



madVR Envy

Kaleidescape Setup Guide

Revision 1.0

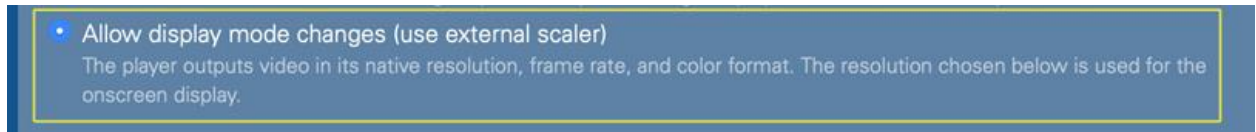
Kaleidescape Setup with the Envy

Please follow these instructions to setup your Kaleidescape for proper playback with the madVR Envy. Screenshots of the full Kaleidescape interface with the desired settings are shown in Appendix B.

1. Use a web browser to access the Kaleidescape advanced settings, as these settings are not accessible using the Kaleidescape remote control. If you do not know the IP address of the Kaleidescape, you can get that from its on-screen options.
2. Click on the “Video” tab in the header of the Kaleidescape advanced options page in your browser.



3. Under “Select Video Behavior”, select the option “**Allow display mode changes (use external scaler)**”.



This option ensures the Kaleidescape outputs that the original resolution and framerate of the movie. Otherwise, it will output movies at 60p instead of 24p, which makes HDMI switching faster (and why it is often set up this way), but at the expense of video playback quality. **See Appendix A for more information.**

This setting also ensures that the native aspect ratio of the movie is used. Otherwise, scoped movies will be played back as 21:9 (2.33:1 or 2.35:1), instead of 2.40 or whatever the actual aspect ratio is, which impacts the Envy’s auto-aspect ratio detection and black bar management.

4. Under “4K Ultra HD Support”, select “Automatic (default)”.
5. Optional: Under “HDMI Content Type Metadata”, select “Transmit content type metadata”.
6. Press OK and apply the settings. This completes the Kaleidescape setup.

Appendix A – 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 meant to be watched this way. In some cases, a CE device (e.g., your 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 mentioned it, you very well may. Since the Kaleidescape movie selection screen is always output at 60p, 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 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)" from the "Select Video Behavior" section of the advanced settings, as covered in the setup instructions at the start of this document (step #3).

Tip: Using the Envy you can force all output to 24p. If you do this, the movie selection screen will be output by Envy in 24p, even though the Kaleidescape outputs it to Envy at 60p. This way your movie selection screen and the movies will all be at 24p, avoiding the slower handshake that would take place otherwise, while eliminating the 3:2 pulldown discussed above.

Of course, you would want only content from the Kaleidescape to be forced all the time to 24p. Otherwise your other sources that has native content at 60p, like an Apple TV or a TV box, would be forced to 24p which would create similar motion issues.

We can use "profiles" with the Envy to force 24p, but only for the Kaleidescape. To do this, create a Source Device profile for the Kaleidescape and add the Decimation & Motion menu page to it, setting the Output Frame Rate in that menu page to 24p. Then when watching your Kaleidescape, simply choose your profile for the Kaleidescape, and when watching other sources, choose that source profile or the "Disable Profiles" source device. This can also be automated using a control system. For more information about profiles, please see the Introduction to Profiles guide.

Appendix B – Screenshot of Desired Settings

Video
Audio
Network
Control

Video Capabilities and Status

HDMI displays report the video modes and features they support via the HDMI connection. The player uses this information, together with its own capabilities and the settings selected below, to configure the video output appropriately when playing content or showing the onscreen display.

Show video capabilities and status

Select Video Behavior

Determines how the player outputs content with varying video resolution, frame rates, and color formats. Some users may prefer to minimize display mode changes by converting frame rates and color format when possible, while other users may prefer to display content as close to its native format as possible.

- Minimize display mode changes (default)
The player will use the resolution below, avoiding mode changes unless this would compromise color reproduction or frame rate. On some displays, disabling Deep Color will ensure the mode change is avoided for HDR playback, but at a cost to image quality.
- Allow display mode changes
The player uses the resolution chosen below for the onscreen display and video playback, scaling the video if necessary. It will switch frame rates for film content (e.g. 24p), and may also change display modes for best color reproduction.
- Allow display mode changes (use external scaler)
The player outputs video in its native resolution, frame rate, and color format. The resolution chosen below is used for the onscreen display.

Select Video Resolution

Choose the display resolution to be used for the onscreen display. Video scaling is disabled by the setting above.

- Use highest available, up to 2160p (default)
- 1080p
- 1080i
- 720p

PAL Display Support

If enabled, the onscreen menus will be displayed at 50Hz, which is common outside of North America.

- Do not use 50Hz onscreen menus
- Use 50Hz onscreen menus

Select Screen Aspect Ratio

The CinemaScope 2.35:1 modes cannot be used when the *use external scaler* option is selected above. To use CinemaScope, first choose one of the other Video Behavior options.

▼ Hide Advanced Video Settings

Deep Color Support

The player detects the display's Deep Color capability automatically. Use this setting only in cases where a display or other device in the HDMI chain is incorrectly reporting its Deep Color capability.

- Detect Deep Color support automatically (default)
- Display supports Deep Color
- Disable Deep Color

4K Ultra HD Support

The player detects the display's 4K Ultra HD capability and selects the best possible output mode automatically. Use this setting only in cases where cabling quality, or difficulties with the display or other HDMI devices is impacting the reliability of the connection.

4K Ultra HD Support

The player detects the display's 4K Ultra HD capability and selects the best possible output mode automatically. Use this setting only in cases where cabling quality, or difficulties with the display or other HDMI devices is impacting the reliability of the connection.

Note: If the display supports HDMI 2.0 but an intermediate component like an audio receiver does not, you should connect the HDMI 1 output directly to the compatible display and connect the audio receiver to the HDMI 2 audio-only output.

- Automatic (default)

The player automatically detects the capabilities of the display, and uses the best possible mode supported by the display and all intermediate HDMI devices.

- Limit output to 13.5Gbps

The display, an intermediate device, or the cabling is limited to 13.5Gbps/450MHz operation or has difficulty sustaining a stable connection at higher speeds. Selecting this option will limit chroma resolution to 4:2:0 in 4K Ultra HD 50/60Hz modes. All other HDMI features, including deep color, will be available if supported by the display.

- Limit output to 10.2Gbps

The display, an intermediate device, or the cabling is limited to 10.2Gbps/340MHz operation or has difficulty sustaining a stable connection at higher speeds. Selecting this option will limit chroma resolution to 4:2:0 and will disable deep color 4K Ultra HD 50/60Hz modes. 4K Ultra HD 50/60fps content will be downscaled to HD. As well, playback of all 4K Ultra HD content may experience mode changes even if the player is configured to "Minimize display mode changes".

- Use only HDMI 1.4 modes

The display or an intermediate device is not HDMI 2.0 compatible or has difficulty operating in HDMI 2.0 modes. Selecting this option will disable 50/60Hz output in 4K Ultra HD resolution. 4K Ultra HD 50/60fps content will be downscaled to HD. As well, playback of all content may experience mode changes even if the player is configured to "Minimize display mode changes".

- Disable 4K Ultra HD

The display or one of the intermediate devices does not support 2160p or is not capable of 10.2Gbps/340MHz operation. Selecting this option disables 2160p output from the player. 4K Ultra HD content will be downscaled to HD.

HDMI Content Type Metadata

The player can transmit hints over HDMI to indicate when the video signal carries movie playback or the Kaleidescape OSD. This feature can allow certain displays and processors to adjust their video processing automatically. The way the processing is adjusted is device-specific. When using this setting, please confirm your display's video settings and calibration during playback and during OSD display.

- Do not transmit content type metadata (Default)

- Transmit content type metadata