

# How to set up Pomfort Livegrade for ALEXA 35

WORKFLOW GUIDELINE

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## Version History

<b>Version</b>	<b>Author</b>	<b>Change Note</b>
2022-09-14	Simon Duschl	First creation
2022-09-15	Simon Duschl	Added chapter for external LUT box
2022-09-21	Simon Duschl	Added chapter ACES

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# Introduction

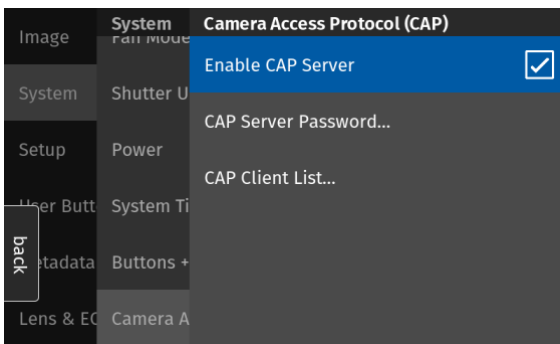
This short document will help you to set up Pomfort Livegrade correctly for use with our ALEXA 35 camera. Pomfort has officially announced full support for our ALEXA 35 camera with Livegrade 6.3, earlier versions are not supported. The latest [changelog](#) can be found [here](#) and additional information and frequently asked questions can be found on the official [Pomfort Knowledge Base for Livegrade](#).

**Please note:** A basic understanding of computer networks is advantageous for a correct setup.

## 1 Set up the ALEXA 35

### 1.1 Activate CAP Server

This chapter explains how to set up the ALEXA 35 for connecting Pomfort Livegrade with the camera. For more information regarding this topic have a look in the official [ALEXA 35 User Manual](#). To get access via the ARRI CAP (Camera Access Protocol), please activate the CAP functionality in-camera. This option can be activated in the menu under “Network /Wifi” -> “CAP Server”.



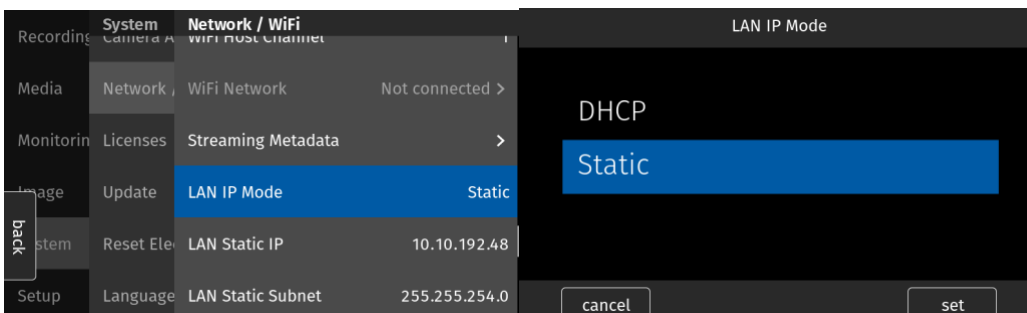
The default password to get access to the CAP functionalities is “arri”. For security reasons, we suggest to change the default password.

### 1.2 Wired / Ethernet connection

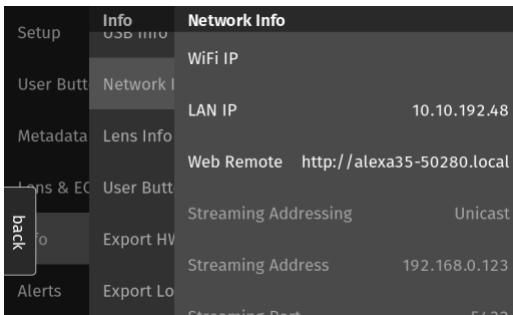
Please connect the ALEXA 35 camera to your network (ethernet device or network switch) by using the official Lemo 10 pin cable / [ALEXA ETH/RJ45 \(3.0m/9.8ft\) KC 153-S \(K2.72021.0\)](#).

#### 1.2.1 Camera wired ethernet network settings

Please check that your camera receives an IP address and is accessible in your LAN. If you have a DHCP server you can select “DHCP” within the camera’s menu. In case you have to use a fixed IP address, it’s also possible to select “Static” IP address here.



Please also check your LAN Static Subnet (Subnet mask) address. This can also be 255.255.255.0 or similar. Note down the IP address of your camera. To get an overview of the network settings the “Network Info” page in-camera is very helpful.



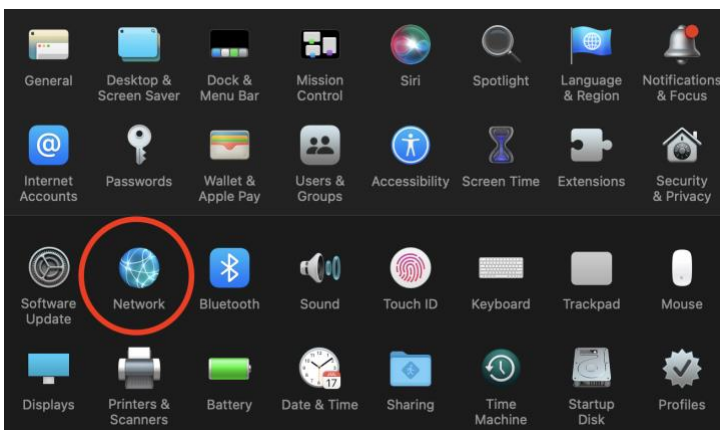
Each camera also has a unique name and can be reached by your web browser e.g. Google Chrome. Both the camera name and IP address can be used to get access to the webremote of the camera. For example:

<http://alexa35-50280.local> (.local can also be different and depends of the setup in your local area network)

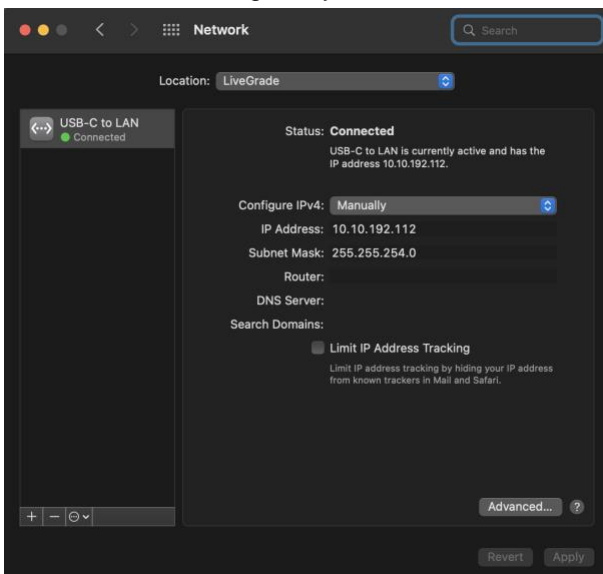
<http://10.10.192.48>

### 1.2.2 macOS network settings

To configure your macOS, you must open the macOS “System Settings” -> “Network”



Set the correct settings for your network here.



If everything is set up correctly you can try to ping your camera in macOS terminal by using its name or ip address. Open the macOS terminal and type

```
ping alexa35-50280.local
```

or

```
ping 10.10.192.48
```

MacOS terminal should get an answer from the camera, and it should look like this:

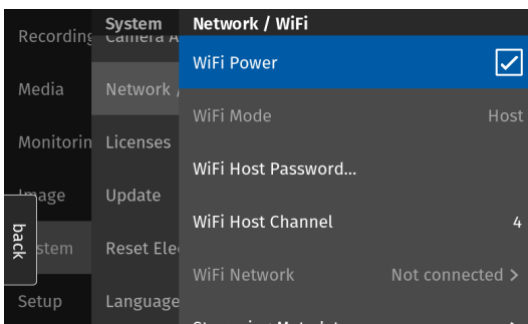
```
PING alexa35-50280.local (10.10.192.48): 56 data bytes
64 bytes from 10.10.192.48: icmp_seq=0 ttl=64 time=0.484 ms
64 bytes from 10.10.192.48: icmp_seq=1 ttl=64 time=0.690 ms
64 bytes from 10.10.192.48: icmp_seq=2 ttl=64 time=0.634 ms
```

### 1.3 Wireless / WiFi connection

You have two options to set up the camera to use a WiFi connection: as a “Client” or “Host”. With “Host” mode the camera will create its own WiFi network and you may connect directly to it. . If your camera is in “Client” mode, then your camera is a “Client” in a bigger WiFi network and connected to an Access Point (AP). Multiple cameras may be connected to the same WiFi network if in “Client” mode. The following steps will assume that the camera is in Host mode and that you are connecting a MacOS device directly to the WiFi network generated by the camera.

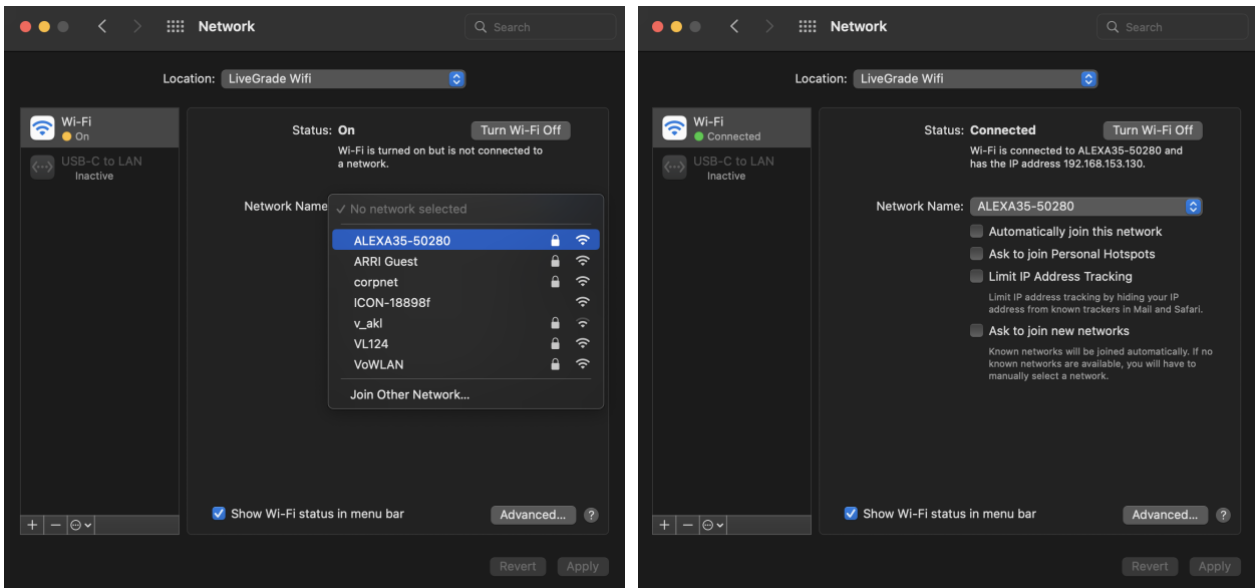
#### 1.3.1 Camera WiFi network settings

Please ensure that the camera’s WiFi mode is set to Host and then activate the WiFi Power to turn on the WiFi module of your camera. You will find this under “System” -> “Network / WiFi”.. The default Wifi password of our cameras is “arriari”. For security reasons we suggest changing the default password.



### 1.3.2 macOS WiFi network settings

To configure your macOS, you must open the macOS “System Settings” -> “Network” and select the camera WiFi. Type in the WiFi password that was set under [1.3.1](#), when prompted. Afterwards, the WiFi connection to the camera should be established successfully.



If everything is set up correctly you can try to ping your camera in macOS terminal by using its name or ip address. Open the macOS terminal and type the following, using your camera-specific details:

```
ping alexa35-50280.local
```

or

```
ping 192.168.153.130
```

MacOS terminal should get an answer from the camera, and it should look like this:

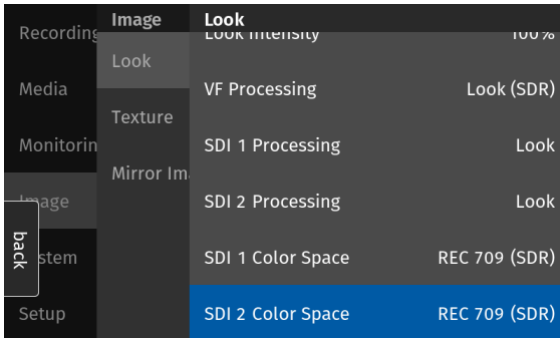
```
PING alexa35-50280.local (10.10.192.48): 56 data bytes
64 bytes from 10.10.192.48: icmp_seq=0 ttl=64 time=0.484 ms
64 bytes from 10.10.192.48: icmp_seq=1 ttl=64 time=0.690 ms
64 bytes from 10.10.192.48: icmp_seq=2 ttl=64 time=0.634 ms
```

## 2 Set up ALEXA35 & Pomfort Livegrade

### 2.1 Livegrade using ALEXA 35 & Camera Access Protocol (CAP)

#### 2.1.1 Configure SDI paths, look and color spaces of ALEXA 35

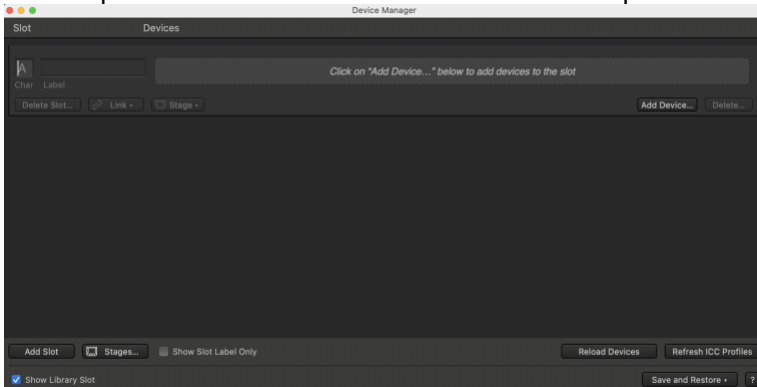
To get a correct image out of the camera you have to set up your SDI image pipeline correctly. To do so, please check the “SDI/VF Processing” and “SDI Color Space”. For using ALF4 looks please select “Look” for the corresponding SDI paths.



**Please note:** These settings depend on your monitoring setup e.g. Standard Dynamic Range (SDR) or High Dynamic Range (HDR) displays.

#### 2.1.2 Add device to Livegrade

In the top menu select “Slots” -> “Add Device...” to open the “Device Manager”.

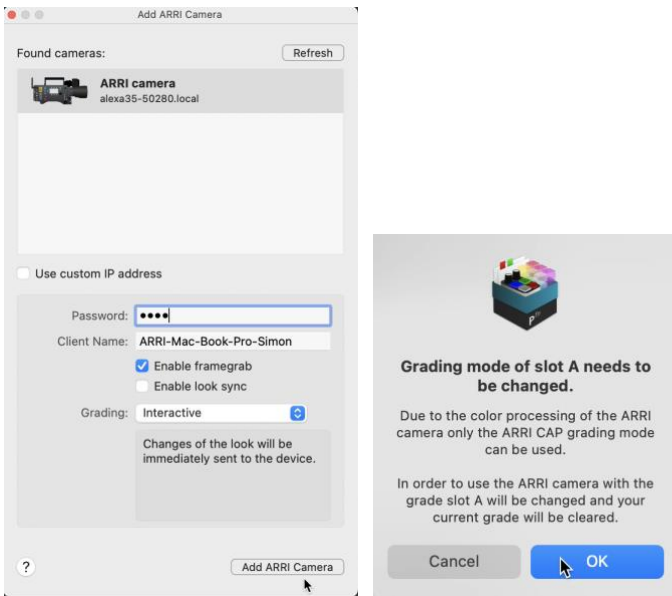


Here please select the button “Add Device...” and select “Add ARRI Camera”.

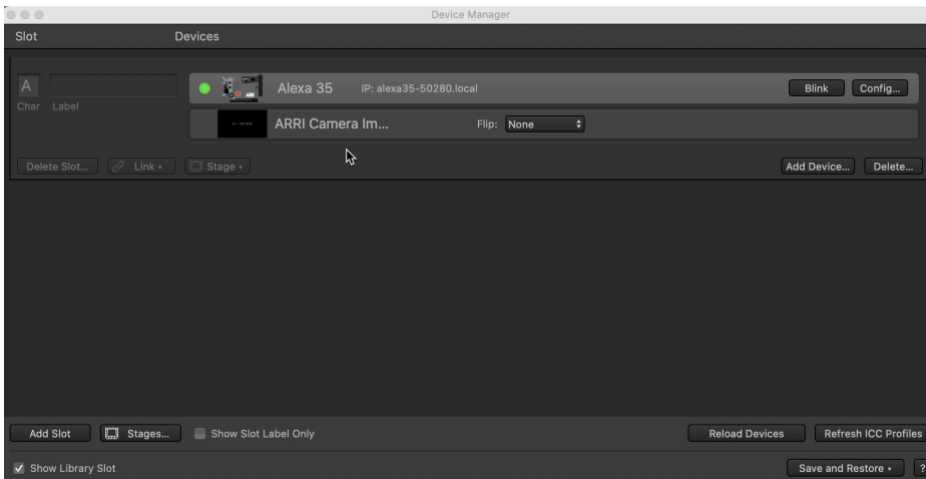




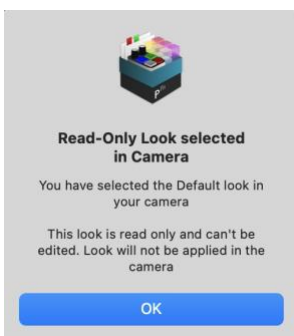
If everything in the previous steps was set up correctly, your camera should appear here after a few seconds. Select the camera and type in your CAP password, that was set in-camera (default: arri) and press “Add ARRI Camera”. Confirm the next window.



The camera should now appear as a device in the “Device Manager”.



Close the “Device Manager” and press OK for the following message.



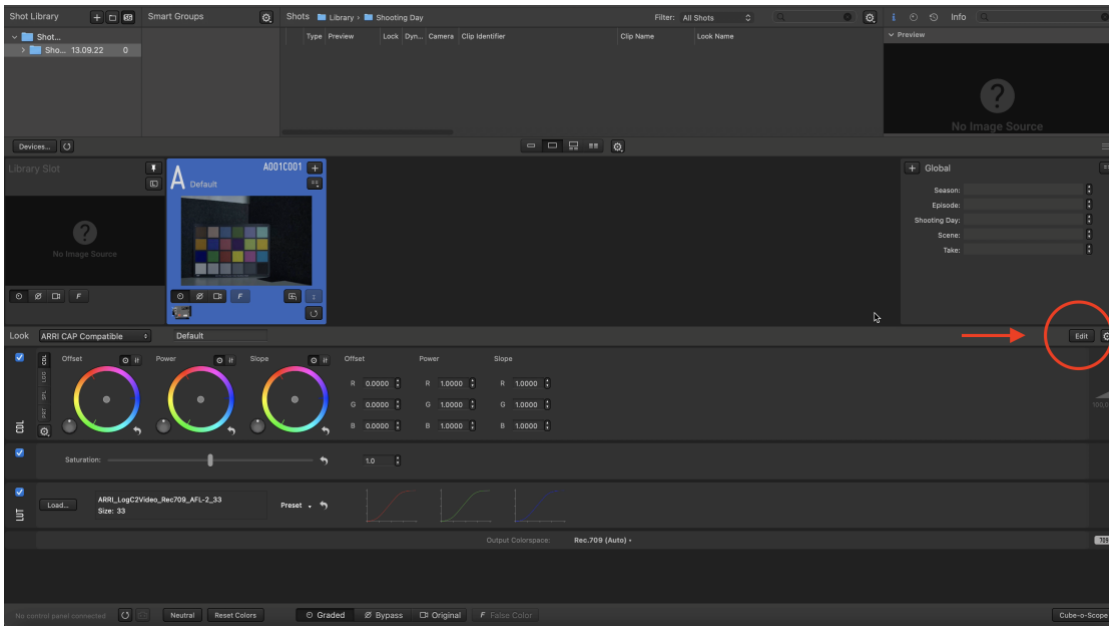
**Please note:** This message appears only if the default look in-camera is selected. The default look cannot be changed.

### 2.1.3 Add an additional node for ALEXA 35 support

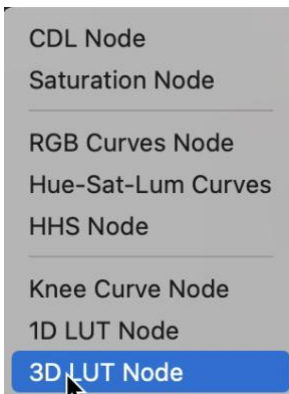
If you would like to add a creative look as a 3D-LUT in addition to your CDL adjustments, you need to add a 2<sup>nd</sup> LUT node for a correct look workflow with the ALEXA 35. This step is necessary due to the new ALF4 (Log-2-log) look workflow.

- Node 1: CDL values
- Node 2: Saturation adjustment
- Node 3: Creative Look (log-2-log) | 3D-LUT
- Node 4: Display Render Transform (DRT) | 3D-LUT

For doing so, please select the “Edit” button on the right-hand side of Livegrade.



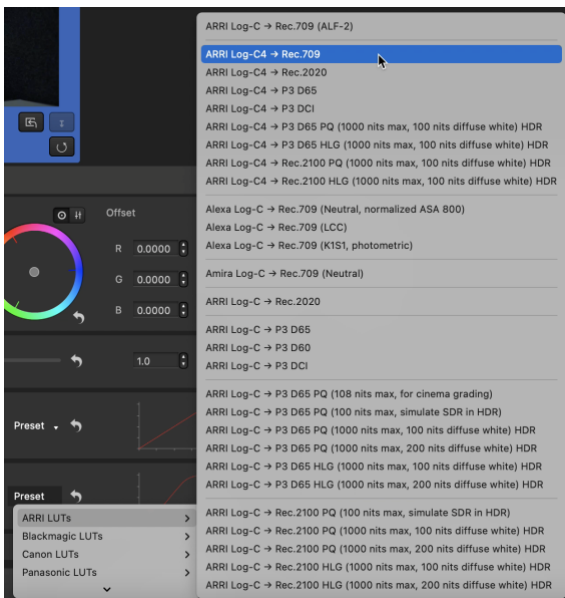
Select the additional “3D LUT Node” here.



Your nodes should look like this:



For a correct image preview within Livegrade, please select the official ARRI LogC4 to Rec709 LUT for the 2<sup>nd</sup> node here. The official color conversion for AWG4 / LogC4 should be built in Livegrade already.



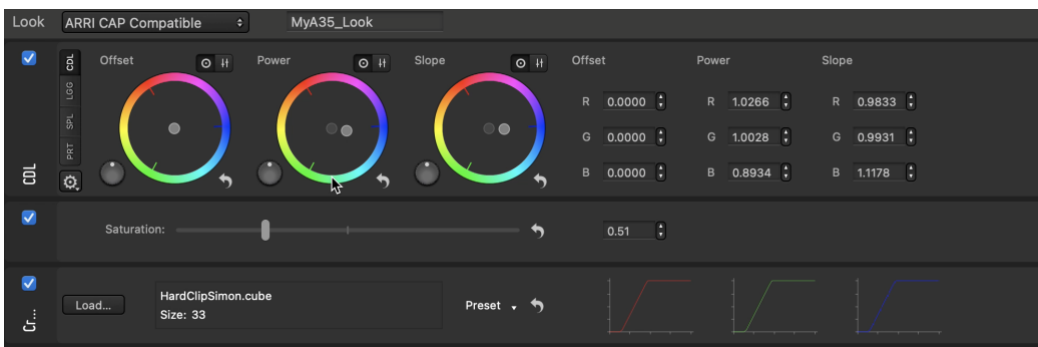
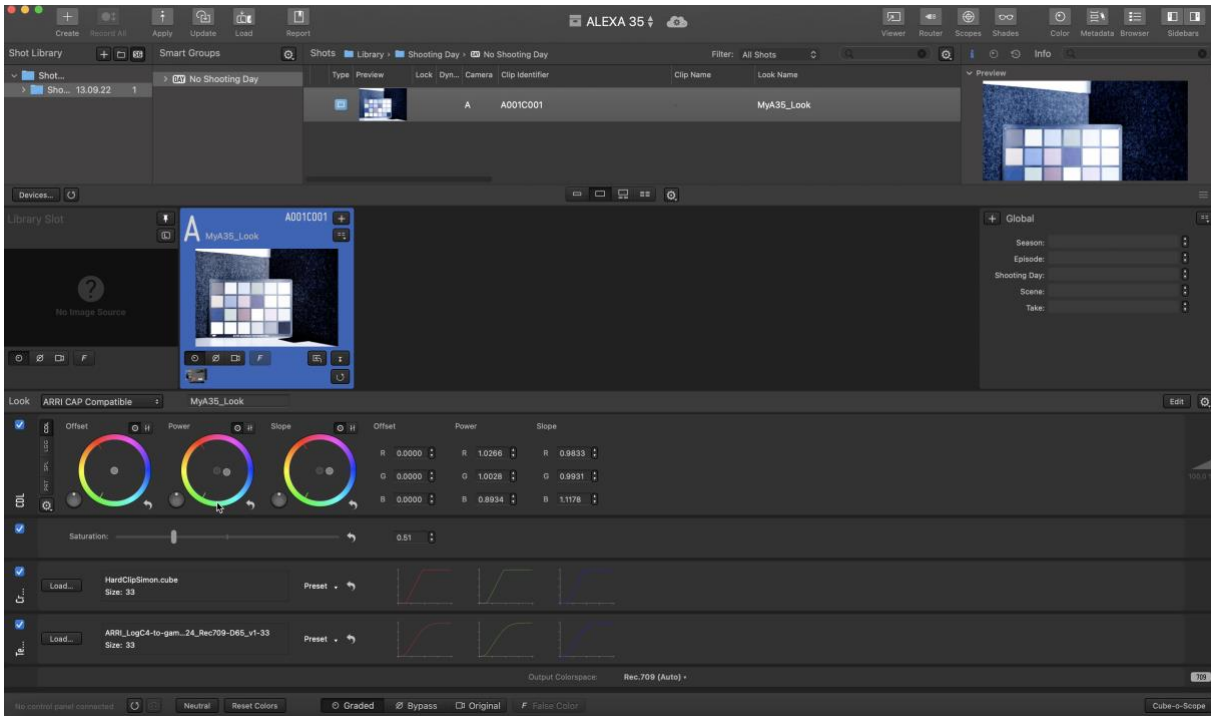
The LUT name of the node should be “ARRI\_LogC4-to-gamma24\_Rec709-D65\_v1” for the conversion to Rec709.

**Please note:** The second node will be ignored by the ALEXA 35 camera, because the “Display Render Transform (DRT)” in-camera is happening on the SDI-Output: for example, by choosing “Rec709 (SDR)” for “SDI 1 Color Space”. **Node 2 in Livegrade is only needed for preview within Livegrade.**

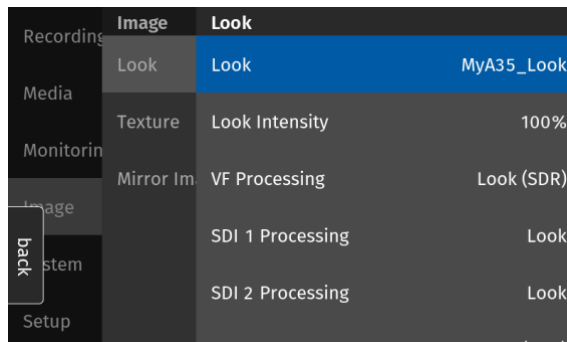
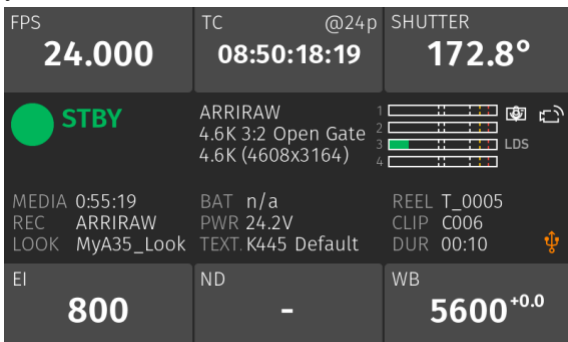
### 2.1.4 Apply CDL values and creative log-2-log LUTs

If everything is set up correctly, it's possible to use CDL values or a creative log-2-log Look / 3D-LUT by using the corresponding nodes in Livegrade (CDL node & 3D-LUT node). It's also possible to add other nodes for example HSL curves or standard curves to your setup. All kind of curves are not CDL compatible and being applied as a combined 3D-LUT.

**Please note:** There's a known issue in Pomfort Livegrade 6.3, where you might need to deactivate and activate the creative log-2-log Look / 3D-LUT node manually one time, so that the look is applied correctly to the image.

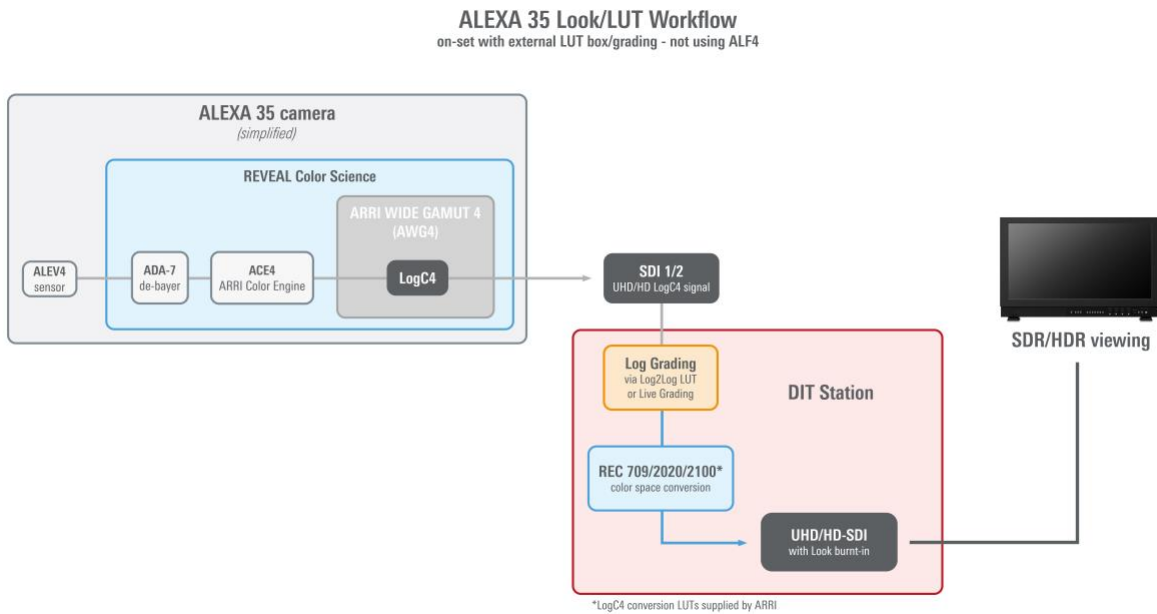


You can do live grading and send your ALF4 look directly to your camera. This newALF4 look will appear in your ALEXA 35 under "Look".



## 2.2 Livegrade using ALEXA 35 & external LUT boxes

In this chapter you will find basic information how to connect an external LUT box with Livegrade and your ALEXA 35. In this example we are using a [TVLogic "IS-mini X"](#).



### 2.2.1 Configure SDI paths, look and color spaces of ALEXA 35

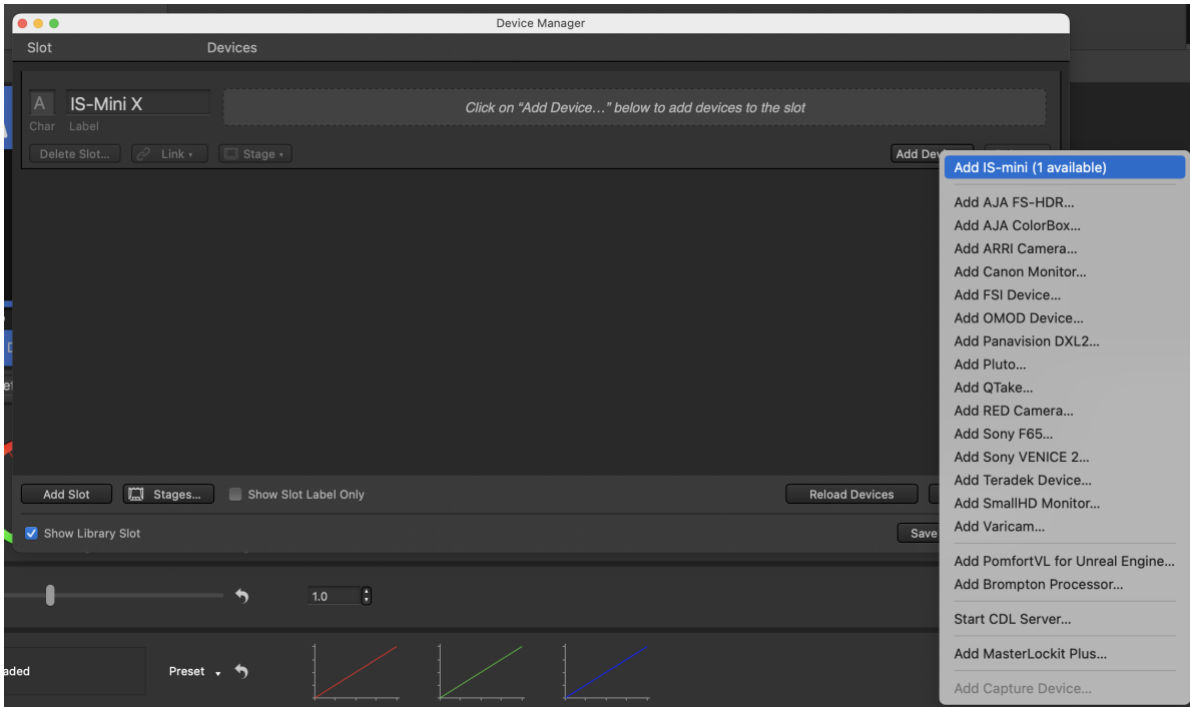
To get a correct image out of the camera you have to set up your SDI image pipeline correctly. To do so, please check the “SDI/VF Processing” and “SDI Color Space”. To use external LUT boxes with 3D-LUTs incl. color space conversions, please select “LogC4” for the corresponding SDI paths.

	Image	Look	
Recording	Look	Look	Default
Media	Texture	Look Intensity	100%
Monitoring	Mirror Im	VF Processing	Look (SDR)
Image		SDI 1 Processing	LogC4
back		SDI 2 Processing	LogC4
System		SDI 1 Color Space	REC 709 (SDR)
Setup			

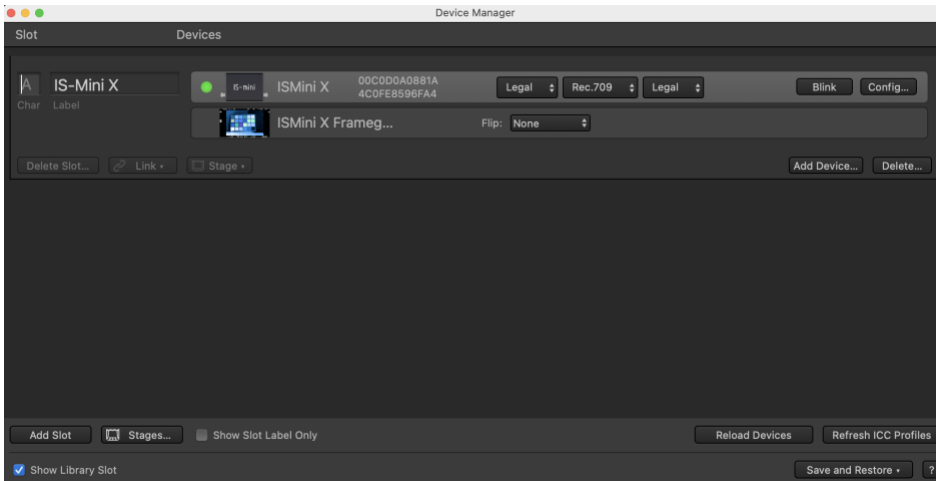
**Please note:** Please select “LogC4” for the corresponding SDI Color Space in the ALEXA 35. Selecting Rec709 (SDR) or other Color Spaces here results in a “double LUT” and therefore in a wrong image.

## 2.2.2 Add external LUT box device to Livegrade

It is recommended to connect the IS-mini via USB. Once a correct connection between the IS-mini device and your computer is established, launch Livegrade and proceed to add the IS-mini as a device. In order to do that, you can choose “Slots” in the main menu and then “Add Device”. Alternatively, you can add the device through the Device Manager. The IS-mini X should appear automatically if it’s connected correctly.



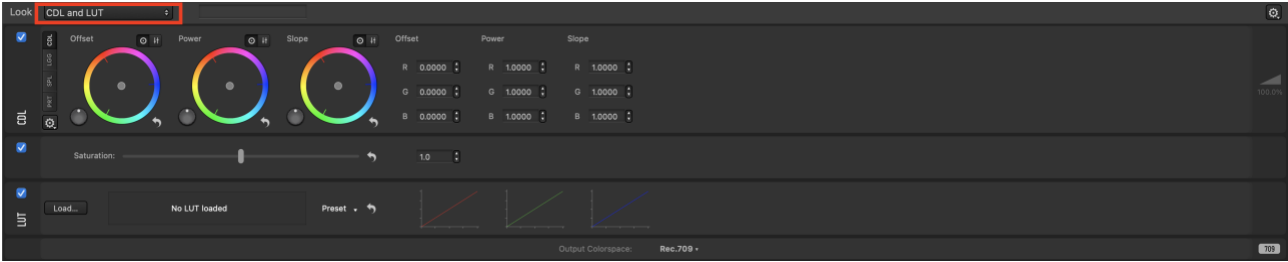
Select “Add Device...” -> “Add IS-mini”.



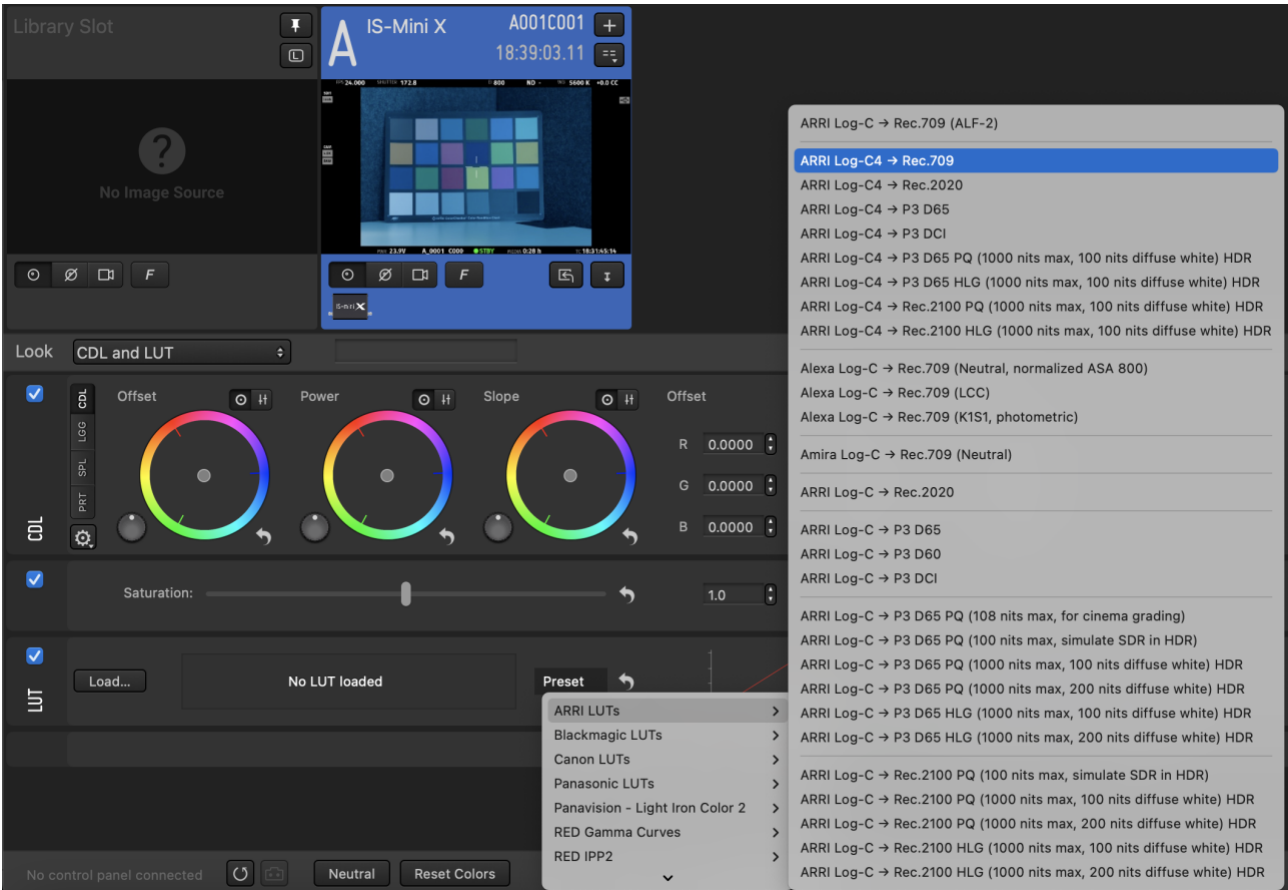
The SDI output of ARRI camera is always “Legal”.

Please note: Please check that the corresponding “SDI 1 Color Space” in-camera is set to LogC4. Selecting Rec709 (SDR) or other Color Spaces here results in a “double LUT” and therefore in a wrong image.

Select your desired grading mode e.g. “CDL and LUT”.



Next, please select the “Display Render Transform (DRT) LUT” for the 3D-LUT node. The official color conversion for AWG4 / LogC4 should be built in Livegrade already.



The LUT name of the node should be “ARRI\_LogC4-to-gamma24\_Rec709-D65\_v1” for the conversion to Rec709.

Your node setup should look like this:

- Node 1: CDL values
- Node 2: Saturation adjustment
- Node 3: Display Render Transform (DRT) | 3D-LUT

### 2.2.3 Adjust CDL values and Saturation

If everything is set up correctly, it's easily possible now adjust the CDL or Saturation values by using the corresponding nodes in Livegrade (Node 1 & 2). It's also possible to add other nodes for example HSL curves or standard curves to your setup. All kind of curves are not CDL compatible and being applied as a combined 3D-LUT.

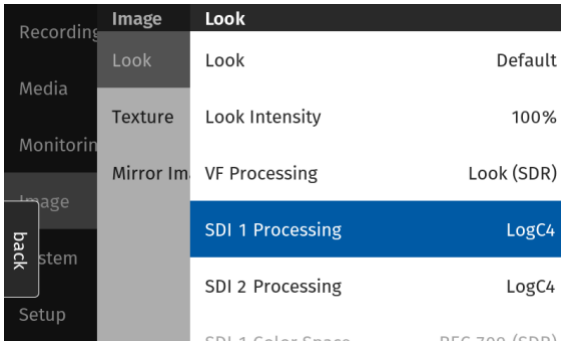
### 2.3 Livegrade using ALEXA 35, external LUT Box and ACES color space

In this chapter you will find basic information how to work in ACES color space with an external LUT Box and the ALEXA 35. In this example we are using a [TVLogic "IS-mini X"](#).

**Please note:** The latest Pomfort Livegrade version should have official support for the Input Device Transform (IDT) for ARRI AWG4/LogC4.

#### 2.2.1 Configure SDI paths, look and color spaces of ALEXA 35

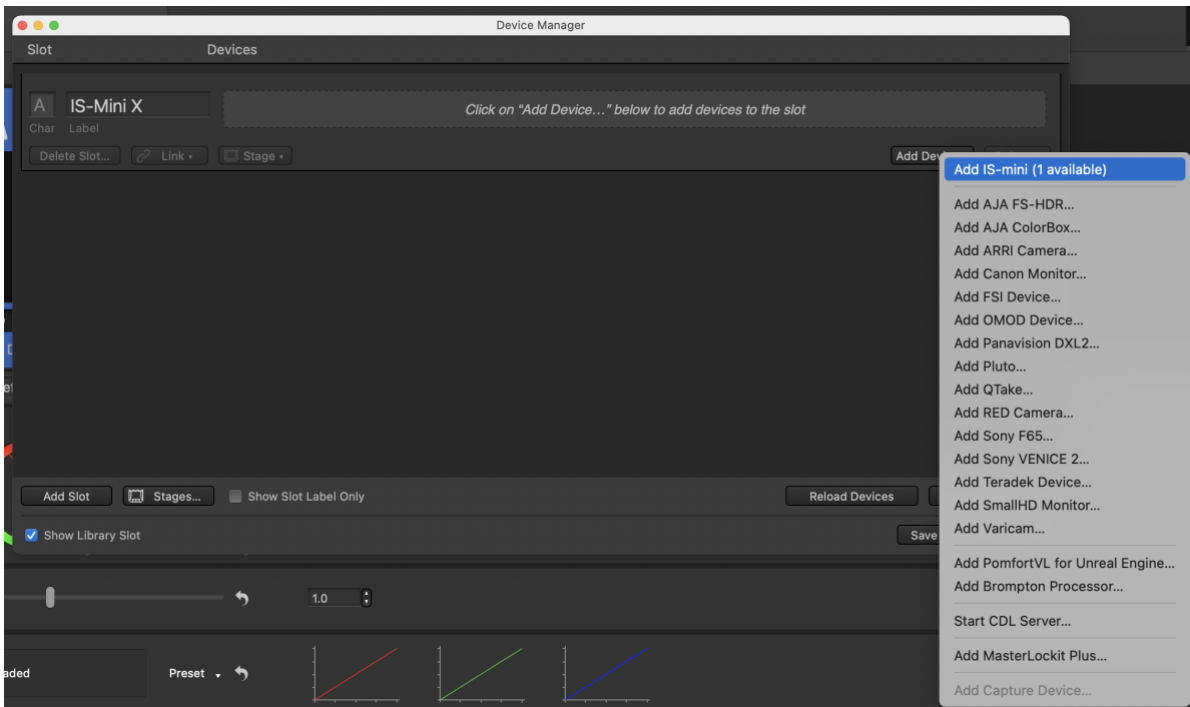
To get a correct image out of the camera you have to set up your SDI image pipeline correctly. To do so, please check the "SDI/VF Processing" and "SDI Color Space". To use external LUT boxes with 3D-LUTs incl. color space conversions, please select "LogC4" for the corresponding SDI paths.



**Please note:** Please select "LogC4" for the corresponding SDI Color Space in the ALEXA 35. Selecting Rec709 (SDR) or other Color Spaces here results in a "double LUT" and therefore in a wrong image.

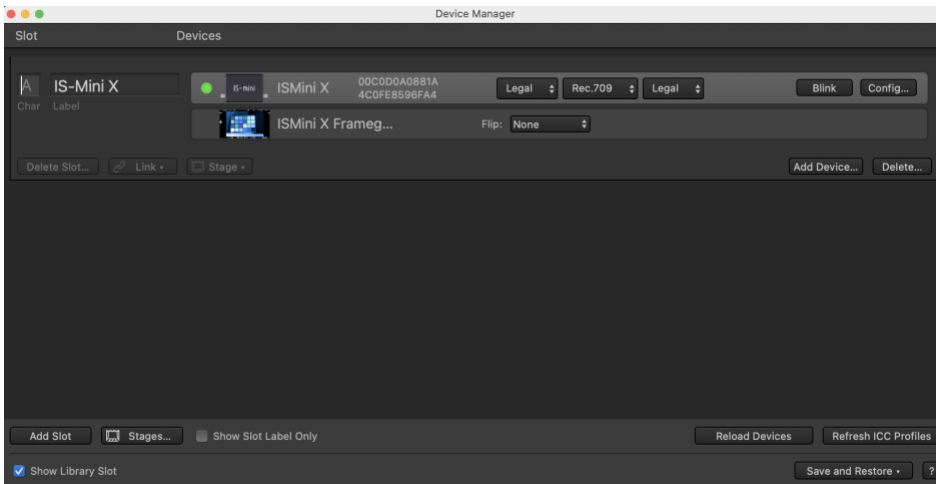
#### 2.2.2 Add external LUT box device to Livegrade

It is recommended to connect the IS-mini via USB. Once a correct connection between the IS-mini device and your computer is established, launch Livegrade and proceed to add the IS-mini as a device. In order to do that, you can choose "Slots" in the main menu and then "Add Device". Alternatively, you can add the device through the Device Manager. The IS-mini X should appear automatically if it's connected correctly.



Select "Add Device..." -> "Add IS-mini".

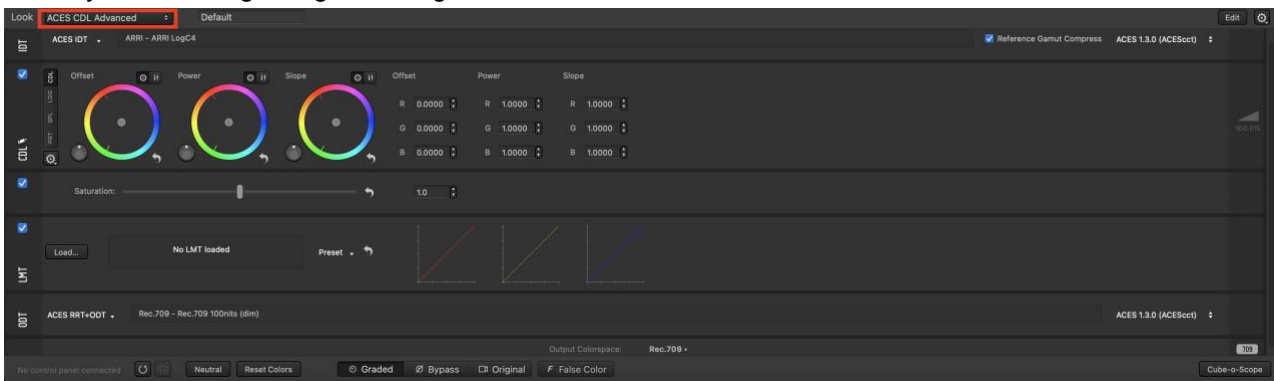




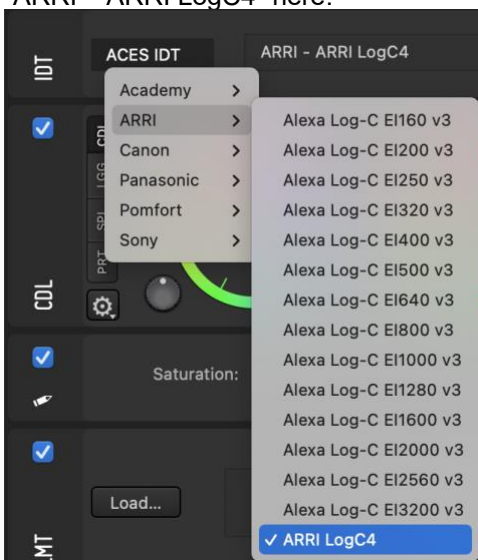
The SDI output of ARRI camera is always “Legal”.

Please note: Please check that the corresponding “SDI 1 Color Space” in-camera is set to LogC4. Selecting Rec709 (SDR) or other Color Spaces here results in a “double LUT” and therefore in a wrong image.

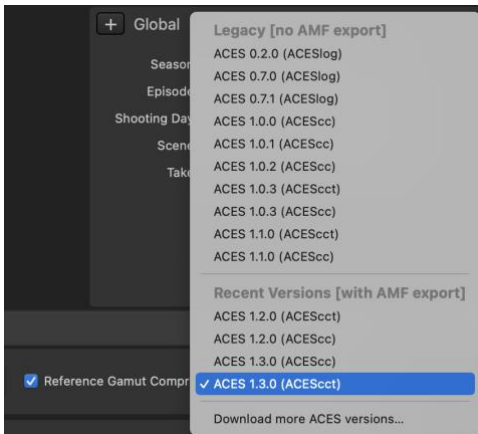
Select your desired grading mode e.g. “ACES CDL Advanced”.



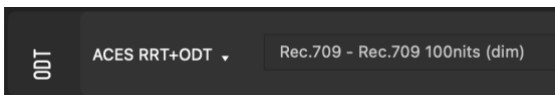
Next, please define the correct ACES “Input Device Transform (IDT)” for ARRI AWG4/Log4. Please select “ARRI – ARRI LogC4” here.



On the right-hand side you can select your ACEScc or ACEScct working space. In this example we are working in ACES 1.3.0 (ACEScct).



In a last step you must define your Output Device Transform (ODT). This of course depends on your monitor/display environment. In this example we are using a monitor with Rec. 709 (Gamma 2.4) color space and 100nits.



Your node setup should look like this:

- Node 1: IDT
- Node 2: CDL values
- Node 3: Saturation adjustment
- Node 4: LMT
- Node 5: ACES RRT + ODT

### 2.2.3 Adjust CDL values and Saturation

If everything is set up correctly, it's easily possible now adjust the CDL or Saturation values by using the corresponding nodes in Livegrade (Node 2 & 3). In addition to that, the user can select an ACES LMT or add another additional node for example a 3D-LUT with a creative look. It's also possible to add other nodes for example HSL curves or standard curves to your setup. All kind of curves are not CDL compatible and being applied as a combined 3D-LUT.

**Please note:** LMTs are specified by the ACES specification as a transform from and to ACES AP-0 (the linear ACES color space). Consequently, loaded LUTs in the LMT node will always be applied in ACES AP-0. For this reason, the LMT node only accepts LUTs in the Common LUT Format (CLF) matching the ACES specification. If you need to load a 3D LUT (e.g., in a typical grading working color space such as ACEScct), you can add a 3D LUT node and load any compatible 3D LUT format without limitation. LUTs in the 3D LUT node will be applied in the working colorspace (ACEScct/ACEScc).<sup>1</sup>

## 4 Links

Links to Pomfort Livegrade Knowledge Base:

- [Livegrade \(general overview\)](#)
- [Color Controls and Grading Modes](#)
- [ARRI CAP](#)
- [ACES](#)

<sup>1</sup> Pomfort Livegrade Knowledge Base

### **3 Contact**

In case you have questions or recommendations, please contact the Digital Workflow Solutions group within ARRI via email: [digitalworkflow@arri.de](mailto:digitalworkflow@arri.de)