Flanders Scientific Inc.

XMP Series Calibration

Using Calman with Direct LUT Upload Capability v1.2

Flanders Scientific, Inc.
6215 Shiloh Crossing
Suite G
Alpharetta, GA 30005
Phone: +1.678.835.4934
Fax: +1.678.804.1882
E-Mail: Support@FlandersScientific.com
www.FlandersScientific.com

Notes Before Starting

This is a preliminary guide showcasing use of Calman with the generic 3D LUT Calibration workflow in Calman. Portrait Displays is developing an FSI specific workflow for Calman and this guide will be updated when that becomes available.

Pre-Calibration Steps

Monitor Settings

Before starting calibration please set all gain, bias, and rotary knob controls back to default.

From the COLOR menu on the monitor set **Color System** to **3rd Party**.

Now set the monitor's Luminance Mode to an appropriate starting position for your desired calibration. For example, if calibrating for SDR you may want to set Luminance Mode to 100.

Next, set the **3rd Party LUT Memory** selection on the monitor to the desired **User#** memory bank where you will save your LUT(s).

The last monitor menu selection to consider is the **Range** selection. The **Range** setting on the monitor should be set to match the output range of your test patterns. For example, if sending video range (64-940) test patch sets to the monitor the monitor should be set to Video Range. A mismatch between your test pattern output range and your monitor's **Range** setting will lead to an incorrect calibration result.

Warm-up

A warm-up period of 10 minutes is suggested for both probe and monitor before starting calibration. For proper warm-up we suggest an average picture level around 100nits.

Connecting the monitor to your network

After the monitor has been turned on connect the display's ethernet port to your local network. The display will obtain an IP address via DHCP or if you prefer you can set a static IP address. The assigned IP address can be seen from the monitor's **System** menu. Take note of this IP address as you will need it to connect Calman to the display. Please see the user manual for futher details on network connectivity.

Connecting Devices in Calman

Start DaVinci Resolve and create a new timeline. There must be content in your timeline before starting calibration. Verify that the monitor is receiving a signal from Resolve then click on the Color Tab in Resolve.

Click on the Workspace menu in Resolve. Select Monitor Calibration. Select Portrait Displays Calman. A pop-up dialog in Resolve will request an IP address, which can be found once you start Calman.

Start Calman and Select *Open Workflow Template -> Calibration -> 3D LUT* from the menu at top left.

Once the 3D LUT workflow template opens select the *3D LUT Only* option.

Follow the prompts to connect your meter.

Next select *Find Source* and select DaVinci Resolve as your Pattern Source. Select *Connect* and take note of the IP address listed. Enter this IP address in Resolve and press Connect. Do not close the Calibration network connection window in Resolve as this will terminate your connection.

Return to Calman and Select *Find Display -> Flanders Scientific -> FSI XM Monitor*. Type in the IP address of your monitor as found on the monitor's System Menu, then select *Connect*.

Press NEXT to continue with the calibration process.

Calibrating the Monitor

In CalMAN set your Calibration Targets, for example Whitepoint: D65, ColorSpace: Rec709, EOTF: Gamma 2.4. Then select NEXT.

You can skip the Pre Cal Capture step if you like, this is optional. However, before continuing select the FSI monitor tab at top right and select Full DDC Reset. This step will load UNITY LUTs to the selected calibration position. Loading UNITY LUTs returns the monitor to its native, uncalibrated state, which is necessary before continuing with the calibration process. Please ensure you are resetting the LUT ID memory that corresponds to the memory position you are saving LUTs to on the monitor.

ID1 = User1
ID2 = User2
ID3 = User3
ID4 = User4
ID5 = User5
ID6 = User6

For example, if you have the monitor's 3rd Party LUT memory currently set to User1 memory position you will want to reset and save LUTs to ID1.

Note: Please ensure that the File Format listed is set to FSI Normal Mode 17.

Once the DDC reset is complete select NEXT to continue to the 1D LUT calibration page.

From the 1D LUT calibration page click on the AutoCal symbol and confirm that you have the LUT ID position set to the correct memory position. Calman will then begin the 1D LUT AutoCal process. It is normal for the screen to flash during this process as the LUTs are updated in real time. The probe will only read between flashes so any lines, flashes, etc. that occur during a LUT update will not negatively impact calibration. Please note that you must utilize the 1D LUT in Calman to control your peak luminance. The monitor's LUM Mode controls only apply to the default GaiaColor Color system. Once this process is complete select NEXT to continue to the 3D LUT calibration step.

From the 3D LUT calibration page select the AutoCal symbol. Confirm your LUT settings once again to ensure that the 3D LUT will be saved to the correct memory position. We also suggest using 0.5 pattern delay.

Select a time based or point based calibration option. Once the calibration process is complete the 3D LUT will be automatically saved to the display.

Your calibration is now complete and you can continue along in the Calman workflow to verify results.

Questions? E-mail: Support@FlandersScientific.com or Call: +1.678.835.4934