



madVR Envy

Kaleidescape Setup Guide

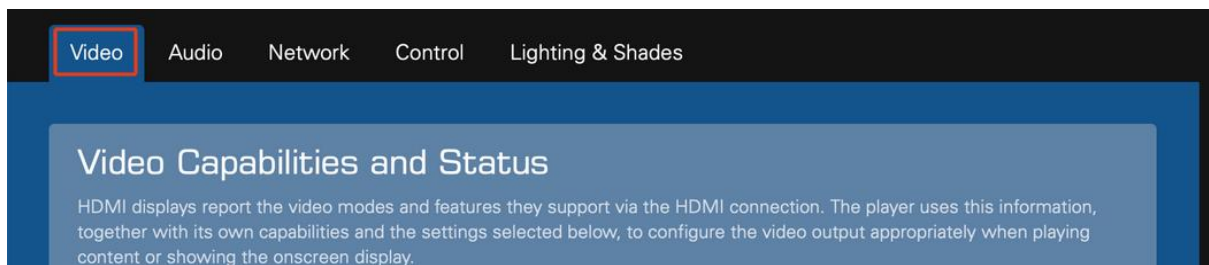
<https://madvrenvy.com>

Revision 2.1

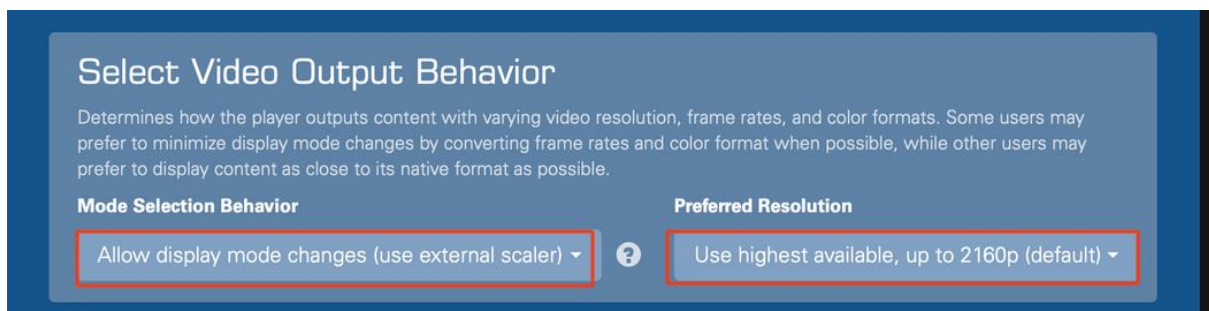
Kaleidescape Setup with the Envy

Please follow these instructions to set up the Kaleidescape for ideal playback with the madVR Envy.

1. Use a web browser to access the Kaleidescape advanced settings, as these settings are not accessible using the Kaleidescape remote control. You can **get the IP address** of the Kaleidescape by going to its **Settings** menu and choosing **Other Settings** from the bottom menu. Entering Kaleidescape IP with **/components** will take user to the take the user to its components list for servers and players.
2. Locate the player that is being used in the system with the Envy video processor and click the **Settings** button.
3. Click on the “Video” tab in the header of the Kaleidescape advanced options page in your browser.



4. Under “Select Video Behavior”, select choose “**Allow display mode changes (use external scaler)**” and “**Use highest available, up to 2160p (default)**”.



The “**Allow display mode changes (use external scaler)**” option ensures the Kaleidescape outputs the native resolution, frame rate, and chroma format of the movie whenever possible. This is **especially important when using the Strato K** with an Envy, as it preserves native 4:2:2 and 4:4:4 content and allows the Envy to perform any required chroma upscaling for maximum image quality (for more information on the Strato K, see Appendix B). Otherwise, depending on the option selected in “Mode Selection Behavior”, the Kaleidescape player will output the content in various ways depending on the player being used.

If **Allow Display Mode Changes** is selected instead of **Allow Display Mode Changes (use external scaler)** the output resolution will always output the resolution to what is selected in the **Preferred Resolution**, though content will still change framerate. An example of this behavior is with the Strato E, which normally outputs 1080p for the UI if using the external scaler option. Though it will output 3840x2160 if Allow Display Mode Changes and 2160p is set as the preferred resolution.

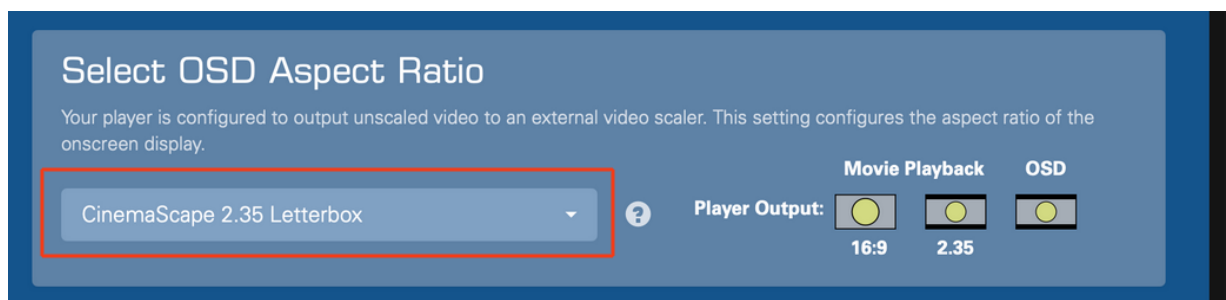
In instances where **Minimize Display Mode changes (default)** are selected, this will use the resolution set in **Preferred Resolution**, and force the output to 60Hz for all content, unless a specific framerate is selected in **OSD Refresh Rate**. Additionally, when using a **Strato V, E, or M**, this setting will force the Main UI to be BT2020 and HDR and will not change based on Dynamic Range. This will result in SDR content being displayed as HDR, which could be problematic depending on system configuration.

Using the **Minimize Display Mode changes** setting can make HDMI switching faster (and why it is sometimes set up this way without understanding the implications) but comes at the expense of video playback quality. See Appendix A for more information.

Not using **Allow Display Mode Changes (use external scaler)** can also potentially impact the reported and displayed aspect ratio, which impacts the Envy's auto-aspect ratio detection and black bar management.

The **"Use highest available"** Preferred Resolution setting ensures that the Kaleidescape will not downscale any resolution (for instance, so that 4K is output as 4K and not 1080p).

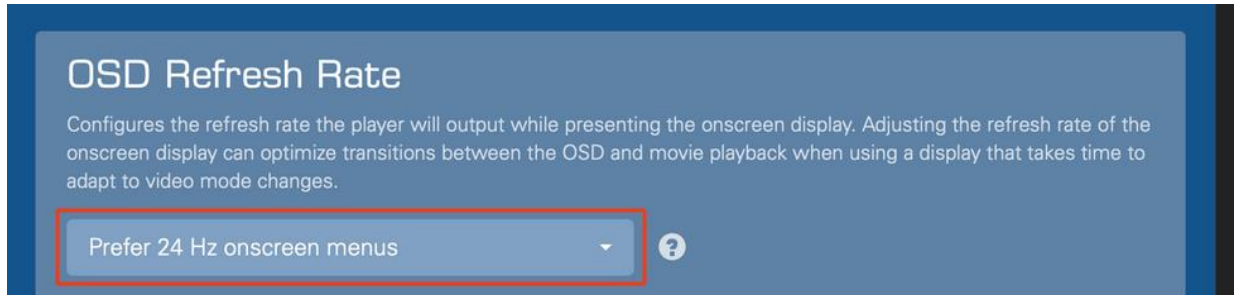
- Under **"Select OSD Aspect Ratio"**, choose **"CinemaScope 2.35 Letterbox"**, if you have a **scope screen** with an aspect ratio of 2.35 or higher. This setting (when used with the "HDMI Content Type Metadata" in Step 11 and "Detect Kaleidescape Menus" in Step 14) will natively make use of your full screen (without using NLS) to show the Kaleidescape Cover Art, Movie List and other Kaleidescape menus. If your screen has an aspect ratio less than 2.35, such as 16:9, chose the "16:9 (default)" option instead.



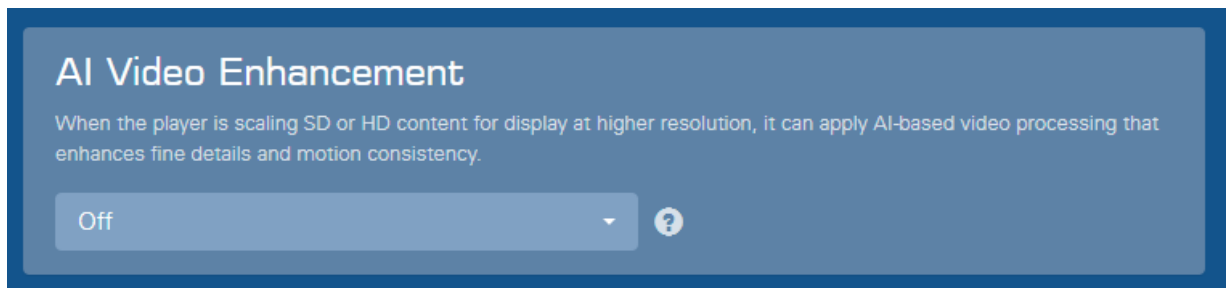
- Under **"OSD Refresh Rate"**, choose **"Prefer 24 Hz onscreen menus"** or **"Automatic (default)"**. Choosing **"Prefer 24 Hz onscreen menus"** is recommended because it allows for the fastest HDMI switching time when starting and stopping movies (since nearly all movies are at 24 Hz which matches the menu framerate with this setting). With this setting, the Kaleidescape menu animations will not be as smooth, but many people find the much faster HDMI switching times to be a worthwhile tradeoff. Likewise, if you have the Envy Extreme, you can have it apply MotionAI to create a much smoother look to the menus, even if MotionAI is not used for the movie itself.

If **“Automatic (default)”** is selected, this enables the Kaleidescape menus to run at 60Hz for smoother Kaleidescape menu animations, although this causes a long handshake when switching between the movies and Kaleidescape menus. However, this may be desirable depending on how the rest of the system needs to be configured.

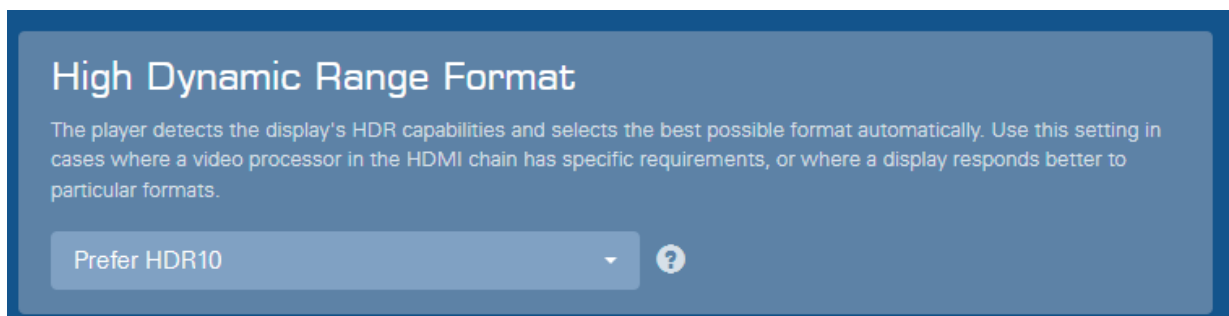
See Appendix A for more information.



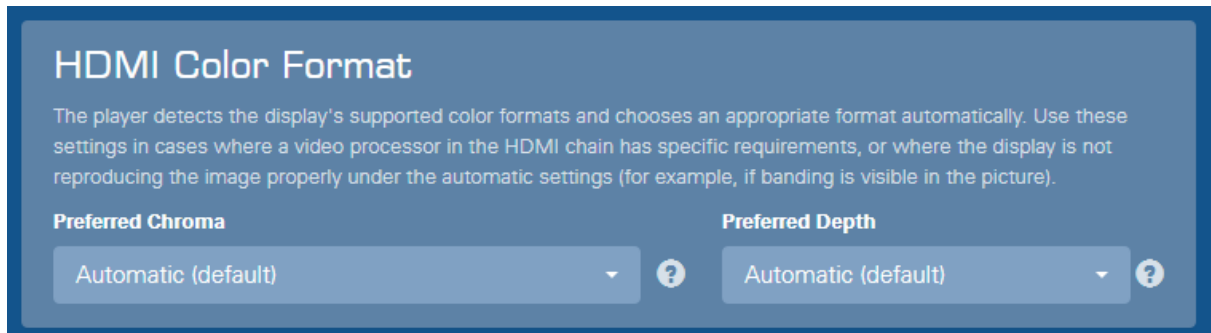
7. Under **“4K Ultra HD Support”**, please keep this option at the default **“Automatic (default)”** unless bandwidth needs to be limited for compatibility with other devices and/or stability in system.
8. If using a Strato V, E, or M, additional options are available compared to a Strato C or S. The first of these options are **“AI Video Enhancement”**. This feature should be turned **“Off”** as it will apply image sharpening in addition to changes in motion and known to cause artifacts with the Envy.



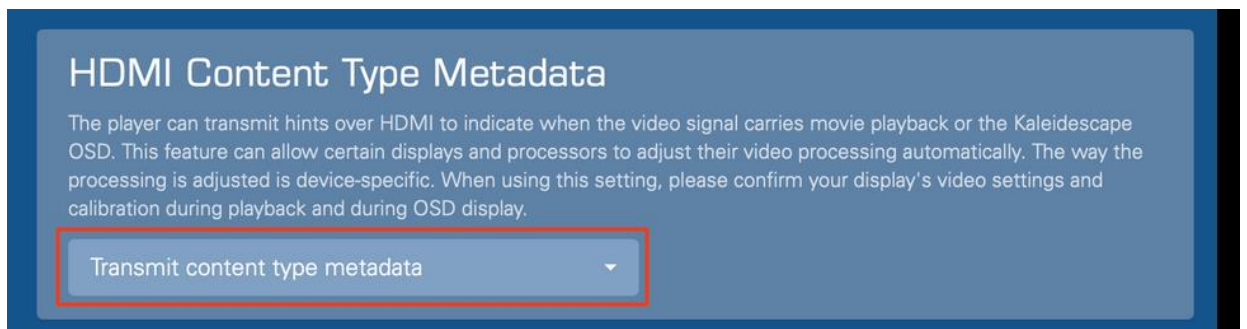
9. The next option that is unique to the Strato V, E, and M is **“High Dynamic Range Format”**. This option in most cases users should select **“Prefer HDR10”** unless you want or need to use the Kaleidescape’s Low Latency Dolby Vision (LLDV). In which case you must also select one of the LLDV EDID options in the Envy HDMI Configuration menu under EDID Output Overrides.



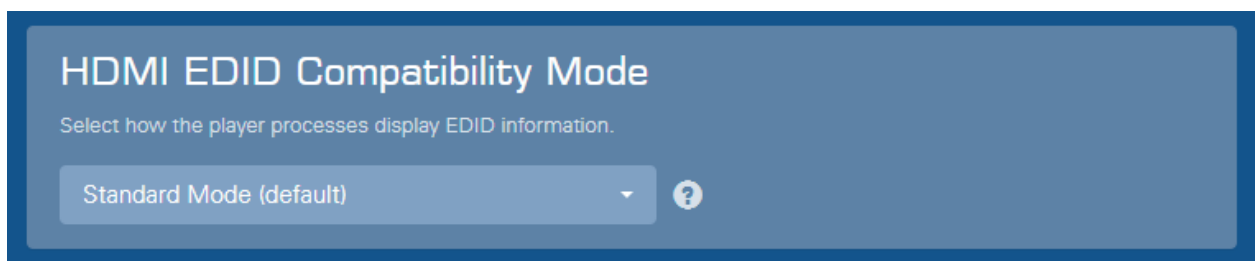
10. **HDMI Color Format** should be left at **“Automatic (default)”** for both **“Preferred Chroma”** and **“Preferred Depth”**. Changing these should only be done if you understand exactly you are changing these, and how it can influence how the Kaleidescape player behaves when going in and out of movies from the Kaleidescape UI. In almost all cases, both of these options should be left as **“Automatic (default)”**.



11. Under **“HDMI Content Type Metadata”**, select **“Transmit content type metadata”**.



12. The last option is available in the Strato C which is **“HDMI EDID Compatibility Mode”**. This should be set to **“Standard Mode (default)”** unless needed for stability reasons within system.



13. Press OK to apply the settings.
14. Open the Envy **“Black Bar Configuration”** menu (press the menu button on the Envy remote, then press the right arrow 3 times). Highlight **“Active Configuration”** at the bottom of the menu. Press right arrow one time, so that it changes to **“Base Configuration”**. Then change the **“Detect Kaleidescape Menu”** to **On** and exit the menu. This completes the Kaleidescape setup.



15. If you are using a scope screen and have not previously set up the **Screen Boundaries** option in your Envy, you must for the Envy to show the Kaleidescape menus at full screen. To do so, go to the Envy **“Screen Configuration”** menu and under **“Screen Boundaries”**, choose **“Run Assistant”**. Note that if you are using a Barco CinemaScope projector with 5K output from the Envy, with a 2.37 aspect ratio screen, then the correct setting is None for Screen Boundaries. In this case Envy knows you have a 2.37 screen, even with Screen Boundaries set to None, since 5K resolution is natively 2.37.

This completes the Kaleidescape setup. Please see **Appendix A on the next page** for additional important information.

Appendix A – Understanding Kaleidescape and Framerates

Kaleidescape players are often set up to output movies at 60p instead of 24p. This is because its movie selection screen only uses 60p, so it avoids the longer HDMI handshakes when movie playback is started 24p, and when stopped.

Almost all movies with few exceptions (Gemini Man, Billy Lynn's Long Halftime Walk, a few others) are mastered at 23.976 frames per second (24p) and are meant to be watched this way. In some cases, a CE device (e.g., the Kaleidescape) may be set to output 24p content at a frame rate of 59.94 fps (60p).

This means that each video frame needs to be repeated, some frames twice, some frames three times, and this uneven pattern (called "3:2 pulldown") causes a slightly distracting motion jerkiness. Not everyone may notice this, but now that we mention it, you very well may. Since the Kaleidescape movie selection screen is always output at 60p with the default settings, setting the Kaleidescape to output movies also at 60p means you can start and stop movie playback much faster. That is because when switching between 60p and 24p, a (slow) HDMI handshake is required.

So, in the case of your Kaleidescape, by outputting movies at 60p you get faster HDMI handshakes, but with motion artifacts some people find distracting, and you are also not watching the movie as the director intended. Therefore, for the best cinematic experience, we recommend that the Kaleidescape be set to output the native frame rate for the movie (24p).

This is done by selecting the option "**Allow display mode changes (use external scaler)**", as covered in Step #4 of this document. Further, since movies will now be output at 24p, you can get much faster HDMI switching by making the Kaleidescape menus (Cover Art view, Movie List Viewer, Settings, etc) also run at 24p. This is achieved by setting the "**Prefer 24 Hz onscreen menus**" option, as covered in Step #6 in this document.

Note that one downside of forcing the Kaleidescape menus to 24p is that the animations in the menu, such as the shuffling of Cover Art posters, will not be smooth like at 60p. However, you can use **MotionAI** in the Envy Extreme to solve this problem. With MotionAI, the Kaleidescape menus and animations will look like they are at 60p, while remaining at 24p. This gives you the best of both worlds – faster HDMI handshakes while retaining the look of 60p in the menus.

Further, for those who prefer to watch their movies without any motion handling, there is an easy option to have the Envy apply MotionAI only when in the Kaleidescape menu, with it turn off during the movie. Just set the **Kaleidescape Menu** option to **On** in the **Envy Motion & Deinterlacing menu**. At any rate, if you choose not to use the "Prefer 24 Hz onscreen menus" option, it is still highly recommended to use the "Allow Display mode changes (use external scaler)" for reasons discussed in this document.

Appendix B – Kaleidescape Strato K with the madVR Envy FAQ

Q: What are the benefits of the new Kaleidescape Strato K?

The Strato K introduces Kaleidescape's new 4K Cinematic format, which offers higher bitrates and support for content encoded in either native 4:2:2 or 4:4:4 chroma formats, depending on the studio master. The result is the highest-fidelity video experience Kaleidescape has offered to date, preserving more of the information contained in the original source.

The good news for Envy owners is that *all* Envy models past and present already support these new 4K Cinematic titles and can fully benefit from the increased image fidelity. Looking ahead, customers interested in future native 8K content from the Kaleidescape should consider the Envy Core MK2 (with Core Premium), Envy Pro MK3, or Envy Extreme MK3, which feature 8K HDMI input.

Q: Will I get the full benefit of Kaleidescape's new 4K Cinematic format with my existing Envy?

Yes. All Envy models are fully capable of preserving and processing the native 4K Cinematic signal, whether the source is delivered as 4:2:2 or 4:4:4. When paired with a properly configured Strato K, the Envy can take full advantage of the format's increased fidelity while continuing to provide its industry-leading dynamic tone mapping, aspect ratio management, subtitle management, MotionAI, exceptional chroma upscaling and other video enhancement capabilities. The new format complements the Envy's processing strengths and allows customers to realize the full benefits of both products working together.

Q: Does the new Kaleidescape Strato K support both native 4:2:2 and native 4:4:4 content?

Yes. Kaleidescape has confirmed that some 4K Cinematic titles will be sourced from native 4:2:2 masters while others will be sourced from native 4:4:4 masters, and the encoding will match the source content rather than converting everything to a single format.

Q: How should the Strato K be configured when used with an Envy?

For the best results with an Envy, be sure to use the **Use External Scaler** option on the Strato K. In this mode, the Strato K automatically outputs content in its native chroma format, switching between 4:2:2 and 4:4:4 as appropriate for each title.

This preserves the maximum fidelity available from the source and allows the Envy to receive the content in its native format. Combined with the Envy's industry-leading video processing and chroma upscaling, this ensures the highest possible image quality throughout the video chain.

Q: Is there an advantage to sending native 4:2:2 to the Envy?

Yes. The Envy's chroma upscaling is exceptional and is designed to deliver the highest possible image quality when chroma reconstruction is required. Therefore, for optimal results, we recommend having the Strato K output content in its native chroma format. This allows native 4:2:2 content to be delivered directly to the Envy, where the final 4:2:2 → 4:4:4 chroma reconstruction is performed by the Envy rather than the source player.

This approach preserves the original chroma information for as long as possible in the video chain and allows customers to benefit from the Envy's best-in-class video processing capabilities.

Q: Do I need an Envy with 8K input support to enjoy Strato K's new 4K Cinematic format?

No. The new 4K Cinematic format remains a 4K format, so all Envy models can fully benefit from the higher-quality source material, including native 4:2:2 and 4:4:4 content, higher bitrates, and improved chroma fidelity.

Q: When does Envy 8K input support become important?

Envy 8K input support is ideal for customers who want to experiment with the limited native 8K content currently available on Kaleidescape and as more becomes available. Likewise, it is important for those who value maximum long-term future-proofing for their theater investment.