madVR Envy

Profile User Guide

Revision 1.02

Contents

1.0 Introduction

Welcome to the madVR Envy Profile User Guide! This document explains everything you need to know to master Envy's profile system. If you are looking for just a quick overview for now, please refer to the Introduction to Profiles guide.

1.1   What Are Profiles?

Profiles are used to set and recall a group of settings that you want applied for a particular purpose. For example, when you watch a movie at 1080p, you may want different settings than when watching it at 4K. Or when using your Oppo player, you may want different settings than when using your Apple TV.

As another example, assume your TV channels have higher compression artifacts than your other sources. You may want to use stronger artifact reduction settings when watching TV than with your other sources.

Envy's profile system enables infinite, yet easily managed combinations of settings. It handles everything from the most basic to complex settings management needs, while maintaining the exceptional ease of use that the Envy is well-known for.

1.2   Why Not Just Use "Presets"?

Many products use "presets" or "memory banks" for settings management. Most readers are likely familiar with this approach – the user configures all the settings in the system how they want, saves the settings to a memory bank, and later recalls the settings this way. While this approach is easy to implement and understand, it has many drawbacks.

For example, assume you want different settings per source device and that you watch both SDR and HDR content, and you want to use different calibration settings for each content type, e.g., a different 3D LUT or a different output gamut setting. You might also have an anamorphic lens which you only want to move into the light path for scope movies. You might also want to switch your projector's light source into high power mode when playing 3D movies, but not when playing 2D movies. You might also want different settings based on the aspect ratio of the movie.

Now if you want to have optimal settings for each of these conditions, in all possible combinations, how many memory banks will you need? Easily over a hundred! And when you want to change one setting in common with most conditions, in how many memory banks will you need to replicate the changes, and which ones might you forget to update?

As you can see, the memory bank approach can quickly become unwieldy for anything except basic use cases. Envy's profile system provides great flexibility without these drawbacks.

3

2.0 Profile System Overview

At the core of the Profile System is the profile itself. Profiles provide a way to recall a group of settings, automatically or manually, for a particular purpose. In this section we take a closer look at the Envy menu system, what profiles are and how they work, the different types of profiles available, and introduce profile groups.

2.1 Envy Menu Pages

To fully understand profiles, we must first consider how the Envy menu system and its settings are organized. The Envy menus consists of several individual menu pages grouped by function, each with its own settings. For example, the "HDR Settings" menu page contains only HDR processing preferences, while the "Upscaling & Sharpening" menu page contains only upscaling and sharpening related settings, as shown below:

2.2 Profiles – A Custom Collection of Envy Menu Pages

Profiles provide an efficient way to group individual menu settings together, even settings from different menu pages, to override just those settings. For example, a profile can override settings from both the "Upscaling & Sharpening" and the "HDR Settings" menu. Profiles make it possible to apply all desired settings at once for any purpose, simply by activating the profile.

To summarize, profiles are just a collection of one or more menu pages, with one or more customized settings in those menu pages, that overrides those settings only when activated, and without impacting any other settings.

4

2.3   Profile Transparency

Profiles are fully transparent – meaning that when a profile is activated, only the overridden settings in that profile are applied. All system defaults, and any overridden settings from other profiles, simply "pass thru". For example, settings for 3D movies and settings based on an aspect ratio of 2.35 will be automatically applied when watching a 3D movie with an aspect ratio of 2.35.

You can think of each activated profile as a "layer". So, if setting A is overridden in profile 1, and setting B is overridden in profile 2, and both profiles are activated, then the settings in effect will be all the system defaults, but with settings A and B overriding those defaults, with any temporary settings applies with highest priority. We discuss temporary settings in Section 3.4. See the diagram in Appendix A for an overview of how profile inheritance and transparency works.

2.4   Predefined Profiles and Custom Profiles

Envy provides several predefined profiles, including ones activated automatically based on the properties of the incoming video signal, such as its resolution, aspect ratio and colorimetry. For example, if you use a predefined profile based on an Incoming Resolution of 1080p or lower, then that profile is automatically activated when the incoming resolution is 1080p or lower and deactivated otherwise. Predefined profiles based on the incoming video signal are below:

By default, Envy also provides predefined profiles for "Source Devices", "Displays", "NLS+" (non-linear stretch), and "MotionAI". Source Devices and Displays are just empty profiles that have no effect until you save settings to them. Whereas NLS+ and MotionAI have options to help you easily configure these options. For instance, in NLS+ you can activate "SmartFit for Scope Screens" and the Envy will set all your aspect ratios as recommended for the use of NLS. Of course, you can then always customize these settings from there, if desired. The use of profiles is completely optional. If you do not have any special settings you want to use for specific source devices or displays, there is no need to set up profiles for these.

You can create custom profiles for any purpose you like. For example, you can create a custom profile called "Sci-Fi" and set all your favorites settings for Sci-Fi movies there. Then when you watch a Sci-Fi movie, simply activate your Sci-Fi profile.

2.5   The Envy Profile Menu

Custom profiles, Source Device profiles, and Display profiles are created, renamed, deleted, and activated by using the Profile menu. To access the Profile menu, press the Profile button on the Envy remote (the button with the two overlapping squares on the MK2 backlit remote, and the button with the square and arrow on the MK1 remote).

You can also activate and manage profiles and profile groups automatically using a control system like Crestron, Control4 Savant, and RTI, or even using a custom program you create and run on the same network, by using the Envy IP Control API.

Tip: The Envy does not provide "hunt and peck" keyboard entry with the remote control. Therefore, to customize the names of profiles and profile groups, please attach a keyboard to one of the USB ports on the rear of the Envy.

Below is an example from the profile menu with customized Source Devices:
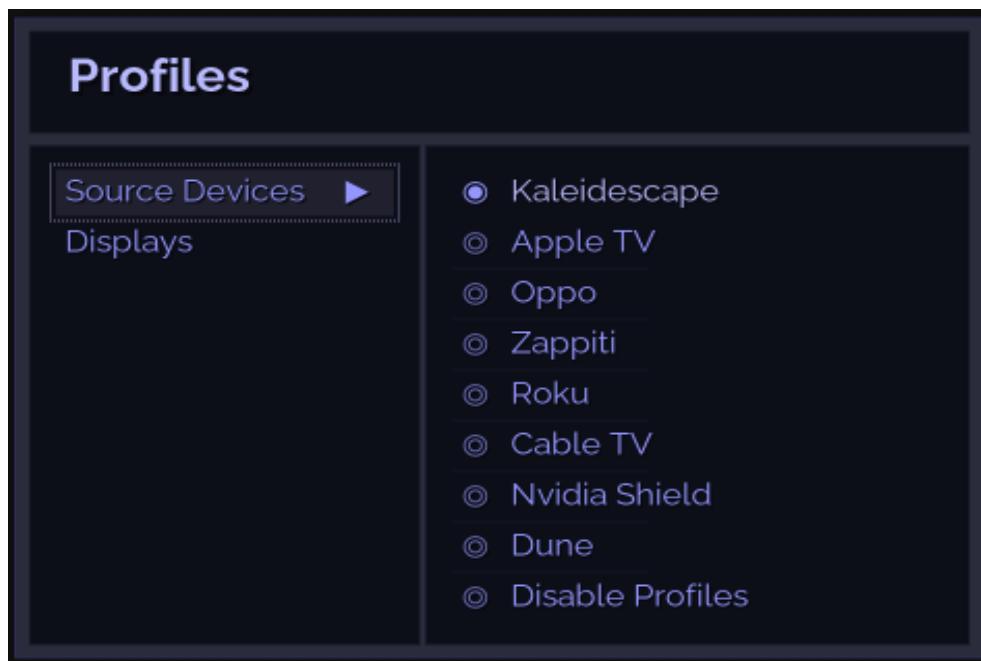
2.6   Getting Organized with Profile Groups

To help you organize your profiles, Envy provides profile groups. The intended use is to have one profile group for each general purpose, with one or more profiles assigned to the group. For example, you could create custom profiles called Daytime, Nighttime and Batcave, with your

6

preferred settings for each, and place these profiles into a custom profile group you create named "Viewing Conditions", as below:
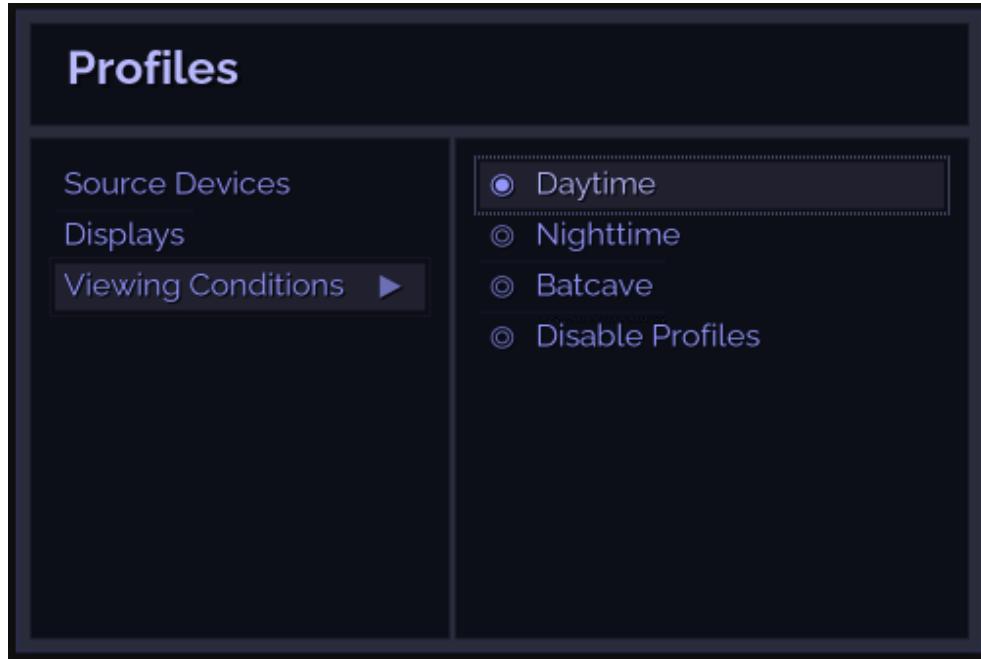
"Source Devices" and "Displays", covered earlier, are really just predefined profile groups. Likewise, profiles based on the incoming video signal also organized into profile groups for you.

Only one profile at a time can be active within a profile group. With the "Viewing Conditions" example, you can see how this is the intended behavior, as these viewing conditions are mutually exclusive (e.g., you would not want to use Daytime and Nighttime profiles at the same time). Therefore, activating a profile in a profile group automatically deactivates the other profiles in the same group.

Profile groups are completely arbitrary. You may create as many profiles and profile groups as you wish. Do you want different settings when watching hockey, basketball, and football? No problem, just create profiles called "Hockey", "Basketball" and "Football", configure the desired settings for each, and place these profiles into a custom profile group named "Sports".

3.0 Profiles in Action

Now that we have covered the foundation for the profile system, it is time to look at profiles in action. We explain the Base Settings, the Profile Bar, menu tags, temporary settings, and how everything comes together to form the Active Settings.

3.1   Base Settings

At the root of Envy's settings management is the "Base Settings" layer, where all default values are set and inherited from. The Base Settings are used globally, unless overridden by settings in an activated profile, or by temporary settings.

Below is an example of Base Settings defined for Upscaling & Sharpening. These settings are therefore the defaults that Envy will use for Upscaling & Sharpening, regardless of resolution, source device, or any other condition – unless overridden.

The area highlighted in the menu page shown below is the Profile Bar. Since the Base Settings option is selected in the profile bar, the menu values shown here reflect the Base Settings.

3.2   Profile Bar

The Profile Bar is used to select whether the currently displayed menu settings are for the Base Settings, the Active Settings, or a specific profile. Therefore, the Profile Bar will always contain a selection for at least the Base Settings and Active Settings, and for each profile (if any) that the menu page has been added to.

In the image above, we know the menu settings shown are for the Base Settings, since "Base Settings" is selected in the Profile Bar. Any changes made to these menu options while "Base Settings" is selected in the Profile Bar will therefore be applied to the Base Settings (and hence become the new system defaults).

Note: Envy has both "Settings" menu pages and "Configuration" menu pages. There is no difference between "Active Settings" vs "Active Configuration", or between "Base Settings" vs "Base Configuration" that you will see in the Profile Bar. These are simply different labels for the same thing, depending on the type of menu page you are viewing.

3.3   Active Settings and Menu Tags

The Active Settings reflect the current settings in use by Envy. Let's look again at the Upscaling & Sharpening settings, except this time, with the Active Settings option selected in the Profile Bar.

Comparing this to the same menu page as shown in Section 3.1, there are two key differences. First, Active Settings is selected in the Profile Bar instead of Base Settings. Therefore, the menu settings shown here are for the settings that are currently active, after any activated profiles and any temporary settings have been applied.

Second, notice the BASE tag next to each menu setting. In general, menu tags indicate where each setting gets its value from. In this case, BASE indicates that the setting is inherited from the Base Settings and is not currently being overridden by any profiles or temporary settings. If the BASE setting is set to "Auto", instead of set to an overridden value, AUTO will also appear in the BASE tag. Base tags appear only when viewing Active Settings. Other menu tags are TEMP, PROF, SET and THRU. We discuss these tags in further examples below, starting with how temporary settings are handled.

9

3.4   Temporary Settings

Envy makes it easy to temporarily change your settings, without fear of losing your preferred and trusted settings, or fouling something up. Temporary settings are especially useful for changing a setting just for the current movie, or for experimenting with other options.

To make changes that are temporary, you simply change them in the Active Settings. Since the Active Settings are the top-most layer in our profile hierarchy, any settings you change there are instantly applied and in effect.

Continuing with our example from above – assume you want to experiment with the Image Upscaling setting, and you change it in the Active Settings to "Anti-Alias", as shown below:
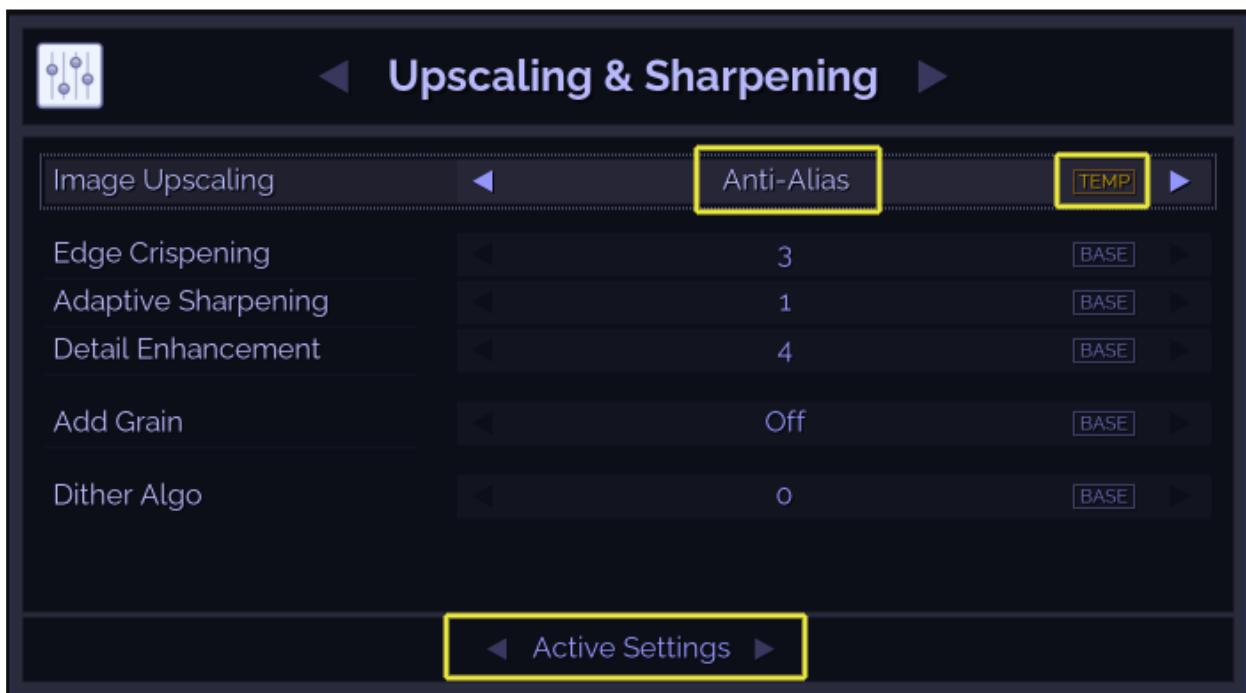
Notice how the tag for the Image Upscaling setting has now changed from BASE to TEMP. This is because we made the change while Active Settings was selected in the Profile Bar. The TEMP tag here indicates that this setting is being overridden temporarily, instead of being inherited from the Base Settings as before. TEMP tags only appear in the Active Settings (since that is the only place where temporary changes can be made).

Temporary settings are automatically reverted once there is an HDMI signal change, such as when a movie ends, and the player goes back to its main menu. Likewise, temporary settings also revert if you change HDMI inputs, or turn off or restart your Envy.

3.5   Making Temporary Settings Permanent

To keep any temporary settings, you must save them to the Base Settings or to a profile before they revert, as explained above.

3.5.1 Saving to the Base Settings

If you want to save your temporary settings so that they become the new system defaults, you can save them directly to the Base Settings. Press the Green button on the Envy remote while any temporary menu setting is highlighted.

In the image in Section 3.4, you can see that the Image Upscaling setting is highlighted and tagged as TEMP. Therefore, pressing the Green button while on this line will save this new setting of "Anti-Alias" to the Base Settings.

Tip: The Context Sensitive Help window provides a nice summary of what colored buttons are available and what actions pressing that button will take. This varies depending on the context of the menu.
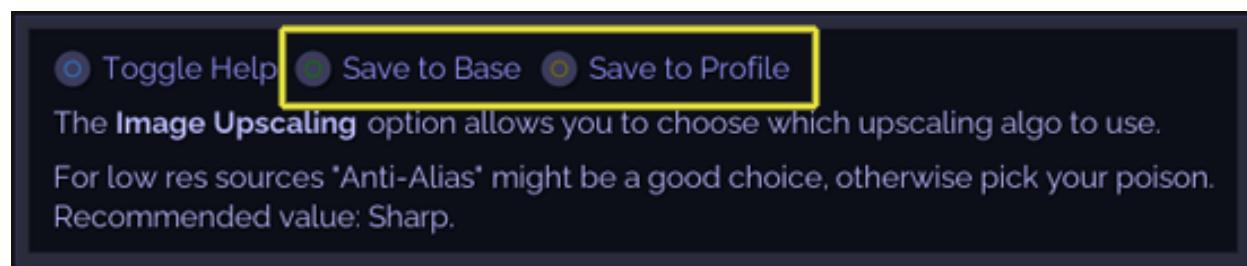
Another way to update the Base Settings, without making the change in the Active Settings, is to select "Base Settings" in the profile bar, and then make the changes directly in the Base Settings. This approach is reviewed in Section 4.0. In practice you will usually make the changes directly in the Active Settings and then use the Save to Base option, but either approach will work.

3.5.2 Saving to a Profile

Temporary settings can also be saved to a profile, so that they are used only when that profile is activated, and not as default settings, as we did above.

For example, assume you experiment with the Anti-Aliasing option and find you prefer it over the Sharp option, but only for resolutions of 1080p and below. Wouldn't it be great if your Envy would automatically use your preferred Anti-Alias setting whenever the resolution was 1080p or below? Let's give that a try.

First, press the Yellow button when the "Image Upscaling" menu item is highlighted, since it contains the temporary setting we wish to save. This will prompt you to select the profile you want to save all temporary settings in this menu page to, as shown below. Select 1080p or lower.

Now whenever the content is 1080p or lower, Envy will automatically activate this profile and use the Anti-Alias setting. Otherwise, the Sharp setting will be inherited from the Base Settings.

3.6   More About Menu Tags

Now that we have assigned a setting to our first profile, we can take a closer look at how menu tags are used. Having already learned about the BASE and TEMP tags, let's turn our attention to the PROF, SET and THRU tags.

3.6.1 The PROF Tag

Continuing with our last example – after saving the profile you will see the TEMP tag change to either BASE or PROF, depending on the current resolution of the incoming signal (recall that Envy automatically activates predefined profiles based on the incoming signal, as we learned in Section 2.4). The PROF tag indicates when a profile is setting the value shown in the menu page. PROF tags only appear within the Active Settings.

If your Envy is currently receiving a 1080p or lower signal, the profile will activate automatically, and your menu page will look like what is shown on the next page. Note the "Anti-Alias" setting and the PROF tags shown there, which indicate a profile (in this case, our 1080p or lower profile) is setting that value.

If instead your Envy is receiving a 4K signal, then you will see the Image Upscaling setting of "Sharp" and the tag will show BASE, since the profile will not be activated. The next time a 1080p or lower signal is received, however, then the tag will show PROF and the setting will show "Anti-Alias".
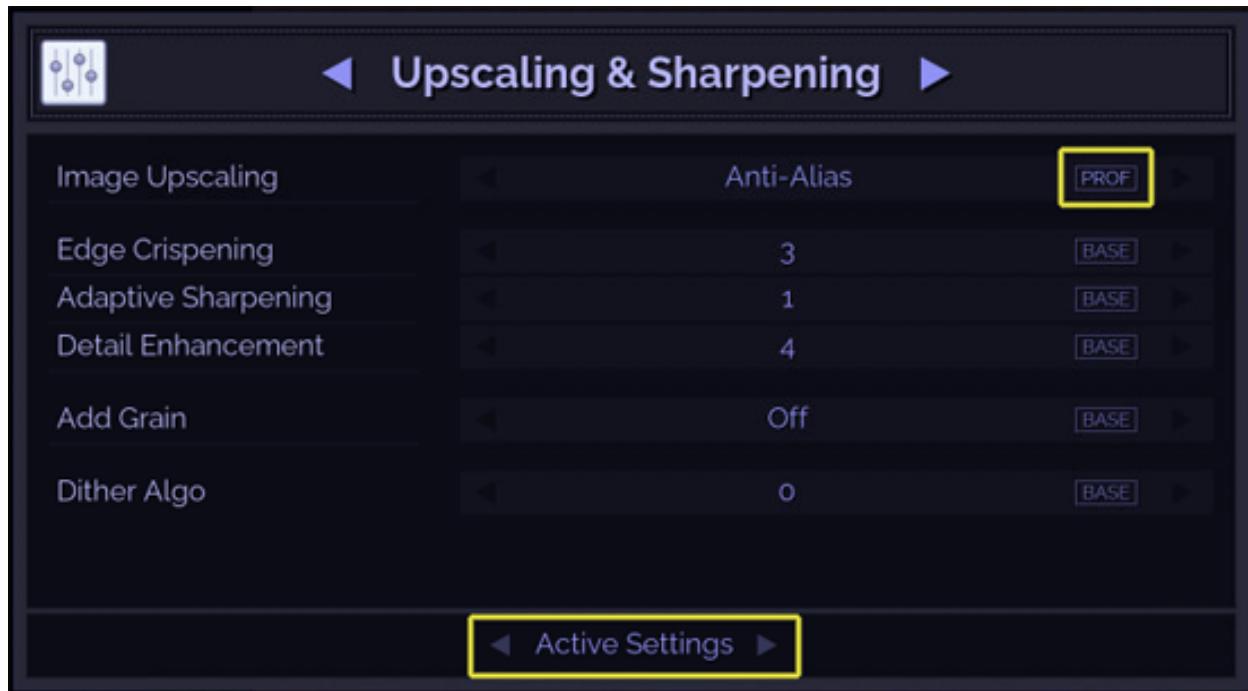
In summary, menu settings tagged with PROF indicate that the values shown for those settings are being set by an activated profile. Since there are many possible profiles, however, it does not indicate *which* profile is the one setting the value. For that we need to look to the SET tag.

3.6.2 The SET and THRU Tags

As we learned above, the PROF tag indicates when a menu item is being set by a profile. Naturally, this raises the question of which profile is the one setting the value. To determine this, we just need to scroll through the profiles associated with the menu page.

Simply move to the Profile Bar and scroll through the selections. In our example, you will find Base Settings, Active Settings, and the "Incoming Resolution: 1080p (or Lower)" profile. If this menu page had been included in other profiles, those other profiles would also appear here.

With the Profile Bar set at "Incoming Resolution: 1080p (or Lower)" you will now see the menu page as shown above. This profile appears as a selection in the Profile Bar because we added it in section 3.5.2.

Note the SET tag. The SET tag indicates that *this* profile (since it is the one selected in the Profile Bar) "sets" the menu item to Anti-Alias – just if there is no other active profile with higher priority. We learn about profile priority next.

Also note the THRU tags. Recall from Section 2.3 that any settings in a profile which that profile does not override are fully transparent. The THRU tag indicates the menu settings which are not set by the profile and just passed thru from BASE. If the BASE setting is set to Auto, then AUTO will appear with the THRU tag. You can think of any setting tagged as AUTO THRU or THRU as if it did not even exist in the menu page for that profile. SET and THRU tags only appear in profiles.

Further note that *values* shown for any settings marked as THRU will reflect the values from the Active Settings. For example, if the Add Grain setting is temporarily changed in the Active Settings to 1, the Add Grain value shown in the profile view will be 1 instead of Off, since the setting is not used by the profile (it is THRU). When the temporary change reverts, the value will show Off.

3.7   Profile Priority

Given what we know about the highly transparent nature of profiles, and that any menu items not "SET" by the profile simply pass thru, this raises the question of how conflicts are treated. For example, what happens if a menu page exists in two different active profiles and has the same menu item set differently in each profile?

14

In the case of conflicting settings, profiles are applied in the following order of priority (from highest priority to lowest):

1. Any custom profiles you create.
2. "Source Devices" profiles.
3. "Displays" profiles.
4. Profiles based on properties of the incoming video signal.

Note that temporary changes made to the Active Settings have the highest priority, even overriding custom profile settings. See Section 3.4 for more information on temporary settings.

4.0 More Ways to Create and Manage Profiles

In the previous section we assigned settings to a profile using temporary settings and the "Save To Profile" shortcut. This is handy for making quick adjustments based on temporary settings.

When doing more extensive setup, however, you may find it more convenient to first manually add menu pages to profiles, and then configure their settings, without using temporary settings. In this section we walk through a few more examples of creating and managing profiles, except this time we set up the profiles manually.

Tip: If you are an installer/integrator that frequently configures Envys, you can set up one Envy as desired with all your custom profiles, and then download the configuration using the Envy IP Control Tool. Then for all future Envys, you can simply upload your configuration to each Envy rather than setting it up from scratch.

4.1 Deleting a Menu Page from a Profile

Before getting started with our next example, we need to delete the previous "Incoming Resolution 1080p (or Lower)" profile that we created in Section 3.5.2. This is also a good opportunity to demonstrate how to delete profiles.

Let's start by going to the Upscaling & Sharpening menu page. Scroll within the Profile Bar until you reach the "Incoming Resolution 1080p (or Lower)" selection. [If this selection does not appear in your Profile Bar, it means you did not create this profile as part of our earlier exercises.] Notice now in the Context Sensitive Help window indicates that the Red button is assigned to "Remove Profile". Press the Red button and confirm "Yes" when prompted.

4.2 Adding a Default Menu Page to a Profile

We now demonstrate how to add a default menu page to a profile. In this example we will create two profiles for controlling Upscaling & Sharpening settings – one for 4K resolution, and the other for 1080p and lower resolution.

First, let's assign the settings for use with 4K resolution. From within the Upscaling & Sharpening menu, move to the Profile Bar. Then press the Green button to "Add Profile". You will then see the following options:
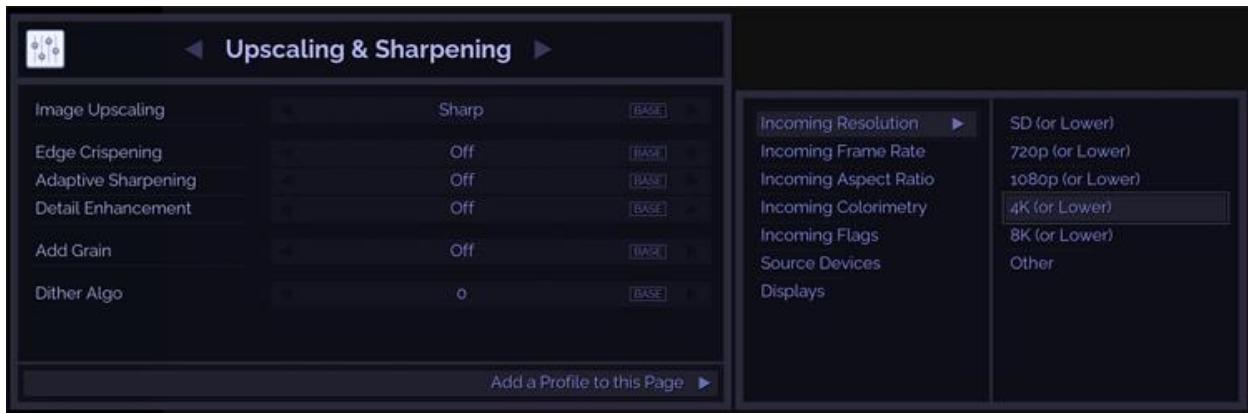
Select "Incoming Resolution->4K (or Lower)". The default settings for the Upscaling & Sharpening menu page are then added to this profile. We will override these settings next.

4.3   Setting Values in a Profile

Notice in the image below how once we add the menu page to a profile, that profile is automatically selected in the Profile Bar. With this as the selected profile, we know we are making changes in the menu page for this profile. Now let's configure the settings to apply for 4K Upscaling & Sharpening:

In this case you can see the three values that we set. Notice that the indicator shows SET instead of THRU. As we learned in Section 3.6.2, this indicates that the selected profile in the Profile Bar is setting these values. Whether that ultimately becomes the value used in the Active Settings depends on the profile being activated (in this case, a 4K signal needs to be present), and not conflicting with any higher priority active profiles. Note that the values that we did not override continue to show as THRU.

Next, recall we also want to have different Upscaling & Sharpening settings for 1080p signals. So, we need to also create a new profile for 1080p and lower for this same menu page. Highlight the Profile Bar, press the Green button, and add a new profile for 1080p or lower. The menu page now looks like this:

Notice that our new values from above (3, 1, 4) show with the THRU tag. This indicates that the currently selected profile (as shown in the Profile Bar) is not setting these values and these will be unaffected by this profile, if not set here.

Now it is time configure the settings we want to assign for our 1080p and lower profile. Make sure "Incoming Resolution: 1080p (or Lower)" is selected in the Profile Bar. Override these settings to 4, Off and 5. As before, the indicators change to SET to show that the selected Profile is "setting" these values, and the settings with THRU tags are unaffected. The menu page should now look like this:

Now let's assume the Envy is currently receiving a 4K signal. Therefore, when we select Active Settings in the Profile Bar, we see the following:

Notice how the menu page now shows the values of 3, 1 and 4, along with the PROF tags. This indicates that these values are being used because of an applied profile.

Lastly, let's send a 1080p signal to the Envy. The menu page now shows the following:

Notice how the Envy has automatically recalled our Upscaling & Sharpening settings for 1080p, and that this shows as our Active Settings. The PROF tags here indicate the settings are coming from an active profile – in this case, the profile we added for 1080p or lower.

Recall that this profile is assigned for 1080p and lower. What if you wanted to use even stronger Upscaling & Sharpening settings for 720p and below? To do that you would just create another profile, based on a resolution of 720p or lower, and set those settings as desired, using the same steps as above when setting the 4K and 1080p profiles above.

5.0 Profile Flexibility and Conclusion

This document discusses the power, flexibility, and ease of use of the Envy's profile system. To illustrate this even further, let's consider one more scenario that shows just how easy it is to adapt your profiles if you change your mind about your settings later.

Imagine after all the above profile work, you discover that you like to use an "Add Grain" setting of 1 instead of Off, for all viewing conditions. How many of these profiles that we already set up would you need to modify? Well, none of course! This is because for all profiles, the Add Grain setting is not overridden, as you can tell from the THRU tag when each profile is viewed.

To make this change for the Add Grain setting, we only need to go to the Base Settings, and change the Add Grain setting there to "1". As we learned, profiles are fully transparent for all settings except those that are overridden. Therefore, your change to the Add Grain setting in the Base Settings will be passed all the way up the chain of profile layers, to the Active Settings, and applied to everything you watch.

OK, how about one final twist? What if you wanted the Add Grain setting of 1 to be used with all sources, except when using your Oppo Blu-ray player, you want to use a setting of 2? Just add another profile to the Upscaling & Sharpening menu, this time for Source Device 1.

Then optionally rename Source Device 1 to "Oppo" and set the Add Grain setting in the Profile to 2. Then when watching the Oppo, manually select the Oppo profile, or do so automatically with your automation system.

Also, since Source Devices have higher priority than incoming video signal profiles (see Section 3.7), when watching the Oppo, the Add Grain setting of 2 will have priority over any Add Grain setting you may also eventually add to the 1080p and 4K profiles we created in Section 3.4.

When watching any other source, choose Source Device -> Disable Profiles. This disables only the profiles for Source Devices, so the Oppo Add Grain setting will not be used. Likewise, you could activate Source Device 2 (or any other Source Device) with no settings in that profile to achieve the same result, since activating any profile within a profile group deactivates all other profiles in the group.

As this guide has demonstrated, the Envy profile system provides a powerful, flexible, and yet highly intuitive way to manage your Envy system settings. We hope you have enjoyed learning about Envy profiles and find them fun and easy to use.

Appendix A

Profile System Inheritance

Active Settings

Temporarily set by user:
Setting 2 = JJJ

Applied Settings

Setting 1 = III
Setting 2 = JJJ
Setting 3 = CCC
Setting 4 = HHH
Setting 5 = GGG

The Active Settings are the settings that are in effect at the current time, after the Base Settings, settings from any activated profiles, and any temporary settings are applied. Temporary settings can be made permanent by saving them to the Base Settings or assigning them to a profile.

ACTIVE CONFIG

ACTIVATED PROFILE(S)

Profile 1

Set by user:
Setting 1 = III
Setting 4 = HHH

Applied Settings

Setting 1 = III
Setting 2 = BBB
Setting 3 = CCC
Setting 4 = HHH
Setting 5 = GGG

Envy's menu system consists of multiple menu pages, such as "HDR Settings" and "Display Configuration". A profile consists of a group of one or more customized copies of menu pages. Only explicitly set settings in profiles are applied. Unchanged menu items in a profile are fully transparent and "passed thru", as if non-existent. Profiles are activated, either manually using your remote, or automatically by your control system or Envy's predefined profiles based on the incoming video signal.

Profile 2

Set by user:
Setting 4 = FFF
Setting 5 = GGG

Applied Settings

Setting 1 = AAA
Setting 2 = BBB
Setting 3 = CCC
Setting 4 = FFF
Setting 5 = GGG

In the case of conflicting settings, Profiles are applied in the following order of priority (from highest priority to lowest):
1) Any custom profiles you create.
2) "Source Devices" profiles.
3) "Displays" profiles.
4) Profiles based on properties of the incoming video signal.

Highest priority ↑ Lowest priority

ACTIVATED PROFILE(S)

BASE

Base Settings

Set by user:
Setting 1 = AAA
Setting 2 = BBB
Setting 3 = CCC
Setting 4 = DDD
Setting 5 = EEE

Applied Settings

Setting 1 = AAA
Setting 2 = BBB
Setting 3 = CCC
Setting 4 = DDD
Setting 5 = EEE

The "Base Settings" is the layer where all default values are set and inherited from. The Base Settings are used globally, unless overridden by settings in an activated profile or by temporary settings.

21