Suite 7.1 HD
Home Theater Controller

INSTALLATION MANUAL
VERSION 4.0 - JUNE 2010

ada audio design associates®

Contents

Safety Instructions & Electrical Warning

READ INSTRUCTIONS - All the safety and operating instructions should be read before the appliance is operated.

RETAIN INSTRUCTIONS - The operating instructions should be retained for future reference.

HEED WARNING - All warnings on the appliance and in the operating instructions should be adhered to.

FOLLOW INSTRUCTIONS - All operating and use instructions should be followed.

WATER AND MOISTURE - The appliance should not be used near water - for example, near a bathtub, washbowl, kitchen sink, laundry tub, in a wet basement, or near a swimming pool, etc.

LOCATION - The appliance should be installed in a stable location.

WALL OR CEILING MOUNT - The appliance should not be mounted to a wall or ceiling.

VENTILATION - The appliance should be situated so that its location or position does not interfere with its proper ventilation. For example, the appliance should not be situated on a bed, sofa, rug or similar surface that may block the ventilation openings.

HEAT - The appliance should be situated away from heat sources such as radiators, heat registers, stoves, or other appliances that produce heat.

POWER SOURCES - The appliance should be connected to a power supply only of the type described in the operating instructions or as marked on the appliance.

GROUNDING - Make sure that this unit is always connected to a standard three-prong grounded outlet (the circular pin is ground). When operating this unit at a higher voltage with a different power cord configuration, consult your dealer for the proper power cord/outlet combination to use before operating this unit.

POWER CORD PROTECTION - Power supply cords should be routed so that they are not likely to be walked on or pinched by items placed upon or against them, paying particular attention to cords at plugs, convenience receptacles, and the point where they exit from the appliance.

CLEANING - The appliance should be cleaned only with a polishing cloth or a soft dry cloth. Never clean with furniture wax, benzine, insecticides or other volatile liquids since they may corrode the face plate.

POWER LINES - An outdoor antenna should be located away from power lines.

NONUSE PERIODS - The power cord of the appliance should be unplugged from the outlet when left unused for a long period of time.

OBJECT AND LIQUID ENTRY - Care should be taken so that objects do not fall and liquids are not spilled into the enclosure through openings.

DAMAGE REQUIRING SERVICE - The appliance should be serviced by an authorized service center or qualified service personnel when:

- The power supply cord or plug has been damaged; or
- Objects have fallen, or liquid has been spilled into the appliance; or
- The appliance has been exposed to rain; or
- The appliance does not appear to operate normally or exhibits a marked change in performance; or
- The appliance has been dropped; or the enclosure has been damaged.

SERVICING - The user should not attempt to service the appliance beyond that described in the operating instructions. For all other service requirements, the user should contact an Authorized Dealer or Service Center.

<div align="center">

WARNING:
</div>

TO REDUCE THE RISK OF FIRE OR ELECTRICAL SHOCK, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE. REPLACE FUSE ONLY AS MARKED.

<div align="center">

CAUTION:
</div>

TO PREVENT ELECTRIC SHOCK, DO NOT PLUG THIS UNIT INTO ANY OUTLET OR EXTENSION CORD WITHOUT THE STANDARD THREE-PRONG CONFIGURATION, WHERE THE CIRCULAR HOLE IS USED FOR THE GROUND PLUG. ANY UNITS NOT SOLD IN THE UNITED STATES OR CANADA ARE NOT SUPPLIED WITH A POWER CORD. THEREFORE, AN AUDIO DESIGN ASSOCIATES DEALER SHOULD BE CONSULTED BEFORE CONNECTING THIS UNIT TO ANY POWER SOURCE.

LINE VOLTAGE SELECTOR SWITCH AND REMOVABLE POWER CORD:
THIS UNIT IS EQUIPPED WITH A VOLTAGE SELECTOR SWITCH. IN MOST CASES, THIS SWITCH WILL REMAIN IN THE 115V POSITION (SEE PICTURE BELOW), WHICH IS HOW THE UNIT LEAVES THE FACTORY. HOWEVER, IF YOU WANT TO OPERATE THE UNIT IN AN AREA THAT USES THE 230V SETTING, CONSULT YOUR DEALER BEFORE PLUGGING THE UNIT IN. IN A CASE WHERE THE 230V SETTING WOULD BE NEEDED, AUDIO DESIGN ASSOCIATES WILL NOT PROVIDE A POWER CORD FOR THE UNIT. THEREFORE, THE USER MUST CONSULT AN AUTHORIZED DEALER OR ADA TO OBTAIN THE PROPER POWER CORD, AS WELL. **MAKE SURE THAT THE VOLTAGE SELECTOR SWITCH IS IN THE PROPER POSITION AND THAT YOU HAVE THE CORRECT POWER CORD BEFORE THIS UNIT IS PLUGGED IN AND OPERATED!**
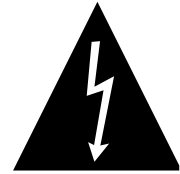
The lightning flash with the arrowhead, within an equilateral triangle, is intended to alert the user of the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electrical shock to persons.

IMPORTANT

CAUTION
RISK OF ELECTRIC SHOCK
DO NOT OPEN

CAUTION: TO PREVENT RISK OF ELECTRICAL SHOCK, DO NOT REMOVE COVER (OR BACK). NO USER-SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.
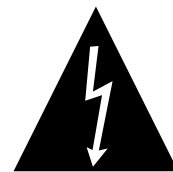
The exclamation point within the equilateral triangle is intended to alert the user of the presence of important operating and maintenance (servicing) instruction in the literature accompanying the appliance.

115 V

AC Connections

AC Connection

The Suite 7.1 HD features a dual-primary type of power supply that operates on 115V~/60Hz as well as 230V~/50Hz.

When using the Suite 7.1 HD with non-US Standard AC power cords, the user must supply the appropriate EIC Female to Male AC power cord.

Before You Begin

As you remove the Suite 7.1 HD from its packaging, inspect the condition of the component prior to proceeding with the following steps for AC connection. In the event that the Suite 7.1 HD appears to have suffered cosmetic damage due to shipping, please contact your Authorized ADA Dealer immediately and do not proceed to plug the unit into an AC outlet.

AC Connection

For customers who are using the U.S. standard AC receptacle, you will use the EIC AC Power Cord provided with the Suite 7.1 HD. Simply plug this AC cord into an operative AC outlet. For customers who are using a non-U.S. standard AC receptacle, you will need to acquire an EIC AC Power Cord with the appropriate receptacle connector. ADA only provides AC Power Cords with the U.S. standard AC prongs.

Plug into Cinema Rhapsody

Plug into an AC Outlet
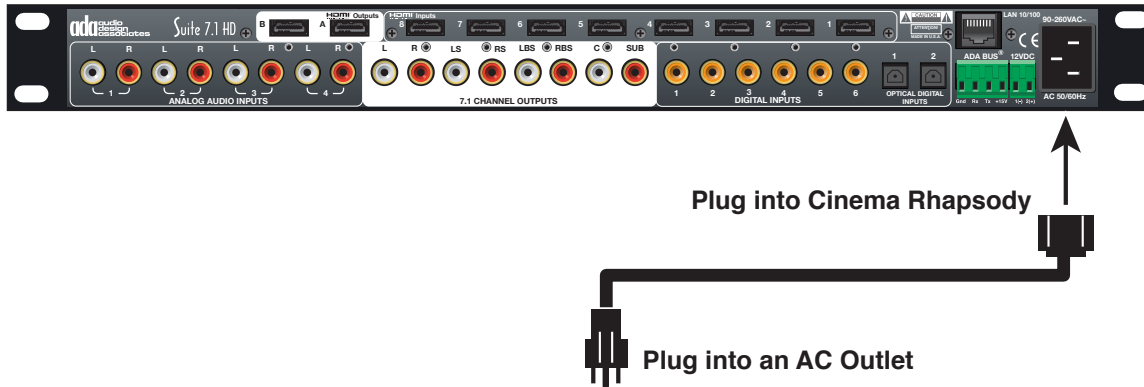
Power Amplifier (& Powered Subwoofer) Connections

Audio Connections

The Suite 7.1 HD's Audio Outputs are clearly marked in a white field on the back of the unit. ADA strongly suggests not using directional interconnects that lift the grounds. This diagram includes ADA's PTM-8150 Eight Channel Power Amplifier. While you may decide to vary the input arrangement if you are using a PTM-8150, the following input arrangement will cause the amplifier's front panel LED display to spread outward from Channel 4, the center channel speaker. If you are using a self-powered subwoofer, you will connect the Suite 7.1 HD's SUB Output directly to the subwoofer and you may opt to "Y" split the SUB output to illuminate channel eight of the PTM-8150.

Low Volatge Trigger
Pin 1 (-) to Gnd on 9-Pin D
Pin 2 (+) to Zn 1 on 9 Pin D
**(Set PTM-8150 PAC Module so all channels trigger with Zone 1 and Normal Turn On)**

Sub Output To Power Amplifier For Passive Subs

Or Sub Output To Powered Subwoofer
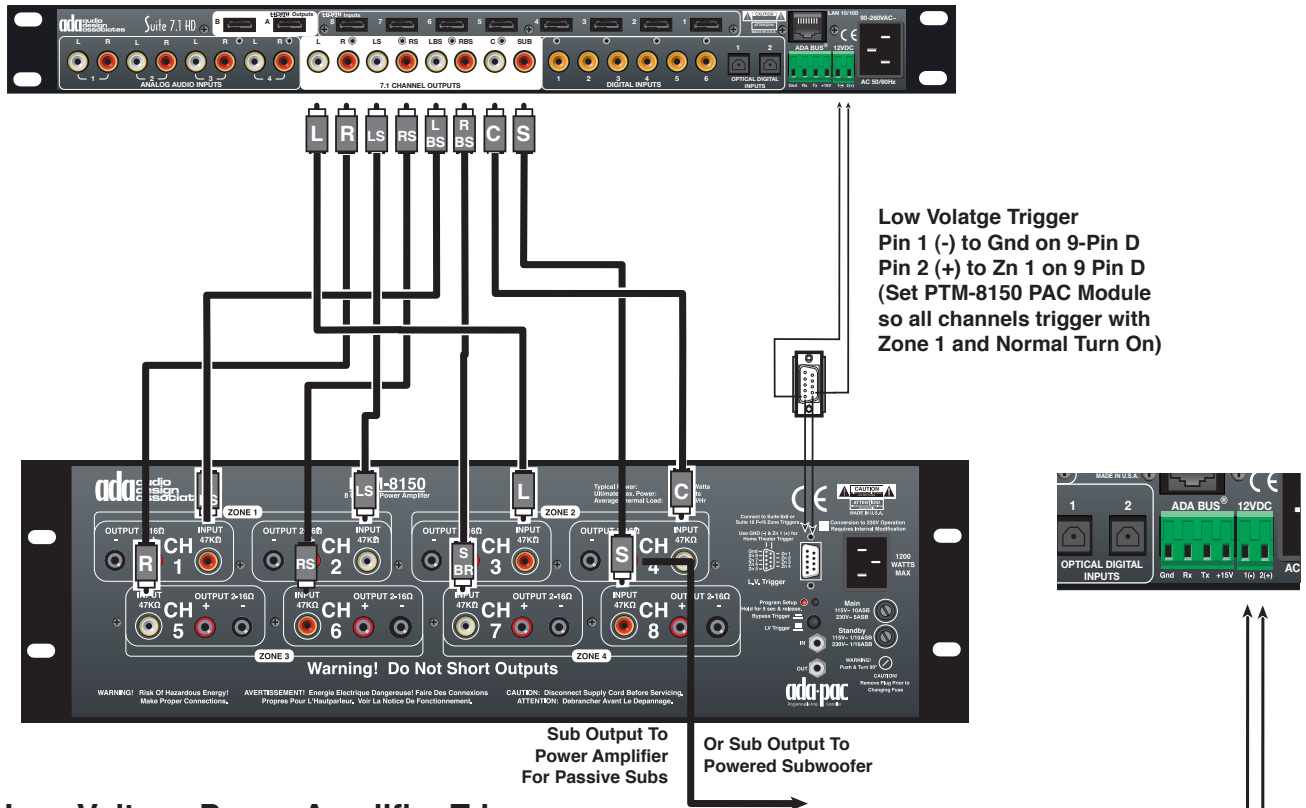
Low Voltage Power Amplifier Trigger

The Suite 7.1 HD features two low voltage triggers that can be used among other things, to turn ADA power amplifiers on and off. Unlike the switched AC outlet, which turns on and off with the Suite 7.1 HD, the low-voltage triggers are set to track inputs on the preamplifier. In the setup mode, you can determine if either trigger one or trigger two (or both) engage with that input or not. When triggering a power amplifier using the low voltage triggers, ADA's out of the box setup has Trigger 1 engaging with all inputs.

ADA power with a PAC Module (Programmable Amplifier Controller) permit amplifier channel pairs to be assigned to track independent zone triggers (for use in multi-room systems). The amplifiers can also be set to "Fast Turn On" so that the amplifier can be used for paging (amplifier remains on and charged even when the trigger is off). In a home theater system, zone triggering and fast turn on are not required. If an ADA PAC amplifier is ordered with an ADA home theater preamplifier, the unit will ship with all channel pairs set to trigger with Zn 1. Also, the amplifier will be set to "Normal Turn On" so that when the trigger is removed, the amplifier will turn off completely. Here, the Mach III will also ship with a 9-pin D to two-wire cable that can be terminated to Low Voltage Trigger 1 on the Mach III as shown in the adjacent diagram. Make certain that Low Voltage Trigger Button on the back of the PAC amplifier is in the outward "LV Trigger" position.
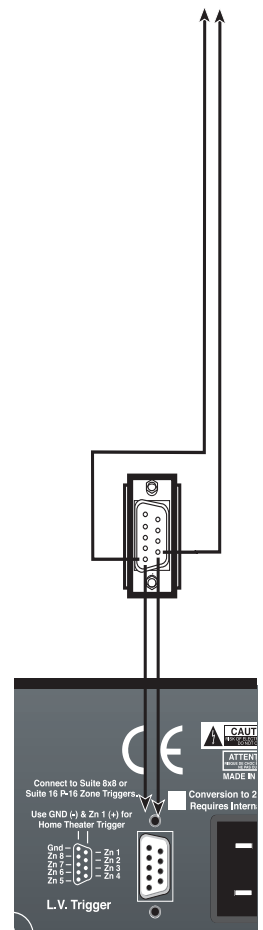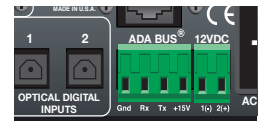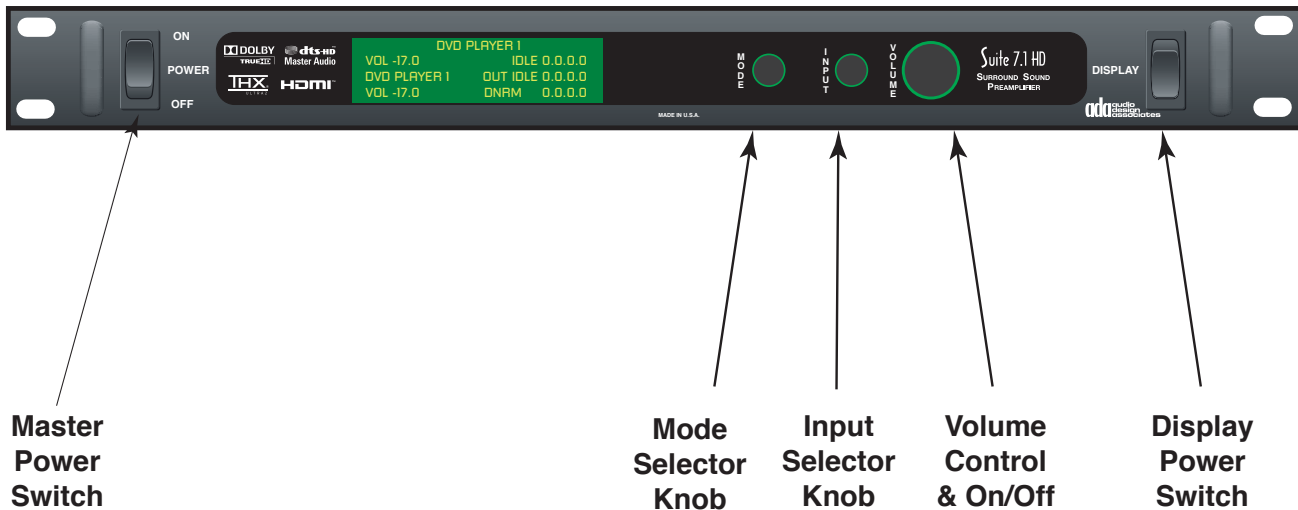
Introduction - Front Panel Controls & Displays

Overview

The Suite 7.1 HD is factory set for optimum operation. This section details the front panel features of the Suite 7.1 HD. All component functions can be operated through the three control knobs located on the units front panel. The front panel displays are also explained in this section.

Welcome

The Suite 7.1 HD is the world's most advanced audio video surround sound preamplifier. **It is also configured "Out Of The Box" for optimum operation.** While it is designed to be easy to setup and operate, ADA strongly recommends spending some time familiarizing yourself with the units many functions and features. For those who wish to customize their home theater system, the Suite 7.1 HD is also equipped to be configured to operate ideally in any environment and with many varying source components. While the connection of components and accessories are discussed in the following sections, this area will explain the front panel features and basic operation commands of the Suite 7.1 HD's front panel. The text found in italic type in this manual's margins will act as a quick reference when reviewing these materials.

Master Power Switch

Mode Selector Knob

Input Selector Knob

Volume Control & On/Off

Display Power Switch

Features

The Suite 7.1 HD acts as both an input selector and surround sound decoder. It is capable of decoding Dolby TrueHD, DTS HD Master Audio, Multi-Channel PCM from sources that connected using an HDMI cable as well as Dolby Pro Logic, Dolby Digital (AC-3), and DTS encoded formats and also provide Lucasfilm THX Ultra 2 enhancements and filters. While the Suite 7.1 HD can automatically detect between Dolby Digital, DTS, Dolby Pro Logic, and Dolby Digital/Dolby Pro Logic (both decoding formats are used when playing two-channel encoded DVD discs {typically older movies available on DVD that are not mixed in six channels}), the option to engage either full THX enhancements or only THX Re-EQ must be manually set on the Suite 7.1 HD. The Suite 7.1 HD also provides several additional modes ideal for music playback. There are additional settings that permit the Suite 7.1 HD to also operate in home theaters where a full eight channel speaker array may only be partially implemented (i.e. no back surround and/or no center channel). Furthermore, the Suite 7.1 HD also permits each channel to be set to its own volume level with respect to all other channels as well as have its own delay setting. These features and more are discussed in the upcoming sections.

Power On, Mute, Off, & Master Volume Control

When the Suite 7.1 HD is off, turning any knob or pushing any knob other than the Volume knob will cause the Suite 7.1 HD's center LCD display to indicate that you need to push the knob to turn it on.

```
       POWERING UP
            IDLE 0.0.0.0
            OUT 0.0.0.0
```

To turn on the Suite 7.1 HD, providing the unit is not in Mute, press the Volume knob once.

```
       RELEASE 2.X1
VOL -17.0    IDLE 0.0.0.0
BLU-RAY    6 OUT 0.0.0.0
PLII MVE+THX
```

```
VOL -17.0     IDLE 0.0.0.0
BLU-RAY     6 OUT 0.0.0.0
PLII MVE+THX
```

Pressing of the Volume knob performs only three functions.

If the unit is off, pressing it will turn it on.
If the unit is on, pressing it once will engage Mute.
If the unit is in Mute, pressing it again will turn it off.

(To regain the audio (exit Mute), turn the Volume knob).

Lower & Raise Volume
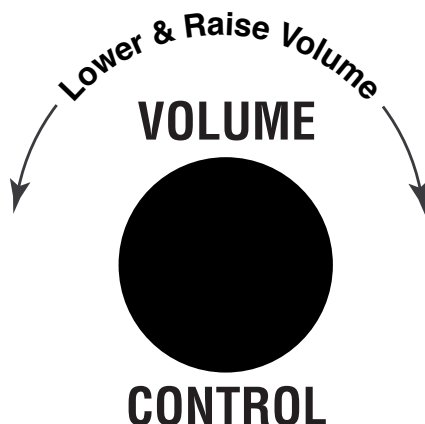
VOLUME

CONTROL

Once the Suite 7.1 HD is on, turning the Volume knob will only raise or lower the system's volume level. This is considered the Master Volume Control as it will adjust all eight channels of volume, maintaining the balance of levels that are preset between channels.

Power On
Press the Suite 7.1 HD's Volume knob to engage power on.

Front Plate

Press Knob To Turn On

Press Knob Once To Mute

Press Knob Twice For Off

Side View

Chassis Side
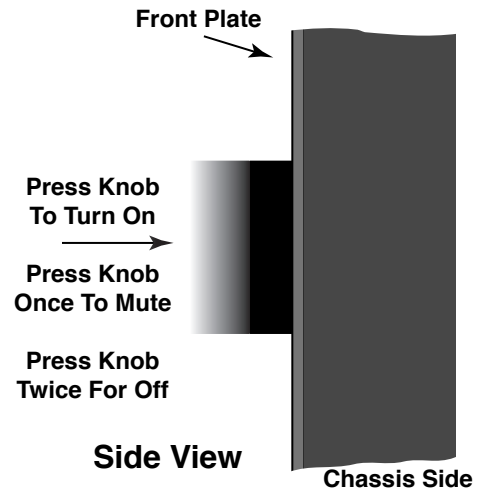
Mute
While the Suite 7.1 HD is on, pressing it's Volume knob once will mute all channels.

Power Off
While the Suite 7.1 HD is in Mute, pressing the Volume knob a second time will turn the Suite 7.1 HD off.

Un-Mute
While the Suite 7.1 HD is in Mute, turning the volume knob, will regain audio.

Power On/Off Via AC Control
If the Suite 7.1 HD is on when it is unplugged or when power is removed through the use of an AC Controller, it will also automatically turn back on when power is restored.

Input Selector

Turn To Select Another Component

INPUT

SELECTOR

The Suite 7.1 HD permits you to scroll to the next input without having all of the components you are passing actively process through the Suite 7.1 HD. This prevents the clicking that is commonly associated with changing TV channels up and down. To best access another component from the front of the Suite 7.1 HD, turn the Input Selector knob. As you turn this knob, you will notice that the top row of the LCD display will advance through the input names until the desired component is displayed while the current component in use (in this example, BLUE RAY DVD) remains unchanged in the "Current Input" section.

Front View

1 Dial In New Input

Turn the Input Selector knob until the top line of the LCD display reads the component you wish to select. As you turn the knob, you will notice that the "Current Input" section of the display still indicates the current source in play. Also, this component is still being routed and processed by the Suite 7.1 HD.

2 Engage New Input

Once the top line of the display indicates the next component you wish to access, press the Input Selector knob to engage this input. This method permits you to select an input without switching all of the inputs you are scrolling through.

```
Feature You Are Changing
Volume       # Input  CHs
Input        # Output Chs
Decode Mode Dialogue Nrm
```

```
     BLU-RAY      1
VOL -17.0    IDLE 0.0.0.0
```
```
     SATELLITE  2
VOL -17.0    IDLE 0.0.0.0
```
```
     CABLE/TV    3
VOL -17.0    IDLE 0.0.0.0
```
```
     HD DVR/PVR 4
VOL -17.0    IDLE 0.0.0.0
```
```
     VIDEO LIB   5
VOL -17.0    IDLE 0.0.0.0
```
```
     VIDEO GAME 6
VOL -17.0    IDLE 0.0.0.0
BLU-RAY         OUT 3.2.1.2
PLII MVE+THX
```

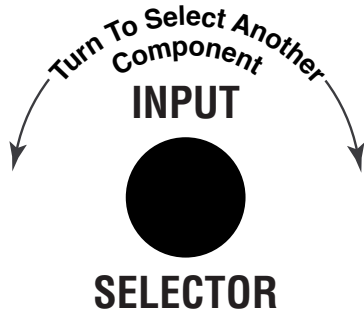**Front Plate**

**Press Knob
To Activate**

**The New
Component
Selection**

Once the desired component is displayed on the LCD's top row, press the Input Selector knob to engage that component. The display will then return to read the new selection (i.e. Video Game).

```
VOL -17.0    IDLE 0.0.0.0
VIDEO GAME 6 OUT 3.2.1.2
PLII MVE+THX
```

Side View

Chassis Side

Mode Selector & Mode Descriptions

Turn To Select Another Mode

MODE

⬤

SELECTOR
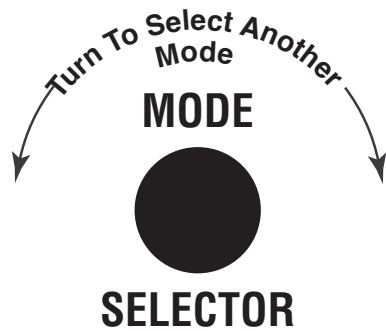
The Suite 7.1 HD permits you to scroll through available modes without necessarily engaging the mode until you have found the one you wish to use. As you turn the mode knob, the top line of the Suite 7.1 HD's display will read the modes available. The lower left-hand of the display indicates the current mode. When the desired mode displayed on the top line, press the Mode knob. The new mode will now engage and its name will display in the lower left-hand corner of the display. The Suite 7.1 HD only displays Multi-Channel Modes when it detects a multi-channel signal present (i.e. 5.1). Otherwise it defaults to just displaying Two-Channel modes. When displaying Multi-Channel modes, note that Direct and Discrete decode DTS or Dolby Digital bit streams depending on the signal type.

Front View

Front Plate →

Press Knob To Activate

The New Mode Selection

Side View

Chassis Side

```
STEREO DNMX
VOL -17.0    IDLE 3.2.1.0
BLU-RAY      OUT  3.2.1.2
DIRECT 7.1
```

```
STEREO DNMX
MONO DNMX
3 CHANN DNMX
PHANTOM DNMX
DISCRETE
DISCRETE+THX
DISCRT+EX/ES
VOL -17.0    IDLE 3.2.1.0
BLU-RAY      OUT  3.2.1.2
DISCRT+EX/ES
```
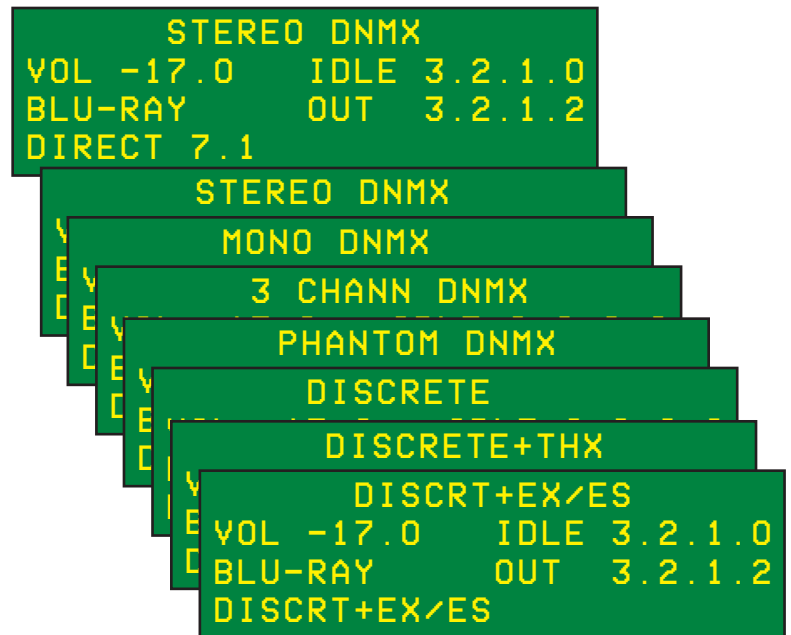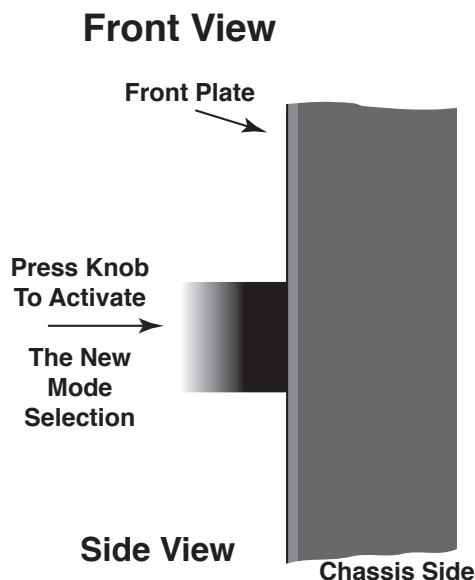
Two-Channel Modes

Mode	Speakers	Description
Direct 2.0	LF/RF	Two-channel & no audio processing, Fronts speakers Large
Stereo	LF/RF/Sw	Two-channel with Subwoofer
Mono	C	Center speaker down-mix to mono

DTS NEO Audio Stream Processing Algorithm

Mode	Speakers	Description
NEO6 3Channel	LF/RF/C/Sw	Front speakers with subwoofer
NEO6 Phantom	LF/RF/LS/RS/Sw	No Center speaker & Center channel to Front Right & Left speakers
NEO6 5Channel	LF/RF/C/LS/RS/Sw	No Back Surround Speakers
NEO6 Movie	LF/RF/C/LS/RS/LB/RB/Sw	Full Speaker array
NEO6 Mve +THX	LF/RF/C/LS/RS/LB/RB/Sw	Full Speaker array with THX filters
NEO6 Music	LF/RF/C/LS/RS/LB/RB/Sw	Full Speaker array design for music playback

Dolby Pro Logic Audio Stream Processing Algorithm

Mode	Speakers	Description
Pro Logic 3Ch	LF/RF/C/Sw	Front speakers with subwoofer
Pro Logic Phan	LF/RF/LS/RS/Sw	No Center speaker & Center channel to Front Right & Left speakers
Pro Logic	LF/RF/C/LS/RS/LB/RB/Sw	Full Speaker array
Pro Logic +THX	LF/RF/C/LS/RS/LB/RB/Sw	Original Pro Logic with full Speaker array with THX filters

Dolby Pro Logic IIx Audio Stream Processing Algorithm

Mode	Speakers	Description
PL2 Matrix	LF/RF/C/LS/RS/LB/RB/Sw	For Mono signals, fills speaker array
PL2 Game	LF/RF/C/LS/RS/LB/RB/Sw	For Video Games encoded by Dolby in 2-Channel
PL2 Music	LF/RF/C/LS/RS/LB/RB/Sw	For Music - permits adjustment of PLII features
PL2 Movie	LF/RF/C/LS/RS/LB/RB/Sw	For Film & TV - Greater spatial separation than PL, full bandwidth

Dolby Pro Logic IIx Audio Stream Processing Algorithm (Continued)

PL2 Mve +THX	LF/RF/C/LS/RS/LB/RB/Sw	Adds THX filters to Pro Logic 2 Movie
PL2 Custom	LF/RF/C/LS/RS/LB/RB/Sw	Custom settings for Pro Logic 2 Movie - permits adjustment of PL II
PL2 Cstm1 +THX	LF/RF/C/LS/RS/LB/RB/Sw	Adds THX filters to PL Custom mode (above)
PL2 Custom 2	LF/RF/C/LS/RS/LB/RB/Sw	Custom 2 settings for Pro Logic 2 Movie - permits adjustment of PL IIPL2
Cstm2 +THX	LF/RF/C/LS/RS/LB/RB/Sw	Adds THX filters to PL Custom mode (above)
PL2 Custom 3	LF/RF/C/LS/RS/LB/RB/Sw	Custom 3 settings for Pro Logic 2 Movie - permits adjustment of PL IIPL2
Cstm3 +THX	LF/RF/C/LS/RS/LB/RB/Sw	Adds THX filters to PL Custom mode (above)

ADA Proprietary Modes (ADA's Favorites)

AGL Enhanced	LF/RF/C/LS/RS/LB/RB/Sw	Based on Pro Logic, AGL is an auto-sensing 2-channel mode
Quad Bypass	LF/RF/C/LS/RS/LB/RB/Sw	For Music - Creates excellent music image using full speaker array
Stereo Enh	LF/RF/C/LS/RS/LB/RB/Sw	For Stereo Signals - Simulated surround w/control of room size
Mono Enh	LF/RF/C/LS/RS/LB/RB/Sw	For Mono Signals - Simulated surround w/control of room size
Stereo 5	LF/RF/C/LS/RS/LB/RB/Sw	Distributes stereo to entire speaker array
Mono 5LF/RF/C/LS/RS/LB/RB/Sw		Distributes mono to entire speaker array

Room Simulation Modes with Reverb Customization

Cinema	LF/RF/C/LS/RS/LB/RB/Sw	For Film - Uses the entire speaker array
Club	LF/RF/C/LS/RS/LB/RB/Sw	For Music - Uses the entire speaker array
Hall	LF/RF/C/LS/RS/LB/RB/Sw	For Music - Uses the entire speaker array
Arena	LF/RF/C/LS/RS/LB/RB/Sw	For Music - Uses the entire speaker array
Cathedral	LF/RF/C/LS/RS/LB/RB/Sw	For Music - Uses the entire speaker array
Quad Reverb	LF/RF/C/LS/RS/LB/RB/Sw	For Music - Uses the entire speaker array

Multi-Channel Modes

Direct 7.1	LF/RF/C/LS/RS/LB/RB/Sw	7.1 direct from source, LFE but no bass management
Dnmix Stereo	LF/RF/Sw	2 Channel downmix with subwoofer
Dnmix Mono	C	2 Channel downmix to mono with Center speaker & Subwoofer
Dnmix 3Channel	LF/RF/C/Sw	2 Channel downmix to Front speakers & Subwoofer
Dnmix Phantom	LF/RF/Sw	2 Channel downmix to Front right & left speakers and Subwoofer

Ideal Modes for DTS or Dolby Digital Signals

Discrete	LF/RF/C/LS/RS/LB/RB/Sw	DTS or Dolby Digital 7.1 direct from source with bass management
Discrete +THX	LF/RF/C/LS/RS/LB/RB/Sw	Above Mode with THX Enhancements
Discrete EX/ES	LF/RF/C/LS/RS/LB/RB/Sw	Same as Discrete but uses DTS ES or DD EX flags
THX Surr EX/ES	LF/RF/C/LS/RS/LB/RB/Sw	Above Mode with THX Enhancements

DTS NEO Audio Stream Processing Algorithm

NEO6 Movie	LF/RF/C/LS/RS/Sw	Downmix to 2-Channel & then processed via NEO6 Matrix
NEO6 Mve +THX	LF/RF/C/LS/RS/Sw	Above Mode with THX Enhancements
NEO6 Music	LF/RF/C/LS/RS/Sw	Downmix to 2-Channel & then processed via NEO6 Music Matrix

Dolby Pro Logic Audio Stream Processing Algorithm

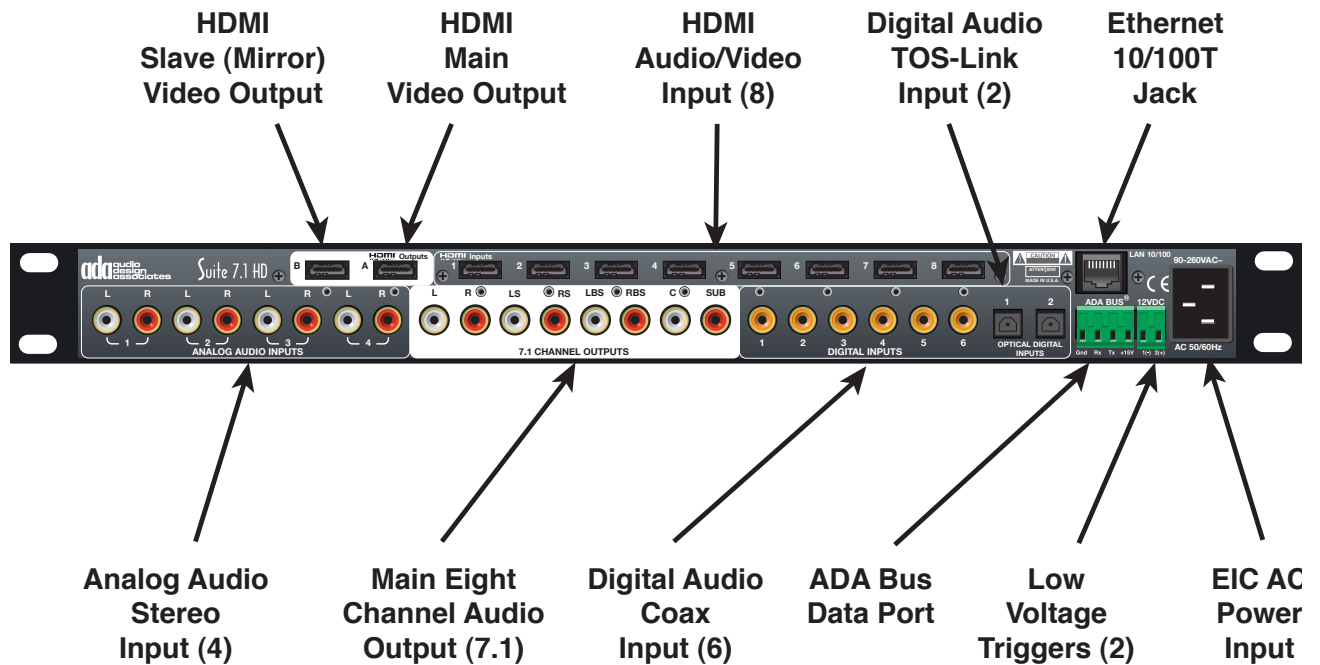|		
PL2x Movie	LF/RF/C/LS/RS/LB/RB/Sw	Downmix to 2-Channel & then processed via PL II Movie Matrix
PL2x Mve +THX	LF/RF/C/LS/RS/LB/RB/Sw	Above Mode with THX Enhancements
PL2x Music	LF/RF/C/LS/RS/LB/RB/Sw	Downmix to 2-Channel & then processed via PL II Music Matrix

THX Modes

THX Ultra2 Mve	LF/RF/C/LS/RS/LB/RB/Sw	For Film - 7.1 direct from source with THX Ultra 2 Enhancements
THX Ultra2 Gme	LF/RF/C/LS/RS/LB/RB/Sw	For Games - 7.1 direct from source w/THX Ultra 2 Enhancements
THX Ultra2 Msc	LF/RF/C/LS/RS/LB/RB/Sw	For Music - 7.1 direct from source w/THX Ultra 2 Enhancements

Room Simulation Modes

Dmx Cinema	LF/RF/C/LS/RS/LB/RB/Sw	Downmix to 2-Channel then Cinema mode with Reverb
DmxClub	LF/RF/C/LS/RS/LB/RB/Sw	Downmix to 2-Channel then Club Mode with Reverb
DmxHall	LF/RF/C/LS/RS/LB/RB/Sw	Downmix to 2-Channel then Hall Mode with Reverb
DmxArena	LF/RF/C/LS/RS/LB/RB/Sw	Downmix to 2-Channel then Arena Mode with Reverb
DmxCathedral	LF/RF/C/LS/RS/LB/RB/Sw	Downmix to 2-Channel then Cathedral Mode with Reverb
DmxQuadReverb	LF/RF/C/LS/RS/LB/RB/Sw	Downmix to 2-Channel then Quad Mode with Reverb

Rear Panel Connections

HDMI Slave (Mirror) Video Output   **HDMI Main Video Output**   **HDMI Audio/Video Input (8)**   **Digital Audio TOS-Link Input (2)**   **Ethernet 10/100T Jack**

Analog Audio Stereo Input (4)   **Main Eight Channel Audio Output (7.1)**   **Digital Audio Coax Input (6)**   **ADA Bus Data Port**   **Low Voltage Triggers (2)**   **EIC AC Power Input**

Out of the Box Input Configuration

The "Out of the Box" input configuration is easy to follow and offers connection of as many as 20 components without adjustment of the Suite 7.1 HD's input configurations (providing that the sources have the appropriate outputs). Below is a chart showing the Suite 7.1 HD's 20 "input labels" and the assignment of the HDMI (audio & video signal) and audio jacks on the rear panel of the unit. Also shown here are the default surround sound modes for the respective inputs when playing 5.1 or 2 channel material.

INPUT #	INPUT LABEL	VIDEO INPUT	AUDIO INPUT	DEFAULT 5.1	DEFAULT 2.0
1	BLURAY 1	HDMI 1	HDIMI	DISCRETE+EX/ES	PLII MOVIE
2	SATELLITE 2	HDMI 2	HDMI	DISCRETE+EX/ES	PLII MOVIE
3	CABLE/TV 3	HDMI 3	HDMI	DISCRETE+EX/ES	PLII MOVIE
4	HD DVR/PVR 4	HDMI 4	HDMI	DISCRETE+EX/ES	PLII MOVIE
5	VIDEO LIB 5	HDMI 5	HDMI	DISCRETE+EX/ES	PLII MOVIE
6	VIDEO GAME 6	HDMI 6	HDMI	THX GAMES	PLII GAME
7	HD VCR 7	HDIM 7	HDMI	DISCRETE+EX/ES	PLII MOVIE
8	HD CAMERA 8	HDMI 8	HDMI	DISCRETE+EX/ES	PLII MOVIE
9	IPOD DOCK 9	OFF	ANALOG 1	THX MUSIC	QUAD BYPASS
10	RADIO 10	OFF	ANALOG 2	THX MUSIC	QUAD BYPASS
11	MULTIROOM 11	OFF	ANALOG 3	THX MUSIC	QUAD BYPASS
12	PHONO 12	OFF	ANALOG 4	THX MUSIC	QUAD BYPASS
13	CD PLAYER 13	OFF	OPTICAL 1	THX MUSIC	QUAD BYPASS
14	COMPUTER 14	OFF	OPTICAL 2	THX MUSIC	QUAD BYPASS
15	MUSIC LIB 15	OFF	DIGITAL 1	THX MUSIC	QUAD BYPASS
16	DVD AUDIO 16	OFF	DIGITAL 2	THX MUSIC	QUAD BYPASS
17	SACD 17	OFF	DIGITAL 3	THX MUSIC	QUAD BYPASS
18	DAT 18	OFF	DIGITAL 4	THX MUSIC	QUAD BYPASS
19	LASER AC3 19	OFF	DIGITAL 5	DISCRETE+EX/ES	PLII MOVIE
20	LASER DTS 20	OFF	DIGITAL 6	DISCRETE+EX/ES	PLII MOVIE

Custom Input Configuration

The Suite 7.1 HD is an incredibly flexible home theater controller that can accommodate a wide array of components. For easy and quick setup, one can use the "Out of the Box" input configuration. One can also elect to do a completely "Custom Input" configuration or a combination of "Out of the Box" and "Custom Input" configurations.

There are several Suite 7.1 HD features specific to each input including:

Input Labeling - The ability to rename input labels to match more closely a specific setup. For example, you can relabel the input labeled SATELLITE to read DSS SAT. You need to limit the input label to 12 characters including spaces, symbols and numbers. ADA strongly suggests that as you rename inputs, you maintain their numeric reference (i.e. the 3 in CABLE/TV **3**). From a control standpoint, this will make it easier to maintain a link between the input and the input command.

Final Input - The ability to reduce from 20, the number of input labels seen turning the input knob. If you have say only six components, you can limit the Final Input number to read 6. Please note that this eliminates the display from showing input labels 7-20. If you had an input label that you wanted to use above input label 6 (i.e. MULTI-ROOM), you would relabel one for the first six inputs to read MULTI-ROOM. Obviously, you may also need to re-assign input jacks (see below).

AV Input Jack Assignment - The ability to have HDMI & audio input jacks track input labels as they are selected. If you are assigning an AV source using an HDMI input, you can opt to route the audio via the HDMI input or alternately, via an analog or digital audio input. Typically you will select HDMI for the audio input as this permits the Suite 7.1 to process the high-resolution audio formats (Dolby TrueHD, DTS-HD Master Audio, or multi-channel PCM). For audio only sources (analog or digital), you can turn the HDMI input OFF or alternately, you can select a specific video input. For example, if while listening to the music playing in the multi-room system you wish to also watch the video image of the satellite receiver (a sporting event), you could have the Satelllite's HDMI jack track the audio from the Multi-Room input.

Default Modes - When an input is selected, pre-assigned modes for 5.1 or 2 channel audio automatically engage. This way, the best possible mode always engages.

Input Presets - There are a total of six features that can be engaged when an input is selected. These include a starting volume preset, balance preset (includes levels and delays), tone preset, parametric equalizer (PEQ) preset, and speaker preset which includes active speakers, whether they roll-off and their roll-off frequency. The last feature involves setting an audio delay for that input.

HDMI Cable Equalizer - The ability to set an equalization level to compensate for the HDMI cable between the source component and the Suite 7.1 HD. These settings are saved for each input individually and there are also equalizer settings for each of the two HDMI outputs.

While you can limit the number of inputs to just the number of sources that are connected (using Final Input) and then rename (Input Labeling), re-link the sources (AV Input Jack Assignment), and assign surround modes (Default Modes), the ability to custom label inputs has other benefits.

For example, if the DVD player is used for both film and music playback, you could create an input label called DVD FILM and a second input label called DVD MUSIC. While both labels would access the same AV Input Jack, you could then set a set of Default Modes for DVD FILM that were film like (i.e. DISCRETE+EX/ES & PLII MOVIE) while the Default Modes for DVD MUSIC were set to THX MUSIC and QUAD BYPASS. This way, the user simply selects the appropriate input and does not think about then selecting modes. Note that if you are going to use multiple input labels for one or more sources, your Final Input number will need to be increased.

Setup - Entering & Navigation

The Suite 7.1HD can be setup using either the unit's front panel display and knobs or by using the Suite 7.1 HD PC Program.

ADA strongly suggests using the PC program when ever possible as it is more intuitive.

When setting up the Suite 7.1 HD from its front panel, the Mode, Input and Volume knobs are used to move the display's cursor and to make changes or selections.

To enter the Setup mode on the front of the Suite 7.1 HD, press and hold the Mode knob. The display will read as in the diagram to the right.

The cursor will be flashing on the arrow. To exit this option, simply press the Mode knob while the cursor is on the arrow. To proceed to the Setup Mode, turn the mode knob (clockwise) one click. The cursor will now flash on the first "x". Turn the Input knob so that the number "1" is on the display.

Using the Mode and Input knobs, repeat these steps until the display reads "1867". Then press the Mode knob. The display will change to the primary Setup Mode Screen. Here you can recall Tone, Balance and Volume presets as well as turning Loudness on or off. You can also:

TN - Set tone levels and store presets 1-4.
BL - Set balance levels and store presets 1-4.
VL - Set the max volume level & store presets.
SETUP - Entering the Pro Setup menu.

By turning the Mode knob, you cycle through the options with the cursor flashing on the first letter of that feature. Pressing the Mode knob while on an feature selects it. Turning the Input knob while on a feature that has options (Recalls or Loudness) cycles through the options. In the case of the "Recall" features, pressing the Input knob engages the recall.

To exit the Setup mode from any page, navigate the cursor to the arrow next to the letter M (Main) and press the Mode knob.
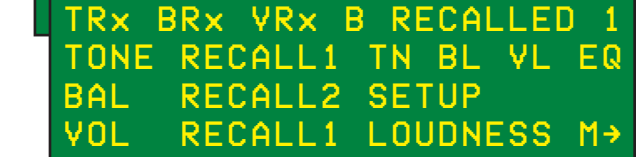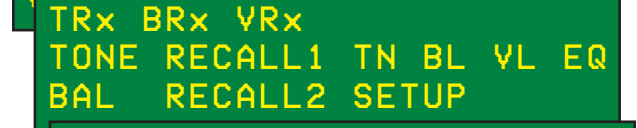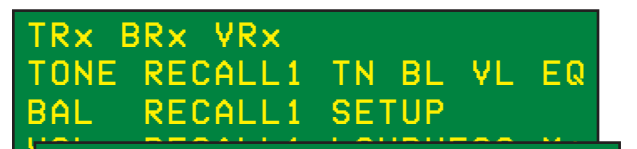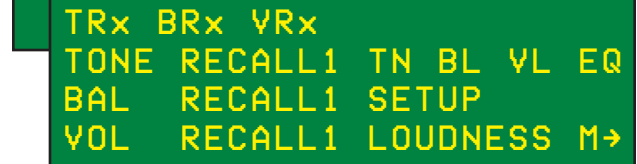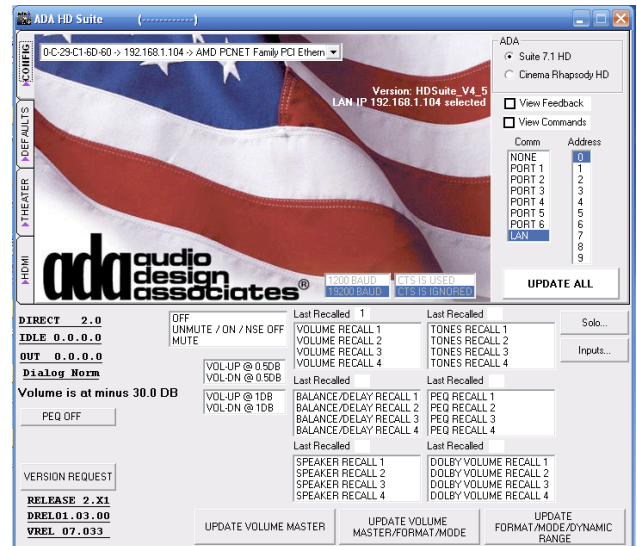
Customizing Virtual Inputs

The Suite 7.1 features 20 virtual inputs that can be limited in number, renamed, reassigned to different AV jacks, carry default modes along with recalling presets for volume, balance (with delay), tone, parametric EQ, speaker configuration, and even audio delay.

While each input label is unique, several input labels can be set to access the same source. For example, an input labeled DVD FILM and another labeled DVD MUSIC would access the same DVD player but simply engage different sound fields ideally suited for viewing the movies or listening to music.

As an input is selected, the following Suite 7.1 HD features can be accessed.

Default Modes - Set an ideal mode for both 2 channel audio detection and multi-channel audio detection.

Volume Preset - Recall one of four volume presets or simply remain on the last used volume.

Balance Preset - Recall one of four balance presets that also store delay levels or simply remain on the last used setting.

Tone Presets - Recall one of four balance presets or simply remain on the last used setting.

PEQ Presets - Recall one of four parametric EQ presets or simply remain on the last used setting.

Speaker Presets - Recall one of four speaker configuration presets or simply use the current speaker configuration (last used).

Delay - Measured in mili-seconds (up to 200) this feature permits you to time align sources. This is in addition to the global Lip Sync Delay.

From a hardware standpoint, while all other settings occur in real-time in the Suite 7.1 HD, these features are loaded into the motherboard of the unit. Even the front panel control head acts only like an external interface (like the PC program). Once you have made adjustments on it, you will still need to "load" these settings into the Suite 7.1 HD's motherboard.

Before proceeding with the custom setup of your Suite 7.1 HD, it is worth taking some time to consider just how you intend to use your system. Some considerations include:

Is your system going to be used solely for film playback or are you going to also use it to play music?

If you are going to use it for music, do you want to use the same speaker configuration as for theater or do you prefer operating the system in just two-channel mode?

If you are using the system to view TV, are there times when you wish to defeat surround sound such as when viewing the news?

Are you using your DVD player for both DVD movies and music CDs?

Obviously there are many other possible considerations. These are here to simply illustrate just how flexible the Suite 7.1 HD is. In the end, the goal of the optimum setup is to make operating the Suite 7.1 HD as easy as selecting an input.

Example 1: Using the DVD player for both flim and music.

Here you could opt to create an input labeled DVD FILM and another labeled DVD MUSIC. Both inputs would access the same jacks. The difference between these two virtual inputs could include default modes, starting volume level, balance levels, tone settings, and parametric EQ settings. As such, when inserting a DVD into your player, all you do is select the DVD FILM input. When you insert a CD, select DVD MUSIC. All other settings then engage automatically.

Example 2: Using your speaker system for both 7.1 (or 5.1) surround sound and strict 2-channel stereo.

When going to a source you want to play in just stereo (CD STEREO), you could recall a speaker preset that includes just the right and left front speakers without any roll-off. You could also bypass modes and change the starting volume level, balance level and perhaps flatten tones and parametric EQ levels.

Inputs Labels

To navigate to the LABELS/AV setup feature, turn the Mode knob until the cursor is flashing on S in SETUP and then press the Mode knob. The first option will be the LABELS/AV option and the L in LABELS/AV will already by lit by the cursor. Press the Mode knob again. Note that these pages also feature an arrow pointing left next to the letter P (Previous page). If you wish to return to the prior screen, navigate the cursor using the Mode knob until it rests on this arrow and press the Mode knob. Doing the same on the letter M exits setup.

The Suite 7.1 HD features 20 input labels or virtual inputs. The Factory Default features 20 input labels. Features discussed in this section include:

FINAL INPUT - Lowering the number of visible inputs that are displayed as you turn the input knob. Please note the PC program does this elsewhere.

LABEL - Customizing the name of the input.

AUDIO - Linking the rear panel audio jack.

VIDEO - Linking the rear panel HDMI jack.

N - Setting up Input Presets

LOAD - Loading the settings. While most functions take place in real time with the Suite 7.1 HD, this set of functions do not and must be loaded (the final step).

While the I in INPUT is underlined, turning the Mode knob advances through other Input Labels. If we are looking to relabel Input 5 "VIDEO LIB 5" to read "SERVER   5", turn the Mode knob until the screen reads INPUT 5 on the top left line of text.

Turn the Mode knob so that the cursor is on the letter L in LABEL and press the Mode knob. Now, turning the Mode knob positions the cursor on a character and turning the Input knob changes the character. If you want to exit out of this feature, turn the Mode knob to the letter S in SAVE and press the Mode knob. ADA Strongly recommends keeping the numeric suffix (i.e. 5) as it reminds you of the control code or IR code that accesses this input.

In the PC program, simply select the input on the left and then highlight the input name and type in the new input name.
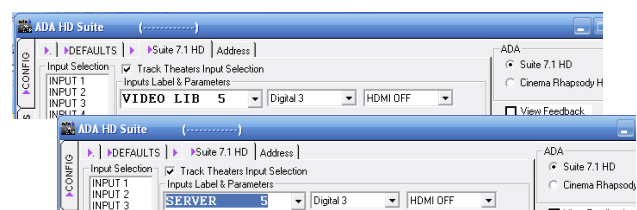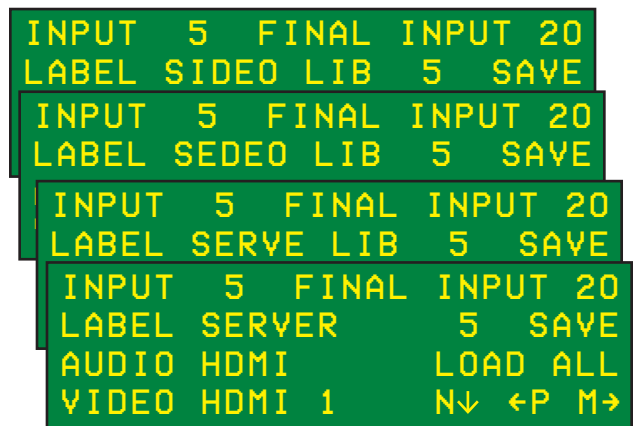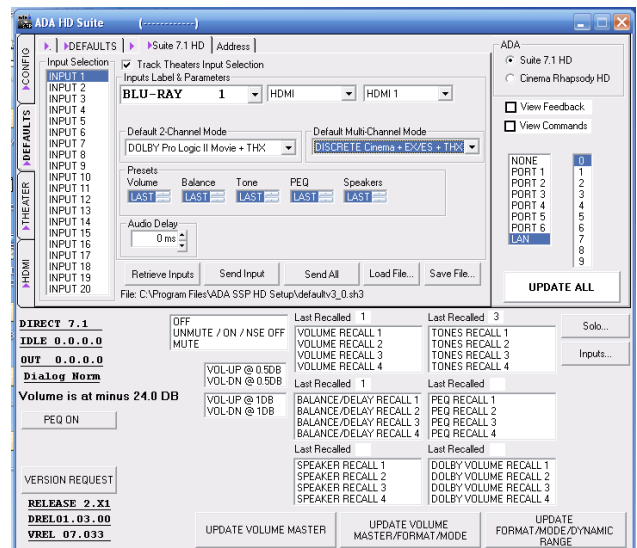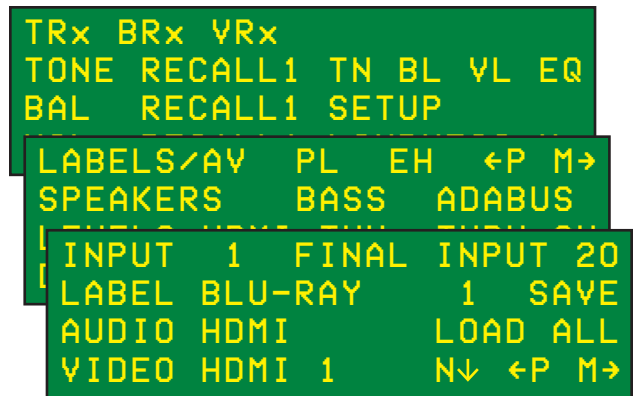
Audio Input Jack Assignment

The Suite 7.1 HD makes it possible to assign any audio and video jack to an Input Label. For audio, there are:

2 TOS-Link Optical inputs,
6 digital coax inputs
4 analog audio inputs
8 HDMI inputs (A/V)

When using an HDMI interconnect, you may still opt to use any one of the analog or digital audio inputs. If you want to extract the audio for that source from the HDMI input used for video, instead of selecting a digital or analog audio input, select HDMI. The Input Label will then select the audio associated to the HDMI input.

To change the Audio Input, first select the input you wish to setup. With the cursor on the I in IN-PUT, turn the input knob until the desired INPUT # is displayed. The turn the Mode knob so that the cursor is under the letter A in Audio. Turn the Input knob until the connection you require is displayed. In this example, we want to alter the SATELLITE input from HDMI to OPTICAL 1.

In the PC program, pull down on the first window to the left of the Input Label (source name) and select the audio jack.

Note - If you are looking to extract audio present on the HDMI cable, the audio option must be HDMI.

Note - Changes are not effected until you have performed a LOAD.

To assign audio jacks for other Input Labels, turn the Mode knob so that the cursor is sitting under the I in the word INPUT. Then turn the Input Knob to select the desired input number. Repeat the above steps.

Since several other features also need to be "loaded" it is useful to set these first. As such, you will save time loading parameters such as Video Input Jack Assignment, Input Presets, and Default Modes. If you do not intend to change these other settings and wish to simply Load the Input Labels now, proceed to Loading Input Parameters.
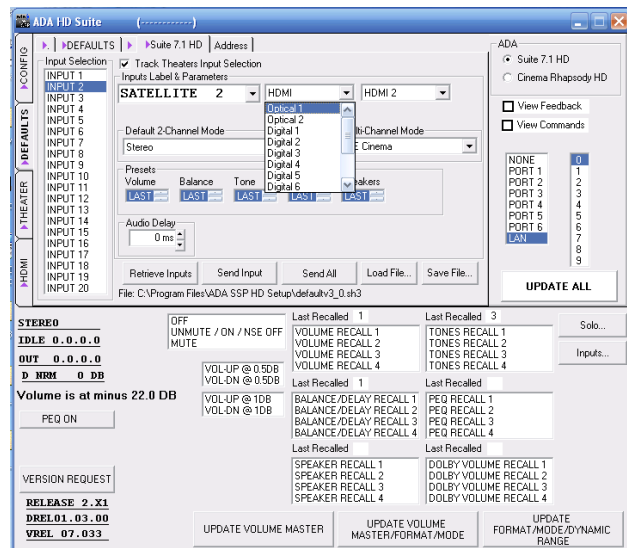
Video Input Jack Assignment

The Suite 7.1 HD makes it possible to assign any audio and video jack to an Input Label. For video, there are eight HDMI inputs. There is also a setting for VIDEO OFF which should be used for sources that have no video signal corresponding the source.

To change the Video Input, first select the input you wish to setup. With the cursor on the I in IN-PUT, turn the input knob until the desired INPUT # is displayed. The turn the Mode knob so that the cursor is under the letter V in Video. In this example, we want to change the HDMI jack for the input labeled SATELLITE 2 from HDMI 1 to HDMI 2.

To change the Video Input, turn the Input knob and the screen will advance through the options in the order shown here including OFF.

Remember that in order to play the audio off the HDMI cable, HDMI needs to be selected as the Audio Input.

In the PC program, pull down on the first window to the left of the Input Label (source name) and select the video (HDMI) jack.

**Note** - If your source is audio only connected via an analog, coaxial or TOS-Link cable, set the HDMI video input to OFF.

Note - Changes are not effected until you have performed a LOAD.

To assign video (HDMI) jacks for other Input Labels, turn the Mode knob so that the cursor is sitting under the I in the word INPUT. Then turn the Input Knob to select the desired input number. Repeat the above steps.

Since several other features also need to be "loaded" it is useful to set these first. As such, you will save time loading parameters such as Input Presets and Default Modes. If you do not intend to change these other settings and wish to simply Load the Input Labels now, proceed to Loading Input Parameters.
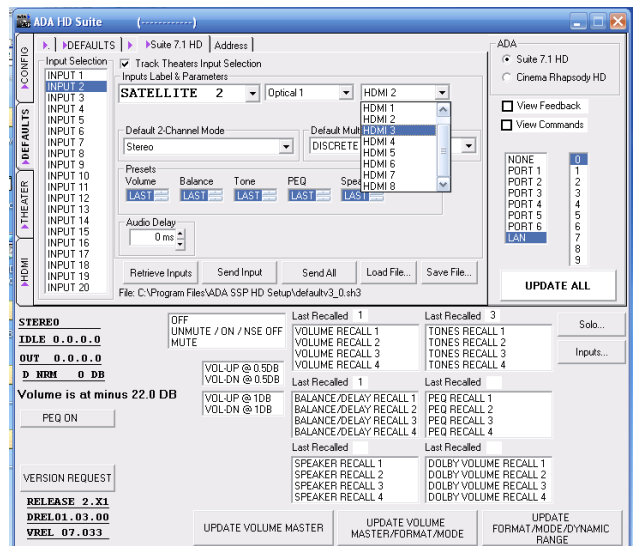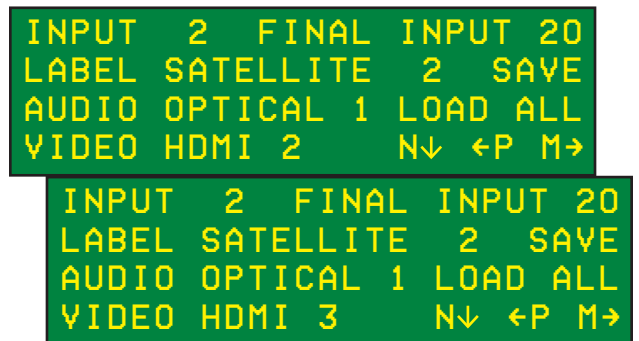
Input Presets

The Suite 7.1 HD has the ability to engage certain feature sets when an input is selected. One of these is:

Auto Delay - Rated in milliseconds (0-200).

In addition to setting the Audio Delay, you can also assign one of four inputs for each of the following.

Volume - The volume preset lets you assign a starting volume level for a specific input. If the unit is off and an input with a specific volume preset is selected, the Turn On volume preset is ignored and this input specific volume preset is used.

Balance - The balance preset stores channel levels and delay levels.

Tone - The tone preset stores the parametric bass and treble control.

PEQ - The multi-band parametric equalizer features a 12 band EQ for all channels and an 8 band EQ for the subwoofer.

Speakers - The speaker configuration lets you determine which speakers are active, whether they roll-off, and their roll-off frequency.

To change these settings in the PC program, click on the button to the right of the option window. On the Suite 7.1 HD, if you are in the LABELS/ AV screen navigate to the letter N (next) at the bottom of the screen using the Mode knob and then press the knob.

To select the input you wish to adjust, turn the Input knob while the cursor is on the first character of the input's name in the upper right hand corner of the display.

Next, use the Mode knob to scroll through the six preset options. When the cursor is on an option you wish to adjust, turn the Input knob.

Note - Changes are not effected until you have performed a LOAD.

If you are done assigning Input Presets, navigate to the letter P (previous) at the bottom of the display using the Mode knob and press the knob.
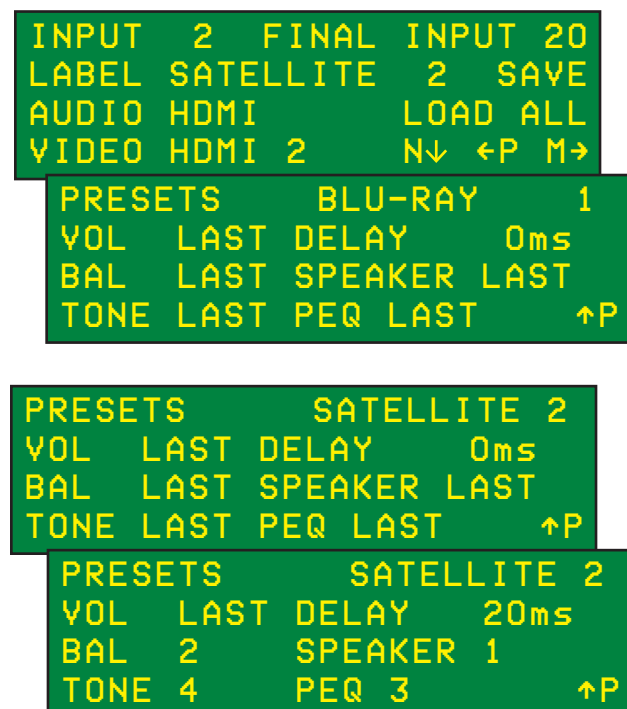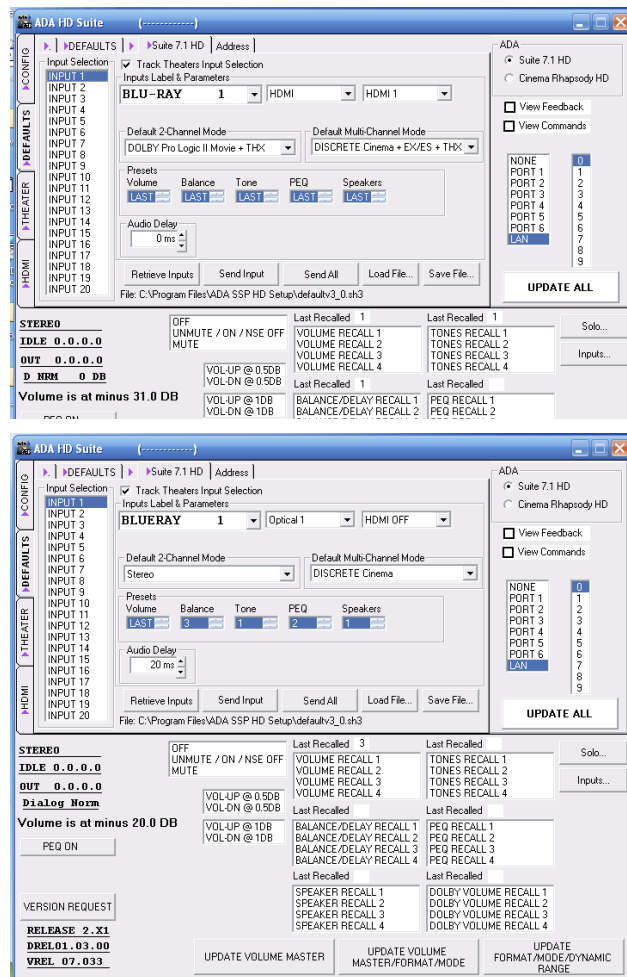
Default Modes

The Suite 7.1 HD features ADA's unique Double Default Mode Auto-Detection that automatically engages a surround sound mode for each input - one for 7.1/5.1 and another for 2 channel audio. This way, regardless of what mode was last used, the right decoding takes place each time an input is selected. Default Modes are loaded to the Suite 7.1 HD along with the Input Labels, AV Input Jack Assignments and Input Presets. As such, before loading it is suggested that you set the Default Modes for the Input Labels you have created or modified.

While the PC program permits assignment of the Default Modes on the same page as other input assignments, this feature is located elsewhere in the Suite 7.1 HD's menu.

To set the Default Modes, if you are still on the LABELS/AV screen, turn the Mode knob so that the cursor is under the arrow to left of the letter P (previous page) and press the Mode knob.

Turn the Mode knob so that the cursor is under the letter T of TURN ON and press the Mode knob.

Turn the Mode knob so that the cursor is under the arrow next to the text DEFAULT MODES PAGE and press the Mode knob.

With the cursor under the I in INPUT SEL, you can scroll through inputs by turning the Input knob. If you have altered Input Label names (regardless whether you loaded the Suite 7.1 HD), the new Input Label names will appear on the screen because the control head on the unit already contains the changes even though the Suite 7.1 HD does not.

When you are on the desired input label, turn the Mode knob to select DEFAULT 5.1 and DEFAULT 2.0. While on either of these features, the Input Knob lets you change the Default Mode for that input. Please note that "LAST USED" mode is an option. For other inputs, navigate back to the INPUT SEL using the Mode Knob and then selecting another input using the Input knob and repeat.

When you are done, return to the LABELS/AV screen by selecting P (previous screen) both on this page and the TURN ON screen. You will then be able to select the LABELS/AV page.
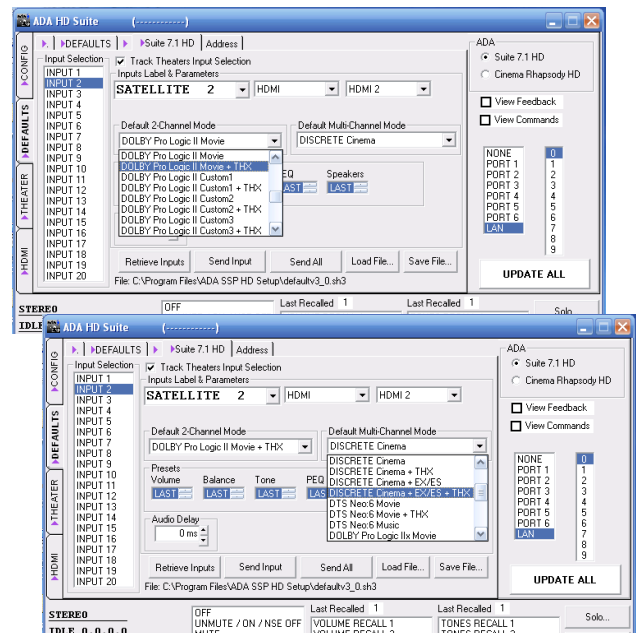
Loading Custom Input Configurations

As a reminder to how the Suite 7.1 HD operates, when you adjust most every feature on the unit, the changes occur in real time (immediately). That is not the case when it comes to labeling of inputs, assigning AV jacks, altering input presets, or changing default modes.

For these specific features, you must load them into the Suite 7.1 HD. Even if you are adjusting them on the front panel control, these changes are only being held in the front panel control and have not yet been loaded into the motherboard. As such, the front panel control works much like the PC program which also needs to be "loaded" into the Suite 7.1 HD.

When using the PC program, you have two loading options which read Send Input or Send All. Since Send All involves going through all 20 Input Labels, the Send Input is a nice feature if you only made a change to a few devices. While on that Input, press the Send Input button and just that input will be loaded to the Suite 7.1 HD. Also, you save the configuration for all inputs by selecting Save File. Inversely, you can load a previously stored configuration using the Load File feature. The Retrieve Input feature loads the settings internal to the Suite 7.1 HD into the PC Program.

From the front of the Suite 7.1 HD, while on the LABELS/AV display, turn the Mode knob so that the cursor is flashing on the "L" in LOAD ALL. Then press the Mode knob.

The display will change from reading LOAD ALL to LOADING and the inputs will scroll through all 20 Input Labels.

When the upload is completed, the display will indicate revert to the first Input Label and LOAD ALL will be displayed.

At this time, you can choose to adjust the Final Input number, return the previous menu page (P) for other settings, or exit the setup completely (M).
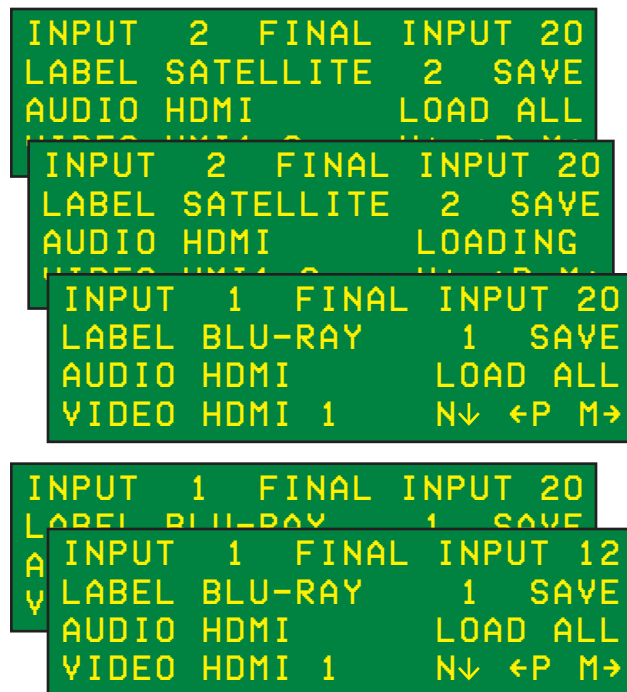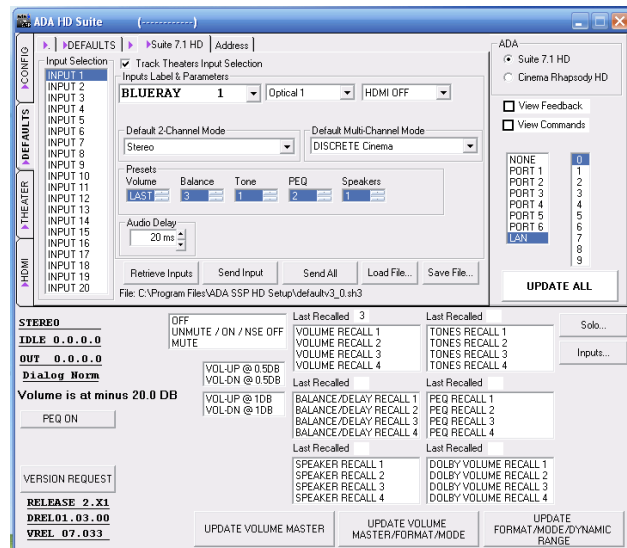
Final Input

The Final Input feature lets you limit the number of inputs visible to the user as they turn the Input knob during normal operation. So instead of scrolling through all twenty (factory default) input labels, you can set the unit to display just the inputs available in your system.

Sometimes, the final input number corresponds to the number of source devices connected to the Suite 71. HD. However, if you are using the Suite 7.1 HD's virtual inputs such that a single source component takes up multiple Input Labels with different Input Presets and/or Default Modes, the Final Input number will be greater than the number of source components.

Determine the number of virtual inputs (Input Labels) you are using and then set the Final Input to that number.

Note: Final Input reduces the number of inputs visible by eliminating the highest input labels in order. You <u>cannot</u> set the Suite 7.1 HD to skip over inputs that are not used. If you have an Input Label that you want to use above an Input Label you are not using, you will need to recreate the input settings on a lower Input Label number.

Note: Unlike other virtual input related features, the adjustment of the Final Input is in real time (instantaneous). There is no "loading" required. Once set, the highest input you can select will be the Final Input number.

To set the Final Input number in the PC program, Select the side THEATER tab and then the top INPUTS tab. Using the FINAL INPUT DN or UP buttons, adjust the Final Input number. The Final Input number will change in the feedback area to the right of these buttons.

From the front of the Suite 7.1 HD, while on the LABELS/AV display, navigate the cursor so that the letter F in FINAL INPUT is flashing using the Mode knob. Use the Input knob to adjust the Final Input number.

When you are finished, you can return to the previous menu page by selecting P or exit the Setup Menu by selecting M.
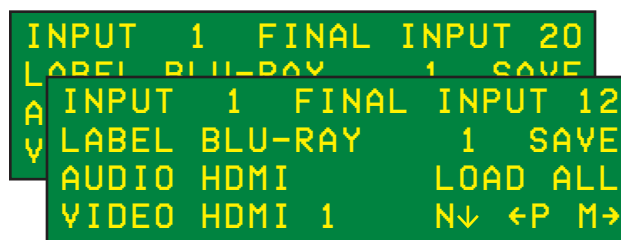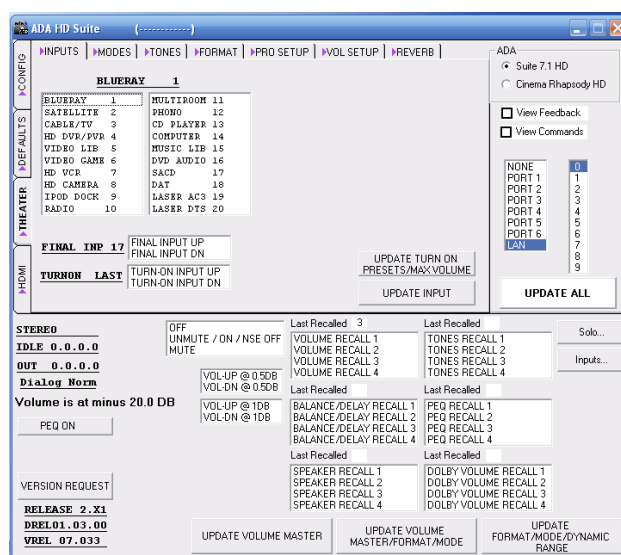
Setup 1 - Speaker Size & Crossover Frequency

The Suite 7.1 HD uses the description of Small (SM), Large (LG), and None (NO) with respect to the speakers. Small refers to speakers that are not designed to handle low frequencies. Bass information is redirected to the subwoofer. Large refers to speakers that are capable of playing low frequencies. No bass redirection takes place. None refers to that speaker not existing in your system (i.e. no back-center surround speakers)

There is another Suite 7.1 HD feature that works in conjunction with SMALL settings called Sub Cross-over (SUB) which refers the Sub Woofer crossover frequency point that determines at which frequency the Small speakers' bass information is "rolled off" and sent to the subwoofer. Speakers that are set to Large are never rolled off. The crossover frequency point is fully adjustable per speaker group on the Suite 7.1 HD. Speakers are grouped together accordingly: Front Right & Left, Center, Surround Right & Left, Back Surround Right & Left, and Subwoofer.

THX Rated or Small Speakers
If you are using THX speakers, most such speaker designs are purposely engineered to not handle low frequencies because the subwoofer is providing all of the bass sound reinforcement. The typical crossover frequency point for THX speaker is 80Hz (Hertz). In a THX speaker system, all bass infor-mation below 80Hz intended for the left, center, right, surround left, surround right, back surround left, and back surround right speakers is redirected to the subwoofer and summed (combined) with the LFE (Low Frequency Effects or the ".1" in a 5.1 mix). As such, these speakers are rolled off at 80Hz.

Full Range or Large Speakers
If you have a mix of home theater speakers and full-range speakers (speakers that can handle bass), you can opt to set some speakers to the Large setting and other speakers to the Small setting. Note that speakers set to Large do not have any of their bass information sent to the subwoofer - the speaker most likely best capable of producing low frequency sounds.

ADA generally recommends that all speakers are set to small for the optimum theater experience, even if some of your speakers are full range. This suggestion coincides with the understanding that your system contain at least one subwoofer which is usually better suited for bass reproduction. Most bass information in film content is mixed into the front left and right channels as well as the ".1" LFE channel. By directing all of the bass information to the subwoofer, you will create a more theater-like experience.

While systems can be run in a phantom mode, where the center channel information is redirected to the front right and left speakers, ADA strongly suggests that you utilize a center channel speaker in your system. As this channel handles mostly dialogue, it is an important speaker in your system.

When trying to decide what type of surround speakers to utilize, either dipole or directional speakers, there is much discussion as to which will perform better with 5.1 digital source material. Some sug-gest placing directional speakers in the back left and right corners. While this will work, if you are also employing back-surround speakers in addition to left and right surround speakers, you will most likely have a better sound field with dipole speakers placed at the listening position slightly above head level. You can then opt for directional or dipole speakers for the back-surround channels.

When employing back surround speakers, you will need to determine if you are using one or two speakers. If the back wall of the theater is not very wide, you may opt to include a single speaker in the middle. If the rear wall is wide, you can include two speakers evenly spaced along the back wall. The Suite 7.1 HD permits you to have two, one, or no back-surround speakers. Please note, you always have surround speakers even if you locate them along the back wall. The "back surround speakers" are in addition to "surround speakers".

When setting up your speaker array using the PC program, select the side THEATER tab, the PRO SETUP top tab and then the 1-SPEAKERS sub tab.

To select the speaker's size, press NONE, SMALL or LARGE. To adjust the frequency roll-off point for just that speaker(s), adjust FREQ UP or DN. When adjusting the Back Surround speakers, note that you must have the Surround speakers set to either LARGE or SMALL in order to have Back Surround speakers at all.

The TRACK CROSSOVER FREQ option raises and lowers the frequency roll-off point for all speakers together (other than the subwoofer).

The four Speaker Presets hold which speakers in the array are active (large or small), if they are small the crossover frequency, and the subwoofer's setting. To store a preset, press the SPEAKER STORE # button.

From the front of the Suite 7.1 HD, while in the setup mode, use the Mode knob to navigate to the word SETUP and press the Mode knob.

On the page that features LABELS/AV in the top left corner, use the Mode knob to navigate to the SPEAKERS option and press the Mode knob.

You are now on the Speakers page with the L in L&R flashing. The front speaker are now able to be adjust as indicated in the display's top line, SPEAKERS FRONT. Turning the Input knob will adjust the speaker size (LG=large, SM=small). For other speakers the option for NO=none will exist). To set the Crossover Frequency, turn the Mode knob and the cursor will move to the H of Hz. Use the Input knob to adjust the Crossover Frequency. Repeat these steps for all speakers you wish to adjust. To adjust the frequency for all speakers at the same time (other than the subwoofer), turn the Mode knob until the cursor is on the letter T in TRACK. Turn the Input knob to adjust all frequencies together.

To store the Speaker Presets, turn the Mode knob so that the cursor is in the top row. The display will indicate the PRESETS option with an arrow to the right. Press the Mode knob. The S in the word STORE will be flashing. Turn the Input knob to change the preset number. Press the Mode knob to store the Speaker Preset. To return to the previous page, navigate to P and press.
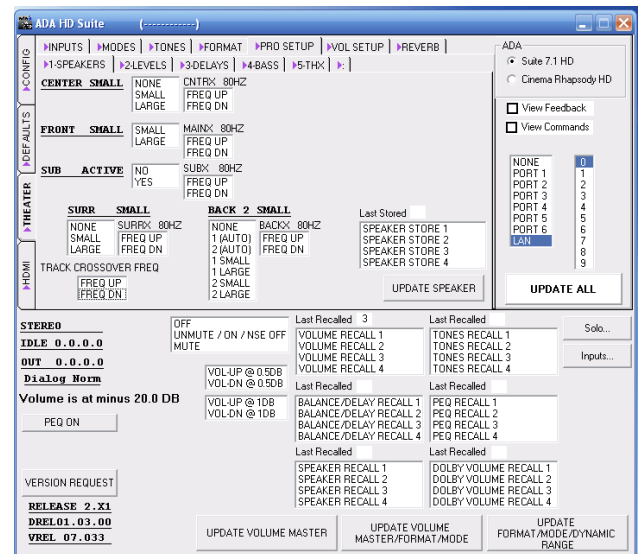
To view the current Speaker setup, select UP-DATE SPEAKERS. To view the settings of any of the four possible Speaker Presets, press the SPEAKER RECALL 1-4 buttons at the bottom of the window (do not press SPEAKER STORE).
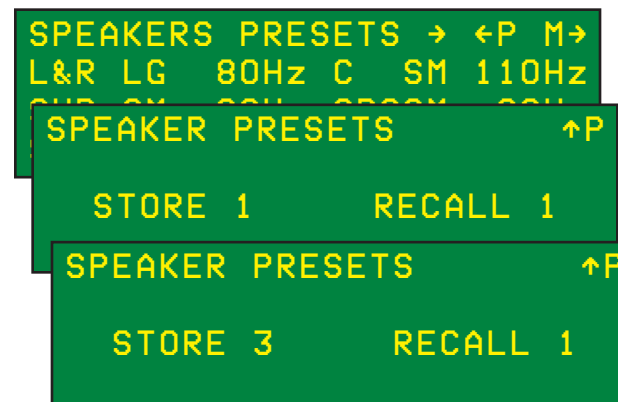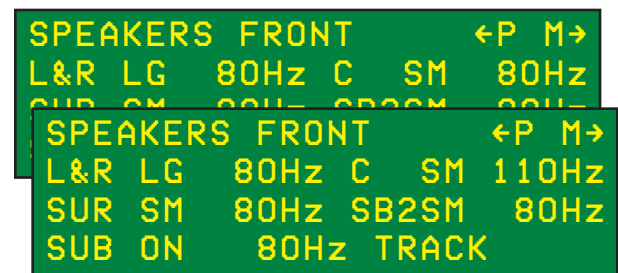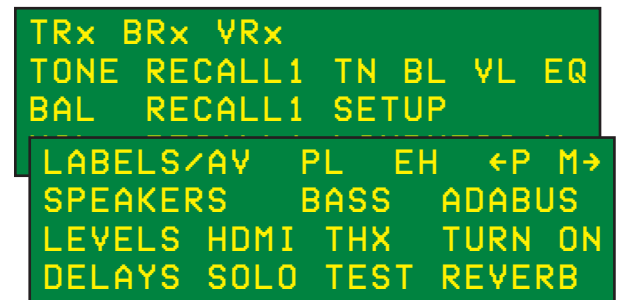
Setup 2 - Speaker Level

The Suite 7.1 HD's makes it easy to balance the speaker channels for the optimum home theater experience. Prior to entering this step, you should already have completed the positioning of your speakers and programmed their size into the Suite 7.1 HD.

While delay settings (discussed in the next section) make certain that the sound from each speaker arrives to the primary listening position at the precise moment in time, Speaker Level adjustment makes certain that the balance of volume between speakers is accurate. A speaker further away from the listening position might not sound as loud as one that is closer so you will need to adjust that speakers level a little higher than the closer speaker. Alternately, one type of speaker (a front channel speaker) may have different characteristics from a rear channel speaker.

To do this properly, you will need to use an SPL Meter (Sound Pressure Level). There are several on the market including models that feature an analog meter (sweeping needle) while other units feature a digital numeric readout. For Speaker Level setup, the SPL meter with an analog sweeping needle will work best.

To setup the meter, make certain that you have good batteries and set the meters two switches to "C Weighted" and "Slow". Set the Range to 80 dB (Decibels) which covers the level range from 70 dB to 86 dB as the range point for setting up a home theater is 75 dB. Position the SPL meter at the primary seating area and aim its microphone toward the first speaker (typically Front Left).

The Suite 7.1 HD features an internal Pink Noise generator which is used to determine the signal level to each speaker. Please note that pink noise is a static type sound that will not harm your speakers and is used strictly for calibration.
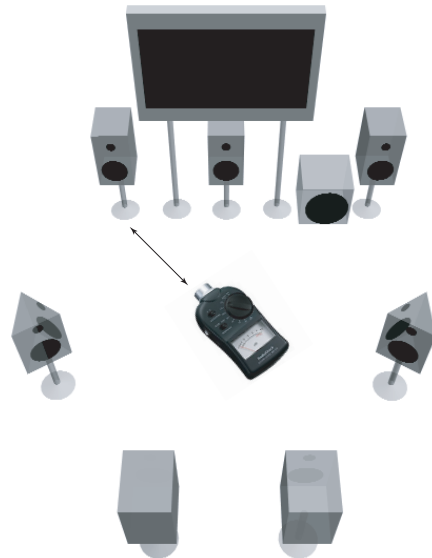
When setting up your speaker array using the PC program, select the side THEATER tab, the PRO SETUP top tab and then the 2-LEVELS sub tab.

In the window toward the left are the text buttons that engage the pink noise generator. Here you can SEQUENCE (noise will move from speaker to speaker automatically), ADVANCE (go to the next speaker in order when pressed), or select a specific speaker in which the noise will remain until another option is selected or the Noise Test OFF button is pressed.

With pink noise playing through a speaker, aim the SPL meter at the speaker but note the position of where the meter is. You can spin it but you do not want to move it from that spot. Raise or lower that speaker channels audio level (UP or DN buttons). Any adjustments made here occur in real time (instantly). The level noted in Decibels (dB) will also change. Adjust that speaker's level such that the needle on the SPL meter is swinging with 75 dB as a center point. Then proceed to adjust another speaker by selecting its NOISE button and then aiming the SPL meter toward it.

From the front of the Suite 7.1 HD, while in the setup mode, use the Mode knob to navigate to the word SETUP and press the Mode knob.

On the page that features LABELS/AV in the top left corner, use the Mode knob to navigate to the LEVELS option and press the Mode knob.

You are now on the Levels page with the N in NOISE flashing. To engage the automatic sequencing of noise through all active speaker channels, turn the Mode knob so that the cursor is on the S in SEQ and press the Mode knob. Alternately, to select a specific channel, turn the Mode knob to that channel. The Noise will engage when you press the Mode knob. Turning the Input knob will adjust that channels volume. Use the SPL meter as noted above to set the levels.

Note: If you deactivated a speaker channel during Speaker setup, the Noise test will skip over that speaker and move on to the next active speaker.

While Storing of Balance Presets is done on this screen, ADA suggests waiting to store these presets until the Delay Levels are also adjusted. The Balance Preset stores both the Balance Levels and Delay Levels.
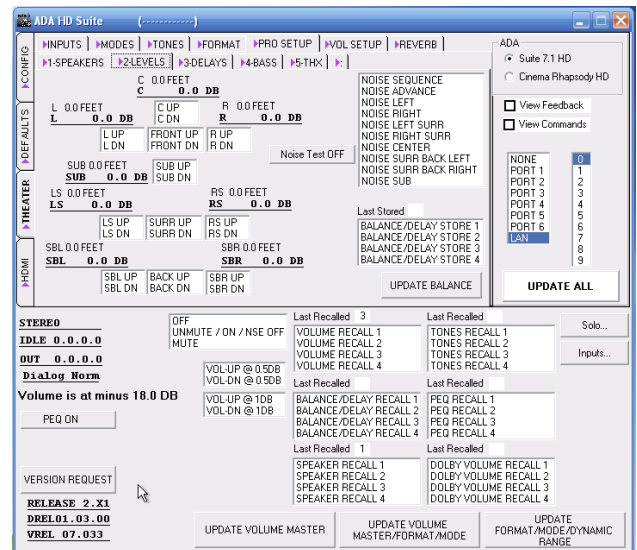
Setup 3 - Delay Settings

The adjustment of the Delay setting can be configured independently for each of the Suite 7.1 HD's eight channels (including the subwoofer channel). The goal of setting channel delays is to have the sound from each speaker reach the primary seating position at the same time or perhaps better put, the correct time. Since the Suite 7.1 HD can delay the signal of a channel from reaching that channel's output (and as such, the amplifier, then the speaker, and then your ears), the delay is applied to all speakers that are closer to the listener than the furthest speaker. This speaker, the one at the greatest distance from the primary listening/viewing position, for the sake of this section, will be called the "Reference Speaker", because all of the other speakers closer to the listening position will use this speaker's distance as a reference point.

The process of setting the delays will require the use of a tape measure or some other distance measuring instrument. ADA suggests using the U.S./British standard to measure these distances in feet as sound travels at approximately 1 foot per millisecond (1/1000th of a second). If you are using the metric standard to measure your distances, ADA suggests converting all measurements to feet as it will be easier to calibrate the delay time settings (1 foot is approximately equal to 30.5 cm). Note that the Suite 7.1 HD can be set in increments of 1/10th of a foot (0.1' or 3.5 cm).

The example details an extreme sample speaker placement where each speaker is located at a different distance from the primary seating position. The chart below uses these example distances.

To proceed, you will first determine where your primary listening/viewing seating position will be. Next you will want to measure the distance from the primary listening/viewing position to each speaker using a tape measure. Measure to 1/10th of a foot (~1.25 inches). You can use the blank chart below to fill in your speaker distances. Once you have filled in the speaker distances on the second line, take the highest value distance and insert it into the top row of each speaker column. Then subtract the distance of the speaker from the distance of the Reference Speaker. The end value (in feet) is the distance value for the delay setting for that speaker.
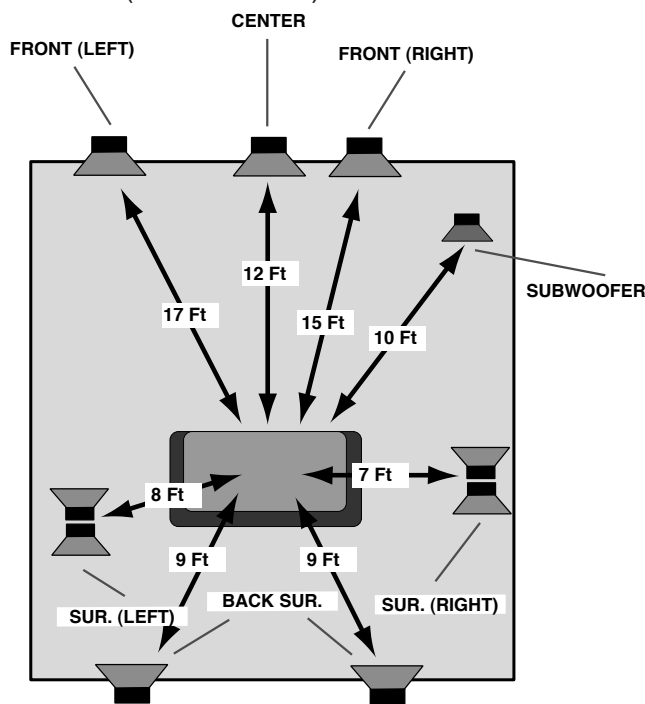
	FRONT LEFT	CENTER	FRONT RIGHT	SUBWOOFER	LEFT SURROUND	RIGHT SURROUND	LEFT BACK SURROUND	RIGHT BACK SURROUND	
ENTER DISTANCE OF FURTHEST SPEAKER (REFERENCE SPEAKER)	17	17	17	17	17	17	17	17	
ENTER DISTANCE OF EACH SPEAKER	17	12	15	10	8	7	9	9	
SUBTRACT SPEAKER'S DISTANCE FROM REFERENCE SPEAKER	0	5	2	7	9	10	8	8	THESE ARE THE SPEAKER'S DELAY SETTINGS
	FRONT LEFT	CENTER	FRONT RIGHT	SUBWOOFER	LEFT SURROUND	RIGHT SURROUND	LEFT BACK SURROUND	RIGHT BACK SURROUND	
ENTER DISTANCE OF FURTHEST SPEAKER (REFERENCE SPEAKER)									
ENTER DISTANCE OF EACH SPEAKER									
SUBTRACT SPEAKER'S DISTANCE FROM REFERENCE SPEAKER									THESE ARE THE SPEAKER'S DELAY SETTINGS

When setting up your speaker array using the PC program, select the side THEATER tab, the PRO SETUP top tab and then the 3-DELAYS sub tab.

Here you can increase (UP) or decrease (DN) the delay levels by channel. All changes occur in real-time (instantly).

The Master Delay is a global delay or lip sync delay. This feature can be added to remote control or touchscreen permitting the end user to compensate for lip sync issues which can vary from source to source and even program content.

If you want to see the delays currently active on the Suite 7.1 HD, press the UPDATE DELAYS button.

From the front of the Suite 7.1 HD, while in the setup mode, use the Mode knob to navigate to the word SETUP and press the Mode knob. On the page that features LABELS/AV in the top left corner, use the Mode knob to navigate to the DELAYS option and press the Mode knob.

You are now on the Delays page with the cursor flashing on the first 0 in L 0.0. To alter the whole number (feet) turn the Input knob. To advance to the decimal (1/10 foot ~ 1.25 inch), turn the Mode knob. Now the Input knob will adjust the 1/10 foot setting. To adjust other speaker channels, turn the Mode knob and accordingly use the Input knob to make any changes.

To set the Master (Lip Syn) delay, turn the Mode knob so that the cursor is on the arrow to the right of MASTER and press the knob. On the Master Delay page, turn the Input knob to adjust the Master Delay. Navigate to P to return to the previous screen.

To store the Balance and Delay levels (but not the Master Delay) on a Balance Preset, you have to return to the Levels screen. Turn the Mode knob to the letter P (previous) and then press the knob. Turn the Mode knob to LEVELS and press the knob.

Turn the Mode knob to STR1. To select the Balance Preset number you wish to use for these settings, turn the Input knob and then press the Input knob to store it. Repeat setting and storing of Balance and Delay levels for other seating positions or speaker configurations.
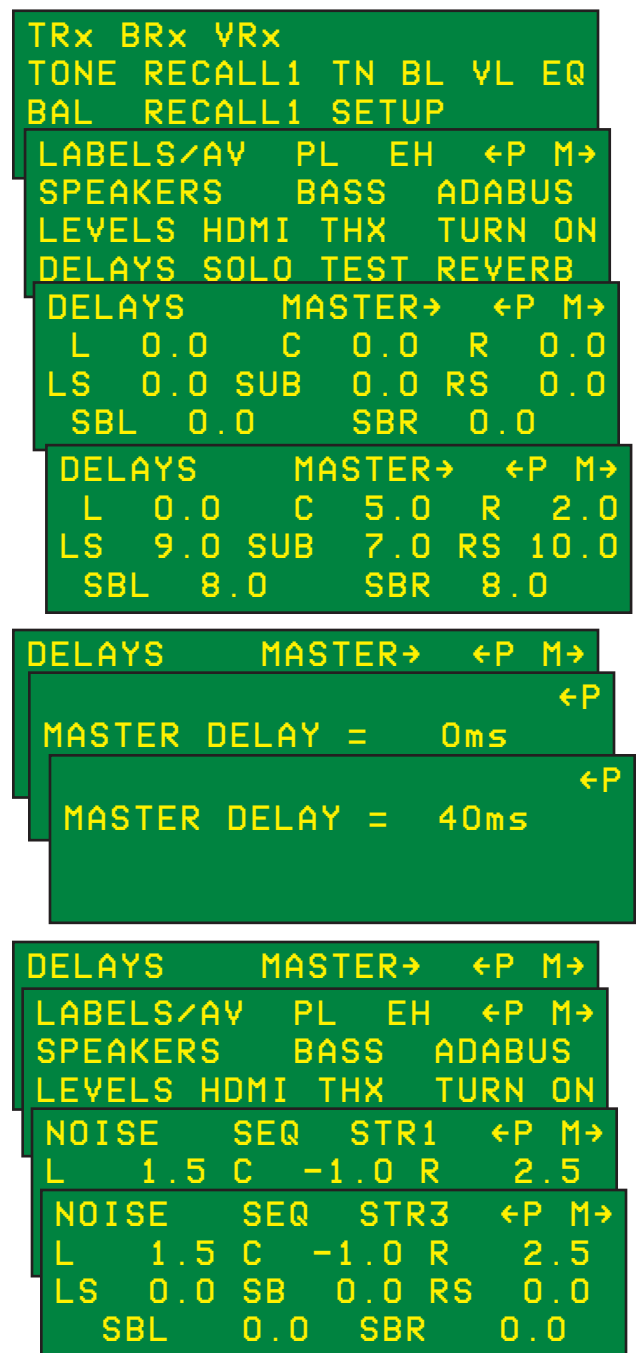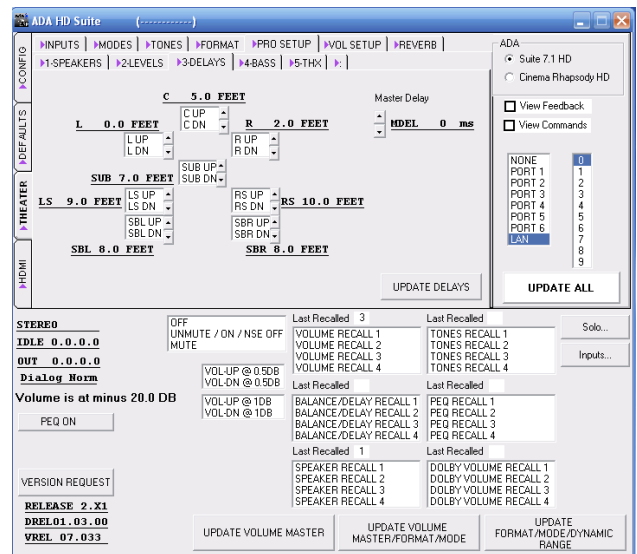
Setup 4 - Bass Limiter

The Suite 7.1 HD provides you with the ability to engage a Bass Peak Limiter that operates in a range from 0 dB (decibels) to -24 dB. The function of the Bass Peak Limiter is to reduce the possibility of overloading the subwoofer in cases of extreme volume and/or software that provides extremely dynamic bass information. If your subwoofer is capable of providing a large level of bass without bottoming out, you may not need to engage the Bass Peak Limiter (leaving it Off). If however, you play your system at volume levels that on occasion will cause your subwoofer to play distorted audio segments, you will wish to engage the Bass Peak Limiter. The Suite 7.1 HD's "Out Of The Box" setup has the Bass Peak Limiter, also known as the Bass Limiter, set to OFF.

When setting Bass Peak Limiter using the PC program, select the side THEATER tab, the PRO SETUP top tab and then the 4-BASS sub tab. Here you can increase (UP) or decrease (DN) the limiter level in dBs. All changes occur in real-time (instantly).
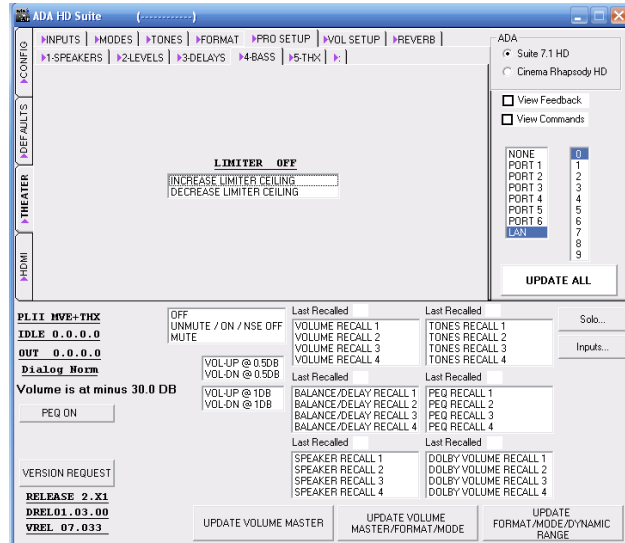
From the front of the Suite 7.1 HD, while in the setup mode, use the Mode knob to navigate to the word SETUP and press the Mode knob. On the page that features LABELS/AV in the top left corner, use the Mode knob to navigate to the BASS option and press the Mode knob.

You are now on the Bass Peak Limiter page with the cursor flashing on the L in LIMITER. To engage and/or alter the Limiter, turn the Input knob accordingly. The Bass Peak Limiter range is OFF (0 dB) to -24 dB.

To return to the previous page, turn the Mode knob to the letter P (previous) and press the Mode knob.

To exit the Setup Mode entirely, navigate to the letter M (main) and press the Mode knob.
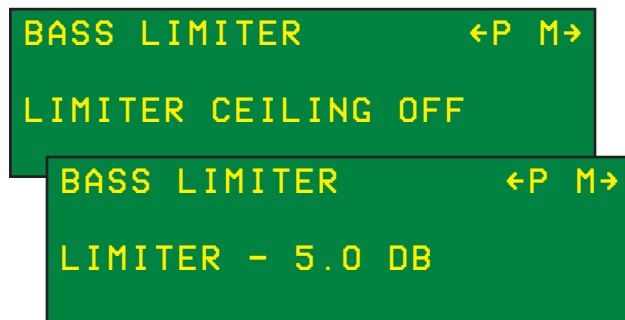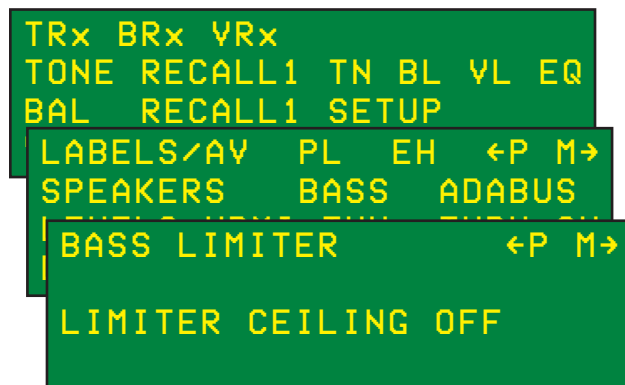
Setup 5 - THX

The Suite 7.1 HD permits the adjustment of features that are specific to THX Ultra 2. These two elements include Boundary Gain settings and Advanced Speaker Array settings.

Boundary Gain Control (BGC)
When the chosen listening room layout (for practical or esthetic reasons) results in the listener being too close to the rear wall, the resulting bass level can be sufficiently reinforced by the boundary that the overall sound quality becomes "boomy". Boundary Gain Compensation (BCG) can be switched ON to restore the correct bass performance. Please note, that ADA recommends this filter remain off.

Back Speaker Spacing - Advanced Speaker Array (ASA)
The optimum blend of ambient and rear directional information provides an enhanced surround experience over a wider listening area for all multi-channel formats. With stereo surround tracks and multi-channel 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 (Back Speaker Spacing) is based on three settings; if the two back surround speakers are less than 1 foot apart, if they are between 1 and 4 feet apart, or if they are greater than 4 feet apart. To set the Back Speaker Spacing for your system.

In the PC program, select the side THEATER tab, the PRO SETUP top tab and then the 5-THX sub tab. Here you can turn Boundary Gain ON or OFF as well as select the ASA speaker setting.

From the front of the Suite 7.1 HD, while in the setup mode, use the Mode knob to navigate to the word SETUP and press the Mode knob. On the page that features LABELS/AV in the top left corner, use the Mode knob to navigate to the THX option and press the Mode knob. Use the Mode knob to navigate to either Boundary Gain or Surround Back Spacing. Use the Input knob to turn Boundary Gain ON or OFF and to select the ASA setting of choice which will be denoted by an asteric (*).

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Modes, DTS Enhancements & THX Options

Modes have become so numerous that it may become difficult to manage them. Here, the Suite 7.1 HD is specifically designed to minimize mode clutter. In addition to Default Modes per input, ADA begins by placing modes in one of two camps, Two-Channel Modes or Multi-Channel Modes. Both groups are never available at the exact same time. So when the Suite 7.1 HD senses a two-channel source playing, it makes Two-Channel modes available. The PC program even grays out the Multi-Channel modes while the front panel does not preset them at all. Alternately, when a multi-channel signal is detected (i.e. 5.1), then the Two-Channel modes grey out or are not visible while the Multi-Channel modes are.

DTS Enhancements & THX Enhancements
The Suite 7.1 HD PC program has a unique tab that permits you to engage DTS LFE Attenuation as well as adjustment of THX Enhancements. Please note, this feature is only available through the PC program and cannot be accessed via the front panel.

By selecting the Theater side tab and then Mode top tab, you can then select the DTS & THX Extras tab to access control of these features.

DTS LFE Attenuation is incorporated in the Suite 7.1 HD to compensate for what some may perceive as excessive bass when playing DTS encoded software. To minimize this, the Suite 7.1 HD is uniquely capable of lowering the LFE when a DTS bit stream is detected. Here you can also set the level the LFE is lowered (in dB) from 0 to -20 dB. Generally, -10 dB should do the trick. If you choose to use this feature, you must first select LFE ATTEN ENABLE (FOR DTS). Then you can adjust the level you wish to attenuate the LFE signal.

For THX, the Suite 7.1 HD is unique in that it permits you to engage Re-Equalization, Deorralation, and Timbre Match at will providing you are not on a THX mode in which case, all three THX filters will automatically be engaged. This is ideal for those that recognize the benefit of Re-EQ but prefer to leave Decorrelation and Timbre Match off.
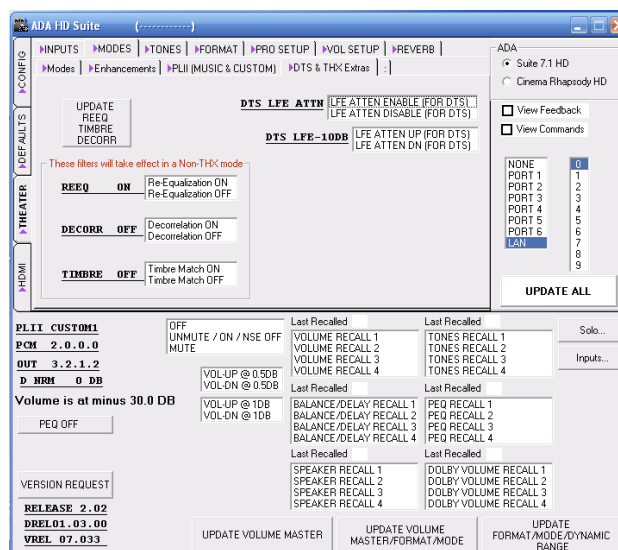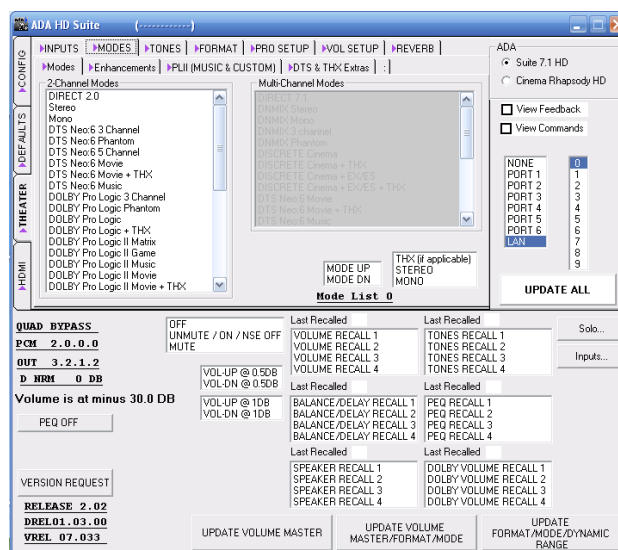
Simulated Surround & Dynamic Range Settings

Stereo & Mono Enhance Settings
The Suite 7.1 HD features two ADA modes that are designed to enhance your experience when viewing stereo or mono source material such as older films, TV shows, or other programming that is neither Dolby Pro Logic or 5.1 encoded.

Stereo Enhance is designed to provide spatial separation using the entire speaker array. This mode will work well for both strong and weak stereo signals.

Mono Enhance is similar but works with mono source material creating an enveloping surround sound experience.

Uniquely, the Suite 7.1 HD permits you to customize these simulated surround sound modes to the room environment by setting an attenuation level (level of audio to the surrounds) and delay level independently for each of these two modes. Changes are made in real time so that as you make adjustments to these setting, you can hear the changes. To setup these modes, play the appropriate type of source material and adjust according to personal preference.

In the PC program these changes are made under the Modes tab under Enhancements.

From the Suite 7.1 HD's front panel, while in setup mode, navigate to the SETUP page with the LABELS/AV option in the upper left hand corner. Then navigate the cursor using the Mode knob so that the E in EH is flashing and press the Mode knob. Use the Mode knob to select the feature you wish to adjust and then use the Input knob to adjust its setting.

Dynamic Range Settings
Dynamic Range is normally set to Max in typical ADA home theater systems as this setting will provide the vibrant experience. There are two other settings available that can only be set via the PC program. These minimize the range of the audio experience such that there is less of a volume difference between loud sounds and softer sounds. In theaters where the whispers are too soft or the explosions too loud, you can elect to try either Dynamic Range Min or Mid.
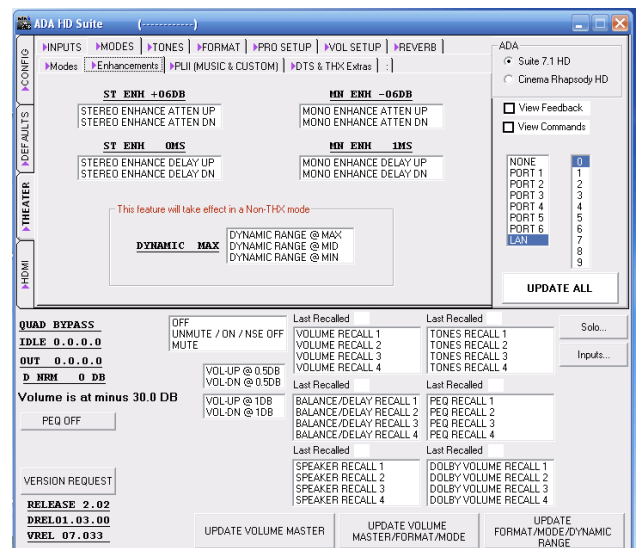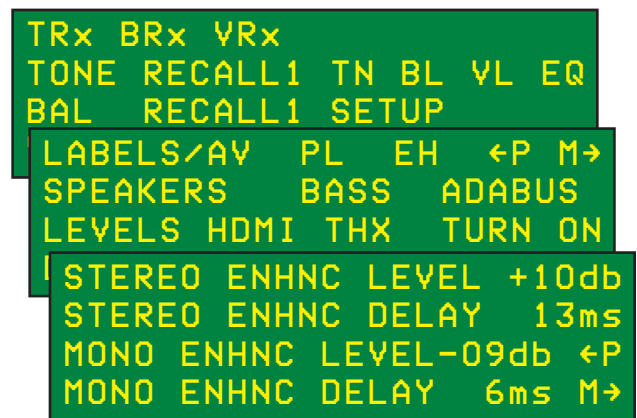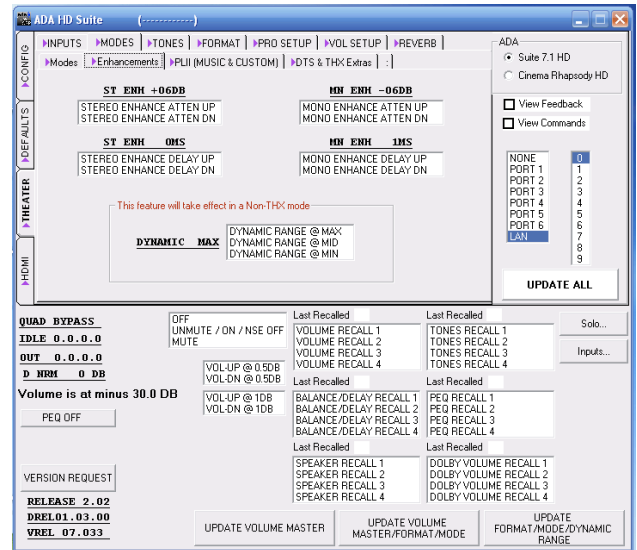
Dolby Pro Logic II Music & Custom Settings

The Suite 7.1 HD features Dolby Pro Logic decoding. While the parameters behind the Dolby Prologic II Movie mode are not adjustable (the top image of the PC program shows that all features are greyed-out when in this mode), some of these parameters are adjustable for Dolby Prologic II Music mode (middle screen shot). All of the parameters are available for the three Dolby Pro Logic II Custom modes.

Center Width - Using a scale from 0 (off) to 7, Center Width spreads the center channel image toward the right and left. Remember that this is still a mode that is based on Dolby Prologic decoding and as such, mono (i.e. vocals in music) are extracted from the right & left tracks and passed onto the center channel.

Panorama On or Off - When Panorama is ON, the sound field from the front speakers is pulled into the surround speakers.

Dimension Control - Using a scale from 0 (off) to 7, Dimension Control is the level of audio that is pulled to the surround channels when Panorama is ON.

Additional features available when first selecting one of the three Prologic II Custom modes include Surround Shelfing filter, Surround Delay On/Off, Polarity Control, Matrix Coefficient Control and Auto Balance On/Off.

Once features are set for either Prologic II Music or any of the three Custom modes, it remains set for that mode.

From the front panel of the Suite 7.1 HD while in the Setup Mode navigate to the SETUP using the Mode knob and press the knob. While on the screen that displays LABELS/AV in the upper left-hand corner, turn the Mode knob until the cursor is on the letter P in PL and press the Mode knob.

You are now on the Prologic II setup screen. While the cursor is on the letter P in the upper left-hand corner of the display, turning the Input knob will advance through the three Custom modes and one Music mode. You can scroll through features for that mode by turning the Mode knob. While on the desired feature, turning the Input knob will change that feature's settings.
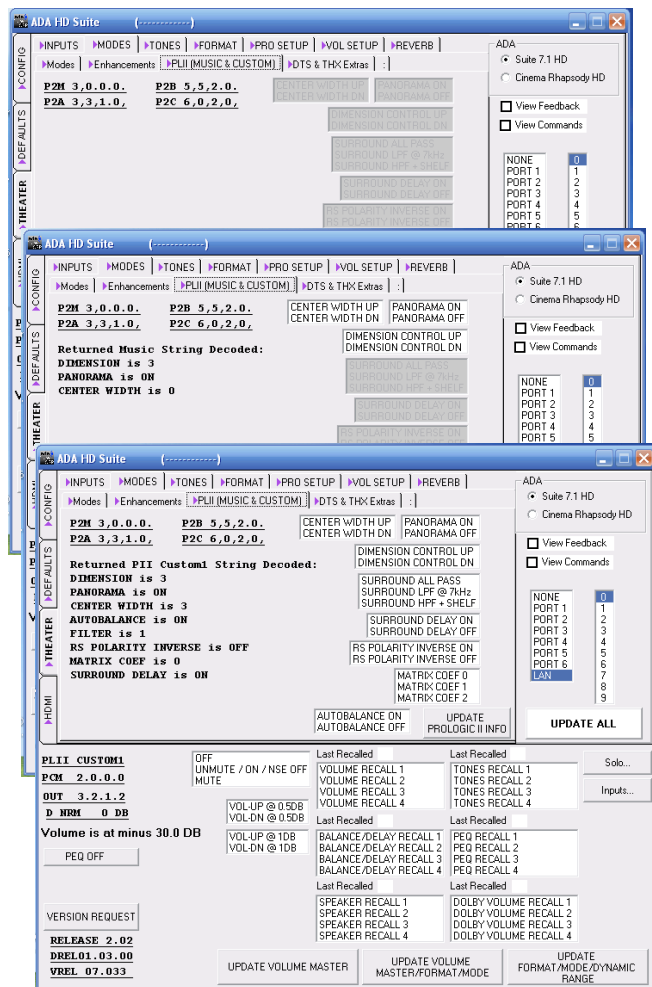
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Reverb Mode Settings

The Suite 7.1 HD features several modes that incorporate Reverb. Uniquely, ADA permits you to fully adjust these modes including features that permit you to determine the Size of the affect, the Mix percentage, the Low Frequency Cut, the Reverb Time and the Damping frequency.

These features can be individually set for each of the six Reverb modes. Once set, the features are preserved.

Adjustments are made in real time so that as you change these settings you can hear the affects of your adjustments providing that mode is selected at the time.

ADA has set factory Defaults which can be recalled at any time. Note that Recalling these Defaults only recalls the ADA Factory Defaults for the selected Reverb Mode and will not affect the other Reverb Modes.

To adjust the settings from the PC Program, select the side Theater tab and then the top Reverb tab. Then select the reverb mode you wish to adjust.

From the front of the Suite 7.1 HD, while in the Setup Mode, turn the Mode knob to navigate the cursor to the S in SETUP and then press the Mode knob. You are now on the page that reads LABELS A/V in the upper left-hand corner of the page. Turn the Mode knob so that the cursor is under the R in REVERB and then press the Mode knob. You are now on the Reverb screen.

The cursor will be flashing on the R in REVERB: while showing the Reverb mode. Turning the Input knob will scroll through the six Reverb modes. When you are on the desired Reverb mode, turn the Mode knob to cycle through its features. While on a feature, turn the Input knob to adjust the setting.

If you want to reset a Reverb mode to the ADA Factory default, turn the Mode knob such that the cursor is flashing on the letter R in RCL and then press the Mode knob. The current Reverb mode is now reset to the factory setting. Other Reverb modes remain unchanged. To exit, navigate to either the letter P (previous screen or the letter M (main screen) using the Mode knob and then press the Mode knob.
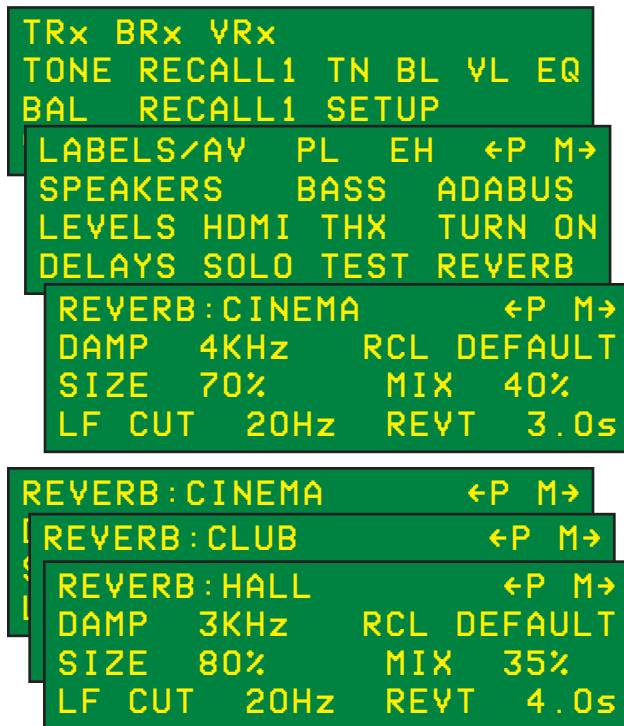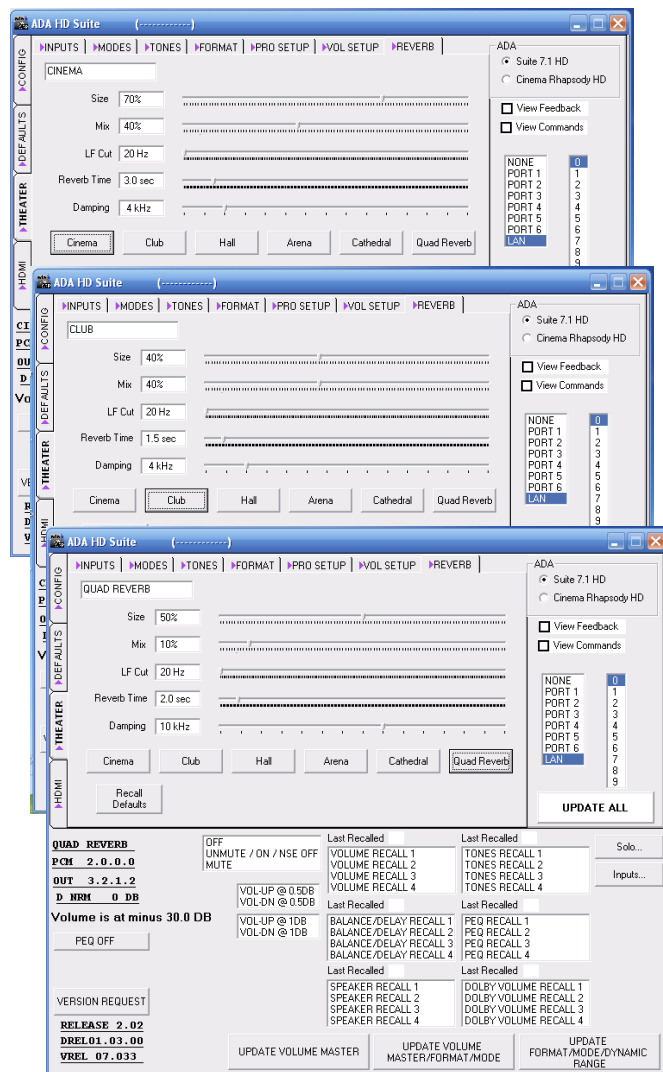
Maximum & Turn-On Volume Settings

The Suite 7.1 HD features a comprehensive volume control stage that in addition to letting you access a volume point numerically, also lets you set a maximum volume level, four volume presets, and select one of the four volume presets as your turn-on volume level.

On the PC Program tab labeled VOL SETUP, the slider permits you to jump to a specific volume point.

Volume Numeric Direct - This feature is available on the ADA PC program and lets you jump to a specific volume point. In the PC program, a virtual slider accomplishes this. Essentially, when you release the slider the volume command is sent. To view this code in HEX, you simply check the View Commands box and if you wish to copy the HEX command into a program, merely double-click on the command itself.

Storing Volume Presets - This tab also enables you to store the current volume as one of the four Volume Presets. When on a volume you wish to store, press the corresponding VOLUME STORE # button. These four presets can be recalled at turn on or when an input is selected.

Turn On Volume Preset - You can select one of the four volume presets as your Turn On Preset or have the system turn on the last volume setting by Selecting the Last Used option.

From the front panel of the Suite 7.1 HD while in the Setup Mode navigate to the VL using the Mode knob and press the knob.

To select a navigate between features, turn the Mode knob.

To store a volume preset, first make certain that you are at the volume level you wish to store by turning the Volume knob. Then with the cursor on the letter V of VOLUME STORE #, turn the Input knob to select the volume preset number. Then press the Input knob to store that preset. The same steps can be used to Recall a volume preset.

To set the Maximum Volume Level, select that feature and then turn the Input knob to adjust.
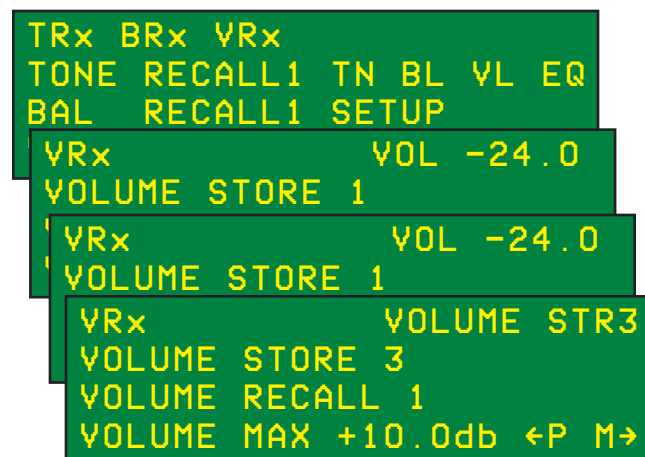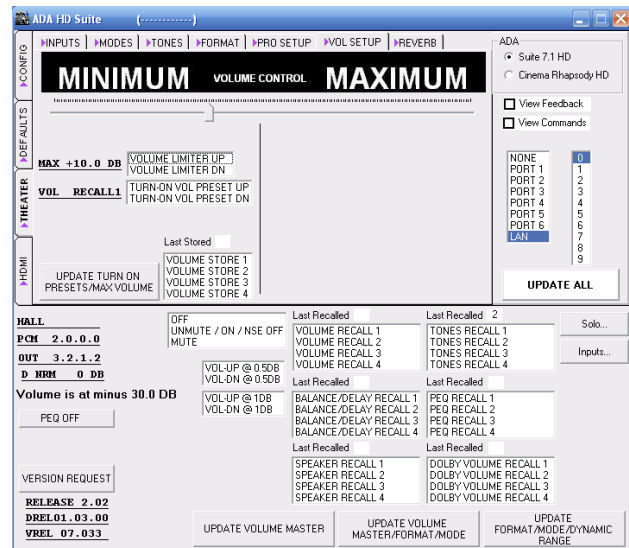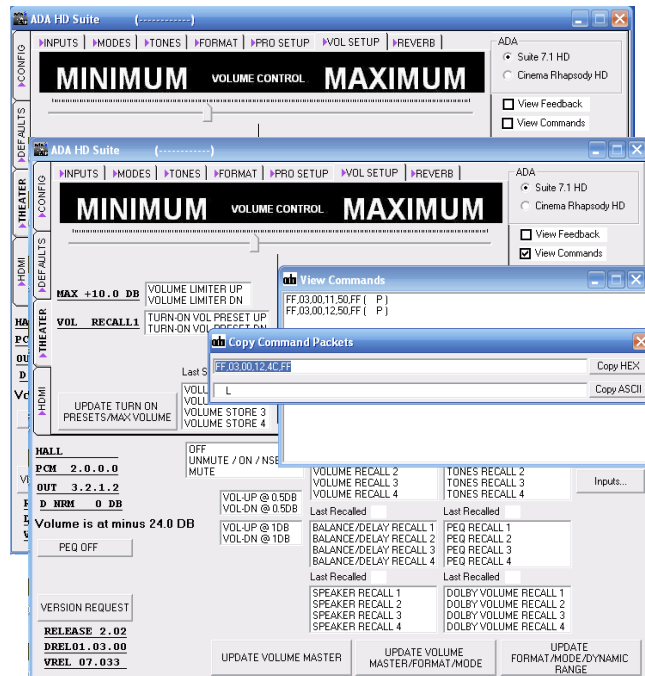
Tone Settings

The Suite 7.1 HD features a powerful parametric tone control where in you can adjust Bass and Treble Levels as well as set a Frequency points for both bass and treble. Additionally, there are two speaker groups - Group A and Group B. In each group, you can determine which speakers are track that group (are affected by that group's bass and treble levels). Speakers can be in one group or another, both groups or neither. Lastly, there are four Tone Presets that are saved by simply Storing the preset while the audio levels are in use. The preset not only stores levels and frequency points, but also which speakers are active in both Speaker Group A and B.

Perhaps your front speakers are one design while the surrounds are another, placing each type in their own group. Perhaps you are looking to EQ just the left and right across two frequency points and as such are including them in both groups while excluding all other speakers. Perhaps you simply want to correct the subwoofer and are including it in both groups while excluding all other speakers.

To set the Tone Controls using the PC program, select the Tones tab and then either Group A or B. Here speakers are toggled into or out of a group. You can also raise or lower the frequency points and levels for both bass and treble.

From the front panel of the Suite 7.1 HD while in the Setup Mode turn the Mode knob to navigate the cursor so that the T in TN is flashing and then press the Mode knob. Use the Mode knob to navigate the screen and the Input knob to make adjustments. Pressing the Input knob while on preset SToRe or RECall activates the function.

For example, when recalling factory default Preset 2, navigate to the R in REC using the Mode knob. Turn the Input knob to change the preset number 2 and then press the Input knob to recall. Note that the speakers in the group have a mark to the upper right of the speaker's letter. Navigate to the G in GROUP using the Mode knob and then select Group B using the Input knob. Notice that under preset 2, the front speakers are in Group A while the surrounds are in Group B.

Select Treble level (db), Treble frequency (KHz), Bass level (db), and Bass frequency (Hz) using the Mode and adjust levels with the Input knob.
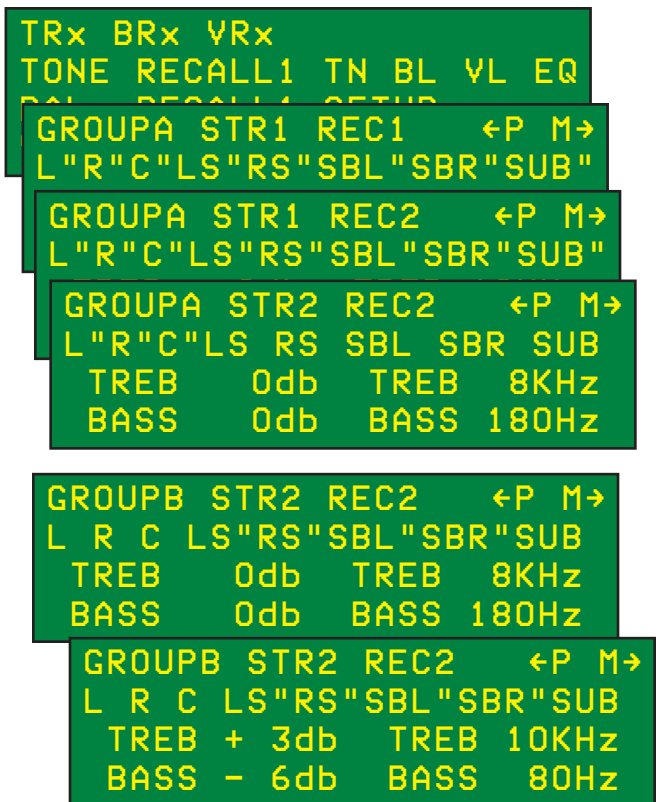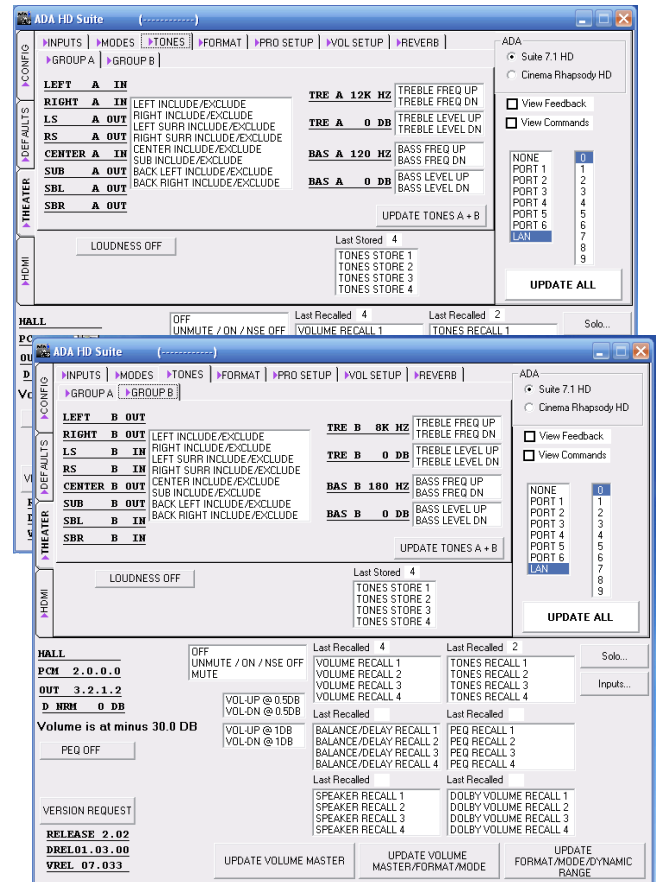
Parametric EQ (PEQ) Setup

The Suite 7.1 HD features a multi-band parametric equalizer (PEQ) that provides you with tools to dramatically correct acoustical imperfections. Typically, best results are achieved using acoustical measurement systems. The PEQ is a separate PC program to the Suite 7.1 HD PC program. ADA suggests running one or the other but not both at the same time for optimal results. You can also set and adjust the PEQ from the front of the Suite 7.1 HD.

Each of the seven main channels features a 12-band equalizer. Each band allows you to set a center frequency point, Q level and +/- gain level per speaker channel. You can also have all seven main channels track each other. The subwoofer channel features an 8-band equalizer with independent center frequency, Q and level per band.

There are four PEQ presets that store all parameters. You can also reset center frequency, Q and levels individually with the touch of one button. Lastly, the PEQ can be turned on and off permitting you to A/B your results. Like other Suite 7.1 HD setup features, you can store your PEQ settings to a file on your PC.

To set and adjust the PEQ from the front panel of the Suite 7.1 HD, while in the Setup Mode navigate the cursor to the EQ using the Mode knob and press the knob. The cursor will flash on the arrow next to the letter N.

Turning the Mode knob scrolls you through options on this page including Channel selection and All Channels (7), Storing Presets and Recalling Presets, as well as Reseting Q, Levels (Flat) and Frequency points. Turning the Input knob while on a specific feature cycles through options.

With the cursor on the arrow next to the letter N, turning the Input knob cycles you through individual channels and the bands of the PEQ (three bands at a time).

While on a screen, turning the Mode knob moves the cursor through the options on any one specific screen permitting you to adjust Gain Level, Center Frequency, and Q for that channel. To adjust the next three bands, position the cursor on the arrow next to N and turn the Input knob.
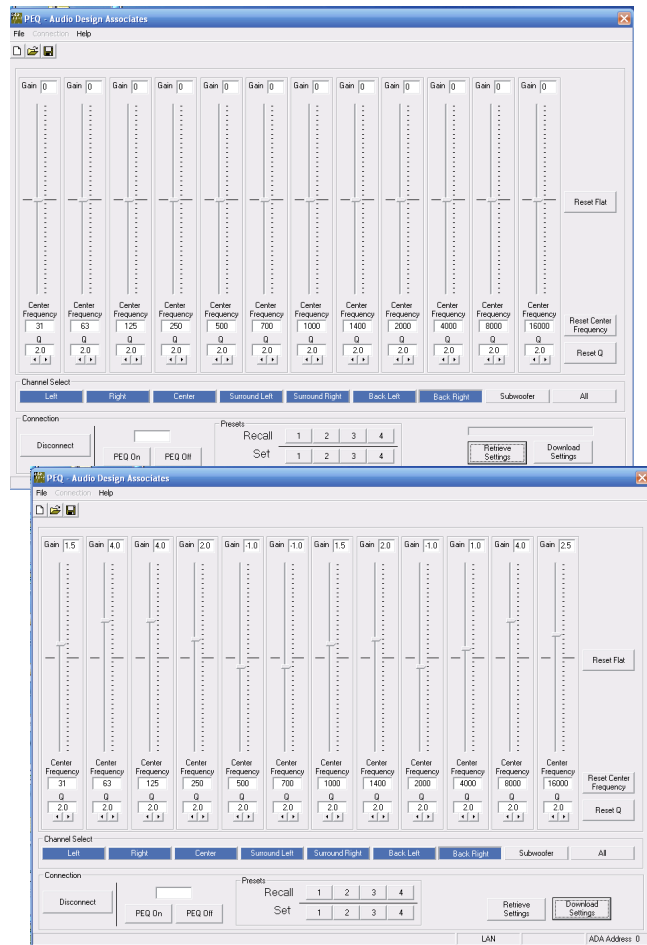
HDMI Equalizer Settings

The Suite 7.1 HD features a HDMI Equalizer that lets you compensate for HDMI cable length or type of cable after all connections are made. There are adjustments for each input and each output.

The Suite 7.1 HD also is capable of passing 2-channel audio over the HDMI cable to the TV in the event you would like to have the TV's speakers provide sound. Like all functions, this feature can be incorporated into a remote control or touchscreen system. In the PC program, this feature is a simple On or Off button press.

To adjust the HDMI Equalizer for a specific input, select the input number and then select the options from either Auto or Low - High. Repeat this process for each input that requires adjustment.

For both the primary output A and the secondary output B, there is a slider adjustment that sets the output equalizer on a scale from 0 to 31.

Note that all changes are in real time.

From the front panel of the Suite 7.1 HD while in the primary setup mode screen navigate to the S in SETUP and press the Mode knob. Then turn the Mode knob so that the cursor is on the H in HDMI and press the Mode knob.

The cursor will be flashing on the H in HDMI DOWNMIX. Turn the Input knob to set the 2-channel downmix output to the TV to ON or OFF.

To adjust the HDMI Input Equalizer settings, turn the Mode knob so that the H in HDMI IN is flashing. Turning the Input knob scrolls through all eight HDMI inputs. Turn the Mode knob so that the cursor moves to the right and now you can adjust to the Input EQ using the Input knob.

To adjust the HDMI Output Equalizer settings, turn the Mode knob so that the H in HDMI OUT is flashing. Turn the Input knob to select between Output A and B. Turn the Mode knob so that the cursor moves to the right and then turn the Input knob to adjust the Output EQ.

In the event you are having HDMI issues via the Suite 7.1 HD, try different HDMI cable lengths to see if they resolve the problem.
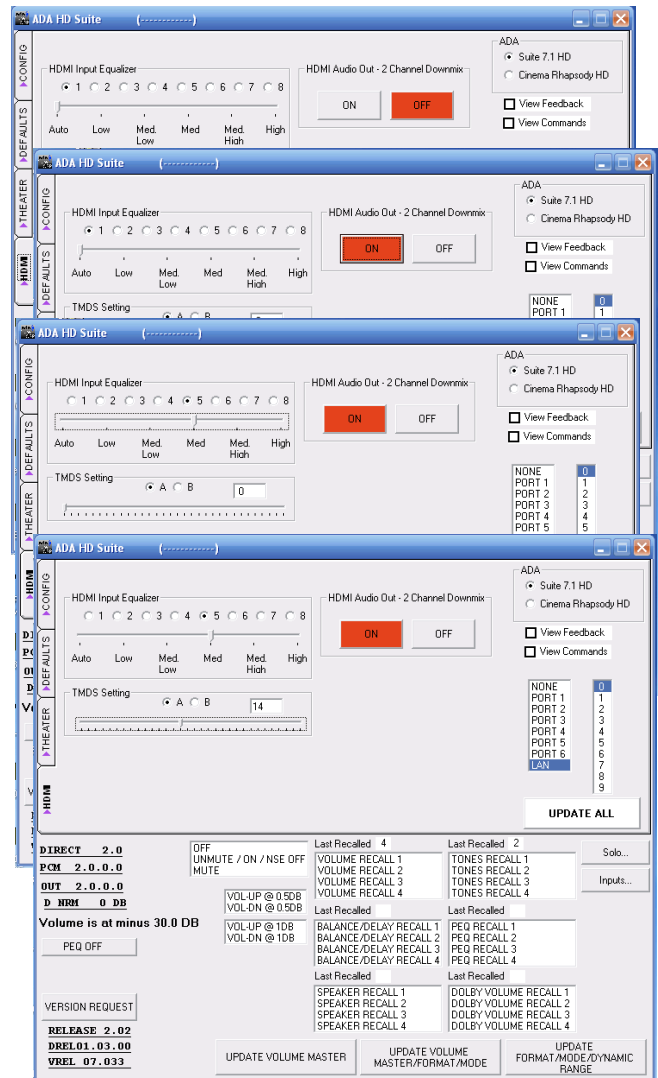
Solo Test

The Suite 7.1 HD features a Solo Test that allows you to turn off speakers while leaving others playing. The affect could be described as unplugging speakers during a performance. The obvious difference is that the Suite 7.1 HD does this safely and quickly.

You can use this feature to determine if you have a blown speaker driver or if your speakers are out of phase.

It is also a terrific way to demonstrate the benefits of multi-channel music providing you have the proper source material. A particular ADA favorite is the DTS version of the Eagles Hell Freezes Over CD or DVD (must be the DTS version). There is a bonus 17th track on either disc that is a special recording of Seven Bridges Road. Mixed in DTS 5.1, each of the five band members is mixed on their own speaker channel. When playing the song through the entire speaker array, the sound is natural and welcoming. We encourage playing the cut with the audience seated during the first half of the song and then encouraging them to get up an move around during the second half, noting that while the sound field flexes as they move around the room it does not come apart. Then we replay the song but this time with Solo Test ready. Now we can engage just one speaker at a time revealing the vocals of that one artist. By the end of the demonstration, it is becomes obvious that this song is mixing live - in the room itself.

From the PC program, select the Solo button on the right side of the window and a new window will open up revealing the Solo buttons. Red buttons indicate input channels, bold letters indicate Solo channels, and non-bold letters are channels that are muted. The PC program lets you quickly turn speaker channels on and off, even in pairs.

From the front panel of the Suite 7.1 HD while in the primary setup mode screen navigate to the S in SETUP and press the Mode knob. Then turn the Mode knob so that the cursor is on the S in SOLO TEST and press the Mode knob.

The cursor will be flashing on the O in OFF. The asterisk (*) shows the Solo Test state. Turn the Mode knob to select between channels and press the Mode knob to Solo audio to only that channel. The asterisk will indicate Solo channel.
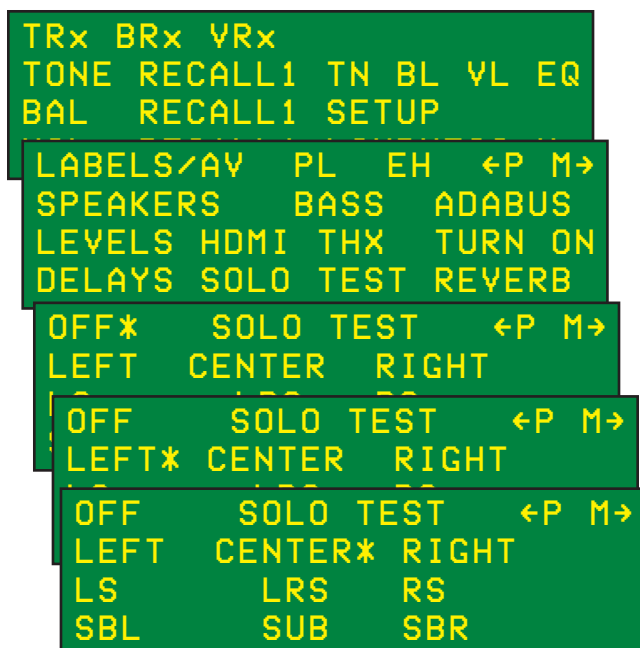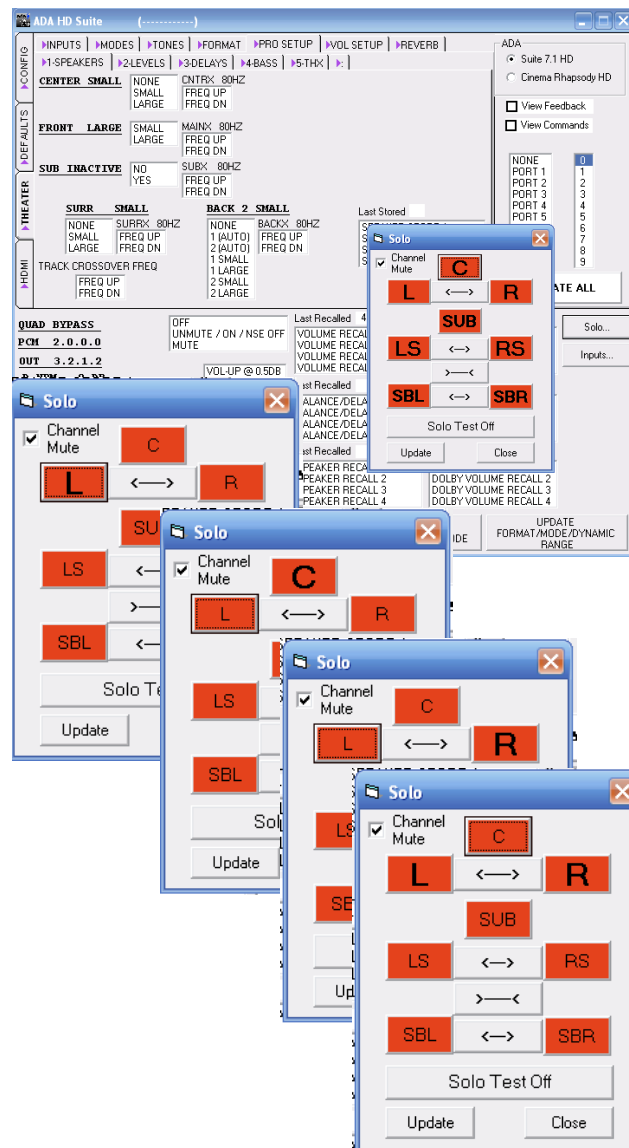
Saving (& Loading) Input Configuration & PROM Files

The Suite 7.1 HD allows you to save the configuration of your inputs to your PC. This preserves the Input Lables, the connectivity of the jacks, the default modes and the input presets.

By input storing configurations to your PC, you can recall them in the event that there is ever a problem with the Suite 7.1 HD. Alternately, since many home theater utilize similar components, recalling a previously saved project may give you a head start on a different project.

To Save the files setup (or recall a previously saved setup), selet the Default side tab and the Suite 7.1 HD top tab.

After all custom input configurations are done, press the Save File button. A Save As window will open. Here you can select to save the file in an alternate folder as well as label the file.

When you are done, select Save. The file will be saved as the ".SH3" file extension.

While the Input Configuration is saved as a .SH#3 file - containing input labels, AV jack links, defalut modes and input presets, the PROM file contains all the other aspects of the Suite 7.1 HD. To numerous to mention, these features also should be preserved in a PC file (.S7P extension) as they can be recalled in the event of a problem. Alternately, they too can provide you a head start when configuring systems similar to each other.

ADA strongly recommends saving both files to your PC.

To save the PROM file, while on the Defaults side tab, select the Defaults top tab. Then press the PROM Configuration button. Again, a Save As window will appear in which you can navigate to a folder of your choosing. You can also name the file which will be assigned the .S7P suffix.

Use this same procedure to recall previously saved PROM files.
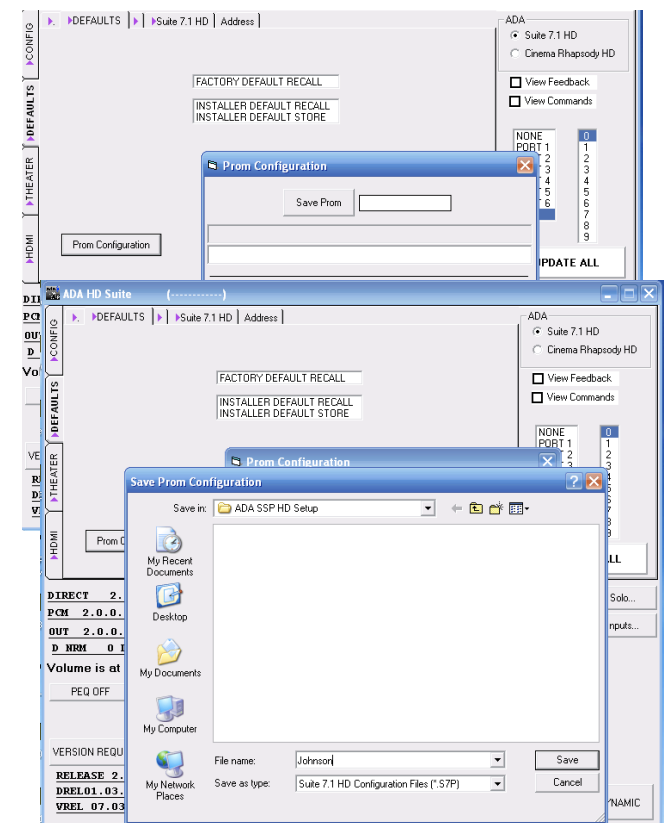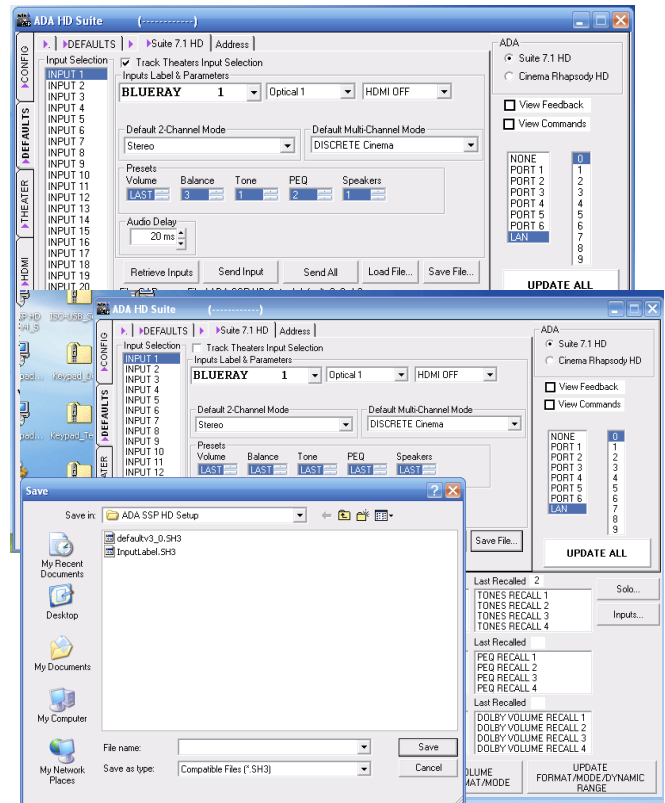
Recalling Factory & Storing/Recalling Installer Defaults

The Suite 7.1 HD features both a Factory Default as well as an Installer Default. The Factory Default can be recalled in the event you wish to begin the process of setting up the Suite 7.1 HD from a clean start. Note that recalling the Factory Default does not reset the Installer Default, providing one was saved first.

To recall the Factory Default in the PC program, simply press the Factory Default Recall button. The Suite 7.1 HD will reset and power down and then up. The factory default does not reset input configurations or the PEQ.

When you are done with your custom input configuration and setup, ADA strongly suggests saving your setup on the Installer Default. You can provide the Installer Default Recall button on a touchscreen or remote control so that in the event the system was tampered with inadvertently, your customer can reset the unit to the way you left the system. To store the Installer Default from the PC program, press the Installer Default Store button (also saving PEQ and input configurations).

To recall the Installer Default in the PC program, simply press the Installer Default Recall button. The Suite 7.1 HD will reset and power down and then up.

From the front panel of the Suite 7.1 HD while in the Setup Mode navigate to the A in ADAUBS and press the Mode knob. Navigate the cursor to the D in DEFAULTS and press the Mode knob.

While the cursor is flashing on either the F in Factory Recall or the I in Installer Recall, merely pressing the Mode button will force the recall of that specific default setting. The Suite 7.1 HD will reset, turning off and then turning on again. Note that you will be exited from the Setup Mode.

Setting the Installer Default requires the entering of a password (1867). To store your Installer Default setting, navigate the cursor using the Mode knob the I in Installer Store Code and using the Input knob to select numbers and the Mode knob to position the cursor, enter 1867. Once the 7 is entered the fourth line of the display will read Install Store. Navigate to this line using the Mode knob and then press the Mode knob to save the Installer Settings (which include PEQ & inputs).

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ADA Bus Address, Baud Rate, IR & Display Blanking

The Suite 7.1 HD features 9 potential ADA Bus Addresses such that a system with several Suite 7.1 HDs can have each one on its own unique control address. The ADA Bus address can be changed from either the PC program or the setup menu of the Suite 7.1 HD. Changing the Address takes place in real time - there is no loading of the new address. The most typical address for the Suite 7.1 HD is ADA Bus Address 0. A Factory Default reset will reset the unit to this address.

To change the address of the Suite 7.1 HD, set the address button up or down.

From the front panel of the Suite 7.1 HD while in the Setup Mode navigate to the A in ADABUS using the Mode knob and press the knob. The B in Bus Address should be flashing. Turning the Input knob changes the address.

The following are only set on the Suite 7.1 HD.

Baud Rate - While the ADA Bus Address determines the way the Suite 7.1 HD communicates, the Baud Rate determines the speed of the communication. Here there are only two options, 1200 Baud and 19200 Baud. ADA strongly recommends leaving the Baud Rate set to 19200 baud. Note that since the Suite 7.1 HD has a built-in BRT circuit for IR control (baud rate translator because IR command operate at 1200 baud), you do not need to reduce the baud rate of the Suite 7.1 HD when controlling it from an infrared remote. In the event you need to change the Baud Rate, turn the Mode knob so that the B in BUS BAUD is flashing and turn the Input knob to set the Baud Rate.

You can also activate or deactivate the front panel IR receiver on the Suite 7.1 HD. Generally, the receiver is deactivated so it does not interfere when these components are integrated into a control system. To turn the IR receiver On (or Off), turn the Mode knob so that the I in IRR is flashing and the turn the Input knob to set it On or Off.

In the event you want the front panel display on the Suite 7.1 HD to turn off (blank out), you can set the blanking function between 0 and 60 seconds. Turn the Mode knob so that the B in Blanking is flashing and the turn the input knob to set the blanking time. Turning any knob wakes will illuminate the Suite 7.1 HD for the time set.

View HEX Commands & Feedback

The Suite 7.1 HD is controllable via HEX commands and also provides feedback in HEX that can be translated to ASCII. For each and every function described in this manual, there is a matching HEX command. This includes update requests (feedback updates) which in addition to an Update All command, include update requests specific to a function or section of functions thus keeping the incoming data stream shorter.

While commands are seven bytes in length with the first and last byte the FF clear buffer bytes, the second byte (03) refers the component type and the third byte (typically 00) is the unit address. The remaining three bytes change depending on the function command.

The PC program features a View Command check box which displays the HEX command. Double clicking on the command opens a Copy Command Packet's window in which permits you to copy and place the HEX command directly into a control system.

Feedback is a 16 byte string with the first byte 0F and the last byte F0 (clear buffer). For filtering purposes, the 14th byte is the unit type (03) and the fifteenth byte the unit address (typically 00). Bytes 2-13 are is the 12-character text feedback in HEX. Both the PC program and the front panel display translate this HEX feedback to ASCII.

The PC program features a View Feedback check box which opens a window that displays this feedback in ascending order. To the left is the 16 byte HEX string and to the left in parenthesis is the ASCII translation of bytes 2-13 (the feedback in English).
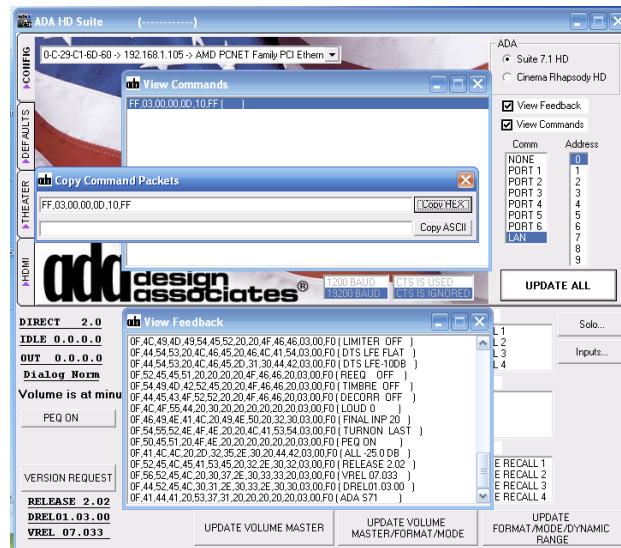
HEX Codes for System Integration

Comments/Notes

All Commands below use 00 for the Unit Address number. When the unit address is changed, Byte number 6 (the Checksum Byte) increments by one step in Hex. For example, using the Discrete On Command on with the unit address changed to 01; the Checksum Byte changes to 26. The various commands below have been grouped together based on common function. On Off, Input Selection and Volume are together; Direct Mode and Mode related are together, etc. Some commands require settings that can only be made in the PC program. Sending the command without first defining the settings in the PC program will result in nothing happening at all or improper functioning of the unit.

Command Name	Hex Command	On/Off, Volume and Input Related Commands
Discrete On/UnMute	FF, 03, 00, 01, 21, 25, FF	Turns System On to Default Souce or Last Used (set in software) or Unmutes
Power Off	FF, 03, 00, 01, 08, 0C, FF	Turns System Off
Mute	FF, 03, 00, 01, 22, 26, FF	Mutes Audio
Volume Up 1/2 dB	FF, 03, 00, 01, 37, 3B, FF	Raises Volume 1/2 dB at a time
Volume Down 1/2 dB	FF, 03, 00, 01, 38, 3C, FF	Lowers Volume 1/2 dB at a time
Volume Up 1 dB	FF, 03, 00, 01, 5A, 5E, FF	Raises Volume 1 dB at a time
Volume Down 1dB	FF, 03, 00, 01, 5B, 5F, FF	Lowers Volume 1 dB at a time
Volume Up 1/2 dB	FF, 03, 00, 01, 27, 2B, FF	Optimized for 1200 Baud/Feedback Delayed-Raises Volume 1/2 dB at a time
Volume Down 1/2 dB	FF, 03, 00, 01, 28, 2C, FF	Optimized for 1200 Baud/Feedback Delayed-Lowers Volume 1/2 dB at a time
Volume Up 1 dB	FF, 03, 00, 01, 29, 2D, FF	Optimized for 1200 Baud/Feedback Delayed-Raises Volume 1 dB at a time
Volume Down 1dB	FF, 03, 00, 01, 2A, 2E, FF	Optimized for 1200 Baud/Feedback Delayed-Lowers Volume 1 dB at a time
Input 1	FF, 03, 00, 10, 70, 83, FF	Selects Input 1 (if unit is Off then this command will power the unit on and select source)
Input 2	FF, 03, 00, 10, 71, 84, FF	Selects Input 2 (if unit is Off then this command will power the unit on and select source)
Input 3	FF, 03, 00, 10, 72, 85, FF	Selects Input 3 (if unit is Off then this command will power the unit on and select source)
Input 4	FF, 03, 00, 10, 73, 86, FF	Selects Input 4 (if unit is Off then this command will power the unit on and select source)
Input 5	FF, 03, 00, 10, 74, 87, FF	Selects Input 5 (if unit is Off then this command will power the unit on and select source)
Input 6	FF, 03, 00, 10, 75, 88, FF	Selects Input 6 (if unit is Off then this command will power the unit on and select source)
Input 7	FF, 03, 00, 10, 76, 89, FF	Selects Input 7 (if unit is Off then this command will power the unit on and select source)
Input 8	FF, 03, 00, 10, 77, 8A, FF	Selects Input 8 (if unit is Off then this command will power the unit on and select source)
Input 9	FF, 03, 00, 10, 78, 8B, FF	Selects Input 9 (if unit is Off then this command will power the unit on and select source)
Input 10	FF, 03, 00, 10, 79, 8C, FF	Selects Input 10 (if unit is Off then this command will power the unit on and select source)
Input 11	FF, 03, 00, 10, 7A, 8D, FF	Selects Input 11 (if unit is Off then this command will power the unit on and select source)
Input 12	FF, 03, 00, 10, 7B, 8E, FF	Selects Input 12 (if unit is Off then this command will power the unit on and select source)
Input 13	FF, 03, 00, 10, 7C, 8F, FF	Selects Input 13 (if unit is Off then this command will power the unit on and select source)
Input 14	FF, 03, 00, 10, 7D, 90, FF	Selects Input 14 (if unit is Off then this command will power the unit on and select source)
Input 15	FF, 03, 00, 10, 7E, 91, FF	Selects Input 15 (if unit is Off then this command will power the unit on and select source)
Input 16	FF, 03, 00, 10, 7F, 92, FF	Selects Input 16 (if unit is Off then this command will power the unit on and select source)
Input 17	FF, 03, 00, 10, 80, 93, FF	Selects Input 17 (if unit is Off then this command will power the unit on and select source)
Input 18	FF, 03, 00, 10, 81, 94, FF	Selects Input 18 (if unit is Off then this command will power the unit on and select source)
Input 19	FF, 03, 00, 10, 82, 95, FF	Selects Input 19 (if unit is Off then this command will power the unit on and select source)
Input 20	FF, 03, 00, 10, 83, 96, FF	Selects Input 20 (if unit is Off then this command will power the unit on and select source)
Optical 1	FF, 03,00, 10, 70,83, FF	From the Input/Record Tab (on the Theater tab) of the PCOS Selects Input 1
Optical 2	FF, 03,00, 10, 71,84, FF	From the Input/Record Tab (on the Theater tab) of the PCOS Selects Input 2
Digital 1	FF, 03,00, 10, 72,85, FF	From the Input/Record Tab (on the Theater tab) of the PCOS Selects Input 3
Digital 2	FF, 03,00, 10, 73,86, FF	From the Input/Record Tab (on the Theater tab) of the PCOS Selects Input 4
Digital 3	FF, 03,00, 10, 74,87, FF	From the Input/Record Tab (on the Theater tab) of the PCOS Selects Input 5
Digital 4	FF, 03,00, 10, 75,88, FF	From the Input/Record Tab (on the Theater tab) of the PCOS Selects Input 6
Digital 5	FF, 03,00, 10, 76,89, FF	From the Input/Record Tab (on the Theater tab) of the PCOS Selects Input 7
Digital 6	FF, 03,00, 10, 77,8A, FF	From the Input/Record Tab (on the Theater tab) of the PCOS Selects Input 8
Analog 1	FF, 03,00, 10, 78,8B, FF	From the Input/Record Tab (on the Theater tab) of the PCOS Selects Input 9
Analog 2	FF, 03,00, 10, 79,8C, FF	From the Input/Record Tab (on the Theater tab) of the PCOS Selects Input 10
Analog 3	FF, 03,00, 10, 7A,8D, FF	From the Input/Record Tab (on the Theater tab) of the PCOS Selects Input 11
Analog 4	FF, 03, 00, 10, 7B, 8E, FF	From the Input/Record Tab (on the Theater tab) of the PCOS Selects Input 12
HDMI 1	FF, 03, 00, 10, 7C, 8F, FF	From the Input/Record Tab (on the Theater tab) of the PCOS Selects Input 13
HDMI 2	FF, 03, 00, 10, 7D, 90, FF	From the Input/Record Tab (on the Theater tab) of the PCOS Selects Input 14
HDMI 3	FF, 03, 00, 10, 7E, 91, FF	From the Input/Record Tab (on the Theater tab) of the PCOS Selects Input 15
HDMI 4	FF, 03, 00, 10, 7F, 92, FF	From the Input/Record Tab (on the Theater tab) of the PCOS Selects Input 16
HDMI 5	FF, 03,00, 10, 80,93, FF	From the Input/Record Tab (on the Theater tab) of the PCOS Selects Input 17
HDMI 6	FF, 03,00, 10, 81,94, FF	From the Input/Record Tab (on the Theater tab) of the PCOS Selects Input 18
HDMI 7	FF, 03,00, 10, 82,95, FF	From the Input/Record Tab (on the Theater tab) of the PCOS Selects Input 19
HDMI 8	FF, 03,00, 10, 83,96, FF	From the Input/Record Tab (on the Theater tab) of the PCOS Selects Input 20

Command Name	Hex Command	On/Off, Volume and Input Related Commands
Volume Recall 1	FF, 03, 00, 01, 89, 8D, FF	Recalls Volume level 1 as stored
Volume Recall 2	FF, 03, 00, 01, 8A, 8E, FF	Recalls Volume level 2 as stored
Volume Recall 3	FF, 03, 00, 01, 8B, 8F, FF	Recalls Volume level 3 as stored
Volume Recall 4	FF, 03, 00, 01, 8C, 90, FF	Recalls Volume level 4 as stored
Volume Store 1	FF, 03, 00, 01, 8D, 91, FF	Stores Volume level for Recall 1
Volume Store 2	FF, 03, 00, 01, 8E, 92, FF	Stores Volume level for Recall 2
Volume Store 3	FF, 03, 00, 01, 8F, 93, FF	Stores Volume level for Recall 3
Volume Store 4	FF, 03, 00, 01, 90, 94, FF	Stores Volume level for Recall 4
Volume Limiter Up	FF, 03, 00, 10, D8, DC, FF	Increases the maximum master volume setting (up to + 27.5 dB-out of box default)
Volume Limiter Down	FF, 03, 00, 01, D9, DD, FF	Decreases the maximum allowable master volume setting
Turn On Volume Preset Up	FF, 03, 00, 01, DA, DE, FF	Increments through turn on Volume options: Vol Recall Presets 1 through 4 or Last Used
Turn On Volume Preset Dn	FF, 03, 00, 01, DB, DF, FF	Decrements through turn on Volume options: Vol Recall Presets 1 through 4 or Last Used
Final Input Up	FF, 03, 00, 01, DD, D1, FF	Increments through inputs and removes inputs from front display not being used.
Final Input Down	FF, 03, 00, 01, DE, D2, FF	Decrements through inputs and add inputs back to the front display that are being used
Turn On Input Up	FF, 03, 00, 10, E0, F3, FF	Increments through the inputs to choose the unit to power on to the specific input chosen
Turn On Input Down	FF, 03, 00, 10, E1, F4, FF	Decrements through the inputs to choose the input the unit powers on via Volume. knob.
Direct Volume Control	FF, 03, 00, 11, 01, FF	Will take unit directly to the specific volume 01 = -63.5 dB through B7 = +27.5 dB
Direct Volume Control	FF, 03, 00, 12, 01, FF	As above. Please note that hex value 00 = Volume Mute! Both commands must be sent

Command Name	Hex Command	New HDMI Specific Related Functions
HDMI 2-Ch Downmix On	FF, 03, 00, 15, 21, 39, FF	Sets HDMI Audio Output to 2-Channel Downmix for Direct Connection to a TV Monitor
HDMI 2-Ch Downmix Off	FF, 03, 00, 15, 20, 38, FF	Sets HDMI Audio Output back to Default
HDMI Input Equalizer 1	FF, 03, 00, 15, 70, 88, FF	Optimizes HDMI Input Signal for long cable runs: HDMI Input 1
HDMI Input Equalizer 2	FF, 03, 00, 15, 71, 89, FF	Optimizes HDMI Input Signal for long cable runs: HDMI Input 2
HDMI Input Equalizer 3	FF, 03, 00, 15, 72, 8A, FF	Optimizes HDMI Input Signal for long cable runs: HDMI Input 3
HDMI Input Equalizer 4	FF, 03, 00, 15, 73, 8B, FF	Optimizes HDMI Input Signal for long cable runs: HDMI Input 4
HDMI Input Equalizer 5	FF, 03, 00, 15, 74, 8C, FF	Optimizes HDMI Input Signal for long cable runs: HDMI Input 5
HDMI Input Equalizer 6	FF, 03, 00, 15, 75, 8D, FF	Optimizes HDMI Input Signal for long cable runs: HDMI Input 6
HDMI Input Equalizer 7	FF, 03, 00, 15, 76, 8E, FF	Optimizes HDMI Input Signal for long cable runs: HDMI Input 7
HDMI Input Equalizer 8	FF, 03, 00, 15, 77, 8F, FF	Optimizes HDMI Input Signal for long cable runs: HDMI Input 8
TMDS 1	FF, 03, 00, 15, 78, 90, FF	Optimizes HDMI Output Signal for long cable runs: HDMI Output 1
TMDS 2	FF, 03, 00, 15, 79, 91, FF	Optimizes HDMI Output Signal for long cable runs: HDMI Output 2
Comm And 11	FF, 03, 00, 15, 56, 6E, FF	Unknown

Command Name	Hex Command	Reverb Settings for Cinema, Club, Hall, Arena, Cathedral, Quad Rev Modes
Cinema	FF, 03, 00, 14, 00, 17, FF	Selects Cinema Mode to Adjust Reverb Settings (for both 2-Channel and Multi-Channel)
Club	FF, 03, 00, 14, 01, 18, FF	Selects Club Mode to Adjust Reverb Settings (for both 2-Channel and Multi-Channel)
Hall	FF, 03, 00, 14, 02, 19, FF	Selects Hall Mode to Adjust Reverb Settings (for both 2-Channel and Multi-Channel)
Arena	FF, 03, 00, 14, 03, 1A, FF	Selects Arena Mode to Adjust Reverb Settings (for both 2-Channel and Multi-Channel)
Cathedral	FF, 03, 00, 14, 04, 1B, FF	Selects Cathedral Mode to Adjust Reverb Settings (for both 2-Channel & Multi-Channel)
Quad Reverb	FF, 03, 00, 14, 05, 1C, FF	Selects Quad Reverb Mode to Adjust Reverb Settings (for 2-Channel & Multi-Channel)
Recall Defaults	FF, 03, 00, 15, E0, E8, FF	Recalls Default Reverb Settings for any of the Selected Modes Above

Command Name	Hex Command	Speaker Size, Noise/Levels/Balance, Delays and Tone setting Commands
Center None	FF, 03, 00, 01, 51, 55, FF	Turns Center Speaker Off
Center Small	FF, 03, 00, 01, 52, 56, FF	Sets Center Speaker to Small
Center Large	FF, 03, 00, 01, 53, 57, FF	Sets Center Speaker to Large
Center Crossover Freq Up	FF, 03, 00, 15, 03, 1B, FF	Adjusts Center Crossover Frequency Up
Center Crossover Freq Down	FF, 03, 00, 15, 04, 1C, FF	Adjusts Center Crossover Frequency Down
Front Small	FF, 03, 00, 01, 4F, 53, FF	Sets Front Left and Right Speakers to Small
Front Large	FF, 03, 00, 01, 50, 54, FF	Sets Front Left and Right Speakers to Large
Front Crossover Freq Up	FF, 03, 00, 15, 01, 19, FF	Adjusts Front Crossover Frequency Up
Front Crossover Freq Down	FF, 03, 00, 15, 02, 1A, FF	Adjusts Front Crossover Frequency Down
Subwoofer No (Off)	FF, 03, 00, 01, 57, 5B, FF	Turns Subwoofer Off
Subwoofer Yes (On)	FF, 03, 00, 01, 58, 5C, FF	Turns Subwoofer On
Sub Crossover Freq Up	FF, 03, 00, 15, 01, 19, FF	Adjusts Subwoofer Crossover Frequency Up
Sub Crossover Freq Down	FF, 03, 00, 15, 02, 1A, FF	Adjusts Subwoofer Crossover Frequency Down
Surrounds None	FF, 03, 00, 01, 54, 58, FF	Turns the Left and Right Surround Speakers Off
Surrounds Small	FF, 03, 00, 01, 55, 59, FF	Sets the Left and Right Surround Speakers to Small
Surrounds Large	FF, 03, 00, 01, 56, 6A, FF	Sets the Left and Right Surround Speakers to Large
Surround Crossover Freq Up	FF, 03, 00, 15, 05, 1D, FF	Adjusts Surround Crossover Frequency Up
Surround Crossover Freq Dn	FF, 03, 00, 15, 06, 1E, FF	Adjusts Surround Crossover Frequency Down
Back None	FF, 03, 00, 01, 6D, 71, FF	Turns the Left and Right Back Surround Speakers Off
Back 1 Speaker-Auto Size	FF, 03, 00, 01, 6E, 72, FF	Turns on only the Left Back Surround speaker; sets size to the same as Surround L/R
Back 2 Speakers-Auto Size	FF, 03, 00, 01, 6F, 73, FF	Turns on both the Left & Right Back Surround speakers; sets Size same as Surround L/R
Back 1 Small	FF, 03, 00, 01, 72, 76, FF	Turns on only the Left Back Surround speaker and sets to Small

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Back 1 Large	FF, 03, 00, 01, 70, 74, FF	Turns on only the Left Back Surround speaker and sets to Large
Back 2 Small	FF, 03, 00, 01, 73, 77, FF	Turns on both the Left and Right Back Surround speakers and sets to Small
Back 2 Large	FF, 03, 00, 01, 71, 75, FF	Turns on both the Left and Right Back Surround speakers and sets to Large
Back Crossover Freq Up	FF, 03, 00, 15, 07, 1F, FF	Adjusts Back Crossover Frequency Up
Back Crossover Freq Dn	FF, 03, 00, 15, 08, 20, FF	Adjusts Back Crossover Frequency Down
Track Crossover Freq Up	FF, 03, 00, 01, 7D, 81, FF	Adjusts Crossover Frequency Tracking Up
Track Crossover Freq Dn	FF, 03, 00, 01, 7E, 82, FF	Adjusts Crossover Frequency Tracking Down
Boundary Gain On	FF, 03, 00, 01, 4D, 51, FF	Turns on Boundary Gain (for Surround Back speakers)
Boundary Gain Off	FF, 03, 00, 01, 4C, 50, FF	Turns off Boundary Gain (for Surround Back speakers)
Back Speakers: > 12"	FF, 03, 00, 01, 85, 89, FF	When Boundary Gain is on Adjusts BG for distance between Surround Back speakers
Back Speakers: 12-48"	FF, 03, 00, 01, 86, 8A, FF	When Boundary Gain is on Adjusts BG for distance between Surround Back speakers
Back Speakers: < 48"	FF, 03, 00, 01, 87, 8B, FF	When Boundary Gain is on Adjusts BG for distance between Surround Back speakers
LFE Attenuation Enable	FF, 03, 00, 01, CA, CE, FF	Turns LFE Attenuation On for DTS Only
LFE Attenuation Disable	FF, 03, 00, 01, CB, CF, FF	Turns LFE Attenuation Off for DTS Only
LFE Attenuation Up	FF, 03, 00, 01, E0, E4, FF	Increments LFE Attenuation when enabled for DTS Only
LFE Attenuation Down	FF, 03, 00, 01, E1, E5, FF	Decrements LFE Attenuation when enabled for DTS Only
Speaker Recall 1	FF, 03, 00, 13, 86, 9C, FF	Recalls Speaker Size Setting 1-only valid w/Advanced Speaker Option is selected by PC
Speaker Recall 2	FF, 03, 00, 13, 87, 9D, FF	Recalls Speaker Size Setting 2-only valid w/Advanced Speaker Option is selected by PC
Speaker Recall 3	FF, 03, 00, 13, 88, 9E, FF	Recalls Speaker Size Setting 3-only valid w/Advanced Speaker Option is selected by PC
Speaker Recall 4	FF, 03, 00, 13, 89, 9E, FF	Recalls Speaker Size Setting 4-only valid w/Advanced Speaker Option is selected by PC
Speaker Store 1	FF, 03, 00, 13, 8A, A0, FF	Stores Speaker Size Setting 1-only valid w/Advanced Speaker Option is selected by PC
Speaker Store 2	FF, 03, 00, 13, 8B, A1, FF	Stores Speaker Size Setting 1-only valid w/Advanced Speaker Option is selected by PC
Speaker Store 3	FF, 03, 00, 13, 8C, A2, FF	Stores Speaker Size Setting 1-only valid w/Advanced Speaker Option is selected by PC
Speaker Store 4	FF, 03, 00, 13, 8D, A3, FF	Stores Speaker Size Setting 1-only valid w/Advanced Speaker Option is selected by PC
Noise Sequence	FF, 03, 00, 01, 2E, 32, FF	Starts Noise Generator Sequence (from Left though Sub-in order as noted below)
Noise Advance	FF, 03, 00, 01, 2F, 33, FF	When choosing any of the direct noise options below, moves to the next speaker
Noise Left	FF, 03, 00, 01, 30, 34, FF	Generates noise for the Left speaker only
Noise Right	FF, 03, 00, 01, 31, 35, FF	Generates noise for the Right speaker only
Noise Left Surround	FF, 03, 00, 01, 32, 36, FF	Generates noise for the Left Surround speaker only
Noise Right Surround	FF, 03, 00, 01, 33, 37, FF	Generates noise for the Right Surround speaker only
Noise Center	FF, 03, 00, 01, 34, 38, FF	Generates noise for the Center speaker only
Noise Surround Back Left	FF, 03, 00, 01, 35, 39, FF	Generates noise for the Surround Back Left speaker only
Noise Surround Back Right	FF, 03, 00, 01, 36, 3A, FF	Generates noise for the Surround Back Right speaker only
Noise Sub	FF, 03, 00, 01, 59, 5D, FF	Generates noise for the Subwoofer only
Noise Test Off	FF, 03, 00, 01, 21, 25, FF	Same command as line 13, Turns off the noise generator mode when in this mode
Subwoofer Manager Noise	FF, 03, 00, 01, C9, CD, FF	Turns on noise for the Subwoofer the adjust Limiter Ceiling
Increase Limiter Ceiling	FF, 03, 00, 01, CC, D0, FF	Increases the limiter ceiling for the Subwoofer (in dB) against the master volume
Decrease Limiter Ceiling	FF, 03, 00, 01, CD, D1, FF	Decreases the limiter ceiling for the Subwoofer (in dB) against the master volume
Center Speaker Level Up	FF, 03, 00, 01, 3B, 3F, FF	Adjusts Center Speaker Level Up-Above Master Volume Level for unit (in dB)
Center Speaker Level Down	FF, 03, 00, 01, 3C, 40, FF	Adjusts Center Speaker Level Down-Below Master Volume Level for unit (in dB)
Left Speaker Level Up	FF, 03, 00, 01, 39, 3D, FF	Adjusts Left Speaker Level Up-Above Master Volume Level for unit (in dB)
Left Speaker Level Down	FF, 03, 00, 01, 3A, 3E, FF	Adjusts Left Speaker Level Down-Below Master Volume Level for unit (in dB)
Right Speaker Level Up	FF, 03, 00, 01, 3D, 41, FF	Adjusts Right Speaker Level Up-Above Master Volume Level for unit (in dB)
Right Speaker Level Down	FF, 03, 00, 01, 3E, 42, FF	Adjusts Right Speaker Level Down-Below Master Volume Level for unit (in dB)
Front Speaker Levels Up	FF, 03, 00, 13, 76, 8C, FF	Adjusts Left and Right Speaker Levels Up-Above Master Volume Level for unit (in dB)
Front Speaker Levels Down	FF, 03, 00, 13, 77, 8D, FF	Adjusts Left and Right Speaker Levels Down-Below Master Volume Level for unit (in dB)
Subwoofer Level Up	FF, 03, 00, 13, 43, 47, FF	Adjusts Subwoofer Speaker Level Up
Subwoofer Level Down	FF, 03, 00, 13, 44, 48, FF	Adjusts Subwoofer Speaker Level Down
Left Surr. Speaker Level Up	FF, 03, 00, 01, 3F, 43, FF	Adjusts Left Surround Speaker Level Up-Above Master Volume Level for unit (in dB)
Left Surr. Speaker Level Up	FF, 03, 00, 01, 40, 44, FF	Adjusts Left Surround Speaker Level Down-Below Master Volume Level for unit (in dB)
Right Surr. Speaker Level Up	FF, 03, 00, 01, 41, 45, FF	Adjusts Right Surround Speaker Level Up-Above Master Volume Level for unit (in dB)
Right Surr. Speaker Level Dn	FF, 03, 00, 01, 42, 46, FF	Adjusts Right Surround Speaker Level Down-Below Master Volume Level for unit (in dB)
Surround Speaker Levels Up	FF, 03, 00, 13, 78, 8E, FF	Adjusts Left & Right Surround Speaker Levels Up-Above Master Vol. Level for unit (dB)
Surround Speaker Levels Dn	FF, 03, 00, 13, 79, 8F, FF	Adjusts Left & Surrond Speaker Levels Down-Below Master Vol. Level for unit (dB)
Surr. Back Left Level Up	FF, 03, 00, 01, 45, 49, FF	Adjusts Left Surround Back Speaker Level Up-Above Master Volume Level for unit (dB)
Surr. Back Left Level Dn	FF, 03, 00, 01, 46, 4A, FF	Adjusts Left Surround Back Speaker Level Down-Below Master Volume Level for unit (dB)
Surr. Back Right Level Up	FF, 03, 00, 01, 47, 4B, FF	Adjusts Right Surround Back Speaker Level Up-Above Master Volume Level for unit (dB)
Surr. Back Right Level Dn	FF, 03, 00, 01, 48, 4C, FF	Adjusts Right Surround Back Speaker Level Down-Below Master Volume Level for unit (dB)
Surround Back Levels Up	FF, 03, 00, 13, 7A, 90, FF	Adjusts Left and Right Surround Back Speaker Levels Up-Above Master Vol. Level (dB)
Surround Back Levels Up	FF, 03, 00, 13, 7B, 91 FF	Adjusts Left & Right Surround Back Speaker Levels Down-Below Master Vol. Level (dB)
Solo Center	FF, 03, 00, 01, 99, 9D, FF	When playing audio plays audio only from the Center speaker
Solo Left	FF, 03, 00, 01, 9B, 9F, FF	When playing audio plays audio only from the Left speaker
Solo Right	FF, 03, 00, 01, 9C, A0, FF	When playing audio plays audio only from the Right speaker
Solo Left and Right	FF, 03, 00, 10, 2B, 3E, FF	When playing audio plays audio only from the Left and Right speakers
Solo Subwoofer	FF, 03, 00, 01, 9A, 9E, FF	When playing audio plays audio only from the Subwoofer
Solo Left Surround	FF, 03, 00, 01, 9D, A1, FF	When playing audio plays audio only from the Left Surround speaker
Solo Right Surround	FF, 03, 00, 01, 9E, A2, FF	When playing audio plays audio only from the Right Surround speaker

Command	Code	Description
Solo Left and Right Surround	FF, 03, 00, 01, 9F, A3, FF	When playing audio plays audio only from the Left and Right Surround speakers
Solo Surround Back Left	FF, 03, 00, 01, A0, A4, FF	When playing audio plays audio only from the Surround Back Left speaker
Solo Surround Back Right	FF, 03, 00, 01, A1, A5, FF	When playing audio plays audio only from the Surround Back Right speaker
Solo Surr.Back Left and Right	FF, 03, 00, 10, 2C, 3F, FF	When playing audio plays audio only from the Surround Back Left and Right speakers
Solo All Surrounds	FF, 03, 00, 10, 2D, 40, FF	When playing audio plays audio only from all fo the Surround Speakers
Solo Test Off	FF, 03, 00, 01, 21, 25, FF	Same command as line 13, Turns Off the Solo Test mode when in this mode.
Balance Recall 1	FF, 03, 00, 01, 91, 95, FF	Recalls Balance settings 1 as stored
Balance Recall 2	FF, 03, 00, 01, 92, 96, FF	Recalls Balance settings 2 as stored
Balance Recall 3	FF, 03, 00, 01, 93, 97, FF	Recalls Balance settings 3 as stored
Balance Recall 4	FF, 03, 00, 01, 94, 98, FF	Recalls Balance settings 4 as stored
Balance Store 1	FF, 03, 00, 01, 95, 99, FF	Stores Balance settings for Recall 1
Balance Store 2	FF, 03, 00, 01, 96, 9A, FF	Stores Balance settings for Recall 2
Balance Store 3	FF, 03, 00, 01, 97, 9B, FF	Stores Balance settings for Recall 3
Balance Store 4	FF, 03, 00, 01, 98, 9C, FF	Stores Balance settings for Recall 4
Center Delay Up	FF, 03, 00, 01, 5F, 63, FF	Increases the Delay time for the Center speaker (in feet)
Center Delay Down	FF, 03, 00, 01, 60, 64, FF	Decreases the Delay time for the Center speaker (in feet)
Left Delay Up	FF, 03, 00, 01, 5D, 61, FF	Increases the Delay time for the Left speaker (in feet)
Left Delay Down	FF, 03, 00, 01, 5E, 62, FF	Decreases the Delay time for the Left speaker (in feet)
Right Delay Up	FF, 03, 00, 01, 61, 65, FF	Increases the Delay time for the Right speaker (in feet)
Right Delay Down	FF, 03, 00, 01, 62, 66, FF	Decreases the Delay time for the Right speaker (in feet)
Subwoofer Delay Up	FF, 03, 00, 01, 67, 6B, FF	Increases the Delay time for the Subwoofer (in feet)
Subwoofer Delay Down	FF, 03, 00, 01, 68, 6C, FF	Decreases the Delay time for the Subwoofer speaker (in feet)
Left Surround Delay Up	FF, 03, 00, 01, 63, 67, FF	Increases the Delay time for the Left Surround speaker (in feet)
Left Surround Delay Down	FF, 03, 00, 01, 64, 68, FF	Decreases the Delay time for the Left Surround speaker (in feet)
Right Surround Delay Up	FF, 03, 00, 01, 65, 69, FF	Increases the Delay time for the Right Surround speaker (in feet)
Right Surround Delay Down	FF, 03, 00, 01, 66, 6A, FF	Decreases the Delay time for the Right Surround speaker (in feet)
Left Back Surround Delay Up	FF, 03, 00, 01, 69, 6D, FF	Increases the Delay time for the Left Back Surround speaker (in feet)
Left Back Surr. Delay Down	FF, 03, 00, 01, 6A, 6E, FF	Decreases the Delay time for the Left Back Surround speaker (in feet)
Right Back Surr.Delay Up	FF, 03, 00, 01, 6B, 6F, FF	Increases the Delay time for the Right Back Surround speaker (in feet)
Right Back Surr. Delay Down	FF, 03, 00, 01, 6C, 70, FF	Decreases the Delay time for the Right Back Surround speaker (in feet)
Tone Group A-Left	FF, 03, 00, 01, A3, A7, FF	Include or Exclude Left Speaker in Tone Group A-Toggle Command
Tone Group A-Right	FF, 03, 00, 01, A4, A8, FF	Include or Exclude Right Speaker in Tone Group A-Toggle Command
Tone Group A-Left Surr.	FF, 03, 00, 01, A5, A9, FF	Include or Exclude Left Surround Speaker in Tone Group A-Toggle Command
Tone Group A-Right Surr.	FF, 03, 00, 01, A6, AA, FF	Include or Exclude Right Surround Speaker in Tone Group A-Toggle Command
Tone Group A-Center	FF, 03, 00, 01, A7, AB, FF	Include or Exclude Center Speaker in Tone Group A-Toggle Command
Tone Group A-Subwoofer	FF, 03, 00, 01, A8, AC, FF	Include or Exclude Subwoofer in Tone Group A-Toggle Command
Tone Group A-Back Left	FF, 03, 00, 01, A9, AD, FF	Include or Exclude Back Left Surround Speaker in Tone Group A-Toggle Command
Tone Group A-Back Right	FF, 03, 00, 01, AA, AE, FF	Include or Exclude Back Right Surround Speaker in Tone Group A-Toggle Command
Treble Freq Up Tone Group A	FF, 03, 00, 01, AB, AF, FF	Adjusts Treble Frequency for Tone Group A Up (in kHz)
Treble Freq Dn Tone Group A	FF, 03, 00, 01, AC, B0, FF	Adjusts Treble Frequency for Tone Group A Down (in kHz)
Treble Level Up Tone Group A	FF, 03, 00, 01, AD, B1, FF	Adjusts Treble Level for frequency set above in Tone Group A Up (in dB)
Treble Level Dn Tone Group A	FF, 03, 00, 01, AE, B2, FF	Adjusts Treble Level for frequency set above in Tone Group A Down (in dB)
Bass Freq Up Tone Group A	FF, 03, 00, 01, AF, B3, FF	Adjusts Bass Frequency for Tone Group A Up (in Hz)
Bass Freq Dn Tone Group A	FF, 03, 00, 01, B0, B4, FF	Adjusts Bass Frequency for Tone Group A Down (in Hz)
Bass Level Up Tone Group A	FF, 03, 00, 01, B1, B5, FF	Adjusts Bass Level for frequency set above in Tone Group A Up (in dB)
Bass Level Dn Tone Group A	FF, 03, 00, 01, B2, B6, FF	Adjusts Bass Level for frequency set above in Tone Group A Down (in dB)
Tone Group B-Left	FF, 03, 00, 01, B4, B8, FF	Include or Exclude Left Speaker in Tone Group A-Toggle Command
Tone Group B-Right	FF, 03, 00, 01, B5, B9, FF	Include or Exclude Right Speaker in Tone Group A-Toggle Command
Tone Group B-Left Surr.	FF, 03, 00, 01, B6, BA, FF	Include or Exclude Left Surround Speaker in Tone Group A-Toggle Command
Tone Group B-Right Surr.	FF, 03, 00, 01, B7, BB, FF	Include or Exclude Right Surround Speaker in Tone Group A-Toggle Command
Tone Group B-Center	FF, 03, 00, 01, B8, BC, FF	Include or Exclude Center Speaker in Tone Group A-Toggle Command
Tone Group B-Subwoofer	FF, 03, 00, 01, B9, BD, FF	Include or Exclude Subwoofer in Tone Group A-Toggle Command
Tone Group B-Back Left	FF, 03, 00, 01, BA, BE, FF	Include or Exclude Back Left Surround Speaker in Tone Group A-Toggle Command
Tone Group B-Back Right	FF, 03, 00, 01, BB, BF, FF	Include or Exclude Back Right Surround Speaker in Tone Group A-Toggle Command
Treble Freq Up Tone Group B	FF, 03, 00, 01, BC, C0, FF	Adjusts Treble Frequency for Tone Group B Up (in kHz)
Treble Freq Dn Tone Group B	FF, 03, 00, 01, BD, C1, FF	Adjusts Treble Frequency for Tone Group B Down (in kHz)
Treble Level Up Tone Grp B	FF, 03, 00, 01, BE, C2, FF	Adjusts Treble Level for frequency set above in Tone Group B Up (in dB)
Treble Level Dn Tone Grp B	FF, 03, 00, 01, BF, C3, FF	Adjusts Treble Level for frequency set above in Tone Group B Down (in dB)
Bass Freq Up Tone Group B	FF, 03, 00, 01, C0, C4, FF	Adjusts Bass Frequency for Tone Group B Up (in Hz)
Bass Freq Dn Tone Group B	FF, 03, 00, 01, C1, C5, FF	Adjusts Bass Frequency for Tone Group B Down (in Hz)
Bass Level Up Tone Group B	FF, 03, 00, 01, C2, C6, FF	Adjusts Bass Level for frequency set above in Tone Group B Up (in dB)
Bass Level Dn Tone Group B	FF, 03, 00, 01, C3, C7, FF	Adjusts Bass Level for frequency set above in Tone Group B Down (in dB)
Tones Recall 1	FF, 03, 00, 01, D0, D4, FF	Recalls Tones settings 1 as stored (both Tone Groups A & B)
Tones Recall 2	FF, 03, 00, 01, D1, D5, FF	Recalls Tones settings 2 as stored (both Tone Groups A & B)
Tones Recall 3	FF, 03, 00, 01, D2, D6, FF	Recalls Tones settings 3 as stored (both Tone Groups A & B)
Tones Recall 4	FF, 03, 00, 01, D3, D7, FF	Recalls Tones settings 4 as stored (both Tone Groups A & B)
Tones Store 1	FF, 03, 00, 01, D4, D8, FF	Stores Tones settings for Recall 1 (both Tone Groups A & B)

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Command Name	Hex Command	Direct Mode Selection and all Mode Related Commands
Tones Store 2	FF, 03, 00, 01, D5, D9, FF	Stores Tones settings for Recall 2 (both Tone Groups A & B)
Tones Store 3	FF, 03, 00, 01, D6, DA, FF	Stores Tones settings for Recall 3 (both Tone Groups A & B)
Tones Store 4	FF, 03, 00, 01, D7, DB, FF	Stores Tones settings for Recall 4 (both Tone Groups A & B)

Command Name	Hex Command	Direct Mode Selection and all Mode Related Commands
Mode Scroll Up	FF, 03, 00, 10, 2E, 41, FF	Increments through all available modes in current playback mode (2 Ch. or Multi-Ch. Mode)
Scroll Down	FF, 03, 00, 10, 2F, 42, FF	Decrements through all available modes in current playback mode (2 Ch. or Multi-Ch. Mode)
THX	FF, 03, 00, 10, 6B, 7E, FF	If THX is not selected & the current mode has +THX option, turns on THX/Changes mode
User Mode	FF, 03, 00, 10, 6C, 7F, FF	Goes directly to specific mode for current playback mode as determined in PC Set-Up
Stereo	FF, 03, 00, 10, 6D, 80, FF	Goes directly to Stereo Mode (2 Channel Only)
Mono	FF, 03, 00, 10, 6E, 81, FF	Goes directly to Mono Mode (2 Channel Only)
Direct 5.1	FF, 03, 00, 13, 70, 86, FF	Goes directly to 5.1 Bypass Mode (direct via RCA inputs on back of unit)
Direct 7.1	FF, 03, 00, 13, 71, 87, FF	Goes directly to 7.1 Bypass Mode (direct via RCA inputs on back of unit)
Direct 2.0	FF, 03, 00, 10, 65, 78, FF	Direct Mode Selection-No Subwoofer (2 Channel Only Mode)
Stereo	FF, 03, 00, 10, 48, 5B, FF	Direct Mode Selection-Sub only if Left/Right Speakers are Small (2 Channel Only Mode)
Mono	FF, 03, 00, 10, 49, 5C, FF	Direct Mode Selection-Center Channel Only (2 Channel Only Mode)
DTS Neo:6 3-Channel	FF, 03, 00, 13, 50, 66, FF	Direct Mode Selection-Left, Center Right Only (2-Channel Mode)
DTS Neo:6 Phantom	FF, 03, 00, 13, 51, 67, FF	Direct Mode Selection-No Center Channel (2-Channel Mode)
DTS Neo:6 5-Channel	FF, 03, 00, 13, 52, 68, FF	Direct Mode Selection-No Surround Back Channels (2-Channel Mode)
DTS Neo:6 Movie	FF, 03, 00, 10, 4A, 5D, FF	Direct Mode Selection-Optimized for Movies (2-Channel Mode)
DTS Neo:6 Movie +THX	FF, 03, 00, 10, 4B, 5E, FF	Direct Mode Selection-Optimized for Movies; THX Enhancements added (2-Ch. Mode)
DTS Neo:6 Music	FF, 03, 00, 13, 53, 69, FF	Direct Mode Selection-Optimized for Music (2-Channel Mode)
Dolby Pro Logic 3-Channel	FF, 03, 00, 10, 63, 76, FF	Direct Mode Selection-Left, Center Right Only (2-Channel Mode)
Dolby Pro Logic Phantom	FF, 03, 00, 10, 64, 77, FF	Direct Mode Selection-No Center Channel (2-Channel Mode)
Dolby Pro Logic	FF, 03, 00, 10, 4C, 5F, FF	Direct Mode Selection-The "original" Dolby Processing Mode (2-Channel Mode)
Dolby Pro Logic + THX	FF, 03, 00, 10, 4D, 60, FF	Direct Mode Selection-The "original" Dolby Processing Mode with THX (2-Channel Mode)
Dolby Pro Logic II Matrix	FF, 03, 00, 10, 50, 63, FF	Direct Mode Selection-the new standard Dolby mode Pro Logic II Mode (2-Channel Mode)
Dolby Pro Logic II Game	FF, 03, 00, 13, 54, 6A, FF	Direct Mode Selection-Optimized for Games (2-Channel Mode)
Dolby Pro Logic II Music	FF, 03, 00, 10, 52, 65, FF	Direct Mode Selection-Optimized for Music (2-Channel Mode)
Dolby Pro Logic II Movie	FF, 03, 00, 10, 4E, 61, FF	Direct Mode Selection-Optimized for Movies (2-Channel Mode)
Dolby Pro Logic II Movie/THX	FF, 03, 00, 10, 4F, 62, FF	Direct Mode Selection-Optimized for Movies; THX Enhancements added (2-Ch. Mode)
Dolby Pro Logic II Custom 1	FF, 03, 00, 10, 53, 66, FF	Direct Mode Selection-with Custom settings from PC Set-up (2-Channel Mode)
Dolby Pro Logic II Cust 1/THX	FF, 03, 00, 10, 54, 67, FF	Direct Mode Selection-with Custom settings from PC Set-up and THX (2-Channel Mode)
Dolby Pro Logic II Custom 2	FF, 03, 00, 10, 55, 68, FF	Direct Mode Selection-with Custom settings from PC Set-up (2-Channel Mode)
Dolby Pro Logic II Cust 2/THX	FF, 03, 00, 10, 56, 69, FF	Direct Mode Selection-with Custom settings from PC Set-up and THX (2-Channel Mode)
Dolby Pro Logic II Custom 3	FF, 03, 00, 10, 57, 6A, FF	Direct Mode Selection-with Custom settings from PC Set-up (2-Channel Mode)
Dolby Pro Logic II Cust 3/THX	FF, 03, 00, 10, 58, 6B, FF	Direct Mode Selection-with Custom settings from PC Set-up and THX (2-Channel Mode)
AGL Enhanced	FF, 03, 00, 10, 51, 64, FF	Direct Mode Selection-Custom AGL Designed ADA mode (2-Channel Mode)
Quad Bypass	FF, 03, 00, 10, 59, 6C, FF	Direct Mode Selection-Custom AGL Designed ADA mode (2-Channel Mode)
Stereo Enhance	FF, 03, 00, 10, 5A, 6D, FF	Direct Mode Selection-with settings adjustable in PC Set-Up (2-Channel Mode)
Mono Enhance	FF, 03, 00, 10, 5B, 6E, FF	Direct Mode Selection-with settings adjustable in PC Set-Up (2-Channel Mode)
Stereo 5	FF, 03, 00, 10, 5C, 6F, FF	Direct Mode Selection (2-Channel Mode)
Mono 5	FF, 03, 00, 10, 5D, 70, FF	Direct Mode Selection (2-Channel Mode)
Cinema	FF, 03, 00, 14, 00, 17, FF	Direct Mode Selection (2-Channel Mode - New for 7.1 HD)
Club	FF, 03, 00, 14, 01, 18, FF	Direct Mode Selection (2-Channel Mode - New for 7.1 HD)
Hall	FF, 03, 00, 14, 02, 19, FF	Direct Mode Selection (2-Channel Mode - New for 7.1 HD)
Arena	FF, 03, 00, 14, 03, 1A, FF	Direct Mode Selection (2-Channel Mode - New for 7.1 HD)
Cathedral	FF, 03, 00, 14, 04, 1B, FF	Direct Mode Selection (2-Channel Mode - New for 7.1 HD)
Quad Reverb	FF, 03, 00, 14, 05, 1C, FF	Direct Mode Selection (2-Channel Mode - New for 7.1 HD)
Direct 7.1	FF, 03, 00, 13, 2D, 43, FF	Direct Mode Selection-via Multi Channel Analog RCA inputs (no processing)
Downmix Stereo	FF, 03, 00, 10, 30, 43, FF	Direct Mode Selection-Left and Right channels Only (Multi-Channel Mode)
Downmix Mono	FF, 03, 00, 10, 31, 44, FF	Direct Mode Selection-Center channel Only (Multi-Channel Mode)
Downmix 3 Channel	FF, 03, 00, 10, 39, 4C, FF	Direct Mode Selection-Left, Right and Center channels only (Multi-Channel Mode)
Downmix Phantom	FF, 03, 00, 10, 3A, 4D, FF	Direct Mode Selection-No Center Channel (Multi-Channel Mode)
Discrete Cinema	FF, 03, 00, 10, 33, 46, FF	Direct Mode Selection-Plays DVD Default (Dolby/DTS) Mode (Multi-Channel Mode)
Discrete Cinema/THX	FF, 03, 00, 10, 34, 47, FF	Direct Mode Selection-Plays DVD Default (Dolby/DTS) Mode with THX (Multi-Ch. Mode)
Discrete Cinema EX/ES	FF, 03, 00, 10, 35, 48, FF	Direct Mode Selection-Plays DVD Default (Dolby/DTS) Mode w/EXorES (Multi-Ch. Mode)
Discrete Cinema EX/ES/THX	FF, 03, 00, 10, 36, 49, FF	Direct Mode Selection-Plays DVD Default (Dolby/DTS) Mode w/ESorES+THX (M-Ch. Mode)
DTS Neo:6 Movie	FF, 03, 00, 13, 27, 3D, FF	Direct Mode Selection-Optimized for Movies (Multi-Channel Mode)
DTS Neo:6 Movie + THX	FF, 03, 00, 13, 29, 3F, FF	Direct Mode Selection-Optimized for Movies with THX (Multi-Channel Mode)
DTS Neo:6 Music	FF, 03, 00, 13, 2B, 41, FF	Direct Mode Selection-Optimized for Music (Multi-Channel Mode)
Dolby Pro Logic IIx Movie	FF, 03, 00, 13, 28, 3E, FF	Direct Mode Selection-Optimized for Movies (Multi-Channel Mode)
Dolby Pro Logic IIx Movie/THX	FF, 03, 00, 13, 2A, 40, FF	Direct Mode Selection-Optimized for Movies with THX (Multi-Channel Mode)
Dolby Pro Logic IIx Music	FF, 03, 00, 13, 2C, 42, FF	Direct Mode Selection-Optimized for Music (Multi-Channel Mode)
THX Ultra 2 Movie	FF, 03, 00, 10, 37, 4A, FF	Direct Mode Selection-THX Ultra Mode Optimized for Movies (Multi-Channel Mode)
THX Ultra 2 Games	FF, 03, 00, 10, 40, 53, FF	Direct Mode Selection-THX Ultra Mode Optimized for Games (Multi-Channel Mode)

THX Ultra 2 Music	FF, 03, 00, 10, 38, 4B, FF	Direct Mode Selection-THX Ultra Mode Optimized for Music (Multi-Channel Mode)
Downmix Cinema	FF, 03, 00, 14, 06, 1D, FF	Direct Mode Selection (Multi-Channel Mode - New for 7.1 HD)
Downmix Club	FF, 03, 00, 14, 07, 1E, FF	Direct Mode Selection (Multi-Channel Mode - New for 7.1 HD)
Downmix Hall	FF, 03, 00, 14, 08, 1F, FF	Direct Mode Selection (Multi-Channel Mode - New for 7.1 HD)
Downmix Arena	FF, 03, 00, 14, 09, 20, FF	Direct Mode Selection (Multi-Channel Mode - New for 7.1 HD)
Downmix Cathedral	FF, 03, 00, 14, 0A, 21, FF	Direct Mode Selection (Multi-Channel Mode - New for 7.1 HD)
Downmix Quad Reverb	FF, 03, 00, 14, 0B, 22, FF	Direct Mode Selection (Multi-Channel Mode - New for 7.1 HD)
Stereo Enhance Attn Up	FF, 03, 00, 01, E2, E6, FF	Increments Gain for Stereo Enhance Mode
Stereo Enhance Attn Down	FF, 03, 00, 01, E3, E7, FF	Decrements Gain for Stereo Enhance Mode
Stereo Enhance Delay Up	FF, 03, 00, 01, E4, E8, FF	Increments Delay for Stereo Enhance Mode
Stereo Enhance Delay Down	FF, 03, 00, 01, E5, E9, FF	Decrements Delay for Stereo Enhance Mode
Mono Enhance Attn Up	FF, 03, 00, 01, E6, EA, FF	Increments Gain for Mono Enhance Mode
Mono Enhance Attn Down	FF, 03, 00, 01, E7, EB, FF	Decrements Gain for Mono Enhance Mode
Mono Enhance Delay Up	FF, 03, 00, 01, E8, EC, FF	Increments Delay for Mono Enhance Mode
Mono Enhance Delay Down	FF, 03, 00, 01, E9, ED, FF	Decrements Delay for Mono Enhance Mode
Dynamic Range @ Max	FF, 03, 00, 01, 49, 4D, FF	Sets Dynamic Range at Maximum for non THX modes only
Dynamic Range @ Mid	FF, 03, 00, 01, 4A, 4E, FF	Sets Dynamic Range at the Middle for non THX modes only
Dynamic Range @ Min	FF, 03, 00, 01, 4B, 4F, FF	Sets Dynamic Range at Minimum for non THX modes only
Center Width Up	FF, 03, 00, 01, F0, F4, FF	Increments Center channel width for Pro Logic II Music and Custom Modes Only
Center Width Down	FF, 03, 00, 01, F1, F5, FF	Decrements Center channel width for Pro Logic II Music and Custom Modes Only
Panorama On	FF, 03, 00, 01, EE, F2, FF	Turns on Panorama enhancement for Pro Logic II Music and Custom Modes Only
Panorama Off	FF, 03, 00, 01, EF, F3, FF	Turns off Panorama enhancement for Pro Logic II Music and Custom Modes Only
Dimension Control Up	FF, 03, 00, 01, EC, F0, FF	Increments Dimension Control for Pro Logic II Music and Custom Modes Only
Dimension Control Down	FF, 03, 00, 01, ED, F1,FF	Decrements Dimension Control for Pro Logic II Music and Custom Modes Only
Surround All Pass	FF, 03, 00, 01, F4, F8, FF	Sets Frequency Pass Filter for Surrounds for Pro Logic II Music and Custom Modes Only
Surround LPF @ 7kHz	FF, 03, 00, 01, F5, F9, FF	Sets Frequency Pass Filter for Surrounds for Pro Logic II Music and Custom Modes Only
Surround HPF + Shelf	FF, 03, 00, 01, F6, FA, FF	Sets Frequency Pass Filter for Surrounds for Pro Logic II Music and Custom Modes Only
Surround Delay On	FF, 03, 00, 01, FC, 00, FF	Turns on surround delay for Pro Logic II Music and Custom Modes Only
Surround Delay Off	FF, 03, 00, 01, FD, 01, FF	Turns off surround delay for Pro Logic II Music and Custom Modes Only
RS Polarity Inverse On	FF, 03, 00, 01, F7, FB, FF	Turns on RS Polarity Inverse for Pro Logic II Music and Custom Modes Only
RS Polarity Inverse Off	FF, 03, 00, 01, F8, FC, FF	Turns off RS Polarity Inverse for Pro Logic II Music and Custom Modes Only
Matrix Coef 0	FF, 03, 00, 01, F9, FD, FF	Sets Matrix Coefficient at 0 for Pro Logic II Music and Custom Modes Only
Matrix Coef 1	FF, 03, 00, 01, FA, FD,FF	Sets Matrix Coefficient at 1 for Pro Logic II Music and Custom Modes Only
Matrix Coef 2	FF, 03, 00, 01, FB, FD, FF	Sets Matrix Coefficient at 2 for Pro Logic II Music and Custom Modes Only
Auto Balance On	FF, 03, 00, 01, F2, F6, FF	Turns on Auto Balance for Pro Logic II Music and Custom Modes Only
Auto Balance Off	FF, 03, 00, 01, F3, F7, FF	Turns off Auto Balance for Pro Logic II Music and Custom Modes Only
Re-Equalization On	FF, 03, 00, 01, 77, 7B, FF	Turns Re-Equalization On (for Non THX Modes Only)
Re-Equalization Off	FF, 03, 00, 01, 78, 7C, FF	Turns Re-Equalization Off (for Non THX Modes Only)
Decorrelation On	FF, 03, 00, 01, 7B, 7F, FF	Turns Decorrelation On (for Non THX Modes Only)
Decorrelation Off	FF, 03, 00, 01, 7C, 80, FF	Turns Decorrelation Off (for Non THX Modes Only)
Timbre Match On	FF, 03, 00, 01, 79, 7D, FF	Turns Timbre Match On (for Non THX Modes Only)
Timbre Match Off	FF, 03, 00, 01, 7A, 7E, FF	Turns Timbre Match Off (for Non THX Modes Only)

Command Name	Hex Command	System and Specific Information Update Commands
Send Address	FF, 03, 07, 82, 00, 8C, FF	Sends the selected unit address from the PCOS Program to the unit
Update All Settings	FF, 03, 00, 00, 0D, 10, FF	Requests an update of all possible settings in the unit
Update Turn on Preset/Max	FF, 03, 00, 01, DC, E0, FF	Requests an update of the current Turn On Input Pre-set and Maximum Volume setting
Update Input	FF, 03, 00, 10, 84, 97 FF	Requests an update of the currently selected input
Update Record	FF, 03, 00, 10, A4, B7 FF	Requests an update of the currently selected record input
Update Volume Master	FF, 03, 00, 01, 7F, 83, FF	Requests an update of current master volume setting (in dB)
Update Vol/Mst/Fmt/Mode	FF, 03, 00, 01, 81, 85, FF	Requests an update of the current master volume, decoding format and playback mode
Update Fmt/Mode/Dyn Rng	FF, 03, 00, 01, 80, 84, FF	Requests an update of the current decoding format, playback mode & dynamic range setting
Update Re-Eq/Tim/Decorr	FF, 03, 00, 01, 76, 7A, FF	Requests an update of the current Re-EQ, Timbre Match and Decorrelation settings
Update Pro-Logic II Informtn	FF, 03, 00, 01, EB, EF, FF	Requests an update of all Pro Logic II information (only if in Pro Logic II mode)
Update Tone Group A	FF, 03, 00, 01, A2, A6, FF	Requests an update of all current Tone Group A Settings
Update Tone Groups B	FF, 03, 00, 01, B3, B7, FF	Requests an update of all current Tone Group B Settings
Update Speaker Size	FF, 03, 00, 01, 88, 84, FF	Requests an update of all current Speaker size settings
Update Balance	FF, 03, 00, 01, 82, 86, FF	Requests an update of all current speaker balance settings
Update Delays	FF, 03, 00, 01, 83, 87, FF	Requests an update of all current speaker delay settings
Update ASA	FF, 03, 00, 01, 4E, 52, FF	Requests an update of all current Boundary Gain settings
Version Request	FF, 03, 00, 00, 0E, 11, FF	Requests an update of all current revs for the unit and chips
Installer Default Store	FF, 03, 00, 13, 81, 97, FF	Stores all changes/set-ups/settings as the Installer Default
Installer Default Recall	FF, 03, 00, 13, 80, 96, FF	Recalls all changes/set-ups/settings as stored above as the Installer Default
Factory Default Recall	FF, 03, 00, 10, FC, 0F, FF	Returns all settings/set-ups to the ADA out of box default recalls

Command Name	Hex Command	PEQ-1 Commands
Enable PEQ	FF, 03, 00, 15, 40, 58, FF	Turns on the Parametric Equalizer Function
Disable PEQ	FF, 03, 00, 15, 41, 59, FF	Turns off the Parametric Equalizer Function
Get State	FF, 03, 00, 15, 43, 5B, FF	Requests the current status of the Parametric Equalizer Function
Set Preset 1	FF, 03, 00, 15, 4C, 64, FF	Stores the current PEQ Setting as Preset 1
Recalls Preset 1	FF, 03, 00, 15, 48, 60, FF	Recalls the current PEQ Setting for Preset 1
Set Preset 2	FF, 03, 00, 15, 4D, 65, FF	Stores the current PEQ Setting as Preset 2
Recalls Preset 2	FF, 03, 00, 15, 49, 61, FF	Recalls the current PEQ Setting for Preset 2
Set Preset 3	FF, 03, 00, 15, 4E, 66, FF	Stores the current PEQ Setting as Preset 3
Recalls Preset 3	FF, 03, 00, 15, 4A, 62, FF	Recalls the current PEQ Setting for Preset 3
Set Preset 4	FF, 03, 00, 15, 4F, 67, FF	Stores the current PEQ Setting as Preset 4
Recalls Preset 4	FF, 03, 00, 15, 4B, 63, FF	Recalls the current PEQ Setting for Preset 4