Acurus ACT 3

Owner's Manual

acūrus

ACT-3

(1) (2) (3) (4)

(5) (6) (7) (8)

9		12	14
		VOL	CH
10	11	13	15

┌─ LEFT ──── CENTER ──── RIGHT ─┐

| 21 | | 16 | | 22 |

LVL
DV   19   (20)   18   LVL
▼   UP
                                 ▲

| 23 | | 17 | | 24 |

└─ L.REAR ──── SUB ──── R.REAR ─┘

B MODES   EQ
| 25 | 26 | 27 | 37 |
DELAY   PRO L.
| 28 | 29 | 30 | 38 |
DISPLAY   STEREO
| 31 | 32 | 33 | 39 |
RECALL   TEST
| 34 | 35 | 36 | 40 |

┌─ A/V INPUTS ─┐   ┌─ AUD INPUTS ─┐

(41) (42)   (43)   (44) (45)
A/V 1 VCR   SELECT   AUD 1 CD

(46) (47)   (48)   (49) (50)
A/V 2 A/V DISC MODES AUD 2 TUNER

| 51 | 52 | 53 | 54 |

| 55 |

Congratulations on your acquisition of the Acurus ACT3. Engineered and made in the U.S.A., we believe it to be the most ergonomic and technologically advanced preamplifier/processor in the world. Acurus components are internationally acclaimed as the finest value in quality audio. As an Acurus component, the ACT3 also upholds the over decade long Mondial Designs Ltd tradition of achieving outstanding sound quality, superior construction and paramount reliability.

The following are some of the ACT3's advanced features:
All circuit boards are glass epoxy with plated through holes
Separate Class A discrete outputs for all 6 channels
20 bit D/A converters for all 6 channels
Precision digitally governed analog volume controls
maintain full 20 bit resolution at all settings
Ultra high speed DSP architecture specifically engineered
for digital surround bit stream processing
Analog input pass through allows recording in 2 channel
while listening in 5.1 channel digital
Elimination of need for on screen display menus
through the use of direct access programming
Extremely high resolution video for both PAL & NTSC
without character generators in signal path
Ability to watch a movie in S-video while recording
it onto a VCR in composite video
Fully upgradeable via both software and hardware
to prevent obsolescence
Custom menu allows you to easily program ACT3
to better suit your needs
Automatic Format Detection flawlessly determines
digital sources format
Automatically recalls each modes speaker balance setup
Ergonomic and easy to use programmable remote control
can operate your entire audio/video system

The Acurus quality goes beyond the audio component, because we are represented by the finest dealer network. The Acurus dealer takes pride in the fact that he presents the finest audio/video component value in the world. We are proud of the fact that every Acurus dealer is capable of providing the knowledge and service required for this complex electronic world. *If you have any question about the setup and use of the Acurus ACT3 please feel free to call the dealer that you acquired it from. They will answer your questions and assist you with home theater installation.* On the rare occasion that they may not know an answer they will contact us and notify you. If you are not happy with the service you have received from your dealer please let us know, as we endeavor to maintain the highest level of product and representation. *Please be sure to send in your warranty card so that we can keep you appraised of future upgrades and advancements.*

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CONNECTIONS

Plug the AC power cord into the receptacle marked AC into the rear panel's lower right corner and plug the other end into an AC outlet.

Connect either your DVD player or Laser Disc player into either the optical or coaxial digital input labeled A/V Disc. *Turn to Page 7 for details of rear panel input connections.*

Note: If you are using a laser disc player you will need to connect an rf demodulator to the players output, which will convert the rf signal to a digital signal which can then be connected to the ACT 3 via either the optical or coaxial digital inputs.

Connect your other components to the inputs which best describe the component (i.e.. CD player should be connected to the audio CD input). We recommend you connect components with digital outputs to the digital inputs. In other words, a components digital output takes precedence over its analog output and you should connect both the digital and analog outputs to the same assigned input. The ACT3 will automatically route the analog input to the tape output for recording. This allows you, for example, to watch a movie in Dolby Digital while you record it onto a VCR's two channel audio inputs in Dolby Pro Logic.

Be sure all the sources are plugged into an AC outlet and turn on the power to all the source components connected to the ACT3. Push the front panel power button (1st button from left) to turn on the ACT3. You can switch between a digital source component's analog output and digital output by pressing the SELECT button on the remote control. The front panel display will show an **A** for the analog and a **D** for the digital. When in digital, the ACT 3 will automatically detect what format the digital source is (Dolby Digital, DTS or PCM) and switch to that format. Push the power button again and turn off the ACT3. Connect the ACT3's outputs to the appropriate amplifier's inputs (there are additional outputs for center channel and subwoofer which can be used to place a center channel above and below the video screen and to place subwoofers front and rear). *Turn to PAGE 9 for details of output connections on the rear panel.* Using the ACT3 remote, push button(1) on the remote's upper left labeled ACT3, then push button(9) POWER to turn on the ACT3. Lower the volume of the ACT3 to **0**. The volume's numerical designation is displayed from **0** to **70** in the upper right corner of the front panel display screen. Next turn on your amplifiers. If you don't have a subwoofer we will address that during the bass mode setup. Push button(38) PRO.L on the lower right of the remote. This will put the ACT3 into Dolby Pro Logic mode. Push button(40) TEST on the remote's lower right. This will begin the scrolling of the test tones and the front panel display will read out which channel and speaker the test tone has moved to. Set the volume to a comfortable listening level and be sure that the speaker channel displayed is the same speaker the sound is emanating from. If not, turn your system off and check your connections from the ACT3 to the amplifiers. If those appear correct, check the wire connections from your amplifiers to your speakers. When you have found the wires connected to the wrong amp inputs or speaker inputs, switch the connections before you turn your system on again. When you are certain that the test tones are emanating from the correct speaker, go to the next section for setup.

Please Note: Do not use a microphone with sound pressure meter for setting up channel levels in the following sections. A microphone's directional pattern is completely different than your ear's directional pattern. Determine all speaker levels while facing forward at your typical listening position.

Dolby Pro Logic Setup

Push button(38) PRO.L on the lower right of the remote. This will put the ACT3 into Dolby Pro Logic mode.

Push button(40) TEST on the remote's lower right to enter setup.

If you are using 5 speakers for left, center, & right main front speakers and left and right rear surround speakers you may skip this section, since the ACT 3 is set at the factory for use of 5 speakers, and go directly to Bass Management. If you are not using the full complement of 5 speakers please do the following:

Speaker Configuration Setup

While you are in set up, with the test tones scrolling through the speakers, press button(48) MODES , at the bottom center of the remote, to enter the Speaker Configuration Mode. The speaker configuration menu is now displayed on the front panel. To cycle through the speaker configurations push semicircular buttons(18)(19) LEVEL UP or LEVEL DOWN located near the center of the remote. The following speaker arrangements (shown in bold print along with the number of front/rear speakers) will appear on the front panel display:

L/C/R/RS/LS 3/2 (This mode is for a setup with left, center, & right main front speakers and left & right rear surround speakers.)

L/R/Surr 2/2 (This mode is for a setup with left & right main front speakers and left & right rear surround speakers. This mode will generate a "phantom center channel" for Dolby ProLogic and Dolby Digital 5.1, since there is no center speaker.)

LCR   3/0 (This mode is for a setup with left, center & right main front speakers only.)

L/R   2/0 (This mode is for a setup with left & right main front speakers only.)

Center 1/0 (This mode is for a setup using only a center speaker.)

When the mode you want is displayed press button(36) ENTER, then press button(40) TEST and continue to the next section - Bass Management.

Bass Management Setup

While you are in setup press button(25) B.MODES. You are now in the bass modes menu and **Output Configuration 0** to **4** will appear on the front panel display. This allows you to direct the bass using whichever configuration most applies to your speakers. Read the available options below before accessing the configuration that best applies to your system. To access the different configurations, press semicircular buttons(18)(19) LEVEL UP or LEVEL DOWN.

Configuration 0: Use this mode when all your speakers are full range since it does not redirect or filter the lower frequencies. (A full range speaker would be traditionally defined as employing at least an 8 inch woofer.) This mode may be used with or without a subwoofer.

Configuration 1: Use this configuration if your front, center and rear speakers are not full range (as defined under Configuration 3), and you are using a subwoofer. Under this configuration signals to the left & right front, left & right rear and center channels are provided high-pass filters. The low frequency signals of all 5 channels are redirected to the LFE channel and provided to the subwoofer via a low-pass filter.

Configuration 2: Use this configuration if you do not have a subwoofer, but do have full range speakers for your left & right fronts and smaller speakers for your center and rears. Under this configuration, signals to the center and rear channels are provided via high-pass filters. The low frequency signals of the center, left & right rear channels and the LFE channel are redirected to the left and right front channels via a low-pass filter.

Dolby Digital Setup

If you do not have a Dolby Digital source skip to DTS Setup on page 5.
Insert a disc with Dolby Digital 5.1 sound into your A/V disc player and push the play button. On the lower left corner of the ACT3 remote, select the input that your A/V disc player is connected to. When the ACT3 senses the Dolby Digital signal at the start of the movie, it will display Dolby Digital on the display screen. While allowing the movie to continue playing, push button(40) TEST on the remote's lower right. Continue to the next section - Center Delay

Center Delay Setup

Press semicircular button(16) CENTER, then press button(28) DELAY. To adjust the amount of delay press either semicircular button(18)(19) LEVEL UP or LEVEL DOWN.
If your seating position is equidistant to the three front speakers set the delay to **0**. (This would only occur if your three front speakers are so close together, that they are on the same plane and butted against each other.)
If your seating position is slightly closer to the center speaker than the left and right front speakers set the delay to **1**.
These delay settings increase up to a level of **5**.
The closer you are seated to the front speaker compared to the left and right fronts the greater the delay setting required. Think of each digit as adding a foot of distance between you and the front speaker. For example a setting of **3** acoustically adds a distance of 3 feet between the front speaker and you. If you wish to be precise, you may measure the distance from the front of the center speaker to your seated position and subtract that number from the distance you measure from the left front speaker to your seated position. When the correct delay setting is displayed press button(36) ENTER, then press button(40) TEST and go the next section.
Please note: Because you have set rear delay in Dolby Pro Logic it will automatically be set properly in Dolby Digital, however it will read differently (15 in Pro Logic = 0 in Digital) by a difference of -15. Dolby does not use a center channel delay in Pro Logic.

Channel Balance Level Setup

Press button(21) LEFT on the remote's center section. As the test tones scroll, listen for a speaker which appears to be louder than the others from what will be your typical video viewing and listening location. The sound will move to the next speaker every two seconds. When the sound has arrived at the speaker whose volume you wish to lower, press semicircular button(19) LEVEL DOWN. The sound will now stop at that speaker until you have finished adjusting the level. Within two seconds of your release of the level button, the sound will again begin to scroll. Continue scrolling and adjusting until all the speakers appear to be at the same loudness level when you are facing forward at your typical viewing and listening position. Write down each channel's loudness level number, appearing in the display's right corner, for later use.
Press button(36) ENTER. All the settings are stored and recalled when you play a Dolby Digital source.
Please note: Subwoofer level should be set while listening to a movie or music in order to determine output that you deem appropriate. While in Dolby Digital press button(17) SUB, then press either buttons(18)(19) LEVEL UP or LEVEL DOWN to adjust subwoofer output with all channels playing. Press button(40) TEST, then press button(36) ENTER. Your setting is stored. Remove the Dolby Digital disc from your A/V disc player and continue to DTS Setup.

DTS Setup

If you do not have a DTS source skip to Stereo Setup.
Insert a disc with DTS sound into your A/V disc player and push the play button. (If you do not currently have a DTS disc, you will not need to setup the ACT3 for DTS until you do.) On the lower left corner of the ACT3 remote, select the A/V input that your A/V disc player is connected to. When the ACT3 senses the DTS signal at the beginning of the sound, it will display **DTS** on the display screen. While allowing the disc to continue playing, push button(40) TEST on the remote's lower right. Continue to the next section.

Channel Balance Level Setup

Since DTS is 5.1 discrete channels, we suggest you use the same channel balance levels as Dolby Digital. To do this refer to the Dolby Digital balance level settings you made a written note of in the Dolby Digital section. Press button(21) LEFT on the remotes center section. The channels display will begin to scroll. There are no test tones in DTS mode. As they scroll they will display a level setting of **70** for each channel. As a channel is displayed, if you have written a lower level for the Dolby Digital setting, press semicircular button(19) LEVEL DOWN until the same number is displayed. Continue doing this for each channel until all the DTS levels match the Dolby Digital levels. Press button(36) ENTER. All the settings are stored and recalled when you play a DTS source. If, after listening to several DTS sources, you prefer a different channel balance setup you should repeat this procedure and change the balance levels.
Please note: Subwoofer level should be set while listening to a movie or music in order to determine output that you deem appropriate. You can set a subwoofer level for each of the 4 DSP modes. While in a DSP mode press button(17) SUB, then press either buttons(18)(19) LEVEL UP or LEVEL DOWN to adjust subwoofer output with all channels playing. Press button(40) TEST, then press button(36) ENTER. Your setting is stored.

Stereo Setup

Press button(39) STEREO on the remote and **Stereo** will appear on the front panel display screen. You are now in stereo. Now press button(40) TEST on the remote to scroll the test tones. As the test tones scroll, listen for the left or right front speaker which appears to be louder than the other from what will be your typical listening location. The sound will move to the next speaker every two seconds. When the sound has arrived at the speaker whose volume you wish to lower, press semicircular button(19) LEVEL DOWN. The sound will now stop at that speaker until you have finished adjusting the level. Within two seconds of your release of the level button, the sound will again begin to scroll. Continue scrolling and adjusting until the speakers appear to be at the same loudness level when you are facing forward at your listening position. Now press button(36) ENTER to store the settings.
Please note: Subwoofer level should be set while listening to a movie or music in order to determine output that you deem appropriate. While in Stereo press button(17) SUB, then press either buttons(18)(19) LEVEL UP or LEVEL DOWN to adjust subwoofer output with all channels playing. Press button(40) TEST, then press button(36) ENTER. Your setting is stored. Continue to Modes Setup

Modes Setup

There are four DSP modes that can create different surround effects from a stereo analog source. These four DSP modes can also have speaker levels stored which are automatically recalled when a particular mode is used. To setup the speaker levels for each mode begin with the ACT3 in Stereo Analog (with **Stereo** and **A** appearing on the front panel display screen) while playing a stereo music source. If **D** appears on the display, push button(43) SELECT on the remote to switch to the analog input. To activate a DSP mode push button(48) MODES on the remote. **Club** will now appear on the front panel display screen.

Now press button(40) TEST on the remote to scroll the test tones. As the channels scroll with music, listen for a speaker which appears to be louder than the others at what will be your typical video viewing and listening location. The sound will move to the next speaker every two seconds. When the sound has arrived at the speaker whose volume you wish to lower, push semicircular button(19) LEVEL DOWN located near the center of the remote. The sound will now stop at that speaker until you have finished adjusting the level. Within two seconds of your release of the level button, the sound will again begin to scroll. Continue scrolling and adjusting until all the speakers appear to be at the same loudness level when you are facing forward at your typical viewing and listening position. Press button(36) ENTER to store the settings for Club Mode. Press button(48) MODES again and **Hall** will appear on the display screen. Repeat the above process used for setting up and storing Mode speaker levels. When Hall Mode settings are stored, push button(48) MODES and **Arena** will appear on the screen, and again repeat the above process. When Arena Mode speaker levels are stored, push button(48) MODES and **Party** will appear on the screen, and again repeat the above process. You have now stored the speaker level settings for all the DSP modes. These settings will be automatically recalled when a mode is selected.

Please note: Subwoofer level should be set while listening to a movie or music in order to determine output that you deem appropriate. You can set a subwoofer level for each of the 4 DSP modes. While in a DSP mode press button(17) SUB, then press either buttons(18)(19) LEVEL UP or LEVEL DOWN to adjust subwoofer output with all channels playing. Press button(40) TEST, then press button(36) ENTER. Your setting is stored.

Automatic Format Detection

The ACT3 will automatically detect which format a digital source is in, PCM, Dolby Digital or DTS, and switch to that format.

Temporary change of Setup levels during listening

Front-Rear Level - The overall front to rear balance can be adjusted while watching a movie by going to the speaker level quadrant on the remote and pushing either button(23)(24) L.REAR or R.REAR. The ACT3 front panel will then display the front-rear balance. Pushing the LEVEL UP semicircular button will shift the balance towards the front. Pushing the LEVEL DOWN semicircular button will shift the balance towards the rear speakers.

Center Channel Level - The center channel level can be adjusted by pushing the semicircular button(16) CENTER. The LEVEL UP and LEVEL DOWN buttons will increase or decrease the center channels volume level, as shown on the front panel display. Since the center channel is where most of the dialogue takes place in a movie, increasing the center channel level will make the dialogue more intelligible without increasing the overall loudness of your system.

Subwoofer Level - Pushing the semicircular button(17) SUB will allow you to adjust the subwoofers output level by pushing the LEVEL UP or LEVEL DOWN buttons. The front panel display will show the adjustment.

Night Mode - The circular button(20) SEL at the center of the speaker level quadrant will select night mode (**N** appears on the display) when listening to Dolby Digital only. This compresses the overall volume such that the quiet passages are louder and the loud passages are quieter.

Recalling setup levels

Pushing the RECALL button located on the lower left of the remote will return the balance setting to those stored in memory during test setup. When the ACT3's power is turned off and then turned on again the speaker level settings for Dolby Digital, Dolby ProLogic, Stereo, Club, Hall, Arena, Party and DTS selected during the test setup, will automatically be recalled when the ACT3 enters into a mode.

VIDEO INPUTS

COMPOSITE

The first four inputs - labeled A/V1, A/V2, VCR, A/V DISC are Composite Video inputs. The labeling we chose is to assist you in recalling which source (i.e.. Laser Disc, DVD, VCR, Satellite Dish, Cable TV etc.) is connected to a particular ACT3 input. Since all inputs are engineered to pass any composite video signal accurately in order to provide the best picture, it doesn't matter which source you connect to which input. For example, you could connect a VCR to the input labeled A/V DISC and the picture would be just as accurate as connecting the vcr to the input labeled VCR.. If you have an A/V source with an Optical digital audio output, and you want to use this Optical output, you will need to connect this source's Video output to either the A/V1 or A/V2 video input. *For best results, be sure to use cables designed for video.*

S-VIDEO

The next two inputs - labeled A/V1, A/V2 are S-Video inputs. The ACT3 allows you to connect both composite and S-video outputs from the same source if you choose. For example, if you have DVD player with both composite and S-video outputs, you may connect both its composite video output to the composite A/V1 input and its S-video output to the S-video A/V1 input. When you play that source you will have a picture from both the composite and S-video outputs of the ACT3. This allows you , for instance, to watch the movie in S-video while you record onto your VCR in composite video. *Do not assume that if a source has an S-video output, that the S-video will provide a better picture. Always compare the source's composite and S-video outputs to determine which is the better picture.*

HOW TO "CREATE" MORE VIDEO INPUTS

Across the bottom of the ACT3 remote are four macro buttons labeled M1, M2, M3, M4. You can connect any source's video output directly to your monitor or TV, while connecting the source's audio output to any of the ACT3's audio inputs. Any of the above macro buttons can be programmed to switch both the video(TV) and audio(ACT3) inputs simultaneously. With this remote feature any type of video source outputs and monitor inputs, RGB or Component video for example, can be seamlessly integrated with the ACT 3. *See the Acurus ACT3 Remote Control Operating Instructions section for macro button programming details.*

AUDIO INPUTS

Please note: You may connect a components Digital and Analog audio outputs to the ACT 3's same designated inputs. For example, you may connect your DVD player's video output, Digital audio output and left / right Analog audio outputs to A/V 1. The ACT 3 will automatically assign priority to the Digital audio input in all such cases. The Analog audio inputs are used for recording from the audio tape outputs. This allows you to watch a movie in Dolby Digital, for instance, while recording the movie on your VCR in Dolby Pro Logic. You can choose to listen to the Analog audio inputs by pushing button(43) SELECT on the remote. The SELECT button allows you to switch between the Analog and Digital connections of any input.
If by mistake you connect a component to both the Coaxial and TOSLINK inputs, the ACT 3 will only allow that component's TOSLINK input signal to operate. This prevents the mistake of sending two digital bit streams, at the same time, through the D/A converter.

THE 3 TOSLINK OPTICAL DIGITAL INPUTS

The ACT 3's A/V TOSLINK inputs are located in the same row as the Coaxial inputs. You may choose to connect an A/V source with TOSLINK audio outputs to either the A/V 1 or A/V 2 inputs. *Always be sure that an A/V source has both its Audio and Video outputs connected to the Audio and Video inputs of the same source designation, so your sound will match your picture.* If you choose to use an TOSLINK output from an Audio source connect it to the TOSLINK input labeled AUDIO1.

THE 8 COAXIAL DIGITAL INPUTS

The first 4 Coaxial digital inputs are for your audio/video sources. Connect your A/V source component's digital coaxial audio output to the same labeled input as its video output is connected. For example if your DVD player's video output is connected to the ACT 3's A/V1 video input connect the DVD players digital audio output to the Digital input under the A/V1 label. The ACT 3 will now switch the DVD's audio and video inputs simultaneously. The next 4 Coaxial digital inputs labeled AUDIO1, AUDIO2, CD and TUNER are for your audio sources. Note: All audio inputs offer 20 bit digital to analog conversion with discrete Class A outputs, labeling of inputs is for convenience.

THE 8 STEREO ANALOG INPUTS

The ACT 3 offers 8 Analog inputs. The first 4 of these inputs are for A/V sources that do not offer digital audio outputs. Sources such as VCRs, Cable Television, Satellite Television and Television Tuners typically offer only stereo analog outputs. Connect the Analog stereo outputs of any of these sources to the Analog stereo inputs under the same label that the video output is connected to be assured that the audio output will match the television picture. If your source has only a mono audio output, you will need to use a Y connector. The single connector end of the Y is connected to the sources output and the dual connector end is connected to the left and right inputs. (Since it is a mono signal it doesn't matter which you connect to left or right as long as they are both connected.)
The 4 analog inputs labeled AUDIO1, AUDIO2, CD and TUNER are for stereo Audio sources. Since all the Analog inputs have Class A discrete outputs it does not matter what source you connect to an input because they all go through the same high quality output stage, our labeling of inputs is for convenience only. *See Advanced Features Section for custom labeling.*

Video Outputs
S-VIDEO
If you are using either or both of the S-video inputs connect the S-video output to your TV or monitor S-video input. When you are playing an S-video source and want to watch it in S-video switch to the S-video input on your TV or monitor that the ACT3's S-video output is connected. If you are using an S-VHS VCR, connect the ACT3's S-video output to the S-VHS VCR's input and the S-VHS VCR's output to the TV's S-video input.

COMPOSITE VIDEO
There are two buffered composite video outputs. Connect the output labeled MONITOR to your monitor or TV's composite input. Connect the output labeled RECORD to your VCR's composite video input.

Audio Outputs
AUDIO RECORD OUTPUTS
Connect one set, labeled left and right, of the record outputs to the left and right audio inputs of your VCR. This allows you to record the audio portion of the selected A/V component to your VCR. Connect the other set of outputs to an audio tape recorders left and right audio inputs. *Please note*: An analog signal will only be present at the audio record outputs when a selected sources analog outputs are connected to the ACT3.

PREAMP AUDIO OUTPUTS
Connect the preamp audio outputs to the appropriate inputs of your amplifiers. The left and right front outputs should be connected to the amplifier channels that are connected to your front left and right speakers. The left and right surround outputs should be connected to the amplifier inputs connected to your left and right rear speakers. Select either center channel output to connect to the input of the amplifier channel connected to your center speaker. Two center channel outputs are provided for larger installations where you might choose to have two center channel speakers. Connect either subwoofer output to your subwoofer's input. Two subwoofer outputs are provided allowing for subwoofers to be placed front and rear.

PORTS
RS-232 DATA PORT
This port permits the ACT 3 to be interfaced with future Acurus hardware systems.

IR DATA PORT
The rear panel data port labeled IR IN allows access to the front panel and remote functions. This is specifically useful for interfacing the ACT 3 with multiroom or infrared repeater systems.

CONTROL VOLTAGE PORT
The port labeled +5VDC OUT can turn an entire home theater system, including electric projection screens, on and off via the optional Mondial RPC-120 AC filter and switcher.

FRONT PANEL CONTROLS

Pressing the POWER button turns the ACT 3 on and off.

Pressing any input button labeled A/V 1, A/V 2, VCR, A/V DISC, AUDIO 1, AUDIO 2, CD or TUNER switches to that input and lights the green LED above the input.

Pushing the button again, of an input that is already selected and is indicated as such with a lit green LED above it, will allow access to each of the available modes - Stereo, Club, Hall, Arena, Party and Dolby Pro Logic. These modes can be accessed only if there is no Dolby Digital or DTS signal at the selected input.

Turning the volume control knob counterclockwise (down) and holding it, decreases the volume until it is released. The lowest volume setting is indicated by the number 0 on the front panel display. Turning the volume control knob clockwise (up) and holding it, increases the volume until it is released. The volume can be controlled by one decibel at a time. The front panel indicates a decibel change by displaying a number one digit higher. For example a volume setting of 58 is one decibel higher than 57. The maximum volume setting is indicated by the number 70 on the front panel display.

REMOTE CONTROL FUNCTIONS

Please note: The ACT3 remote is programmable and can control up to seven other components in your system. When you push the button labeled ACT3, the remote controls the ACT3 functions. All ACT3 functions are labeled in gold directly on the body of the remote, the functions of the other components are labeled in black on the back lit buttons. The exceptions are POWER labeled in red, which can turn on the power to the ACT3 and all your programmed components, MUTE which mutes the ACT3, CH(channel) which will change channels on your TV, satellite, VCR or cable box when programmed to do so, SEL which puts Dolby Digital into Night mode and ENTER which stores each modes setup in memory.

Please open to the inside front cover for a diagram of Remote Control with numbered which correspond to the numbers below.

1 - 8 Device Buttons

Use the device selection buttons, when programmed, to choose which component the remote control is operating. When a button on the remote control is pressed, the Device Button for the component being controlled will flash red. If the button for a particular component does not have a function the Device Button will not flash.

1. ACT3(AUD): The ACT3 Device Button configures the remote to control the ACT3 preamp/processor. When the ACT3 custom menu is set to separate on/off, this button will also transmit the power on function when pressed. *See Advanced Features Section for custom menus.*

2. CD: The CD Device Button configures the remote to control the CD.

3. DVD: The DVD Device Button configures the remote to control the DVD.

4. AUX: The AUX Device Button configures the remote to control an Auxiliary device

5. SAT: The SAT Device Button configures the remote to control a Satellite dish receiver.

6. TV: The TV Device Button configures the remote to control the Television

7. VCR: The VCR Device Button configures the remote to control the VCR

8. CBL: The CD Device Button configures the remote to control the Cable box.

9 - 15 Punch Through Buttons

The following commands are associated with the ACT3, and their functions may differ for other components.

9. Power Button : The Power Button transmits the power function for the ACT3, and will toggle the power on and off.

10. Mute Button : The Mute Button will mute the outputs of the ACT3.
 (See also section D Volume Punch Through in the Remote operators manual)

11. T/V : This button is set aside for future use.

12. VOL UP : This will increase the volume of the ACT3. Maximum volume setting on the ACT3 is 70, which is 0dB. (See also section D Volume Punch Through in the Remote operators manual)

13. VOL DN : This will decrease the volume of the ACT3. Minimum volume setting on the ACT3 is 0, which is -70dB. To completely shut off the preamp outputs, press the Mute Button .(See also section D Volume Punch Through in the Remote operators manual)

14. CH UP : This button is set side for future use on the ACT3.

15. CH DN : This button is set side for future use on the ACT3.

16 - 24 Speaker Level Control Buttons

16. CENTER : This button will bring up the center channel level control. In normal operation, the center channel level control will remain active for three seconds. By pressing the Level Up(18) and Level Down(19) buttons, you can adjust the level of the center channel. When in a mode that does not have a center channel (such as stereo) pushing the Center Button will have no effect.

17. SUB : This button will bring up the subwoofer level control. In normal operation, the subwoofer level control will remain active for three seconds. By pressing the Level Up(18) and Level Down(19) buttons, you can adjust the level of the subwoofer.

18. LVL UP : The LEVEL UP button will increase the level of the selected channel, when that channels level adjustment control is active. It is also used to adjust front/rear balance toward the front channels when the front/rear balance control is active.

19. LVL DN : The LEVEL DOWN button will decrease the level of the selected channel, when that channels level adjustment control is active. It is also used to adjust front/rear balance toward the rear channels when the front/rear balance control is active.

20. SEL/PLAY : This button is used when in Dolby Digital mode to place the ACT3 into Night Mode for late night, compressed dynamic range listening. In this mode, the level of quiet sounds is raised, and the level of louder sounds is lowered to allow for a lower overall volume. When in Night Mode the letter **N** will appear on the front panel display.

21. LEFT : This button, when in Test(40) Setup(setups begin on page 2) will bring up the level adjustment control for the Left Front channel. When you are in a speaker configuration which does not have a front left channel, pressing the LEFT button will have no effect.

22. RIGHT : This button, when in Test(40) Setup(setups begin on page 2) will bring up the level adjustment control for the Right Front channel. When you are in a speaker configuration which does not have a front right channel, pressing the RIGHT button will have no effect.

23. L.REAR : This button in normal operation will bring up the Front/Rear Balance adjustment menu. When in Test(40) Setup (setups begin on page 2) will bring up the level adjustment control for the Left Rear channel. The LVL UP(18) and LVL DN(19) buttons are used to adjust

the level or balance accordingly. When you are in a mode or speaker configuration which does not have a rear channels, pressing the L.REAR button will have no effect.

24. R.REAR : This button in normal operation will bring up the Front/Rear Balance adjustment menu. When in Test(40) Setup (setups begin on page 2) will bring up the level adjustment control for the Right Rear channel. The LVL UP(18) and LVL DN(19) buttons are used to adjust the level or balance accordingly. When you are in a mode or speaker configuration which does not have a rear channels, pressing the R.REAR button will have no effect.

25 - 40,43,48 Mode Selection Buttons

25. B.MODES : The BASS MODES button when in Test(40) Setup (setups begin on page 2) will bring up the current bass management configuration selected. By pressing the LVL UP(18) and LVL DN(19) buttons, you can scroll throughout the available bass management options. For a complete description of these options refer to Bass Management section on page 2. The bass management configuration is automatically saved in memory.

26,27,29,30,32,33,34,36: Reserved for future use

28. DELAY : When in the center channel level control, or the Left-Right rear channel control, pressing the delay button will bring you into the delay menu from that particular channel. By using the LVL UP(18), and LVL DN(19) buttons you can scroll though the delay settings. For more detailed information on setting the rear and center channel delays, see pages 3 and 4.

31. DISPLAY : The display button is used to scroll through the bottom line of the front panel display, to access information not normally available on display such as the program format. This tells you how many channels the source is currently providing.

By Pressing the "0" button on the remote and then pressing display you can access the second function of the DISPLAY button which will turn off the front panel display. While the display is off, pressing DISPLAY again will turn it back on.

35. RECALL : Once you have saved your settings in the ACT3 you can adjust them as necessary without changing the saved settings. Press the recall button at any time to revert back to the saved settings.

36. ENTER : The ENTER button is used to save your settings for the particular mode that you are in. The ENTER button will only save the settings when you are in setup mode (accessed by the TEST(40) button.

37. EQ: Reserved for future use.

38. PRO L. : The PRO L. button will place the ACT3 into Pro Logic mode. While the ACT3 is accessing an analog signal or a Dolby Digital signal, pressing the PRO L. button will load Dolby Pro Logic and decode from the analog input. While accessing a digital signal, other than Dolby Digital the ACT3 will load Pro Logic and decode from the digital input.

39. STEREO : The STEREO button operates similar to the PRO L.(38) button. While accessing an analog signal, pressing the STEREO button will place the ACT3 into stereo mode decoding an analog signal. While in Dolby Digital, pressing the STEREO button will convert the current soundtrack into a two channel(L/R) down mix. When in a DSP mode pressing the STEREO button will return Auto Format Detection to that input.

40. TEST : The TEST button access' the ACT3's Test Setup mode allowing the adjustment of each channel individually. You will only have access to the channels for which the mode utilizes. For example, in Stereo mode, you will have access to the Front Left, Front Right, and Subwoofer channels. In Dolby Digital mode, you would have access to all 6 channels.

The ACT3 allows you to save a different setting for each mode. So, you can have a different subwoofer (or any channel) level setting for Stereo, as you do for Dolby digital.

The settings are saved into memory by exiting the Test Setup menu using the ENTER(36) button. By pressing the TEST button while already in Test Setup mode you will exit the Test Setup mode and the settings, although presently valid, will not be saved into memory, and the next time the mode is loaded, it will revert back to the saved settings. If you change the disc while the test tones are cycling, the ACT3 will not change to the format of the newly inserted disc. You must come out of test and reinsert the disc for it to acknowledge the new disc's digital format. See also: Enter Button

43. SELECT : The select button allows you to toggle between the Analog, and Digital input connected to a particular source. When in Digital mode, pressing the select button will access the corresponding analog input using the same mode currently selected. When in Analog mode, and switching to digital, the ACT3 will run a check to determine what type of signal is present on the digital input, and switch to that corresponding format. For example, the system is running in Pro Logic from the A/V 1 analog input, and a digital signal from a DVD player is plugged into the digital input of A/V 1 running a Dolby Digital encoded disc. By pressing the select button, the ACT3 will access the digital input, and switch to Dolby Digital. However, supposing the disc playing in the DVD player is a conventional PCM CD, the unit will switch to Pro Logic, the last mode used at this input, and decode from the digital input. 48. MODES : The MODES button is used in two different instances. During Test(40) Setup, pressing the MODES button accesses the Speaker Mode configuration menu. While in the speaker configuration menu, pressing the LVL UP(18) and LVL DN(19) buttons allows you to scroll through the available speaker options. (see Speaker Configurations on page2) When in the speaker mode configuration menu, pressing the MODES button again will exit this menu.

When the ACT3 is in Stereo(39) Analog mode pressing the MODES button will scroll through the available DSP modes, and back to Stereo mode. See also: Mode Setup page6.

Input Buttons
41,42,46,47. A/V 1, A/V 2, VCR, A/V DISC : Pressing these buttons will access the input connected to the corresponding audio and video inputs on the rear panel.
44,45,49,50. AUD1,AUD2,CD,TUNER : Pressing these buttons will access the audio input connected to the corresponding input on the rear panel. The video will remain switched to the previously selected video input.

51-54 Macro Buttons
M1-M4 Macro Buttons: See "Programming the Macro buttons" in Acurus ACT3 Remote Control Operating Instructions section.

Advanced Features

The ACT3 contains a number of custom menus, which can enhance it's usability, but are not necessary for operation of the ACT3. Accessing and changing the custom menus will affect the method in which some of the ACT3 functions operate. The ACT3 can not be damaged in any way by altering the custom menus, but as a precaution it is best that you understand fully what the custom menus will change before altering them. Your dealer will be able to answer any questions regarding the custom menus, and their functions.

To access the custom menus, be sure that the ACT3 is in the off position. HOLD the volume knob in the up (clockwise) position, and while holding the knob, press the Power button. You can then release the volume knob. The front panel display should read Custom Menu for two seconds, and will then proceed to the first custom adjustment. If this does not access the custom menu, and the power for the ACT3 turns on, shut the power down, and repeat the procedure. The custom menu items can be altered by turning the volume knob to the up or down to scroll through the available options.

On items with a Yes or No option, up(clockwise) corresponds to Yes, and down(counterclockwise) corresponds to No.

Once you have selected the correct adjustment, the selection is saved, and the next menu is accessed by pressing the power button. The menu items will display the current setting (defaults are listed below) so if you have entered this menu by mistake, you can press the power button repeatedly, until the display goes blank. Once the display goes blank, you have exited the custom menu mode, and can continue normal operation of the ACT3.

Custom Menu Items

SEPARATE ON/OFF (DEFAULT NO)

Set to the NO position, the Separate On/Off command allows the Power button on the ACT3 remote to toggle the power On and Off.

Set to the YES position, the Separate On/Off command allows the ACT3 to be controlled by a separate On command and Off command. When in this mode, the ACT3(AUD) button(1) on the top left of the remote will issue the ON command, and the Power button(9) will issue the OFF command. This can be useful in custom setups using Macro commands where you can be sure the command that is set will either turn the unit on or off.

AUTO ON/OFF (DEFAULT NO)

Set to the NO position, the ACT3, when power is first introduced, will run through it's initialization procedures, and then enter the Standby mode.

Set to the YES position, the ACT3, when power is introduced, will run through it's initialization procedures and then power on. This is useful in custom setups where the AC power to the ACT3 is switched on and off.

TEST TONE SCROLL (DEFAULT YES)

Set to the YES position, when the ACT3 is placed into Test Setup Mode, the channel level indicators for a particular channel will remain active for two seconds, and then scroll to the next available channel

Set to the NO position, when the ACT3 is placed into Test Setup Mode, the Test Tones will not scroll, and each channel must be manually selected on the remote to access the test tone for that particular channel.

TEST TONE OFF (DEFAULT NO)
Set to the NO position, when the ACT3 is placed into Test Setup Mode, The pink noise generator will generate a tone at the channel selected.
Set to the YES position, when the ACT3 is placed in Test Setup Mode, you will not hear a pink noise tone. The soundtrack will play uninhibited. This is useful once the system is already setup so minor adjustments can be made to all channels while listening to the soundtrack, or music selection.

CUSTOM INPUT NAMES (DEFAULT NO)
The inputs on the ACT3 are labeled for convenience. The Custom Input Name function allows you to add the name of the actual device associated with a particular input, and this name will be displayed on the front panel display when that input is selected.
Set to the NO position, the ACT3 front panel will display the default input names found on the front panel, rear panel, and remote control. (A/V 1, A/V 2, etc.)
Set to the YES position, the ACT3 will display the custom input names saved in memory for each particular input.
By setting this menu item to YES, and pressing the power button, the ACT3 will proceed through a list of the eight individual inputs. Below each input will be the custom name for that particular input.
By turning the volume knob up or down, the user can scroll through the list of available names:
DVD,Tuner,Satellite,VCR 1,VCR 2,Laser Disc,Television,Compact Disc, or DSS
Once you have found the most appropriate name for the particular input, save the selection by pressing the power button, and the unit will proceed to the next input.
Once you have gone through each of the custom menu items, the ACT3 front panel will go blank, and the processor will be in standby mode.

Program Format Display
The program format display is used to determine what format of a Dolby Digital bitstream is being received by the ACT3. The following formats are applicable, although not all are currently available on today's software.
3/2 L/C/R/LS/RS (This is the standard Dolby Digital 5.1 format.)
2/0 Left/Right (This is 2 channel encoded Dolby Digital) *Please note*: With this format the ACT3 will automatically set to Pro Logic mode for processing. This is indicated on the unit by Pro Logic on the LED mode indicator, and **Dolby Digital** on the front panel display.
1+1 CH1,CH2 (Two separate channels)
1/0 Center Only (Center channel encoded only)
3/0 L/C/R (Encoded with the three front channels)
2/1 L/R/Surr (Left and Right channels with mono surround)
3/1 L/C/R/Surr (Left, Center and Right channels with mono surround)
2/2 L/R/LS/RS (Discrete Left, Right front and Left, Right rear channels)
The above information is valid only when a Dolby Digital bit stream is present and the ACT3 is in Dolby Digital mode.

Simultaneously Selecting Separate Video and Audio

You can easily view the video portion from any of the 4 A/V inputs while listening to the audio from any of the 4 Audio only inputs. Select any of the A/V inputs you want to view by pressing the appropriate button on the front panel or remote control. Then press the button of the Audio only input you want to hear. The selected video portion of the A/V input will remain on screen while the audio portion will switch to the selected Audio input.

Reset Procedure

This procedure allows the ACT3 to be reset to its original factory default settings. This allows you to purge any settings made, thereby allowing you to begin the setup procedures anew.
With the AC power cord plugged in, but with the ACT3's power off, turn and hold the volume knob down. Now press the power button on the front panel and release the volume knob. When executed properly, the front panel display will read - **Reset Processor?**
Respond by turning the volume knob up for **Yes**, or down for **No**. Press the power button to enter your selection. By selecting **Yes**, the ACT3 will reinitialize to its factory settings. *For your convenience, if custom input source names were set they will remain when the processor is reset.*

TROUBLESHOOTING

1 - My a/v system has a low frequency hum.
This is usually caused by a current present on ground from either your cable TV or antenna system. To discover if this is where the hum is emanating from disconnect all cable TV and/or antennas from your a/v system. If the hum goes away, the solution is to acquire a *MAGIC*. This connects between your cable TV or antenna and the a/v component. The MAGIC is a patented device and is the only component in the world that in addition to eliminating hum, can improve video picture quality. Contact your Acurus dealer to purchase either a MAGIC or MAGIC Splitter if you need a splitter in your system. If you have a DSS receiver connected to your system and the hum is eliminated when the DSS receiver is disconnected from your system follow the procedure outlined below in 3.

2 - I hear ticks through the speakers when I use certain functions of my video player.
We have heard some sources, such as video disc players, exhibit strange noises when accessing some functions, such as skip or fast forward. This appears to be normal for some players. In addition, players can be sensitive to static electricity and ticks can be heard through the loudspeaker from the static electricity.

3 - I hear a tick through the speakers when I switch inputs.
This indicates that a component, connected to the ACT3, has unwanted DC present at either its input or output. To fully protect your amplifier and loudspeakers in the event of a failure of one of your systems source components or an AC power failure the ACT3's output relays will open and completely disconnect the ACT3 and all the source components connected to the ACT3 from the amplifier and loudspeakers.
To discover the offending component, disconnect all your sources outputs from the ACT3's inputs.

Follow this sequence: Turn off the ACT3. Disconnect all source components (such as a DSS receiver or VCR). Turn on the ACT3 along with your entire system. Return to your seated listening position. Using the remote, switch inputs. Listen for the tick through the speakers. If the tick is still present, an amplifier in your system has DC present at its input and is creating the audible tick when the ACT3 disconnects its outputs to the amplifier. In this case contact the amplifier manufacturer or subwoofer manufacturer (subs with built in amps) and find out if the amplifier has DC at its input. If, when all the sources are disconnected, the loudspeaker tick is gone the offending component is one of your sources. Turn off the ACT3, connect a source component, turn on the system (ACT3, source component and amplifiers), return to your seat, switch an input, and listen for the tick through the speakers. Continue this procedure until the tick reappears. The component you connected, when the tick from your speakers reappeared, is the one putting out DC.

To solve the problem please follow this procedure. Turn off the system, loosen a chassis screw on the problem source component and connect a wire of at least 16 gauge to the chassis screw and tighten the screw so that the wire is now attached. Connect the wire's other end to a chassis screw on an amplifier in the system and tighten the screw. Now reconnect the components a/v outputs to the ACT 3, turn on the system, return to your listening position, switch an input from the remote and listen for the sound through the speakers. The tick should be significantly reduced or eliminated.

4 - The ACT3 is locked up and doesn't change inputs.
This condition implies that the ACT3 received some form of electrical discharge, either through the AC connection, an attached component or as strong airborne static. To reset the ACT3 unplug its AC power cord and then reconnect it again. This will return it to normal operation. A source, such as video disc player, may also lock up for the same reason. Follow the above procedure to return it to normal operation.

Operating Instructions
ACURUS ACT-3 Remote Control

The ACURUS ACT-3 remote control has been designed to operate eight different Audio/Video components. It is preprogrammed to operate with the Mondial ACURUS ACT-3, as well as, CD, Tape, Satellite, TV, VCR, Cable, and DVD equipment of other manufacturers.

In the Audio mode, the remote Code 001 will only operate the ACURUS ACT-3.

A) Programming the Remote Control :

1. Three Digit Code Method.

The remote control can be programmed by pressing in a three digit code number, listed in the code table, that corresponds to particular manufactures and brands of Audio/Video equipment.

Step 1. Turn on the equipment you wish to program.

Step 2. Press the Device button and Mute button, simultaneously, and hold until the red Led of the Device button remains lit. (The LED will stay on for 20 seconds. The next step must be entered during this period.)

Step 3 Point the remote control toward the equipment and press in the three digit code number that is assigned to your brand of equipment. The equipment will turn off when the correct code number is entered.

Note: If there is more than one three digit number listed for your brand, try one code number at a time until your equipment turns off. When it turns off, you have selected the right code number for your equipment.

Step 4. Store the code number by pressing the corresponding Device button once again. The Device button will blink twice to confirm that the code has been stored and then turn off.

Step 5. Try all the functions on the remote control. If any of the functions do not work as they should, repeat from Step 2 using the next three digit code number assigned to your brand.

2. Auto Search Method:
If none of the three digit code numbers assigned to your brand shut off your equipment or the code table does not list your brand, you can use the Auto Search Method to find the right code number for your equipment.

Step 1. Turn on the equipment you wish to operate.

Step 2. Press the Device and Mute buttons simultaneously, and hold until the red LED of the Device button remains lit. (The LED will stay on for 20 seconds.)

Step 3. Press and hold the CH UP or CH DOWN buttons. The remote will emit a series of Power On/OFF code signals that are stored in its memory. Release the CH button as soon as the equipment turn off.

Step 4. Press the Device button to store the code. The Device Button will blink twice to confirm that the code has been stored. The LED will then turn off.

B. To Find the Code Number That was Stored for a Device :

Step 1. Press the Device button and Mute button simultaneously, and hold until the red LED of the Device Buton remains lit.

Step 2. Press the Exit button. The Device button will blink indicating the number of each digit of the code. Each digit is separated by a 1 second "off" interval of the LED.

Example: One blink, LED OFF, Three blinks, LED OFF and Eight blinks, indicates the code number 138. Note: Ten blinks is equal to the number 0.

C. Programming the Macro buttons (M1 - M4, Power) to send out multiple commands.

The macro buttons can send out up to 8 commands with one push button in the Audio, SAT and Cable modes. These buttons can be used to turn on and turn off up to four different components with one button or to select your favorite channel, etc.

Setting Up:

Step 1. Press the Device button and Mute button simultaneously, hold until the red LED of the Device button remains lit. The LED will turn on for 20 seconds.

Step 2. Press the macro button you wish to program.

Step 3. Press up to 8 buttons you wish to store. Pressing the Device button to change modes is considered one command.

Step 4. Press the Channel UP button to store the commands. The Device Button will blink twice to confirm the programming.

Note: The Power On/Off code is stored using the MUTE button during macro button programming.

D. Volume Punch Through:

The user can program the remote to select the Audio or TV Volume controls (Volume UP, Down and MUTE) to operate in any of the eight modes.

Step 1. Press the Device and MUTE button, simultaneously, hold until the red LED of the Device button remains lit.

Step 2. Press the Volume UP button.

Step 3. Press the Audio or TV Device button, depending on whether AUDIO volume or TV volume is desired for the particular Device mode. The Device button will blink twice, to confirm the programming and then turn off .

Example: If you wish to have the Audio volume operate in the VCR mode, you would press the VCR Device button in Step 1 and the Audio Device button in Step 3.

E. Programming a Second Device onto Another Device Button:
Example: Assigning a second TV to the VCR Device Button.

Step 1. Press the Device button you wish to store the second device to, and the Mute button, simultaneously, and hold until the red LED of the Device button remains lit. (eg. VCR and MUTE buttons)

Step 2. Press the Device button of the equipment you wish to transfer. (eg. TV Device button)

Step 3. Punch in three digit code number of the equipment you wish to assign. (eg. From the TV code table.)

Step 4. Press the Device button once again to store the code. (eg. VCR button)

Step 5. The Device button will blink twice confirming that the code has been stored. The second TV will now operate in the VCR mode.

TV CODES

MANUFACTURER	CODE NUMBER (3 DIGIT) LIST
A MARK	112
ADMIRAL	072 081 161
AKAI	001 146
AMPRO	073 167
ANAM	043 054 055 056 080 104 108 112 118 121
AOC	001 004 058 112
CANDLE	001 002 003 004
CAPEHART	058
CETRONIC	043
CITIZEN	001 002 003 004 101 143
CLASSIC	043
CONCERTO	004
CONTEC	043 051
CORONADO	143
CRAIG	054
CROWN	143

CURTIS MATHES	004 101 143
CURTISMATHES	001
CXC	043
DAEWOO	004 055 103 111 114 127 143
DAYTRON	004 143
DYNASTY	043
DYNATECH	062
ELECTROHOME	024 143
EMERSON	001 004 005 028 043 047 048 051 096 143 151 153 154 155
FISHER	007 057
FUNAI	028 043
FUTURETECH	043
GE	004 008 009 034 056 073 074 091 130 144 155 160 161
GOLDTSAR	004 106 110 112 113 119 127 143
HALL MARK	004
HITACHI	004 007 010 011 012 023 075 143 158 163
INFINITY	164
INKEL	129
JBL	164
JCP	001
JCPENNY	004 008 024 030 065 101 143 160
JENSEN	013
JVC	034 038 070 083
KENWOOD	001 070
KLOSS	002 059
KTV	043 143 154
LODGENET	072
LOGIK	072
LUXMAN	004
LXI	007 015 052 081 160 164
MAGNAVOX	001 003 004 022 059 060 061 063 064 127 164
MARANTZ	001 164
MATSUI	164
MEMOREX	004 007 072
METZ	088
MGA	001 004 024 042
MINERVA	088
MITSUBISHI	004 024 040 042 109 146
MTC	001 004 062 101
NAD	015 025
NEC	001 019 024 040 056 130 134
NIKEI	043
ONKING	043
ONWA	043
OPTONICA	019 081
PANASONIC	034 056 080 164
PHILCO	001 003 004 024 056 059 060 063 064 127 143 164
PHILIPS	001 003 004 005 038 059 093 164
PIONEER	004 018 023 025 135 176
PORTLAND	004 143
PROSCAN	144 160 161 167

PROTON	004 058 143 171 173
QUASAR	034 056
RADIO SHACK	004 019 047 127 143
RCA	001 004 023 024 056 065 074 144 152 156 160 161
REALISTIC	007 019 047
RUNCO	072 169
SAMPO	001 004 058
SAMSUNG	004 101 127 133 143 160
SANYO	007 020 021 033 053 057 082
SCOTT	004 028 043 048 143
SEARS	004 007 015 028 030 057 082 094 143 160
SHARP	004 014 019 022 028 143 175
SIGNATURE	072
SONY	070 085 126 139
SOUNDESIGN	003 004 028 043
SPECTRICON	112
SSS	004 043
SUPRE MACY	002
SYLVANIA	001 003 059 060 063 064 127 160 164
SYMPHONICS	052
TANDY	081
TATUNG	056 062
TECHNICS	034 080
TECHWOOD	004
TEKNIKA	002 003 004 024 028 043 072 101 143
TELERENT	072
TERA	172
TMK	004
TOSHIBA	015 030 040 062 101
TOTEVISION	143
UNIVERSAL	008 009
VIDEO CONCEPTS	146
VIDIKRON	174
VIDTECH	004
WARDS	004 008 009 019 028 060 061 063 064 072 074 164
YAMAHA	004
YORK	004
YUPITERU	043
ZENITH	072 073 095 103
ZONDA	112

VCR CODES

MANUFACTURER	CODE NUMBER (3 DIGIT) LIST
AIWA	34
AKAI	043 046 124 142 146
AMPRO	072
ANAM	031 103
AUDIO DYNAMICS	012 023 043
BROKSONIC	035 037 129
CANON	028 031
CAPEHART	108
CRAIG	001 040 135
CURTIS MATHES	031 041
DAEWOO	007 010 017 065 108 111
DAYTRON	108
DBX	012 023 043
DYNATECH	034 053
ELECTROHOME	059
EMERSON	006 017 025 027 029 031 034 035 036 037 046 101 129 131 138 153
FISHER	001 008 009 010
FUNAI	034
GE	031 063 072 107 109 144 147
GO VIDEO	132 136
GOLDSTAR	004 012 020 101
HARMON KARDON	012 045
HITACHI	018 026 034 043 063 137 150
INSTANTREPLAY	031
JCL	031
JC PENNY	004 012 040 101
JENSEN	043
JVC	012 031 043 048 055 060 130 150 152
KENWOOD	014 034 048
LLOYD	034
LXI	001 004 009 017 034
MAGIN	040
MAGNAVOX	031 034 041 067 068
MARANTZ	012 031 067 069
MARTA	101
MATSUI	027 030
MEI	031
MEMOREX	001 010 014 031 034 040 053 072 101 134 139
MGA	045 046 059
MINOLTA	004 020
MITSUBISHI	004 020 046 051 059 061 142
MTC	034 040
MULTITECH	024 034
NEC	012 023 043 048
NORMENDE	043
OPTONICA	053 054
PANASONIC	070 133 140

VCR CODES

PENTAX	004 020 031 063
PHILCO	031 034 067
PHILIPS	031 034 054 067 101
PILOT	101
PIONEER	004 021 048
PORTLAND	108
PULSAR	072
QUARTZ	014
RCA	004 020 034 040 041 107 109 140 144 147
REALISTIC	001 008 010 014 031 034 040 053 054 101
RICO	058
RUNCO	072
SALORA	014
SAMSUNG	017 040 107 109 113 115 124
SANSUI	043 048 135
SANYO	001 007 010 014 040 134
SCOTT	017 037 129 131
SEARS	001 004 008 009 010 014 017 020 081 101
SHARP	031 054
SHINTOM	024
SONY	001 009 031 052 056 057 058
SOUNDESIGN	034
STS	004
SYLVANIA	031 034 059 067
SYMPHONIC	034
TANDY	010 034
TATUNG	043
TEAC	034 043
TECHNICS	031 070
TEKNIKA	031 034 101
THOMAS	034
TMK	006
TOSHIBA	004 008 017 059 082 131
TOTEVISION	040 101
UNITECH	040
VECTOR RESEARCH	012
VICTOR	048
VIDEO CONCEPTS	012 034 046 141
VIDEOSONIC	040
WARDS	001 004 017 024 031 034 040 053 054 131
YAMAHA	012 034 043
ZENITH	034 048 056 058 072 080 101

CD CODES

MANUFACTURER	CODE NUMBER (3 DIGIT) LIST
ADCOM	062 042
AIWA	187 170
AKAI	202 195
CARVER	003 167 041 135 138 139 050 203
DENON	002 205
H/K	047 033 208
JVC	022 136 163
KENWOOD	007 055 023 137 072 142
MARANTZ	107 044
MONDIAL	001
NAD	215 005
NAKAMICHI	217 218 219
ONKYO	038 168 030
OPTIMUS	049 085
PANASONIC	068
PIONEER	010 020 174
REALISTIC	181 187 102
RCA	012 150
SHARP	013 051 066 031
SHERWOOD	166 112 115 119 093
SONY	225 097 126 133 081
TEAC	052 131 015 182
TECHNICS	068 200 008 060
YAMAHA	012 054 024

DVD CODES

MANUFACTURER	CODE NUMBER (3 DIGIT) LIST
DENON	001
JVC	012
LG	010
MISTUBISHI	002
PANASONIC	003
PIONEER	004
PROSCAN	005
RCA	006
SAMSUNG	011
SONY	007
TOSHIBA	008
YAMAHA	009

SAT CODES

MANUFACTURER	CODE NUMBER (3 DIGIT) LIST
GE	001
ALPHASTAR	007
ECHOSTAR	006
HITACHI	011 012
HUGHES	003
PANASONIC	013
PRIMESTAR	002 005
RCA	001
SONY	004
TOSHIBA	008
UNIDEN	009 010

CABLE CODES

MANUFACTURER	CODE NUMBER (3 DIGIT) LIST	REMCON MODEL
PIONEER	001	BR-200
AMERICAST	005	
JERROLD	006	RT-J22(CFT2200)
JERROLD	007	RT-J550C
PIONEER	002	BR-95
PIONEER	003	RT-P81/82
SCIENTIFIC ATLANTA	004	RT-S6X/USV86
TOCOM	010	RT-T7/T8
ZENITH	008	MN2500
ZENITH	009	RT-ZPMV

TAPE CODES

MANUFACTURER	CODE NUMBER (3 DIGIT) LIST
DENON	011 012
PIONEER	004 007 008 002(LD)
ROTEL	001(RD960) 003(RMZ955)
YAMAHA	005 006 009

DVD CODES

MANUFACTURER	CODE NUMBER (3 DIGIT) LIST
DENON	001
JVC	012
LG	010
MISTUBISHI	002
PANASONIC	003
PIONEER	004
PROSCAN	005
RCA	006
SAMSUNG	011
SONY	007
TOSHIBA	008
YAMAHA	009

FUNCTION LIST AUDIO/CD/DVD/AUX(LDP)

Function Name	ACT-3	CD	DVD	AUX(LDP)
POWER	POWER	POWER	POWER	POWER
VOL +	VOL +		VOL +	
VOL -	VOL -		VOL -	
MUTE	MUTE		MUTE	
PLAY/SEL	SUB	PLAY	PLAY	PLAY
STOP	DELAY	STOP	STOP	STOP
REW /LVL DN	ADJ DOWN	REW	SEARCH -	REW
FF /LVL UP	ADJ UP	FF	SEARCH +	FF
PAUSE	CENTER	PAUSE	PAUSE	PAUSE
EXIT	LEFT SURROUND		OPEN/CLOSE	
GUIDE	LEFT FRONT	PREV TRACK	GUIDE	PREV TRACK
MENU	RIGHT FRONT	NEXT TRACK	MENU	NEXT TRACK
PRE. CH	RIGHT SURROUND		RETURN	OPEN
T/V				
CH +			SKIP +	
CH -			SKIP -	
0	SHIFT			
1/B MODE	BASS MODE			
2			UP	
3				
4/DELAY	DELAY		LEFT	
5				
6			RIGHT	
7/DISPLAY	DISPLAY			
8			DOWN	
9				
10/RECALL	RECALL			
ENTER	ENTER		ENTER	
FAV/EQ	EQ		SUB ON/OFF	
INFO/PRO.L	PRO.L		DISPLAY	
NEXT/STEREO	STEREO		CLEAR	
ALT/TEST	TEST			
A/V 1	A/V 1			
VCR	VCR			
SELECT	SELECT			
AUD1	AUD1			
CD	CD			
A/V 2	A/V 2			
A/V DISC	A/V DISC			
MODES	MODES			
AUD 2	AUD 2			
TUNER	TUNER			
M1				
M2				
M3				
M4				
DEVICE				

FUNCTION LIST TV/VCR/CBL/SAT

FUNCTION NAME	TV	VCR	CBL	SAT
POWER	POWER	POWER	POWER	POWER
VOL +	VOL +		VOL +	VOL +
VOL -	VOL -		VOL -	VÓL -
MUTE	MUTE		MUTE	MUTE
PLAY/SEL	SELECT	PLAY	SELECT	SELECT
STOP	DOWN	STOP	DOWN	DOWN
REW /LVL DN	LEFT	REW	LEFT	LEFT
FF /LVL UP	RIGHT	FF	RIGHT	RIGHT
PAUSE	UP	PAUSE	UP	UP
EXIT	CLEAR/STD	REC	EXIT	EXIT
GUIDE	DISPLAY/REC		GUIDE	GUIDE
MENU	MENU		MENU	MENU
PRE. CH	PRE.CH		PRE.CH	PRE.CH
T/V	TV/VCR	VCR/TV	SWITCH	TV/SAT
CH +	CH +	CH +	CH +	CH +
CH -	CH -	CH -	CH -	CH -
0	0		0	0
1/B MODE	1		1	1
2	2		2	2
3	3		3	3
4/DELAY	4		4	4
5	5		5	5
6	6		6	6
7/DISPLAY	7		7	7
8	8		8	8
9	9		9	9
10/RECALL			PPV	
ENTER	ENTER		ENTER	ENTER
FAV/EQ	SLEEP		FAV	FAV
INFO/PRO.L			INFO	INFO
NEXT/STEREO			BYPASS	NEXT
ALT/TEST			MUSIC	ALT
A/V 1			PAGE +	
VCR			DAY +	
SELECT			DAY -	
AUD1			PAGE -	
CD				
A/V 2				
A/V DISC				
MODES				
AUD 2				
TUNER				
M1				
M2				
M3				
M4				
DEVICE	POWER ON	POWER ON	POWER ON	POWER ON

OUTPUT CONFIGURATION 3 & 4

SUB ← +10 dB ←

ON
SUB OUT
(SWITCH
OPTIONAL)

LFE ○

OFF (NORMAL)

RS ← + ←
LS ← + ←
R ← + ← -4.5 dB ←
C ←
(FULL RANGE CENTER OPTIONAL)
L ← +

RS ○
LS ○
R ○
C ○
L ○

OUTPUT CONFIGURATION 2

LFE ○ → + ← -5 dB
-15 dB x 3

DOLBY DIGITAL
ONLY

RS ←
LS ←
R ← + ← -1.5 dB
-12 dB
C ←
L ← + -1.5 dB
-12 dB

RS ○
LS ○
R ○
C ○
L ○

OUTPUT CONFIGURATION 1

SUB ← +15 dB ANALOG ← + ← +15 dB
+15 dB x 5

DOLBY DIGITAL
ONLY

RS ←
LS ←
R ←
C ←
L ←

LFE ○
RS ○
LS ○
R ○
C ○
L ○

OUTPUT CONFIGURATION 0

SUB ← ○ LFE
RS ← ○ RS
LS ← ○ LS
R ← ○ R
C ← ○ C
L ← ○ L