HYPERION

User Manual
16-Channel Home Theater AV Processor

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Introduction

Thanks, and congratulations on purchasing the AudioControl Hyperion APR-16. This state-of-the-art Immersive Sound Processor has everything needed to produce the most impressive home sound system in the tri-county area (if not the tri-state area).

Features

- Best-in-class Audio Processing
- 48 Gbps HDMI 2.1 with ISF Grade Video Passthrough
- Digital Optical and Coax inputs
- Balanced Stereo XLR Input
- Unbalanced RCA Inputs
- Assignable RCA and XLR outputs
- Built-in Ethernet switching capabilities
- Dante enabled
- Dirac Room Correction, Bass Control, and Active Room Treatment (Available Soon)
- Dolby Atmos and DTS Digital Surround Audio formats
- Full IP control integration
- Easy to navigate web interface

What's in the Box

- The Hyperion APR-16
- Hyperion Remote
- AC Power cord
- Calibrated microphone for Dirac Live
- 15ft USB Cable
- Rack Ears
- Joie de vivre

Specifications

Inputs	
HDMI Inputs	7× 48 Gbps HDMI 2.1
Digital Inputs	2× Optical TOSLINK, 2× Coax S/PDIF
Analog Inputs	1× Stereo XLR (balanced), 2× Stereo RCA (unbalanced)
Analog Input Impedance	47 kΩ
Analog Input Sensitivity	2 Vrms
Dante / AES67 Inputs	2 Audio over IP channels
Outputs	
Preamp Outputs	16× RCA unbalanced + 16× XLR balanced
Digital Output	1× Optical TOSLINK
HDMI Output	1× HDMI (eARC)
Dante / AES67 Outputs	2 Audio over IP channels
Audio	
DAC	ESS SABRE ES9039Q2M
Frequency Response	20 Hz – 20 kHz (±0.05 dB)
THD+N	<0.0004%
SNR (20–20 kHz A-wtd)	>122 dBr (ref 4.2 Vrms) / <−129 dBr (ref 10 Vrms)
Max Output Swing – XLR	10 Vrms / +22 dBu @ 0 dBFS (Balanced)
Max Output Swing – RCA	4 Vrms / +14.2 dBu @ 0 dBFS (Unbalanced)
Max Input Level	RCA: 2.1 Vrms / XLR: 4.2 Vrms
Input Impedance	RCA: >10 kΩ / XLR: >10 kΩ
Processing	
Sampling Rate	Up to 24-bit / 192 kHz
HDMI Version	HDMI 2.1, HDCP 2.3
Max Resolution	4K/120 Hz / 8K/60 Hz
Max Bandwidth	48 Gbps
Audio Formats	Dolby Atmos, DTS:X
Speaker Layouts	2.0 – 9.1.6
Control	
IP Control	Full API over Ethernet (port 8080); Web GUI at hyperion.local
Serial	RS-232
IR Input	3.5mm TR, 5-24V
Trigger	Trigger Input (3.3–12V) + Trigger Output (+5V or +12V)
Network Audio	Dante / AES67 (4-port built-in Ethernet switch)
Power	
Input Voltage	AC 100-240V ~ 50/60 Hz
Power Consumption (Max)	<50 Watts
Physical	
Dimensions (H×W×D)	cm: 13.44 × 43.82 × 45.09
Weight	18.70 lbs / 8.48 kg
Rack Space	3U
Certifications	
Standards & Best Practices	CEDIA/CTA-RP22 (all 21 benchmarks), ISF Certified, FCC Class B
*Specifications subject to change without notice. Mass & dimensions are approximate	

Front Panel Details

1. Power Button

Press once to power the unit on.
Press and hold for 2 seconds to set the unit into standby.
Press and hold for 10 seconds to reset the unit to factory defaults.
During operation, the light around the power button will illuminate differently depending on the status of the amplifier.
Bright Blue — Normal Operation
Slow Blue Fade — Standby / Off
Beige — You have entered… The Twilight Zone

2. IR Sensor

The IR Sensor receives signals from the Hyperion remote. Block this lens or else the remote will not work. If the unit is hidden out of sight, an IR emitter may be placed over the sensor. Alternatively, an IR signal may be connected directly to the IR input, located on the rear panel.

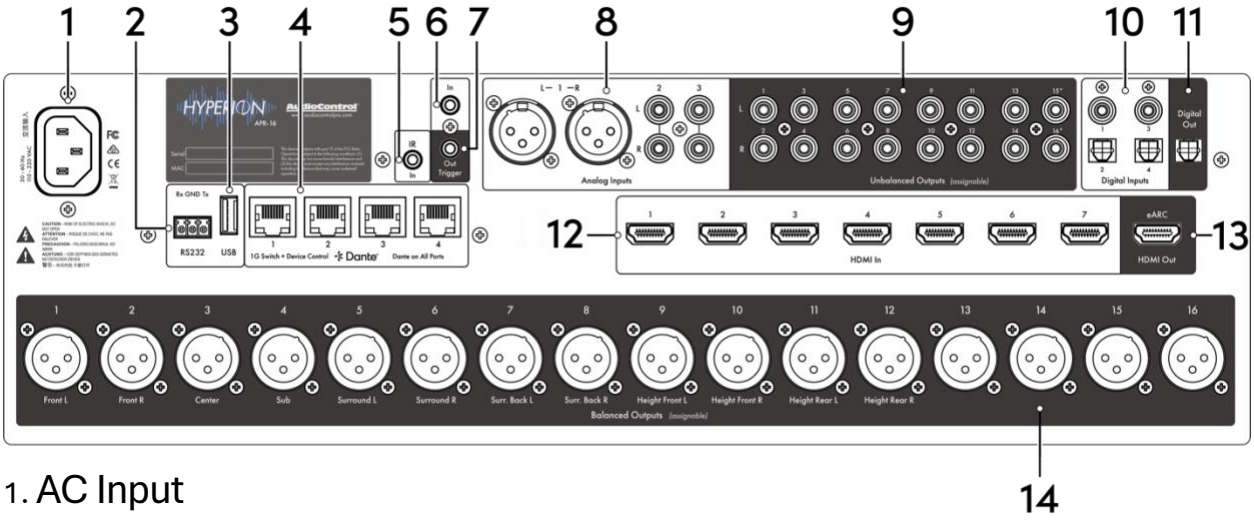
3. LCD Touch Screen Display

This screen displays helpful information including the active input, DSP Mode, volume level, a VU meter, and more.
Tap the gear icon in the top right corner of the screen to access additional APR-16 settings.

4. Volume Dial

A liquid-smooth rotation tool used to change the APR-16's volume level. Crank it up to 11! (Note: 11 is relatively quiet. Crank it up much higher to really rock out).

Back Panel Details



1. AC Input

Connect the supplied AC power cord here. The Hyperion is designed to safely operate using 110 V-220 V AC power.

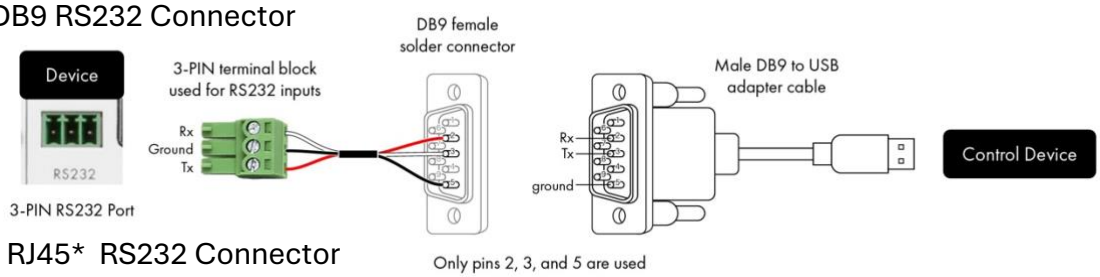
Disconnect power from the Hyperion when adjusting the connections to the amplifier, during lighting storms, or when not in use for long periods of time (due to zombie apocalypse or tropical vacations).

2. RS232 Port

Connect the Tx, Ground, and RX wires from an RS232 source to the terminals on this port to control the Hyperion using serial commands.

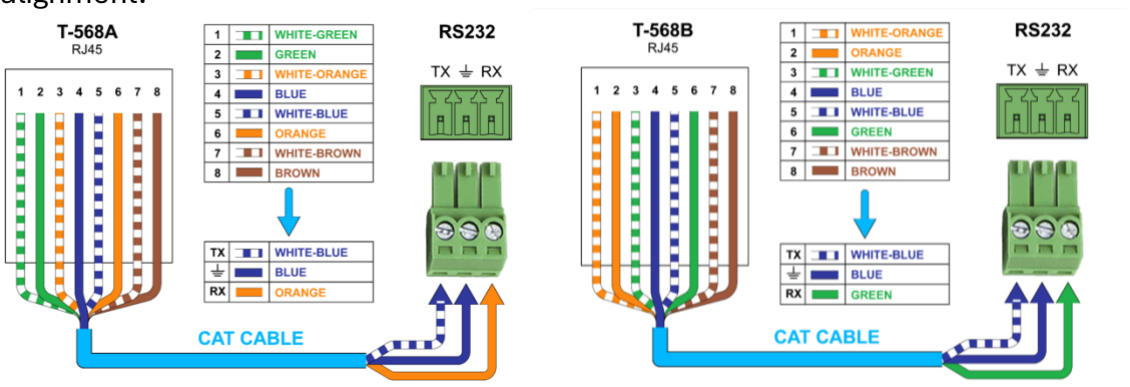
RS232 Connection Diagrams

From a DB9 RS232 Connector



From an RJ45* RS232 Connector

*Suitable for most control processors. Refer to the connected devices manual to ensure pinout alignment.



3. USB Port

Connect a USB flash drive loaded with a firmware file to update firmware without a network connection.

4. Ethernet & Dante Ports

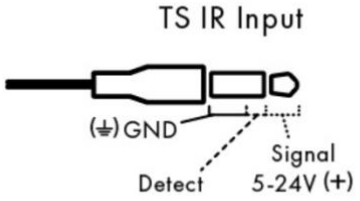
Connect an Ethernet cable to one of the switch ports on the Hyperion to enable IP Control and Dante Audio.
If other Dante devices are available on the network, they will be able to transmit and receive audio to and from the Hyperion.
The other switch ports function as a mini-network switch, enabling network connection for other nearby devices.

5. IR Input

Connect a 3.5mm TS cable to this port from an IR Output to allow the device to receive IR commands.
When connected this port will disable the IR Sensor located on the front of the unit.

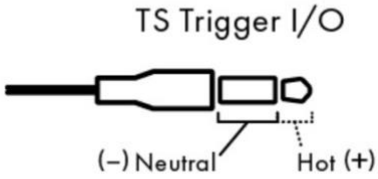
6. Trigger Input

Connect a 3.5 mm TS cable to this port to trigger the Hyperion on and off from an external voltage source. Triggers on with 3.3 to 12 present on the input.



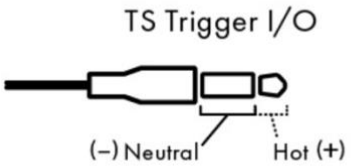
7. Trigger Output

Connect a 3.5 mm TS cable from this port to another device or relay to trigger other products on and off. When the Hyperion is On, this port will output +5 or +12V (depending on System Settings), and output 0V when in standby.



8. Analog Inputs

Three sets of analog inputs: One balanced XLR, and unbalanced RCA inputs.



9. Analog RCA Outputs

Sixteen unbalanced RCA outputs. All RCAs share the same signal as their respective XLR output.

10. Digital Inputs

Two Optical TOSLINK and two Coax S/PDIF inputs.

11. Digital Output

One Optical TOSLINK output to distribute Hyperion audio to other devices.

12. HDMI Inputs

Seven 48Gbps HDMI inputs capable of up to 8K 60Hz / 4K 120Hz at 12 bits per component (36bpp).

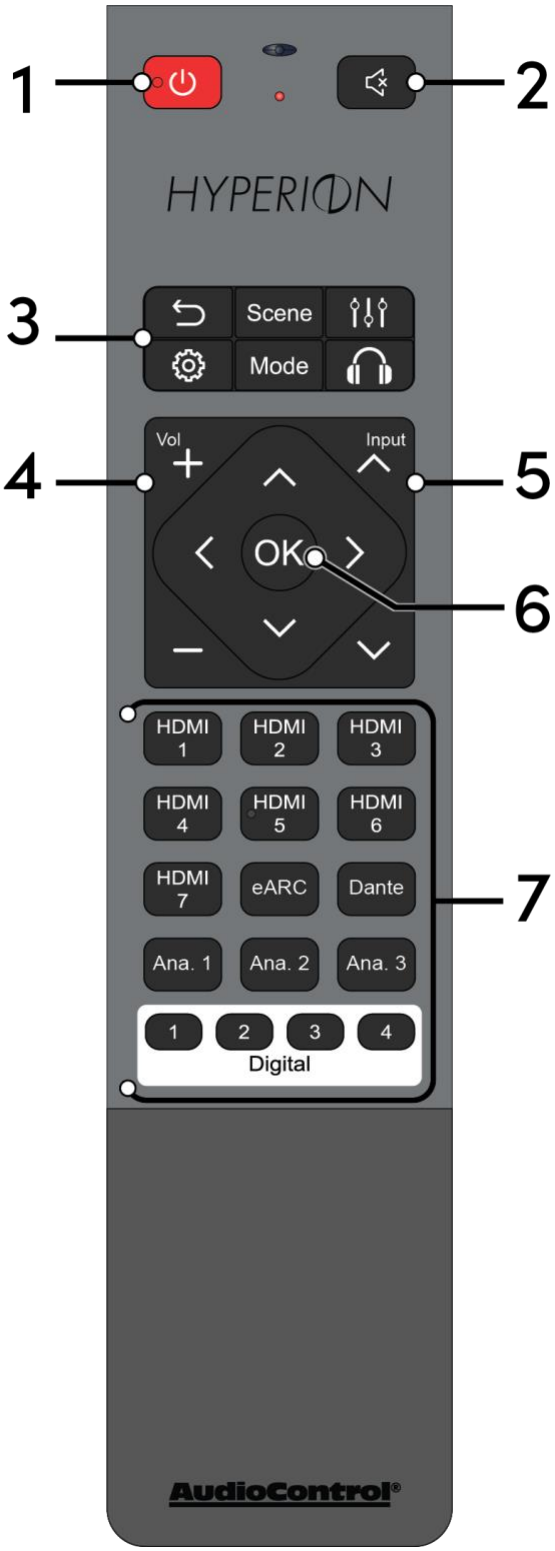
13. HDMI Output with eARC

One 48Gbps HDMI output with eARC capability to connect to a display.

14. Analog XLR Outputs

Sixteen true balanced XLR outputs. All XLRs share the same signal as their respective RCA output

Remote Control



1. Power

Power the unit on or put it into standby.

2. Mute

Mute or un-mute the audio output.

3. System Control

- Go back
- Open settings
- Scene — Cycle through saved scenes
- Mode — Cycle through audio modes
- Cycle through Dirac filters

4. Volume Up/Down

5. Input Up/Down

Cycle through available inputs.

6. Navigation

7. Input Selector

Select a specific input.

Installation

Once the Hyperion has been powered on, it is time to decide where and how to install the Hyperion.

Important Safety Note: Always remove power while conducting removal or installation of the unit.

Media Center

The simplest way to install the Hyperion is by placing it on a shelf in a media center. The Hyperion comes equipped with 4 rubber feet to keep it elevated and stable, allowing for airflow on all sides.

Do not place the Hyperion directly on top of or underneath a game console, AV receiver, amplifier, cable box, or any other heat-producing product.

Amp Rack

The Hyperion uses 3 rack units (RU) of space and includes rack mounts within the box.

First detach the feet, next locate and attach the rack mounts per the instructions. For optimal performance, the Hyperion should have at least 1 RU of empty space above and below it. However, 4 units may be stacked with proper ventilation.

Tartarus

Hyperion has been stuck in Tartarus far too long. Consider instead, the plains of Elysium?

Navigating the Web GUI

Once the Hyperion is connected to the local network via Ethernet, open a browser and enter **hyperion.local** into the address bar to access the Hyperion's web GUI.
If more than 1 Hyperion is on the network, access the unit's GUI using its IP address, which can be found on the Hyperion front panel screen by tapping the Gear icon in the top right corner, then tapping Network.

Main

The Main page includes the basic functionality of the remote control.
Power - Toggles the unit between on or standby.
Volume - Controls the volume of the speaker outputs or toggles the mute state of the speaker outputs.
Input - Selects the input source.
Audio Mode – Sets the upmix mode for stereo signals, and sets the decode mode for multi-channel signals. The available modes are:

Native – Plays the audio in its native format without any processing. What comes in is what goes out.
2-Channel Stereo – Downmixes all audio to a standard stereo (left/right) output, regardless of the source format.
All Channel Stereo – Distributes the stereo signal across all available speakers in the configured arrangement. Great for background music that fills the room evenly.
Dolby Surround – Engages the Dolby Surround upmixer, which analyzes stereo or multi-channel content and intelligently distributes it across the full speaker layout, including height channels if configured.
Dolby Mode – Applies Dolby's processing pipeline for decoding and rendering Dolby-encoded content. Use this mode when playing Dolby Digital, Dolby Digital Plus, Dolby TrueHD, or Dolby Atmos content for optimal decode behavior.
DTS Neural:X – Engages the DTS Neural:X upmixer, which expands stereo or 5.1/7.1 content to fill all configured speakers, including height channels. Ideal for DTS-encoded content or when an immersive upmix from non-Dolby sources is desired.
Direct Mode – Bypasses all DSP processing and sends audio directly to the outputs. No upmixing, no bass management, no EQ—just the raw signal. Useful for diagnostics or when external processing is handling everything.

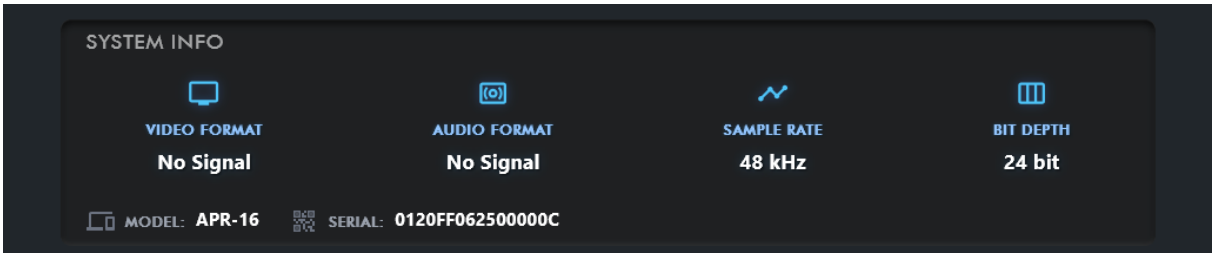
Note: *When the input signal is already multi-channel (e.g., 7.1 PCM or Atmos), some upmix modes may behave differently than with stereo input. Native mode always passes the signal through unchanged.*

Some web pages have a Help button that can clicked to get detailed explanations about how the page and each of its components work.

System Settings

Settings on this page apply to the global functions of the Hyperion.

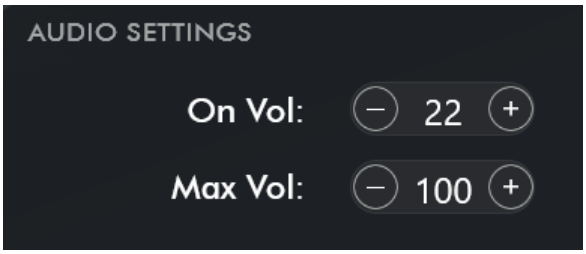
System Info - Displays detailed information about the incoming audio & video signals, including the unit's serial number.



Audio Settings

On Volume - Sets the default volume level for the Hyperion when powered on or brought out of standby.

Max Volume - Sets a maximum limit on how high the user can increase the volume, helpful for protecting smaller speakers (or ear drums).

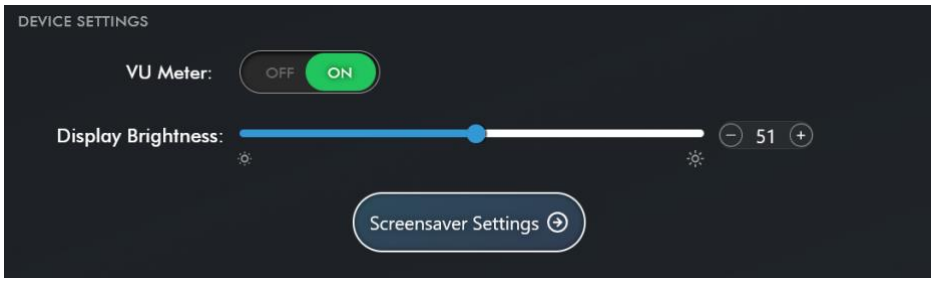


Device Settings

VU Meter - Toggles the VU meter on the front panel display on or off.

Display Brightness - Sets the brightness level of the front panel display.

Screensaver Settings - Edit settings and upload or remove photos from the front panel display's Screensaver.

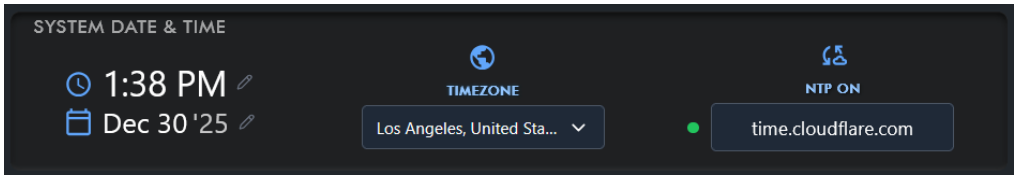


System Date & Time - Displays date & time information that can be edited to match the local time. This modifies the time displayed in the MCU logs.

Time & Date - Click the edit icon to manually adjust the time and date settings.

Timezone - Select from a list of time zones to match the local time.

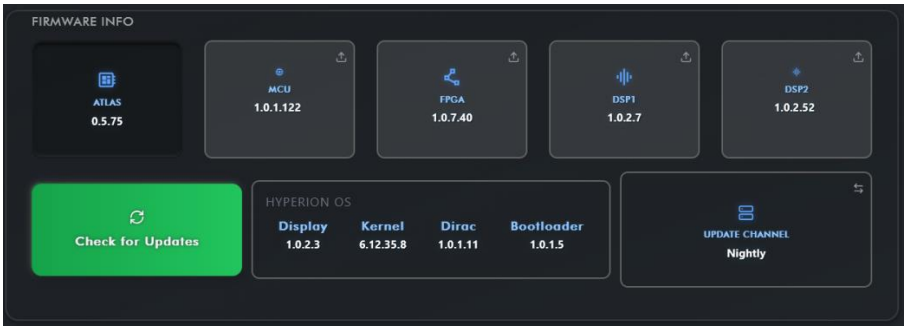
NTP - Network Time Protocol automatically detects the local time. Clicking the NTP icon will turn automatic detection off.



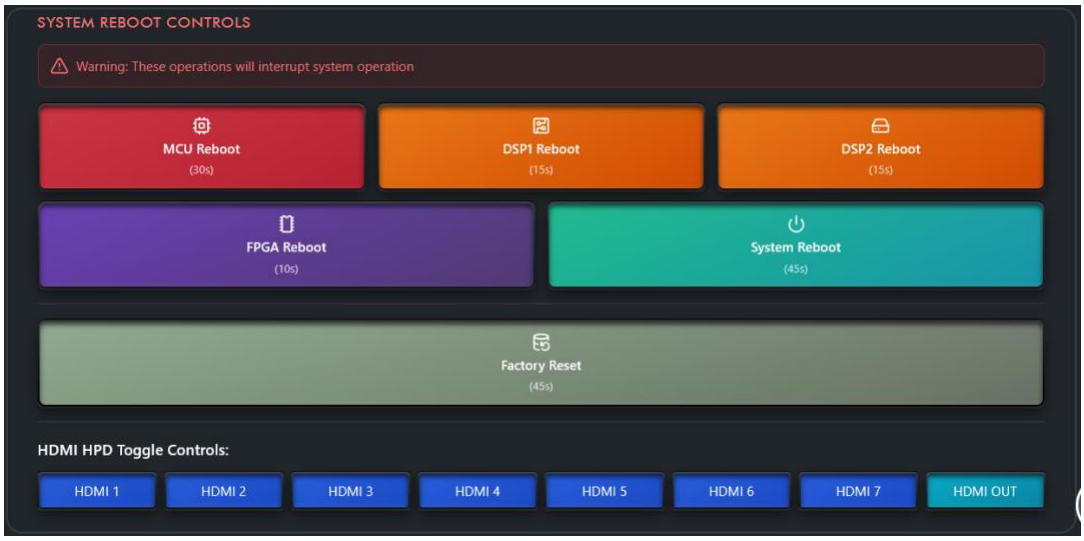
Firmware Info - Displays the versions for each firmware utilized on the Hyperion and allows users to check for updates.

Atlas - Shows the current Atlas firmware version.

Check for Updates - Click this button to check the AudioControl servers for new firmware versions. If a newer version is found for any of the modules, the unit will update and restart.



System Reboot Controls – Allows for the rebooting of the system, individual processors, HDMI handshakes, or factory resetting the Hyperion to its default state.



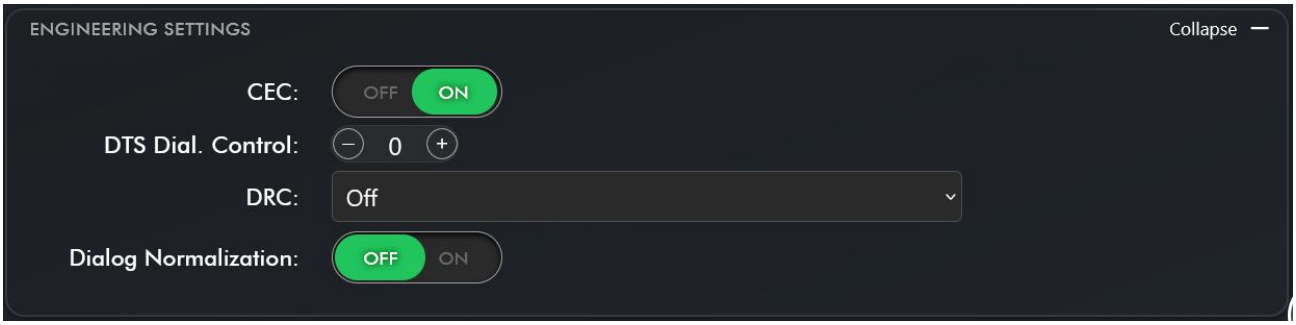
Engineering Settings – Contains advanced HDMI and audio settings.

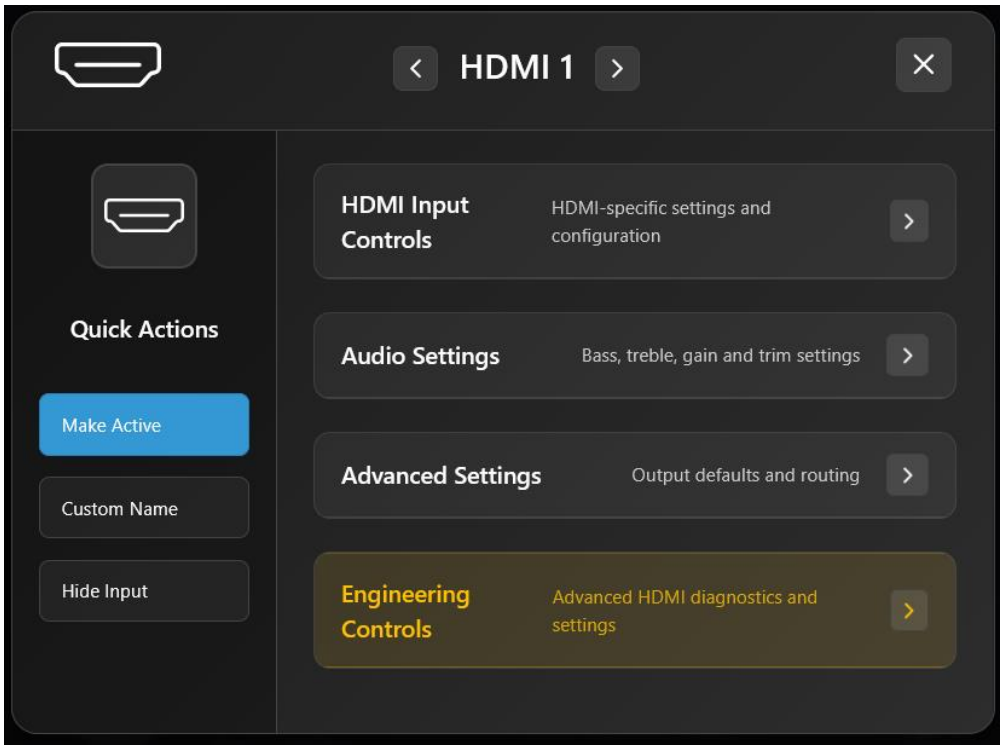
CEC – Toggles HDMI CEC Control On/Off

DTS Dial. Control – Adjusts the dialog channel during DTS:X playback.

DRC – Adjusts the Dolby Dynamic Range Control setting. DRC reduces the dynamic range of the content, with the dialog reference level as the "null" point.

Dialog Normalization – Toggles Dolby Dialog Normalization On/Off. Ensures all audio content is output at the same reference dialog level.





Quick Actions

Make Active - Selects the input as the current active source.

Custom Name - Gives the input a unique name. Displayed on the front panel and the input selection menu.

Hide Input – Hides the input from the Input Selection menu.

Audio Settings

Bass - Adjusts the bass level for this input between -60 to +60 dB.

Treble - Adjusts the treble level for this input between -60 to +60 dB.

Gain - Adjusts the gain of this input between -60 to +60 dB.

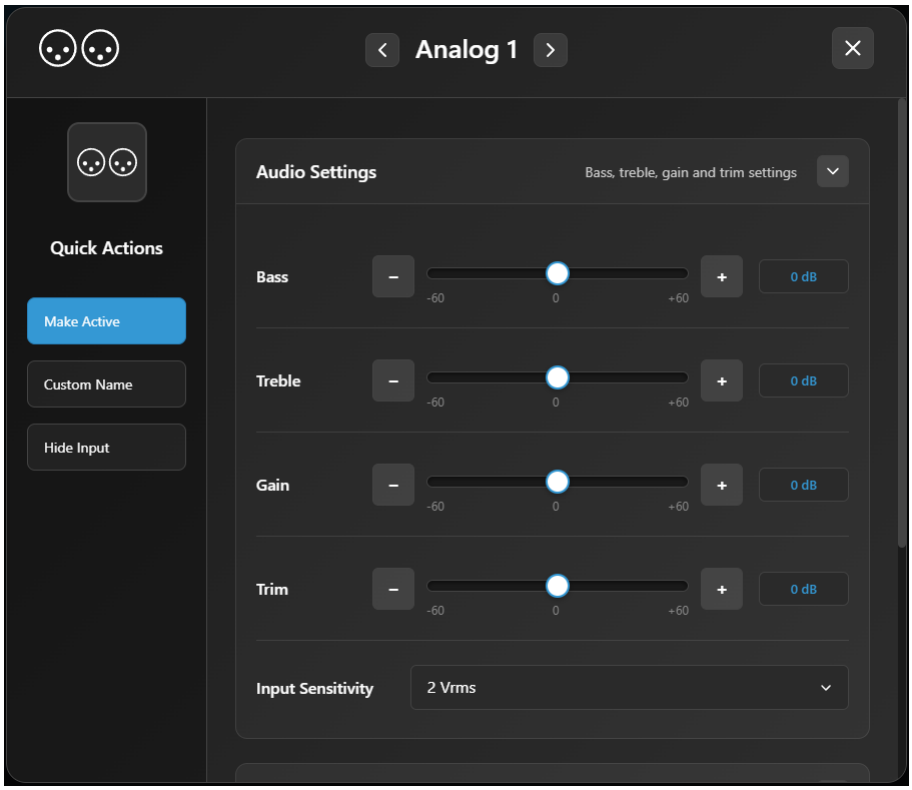
Trim - Adjusts the trim of this input between -60 to +60 dB.

Input Sensitivity (Analog Inputs Only)

When editing an analog input (Analog 1, 2, or 3), an Input Sensitivity selector appears in the Audio Settings section. This sets the maximum input voltage level the Hyperion expects from the connected analog source. Matching the sensitivity to the source device's output level ensures optimal signal-to-noise ratio and prevents clipping or distortion.

The available sensitivity options are:

Setting	Use Case
4 Vrms	Professional/commercial equipment with high output levels (XLR balanced sources)
2 Vrms	Standard professional line-level equipment (most common for balanced XLR)
1 Vrms	Consumer line-level equipment (standard for RCA connections)
0.5 Vrms	Low-output devices or equipment with weak signal levels



Note: *Analog 1 is a balanced XLR input and typically works best at 2 Vrms or 4 Vrms. Analog 2 and 3 are unbalanced RCA inputs and are generally set to 1 Vrms or 2 Vrms. If audio sounds distorted, try a higher sensitivity setting. If it sounds too quiet with excessive noise, try a lower one.*

Advanced Settings

Two-Channel Mode – Sets the default audio processing mode that the Hyperion applies when a two-channel (stereo) signal is detected on this input. Available options:

Last Mode – Uses whatever audio mode was last active. The Hyperion remembers the most recently used mode and applies it automatically.

2-Channel Stereo – Outputs the stereo signal as-is to the front left and right speakers only.

All Channel Stereo – Distributes the stereo signal across all configured speakers.

Dolby Surround – Applies the Dolby Surround upmixer to expand stereo content across all speakers.

Dolby Mode – Applies Dolby's decode and rendering pipeline. Recommended when the stereo source contains Dolby-encoded content.

Multi-Channel Mode – Sets the default audio processing mode when a multi-channel signal (5.1, 7.1, Atmos, etc.) is detected on this input. The same options are available as Two-Channel Mode.

Note: *These per-input defaults override the global Audio Mode on the Main page when the input is active. Setting both to "Last Mode" gives the most flexibility, as it lets modes to be changed globally without per-input overrides.*

Lip Sync Delay - Sets the audio delay to match the video. The Default Delay is 0ms, adjustable from 0-1000ms.

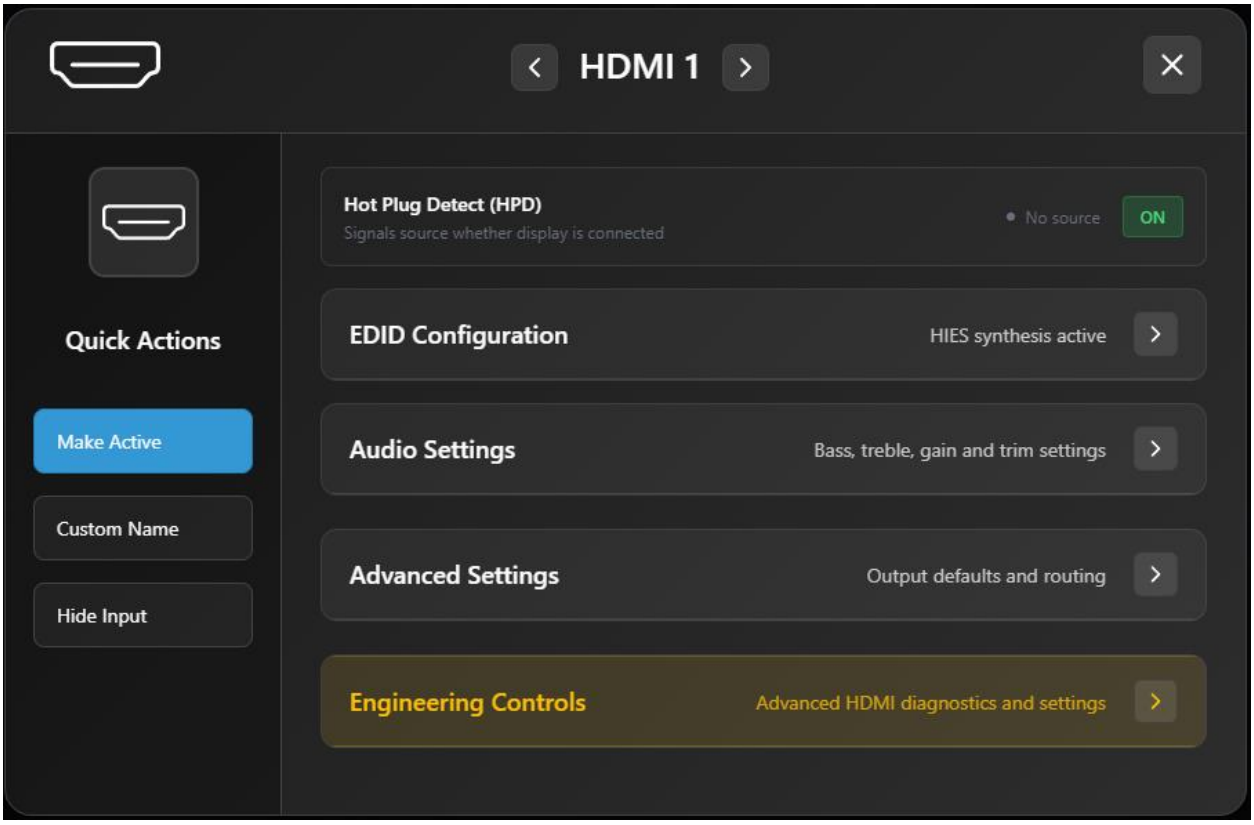
Audio Source – [Only available on HDMI inputs] Choose which audio input plays when this input is selected. (E.g. when the source is a Blu-ray player, but the audio is coming from TOSLINK instead of HDMI)

Hot Plug Detect Control - Signals to the source that a sink device is connected.

EDID Configuration

Every HDMI source device (Blu-ray player, game console, streaming stick, etc.) needs to know what the display can handle before it sends video and audio. It learns this by reading something called an **EDID** (Extended Display Identification Data)—a small block of information that describes the display's supported resolutions, refresh rates, color formats, HDR capabilities, and audio formats.

Because the Hyperion sits between the sources and the display, it needs to present its own EDID to each source device. The **EDID Configuration** section provides full control over what information each HDMI input advertises to its connected source.



Hyperion Intelligent EDID Synthesis (HIES)

At the heart of the EDID Configuration is **HIES – Hyperion Intelligent EDID Synthesis**. When enabled, HIES automatically reads the connected display's native EDID and merges its video capabilities with the Hyperion's audio processing requirements. This means the source devices see a display that supports all the video formats the TV can handle, combined with all the audio formats the Hyperion can decode.

HIES ON (default) – The Hyperion reads the display's EDID and synthesizes a combined EDID that advertises the display's native video capabilities alongside the Hyperion's full audio decoding capabilities (Dolby Atmos, DTS:X, etc.). This is the recommended setting for most installations.

HIES OFF – Disables automatic EDID synthesis. Use this only if needed to present a fully custom EDID to a source device, or for troubleshooting.

> ***Note:*** *HIES is designed to solve one of the most common problems in multi-channel audio installations: source devices that will not output high-resolution audio formats because they do not see audio support in the display's EDID. With HIES enabled, every source device knows the Hyperion can decode everything.*

Connected Display Information

This read-only section shows the details of the display connected to the Hyperion's HDMI OUT / eARC port, as reported by the display's own EDID. This information is read directly from the display and its accuracy depends on how the display manufacturer programmed the EDID.

The displayed information includes:

Display Name – The manufacturer and model name reported by the display (e.g., "GSM - LG TV SSCR2").

Screen Size – The physical screen dimensions reported by the display.

TMDS Clock – The maximum TMDS (Transition-Minimized Differential Signaling) clock speed, which determines the maximum bandwidth for video data.

Audio Channels – The maximum number of audio channels the display supports.

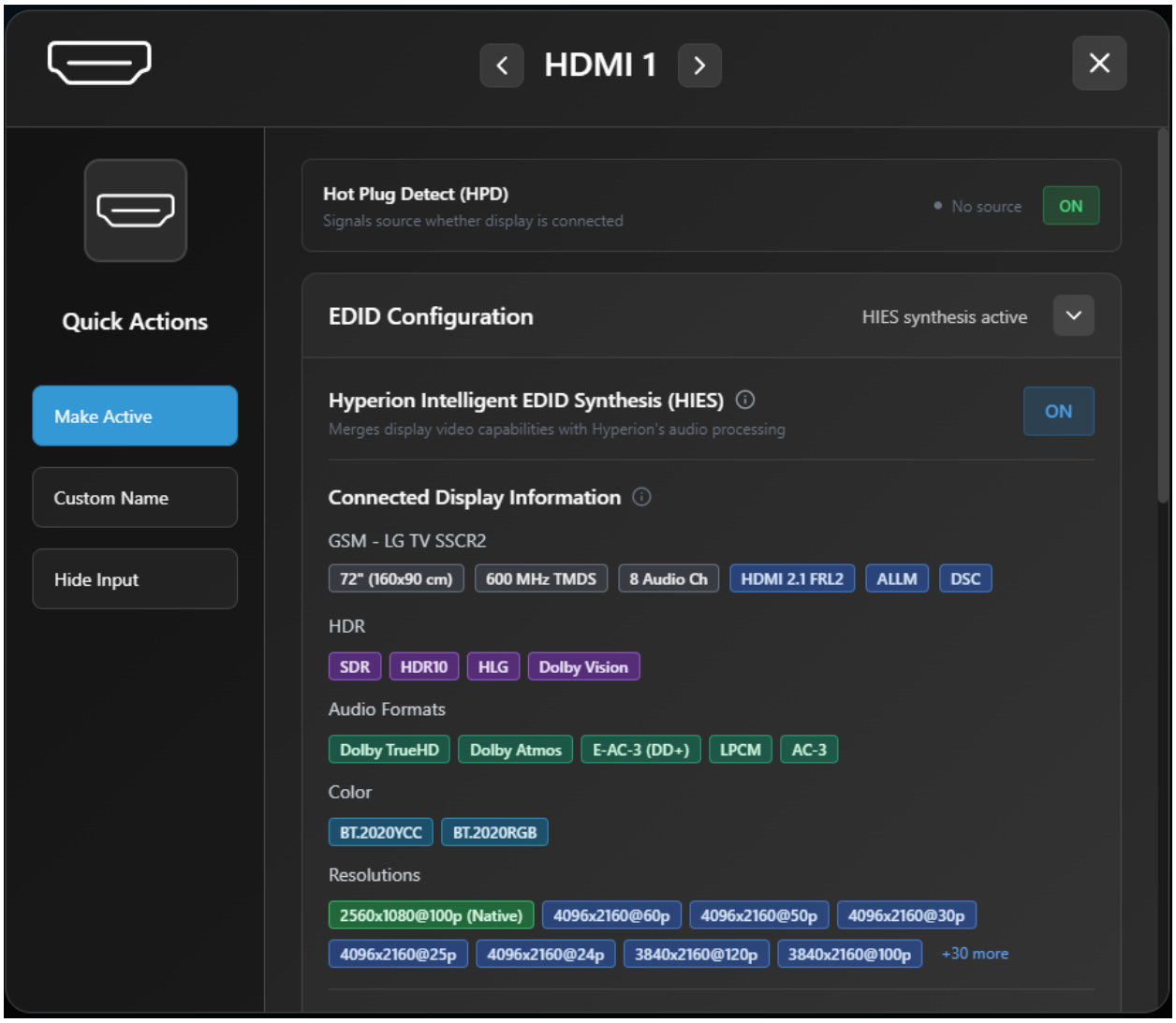
HDMI Version – The HDMI specification version and link type (e.g., HDMI 2.1 FRL2).

Feature Badges – Quick-reference badges for supported features: ALLM, DSC, HDR, SDR, HDR10, HLG, Dolby Vision, etc.

Audio Formats – A list of audio codecs the display reports supporting (e.g., Dolby TrueHD, Dolby Atmos, E-AC-3, LPCM, AC-3).

Color – Supported color spaces (e.g., BT.2020YCC, BT.2020RGB).

Resolutions – A list of supported video resolutions and refresh rates. The display's native resolution is marked. Click "+N more" to expand the full list.



Note: *If something looks incorrect in this section, check the display's settings or consult its documentation. Some displays report incomplete or inaccurate EDID information.*

Synthesis Engine Options

The Synthesis Engine Options overrides specific capabilities in the synthesized EDID. This is organized into three tabs: **Video**, **Audio**, and **Advanced**. By default, all options are set to "Auto (from TV)", which means the Hyperion uses whatever the connected display reports. The Hyperion can override any setting to tell source devices a different capability.

Video Tab

Max Resolution – Override the maximum resolution advertised to source devices. Options range from Auto (from TV) down to 480p60. Use this to force a lower resolution if a source device is having compatibility issues, or to limit bandwidth on longer HDMI cable runs.

Available options:

Setting	Resolution
Auto (from TV)	Uses the display's reported maximum
8K60	7680x4320 @ 60 Hz
8K30	7680x4320 @ 30 Hz
4K120	3840x2160 @ 120 Hz
4K60	3840x2160 @ 60 Hz
4K30	3840x2160 @ 30 Hz
4K24	3840x2160 @ 24 Hz
1440p120	2560x1440 @ 120 Hz
1440p60	2560x1440 @ 60 Hz
1080p120	1920x1080 @ 120 Hz
1080p60	1920x1080 @ 60 Hz
1080p24	1920x1080 @ 24 Hz
1080i60	1920x1080i @ 60 Hz
720p60	1280x720 @ 60 Hz
720p50	1280x720 @ 50 Hz
576p50	720x576 @ 50 Hz (PAL)
480p60	720x480 @ 60 Hz (NTSC)

Max Refresh Rate – Override the maximum refresh rate advertised to source devices. Options include Auto (from TV), 240 Hz, 165 Hz, 144 Hz, 120 Hz, 100 Hz, 60 Hz, 50 Hz, 30 Hz, 25 Hz, 24 Hz (Cinema), and 23.976 Hz (Film).

Color Depth – Override the maximum color bit depth. Options are Auto (from TV), 16-bit (Deep Color Max), 12-bit (Deep Color), 10-bit (HDR), and 8-bit (Standard).

Color Space – Override the color space capabilities advertised to source devices.

Available options:

Setting	Description
Auto (from TV)	Uses the display's reported capabilities
RGB Full Range (0–255)	Full RGB range, common for PC sources
RGB Limited (16–235)	Limited RGB range, common for video content
YCbCr 4:4:4	Full chroma resolution, high bandwidth
YCbCr 4:2:2	Half horizontal chroma, common for high-res video
YCbCr 4:2:0	Quarter chroma, used for 4K120 and 8K
BT.709 (HD)	Standard HD color gamut
BT.2020 (UHD/WCG)	Wide color gamut for UHD/HDR
DCI-P3	Cinema-standard wide color gamut
xvYCC (Extended Gamut)	Extended YCC color space
sYCC	Standard YCC color space
Adobe RGB	Adobe's wide color gamut

HDR Formats – Control which HDR (High Dynamic Range) formats are advertised to source devices.

The HDR Formats section has two special toggles at the top:

Preserve (Use display caps) – When checked, the Hyperion advertises exactly what the display supports. Uncheck this to manually select which HDR formats to advertise.

Disable HDR – Forces Standard Dynamic Range (Rec.709) only. No HDR formats are advertised to source devices.

When Preserve is unchecked, these settings can be individually enabled or disabled:

HDR10 – The universal HDR standard, supported by virtually all HDR displays.

HDR10+ – Samsung's scene-by-scene HDR format with dynamic metadata.

Dolby Vision – Dolby's scene-by-scene HDR format with dynamic metadata.

HLG – Hybrid Log-Gamma, used primarily for broadcast and cable content.

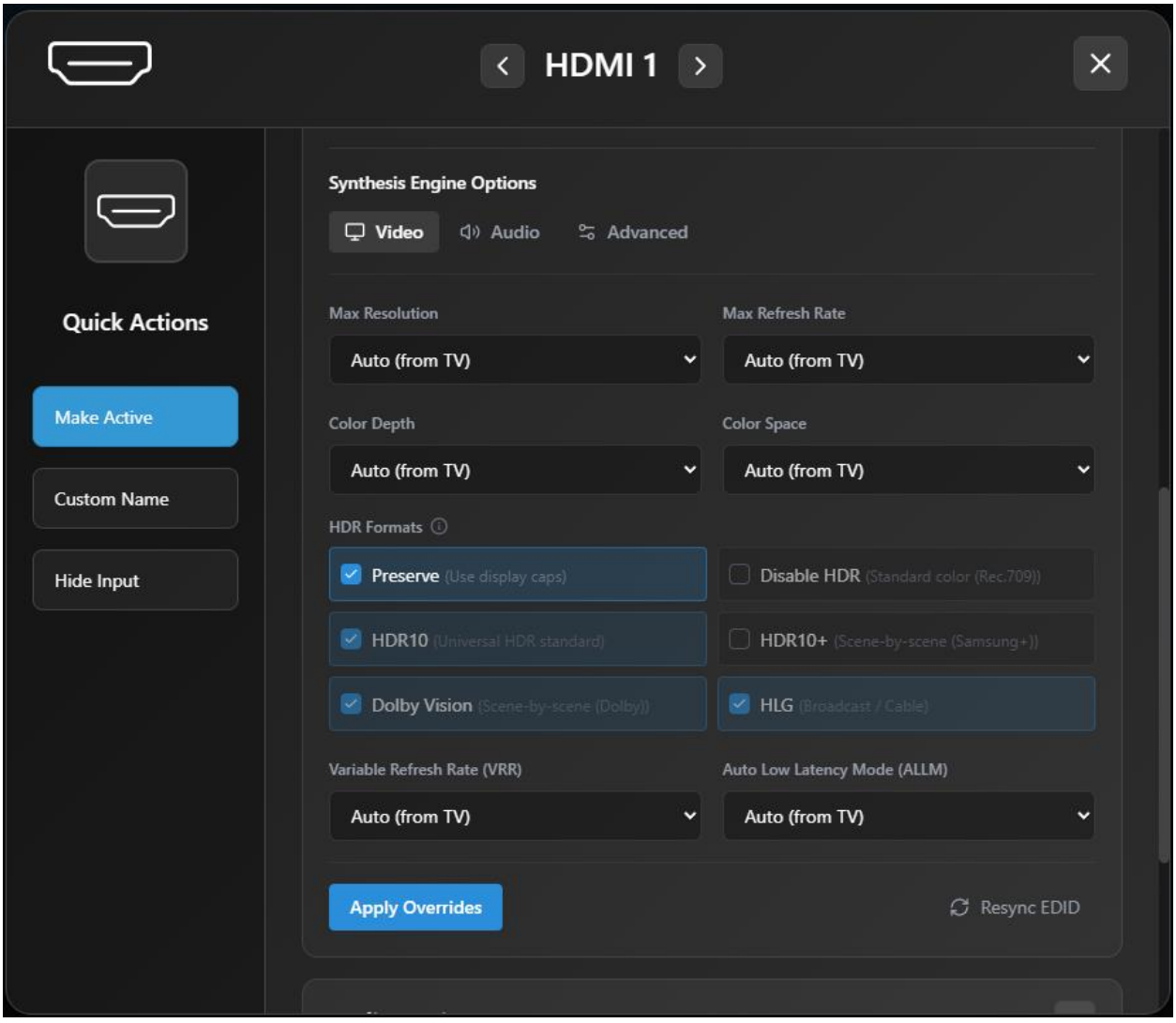
Variable Refresh Rate (VRR) – Control whether VRR is advertised to source devices. Options: Auto (from TV), Enable VRR, Disable VRR. VRR allows the display's refresh rate to dynamically match the source's frame rate, reducing screen tearing. This is primarily useful for gaming.

Auto Low Latency Mode (ALLM) – Control whether ALLM is advertised to source devices. Options: Auto (from TV), Enable ALLM, Disable ALLM. ALLM automatically switches the display to its lowest-latency mode when a compatible source (typically a game console) is detected.

Action Buttons

Apply Overrides – Saves any changes made to the Synthesis Engine Options and regenerates the synthesized EDID. Source devices will re-read the updated EDID.

Resync EDID – Forces the Hyperion to re-read the connected display's EDID and regenerate the synthesis. Use this if the display has changed or if a source device is not seeing the correct capabilities.



Engineering Controls (HDMI Inputs Only)

At the bottom of each HDMI input's settings panel is a collapsible **Engineering Controls** section containing advanced HDMI diagnostics and HDCP settings. These controls are intended for troubleshooting and advanced configuration.

⚠ ***Use these settings with caution.***

HDCP Mode Selection

Three buttons select the HDCP (High-bandwidth Digital Content Protection) mode for this input:

HDCP NONE (No Protection) – Disables HDCP negotiation entirely. The source will send unprotected content only. Some sources may refuse to output certain content (e.g., 4K Blu-ray) without HDCP active.

HDCP 1.4 (Standard) – Standard HDCP protection. Compatible with most HD content and older source devices.

HDCP 2.2 (Enhanced) – Enhanced HDCP protection required for 4K/UHD content from most modern sources. This is the recommended setting for most installations.

HDCP Status Display

Below the mode selection buttons, three read-only status fields show the current HDCP negotiation state:

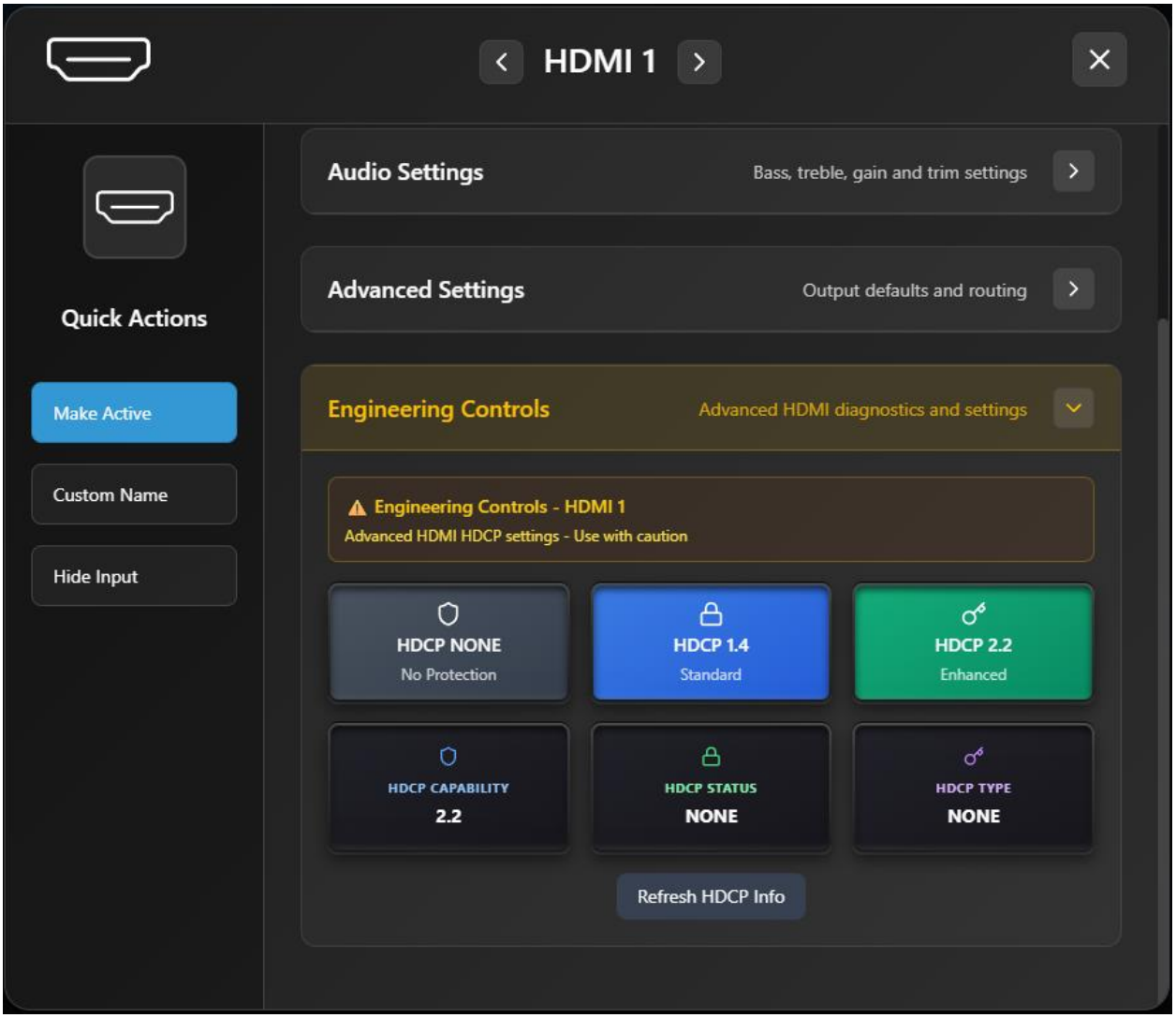
HDCP Capability – Shows the highest HDCP version the connected source device supports (e.g., "2.2").

HDCP Status – Shows whether HDCP authentication was successful ("SUCCESS") or has failed.

HDCP Type – Shows the HDCP version currently in use for the active connection.

Refresh HDCP Info – A button that re-queries the HDCP status from the connected source. Use this after changing HDCP modes or swapping source devices.

Note: *If a source device is not outputting video or shows a blank screen, check the HDCP Status field. A failed HDCP handshake is one of the most common causes of "no signal" issues with HDMI connections.*



Output Assignment

Use the speaker arrangements bar to quickly adjust settings that affect all outputs.

The Connection Map shows all the outputs and what speakers are currently assigned to them.

Click any output to configure which speaker channel is matrixed to each output. Click any output to open the configuration window, showing all user options for that output. After an output setup has concluded, use the navigation arrows at the top of the window to cycle through the outputs.

Speaker Arrangement – Select the speaker arrangement that matches the system. The Hyperion supports the following configurations:

Config	Description	Channels
2.0	Stereo	Left, Right
2.1	Stereo + Sub	Left, Right, LFE
5.1	Standard Surround	FL, FR, C, LFE, SL, SR
6.1	Surround + Back Center	FL, FR, C, LFE, SL, SR, SB
7.1	Full Surround	FL, FR, C, LFE, SL, SR, SBL, SBR
5.1.2	Surround + 2 Height	FL, FR, C, LFE, SL, SR + 2 Top
5.1.4	Surround + 4 Height	FL, FR, C, LFE, SL, SR + 4 Top
7.1.2	Full Surround + 2 Height	FL, FR, C, LFE, SL, SR, SBL, SBR + 2 Top
7.1.4	Full Surround + 4 Height	FL, FR, C, LFE, SL, SR, SBL, SBR + 4 Top
7.1.6	Full Surround + 6 Height	FL, FR, C, LFE, SL, SR, SBL, SBR + 6 Top
9.1.2	Wide Surround + 2 Height	FL, FR, C, LFE, SL, SR, SBL, SBR, FWL, FWR + 2 Top
9.1.4	Wide Surround + 4 Height	FL, FR, C, LFE, SL, SR, SBL, SBR, FWL, FWR + 4 Top
9.1.6	Wide Surround + 6 Height	FL, FR, C, LFE, SL, SR, SBL, SBR, FWL, FWR + 6 Top

> ***Note:*** *The number of active outputs on the Output Assignment page adjusts automatically when the speaker arrangement is changed. Unused outputs will show "None" and "---" for level and distance.*

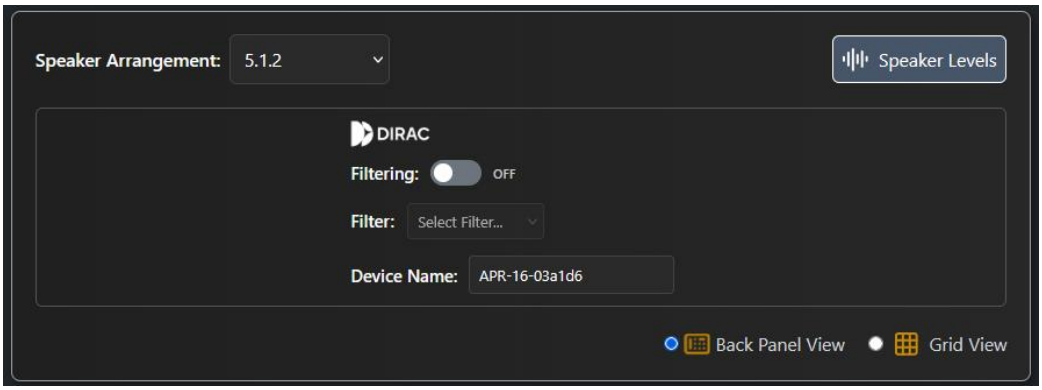
Speaker Levels - Adjust all outputs' level settings and allow test tones to be played from multiple outputs at once (more info on Page 23).

Dirac

Filtering - After Dirac calibration filter has been uploaded to the Hyperion, turn Dirac filtering ON or OFF.

Filter - Selects which Dirac filter is applied.

Device Name - Shows the name of the device as it will be displayed in the Dirac Live software. This name can be edited.



Page View Modes

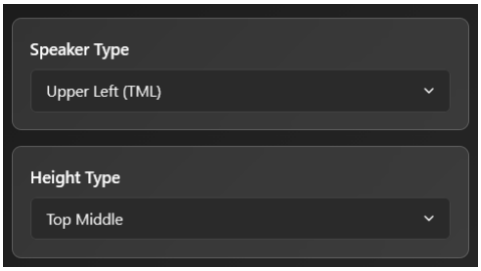
Body - Displays a representation of the Hyperion's back panel. Select an output to edit its settings.

Grid - Lists all outputs and their current settings in a grid for easy editing.

Mobile – Optimized for mobile browsers, displays all outputs in a list. Tap on an output to edit its settings.

Set speaker types, crossovers, levels and distances BEFORE running Dirac. After a Dirac calibration filter has been loaded, speaker settings cannot be changed.

Speaker Type - Select any speaker output to assign a speaker channel. When selecting a speaker channel included in a stereo pair (e.g. Surround Left), the paired speaker (e.g. Surround Right) will automatically be assigned to the next available input.



Speaker Types available for the speaker channel selected depend on which Speaker Arrangement is active.

Height Type - When selecting upper level speaker, the Height Type selector will specify the type of upper level speaker being assigned.

Height - Speaker at Height level (in-wall or on-wall above the listener).

Top - Speaker at Top level (in-ceiling speakers).

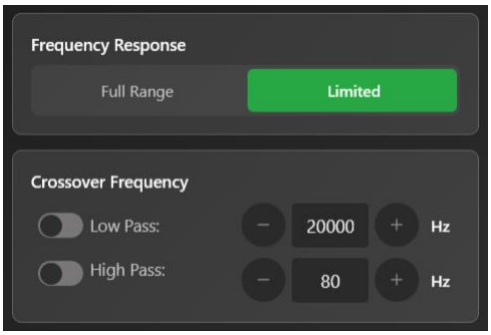
Dolby Enabled - Speaker at listener-level pointed up, bouncing audio off the ceiling to create a virtual top speaker.

Frequency Response - Determines whether the speaker outputs at full range or has a limited frequency response.

Full range - The output channel will pass all frequencies.

Limited – Crossover filter(s) will be applied to the output channel.

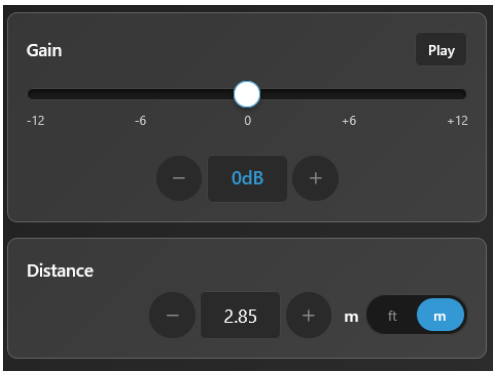
Crossover Frequency



Low Pass – Sets a Low Pass filter value for the output.

- For Sub (LFE) Outputs, only the low pass filter can be adjusted.

High Pass - Sets a High Pass filter value for the output.

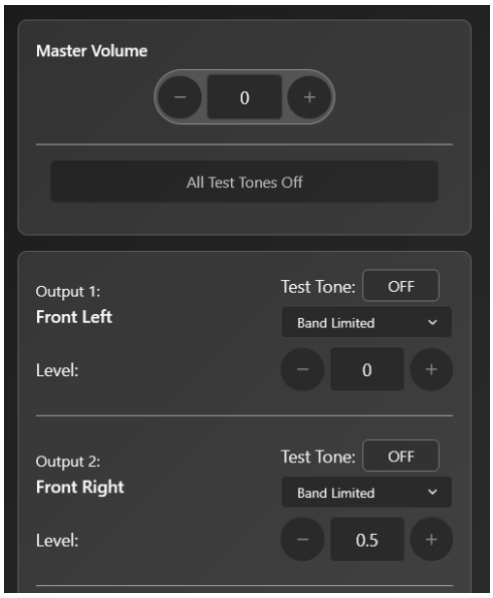


Gain - Adjusts the gain for the output. Gain can be adjusted from -60 dB to +60 dB.

Test Tone - Press the Play button to generate pink noise on the selected output. Press the Stop button, now in place of the play button, to stop the test tone.

Speaker Distances - Sets the distance from the selected speaker to the listening position. Distance can be adjusted from 0.1 ft (0.03 m) to 30 ft (9 m). To toggle distance between feet or meters, press the toggle button to the right of the distance values.

Speaker Levels - The Speaker Levels menu allows quick level adjustments for all outputs.



Master Volume - Sets the Hyperion's main volume level while adjusting individual levels.

All Test Tones Off - Stops test tone playback on all active channels.

Test Tone - Toggles the test tone ON or OFF for the selected output.

Test Tone Type – Selects whether the test tone used is Full Range or Band Limited.

Level - Sets the gain from -60 to 60 dB for the selected output.

Navigating the Web GUI

EQ Settings

A custom EQ curve can be created for each output on the Hyperion. Each output EQ can have up to 8 bands including a Low Shelf, 6 Peaking Filters, and a High Shelf.

EQ Graph - At the bottom of the page is a graph displaying an approximate visualization of the EQ curve created. Each of the bands is displayed on the graph and can be clicked and dragged to quickly adjust the frequency and gain of the selected band.

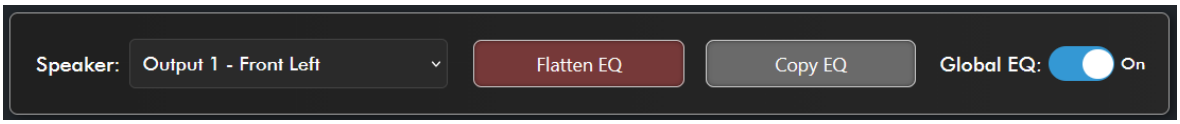
Open/Close Graph - Click the top of the graph window to hide or show it.

Speaker - Selects the output to apply an EQ to.

Flatten EQ - Resets the frequency and Q values back to their defaults, and the gain values back to 0. Choose whether the currently selected output's EQ is flattened, or if all output EQs are flattened.

Copy EQ - Applies the current speaker output's EQ values to another output.

Global EQ Toggle - Enables EQ filtering on all speaker outputs of the Hyperion.



PEQs - The Peaking EQ filters adjust the gain for certain ranges of frequencies.

Low Shelf - Adjusts the gain of all frequencies below a specified frequency.

High Shelf - Adjusts the gain of all frequencies above a specified frequency.

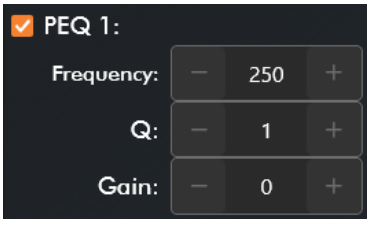
EQ Adjustments:

Enable EQ - When checked, EQ settings applied to this band will affect the output.

Frequency - Adjusts the center frequency for the selected EQ band. Frequency can be set from 20 to 20k Hz.

Q - Adjusts the width of the frequency range affected by the gain. A low Q factor affects a wide range of frequencies, and a high Q factor targets a narrow range. Q factor can be set from 0.3 to 18.

Gain - Boosts or cuts the EQ band. Gain can be set from -12 to +12 dB.



Network Settings

Allows the user to configure Hyperion's network settings between an automatic or static IP address. The Hyperion will automatically pick up an IP address if there is a DHCP server on the network.

MAC Address - Display's the Hyperion's MAC address.

Device IP Settings - Configures the IP settings for the Hyperion.

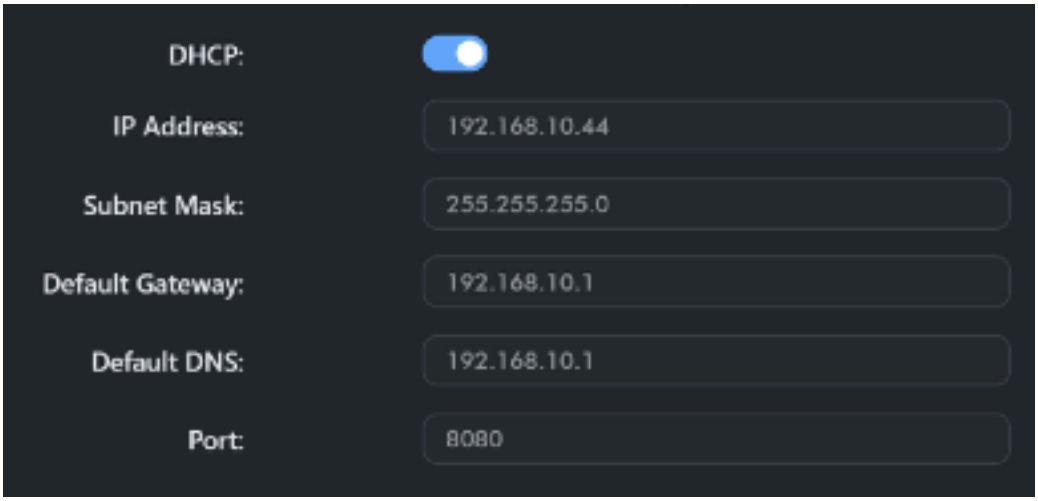
DHCP - Sets DHCP On or Off. DHCP is enabled by default. To set a static IP address DHCP must be turned off.

IP Address - Displays the current IP address for the Hyperion. When setting a static IP address, type the desired address into this field. Double check all network devices to ensure the IP address is not in use.

When setting a static IP address, a Subnet Mask and Default Gateway must be determined. If these values are unknown, leave the unit set to DHCP and contact the network administrator.

Once a static IP is established, click the Apply button to save these settings.

Port - Changes the TCP port from its default (8080).



Console

The console displays information being received by the Hyperion, and information transmitted from the GUI. This aids in troubleshooting to ensure the Hyperion is correctly responding correctly to commands.

Console Tabs – Switches between the MCU and the DSP2 consoles.

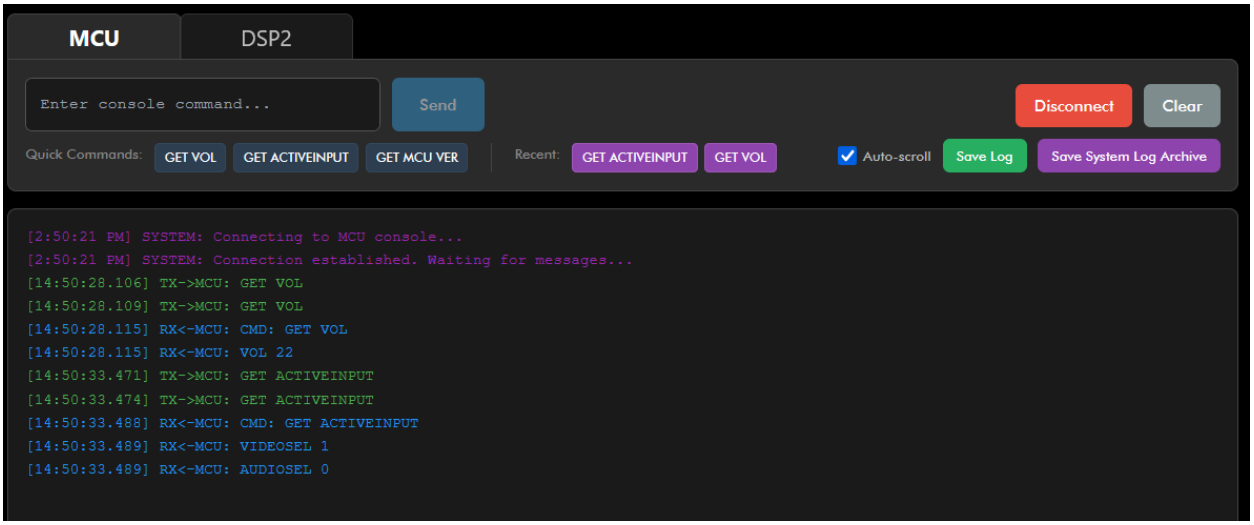
Console Command Input – Enables direct communication by entering an API Command and clicking SEND. The console will display the sent message, and the response from the Hyperion.

Quick Commands - Shows the most recent commands sent. Click a previously sent command to send it again.

Disconnect / Connect - Stop / Start the stream of console messages to and from the Hyperion.

Clear - Clears all messages in the console.

Auto Scroll - When checked, the console automatically scrolls down when a new message is received.



Support Snapshot – Opens the Support Snapshot page where a file of all system logs from up to a week prior can be downloaded.

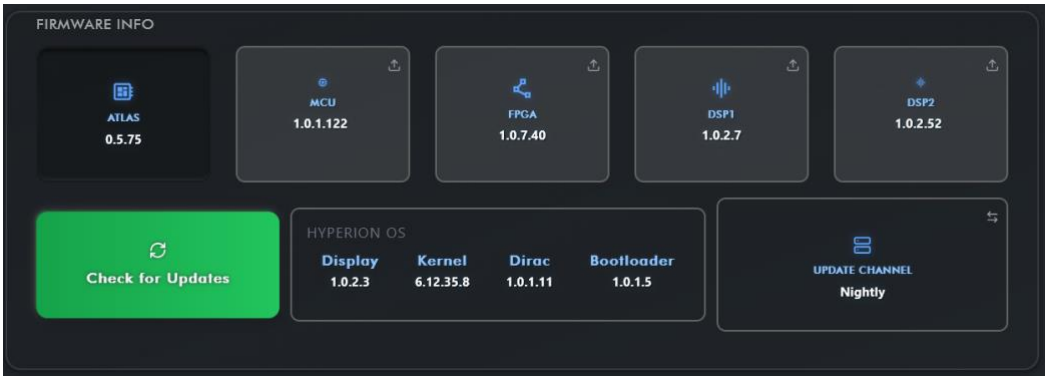
Firmware Update

AudioControl's dedicated team of engineers is always working to improve the quality of our products and ensure they last beyond the duration of their expected lifecycle.
Firmware updates will be available occasionally as improvements are needed or features are added. It is recommended to keep firmware up to date and regularly check for updates.

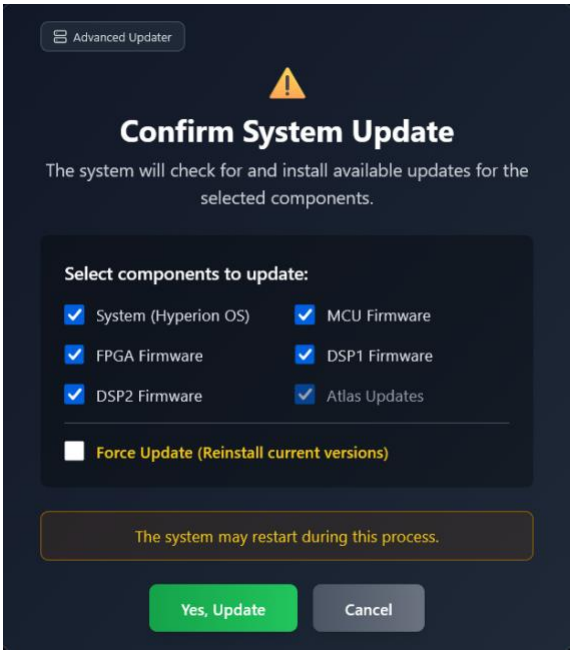
How To Update:

The Hyperion receives updates over the information superhighway we call The Internet.

Navigate to the System page and scroll down to the Firmware Info section.



Click Check for Updates and select which components to update. Click Yes, Update.
If newer versions are available, the firmware will be updated for the selected components.



Update times vary depending on which component is being updated, the size of the update file, and the position of the Earth's moon relative to Pluto.
While the update is processing, the web GUI will display progress bars and console messages relaying the status of each update. The Hyperion may restart several times during an update and will power cycle one final time when all updates are complete. Once the Hyperion is back online, the web page will refresh, and all firmware versions will be up to date.

Screensaver Settings

Clicking the Screensaver Settings button on the System settings page opens a new page where the device's screensaver can be configured.

Screensaver On/Off – Enables the Screensaver.

Screen Time Out Delay – Sets the duration for the last panel interaction. After the set time, the display will sleep and begin playing the screensaver.

Slideshow interval - Sets the time an image is displayed during the screensaver before transitioning to the next image.

Image Upload – Allows a user to upload up to 1GB of images to the screensaver slideshow. Formats supported include JPG, PNG, WebP, GIF, BMP, and TIFF with a max file size of 50MB per file.

Current Images - Displays all images uploaded to the device that are available to be used in the slideshow. Images can be removed or temporarily hidden.

Save and Load Settings

Clicking the Save/Load Settings button on the System settings page opens the Configuration manager. Here, a .json file can be downloaded with all current device settings or a previously saved .json settings file can be uploaded.

Backup Configuration – Click the Download Backup to save the Hyperion config file to a phone or computer. Store the file somewhere easy to remember in the event it is needed when returning to this install site.

Restore Configuration - Click the upload box and select a saved configuration file. All settings will be updated to match the .json file. When finished, check through the web interface to ensure all settings have been updated appropriately.

Using Dante

The Hyperion is Dante enabled, allowing sending and receiving of audio signals from other Dante or AES67 enabled devices.
A CAT 5e or CAT 6 cable is recommended.

Connect an Ethernet cable from any of the Hyperion's Ethernet ports to the same network as other Dante devices.
We recommend using the Dante Controller software that can be downloaded from Audinate's website at:

https://my.audinate.com/support/downloads/dante-controller.

Once the software is installed, use an Ethernet cable to connect a computer to the same network as the Dante devices, and open Dante Controller.
Located here is a list of all available Dante-enabled products in the system.

The Hyperion can send and receive stereo audio signals across the network and transmit audio from whichever input is active. If the Hyperion receives a multi-channel signal from eARC, HDMI, or Digital inputs, it will transmit a downmixed stereo signal over Dante.

Enable AES67

To use AES67, AES67 mode will need to be enabled on the device using Dante Controller.

Inside the Dante Controller software, double-click the Hyperion to open the Device View window, and navigate to the AES67 Config tab. On this tab, in the AES67 mode panel, the current AES67 status will be shown, and a new mode can be adjusted.

Change the AES67 New status from Disabled to Enabled.

Network Configuration

On networks with many network devices and Dante enabled devices, it is recommended to put the audio over IP traffic onto a VLAN to avoid slowing down the primary network traffic.

Dirac Live *Future Firmware*

The Hyperion features Dirac Live Available for Room Correction, Bass Control, and Active Room Treatment (the whole nine yards).

A Dirac Live license can be obtained for the Hyperion from www.dirac.com/online-store and allows users to download & install the Dirac Live software to quickly, easily, and effectively calibrate the listening area.

The Hyperion comes packaged with a calibrated microphone designed for use with Dirac Live, with a calibration file available from www.audiocontrolpro.com.

Running a simple Room Calibration

Ensure all speakers are set correctly in the Hyperion's Output Config menu, and that all speakers are connected and outputting properly.
If a speaker is listed in the Output Config menu that does not output any audio, the Room Calibration cannot be completed.

Once a license has been obtained and the Dirac software has been installed, connect the provided mic to the computer, open Dirac Live, and select the Hyperion model that is being calibrated.

Select the calibrated mic and load the calibration file, then move onto the Volume Calibration. Set the mic gain to max, click the play button for each speaker, and adjust the levels until all speakers measure around -12dB, and subwoofers measure around -16dB (these measurements do not have to be perfect, just close).

Select the speaker arrangement, then start the measurements, moving the mic each time to match the measurement positions shown in the software.
Dirac recommends a minimum of 5 measurement positions for any EQ curve.

Dirac will then create a filter. The settings for each speaker can be tweaked slightly as desired or left as Dirac has calibrated them. At this point, it is recommended to save the Dirac Live session.

Proceed to the Filter Export, give the filter a fitting name, then export it. The file will then be uploaded to the Hyperion. The Hyperion screen will display a notification stating that the upload was successful.
Save the session and close Dirac.

The EQ Filter can now be activated by pressing the EQ button on the remote, or by setting selecting the Dirac Filter in the Input Settings menu.

For more detailed instructions, visit dirac.com/live/quickstart/, or check the AudioControl Pro knowledge base.

Diagnostics and Troubleshooting

There are no lights on the Hyperion

- Pressing the power button on the front panel or the factory remote wakes the Hyperion.
- Tap the screen to wake the display if it is asleep.
- Verify that the power cord is plugged into a live AC outlet.
- Make sure no giant lizards have knocked out the city's power grid (again).

The audio does not match the video

- Confirm that the correct input is selected.
- Switch to a different audio mode.

Audio sound is poor or distorted

- Verify speaker configuration settings match the speaker’s layout and frequency response.
- Verify that all interconnect cables are fully seated in their ports. Disconnect and reconnect them to ensure a good connection.
- Consider upgrading from wax cylinder to .mp3

Humming on the outputs

- Replace the input cables and ensure they are connected properly.
- Disconnect all input cables. If the hum disappears, connect one input at a time until the hum returns. This input may require a ground isolator or have a bad connection.

No Audio from the TV

- Check the TV’s sound settings to ensure that the ARC/eARC channel or Digital output is enabled.

The Hyperion is not coming out of standby

- Remove power from the Hyperion and disconnect all inputs and outputs. Let the device sit without power for at least 5 minutes, then reconnect power.
- Confirm there are no shorts circuits on trigger connections.

The Hyperion is not appearing on the network

- If the Hyperion does not obtain a DHCP IP when connected to a network, it will default to an APIPA address in the 169.254.[0-255].[1-254] range. The IP address can be found on the front panel by tapping the Gear icon and going to Network settings.
- If there was an issue setting up the static IP address, press and hold the Power button for 10 seconds to factory reset the Hyperion.

My cookies spread out too much

- Chill the dough for 30 minutes before baking.

API Commands

A list of all the Hyperion's API commands is accessible on the device itself, and can be found online by navigating to:

hyperion.local:8080/docs

or

[IP Address]:8080/docs

If access is restricted to a Hyperion and this manual is being read for its dramatic narrative arc, the full list of commands can be found here:

Maintenance

- Do not operate these products outside the specified temperature and humidity range listed in the specifications.
- Ensure adequate ventilation to allow this product to operate efficiently.
- Repair of the equipment should only be carried out by qualified professionals.
- Only use this product in a dry environments. Do not allow any liquids or harmful chemicals to come into contact with this product.
- Clean the unit with a soft dry cloth.
- Rotate tires every 6 months.

Support

Before returning any item to AudioControl, you must obtain a return authorization.

If your product needs service, please contact a trusted and trained AudioControl tech support representative, either by email or phone. We will assist with troubleshooting, and verify if there is anything wrong with the system that would require it to be returned to our factory.

Contact tech support at

Phone: +1 (425) 775-8461

Email: techsupport@audiocontrolpro.com

Warranty

In just the same way as being covered in honey and thrown into a dark pit full of hungry woodchucks, people are scared of warranties. Lots of fine print. Months of waiting around. Well, fear no more. This warranty is designed to make you rave about AudioControl. It's a warranty that looks out for you and your client, plus helps you resist the temptation to have your friend Sparky, who's "good with electronics," try to repair your AudioControl product. So go ahead, grab a cup of tea, and carefully read through this warranty.

Our warranty has conditional conditions! "Conditional" doesn't mean anything ominous. The Federal Trade Commission tells all manufacturers to use the term to indicate that certain conditions have to be met before they'll honor the warranty. If you meet all of these conditions, AudioControl will, at its discretion, perform warranty service on any AudioControl products that exhibit defects in materials and/or workmanship during the warranty on your product for five (5) years from the date you bought it, and we will fix or replace it, at our option, during that time.

Here are the conditional conditions:

1. You need to hold on to your sales receipt! All warranty service requires original sales receipt documentation.
   The warranty only applies to the original purchaser from an authorized AudioControl dealer.
   Note: Products purchased from unauthorized dealers are not covered under warranty.
2. If an authorized AudioControl dealer installs your AudioControl product, the warranty is five years, otherwise the warranty is limited to one year.
3. Our warranty covers AudioControl products that have been installed according to the instructions in the installation manual.
4. You cannot let anybody who isn't: (A) the AudioControl factory; or (B) somebody authorized in writing by AudioControl service your AudioControl product. If anyone other than (A), or (B) messes with your AudioControl product, the warranty is void.
5. The warranty is void if the serial number is altered, defaced or removed, or if your product has been used improperly. Now that may sound like a big loophole, but here is what we mean by this: Unwarranted abuse is: (A) physical damage (don't use your product to level your dining room table); (B) improper connections (120 volts into the RCA jacks can fry the poor thing); (C) sadistic things! This is the best product we know how to build, but for example if you mount it to the front bumper of your car, drop it over the Niagara Falls or use it for Clay Pigeon shooting practice, something will go wrong.

Assuming you conform to 1 through 5, and it really isn't all that hard to do, we will have you send your product to us for warranty service.

Legalese Section

This is the only warranty issued by AudioControl. This warranty gives you specific legal rights, and you may also have rights that vary from state to state. Promises of how well your AudioControl product will work are not implied by this warranty. Other than what we've said we'll do in this warranty, we have no obligation, express or implied. We make no warranty of merchantability or fitness for any particular purpose. Also neither we nor anyone else who has been involved in the development or manufacture of the unit will have any liability of any incidental, consequential, special or punitive damages, including but not limited to any lost profits or damage to other parts of your system by hooking up to the unit (whether the claim is one for breach of warranty, negligence of other tort, or any other kind of claim). Some states do not allow limitations of consequential damages.

Acknowledgments

Dolby Atmos

DTS® Digital Surround™

Thank you for choosing AudioControl!
Please contact us with any questions, we are happily at your service!

AudioControl®

an AVPro brand

support: 425-775-8461

techsupport@audiocontrolpro.com