



**ada** audio  
design  
associates

***Suite 7.1  
Surround Sound Preamp***

***Installation Manual***

**Table of Contents**

Welcome and Thank You for Selecting ADA .....4

Keeping Records for Future Reference .....4

Unpacking and Inspecting the Suite 7.1 .....5

Placement Guidelines for Your Suite 7.1 .....5

Input Connections to the Suite 7.1 .....7

  Analog Audio Input Connections .....7

  NTSC Composite Video Input Connections .....7

  S-Video Input Connections .....7

  Component Video Input Connections .....8

  Digital Audio Input Connections .....8

  Multi-pin 8 Channel Input Connection .....9

Output Connections to the Suite 7.1 .....9

  Analog Audio Output Connections to Power Amplifiers .....9

  Composite Video Output Connections .....10

  S-Video Output Connections .....10

  Component Video Output Connections .....11

Control Connections to the Suite 7.1 .....11

  ADA Bus® Connection .....10

  Low Voltage DC Triggers .....10

Operating and Controlling the ADA Suite 7.1 .....11

Placement of Your Home Theater Speakers .....13

RC-40 Remote Control .....19

Setting Up the Suite 7.1 .....22

  Default Settings for Out of the Box Operation .....19

  Customizing the Inputs .....20

  Setting up the Suite 7.1 with Front Panel Controls and Display .....22

  Setting Tone, Balance, and Volume Presets Levels .....22

Pro Setup Overview .....25

  Pro Setup Level One: Input labeling and Input Assignment .....25

  Pro Setup Level Two: Bass Management Setup .....28

  Pro Setup Level Three: Calibrating Channel Levels .....30

  Pro Setup Level Four: Bass Limiter .....31

  Pro Setup Menu Level Five - Calibrating Channel Delay Times .....31

  Setup Menu Level Six – ADA Bus Menu Settings .....32

Pro Setup Menu Level Seven – THX Menu Settings ..... 33

Setup Menu Level Eight – Turn On Menu and Default Surround Modes ..... 34

Pro Setup Menu Level Nine – Pro Logic II Enhancements ..... 35

Pro Setup Menu Level Ten– Stereo Enhancements ..... 39

Pro Setup Menu Level Eleven– Mono Enhancements ..... 40

Pro Setup Menu Level Twelve– Solo Test Mode ..... 40

Maintaining Your ADA Suite 7.1 ..... 41

Call Us if You Need Help ..... 41

Warranty and Returning the Suite 7.1 for Factory repair ..... 41

Appendix A: ..... 42

Multichannel and Two Channel Decoding Modes and Enhancements ..... 42

Multichannel Encoding Overview ..... 42

Suite 7.1 Multichannel Decoding Modes ..... 43

Two Channel Audio Sources Overview ..... 48

Suite 7.1 Two Channel Decoding Modes ..... 48

Cinema Reference Mach II PC Program ..... 51

**Welcome and Thank You for Selecting ADA**

The ADA Suite 7.1 is a high performance fully featured audio video processor designed specifically for use in multiroom applications and installations where space is at a premium. Hand crafted in the United States to the strict quality and performance standards established by Audio Design Associates, the Suite 7.1 performs at the same precision and quality level as the Suite 7.1.

At ADA, we have been designing and building high-performance audio components for use in custom installation applications for over twenty-five years. We're proud to offer this exceptional audio component that will provide many years of enjoyment and dependability.

The ADA Suite 7.1 is extremely versatile and can be configured in many different ways. It can also be controlled with either ADA keypads control components and PC based control systems from other companies. We strongly encourage you to read this entire manual to learn all of its advanced features and capabilities and how to properly connect it to your specific system.

**Keeping Records for Future Reference**

Record the serial number located on the back of your preamplifier in the section below. Also note your dealer's name, phone number, and date of purchase. We recommend that you keep your purchase receipt with this manual you may need to refer to this information in the future.

Serial #: \_\_\_\_\_ ADA Dealer: \_\_\_\_\_

Phone Number \_\_\_\_\_ Date of Purchase: \_\_\_\_\_

Staple Purchase Receipt Here

## **Unpacking and Inspecting the Suite 7.1**

Unpack your Suite 7.1 from the shipping carton and remove the enclosed AC power cord. While you are unpacking the preamplifier, inspect it thoroughly for possible shipping damage. If you see any, contact ADA for further instructions. If possible, save and store both the carton and the packing inserts for possible future transport.

## **Placement Guidelines for Your Suite 7.1**

The sleek one rack space (1 U) chassis design of the Suite 7.1 is designed to fit into tight spaces where space and weight is often a concern such as boats and recreational vehicles. However, the compact design of the Suite 7.1 makes it possible to install several units into the same equipment rack without taking up a lot of space. Following are some simple guidelines to follow when installing the Suite 7.1 into your system:

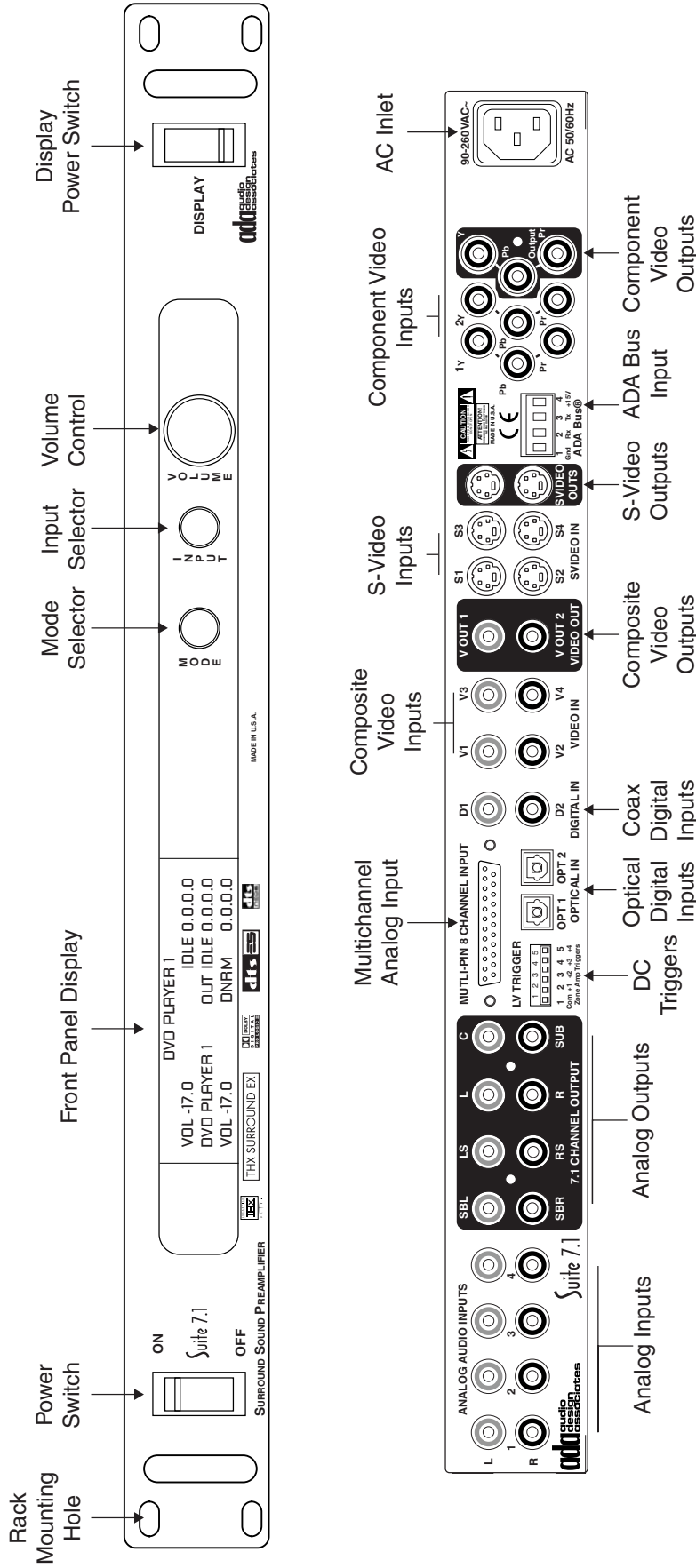
- Do not obstruct the cooling fan or any of the vent openings.
- Do not block the front of the Suite 7.1 behind closed cabinet doors during use.
- Do not stack other components on top of the Suite 7.1.

## **Rack Mounting Your ADA Suite 7.1**

When mounted in a in a standard 19" equipment rack, the Suite 7.1 chassis and front panel height occupies three rack spaces (1 ¾" or 44.45 mm). A single standard rack space allows 1 ¾" vertical inches in a 19-inch wide equipment rack. This measurement standard was developed by the EIA (Electronic Industries Association) so manufacturers of electronic components and equipment racks could build products in standardized heights that would fit in a uniform space.

The light weight of the Suite 7.1 makes it easily hold it in place while you screw it into the rack. We recommend using nylon shoulder washers in front and behind the faceplate to help the unit from being scratched and to also prevent ground loops.

Please call us at ADA if you need additional advice about the placement or mounting of the Suite 7.1.



Front and Rear Panel Drawings of the ADA Suite 7.1

## Input Connections to the Suite 7.1

*Refer to Drawing on Page 6*

### Analog Audio Input Connections

There are four pairs of analog audio inputs on the Suite 7.1. These inputs are used for analog sources such as CD players, VCRs, and cassette decks. You can also use these inputs for the analog output of your DVD players and DSS receivers even if you have connected the digital audio output of these components.

#### Required Input Cables

You will need one shielded interconnect cable terminated with RCA plugs on each for each of the analog inputs you will be using.

IMPORTANT NOTE: Do not use “directional cables” when connecting components to the Suite 7.1. These cables often leave the shield disconnected at one end, which can cause ground loops and subsequent 60 Hz hum. Directional cables are usually labeled with arrows along the insulation to identify which end to connect to the source.

#### Connecting the Analog Audio Cable for Each Analog Source Component

1. Plug one end of an interconnect cable into the white left output jack of your analog source component.
2. Plug the other end of this cable into the white Left (L) input jack on the desired input of the Suite 7.1.
3. Plug one end of an interconnect cable into red right output jack of your analog source component.
4. Plug the other end of this cable into the red right (R) input jack on the desired input of the Suite 7.1.
5. Repeat steps 1-4 for each remaining analog audio component you will be connecting.

### NTSC Composite Video Input Connections

There are four separate NTSC composite video inputs on the Suite 7.1. These RCA input jacks are used for components with composite video outputs such as DVD players, VCRs, and DSS receivers.

#### Required Input Cables

You will need a RG-6 or other 75  $\Omega$  video cable terminated with RCA jacks for each of the four composite video inputs.

#### Connecting the Composite Video Input Cable for Each Video Component

1. Plug one end of a video cable into the composite video output jack of your video component.
2. Plug the other end of this cable into the V1 composite video input of the Suite 7.1.
3. Repeat steps 1-2 for each remaining video component you will be connecting.

### S-Video Input Connections

There are four separate S-Video inputs on the Suite 7.1. These 5-pin DIN input jacks are used for components with composite video outputs such as DVD players, VCRs, and DSS receivers.

#### Required Input Cables

You will need a S-Video cable terminated with 5-pin DIN connectors at each end.

### **Connecting the S-Video Input for Each Video Component**

1. Plug one end of a S-video cable into the S- Video output jack of your video component.
2. Plug the other end of this cable into the V1 S-Video input of the Suite 7.1.
3. Repeat steps 1-2 for each remaining video component you will be connecting.

### **Component Video Input Connections**

There are two separate component video inputs on the Suite 7.1. These input are used for video sources with component video outputs such as DVD players, VCRs, and DSS receivers.

#### **Required Input Cables**

For each of the two component video inputs on the Suite 7.1, there are separate conductors for Y, Pb and Pr. Therefore; you will need three RG-6 or other 75  $\Omega$  video cable terminated with RCA jacks for each of the component video inputs. Each of the three cables there should be color coded for easier identification.

#### **Connecting the Video Cables for Each Video Component**

1. Plug one end of the component video cable into the RCA jack labeled Y on your video component.
2. Plug the other end of this cable into the RCA Jack labeled 1Y on the Suite 7.1
3. Plug one end of the component video cable into the RCA jack labeled Pb on your video component.
4. Plug the other end of this cable into the RCA Jack labeled 1Pb on the Suite 7.1.
5. Plug one end of the component video cable into the RCA jack labeled Pr on your video component.
6. Plug the other end of this cable into the RCA Jack labeled 1Pr on the Suite 7.1.
7. Repeat steps 1-6 for the remaining video component you will be connecting.

### **Digital Audio Input Connections**

The Suite 7.1 has two optical digital inputs and two coaxial digital inputs. These inputs are commonly used to connect the digital output of your DVD player, DSS receiver, or your CD player or changer. During setup, you can assign each digital input to follow the video and analog audio signal whenever you change a source.

#### **Required Input Cables**

You will need 75  $\Omega$  digital cable terminated with RCA jacks for each of the two coaxial digital inputs and a standard Toslink cable for each of the two optical digital inputs.

#### **Connecting the Coaxial Digital Cables for Each Digital Audio Component**

1. Plug one end of the 75  $\Omega$  coaxial cable into the coaxial output jack of your digital audio component.
2. Plug the other end of this cable into the first (D1) digital input of the Suite 7.1.
3. Repeat steps 1-2 for the remaining digital component with a coaxial digital output.

#### **Connecting the Optical Digital Cables for Each Digital Audio Component**

1. Plug one end of the optical cable into the optical output jack of your digital audio component.
2. Plug the other end of this optical cable into the first optical (OPTI 1) digital input of the Suite 7.1.
3. Repeat steps 1-2 for the remaining digital component with optical inputs.

## Multi-pin 8 Channel Input Connection

The Suite 7.1 comes equipped with a multi-pin connector that accepts the output of a multi-channel source component. DVD players that are capable of decoding high resolution MPL DVD Audio or SACD can take advantage of the Suite 7.1's multi-pin connector. The multi-channel connector follows the industry listed in the chart below.

### Required Input Cables

Depending on the multi-channel source component, you will need a multiple connector male RCA to DB-25 or male to female DB-25 cable. Both of these cables are readily available from several cable manufacturers. Contact ADA if you need assistance in locating an appropriate cable for the eight channel multi-pin connector.

### Connecting the Multi-pin Input Cable for a Multichannel Component

1. Plug one end of the multi-pin cable into the multi-channel component equipped with either a DB-25 termination, RCA plug, or other connector. Be sure to follow the correct channel identification based upon the chart below.
2. Plug the other end of this cable into the female DB-25 connector on the Suite 7.1.

## Output Connections to the Suite 7.1

*Refer to Drawing on Page 6*

### Analog Audio Output Connections to Power Amplifiers

The Suite 7.1 is fully capable of decoding up to eight discrete channels of information. To fully take advantage of the Suite 7.1's decoding capabilities, you will need eight channels of amplification available from ADA amplifiers such as the PTM-8150 or the PTM-8125. Of course, you can use four two-channel amplifiers or other combinations tailored for each specific system. The analog output jacks are identified on the rear of the Suite 7.1 by their reversed black background.

### Required Input Cables

You will need one shielded interconnect cable terminated with RCA plugs on each for each of the eight channels you will be using. While you will achieve best results by using all channels of the Suite 7.1, you can design systems using fewer channels if you wish. We recommend that you mark each of the output cables to make it easier to identify each channel in case troubleshooting is necessary. If you are using the ADA PTM-8150 with a display, we recommend the following configuration for an optimum graphical representation.

IMPORTANT NOTE: Do not use "directional cables" when connecting components to the Suite 7.1. These cables often leave the shield disconnected at one end, which can cause ground loops and subsequent 60 Hz hum. Directional cables are usually labeled with arrows along the insulation to identify which end to connect to the source.

### **Connecting the Audio Cables from the Suite 7.1 to each Amplifier Channel**

1. Plug an interconnect cable from the left (L) output jack of the Suite 7.1 into channel 3 of the PTM-8150. When using a different amplifier, use its optimum channel.
2. Plug an interconnect cable from the center (C) output jack of the Suite 7.1 into channel 4 of the PTM-8150. When using a different amplifier, use its optimum channel.
3. Plug an interconnect cable from the right (R) output jack of the Suite 7.1 into channel 5 of the PTM-8150. When using a different amplifier, use its optimum channel.
4. Plug an interconnect cable from the left surround (LS) output jack of the Suite 7.1 into channel 2 of the PTM-8150. When using a different amplifier, use its optimum channel.
5. Plug an interconnect cable from the right surround (RS) output jack of the Suite 7.1 into channel 6 of the PTM-8150. When using a different amplifier, use its optimum channel.
6. Plug an interconnect cable from the surround back left (SBL) output jack of the Suite 7.1 into channel 1 of the PTM-8150. When using a different amplifier, use its optimum channel.
7. Plug an interconnect cable from the surround back right (SBR) output jack of the Suite 7.1 into channel 5 of the PTM-8150. When using a different amplifier, use its optimum channel.
8. Plug an interconnect cable from the subwoofer (SUB) output jack of the Suite 7.1 into channel 8 of the PTM-8150. If you are using a powered subwoofer connect the subwoofer out to its input.

### **Composite Video Output Connections**

There are two NTSC composite video output connections on the Suite 7.1. These RCA output jacks are used to connect to the video monitors. The composite video output jacks are identified on the rear of the Suite 7.1 by their reversed black background.

#### **Required Input Cables**

You will need a RG-6 or other 75  $\Omega$  video cable terminated with RCA jacks for each of the composite video outputs.

### **Connecting the Composite Video Output of the Suite 7.1 to the Input of the Television Monitor**

1. Plug one end of a video cable into the composite video output 1 of the Suite 7.1.
2. Plug the other end of this cable into the NTSC composite video input of your monitor.
3. Repeat steps 1-2 for additional NTSC monitors.

### **S-Video Output Connections**

There are two S-Video output connections on the Suite 7.1. These output jacks are used to connect to the video monitors with S-Video inputs. The S-Video output jacks are identified on the rear of the Suite 7.1 by their reversed black background.

#### **Required Cables**

You will need a S-Video cable terminated with 5-pin DIN connectors at each end for each monitor input you will be using.

### **Connecting the S-Video Output to the S-Video Monitor**

1. Plug one end of an S-Video cable into either S-Video output of the Suite 7.1.
2. Plug the other end of this cable into the NTSC composite video input of your monitor.
3. Repeat steps 1-2 for an additional monitor.

## Component Video Output Connections

There is a single component video output connections on the Suite 7.1. These output jacks are used to connect to the video monitors with component video inputs. The component video output jacks are identified on the rear of the Suite 7.1 by the reversed black background.

### Required Cables

For the component video output on the Suite 7.1, there are separate conductors for Y, Pb and Pr. Therefore; you will need three RG-6 or other 75  $\Omega$  video cable terminated with RCA jacks for the component video output. Each of the three cables there should be color coded for easier identification.

### Connecting the Video Cables for Each Video Component

1. Plug one end of the component video cable into the RCA jack labeled Y on the Suite 7.1.
2. Plug the other end of this cable into the RCA jack labeled Y on the video component.
3. Plug one end of the component video cable into the RCA jack labeled Pb on the Suite 7.1.
4. Plug the other end of this cable into the RCA jack labeled Pb on the video component.
5. Plug one end of the component video cable into the RCA jack labeled Pr on the Suite 7.1.
6. Plug the other end of this cable into the RCA jack labeled Pr on the video component.

## Control Connections to the Suite 7.1

*Refer to Drawing on Page 6*

### ADA Bus® Connection

The innovative ADA Bus® allows the Suite 7.1 to be fully controlled via serial communication providing control and feedback of all commands can be setup and controlled from its custom PC software setup and test program. This makes the Suite 7.1 perfect for integration with advanced multiroom systems such as the ADA Suite 16 and control with ADA's keypads. It also makes it possible to seamlessly integrate the Suite 7.1 with third party computer based control systems such as AMX, Vantage, or Crestron. Refer to the supporting documentation of the other ADA components connected the ADA for detailed information about how to integrate them into your system.

### Required Cable and Connection

The ADA Bus in the Suite 7.1 is connected via the four-pin screw terminal labeled ADA Bus on the rear panel that corresponds to the connection standard listed below. Three conductor 18 AWG shielded wire is utilized to make all ADA bus connections. The relatively thick ADA bus wire used makes it possible to connect multiple ADA components on as single bus over very long wire runs.

Pin 1=Ground

Pin 2=Feedback Terminal (TX)

Pin 3=Control Terminal (RX) Pin 4= +15-24 Vdc supply voltage.

Connecting the ADA bus to any control system requires the addition of the ADA ISO-232 serial communication isolation box. The ISO-232 not only permits trouble free two-way RS-232 communication, but it also provides the necessary isolation and prevents ground loops in the control system from generating noise in the Suite 7.1's audio circuitry.

## **Low Voltage DC Triggers**

The Suite 7.1 has four separate low voltage trigger outputs that can be used to independently trigger other components such as power amplifiers, video projectors, or AC controllers. Each of these triggers can be individually activated depending on how it is programmed during setup. Each of the four triggers provide 12 Vdc at 100 mA per trigger.

### **Required Cable and Connection**

You can use any common two-conductor 18-22 AWG “zip cord” or hook up wire or to connect the DC triggers to the Suite 7.1. For each of the four triggers, connect a wire between ground (pin 1) and each of the four trigger terminals (2, 3, and 4). Depending on the component or device you are triggering, you will need to terminate the other end to accommodate it.

1. Connect one lead of the two-conductor wire into terminal 1 of the Suite 7.1’s DC trigger connector.
2. Connect the other lead of the two-conductor wire into terminal 2 of the Suite 7.1’s DC trigger connector.
3. Connect the other end of the lead connected to terminal 1 to the negative DC terminal of the component to be triggered.
4. Connect the other end of the lead connected to terminal 2 to the positive DC terminal of the component to be triggered.
5. Repeat Steps 1-4 for each additional DC trigger connection.

### **Important Advisory Disabling the Internal BRT-1 for Multiple Suite 7.1s**

The Suite 7.1 comes equipped with an internal baud rate translator. This allows it to be easily controlled at 1200 baud with an infrared remote control or at 19200 baud on the ADA bus in a Suite 16 or other ADA multiroom system. To insure proper operation of the ADA bus, there can only be one BRT-1 in the system. If you are using multiple Suite 7.1s, you will need to disable the BRT-1s in all but one Suite 7.1. If you have installed a separate BRT-1 on the system, be sure to remove it when you install a Suite 7.1. Note: Since the base version of the Suite 7.1 has no front panel display or controls, it does not have a BRT-1, so the above advisory does not apply.

### **To disable the internal BRT-1 when using multiple Suite 7.1s on a single ADA bus**

1. Remove the power to the Suite 7.1
2. Remove the top cover panel screws on the Suite 7.1
3. Locate the internal BRT-1 near the rear left corner of the Suite 7.1
4. Disconnect the orange 8-pin AMP connector that connects the BRT-1 to the main PCB of the Suite 7.1.
5. Replace the top cover panel and screws.

## Placement of Your Home Theater Speakers

Proper speaker placement is essential for optimum performance of your home theater system. The following are basic guidelines for speaker placement based upon idealized conditions. You may need to make placement compromises to allow for room shape, furniture placement, windows, doorways, and other considerations. The Suite 7.1 permits electronic compensation when asymmetrical speaker placement is required.

### Front Speakers

Try to locate your front left and right speakers an equal distance to the right and left of your monitor or projection screen. Ideally, your listening position should be at one point of an equilateral triangle with the left and right speakers at the other two points. To achieve what is commonly called the “sweet spot,” your left and right speakers might sound better facing forward or slightly toed-in, depending on their dispersion characteristics, room reflections, and the number of people in the room.

### Center Speaker

The center speaker’s main function is to reproduce most of the cinema dialog and blend the sonic image from your speakers with the visual image on the screen. It is best to place your center speaker directly above or below the monitor, as close to the same height as the left and right speakers as possible. Be sure your center speaker is shielded to prevent discoloration of the picture tube. If you have a projection screen that is perforated to allow sound to pass through, you should locate the center speaker behind the screen at the same vertical plane as the left and right speakers. The distance from your preferred listening position to the center channel speaker should be the same as the distance from your listening position to the left and right speakers. You can accomplish this by measuring the distance to a left or right speaker and locating the center speaker as far behind the plane of the left and right speakers as required to be the same distance. If you can’t move your center channel behind the plane of the left and right speakers, you can compensate for its shorter distance electronically during setup. The purpose of physical placement or electronic adjustment assures the sound from all three front speakers will arrive at your listening position at the same time.

### Conventional Surround Speakers

Surround speaker placement is a little more flexible than the front speakers are. Although 5.1 channel processing offers discrete surround channel information, movie soundtracks use the surround channels more for creating an ambient effect than for defining precise sonic images. To avoid drawing your attention from the action on the screen and enhance the blend of sound and picture, you should not be able to localize the sound coming from your surround speakers except momentarily during certain special effects. Therefore, you should try to avoid pointing the surround speakers directly toward your listening position and place them behind you and above your ear level when you are seated. You should be prepared to experiment with surround speaker placement for optimum results.

### Dipole Surround Speakers

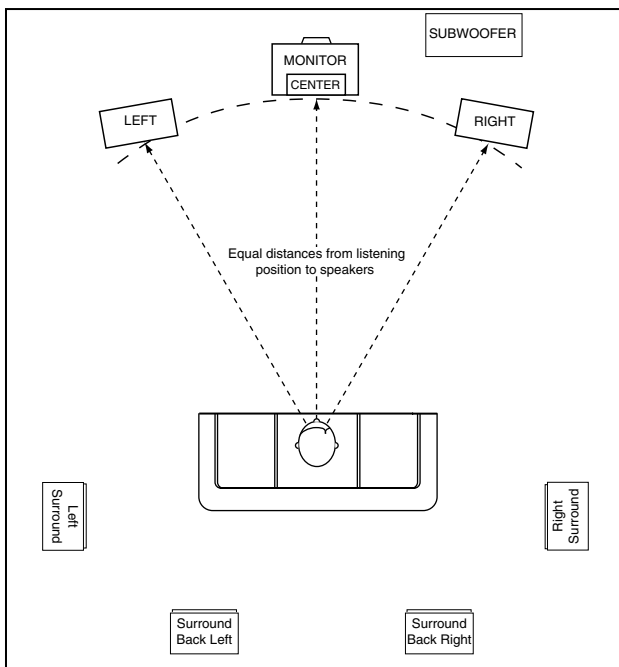
If you are using front and rear firing dipole surround speakers, locate them above and to the sides of your listening area. This deliberately places you in the “null” of the dipole speakers to minimize localization of the surround speakers. Refer to the owner’s manual of your speakers for further information in locating dipole speakers.

### Surround Back Speakers

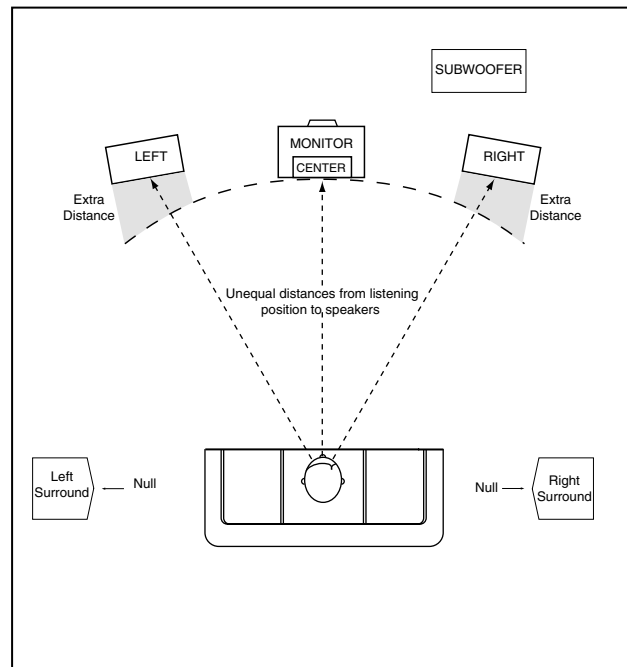
With the advent of Surround EX, you now have the ability to create an even more realistic soundstage by adding one or two surround back speakers that should be located behind the listening position. As with the surround speakers, the surround channels aren't meant to be localized but to substantially add to the envelopment of the surround sound experience. This additional channel can be either discrete or matrixed depending on the source material. Although most media encoded in Surround EX or EX has a single Surround Back channel, there is some material can be encoded with up to two discrete surround back channels.

### Subwoofer

Because of their long wavelengths, low bass frequencies are critically dependent on room placement to avoid bass-robbing standing waves or null points. Sometimes moving a subwoofer a few inches makes the difference between thin, weak bass and room shaking, foundation-rattling bass. One of the most reliable methods to correctly position your subwoofer is to first hook it up and place it next to your favorite listening position. While it is playing music or a movie with strong bass in it, slowly walk around the various room locations where the sub could be located. You should be able to find a place where you hear balanced bass without excessive boominess. Once you have found this optimum location, simply move the subwoofer there. If you change your listening position, you should repeat this procedure. If you are unable to place the sub where it sounds best, you might improve its sound by turning the sub's cabinet to one side or the other. The Suite 7.1 has two subwoofer outputs, in case you prefer two smaller subs in place of one large sub, or if you have an insatiable (but certainly understandable) desire for intense bass. However note that positioning two subs for ideal response is more challenging than positioning one, because they will interact with each other as well as with your room.



**Home Theater Speaker System  
Using Two Surround Back Channels**



**Home Theater Speaker System  
Using Dipole Surround Speakers**

## **Operating and Controlling the ADA Suite 7.1**

### **Overview**

The ADA Suite 7.1 has a minimum of front panel controls. This is largely because in most systems the unit will be operated by a central control system. Nevertheless, you can still completely setup, control, and operate the Suite the 7.1 with the front panel controls.

### **Base Version of Suite 7.1**

Base versions of the ADA suite 7.1 do not have front panel controls or FL status display. This base version of the Suite 7.1 is designed for use in systems where it will be controlled by a separate computer based system with a touch screen or similar user interface. Other than the lack of controls and display, the version of the Suite 7.1 has all the same internal functions and high performance DSP, digital and analog circuitry.

### **Front Panel Display**

The 4 x 25 front panel display provides complete status of all functions of the Suite 7.1 including volume level, mute, incoming bitstream, decoding mode, selected input, enhancement features, and other information. The front panel display also is also instrumental in setting up the Suite 7.1 including channel levels input labels, and volume, balance and tone presets. The front panel display will be described in throughout this section of the manual in context with the operation being discussed.

### **Power/Standby Switch**

The front panel ON/OFF switch acts as both the master power and standby switch for the Suite 7.1. When this switch is in the down position, you cannot turn the unit on from any other method. If the switch was in the OFF (down) position moving this switch to the ON position will turn the unit on without the need for any other control. Otherwise, the switch acts as a standby switch where you can turn the unit on and off via the volume control knob, IR or software. If the Suite 7.1 is out of standby when power is removed accidentally or with an AC controller, it will turn back on to its previous input, mode, and volume level when power is restored.

### **Display Switch**

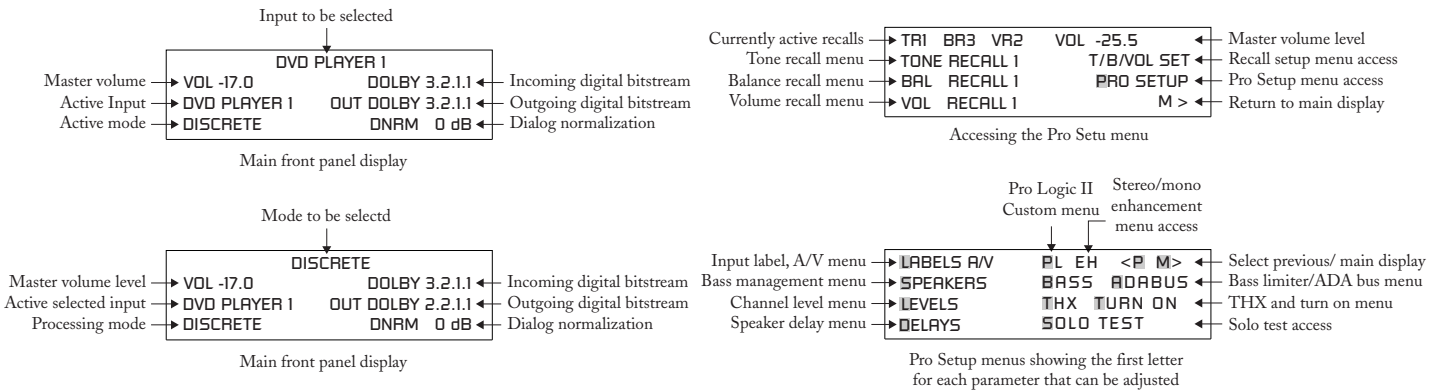
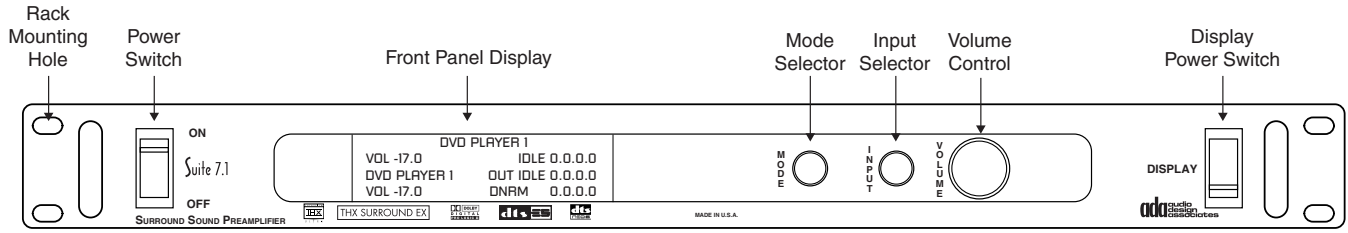
When the main Power/Standby switch is in the ON (up) position and the Suite 7.1 is in standby, the front panel Display switch activates the green backlight behind the front panel display. When the Suite 7.1 is operating normally, the Display switch dims the backlight by about 50%. If the main ON/OFF switch is in the OFF (down) position, the Display switch has no effect until the unit is turned on.

### **Volume Knob Functions**

The volume knob has other functions in addition to controlling the master volume level. Pressing the knob can also engage muting and take the unit in and out of standby.

### **Turning the Unit on**

When Main power switch is in the ON (up) position and the Suite 7.1 is in standby, turning or pushing any knob other than the Volume knob will cause the Suite 7.1's center LCD display to indicate: PUSH VOLUME FOR POWER ON. To take the Suite 7.1 out of standby, press the Volume knob once.



**Muting the Output**

Once the Suite 7.1 has been taken out of standby as described above, pressing the Volume knob once will mute all channels of audio. When the output is muted, MUTE will appear in the display window. To take the unit out of mute, simply rotate the Volume knob or press it again.

**Turning the Unit Off**

If the Suite is already muted, pressing the volume once again will turn the unit off. You can also hold down the Volume knob for three seconds to put the Suite 7.1 into standby.

**Input Knob Functions**

The input knob on the Suite 7.1 allows you to select each input without having to access other inputs along the way. This prevents noise associated with input selection switches and prevents surprise bursts of sound from other active inputs. Normally, the currently active input appears in the third row of the display. The chart on the following page shows the default settings for each input

**Selecting an Input on the Suite 7.1**

1. To select a different input from the front of the Suite 7.1, turn the Input knob in either direction.
2. As you rotate the knob, the top row will sequentially display each of the inputs.
3. Once you have reached the input you want, stop rotating the knob and press it to select the input.
4. The input that you have selected will then appear in the top and third rows of the display simultaneously.
5. After about five seconds, the top row will go out and the new input will remain displayed on the third line.

## Mode Knob Functions

The mode knob on the Suite 7.1 allows you to select each processing mode without having to scroll through different modes during selection. This feature allows you to change the processing mode directly from one to another, which makes it easier to compare modes “on the fly”.

### Selecting a Processing Mode on the Suite 7.1

1. To select a new mode from the front of the Suite 7.1, turn the Mode knob in either direction.
2. As you rotate the knob, the top row will sequentially display each of the processing modes.
3. Once you have reached the mode you want, stop rotating the knob and press it to select the mode.
4. The mode that you have selected will then appear in the top and fourth row of the display simultaneously.
5. After about five seconds, the top row will go out and the new input will remain displayed on the fourth line.

## Mode Selection

The Suite 7.1 is an auto detecting surround decoder. Whenever the internal DSP engine receives an input digital bitstream, it will automatically detect the “flag” that determines how it was originally encoded and engage the appropriate decoding mode. There are three primary types of bitstreams that the Suite 7.1 is capable of decoding: Dolby Digital, DTS encoded signal, or PCM (Pulse Code Modulation).

Dolby Digital and DTS are referred to as Cinema decoding modes, which differ significantly from 2 Channel modes. While there are twenty-seven options when playing a stereo signal, there are only nine Cinema mode options when playing Dolby Digital or DTS encoded material.

Very simply, the Suite 7.1 can decode two types of incoming signals: Multichannel bitstreams or Two Channel signals that include PCM and analog signals. Depending on the mode you select, you can playback the source material for optimum performance. Refer to the drawing that shows the incoming bitstream and how the Suite 7.1 decodes it.

The Suite 7.1 gives you the ability to set default processing modes for both multichannel and two-channel information. Further, there is a second set of default modes called the “user” mode. This advanced feature provides automatic decoding of virtually any incoming signal regardless of how it was encoded. To illustrate how combining bitstream auto detection and user modes can offer maximum flexibility and performance, you could assign Input 1: DVD player with modes described below. **IMPORTANT NOTE:** The secondary user modes are only assignable with the PC program. However, you can access them with the RC-40 remote control once they have been assigned.

**Default Mode**

Multichannel=Discrete+ES/EX  
 Two Channel=Pro Logic II Movie.

**User Mode**

Multichannel=Discrete+THX  
 Two Channel=DTS Neo 6+THX.

In this example, the DVD player connected to Input 1 would be primarily for movie playback. And the theater has surround back speakers. Here is how it would decode depending on the incoming multichannel bitstream.

**Dolby Digital 5.1 encoded disc with a EX flag:** The Suite 7.1 would play this material back through all 6.1 channels (L, C, R, LS, RS, SB, LFE) in Dolby Digital. With a simple press of the User Mode button, you could add THX processing to this Dolby Digital signal.

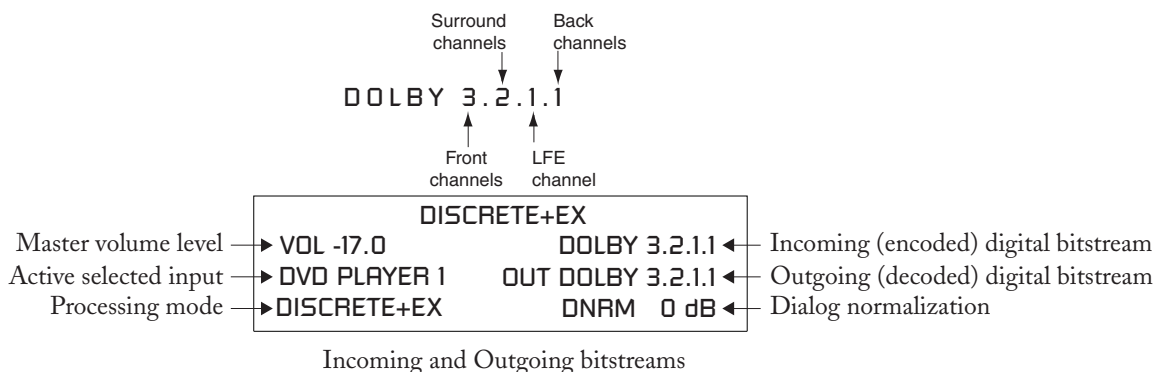
**DTS encoded disc with a ES flag:** The Suite 7.1 would play this material back through all 6.1 channels (L, C, R, LS, RS, SB, LFE) in DTS ES Discrete with all channels active. With a simple press of the User Mode, you could add THX processing to this DTS signal. In a similar example, the same DVD player connected to Input 1 would be primarily for movie playback. Here is how it would decode depending on the incoming two-channel bitstream:

**Dolby Pro Logic Encoded disc :** The Suite 7.1 would play this material back in through the (L, C, R, LS, RS, channels in Dolby Digital Pro Logic II, but the left and right surround channel would be in mono and the surround back channel would be silent. With a simple press of the User Mode button, you could add THX processing to this Dolby Digital Pro Logic II signal.

**Generic Two Channel PCM Encoded Disc:** The Suite 7.1 would play this material back in through the (L, C, R, LS, RS, channels in DTS Neo 6, but the left and right surround channel would be in mono and the surround back channel would be silent. With a simple press of the User Mode button, you could add THX processing to this DTS Neo 6 signal.

**Temporary Override of Default and User Modes**

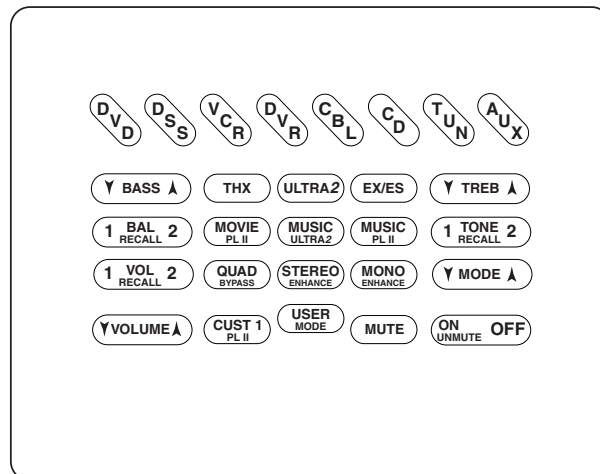
Even though you can set the default modes to decode based on the incoming signal, you can still change modes “on the fly” on the front panel or remote control. However, if you turn off the unit or change inputs, the default modes will be restored upon returning to the input.



A complete discussion of the various multichannel and two channel modes and enhancements that the Suite 7.1 is capable of decoding is discussed in **Appendix A: Decoding modes and Enhancements**. Here is how the Suite 7.1 is set up out of the box for each of the twenty inputs: The default mode setting for all inputs is the last used. This means that the input will always decode in the mode that was last selected. Therefore, we recommend that you set the mode defaults as described in the Setup Level Eight-Turn On Menu and Default Surround modes.

### RC-40 Remote Control

Your Suite 7.1 comes equipped with the RC-40 remote control. This remote control provides IR codes for all of the basic functions of the Suite 7.1 including discrete on and off commands, mute, input selection, and mode selection. There are also buttons to activate the various enhancement modes such as THX, ES/EX, and Pro Logic II custom modes. You can also recall tone, balance, and volume presets with the RC-40. While the RC-40 is dedicated to operate the Suite 7.1 and other ADA Surround controllers, it is not intended to be a “universal” remote control that can capture codes from other remote controls. We provide the RC-40 as a convenient way to send the IR codes to a touchscreen or other more elaborate user controlled device.



**RC-40 Infrared Remote Control**

#### Batteries in the RC 40

The RC-40 uses 2 AA batteries. Battery life for the remote is approximately six months with average use. If components become unresponsive to commands from the remote, it usually means that the batteries need replacing. We recommend that you make sure the batteries are fresh before send IR codes from the RC-40 into a learning remote or other device. This assures reliable IR code transmission.

#### To Replace Batteries in the RC-40

1. Unscrew the four phillips screws that fasten the feet and bottom cover onto the RC-40.
2. Leave the surrounding frame and plastic lens in place.
3. Since the battery holder in the RC-40 holds the batteries firmly into place, use a small screwdriver to carefully pry them out.
4. Replace the bottom plate making sure that the grooves line up with the surrounding outer frame.
5. Replace the four phillips screws that fasten the feet and bottom cover onto the RC-40.

## Setting Up the Suite 7.1

### Suite 7.1 Base Unit

If you are installing the Suite 7.1 base unit without the front panel display and controls, you will need to use the specially designed software application called the Cinema Reference Mach II POS II. (new generic name?). Refer to the section in this manual that describes this program in detail. A 3.5" floppy disk with this software application is included with your Suite 7.1.

### Default Settings for Out of the Box Operation

The ADA Suite 7.1 is an incredibly flexible component that can accommodate a wide variety of audio and video components. To speed up the setup process, you can use the default settings that are preset at the factory. The table below lists the default configurations for each of the inputs. Of course, you can customize the Suite 7.1 for your particular system, but the default settings give you a logical head start.

INPUT #	INPUT LABEL	AUDIO INPUT	COMPOSITE VIDEO INPUT	S-VIDEO INPUT	COMPONENT VIDEO INPUT	5.1 DECODING	2 CHANNEL DECODING
1	DVD PLAYER	DIGITAL 1	1	1	1	LAST USED	LAST USED
2	DSS	DIGITAL 2	2	2	2	LAST USED	LAST USED
3	DVR/PVR	DIGITAL 1	3	3	1	LAST USED	LAST USED
4	VCR	ANALOG 1	4	4	2	LAST USED	LAST USED
5	CABLE/TV	ANALOG 2	1	1	1	LAST USED	LAST USED
6	CD PLAYER	OPTICAL 2	1	1	1	LAST USED	LAST USED
7	TUNER	ANALOG 3	1	1	1	LAST USED	LAST USED
8	AUXILIARY	ANALOG 4	1	1	1	LAST USED	LAST USED
9	DVD AUDIO	MULTI-PIN	1	1	1	LAST USED	LAST USED
10	MULTI-ROOM	OPTICAL 1	1	1	1	LAST USED	LAST USED
11	CAMCORDER	OPTICAL 1	1	1	1	LAST USED	LAST USED
12	VIDEO GAME	OPTICAL 1	1	1	1	LAST USED	LAST USED
13	COMPUTER	OPTICAL 1	1	1	1	LAST USED	LAST USED
14	LASERDISC	OPTICAL 1	1	1	1	LAST USED	LAST USED
15	LASER AC3	OPTICAL 1	1	1	1	LAST USED	LAST USED
16	PHONOGRPH	OPTICAL 1	1	1	1	LAST USED	LAST USED
17	DSS RECORD	OPTICAL 1	1	1	1	LAST USED	LAST USED
18	DVR RECORD	OPTICAL 1	1	1	1	LAST USED	LAST USED
19	TV RECORD	OPTICAL 1	1	1	1	LAST USED	LAST USED
20	CD RECORD	OPTICAL 1	1	1	1	LAST USED	LAST USED

### Customizing the Inputs

As described in the connection section, there are four audio, video, and digital inputs to the Suite 7.1. However, there are up to twenty "virtual" inputs in the setup program. This allows you to customize inputs for different applications. For example, you could use the same DVD player for two completely different playback situations of movies and music. During setup, you can assign different video inputs, digital inputs, and processing modes and enhancements to each of the "virtual inputs". Here is an example of this setup option:

#### DVD Movies:

Video Input   Component 1 (routed to the main TV)  
 Digital Input   Digital 1 (coax 1)  
 Mode            THX +ES/EX

#### DVD Music:

Video Input   Composite (routed to a keypad, for example)  
 Digital Input   Digital 1 (coax 1)  
 Mode            Pro Logic II Music with stereo enhancement

```

TRI BR3 VAR2 VOL -25.5
TONE RECALL 1 T/B/VOL SET
BAL RECALL 1 PRO SETUP
VOL RECALL 1 M >
    
```

Accessing The Tone, Balance, And Volume Store/Recall Menu

```

GROUP A STR1 REC 1
L* R* C* LS RS SBL SBR SUB
TREB 0 db TREB 12KHz
BASS 0 db BASS 120Hz
    
```

The Tone Store/Recall Menu With Adjustable Parameters Highlighted

```

BALANCE STR1 REC 1
L 0.0 C 0.00 R 0.00
LS 0.0 SB 0.00 RS 0.00
SBL 0.0 SBR 0.00
    
```

The Balance Store/Recall Menu With Adjustable Parameters Highlighted

```

VAR x VOL -20 db
VOLUME STORE 1
VOLUME RECALL 1
VOLUME MAX +31.5 db <P M>
    
```

The Volume Store/Recall Menu With Adjustable Parameters Highlighted

```

TRI BR3 VAR2 VOL -25.5
TONE RECALL 1 T/B/VOL SET
BAL RECALL 1 PRO SETUP
VOL RECALL 1 M >
    
```

Accessing The Pro Setu Menu

```

LABELS A/V PL EH <P M>
SPEAKERS BASS ADABUS
LEVELS THX TURN ON
DELAYS SOLO TEST
    
```

Accessing The Labels A/V Menu

```

INPUT 1 MAX INPUT 10
LABEL DVD PLAYER 1 SAVE
AUDIO DIGITAL 1 LOAD ALL
VIDEO C1 S1 CM1 <P M>
    
```

First Display In The Labels A/V Menu

```

INPUT 1 MAX INPUT 10
LABEL DVD PLAYER 1 SAVE
AUDIO DIGITAL 1 LOAD ALL
VIDEO C1 S1 CM1 <P M>
    
```

Input A/V Menu Displaying The First Letter For Changing Each Parameter

```

TRI BR3 VAR2 VOL -25.5
TONE RECALL 1 T/B/VOL SET
BAL RECALL 1 PRO SETUP
VOL RECALL 1 M >
    
```

Accessing The Pro Setu Menu

```

LABELS A/V PL EH <P M>
SPEAKERS BASS ADABUS
LEVELS THX TURN ON
DELAYS SOLO TEST
    
```

Accessing the Bass Management menu

```

SPEAKERS <P M>
FRONT SMALL SURR SMALL
CENTER SMALL SURR SMALL2
SUB ON SUBXOVER 80Hz
    
```

First Display In The Bass Management Menu

```

SPEAKERS <P M>
FRONT SMALL SURR SMALL
CENTER SMALL SURR SMALL2
SUB ON SUBXOVER 80Hz
    
```

Bass Management menu displaying the first letter for changing each parameter

```

TRI BR3 VAR2 VOL -25.5
TONE RECALL 1 T/B/VOL SET
BAL RECALL 1 PRO SETUP
VOL RECALL 1 M >
    
```

Accessing The Pro Setu Menu

```

LABELS A/V PL EH <P M>
SPEAKERS BASS ADABUS
LEVELS THX TURN ON
DELAYS SOLO TEST
    
```

Accessing The Level Calibration Menu

```

NOISE* SEQ STR1 <P M>
L 0.0 C 0.00 R 0.00
LS 0.0 SB 0.00 RS 0.00
SBL 0.0 SBR 0.00
    
```

First Display In The Level Calibration Menu

```

NOISE* SEQ STR1 <P M>
L 0.0 C 0.00 R 0.00
LS 0.0 SB 0.00 RS 0.00
SBL 0.0 SBR 0.00
    
```

Level Calibration Menu Displaying The First Letter For Changing Each Parameter

```

TRI BR3 VAR2 VOL -25.5
TONE RECALL 1 T/B/VOL SET
BAL RECALL 1 PRO SETUP
VOL RECALL 1 M >
    
```

Accessing the Pro Setu menu

```

LABELS A/V PL EH <P M>
SPEAKERS BASS ADABUS
LEVELS THX TURN ON
DELAYS SOLO TEST
    
```

Accessing The Delay Calibration Menu

```

NOISE* SEQ STR1 <P M>
L 0.0 C 0.00 R 0.00
LS 0.0 SB 0.00 RS 0.00
SBL 0.0 SBR 0.00
    
```

First Display In The Delay Menu

```

DELAYS <P M>
L OFT C OFT R OFT
LS OFT SB OFT RS OFT
SBL OFT SBR OFT
    
```

Delay menu displaying the first letter for changing each parameter

```

TRI BR3 VAR2 VOL -25.5
TONE RECALL 1 T/B/VOL SET
BAL RECALL 1 PRO SETUP
VOL RECALL 1 M >
    
```

Accessing The Pro Setu Menu

```

LABELS A/V PL EH <P M>
SPEAKERS BASS ADABUS
LEVELS THX TURN ON
DELAYS SOLO TEST
    
```

Accessing The Bass Limiter Menu

```

BASS LIMITER <P M>
SUBWOOFER NOISE OFF
LIMITER CEILING -20.0 DB
    
```

First Display In The Bass Limiter Menu

```

SUBWOOFER NOISE OFF <P M>
LIMITER CEILING -20.0 DB
    
```

Bass Limiter Menu Showing The First Letter For Changing Each Parameter

```

TRI BR3 VAR2 VOL -25.5
TONE RECALL 1 T/B/VOL SET
BAL RECALL 1 PRO SETUP
VOL RECALL 1 M >
    
```

Accessing the Pro Setu menu

```

LABELS A/V PL EH <P M>
SPEAKERS BASS ADABUS
LEVELS THX TURN ON
DELAYS SOLO TEST
    
```

Accessing the ADA Bus Menu

```

ADA BUS <P M>
BUSS ADDRESS 0 IRR ON
BUS BAUD 19200
BLANKING OFF >DEFAULTS
    
```

First Display In The Ada Bus Menu

```

ADA BUS <P M>
BUSS ADDRESS 0 IRR ON
BUS BAUD 19200
BLANKING OFF >DEFAULTS
    
```

Ada Bus Menu Displaying The First Letter For Changing Both Parameters

```

TRI BR3 VAR2 VOL -25.5
TONE RECALL 1 T/B/VOL SET
BAL RECALL 1 PRO SETUP
VOL RECALL 1 M >
    
```

Accessing The Pro Setu Menu

```

LABELS A/V PL EH <P M>
SPEAKERS BASS ADABUS
LEVELS THX TURN ON
DELAYS SOLO TEST
    
```

Accessing The Thx Menu

```

THX SETUP <P M>
BOUNDARY GAIN OFF
ASA BACKSPKRS
<12" * 12-48" >48"
    
```

First Display In The Thx Bus Menu

```

THX SETUP <P M>
BOUNDARY GAIN OFF
ASA BACKSPKRS
<12" * 12-48" >48"
    
```

Thx Setup Menu Displaying The First Letter For Changing Both Parameters

```

TRI BR3 VAR2 VOL -25.5
TONE RECALL 1 T/B/VOL SET
BAL RECALL 1 PRO SETUP
VOL RECALL 1 M >
    
```

Accessing The Pro Setu Menu

```

LABELS A/V PL EH <P M>
SPEAKERS BASS ADABUS
LEVELS THX TURN ON
DELAYS SOLO TEST
    
```

Accessing The Turn On Menu

```

TURN ON <P M>
TURN ON VOLUME LAST USED
TURN ON INPUT LAST USED
>DEFAULT MODES PAGE
    
```

Turn On Menu Displaying Letters For Changing Parameters

```

DEFAULT MODES <P M>
INPUT SEL DVD PLAYER 1
DEFAULT 5.1 LAST USED
DEFAULT 2.0 LAST USED
    
```

Turn On Menu Displaying The First Letter For Changing Parameters

```

TRI BR3 VAR2 VOL -25.5
TONE RECALL 1 T/B/VOL SET
BAL RECALL 1 PRO SETUP
VOL RECALL 1 M >
    
```

Accessing The Pro Setu Menu

```

LABELS A/V PL EH <P M>
SPEAKERS BASS ADABUS
LEVELS THX TURN ON
DELAYS SOLO TEST
    
```

Accessing The Solo Test Menu

```

OFF SOLO TEST <P M>
LEFT * CENTER RIGHT
LS LRS LS
SBL SUB SBR
    
```

First Display In The Solo Test Menu

```

OFF SOLO TEST <P M>
LEFT * CENTER RIGHT
LS LRS LS
SBL SUB SBR
    
```

Solo Test Menu Showing Left Channel Solo

## Setting up the Suite 7.1 with Front Panel Controls and Display

Although the optimum method for setting up the Suite 7.1 is with setup software described later, you can still set up the Suite 7.1 with the front panel controls if the unit that is so equipped. To activate the setup function of the Suite 7.1, press and hold down the Mode knob for four seconds.

### Navigating Within the Setup Menu

The Mode and Input knobs are used to navigate and select through the front panel setup menu. Once you have entered the setup menu, you generally navigate to the function you want to change with the Mode knob and change the parameter of that function with the Input knob. The following sections illustrate how you set up each of the Suite 7.1's numerous functions. Once you are in the setup mode, you can exit it by navigating to arrow next to the M > and pressing the mode knob. This sends you back to the main control display. You can access the previous display by navigating to arrow next to the <P and pressing the mode knob.

## Setting Tone, Balance, and Volume Presets Levels

The Suite 7.1 allows you to individually fine tune the Tone, Balance, Volume for all eight channels and store these adjustments into memory. There are four separate presets that you can store into memory that can later be recalled to suit a particular environmental situation or source.

### Bass and Treble for Memory Recall

The advanced tone feature of the Suite 7.1 allows you to adjust tone for each of the eight output channels. Each of the four tone presets can be subdivided into two groups. This extra flexibility permits you to have different tone settings for the front and rear channels under the same tone preset.

### Selecting Channels for Tone Adjustment

1. Press and hold the Mode knob until the display changes to the Tone, Balance, and Volume recall setup. The cursor will flash over the T in TONE.
2. Rotate the Mode knob until the cursor is over the T in T/B/VOL SET.
3. Press the Mode knob. The display will change again to the tone store display. There are two groups that can be stored into memory: GROUP A and GROUP B.
4. When the cursor flashes over G in Group A, rotate the Input knob to select between Group A and B.
5. Select the tone group you want to adjust.
6. Once the tone group is selected, rotate the Mode knob until you reach the second line in the display. The cursor will flash over the L for the Left channel.
7. Rotate the input knob until an asterisk appears next to the letter that corresponds to the channel. This will include that channel in the group for tone adjustment. (e.g. L \* R \* C \*)
8. Once you have included all channels for tone adjustment, rotate the Mode knob clockwise until the cursor flashes over the T in TREB.

### Adjusting the Treble Level

1. Rotate the Input knob clockwise to increase the level of treble in 1 dB increments up to +20 dB.
2. Rotate the Input knob counterclockwise to decrease the level of treble in 1 dB increments down to -20 dB.

### **Adjusting the Treble Shelving Frequency**

Once the treble level is adjusted, you can select the frequency at which the treble increase or decrease starts. This is called the shelving frequency and can be set in 1 kHz increments from 1 kHz to 30 kHz. In most cases, you can leave the shelving frequency at the default setting of 12 kHz.

1. Rotate the Mode knob clockwise until the cursor is over the T in TREB near the shelving frequency.
2. Rotate the Input clockwise to increase the shelving frequency.
3. Rotate the Input clockwise to decrease the shelving frequency.

### **Adjusting the Bass Level**

1. Navigate to the bass level position by rotating the Mode knob until the cursor in the display flashes over the B in BASS in the far left of the display
2. Rotate the Input knob clockwise to increase the level of bass in 1 dB increments up to +20 dB.
3. Rotate the Input knob counterclockwise to decrease the level of bass in 1 dB increments down to -20 dB.

### **Adjusting the Bass Shelving Frequency**

Once the bass level is adjusted, you can select the frequency at which the bass increase or decrease starts. This is called the shelving frequency and can set in 10 Hz increments from 20 Hz to 980 Hz. In most cases, you can leave the shelving frequency at the default setting of 120 Hz.

1. Rotate the Mode knob clockwise until the cursor is over the B in BASS near the shelving frequency.
2. Rotate the Input clockwise to increase the shelving frequency.
3. Rotate the Input counterclockwise to decrease the shelving frequency.

### **Storing Group B and Storing Tone Preset Levels into Memory**

If you wish to store different tone settings into group b for different channels, repeat the procedures above. Once you have made all the tone adjustments for Group A and Group B, you can store them into memory for later recall.

1. While still in the tone preset setup menu, navigate to the Store function by rotating the Mode knob until the cursor flashes over the s in STR1 label on the top row.
2. Rotate the Input knob from STR1 to STR4 to select the desired tone presets for storage.
3. Press the Input knob from STR1 to STR4 to store the tone presets into memory.

### **Recalling the Stored Tone Preset**

Once the presets are stored into memory, they can be easily recalled. In most cases, you will access a tone preset with a single press of a button on a remote control, touchscreen, or even in a macro. If this is the case, you won't have to enter the setup menu to access the tone presets. However, you can access the tone preset recall from the front panel by the following method:

1. Press and hold the Mode knob until the display changes to the Tone, Balance, and Volume recall setup. The cursor will flash over the T in TONE RECALL1.
2. Rotate the Input knob until the desired recall number is displayed
3. Press the Mode knob. The display will flash T RECALLED and the recall number on the top row.

**NOTE:** The Suite 7.1 remembers the last tone setting that was selected even after you turn the unit off or change an input. You can override the previous tone setting by selecting a different tone preset. Therefore, you may want to consider having one of the tone presets completely flat (no channels selected for equalization or all levels set to 0 dB) for a zero reference point.

### **Individual Channel Balance Levels**

The balance feature of the Suite 7.1 allows you to adjust the level for each of the eight output channels and store them into four different memory recalls. This feature allows you to quickly adjust levels to accommodate different seating locations within the listening area thus allowing you to recall four different “sweet spots”. As with the tone presets, the Suite 7.1 remembers the last balance setting that was selected even if the input was changed or the unit was turned off.

### **Storing Individual Channel Levels**

1. Press and hold the Mode knob until the display changes to the Tone, Balance, and Volume recall setup. The cursor will flash over the T in TONE.
2. Rotate the Mode knob until the cursor is over the B in T/B/VOL SET.
3. Press the Mode knob. The display will show the eight channels and their current levels. The cursor will flash over the S in STR1.
4. Rotate the Input knob clockwise until the cursor is flashing over the L in LEFT.
5. Rotate the Input knob clockwise to increase the channel level or counterclockwise to decrease the channel level in 0.5 dB increments.
6. Repeat steps 4 and 5 for each of the eight channels.
7. Once you have adjusted all channels, rotate the Input knob until the cursor reaches the S in STR1.
8. Press the Input knob to store the channel levels into memory.
9. Repeat steps 3 through 8 to store up to four level presets into memory.

### **Recalling the Stored Balance Presets**

Once the balance presets are stored into memory, they can be easily recalled. In most cases, you will access a balance preset with a single press of a button on a remote control, touchscreen, or even in a macro. However, you can access the balance preset recall from the front panel by the following method:

1. Press and hold the Mode knob until the display changes to the Tone, Balance, and Volume recall.
2. Rotate the Mode knob until the cursor is flashing over the B in BAL RECALL1.
3. Rotate the Input knob until the desired balance preset recall number is displayed
4. Press the Mode knob. The display will flash B RECALLED and the recall number on the top row.

### **Setting Master and Maximum Volume Levels**

You can also store master volume levels as well as maximum volume into as many as four preset levels. These preset levels can be easily recalled in the same way as tone and balance presets and are useful if you want to select an optimum volume level with the single touch of a button. The maximum volume feature lets you establish a safe volume level to protect your speakers.

### **Storing Master Volume and Maximum Volume Levels into Memory**

1. Press and hold the Mode knob until the display changes to the Tone, Balance, and Volume recall.
2. Rotate the Mode knob until the cursor is over the v in T/B/VOL SET.
3. Press the Mode knob. The display will show the current master volume and maximum volume level. The cursor will flash over the v in VOLUME STORE 1.
4. Rotate the Input knob to select the desired master and maximum volume preset number (1 –4).
5. Rotate the Volume knob clockwise until the desired master volume level is reached.
6. Rotate the Input knob until the cursor reaches the letter v on the bottom line.
7. Rotate the Input knob to set the maximum attainable master volume level.
8. Rotate the Mode knob until the cursor flashes over the v in VOLUME STORE 1.
9. Press the Input knob. The display will flash VOLUME STORE to indicate that the levels have been stored into memory.

### **Recalling the Master and Maximum Volume Levels**

Once the master and maximum level presets are stored into memory, they can be easily recalled. In most cases, you will access a volume preset with a single press of a button on a remote control, touchscreen, or even in a macro. However, you can access the balance preset recall from the front panel by the following method:

1. Press and hold the Mode knob until the display changes to the Tone, Balance, and Volume recall.
2. Rotate the Mode knob until the cursor is flashing over the v in VOL RECALL.
3. Rotate the Input knob until the desired balance preset recall number is displayed
4. Press the Mode knob. The display will flash v RECALLED and the recall number on the top row.

### **Pro Setup Overview**

The Pro Setup menu is where you set the follow important parameters for surround sound decoding including, speaker levels, bass management, and channel delays. The Pro Setup menu is also where you can assign and label each input, limit the number of inputs, and set the ADA Bus baud rate and address. All the additional options within the Pro Set menu are also described in detail below:

### **Pro Setup Level One: Input labeling and Input Assignment**

#### **A/V Input Default Labels**

The default labeling for the inputs were designed to accommodate most systems without the need for renaming. The default labeling is listed below. However, if you want to change the default labels, you can do so in Pro Setup.

#### **Accessing the Pro Setup Menu**

1. Press and hold the Mode knob until the display changes to the Tone, Balance, and Volume recall.
2. Rotate the Mode knob until the cursor is flashing over the P in PRO SETUP.
3. Press the Mode knob. The display will change to the Pro Setup menu and the cursor will flash over the L in LABELS/AV.
4. Once you are in the Pro Setup mode, you can exit it by navigating to arrow next to the M > and pressing the mode knob. This sends you back to the main control display.
5. You can access the previous display by navigating to arrow next to the <P and pressing the mode knob.

### Renaming A/V Input Labels

1. Press and hold the Mode knob until the display changes to the Tone, Balance, and Volume recall setup.
2. Rotate the Mode knob until the cursor is flashing over the P in PRO SETUP.
3. Press the Mode knob. The display will change to the Pro Setup menu and the cursor will flash over the L in LABELS/AV
4. Press the Mode knob again. The cursor will then flash over the I in INPUT 1.
5. Rotate the Mode knob until the cursor is flashing over the L in LABEL.
6. Press the Mode knob again. The cursor will flash over the first letter of the input to be changed.
7. Rotate the Input knob to change the first letter of the label.
8. Rotate the Mode knob to advance to the next letter.
9. Repeat steps 5 and 6 until you have spelled out the new label. There are a total of 12 characters available to store.
10. Once you have updated the input label, rotate the Mode knob until it flashes over s in SAVE. The cursor will return to the L in LABEL
11. Rotate the Mode knob until the cursor flashes over the I in INPUT 1 again.
12. Rotate the Input knob to select the next input to rename and repeat steps 3-9.

### Assigning Audio Sources

You can assign any of the four analog inputs, digital inputs, or multipin input to inputs 1 through 10. For example, you might want to assign either a Digital 1 or Optical 1 to the input with the default input labeled DVD Player because it would allow you to take advantage of the digital processing built into the Suite 7.1. Likewise, you would probably assign Analog 1 to the input labeled VCR 1 since it doesn't have a digital output.

### To Assign an Analog or Digital Source

1. Press and hold the Mode knob until the display changes to the Tone, Balance, and Volume recall.
2. Rotate the Mode knob until the cursor is flashing over the P in PRO SETUP.
3. Press the Mode knob. The display will change to the Pro Setup menu and the cursor will flash over the L in LABELS/AV
4. Press the Mode knob again. The cursor will then flash over the I in INPUT 1.
5. Rotate the Mode knob until the cursor is flashing over the A in AUDIO.
6. Rotate the Input knob to select one of the four analog four, digital inputs, or eight channel multipin input. Once you have selected the input in this way, it remains in memory unless you change it again. There is no need to press a knob.

### Assigning Video Sources

You can also assign any combinations of the four composite or S-video inputs, or two component video inputs to inputs 1 through 10. The video inputs are assigned as simultaneous combinations of composite, S-video and component video. For example, you can assign composite input 1, S-video input 2 and component video input 2. Since there are a total of ten different video inputs, there are 32 available combinations of video inputs.

#### **To Assign Video Sources to the Input**

1. Press and hold the Mode knob until the display changes to the Tone, Balance, and Volume recall.
2. Rotate the Mode knob until the cursor is flashing over the P in PRO SETUP.
3. Press the Mode knob. The display will change to the Pro Setup menu and the cursor will flash over the L in LABELS/AV
4. Press the Mode knob again. The cursor will then flash over the I in INPUT 1.
5. Rotate the Mode knob until the cursor is flashing over the V in VIDEO.
6. Rotate the Input knob to select one of the 32 different video assignment combinations. Once you have selected the input in this way, it remains in memory unless you change it again. There is no need to press a knob.

#### **Setting the Final or Maximum Input**

Although there are ten available inputs, you may not use all of them. You can limit the amount of inputs that you need to scroll through by setting the maximum input. For example, you could connect four components to the Suite 7.1 and create two additional “virtual inputs” as described earlier. This would be a total of six inputs used. You could then set the number of inputs to six. Now whenever you scroll through the inputs, it will only go through 1 to 6, rather than 1 to 10.

#### **To Set the Maximum Input**

1. Press and hold the Mode knob until the display changes to the Tone, Balance, and Volume recall.
2. Rotate the Mode knob until the cursor is flashing over the P in PRO SETUP.
3. Press the Mode knob. The display will change to the Pro Setup menu and the cursor will flash over the L in LABELS/AV
4. Press the Mode knob again. The cursor will then flash over the I in INPUT 1.
5. Rotate the Mode knob until the cursor is flashing over the M in MAX INPUT 10.
6. Rotate the Input knob to set the last of the ten inputs. Once you have selected the final input in this way, it remains in memory unless you change it again. There is no need to press a knob.

#### **Loading Files from the Cinema Reference Mach II PC Program**

As mentioned earlier, the Cinema Reference Mach II PC Program allows you to setup and control the Suite 7.1. When you use this program for set up you need to load all of the parameters into the Suite 7.1. This accomplished within the same setup menu used for labeling and assigning inputs. The setup loading procedure is described in detail in the software instruction section of this manual.

#### **To load a Setup File into the Suite 7.1**

1. Make the changes within the software program as described in the Cinema Reference Mach II PC Program
2. Press and hold the Mode knob until the display changes to the Tone, Balance, and Volume recall setup.
3. Rotate the Mode knob until the cursor is flashing over the P in PRO SETUP.
4. Press the Mode knob. The display will change to the Pro Setup menu and the cursor will flash over the L in LABELS/AV
5. Press the Mode knob again. The cursor will then flash over the I in INPUT 1.
6. Rotate the Mode knob until the cursor is flashing over the L in LOAD.
7. Press the Mode knob. The display shows LOADING while the program is loaded into memory.

## **Pro Setup Level Two: Bass Management Setup**

Bass management is designed to assure overall balanced bass response with many different types of speaker systems. The Bass Management setup menu lets you configure all of your speakers to accept low frequencies below the crossover setting, or to filter out these frequencies and route them to your front speakers, or send them only to your subwoofer channel.

THX certified speaker systems always have a subwoofer included so the left, right, center, and surround speakers can be high pass filtered at 80 Hz. The default bass management settings for the Suite 7.1 is optimized for THX speaker systems as follows: L,C,R, LS, RS, LSB, RSB all high passed at 80 Hz with the subwoofer active and low pass filtered at 80 Hz.

While the default settings are set for THX certified systems, the ADA Suite 7.1 incorporates fully featured bass management circuitry that will deliver optimum bass performance to virtually any home theater speaker system. We recommend that you consult the installation manual to determine the best bass management settings for your speaker particular system.

### **To Setup Bass Management for Your Front Left and Right Speakers:**

1. Press and hold the Mode knob until the display changes to the Tone, Balance, and Volume recall.
2. Rotate the Mode knob until the cursor is flashing over the P in PRO SETUP.
3. Press the Mode knob. The display will change to the Pro Setup menu and the cursor will flash over the L in LABELS/AV
4. Rotate the Mode knob until the cursor flashes over the S in SPEAKERS.
5. Press the Mode knob again the display will change to the bass management menu with the cursor flashing over the F in FRONT.
6. Refer to the owner's manual of your front left and right speakers to determine whether they are designed to reproduce frequencies.
7. If your front left and right speakers are designed to handle low frequencies, rotate the Input knob so the display reads: FRONT LARGE.
8. If your front left and right speakers are not designed to handle low frequencies, rotate the Input knob so the display reads: FRONT SMALL. The front speakers will have low frequencies rolled off starting at the selected crossover frequency. This low frequency information is then re-routed to the subwoofer channel.

### **To Setup Bass Management for Your Center Speaker:**

1. If you are not already in the Bass Management setup menu, follow steps 1-4 from above.
2. Rotate the Mode knob until the cursor flashes over the C in CENTER.
3. Refer to the owner's manual of your front left and right speakers to determine whether they are designed to safely reproduce low frequencies.
4. If your center speaker is designed to operate in full range, rotate the Input knob so the display reads: CENTER LARGE.
9. If your center speaker is not designed to operate in full range, rotate the Input knob so the display reads: CENTER SMALL. The center will have low frequencies rolled off at the selected crossover frequency. This low frequency information is then re-routed to the subwoofer channel.
5. If you do not have a center channel speaker, select CENTER NONE and the Suite 7.1 will create a phantom center image using the front left and right speakers.

**To Setup Bass Management for Your Surround Speakers:**

1. If you are not already in the Bass Management setup menu, follow steps 1-4 from above.
2. Rotate the Mode knob until the cursor flashes over the S in SURROUND.
3. Refer to the owner's manual of your front left and right speakers to determine whether they are designed to safely reproduce low frequencies.
4. If your center speaker is designed to operate in full range, rotate the Input knob so the display reads: SURROUND LARGE.
5. If your center speaker is not designed to operate in full range, rotate the Input knob so the display reads: SURROUND SMALL. The center will have low frequencies rolled off at the selected crossover frequency. This low frequency information is then re-routed to the subwoofer channel.
6. If you do not have a center channel speaker, select SURROUND NONE and the Suite 7.1 will re route the surround channel information to the other active speakers.

**To Setup Bass Management for Your Surround Back Speakers:**

1. If you are not already in the Bass Management setup menu, follow steps 1-4 from above.
2. Rotate the Mode knob until the cursor flashes over the B in BACK.
3. Refer to the owner's manual of your front left and right speakers to determine whether they are designed to safely reproduce low frequencies.
4. If your surround back speakers are designed to operate in full range, rotate the Input knob so the display reads: BACK LARGE 1 OR 2. Note that if you have selected large surround speakers, you can only select large surround back speakers.
5. If your center speaker is not designed to operate in full range, rotate the Input knob so the display reads: BACK SMALL 1 OR 2. The center will have low frequencies rolled off at the selected crossover frequency. This low frequency information is then re-routed to the subwoofer channel. Note that if you have selected large surround speakers, you can only select large surround back speakers.
6. If you do not have a center channel speaker, select BACK NONE and the Suite 7.1 will re route any discrete surround back channel information to the other active speakers.

**To Setup Your Subwoofer:**

1. If you are not already in the Bass Management setup menu, follow steps 1-4 from above.
2. Rotate the Mode knob until the cursor flashes over the S in SUB.
3. If you are using a subwoofer, rotate the Input knob so the display reads SUB YES. Low frequency effects (LFE) are then routed to the subwoofer.
4. If you have selected SMALL or NONE for the main, center, surround, or surround back speakers, frequencies below the crossover frequency are also routed to the subwoofer channel.

**Setting the Subwoofer Crossover Frequency:**

1. If you are not already in the Bass Management setup menu, follow steps 1-4 from above.
2. Rotate the Mode knob until the cursor flashes over the S in SUBXOVER .
3. Rotate the Input knob to adjust the subwoofer crossover frequency, which can be set in 10 Hz increments from OFF to 220 Hz .
4. When you set the crossover frequency to the OFF position, the crossover circuit of the Suite 7.1 is defeated and the full audio spectrum is sent to all the speakers. This gives you the option of using an external crossover or the crossover built in to your subwoofer and avoids the possibility of "double filtering".

### Pro Setup Level Three: Calibrating Channel Levels

Level calibration requires independent adjustment of the output level for each of the channels of the Suite 7.1 so that all channels have the same relative signal strength from your listening position. The Suite 7.1 lets you program its internal noise generator to advance from channel to channel sequentially or manually. If you wish, you can calibrate your system with the aid of a sound pressure level (SPL) meter such as the Realistic Sound Level Meter (Radio Shack catalog # 33-2050). When you use an SPL meter for calibration, you should hold it upright directly in front of your head and make adjustments while you are seated in your listening position. If an SPL meter is unavailable, you can still adjust levels by ear with adequate results. You can store as many as four preset speaker levels into memory recall to accommodate different listening positions.

#### To Set Channel Levels Manually with the Internal Noise Generator:

1. Press and hold the Mode knob until the display changes to the Tone, Balance, and Volume recall.
2. Rotate the Mode knob until the cursor is flashing over the P in PRO SETUP.
3. Press the Mode knob. The display will change to the Pro Setup menu.
4. Rotate the Mode knob until the cursor flashes over the L in LEVELS.
5. Press the Mode knob. The display will change to the speaker level menu with the cursor flashing over the N in NOISE.
6. To manually set the speaker levels one at a time, rotate the Input knob until the cursor flashes over the first letter on any of the channels. (We recommend starting on the left channel.) You will see an asterisk next to NOISE \* indicating that the noise generator is on. *Note:* Rotating the Volume knob will immediately turn off the noise generator.
7. Rotate the Input knob to adjust individual channels to 75 dB on an SPL meter. (Make sure the meter is set to C weighting and slow response time.) The noise generator will not advance to the next channel until you are finished setting the channel level.
8. Repeat the above level adjustment procedures for all channels.

#### To Set Channel Levels Sequentially with the Internal Noise Generator:

1. Press and hold the Mode knob until the display changes to the Tone, Balance, and Volume recall setup.
2. Rotate the Mode knob until the cursor is flashing over the P in PRO SETUP.
3. Press the Mode knob. The display will change to the Pro Setup menu.
4. Rotate the Mode knob until the cursor flashes over the L in LEVELS.
5. Press the Mode knob. The display will change to the speaker level menu with the cursor flashing over the N in NOISE.
6. To sequentially set the speaker levels one at a time, rotate the Input knob until the cursor flashes over the first letter on any of the channels. (We recommend starting on the left channel.) You will see an asterisk next to NOISE \* indicating that the noise generator is on. *Note:* Rotating the Volume knob will immediately turn off the noise generator.
7. Rotate the Input knob to adjust individual channels to 75 dB on an SPL meter. (Make sure the meter is set to C weighting and slow response time.) The noise generator will not advance to the next channel until you are finished setting the channel level.
8. Repeat the above level adjustment procedures for all channels.

### Storing the Channel Levels into One of the Four Preset Memories

Note: These balance level presets are also available for storing and recall are can also be stored and recalled in the Tone, Balance and Volume recall section described earlier.

1. Rotate the Mode knob until the cursor is over the S in SEQ 1
2. Rotate the Input knob to select one of the four memory presets
3. Press the Input knob to store the channel level settings into memory.

### Recalling the Stored Balance Presets

1. Press and hold the Mode knob until the display changes to the Tone, Balance, and Volume recall setup.
2. Rotate the Mode knob until the cursor is flashing over the B in BAL RECALL1.
3. Rotate the Input knob until the desired balance preset recall number is displayed
4. Press the Mode knob. The display will flash B RECALLED and the recall number on the top row.

### Pro Setup Level Four: Bass Limiter

With the extra low frequency content mixed into film soundtracks, especially in the LFE channel, it is sometimes preferable to limit overall bass energy to prevent overloading your speakers and/or subwoofer. The Bass Limiter is designed to protect woofers from over excursion, distortion, or damage. When in doubt, leave the Bass Limiter at its default 0 dB setting and use sensible master volume levels.

1. **IMPORTANT!:** Before setting the bass limiter, turn down the level on your subwoofer amplifier.
2. Press and hold the Mode knob until the display changes to the Tone, Balance, and Volume recall.
3. Rotate the Mode knob until the cursor is flashing over the P in PRO SETUP.
4. Press the Mode knob. The display will change to the Pro Setup menu and the cursor will flash over the L in LABELS/AV
5. Rotate the Mode knob until the cursor flashes over the B in BASS.
6. Press the Mode knob again. The display will change to the bass limiter menu with the cursor flashing over the S in SUBWOOFER NOISE OFF. If it wasn't already off, rotate the Input knob to turn the subwoofer noise off.
7. Rotate the Mode knob until the cursor is flashing over the L in LIMITER CEILING
8. Rotate the Input knob until the limiter ceiling value is -20 dB.
9. Reset your subwoofer to the subwoofer level that you set during calibration.
10. Rotate the Mode knob to SUBWOOFER NOISE OFF and rotate the Input knob to turn on the noise on.
11. Slowly lower the LIMITER CEILING level from -20 dB toward 0 dB until any the any of the woofers in the system start to "overload". When this happens, you may hear some mechanical clattering sound or other evidence of distress. Sometimes the noises you hear are not produced by the subwoofer, but are objects that are vibrating or rattling.
12. Raise the Bass Limiter ceiling level until you can no longer hear the distortion, clattering, or other unmusical sounds from any of the woofers in the system.
13. The LIMITER CEILING is now set to its optimum level.

### Pro Setup Menu Level Five - Calibrating Channel Delay Times

The Suite 7.1 is equipped with advanced delay circuitry that allows you to independently set the delay times of each of your home so the signals from eight arrive at the listening position at the correct time. Ideally, you should try to locate your speakers as close to the same distance from your listening position as possible so you only need a minimum of delay adjustment.

**To Set Channel Delay Times:**

1. Measure the distance in feet from your listening position to each of your home theater speakers. If you have two subs, use the distance that is the average of both of them to your listening location.
2. Press and hold the Mode knob until the display changes to the Tone, Balance, and Volume recall.
3. Rotate the Mode knob until the cursor is flashing over the P in PRO SETUP.
4. Press the Mode knob. The display will change to the Pro Setup menu.
5. Rotate the Mode knob until the cursor flashes over the L in LEVELS.
6. Press the Mode knob. The display will change to the speaker level menu with the cursor flashing over the D in DELAYS.
7. Rotate the Input knob to set the distance in feet that you measured in step 1 above.
8. Rotate the Mode knob to advance to the next channel for delay setting.
9. Repeat steps 7 and 8 for each channel.

**Setup Menu Level Six – ADA Bus Menu Settings**

The Suite 7.1 allows you to adjust communication settings and display settings once in the ADA bus setup menu. The communication settings include setting the address for multiple Suite 7.1s in a single system, setting the baud rate, and turning on and off the front panel IR receiver.

**Setting the Address for the Suite 7.1**

In larger systems, there may be multiple Suite 7.1s installed in the same system. In order to insure that only the desired Suite is controlled on the same communication bus, it is necessary to assign different addresses to each. If there is only one Suite 7.1 in the system, there is no need to change the address.

1. Press and hold the Mode knob until the display changes to the Tone, Balance, and Volume recall.
2. Rotate the Mode knob until the cursor is flashing over the P in PRO SETUP.
3. Press the Mode knob. The display will change to the Pro Setup menu.
4. Rotate the Mode knob until the cursor flashes over the A in ADABUS.
5. Press the Mode knob. The display will change to the ADA bus menu with the cursor flashing over the B in BUS ADDRESS.

**Setting the Baud Rate for the Suite 7.1**

The baud rate determines how rapidly the communication bus transfers data. In most cases, it is best to set the baud rate at 19,200 bps. However, in installations where you wish to control the Suite 7.1 with a learning remote control, it will be necessary to change the baud rate to 1200 bps.

**To Change the Baud Rate**

1. Press and hold the Mode knob until the display changes to the Tone, Balance, and Volume recall.
2. Rotate the Mode knob until the cursor is flashing over the P in PRO SETUP.
3. Press the Mode knob. The display will change to the Pro Setup menu.
4. Rotate the Mode knob until the cursor flashes over the A in ADABUS.
5. Press the Mode knob. The display will change to the ADA bus menu with the cursor flashing over the B in BUS BAUD.
6. Rotate the input knob to change the baud rate.

### **Setting the Display to Blank Out**

You can set the front panel display to go out after a specified amount of time or set it to stay on all the time. Regardless of how you have set the blanking, the front panel display will remain lit as long as you are controlling the unit.

#### **To Set Display Blanking**

1. Press and hold the Mode knob until the display changes to the Tone, Balance, and Volume recall.
2. Rotate the Mode knob until the cursor is flashing over the P in PRO SETUP.
3. Press the Mode knob. The display will change to the Pro Setup menu.
4. Rotate the Mode knob until the cursor flashes over the A in ADABUS.
5. Press the Mode knob. The display will change to the ADA bus menu.
6. Rotate the Mode knob to until the cursor flashes over the B in BLANKING.
7. Rotate the Input knob to set the time from 0 to 60 seconds before the display blanks out.
8. If you want the front panel display to stay on, rotate the Input knob to OFF.

#### **Turning On and Off the Infrared Receiver**

In certain installations where the Suite 7.1 is being controlled through the ADA Bus, it may be desirable to defeat the infrared receiver on the front panel to prevent interference from other IR controlled components.

#### **To Turn Off the Infrared Receiver**

1. Access the ADA Bus menu as described above
2. Rotate the Mode knob until the cursor flashes over the I in IRR.
3. Rotate the Input knob to set the IR receiver to on or off.

#### **Storing and Recalling Default Settings**

All the factory settings of the Suite 7.1 can be recalled from within the ADA bus menu. You can also store all the settings you have made and overwrite the new settings into memory. If you overwrite the factory settings, you can restore them with a special code.

#### **To Turn Off the Infrared Receiver**

1. Rotate the Mode knob until the cursor flashes over the I in IRR.
2. Rotate the Input knob to set the IR receiver to on or off.

### **Pro Setup Menu Level Seven – THX Menu Settings**

#### **Boundary Gain Control (BGC)**

The Boundary Gain Control allows you to compensate for unwanted bass reinforcement from the rear wall. This feature helps reduce boominess especially if the listening position is in close proximity to the rear wall. If you find that the overall sound performance sounds a little bass heavy especially when you are near the rear wall, you can turn on the Boundary Gain Compensation (BCG) to restore the correct bass performance.

**To Turn on the THX Boundary Gain Control**

1. Press and hold the Mode knob until the display changes to the Tone, Balance, and Volume recall.
2. Rotate the Mode knob until the cursor is flashing over the P in PRO SETUP.
3. Press the Mode knob. The display will change to the Pro Setup menu.
4. Rotate the Mode knob until the cursor flashes over the T in THX.
5. Press the Mode knob. The display will change to the THX menu.
6. Rotate the Mode knob to until the cursor flashes over the B in BOUNDARY.
7. Rotate the Input knob to turn on or off the Boundary Gain Control.

**THX Advanced Speaker Array (ASA)**

With stereo surround tracks and multichannel music, the signal is fed unprocessed to the left and right surrounds and, after further processing, to the surround back speakers. This processing uses THX ASA (Advanced Speaker Array) Technology and provides an enveloping rear surround field over a wide listening area. The adjustment to the ASA is based on three settings; if the two back surround speakers are less than 12 inches apart, if they are between 12 and 48 inches apart, or if they are greater than 48 inches apart.

**To set the ASA for your system**

1. Measure the distance between your surround back speakers.
2. Press and hold the Mode knob until the display changes to the Tone, Balance, and Volume recall.
3. Rotate the Mode knob until the cursor is flashing over the P in PRO SETUP.
4. Press the Mode knob. The display will change to the Pro Setup menu.
5. Rotate the Mode knob until the cursor flashes over the T in THX.
6. Press the Mode knob. The display will change to the THX menu.
7. Rotate the Mode knob to until the cursor flashes over the A in ASA BACKSPKRS.
8. Rotate the Input knob to set the distance between the surround back speakers you measured in step 1 above.

**Setup Menu Level Eight – Turn On Menu and Default Surround Modes**

The Turn On menu allows you to establish the input selected when the Suite 7.1 is turned on. This menu also lets you select the turn on volume and surround mode for each of the inputs connected to the Suite 7.1. There are two default surround modes to store into memory: two channel information and discrete multichannel (5.1, 7.1, etc). This permits the proper automatic playback of virtually any media that the Suite 7.1 decodes without having to select the mode each time you play a source.

**To Set Default Volume Level:**

1. Press and hold the Mode knob until the display changes to the Tone, Balance, and Volume recall.
2. Rotate the Mode knob until the cursor is flashing over the P in PRO SETUP.
3. Press the Mode knob. The display will change to the Pro Setup menu.
4. Rotate the Mode knob until the cursor flashes over the L in LEVELS. Press the Mode knob.
5. The display will change to the speaker level menu with the cursor flashing over the T in TURN ON.
6. Press the Mode knob. The cursor will flash over the Turn On Volume menu
7. Rotate the Input knob to select the Volume recall (1-4).

**To Set Default Input:**

1. Press and hold the Mode knob until the display changes to the Tone, Balance, and Volume recall.
2. Rotate the Mode knob until the cursor is flashing over the P in PRO SETUP.
3. Press the Mode knob. The display will change to the Pro Setup menu.
4. Rotate the Mode knob until the cursor flashes over the L in LEVELS. Press the Mode knob.
5. The display will change to the speaker level menu with the cursor flashing over the T in TURN ON.
6. Press the Mode knob. The cursor will flash over the Turn On Input menu
7. Rotate the Input knob to select the source that the Suite 7.1 selects (Input 1 through Input 20) when the unit is turned on.

**To Set 5.1 Channel and 2 Channel Default Modes:**

1. Press and hold the Mode knob until the display changes to the Tone, Balance, and Volume recall.
2. Rotate the Mode knob until the cursor is flashing over the P in PRO SETUP.
3. Press the Mode knob. The display will change to the Pro Setup menu.
4. Rotate the Mode knob until the cursor flashes over the L in LEVELS. Press the Mode knob.
5. The display will change to the speaker level menu with the cursor flashing over the T in TURN ON.
6. Rotate the Mode knob until the cursor flashes over the > in >DEFAULTS.
7. Press the Mode knob again. The display will change to the default mode menu.

**For 5.1 Surround Modes**

1. Rotate the Mode knob until the cursor flashes over the I in INPUT SEL.
2. Rotate the Input knob to select the input (1-20) for surround default settings.
3. Rotate the Mode knob until the cursor flashes over the D in DEFAULT 5.1.
4. Rotate the Input knob to select the default multichannel 5.1 surround decoding mode.

**For 2 Channel Surround Modes**

1. Rotate the Mode knob until the cursor flashes over the I in INPUT SEL.
2. Rotate the Input knob to select the input (1-20) for surround default settings.
3. Rotate the Mode knob until the cursor flashes over the D in DEFAULT 2.0.
4. Rotate the Input knob to select the default multichannel 5.1 surround decoding mode.

**Pro Setup Menu Level Nine – Pro Logic II Enhancements**

The Suite 7.1 allows you to customize the specific decoding parameters of Pro Logic II and store them in up to four memory presets of recall. This unique feature provides you with the ability to fine-tune the sound field for a truly astounding music playback experience. This customization also works well for the playback of sporting events. The adjustable parameters for Pro Logic II include the following:

**IMPORTANT.** In order to access these parameters, you must have the Pro Logic II Music or custom 1-3 mode selected before accessing the Pro Setup menu. If you try to access the Pro Logic customization menu in another mode, the front panel display will read UNAVAILABLE. When adjusting the parameters below, we recommend that you play back a two-channel source so you can judge the audible affect of each of the Pro Logic II enhancements.

**Center Width:**

This parameter allows you to widen the center channel sound toward the front left and right speakers. At its widest setting, all the sound from the center is mixed into the left and right. This control may help achieve a more spacious sound or a better blend of the front image.

### **To Set the Center Width Parameter**

1. Make sure that Pro Logic II Music or custom 1-3 mode is selected on the main display.
2. Press and hold the Mode knob until the display changes to the Tone, Balance, and Volume recall setup.
3. Rotate the Mode knob until the cursor is flashing over the P in PRO SETUP.
4. Press the Mode knob. The display will change to the Pro Setup menu.
5. Rotate the Mode knob until the cursor flashes over the P in PL.
6. Press the Mode knob. The display will change to the speaker level menu with the cursor flashing over the P in PL 1.
7. Rotate the Mode knob until the cursor flashes over the C in CEN WIDTH
8. Rotate the Input knob to increase the center width from 0 to 7 in increments of 1.

### **Surround Filtering:**

There are three available filters for the surround channels. You can set the filtering to ALL for full range operation for the surround channels. You can also set the surround speakers for 7 KHZ for traditional Pro Logic. You can also set this parameter to SHELF for a high pass shelving type filter.

1. Make sure that Pro Logic II Music or custom 1-3 mode is selected on the main display.
2. Press and hold the Mode knob until the display changes to the Tone, Balance, and Volume recall.
3. Rotate the Mode knob until the cursor is flashing over the P in PRO SETUP.
4. Press the Mode knob. The display will change to the Pro Setup menu.
5. Rotate the Mode knob until the cursor flashes over the P in PL.
6. Press the Mode knob. The display will change to the speaker level menu with the cursor flashing over the P in PL 1.
7. Rotate the Mode knob until the cursor flashes over the s in SURR
8. Rotate the Input knob to change the filtering (All, 7 kHz, or shelf).

### **To Set Surround Filtering:**

There are three available filters for the surround channels. You can set the filtering to ALL for full range operation for the surround channels. You can also set the surround speakers for 7 KHZ for traditional Pro Logic. You can also set this parameter to SHELF for a high pass shelving type filter.

1. Make sure that Pro Logic II Music or custom 1-3 mode is selected on the main display.
2. Press and hold the Mode knob until the display changes to the Tone, Balance, and Volume recall.
3. Rotate the Mode knob until the cursor is flashing over the P in PRO SETUP.
4. Press the Mode knob. The display will change to the Pro Setup menu.
5. Rotate the Mode knob until the cursor flashes over the P in PL.
6. Press the Mode knob. The display will change to the speaker level menu with the cursor flashing over the P in PL 1.
7. Rotate the Mode knob until the cursor flashes over the s in SURR
8. Rotate the Input knob to change the filtering (All, 7 kHz, or shelf).

### **Auto Balance:**

This Pro Logic II customization parameter provides a way to automatically balance the left and right channels toward the center even if the program material is mixed heavily toward the left or right.

### **To Set Auto Balance**

1. Make sure that Pro Logic II Music or custom 1-3 mode is selected on the main display.
2. Press and hold the Mode knob until the display changes to the Tone, Balance, and Volume recall setup.
3. Rotate the Mode knob until the cursor is flashing over the P in PRO SETUP.
4. Press the Mode knob. The display will change to the Pro Setup menu.
5. Rotate the Mode knob until the cursor flashes over the P in PL.
6. Press the Mode knob. The display will change to the speaker level menu with the cursor flashing over the P in PL 1.
7. Rotate the Mode knob until the cursor flashes over the A in AUTOBALANCE
8. Rotate the Input knob to turn Auto balance on or off.

### **The Panorama Parameter**

This parameter expands the sound field created by the front left and right speakers to “wrap around” the listening field to create an even greater sense of envelopment than provided by the surround speakers.

#### **To Set the Panorama Parameter:**

1. Make sure that Pro Logic II Music or custom 1-3 mode is selected on the main display.
2. Press and hold the Mode knob until the display changes to the Tone, Balance, and Volume recall.
3. Rotate the Mode knob until the cursor is flashing over the P in PRO SETUP.
4. Press the Mode knob. The display will change to the Pro Setup menu.
5. Rotate the Mode knob until the cursor flashes over the P in PL. Press the Mode knob.
6. The display will change to the speaker level menu with the cursor flashing over the P in PL 1.
7. Rotate the Mode knob until the cursor flashes over the P in PANORAMA.
8. Rotate the Input knob to turn Panorama on or off.

### **Right Surround Channel Polarity Inversion**

This parameter allows you to invert the polarity of the Right Surround speaker with respect to the Left Surround speaker. This can have a dramatic effect on the localization of the surround speakers in the home theater system.

#### **To Set Right Surround Speaker Polarity:**

1. Make sure that Pro Logic II Music or custom 1-3 mode is selected on the main display.
2. Press and hold the Mode knob until the display changes to the Tone, Balance, and Volume recall.
3. Rotate the Mode knob until the cursor is flashing over the P in PRO SETUP.
4. Press the Mode knob. The display will change to the Pro Setup menu.
5. Rotate the Mode knob until the cursor flashes over the P in PL. Press the Mode knob.
6. The display will change to the speaker level menu with the cursor flashing over the P in PL 1.
7. Rotate the Mode knob until the cursor flashes over the R in RS POL.
8. Rotate the Input knob to turn invert the polarity of the Right Surround channel.

### **Matrix Coefficient Setting**

The matrix coefficient parameter allows you to set the amount of separation in the surround channels. There are three settings available for matrix coefficient. The 0 setting provides a monaural surround channel, the 1 setting creates a stereo image in the surround channels, and the 2 setting creates a panoramic surround channel experience. We recommend playing back a two-channel source when experimenting with the matrix coefficient settings.

### To Set the Matrix Coefficient Parameter

1. Make sure that Pro Logic II Music or custom 1-3 mode is selected on the main display.
2. Press and hold the Mode knob until the display changes to the Tone, Balance, and Volume recall.
3. Rotate the Mode knob until the cursor is flashing over the P in PRO SETUP.
4. Press the Mode knob. The display will change to the Pro Setup menu.
5. Rotate the Mode knob until the cursor flashes over the P in PL. Press the Mode knob.
6. The display will change to the speaker level menu with the cursor flashing over the P in PL 1.
7. Rotate the Mode knob until the cursor flashes over the M in MATRIX COEF.
8. Rotate the Input knob to increase the center width from 0 to 3 in increments of 1.

### Surround Delay Setting

The delay parameter allows you to turn on and off the electronic delay for the surround channels. When set to on, the surround channels are delayed according to the value set in the Pro Setup menu.

### To Set the Surround Delay Parameter

1. Make sure that Pro Logic II Music or custom 1-3 mode is selected on the main display.
2. Press and hold the Mode knob until the display changes to the Tone, Balance, and Volume recall.
3. Rotate the Mode knob until the cursor is flashing over the P in PRO SETUP.
4. Press the Mode knob. The display will change to the Pro Setup menu.
5. Rotate the Mode knob until the cursor flashes over the P in PL. Press the Mode knob.
6. The display will change to the speaker level menu with the cursor flashing over the P in PL 1.
7. Rotate the Mode knob until the cursor flashes over the D in DELAY .
8. Rotate the Input knob to turn on and off the surround channel delay.

### Dimension Setting

The dimension parameter allows you adjust the balance from the front channels to the rear channels. You can adjust the dimension parameter in increments of 1 from 0 to 8.

### To Set the Dimension Parameter

1. Make sure that Pro Logic II Music or custom 1-3 mode is selected on the main display.
2. Press and hold the Mode knob until the display changes to the Tone, Balance, and Volume recall.
3. Rotate the Mode knob until the cursor is flashing over the P in PRO SETUP.
4. Press the Mode knob. The display will change to the Pro Setup menu.
5. Rotate the Mode knob until the cursor flashes over the P in PL. Press the Mode knob.
6. The display will change to the speaker level menu with the cursor flashing over the P in PL 1.
7. Rotate the Mode knob until the cursor flashes over the D in DIMEN .
8. Rotate the Input knob to change the balance from the front channels toward the rear channels.

### Storing Pro Logic II Custom Settings into Memory

Once you have made all the desired parameter changes to Pro Logic II, you can store custom modes into memory for recall. The four memory presets available for recall are: PLM, PL1, PL2, and PL3.

**To Store the Customized Settings into Memory**

1. Make sure that Pro Logic II Music or custom 1-3 mode is selected on the main display.
2. Press and hold the Mode knob until the display changes to the Tone, Balance, and Volume recall.
3. Rotate the Mode knob until the cursor is flashing over the P in PRO SETUP.
4. Change all the parameters that you wish as illustrated above.
5. Rotate the Mode knob until the cursor flashes over the P in PL.
6. Rotate the Input knob to select the memory recall that you want to store the custom Pro Logic II parameters. You can select PLM, PL1, PL2, or PL3. Note: Your choices are limited when selecting the parameters in the PLM recall menu.
7. Exit the Pro Logic Customization menu by selecting <P or M>.

**To Recall the Customized Settings Stored into Memory**

The Pro Logic II Custom modes are four of the numerous modes available on the Suite 7.1. You can select these modes with the Mode knob on the front panel or store the custom modes as default or user modes. The custom modes are also accessible with the PC program or an IR command.

**To Store the Customized Settings into Memory**

1. Make sure that Pro Logic II Music or custom 1-3 mode is selected on the main display.
2. Press and hold the Mode knob until the display changes to the Tone, Balance, and Volume recall.
3. Rotate the Mode knob until the cursor is flashing over the P in PRO SETUP.
4. Change all the parameters that you wish as illustrated above.
5. Rotate the Mode knob until the cursor flashes over the P in PL.
6. Rotate the Input knob to select the memory recall that you want to store the custom Pro Logic II parameters. You can select PLM, PL1, PL2, or PL3. Note: Your choices are limited when selecting the parameters in the PLM recall menu.
7. Exit the Pro Logic Customization menu by selecting <P or M>.

**Pro Setup Menu Level Nine – Stereo Enhancements**

Stereo Enhance is a proprietary ADA processing mode designed to improve playback of two-channel source material with limited stereo separation. The two Stereo Enhancement parameters that can be adjusted are Effect Delay and Effect Level. The Effect Delay parameter allows you to add up to 20 mS of delay to the left channel with respect to the right channel. This delay is set prior to any Pro Logic decoding. The Effect Level parameter sets the actual amount of the effect from -20 dB to +20dB. We recommend playing back a two-channel source while adjusting the Stereo Enhancement parameters.

**To Set Stereo Enhancement Parameters**

1. Select an Input label that is playing a two-channel signal and press the Input knob.
2. Press and hold the Mode knob until the display changes to the Tone, Balance, and Volume recall setup.
3. Rotate the Mode knob until the cursor is flashing over the P in PRO SETUP.
4. Rotate the Mode knob until the cursor flashes over the E in EH.
5. Press the Mode knob. The cursor will flash over the S in STEREO ENHANC LEVEL
6. Rotate the Mode knob until the cursor flashes over the S in STEREO ENHANC DELAY.
7. Rotate the Input knob to set the amount of left channel delay.
8. Rotate Input knob back until the cursor flashes over the S in STEREO ENHANC LEVEL.
9. Rotate the Input knob to set the amount of stereo enhancement.

### Pro Setup Menu Level Nine – Mono Enhancements

Mono Enhance is a proprietary ADA processing mode designed to improve playback of monaural source material with no separation. This enhancement feature first sums the left and right channels, then adds delay to the left channel with respect to the right channel. This delay is set prior to any Pro Logic decoding and delivers surround sound with depth and feel, instead of playing audio only out of the center channel. The two Mono Enhancement parameters that can be adjusted are Effect Delay and Effect Level. The Effect Delay parameter allows you to add up to 20 mS of delay to the left channel with respect to the right channel. The Effect Level parameter sets the actual amount of the effect from -20 dB to + 20dB. We recommend playing back a monaural source while adjusting the Mono Enhancement parameters.

#### To Set Mono Enhancement Parameters

1. Select an Input label that is playing a monaural signal and press the Input knob.
2. Press and hold the Mode knob until the display changes to the Tone, Balance, and Volume recall setup.
3. Rotate the Mode knob until the cursor is flashing over the P in PRO SETUP.
4. Rotate the Mode knob until the cursor flashes over the E in EH.
5. Press the Mode knob. The cursor will flash over the M in MONO ENHANC LEVEL.
6. Rotate the Mode knob until the cursor flashes over the M in MONO ENHANC DELAY.
7. Rotate the Input knob to set the amount of left channel delay.
8. Rotate Input knob back until the cursor flashes over the M in MONO ENHANC LEVEL.
9. Rotate the Input knob to set the amount of mono enhancement.

### Pro Setup Menu Level Nine – Solo Test Mode

The Solo Test mode is ADA's proprietary multi-channel monitoring mode. The Solo Test mode permits you to have just one speaker playing while all other channels are muted. You can select just one channel and easily switch between single channels while in the Solo Test mode. This feature is useful when trying to determine if you have a damaged speaker or driver. The Solo Test mode is also ideal to gain an understanding of how different multi-channel recordings are mixed because it allows you to listen to one channel at a time. The unique feature is particularly interesting when playing back multi-channel music recordings where you can actually isolate individual instruments and vocal tracks. To achieve the Solo Test mode on other preamplifiers would require you to individually turn down the gains of each amplifier channel except the one under test.

#### To Activate the Solo Test Mode:

1. Press and hold the Mode knob until the display changes to the Tone, Balance, and Volume recall setup.
2. Rotate the Mode knob until the cursor is flashing over the P in PRO SETUP.
3. Press the Mode knob. The display will change to the Pro Setup menu.
4. Rotate the Mode knob until the cursor flashes over the S in SOLO TEST.
5. Press the Mode knob. The display will change to the speaker level menu with the cursor flashing over the O in OFF.
6. Rotate the Mode knob until the cursor flashes first letter of the channel you want to solo test.
7. Press the Mode channel to mute all other channels. You can adjust the volume level of the channel under test if you wish.
8. You can exit the Solo Test mode by accessing <P or M>.

### **AC Voltage Selection Switch**

The Suite 7.1 can operate on either 110-120 Vac or 220-240 Vac operation. When you purchased the amplifier, the rear panel voltage selector switches were preset for the proper voltage in your area. Nevertheless, it's wise to double-check it before plugging into an AC outlet. If you move to a location with a different line voltage, you can easily convert the Suite 7.1.

### **Maintaining Your ADA Suite 7.1**

Your ADA Suite 7.1 power preamplifier requires no periodic maintenance and has no user-serviceable parts inside. To avoid the risk of electric shock, do not remove its top cover. The preamplifier's exterior can easily be cleaned with a soft cloth pre-moistened only with a few drops of water or glass cleaner.

### **Call Us if You Need Help**

Call your ADA dealer or ADA's Technical Service Department toll free. We can often solve the problem with simple diagnostic tests you can perform yourself. If we determine that your Suite 7.1 will need further inspection or servicing, we will authorize return of the unit to us and advise you of the correct procedure.

Toll Free-New York 8:00-5:00 EST 1-800 HD-AUDIO (432-8346)

Toll Free-California 8:00-5:00 PST 1-877-912-4232

### **Warranty and Returning the Suite 7.1 for Factory repair**

ADA preamplifiers are under warranty for three (3) years effective upon the dealer's receipt of the product. If ADA determines that you should send your unit to ADA for factory repair, you will be given a Return Authorization (RA) number. This RA number must be clearly marked on the outer carton. Enclose a copy of your original purchase receipt to validate warranty coverage. It is the dealer's responsibility to pay for shipping to ADA. Be sure to ship the unit with adequate insurance. After repair under warranty, the unit will be returned to you via prepaid within the continental United States.

#### **Important Notice - Shipping the Preamplifier to ADA**

Before shipping the unit, you **MUST** re-pack the unit into its fitted molded foam insert and its original carton. If you do not have the original packing cartons and foam inserts, call us for new packing materials that we can provide to you for a nominal charge. Use of any other carton and packing materials will probably result in shipping damage, and refusal of the unit. Common carriers such as UPS seldom pay claims for damage incurred during shipment when a product is surrounded only with Styrofoam "peanuts" or otherwise improperly packed. We cannot stress enough the importance of properly packing your preamplifier. Shipping damage resulting from inadequate packing can cost you a lot of money and significantly increase the time required for repair. Ship the unit with adequate insurance. After repair under warranty, the unit will be returned to you via prepaid UPS within the continental United States.

## **Appendix A: Multichannel and Two Channel Decoding Modes and Enhancements**

### **Multichannel Encoding Overview**

#### **Dolby Digital and Dolby Digital Surround EX**

A Dolby Digital bit stream most typically contains a 5.1 channel, or a 3.2.1.0 mix. The 3 refers to the front three channels (left, center, right), 2 refers to the surround channels (left and right), and the 1 or “.1” refers to the called LFE - Low Frequency Effects channel. While there are other options for mixing Dolby Digital (older movies that were never mixed in multi-channel but play off a DVD are often encoded in Dolby Digital, as 2.0.0.0 or stereo), most material is available in a 5.1 format.

Dolby Digital Surround EX is best described as an enhancement to Dolby Digital. Here a mono signal is embedded into the discrete surround left and right channels. This signal creates an image in the back of the room, between the surround left and right channels. If a film has been encoded in Dolby Digital Surround EX, the digital bit stream will contain a “flag” which tells the Suite 7.1 that it has been specifically mixed and mastered to take into consideration a playback system that has one or two surround back speakers.

#### **DTS 5.1 Surround**

Source material encoded in DTS 5.1 Surround operate in a manner similar to Dolby Digital 5.1 Surround material. When playing software encoded in DTS 5.1 Surround, and selecting an EX/ES mode will send audio to the back surround speakers. This feature performs similar to the EX feature for Dolby Digital 5.1 tracks. Also, like Dolby Digital 5.1 material, selecting a THX or THX Ultra 2 mode will engage the appropriate THX enhancements.

#### **DTS ES Matrix**

Much like Dolby Digital Surround EX, DTS ES Matrix encoded material contains the ES flag in the digital bit stream, indicating that this track was specifically mixed on a system with back surround speakers. The number of Output channels is not effected by the ES flag unless and EX/ES or THX Ultra 2 mode is selected. Then the BSL and BSR output channel play back audio from the back surround speakers. All cinema modes as described above are also available with a DTS/ES bitstream.

#### **DTS ES Discrete**

A disc containing a DTS ES Discrete audio track is unlike the other 5.1 or 5.1 with EX/ES encoding formats. DTS ES Discrete material has a sixth fully discrete channel in addition to LFE. The DTS ES discrete decoding process is currently the only source material capable of providing a full seven-channel bitstream in addition to the LFE channel for true 7.1 decoding. When playing a DTS ES Discrete audio track, the Suite 7.1 will automatically detect the ES Discrete flag in the digital bit stream. All cinema modes as described above are also available with a DTS/ES Discrete bitstream.

## **Suite 7.1 Multichannel Cinema Decoding Modes**

The following describes how the Suite 7.1 decodes the incoming bitstream presuming you have a full 7.1 home theater speaker system.

**DISCRETE** - This is ADA's primary Cinema mode as it does not alter your speaker setup and bass filter setups.

**DISCRETE +THX** - This mode applies THX enhancements to the Discrete mode and is ideal for film playback.

**DISCRETE +EX/ES** - This mode will engage the two back surround speakers that will then receive mono information contained in the left and right surround channels. This mode is ideal when viewing a movie that is Dolby Digital 5.1 encoded (without EX), where still want the additional back surround speakers to be active.

**THX +EX/ES** - This mode applies THX enhancements to the Discrete +EX/ES mode.

**THX ULTRA 2** - This mode is to be used for film playback and also has all channels active, much like EX/ES. It also applies THX Ultra 2 enhancements including those that are set in THX Ultra Setup 5.

**THX MUSIC** - This mode is to be used for music playback and also has all channels active, much like EX/ES. It also applies THX Ultra 2 enhancements.

**STEREO DNMX** - Stereo Downmix takes the center channel and surround information and sends it to the front left and right speakers. The bass information is sent to subwoofer.

**MONO DNMX** - Mono Downmix sends every channel to just the center speaker. The bass information is sent to subwoofer.

**DIRECT** - Sets all speakers to the Large setting and cancels all other filters. This mode is mandated by DTS, not Dolby or THX. ADA does not recommend this mode if your speaker system is not be able to play full range audio through the front and surround speakers.

## **Two Channel Audio Sources Overview**

### **Dolby Surround 2.0**

Older films on DVD often feature this track because these movies were never mastered in more than two channels. Dolby surround 2.0 may also appear on DTS encoded discs that are required to provide an alternative audio track in addition to DTS. If you find the Suite 7.1 decoding in Surround 2.0 on a current DVD, you may have the wrong language selected or the DVD player may be set incorrectly. Material encoded in Dolby 2.0 can also be decoded in any of the two channel modes described below.

### **PCM Digital Audio**

PCM digital audio (Pulse Code Modulation) is the stereo audio that is digitally encoded onto CDs and laser discs, as well as the audio output of some broadcast receivers. For standard PCM digital audio, no prior decoding takes place to derive the stereo signal (as in Dolby Surround 2.0). Material encoded in Dolby 2.0 can also be decoded in any of the two channel modes described below.

### **Analog Audio (Stereo or Mono)**

As with two channel PCM or Dolby Digital audio, the Suite 7.1 is capable of processing standard two channel analog signals with all of the two channel modes described below.

### **Two Channel Decoding Modes**

The Suite 7.1 can decode two channel signals in Dolby Surround 2.0, digital PCM or two channel analog audio in any of the modes listed below including any enhancements you choose to add.

**STEREO** - This two channel mode will active only the left and right speakers along with the subwoofer.

**MONO** - In this mode, only the center channel and the subwoofer are active. If a stereo signal is in play, both right and left channels mix to mono and play through the center speaker.

**DTS NEO 6** - DTS Neo 6 is one of the few Two Channel modes that will permit you to engage your entire speaker array (7.1) when playing a two-channel source. Here, the L, C, R, SUB, LS, RS, SBL, and SBR Output channel lamps are on and all speakers are active.

**DTS NEO6+THX** - This mode is the same as DTS Neo 6 and includes the addition of THX enhancements.

**PROLOGIC** - Pro Logic decoding is a matrix decoding mode for two-channel soundtracks and works best with material that was specifically encoded in Dolby Surround. Here the surround channels have a mono, not stereo sound field.

**PROLOGIC THX** - This mode is the same as Pro Logic and includes the addition of THX enhancements. Here, the L, C, R, SUB, LS, and RS Output channel lamps are on, all speakers are active, and the THX symbol is illuminated.

**PLII MOVIE** - Pro Logic II Movie decoding is an advanced matrix decoding mode for two-channel film soundtracks and is optimized for programs or movies that are encoded in Dolby Surround. Here the surround speakers have greater spatial separation, providing a more stereo like sound field. This mode is also appropriate for video games. This mode retains the important features of Pro Logic, but with full-bandwidth stereo surround output, the listening experience is much closer to the sound you get from Dolby Digital.

**PLII MVE + THX** - This mode is the same as Pro Logic II Movie and includes the addition of THX enhancements. This is also an excellent mode for film playback when THX enhancements are preferred.

**PLII MATRIX** - Pro Logic II Matrix produces surround sound from mono material.

**PLII VIRTUAL** - Pro Logic II Virtual is the same as the Movie mode but here, no delay is applied to the surround channels.

**PLII MUSIC** - Pro Logic II Music creates a rich and enveloping surround ambience from stereo sources such as CDs. In Pro Logic II Music mode, three controls permit you to fine-tune the soundfield.

**PLII CUSTOM1, PLII CUSTOM2, PLII CUSTOM3** - The Suite 7.1 features three custom Pro Logic II modes.

#### **Proprietary Two Channel ADA Modes**

**QUAD BYPASS** - Quad Bypass is a proprietary ADA Mode that will permit you to engage your entire speaker array (7.1) when playing a two-channel source. Quad Bypass is ideal for music playback and utilizes the entire sound field. Here, the L, C, R, SUB, LS, RS, SBL, and SBR

**STEREO ENH** - Stereo Enhance is a proprietary ADA Mode that is applied to two-channel signal and is useful for playback of source material with relatively weak stereo separation.

**MONO ENH** - Mono Enhance is a proprietary ADA Mode that is applied to a mono signal and is useful for playback of source material with no stereo separation. There are two adjustments that can be made to the Mono Enhance mode, Effect Delay and Effect Level.

#### **Fun Modes**

The Suite 7.1 also features seven Fun Modes that may prove interesting to you. Stereo 5, Mono 5, Stadium, Theater, Hall, Club, & Church

**STEREO 5** - Stereo 5 is only capable of being engaged when playing two-channel source material. This mode applies the stereo image across the entire sound field and will also play out of the back surround speakers. Here, the L, C, R, SUB, LS, RS, SBL, and SBR Output channel lamps are on.

**MONO 5** - Mono 5 is only capable of being engaged when playing two-channel source material. This mode applies a mono image across the entire sound field and will also play out of the back surround speakers. Here, the L, C, R, SUB, LS, RS, SBL, and SBR Output channel lamps are on. The other five Fun Modes are room type modes; Stadium, Theater, Hall, Club, and Church. Unlike either Cinema Modes which are specific to only multi-channel digital source material or Two Channel Modes which are specific to only stereo or mono source material, these five Fun Modes can be applied to all types of material playing through the Suite 7.1 (with the exception of DVD Audio or SACD).

**STADIUM** - This mode is supposed to sound like a stadium and is useful for playback of a concert or sporting event. Here, the L, C, R, SUB, LS, and RS Output channel lamps are on.

**THEATER** - This mode is supposed to sound like a theater and is useful for playback of plays or operas. Here, the L, C, R, SUB, LS, and RS Output channel lamps are on.

**HALL** - This mode is supposed to sound like a hall and is useful for playback of chamber music. Here, the L, C, R, SUB, LS, and RS Output channel lamps are on.

**CLUB** - This mode is supposed to sound like a dance club and is useful for playback of music videos and other dance music. Here, the L, C, R, SUB, LS, and RS Output channel lamps are on.

**CHURCH** - This mode is supposed to sound like a church and is useful for playback of choral music.

### **THX Enhancements**

For either Dolby Digital, Dolby Digital EX, DTS, or DTS ES, THX enhancements can be turned on or off. THX is an exclusive set of standards and technologies established to make your experience of the film soundtrack as faithful as possible to what the director intended. Movie soundtracks are mixed in special movie theaters called dubbing stages and are designed to be played back in movie theaters with similar equipment and conditions. The soundtrack created for the movie theater is then transferred directly onto Laserdisc, VHS tape, DVD, etc., and is not changed for playback in a small home theater environment. THX engineers developed patented technologies to accurately translate the sound from the movie theater environment into the home, correcting the tonal and spatial errors that occur. When the THX mode is on, the following three THX technologies are automatically added after the decoded signal:

**Re-Equalization™** - The tonal balance of a film soundtrack will be excessively bright and harsh when played back over audio equipment in the home because the film soundtracks were designed to be played back in large movie theatres using very different professional equipment. Re-Equalization restores the correct tonal balance for watching a movie soundtrack in a small home environment.

**Timbre Matching™** - The human ear changes our perception of a sound depending on the direction from which the sound is coming. In a movie theater, there is an array of surround speakers so that the surround information is all around you. In a home theater, you use only two speakers located to the side of your head. The Timbre Matching feature filters the information going to the surround speakers so that they more closely match the tonal characteristics of the sound coming from the front and surround speakers.

**Adaptive Decorrelation™** - In a movie theater, a large number of surround speakers help create an enveloping surround sound experience, but in a home theater there are usually, only two speakers. This can make the surround speakers sound like headphones that lack spaciousness and envelopment. The surround sounds collapse into the closest speaker as you move away from the middle seating position. Adaptive Decorrelation slightly changes on surround channel's time and phase relationship with respect to the other surround channel. This expands the listening position and creates—with only two speakers—the same spacious surround experience as in a movie theater

## Cinema Reference Mach II PC Program

The Cinema Reference Mach II is capable of being controlled and setup from a special PC program provided by ADA, the Cinema Ref. II PCOS. You will need to communicate with the Cinema Reference as outlined in this manual under PC Setup & Control. This section will assist you in understanding the software application.

When the application is running, the Main page permits you set your Com Port, the Address of the unit (typically address 00) and the Baud Rate (1200 Baud Out of the Box). The lower portion of the window permits you to turn the unit off, mute, unmute/power on. You can also opt to raise and lower Volume in either .5dB or 1dB steps as well as Recall and Store volume presets. This page also permits you to recall both Balance and Tone presets. The Red and Blue squares are update information requests and when pressed, will cause the Cinema Reference Mach II to update data based on the buttons function. As you place your cursor over the Red button squares, the type of data that will be updated will display in a yellow text box. The Blue button squares update the information in the top portion of the window. This applies to all screens.

Under the Cinema Mode tab, the Input Control sub-tab permits selection of both the Main Input and the Record Input. Under the Download Labels and Parameters sub-tab, you can proceed to alter the Input Labels to customize your Cinema Reference Mach II. To do so, select an input number from the column on the left. The Input Label will display and you can then highlight the name using your mouse and type in your own Input Label. ADA strongly suggests leaving the one or two digit numeric input number reference in place. You may also select the audio and video jacks assigned to this Input Number/Label, as well as the signal that will emit from the Processed RGB output. Low Voltage trigger assignment is also facilitated on this page individually for Triggers 1 and 2. Lastly, you may also select the two Default Modes and the two User Modes for this Input Number/Label. Once all these features are set, you may save them for future reference. To do so, press the Save File button and assign a file name to this setup. To recall these saved settings, you will press the Load File button and then select the desired file you wish to open. To download this setup to the Cinema Reference Mach II, press the Download All button. Download Input will just download the selected input.

Under the Mode Selection sub-tab, you have the opportunity to select Modes directly. If the Cinema Reference Mach II is playing a non-Two Channel source (5.1), the Cinema Modes in the lower half of the window will be active. If the Cinema Reference Mach II is playing a Two-Channel source (2.0), the 2 Channel Modes in the upper half of the window will be active.

Under the Enhancement subtab, you can: Turn Re-EQ, Timbre Match, and Decorrelation on or off providing that you are not in a THX mode. Set the Dynamic Range. Set the Stereo Enhancement Mode settings. Set the Mono Enhancement Mode settings. When playing Two-Channel source material in the Pro Logic II Music mode you adjust Center Width control, Dimension Control, and turn Panorama on or off. These features will be unavailable in other Pro Logic modes (other than Custom PLII modes). For Pro Logic II Custom I, II, or III (with or without THX), these additional features become active in addition to those just mentioned. Here you set the Surround speakers filters, turn Surround Delay on or off, invert the Right Surround speaker's polarity, set the Matrix Coefficient, and turn Auto Balance on or off. These features are not available on any modes other than the three Custom PL II modes.

Under the Solo sub-tab, you can selectively engage on speaker at a time. This tab also details system information including Input and Output formats. Under the Tones sub-tab, there are two addition sub-sub tabs marked Group A and Group B. Under the Group A tab, you can determine which speakers are active in Group A, the Frequency point for Treble and the Treble Level. You can do the same for Bass, setting both the Bass Frequency point and the Bass Level. Under the Group B tab, you can determine which speakers are active in Group A, the Frequency point for Treble and the Treble Level. You can do the same for Bass, setting both the Bass Frequency point and the Bass Level. Once you have set speakers up in these two groups and adjusted their level, you can opt to Store these settings on one of the four Tone Presets by pressing the corresponding Tones Store number. The Misc tab allows you to set the volume using a sliding control at the top of this window. You can also set the Cinema Reference Mach II's maximum volume level and select the Turn-On Volume Preset. DTS LFE settings are also adjusted on this page.

Under the Pro Setup tab, there are six sub-tabs that are in order according to THX setup suggestions. The 1-Speaker tab permits you to determine the size of the speakers. For the subwoofer, you can determine if one exists in your system and also set the Crossover Frequency point. Under 2-Levels, you can set the balance levels using an SPL meter. Here you can engage the Cinema Reference Mach II's internal pink-noise generator to facilitate this setup. Once setup is completed, you can also Store the Balance Preset in one of the four Balance Presets by simply pressing the Balance Store number. The 3-Delay sub-tab permits you to set the delays for each channel. ADA reminds you to keep at least one speaker set to 0 as this is the speaker that is the greatest distance from the seating area. All speakers that are closer to the seating area should have their delays set accordingly.

Under the 4-Bass tab, you can set the Bass limiters level and even engage subwoofer pink noise. Under the 5-THX sub-tab, you can turn Boundary Gain on or off and also adjust the ASA setting. Under the Remote sub-tab, you can use single steps to proceed through all of the Cinema Reference Mach II steps one by one, using a Execute, Previous, and Next step button. These features exist to permit the Cinema Reference Mach II to be setup using the OSD output in conjunction with a hand-held IR remote control.