



madVR Envy

Epson QL Series

Setup Guide

QL3000/QL7000

www.madvrenvy.com

Rev 1.01

Introduction

Welcome to the madVR Envy Setup Guide for the Epson QL Series projectors. Although setting up the Envy itself is rather straight forward, it is important that your Epson projector be set optimally for use in conjunction with the Envy. This guide covers the recommended set up for QL series projectors when used with Envy.

Please make all the menu changes with “Base Settings” selected in the Profile Bar (the bottom selection in each Envy menu) so the changes will be permanent. Otherwise, if you make changes when “Active Settings” is selected in the Profile Bar, the changes will only be temporary and later lost, unless you use the “Save to Base” option. For a better understanding of how settings in the Envy work, please see Introduction to Profiles guide at <https://madvrenvy.com/#resources>.

Epson Configuration

The following steps are recommended to best configure the Epson for use with the Envy.

1. First, let's configure important settings in the Envy's Display Configuration menu. Press the button on the Envy remote with the three horizontal lines or gear icon depending on remote to access the Configuration menu. Then follow the steps below. An example of the completed settings is shown in the image on the next page.
 - A. **Resolution setting:** If you are using a screen with an aspect ratio of 1.85:1 or larger, such as a 2.35 or 2.40, the “Resolution” can be set to the menu option **4096 x 2160** and the Epson will scale the resolution. For such aspect ratios, this allows you to maximize the light output of the projector. After changing to **4096 x 2160**, adjust your lens zoom position to fit the screen. If using a 16:9 screen, set the “Resolution” to **3840 x 2160** (4096 would be slightly detrimental for 16:9 screens).
 - B. **Peak Luminance:** Peak Luminance is a measure of the brightest image your display achieves for a specific system configuration. This depends on several factors, including your display's lumens, lens position, iris position, lamp/laser power mode, calibration settings, throw distance, and your screen size and gain.

The best way to determine your peak luminance is to display a 100% white pattern and measure it using 3rd party calibration software or a handheld lux meter. If measuring with calibration software, enter the “cd/m2” measurement as your nits value. If using a lux meter,

multiply the lux reading by the screen gain and divide by 3.14 to get this value. If using a full screen white pattern, as opposed to a 10% or 20% pattern, add a 10% to the value. A full screen white pattern is available within the Envy's Test Pattern Menu which can be accessed by holding the Green flex key button.

Additionally, the desired SDR luminance value can be used to target a specific luminance level for SDR content, **but only if you find SDR to be overly bright** Note that rather than using this setting to adjust the SDR luminance, it is best to use a lower laser percentage output for SDR, while keeping Desired SDR Luminance set to Auto. This will maximize your contrast, but at the expense of having to change the projector settings (laser percentage) based on SDR vs HDR. If that is inconvenient, the **Desired SDR Luminance** can be used as a substitute.



- Next, go to the Envy **Display Calibration** menu (shown below). To access this menu, press the Configuration Menu button, then press the right arrow button once. Here we will focus on the **Transfer Function** and **Gamut** settings.

It is important that the Envy Transfer Function value reflects the gamma correction being used in the Epson. Therefore, we recommend setting the Gamma to 2.4 if utilizing Natural, Cinema, or Vivid picture modes, and -2 if utilizing Dynamic picture mode in the Epson. Followed by setting the Envy Transfer function to **2.4**. You can access the Gamma setting in the Epson from the menu **Image > Advanced** menu and selecting “**Gamma**”

3. Next, change the Gamut in the Envy’s Display Configuration menu to **BT2020**.

Note that when using a 3D LUT, the Transfer Function and Gamut options are not available in the menu, because in that case, the LUT fully manages the Transfer Function and Gamut.

4. Note: Please leave the **HDR Flag** set to **Off**. Setting this on will cause problems with HDR images, unless you know exactly why you are turning on this flag, which is for advance use only.

Before continuing, make certain that you save these changes to the Base Configuration. Otherwise, the changes you make here will revert on the next signal change. To save these changes to the **Base Configuration**, highlight either of the values that shows an orange TEMP tag and press the Green button on the Envy remote. If you have made the changes with Base Configuration already selected at the bottom of the menu, then this step is not necessary.



5. If using a scope screen (a screen that has an aspect ratio of 1.85 or greater, such as 2.35 or 2.40 aspect ratio), please go to the Envy **Screen Configuration** menu, and under **Screen Boundaries**, click **Run Assistant**. Then follow the on-screen instructions. This is a critical step to ensure the Envy menus are properly positioned and that content is displayed properly. When performing this step it is ideal to have the the projector properly aligned with the screen and Geometry Correction with the Epson disabled. Geomtery Correction can be reenabled after Screen Boundaries have been set if needed for Envy models such as the Core, and Pro variants.

ALL other settings in the various Envy Configuration Menu should be left on AUTO, unless you have a particularly good and specific reason to change it. Often people change these settings without understanding the full impact. Note that changing the “Configuration” items should not be confused with the changing the Envy Settings Menu (the Envy remote control button with the 3 sliders on it) – those are there for you to change the image to suit your tastes.

6. In the Epson **Image > Image Enhancement** menu, we recommend **turning the Image Preset Mode to “Off”**. This enables the Envy to handle all processing of the image.

7. **Basic Picture** settings should use the following values for a good starting baseline to an accurate picture.

Color Mode: Natural
Brightness: 50
Contrast: 50
Color Saturation: 50
Tint: 50
White Balance > Color Temp: 6500K

8. **Scene Adaptive Gamma** – This feature should be turned Off by setting the value to “0”. This option is located in **Image > Advanced**.

9. **Dynamic Contrast** should be set to “On” with Response Speed set to “High Speed”.

10. **Lights-Out Control** should be set to “On”. A good starting point to use for this feature is setting **Lights-Out Signal Level to 1%**, and **Lights-Out Timer to 0.5 Sec**.

11. Ensure that **Color Space**, located in **Signal > Color Space**, is set to **Auto**, which is the default.

12. For the highest quality motion handling, set **Frame Interpolation to Off**, which is located in the **Image > Image Enhancement** menu and use **MotionAI** exclusively in the Envy Extreme. See the [MotionAI User Guide](#) for more information. If using an Envy Pro, the Epson Frame Interpolation can be enabled and set to taste.

Note: Frame Interpolation should always be Off when performing a calibration.

13. In the Epson “**Network**” menu, set **PJLink** to **On**. This is located in **Network > Network Configuration > Others**. This will allow the Envy to control the Epson directly by searching for **Display** from the **Device IP Control Configuration** menu.

* Please note that this feature is only available on the Envy Extreme, Envy Pro, and Envy Core models with the Core Premium Pack.

14. **Epson Signal Configuration:**

- A. Located in the Epson’s **Signal > Advanced > Video Range** menu, set the **Video Range** to Limited 16-235, to be sure the Epson picks the proper levels (Auto will usually pick Limited, but sometimes this can cause a level mismatch).
- B. The default EDID Mode setting for the QL3000/QL7000 is “Up to 4K 120Hz 40Gbps.” and should be used. **This mode requires certified, full-bandwidth 48 Gbps HDMI cables.** For cable runs longer than 15 feet, this typically means using an active optical (fiber) HDMI cable, such as the Kordz Pro4 Active Optical Cable, or a pure fiber solution like the RUIPRO 8K Detachable. Keep in mind that not all cables perform reliably at full bandwidth over every distance, so some trial and error may be required to identify a cable that works consistently in your specific installation. If you experience HDMI dropouts or handshaking issues, try the following steps in order:
 - a. Temporarily change the EDID Mode to “Up to 4K 60Hz 18Gbps.” This setting is not recommended for long-term use, as it disables 4K/120Hz. Running at 120Hz is generally preferred for MotionAI (Envy Extreme models only) and helps reduce HDMI handshake delays when switching frame rates by running with 120Hz even without MotionAI. If the dropouts stop, this indicates a bandwidth-related issue with your cable between the Envy and Epson. Even certified cables may not maintain stable performance at full bandwidth over certain run lengths. Switch back to “Up to 4K 120Hz 40Gbps” and try replacing the cable with a known reliable 48 Gbps active fiber solution (such as Kordz Pro4 AOC or a pure fiber cable). Note you may have to try multiple cables to find one that works, as each cable tends to work a bit differently depending on various components in the system.
 - b. Alternatively, insert an AV Pro Edge AC-DA-12X2 distribution amplifier between the Envy and the projector. Use a short passive HDMI cable (approximately 6 ft) from the Envy to the amplifier, then connect your long cable from the amplifier to the projector and it is likely to resolve the issue. This setup re-clocks and stabilizes the signal. In some cases, optimal results may still require both a new cable and the amplifier.

15. Aspect Menu:

- A. The **Aspect** option located in **Signal > Aspect** should be set to Auto. This is the setting that should be used with and without an Anamorphic Lens. If you have an anamorphic lens, you will configure the Envy Screen Configuration menu settings to use its AI-based anamorphic stretch instead.

Quick Sanity Check

After completing the setup of the Envy with your Epson projector, we recommend reviewing the following checklist as a final “sanity check” to help ensure everything is set up optimally:

- A. Play any 4K HDR movie (except Gemini Man or Billy Lynn). Check the Envy Incoming Signal Menu (press OK on the Envy remote when no Envy menu is active) and make sure that the “Framerate” shows 23.976. If instead it shows 59.94, and you are using an Apple TV or Kaleidescape, then your source device(s) are not set up for proper playback – check our setup Apple TV and Kaleidescape guides on our website for more information. Or if you are using a different source device, check its settings and make sure it outputs in a “native” or “direct” mode.
- B. While playing the 4K HDR movie, check the Envy Incoming Signal Information to make sure the “Transfer Function” shows “HDR”. If not, Envy is not receiving HDR from the source player. This could be caused by a “rogue” device in the HDMI chain, or if using an AVR like the Denon/Marantz, make sure it is set to use “Enhanced” HDMI, so that it outputs the full 18 Gbps bandwidth and is not restricted to 9 Gbps.
- C. If the colors look undersaturated or oversaturated, please check the Envy and Epson menus to confirm the Envy and the projector are using the correct, corresponding color space (revisit steps 3 & 11).

Additional Resources

We highly recommend reviewing the [Envy Academy Online video course](#) or reviewing the Envy Introduction to Profiles guide, MotionAI guide, and the setups guides for source devices such as Kaleidescape and Apple TV. This and other such resources are available at www.madvrenvy.com/#resources. You may also wish to seek our calibration services from third parties or from the madVR Labs Professional Services Group. Email psg@madvr.com for more information.

Thank you and enjoy your Envy!