codes
POLKAUDIO	162
RUSSOUND	081
SCIENTIFIC ATLANTA	156 163
SIMA	082
SOLO ELECTRONICS	207
SOMFY	078 079
SONY	164 165 166 261 262
STARCOM	153
TURBOSCAN	167
VELODYNE	203
XANTECH	168 169 170 171 172 188 189

AUX-Media PC Controls

DELL	261 262
GATEWAY	261 262
HAUPPAUGE	294 295
HP	261 262
KEYSPAN	297
SONY	261 262
TOSHIBA	261 262
WINBOOK	261 262

AUX-XBox Controls

MICROSOFT/XBOX	107 408

AUX-iPod Controls

APPLE/iPod	401
BOSE	409
KENSINGTON	406

D

Appendix

INSTALLATION WORKSHEET

INPUT SETUP	HD	DVD	GAME	SAT	CABLE	DVR	CD	DOCK	PC	TUNER	AUX1	AUX2
NAME												
VIDEO IN												
V-PROCESS												
VIDEO OUT												
HDMI LINK												
DIG AUDIO								NONE	USB			
ANLG AUDIO								DOCK	NONE			
DIG/ANLG AUTO								N/A	N/A			
MODE FAMILY**												
MODE**												
DEFAULT SUR**												
A/D SAMPLE RATE												
A/V SYNC DELAY												
TRIGGER 2												
ZONE2 OUT**												
ADVANCED VIDEO												
INPUT TYPE												
SHARPNESS												
NOISE REDUCTION												
X-COLOR SUPPRESS												
DCDi INTERPOL												
FILM DETECTION												
FILM EDIT DETECTION												
FLESHTONE NR												

INPUT SETUP	HD	DVD	GAME	SAT	CABLE	DVR	CD	DOCK	PC	TUNER	AUX1	AUX2
ADVANCED VIDEO (CONTINUED)												
COMPNT ENHANCE												
BRIGHTNESS												
CONTRAST												
COLOR												

SPEAKER SETUP REAR AMP**: ____	AUTO SETTING **	FRONT LEFT	CENTER	FRONT RIGHT	SIDE LEFT	SIDE RIGHT	REAR LEFT	REAR RIGHT	SUB/ LFE LPF SUB 1	SUB/ LFE HPF SUB 2
CROSS-OVER POINTS**										
DISTANCES (UNITS: ___)**										
OUTPUT LEVELS										
"ALL" INPUT**										
HD INPUT										
DVD INPUT										
GAME INPUT										
SAT INPUT										
CABLE INPUT										
DVR INPUT										
CD INPUT										
DOCK INPUT										
PC INPUT										
TUNER INPUT										
AUX 1 INPUT										
AUX 2 INPUT										

SURROUND CONFIGURATION		NO	YES
LOGIC 7 DEFAULT**			
DTS**	DTS 96/24		
	DTS + NEO:6		
	DTS-ES MATRIX		
	DTS-ES DISCRETE		
	LOGIC 7		
	STEREO DOWN MIX		
DOLBY 2.0**	DOLBY PLII		
	DOLBY PLIIx		
	DOLBY VIRTUAL		
	LOGIC 7		
DOLBY MULTI-CHANNEL**	DOLBY VIRTUAL		
	LOGIC 7		
	STEREO DOWN MIX		
PCM 44.1/48 kHz**	LOGIC 7		
	DOLBY PLII		
	DOLBY PLIIx		
	DOLBY VIRTUAL		
	DTS NEO:6		
	HALL		
	5/7 CH STEREO		
PCM 96 kHz**	LOGIC 7		
	DOLBY PLII		
	DOLBY PLIIx		
	DTS NEO:6		
	5/7 CH STEREO		

AUDIO CONTROLS	SETTING
AUTO EQ**	
ACTIVE EQ PRESET**	
EQ ADJUST/HF SHELF**	
TONE CONTROLS	
BASS	
TREBLE	
VIDEO CONTROLS	
4:3 IN >16:9 DISPLAY**	

DOLBY CONFIG	PLII**	PLIIx**
CENTER WIDTH		
DIMENSION		
PANORAMA		
NIGHT		

DISPLAY SETUP**	SETTING
CONNECTION	
HDMI AUDIO OUT	
OSD: 2-LINE OSD	
OSD: MENU TIME OUT	
F/P DISPLAY: BRIGHTNESS	
F/P DISPLAY: TIME OUT	

R/P CONNECTIONS	ANALOG AUDIO	DIGITAL AUDIO	ANALOG VIDEO	DIGITAL VIDEO
HD INPUT				
DVD INPUT				
GAME INPUT				
SAT INPUT				
CABLE INPUT				
DVR INPUT				
CD INPUT				
DOCK INPUT	DOCK	NONE		
PC INPUT	NONE	USB		
TUNER INPUT				
AUX 1 INPUT				
AUX 2 INPUT				

3-DIGIT PRE-PROGRAMMED CODES WORKSHEET

COMPONENT	MANUFACTURER	CODE(S) USED
AUDIO		
DVD		
CD		
SAT		
TV		
VCR		
CABLE		
AUX		
LIGHT		
TAPE		
PHONO		
TV2		
VCR2		
DVR		
LDP		
XM RADIO		
IPOD		
X-BOX		

Index

Numerics

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Z

LIMITED WARRANTY

Harman Specialty Group offers the following warranty on this product:

What is the Duration of this Warranty?
This warranty will remain in effect for three (3) years from the original date of purchase.

Who is Covered?

This warranty may be enforced by the original purchaser and subsequent owners during the warranty period, provided the original dated sales receipt or other proof of warranty coverage is presented at time of service.

What is Covered?

This warranty covers all defects in material and workmanship on this product, except as specified below. The following are not covered:

1. Damage resulting from:
   A. Accident, misuse, abuse, or neglect.
   B. Failure to follow instructions contained in the user guide.
   C. Repair or attempted repair unauthorized by Harman Specialty Group.
   D. Failure to perform recommended periodic maintenance.
2. Causes other than product defects, including lack of skill, competence, or experience on the part of the owner.
3. Damage occurring during any shipment of this product. Claims for shipping damages must be made with the carrier.
4. Damage to a unit that has been altered, or on which the serial number has been defaced, modified, or removed.

What Expenses will Harman Specialty Group Assume?

Harman Specialty Group will pay all labor and material expenses for covered items. Payment of shipping charges is discussed in the next section of the warranty.

How is Service Obtained?

When this product needs service, write, telephone, or fax Harman Specialty Group to request information about where the unit should be taken or sent. When making a written request, please include your name, complete address, and daytime telephone number; the product model and serial numbers; and a description of the problem. Do not return the unit to Harman Specialty Group without prior authorization.

When Shipping a Product for Service . . .

1. Pay any initial shipping charges, which are the responsibility of the owner. If necessary repairs are covered by this warranty, Harman Specialty Group will pay return shipping charges to any destination in the United States using the carrier of our choice.
2. Pack the unit securely. Package insurance is strongly recommended.
3. Include a copy of the original dated sales receipt. (A copy of the original dated sales receipt must be presented whenever warranty service is required.)
4. Do not include accessories such as power cords or user guides unless instructed to do so.

What are the Limitations of Implied Warranties?

Any implied warranties, including warranties of merchantability and fitness for a particular purpose, are limited in duration to the length of this warranty.

What Certain Damages are Excluded?

Harman Specialty Group's liability for a defective product is limited to repair or replacement of that product, at our option. Harman Specialty Group shall not be liable for damages based on inconvenience; loss of use of the product; loss of time; interrupted operation; commercial loss; or any other damages, whether incidental, consequential, or otherwise.

How do State Laws Relate to this Warranty?

Some states do not allow limitations on the duration of implied warranties and/or the exclusion or limitation of incidental or consequential damages. As such, the above limitations may not apply.

This warranty is not enforceable outside of North America. This warranty provides specific legal rights. Additional rights may be provided by some states.

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Part No. 070-18137 | Rev 0 | 07/07