

# CaIMAN Setup Guide

Konvision monitors

Rev. 1.0

## Introduction

CalMAN Display Calibration Software can automatically create multiple optimized calibration 3D LUTs for the entire line of Konvision monitors, with the exception of the small KRM-208A. CalMAN controls Konvision internal test patterns while it creates a custom LUT file, optimized to calibrate the Konvision monitor to the selected performance standard.

CalMAN then automatically loads the custom 3D LUT file into the Konvision monitor, to one of the monitor's REC709, EBU, SMPTE C, DCI P3, USER1, USER2, or sRGB ColorSpace modes.

### CalMAN Required Software Version

- CalMAN 2017 R2 (5.8.2.78) or newer

### CalMAN Recommended Workflow

- Quick Analysis (easiest)
- Color Cube (3D LUT)

### Konvision Supported Firmware

- All firmware versions

### Konvision Control Connection

- Ethernet LAN port (RJ45)

*The LAN cable should be parallel connection for both ends, for example 568B LAN cable, with pin definition:*

*orange-white, orange, green-white, blue, blue-white, green, brown-white, brown.*

## CalMAN Device Connections

### Source Connect

Konvision internal test patterns are available to be used during CalMAN 3D LUT creation.

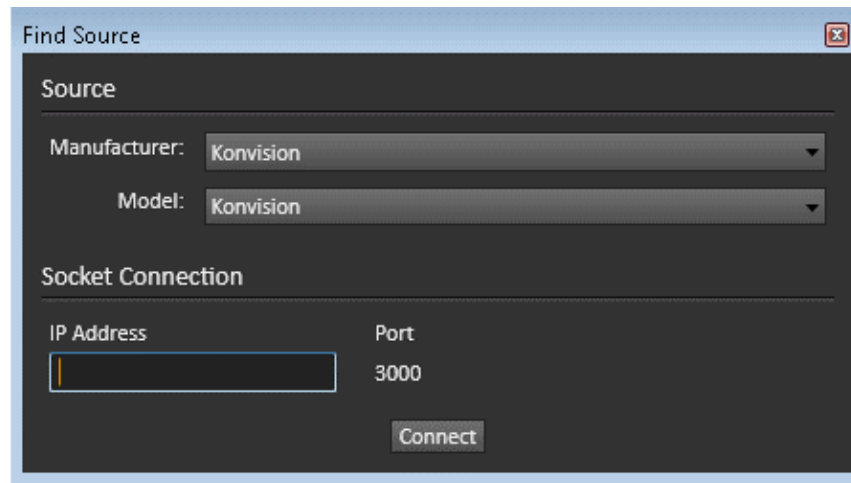


Figure 1. CalMAN Find Source dialog for connecting to Konvision internal test pattern generator.

To connect CalMAN to the Konvision monitor internal test pattern generator:

1. On the CalMAN *Source Settings* tab, click the *Find Source* button.
2. On the *Find Source* dialog (Figure 1), under *Manufacturer*, select “Konvision.”
3. Under *Model*, select “Konvision.”
4. Enter the Konvision monitor’s IP address. (The default monitor IP address is 192.168.1.155)
5. Click *Connect*.

*Note:* Konvision monitor IP addresses can be changed using the 'Konvision Device Controller' software.

[https://mega.nz/#!TwFTXSjb!VnU7qUpfyrh\\_lcZhwgaU4g61fEV99xB\\_vxNWe3802ds](https://mega.nz/#!TwFTXSjb!VnU7qUpfyrh_lcZhwgaU4g61fEV99xB_vxNWe3802ds)

## Display Connect

CalMAN connects to the Konvision monitor to automatically load a created 3D LUT into one of the Konvision monitor's ColorSpace modes.

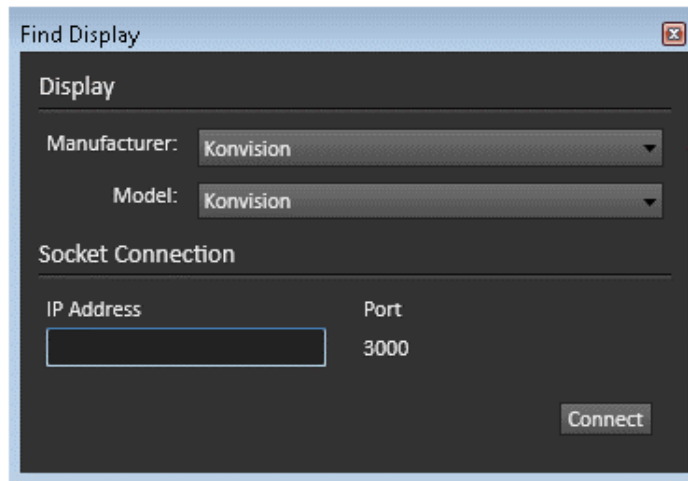


Figure 2. CalMAN Find Display dialog for connecting to Konvision display.

To connect CalMAN to the Konvision monitor for display control:

1. On the CalMAN *Display Control* tab, click the *Find Display* button.
2. On the *Find Display* dialog (Figure 2), under *Manufacturer*, select "Konvision."
3. Under *Model*, select "Konvision."
4. Enter the Konvision monitor's IP address. (The default monitor IP address is 192.168.1.155)
5. Click *Connect*.

**Note:** Konvision monitor IP addresses can be changed using the 'Konvision Device Controller' software.

[https://mega.nz/#!TwFTXSjb!VnU7qUpfyrh\\_lcZhwgaU4g61fEV99xB\\_vxNWe38O2ds](https://mega.nz/#!TwFTXSjb!VnU7qUpfyrh_lcZhwgaU4g61fEV99xB_vxNWe38O2ds)

## Device Settings

### Source Settings

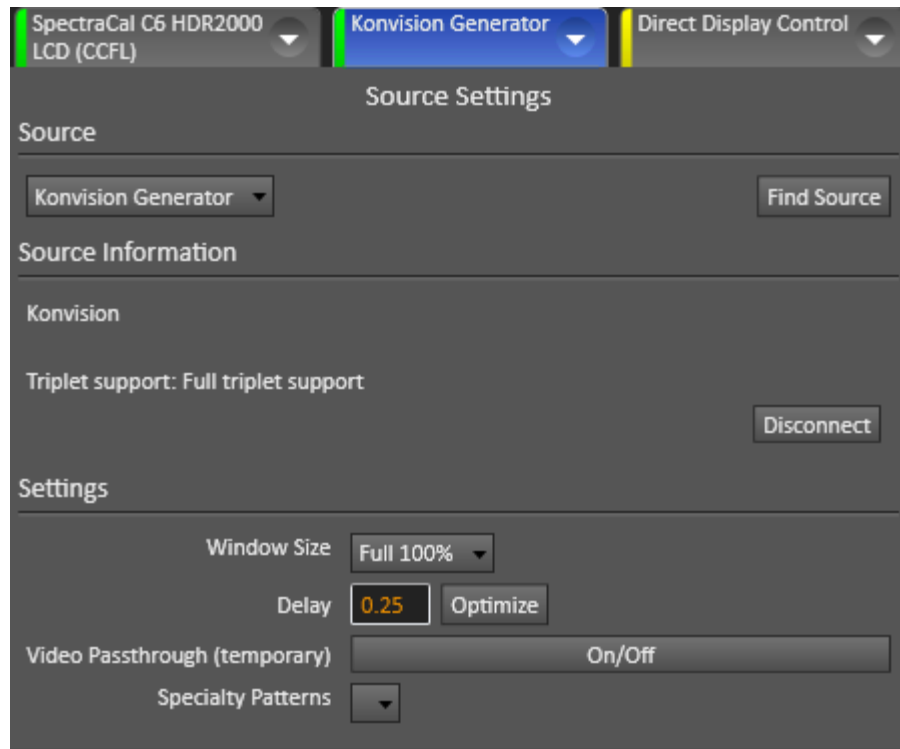


Figure 3. CalMAN Source Settings tab, with Konvision internal test pattern generator connected.

1. On the CalMAN Source Settings tab (Figure 3), click the *Video Passthrough On/Off* button to temporarily disable the Konvision internal test pattern generator, to allow access to the monitor's on-screen display menu.
2. In the monitor's on-screen *Setup* menu, click the *Factory Reset* button to reset the monitor control to factory default (Menu > Setup > Factory Reset).
3. In the monitor's on-screen *Imj Adjust* menu, under *ColorSpace*, set the mode to *Bypass*.

## Display Control

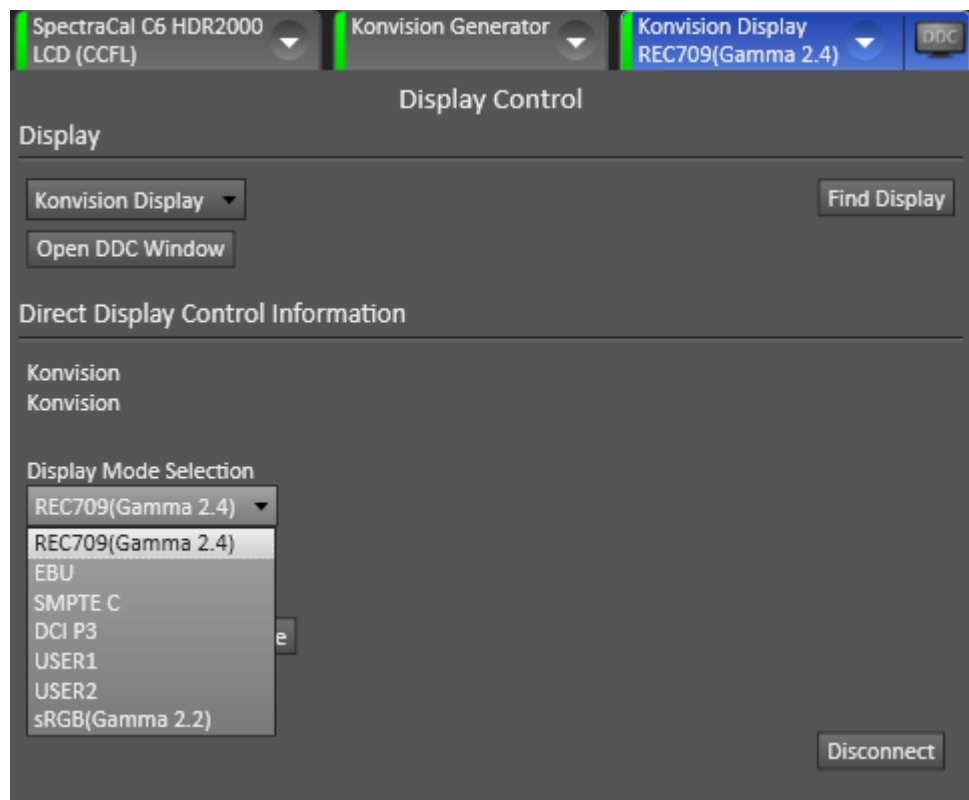


Figure 4. CalMAN Display Control tab, showing Display Mode Selections.

1. On the CalMAN Display Control tab (Figure 4), select the desired Konvision ColorSpace mode (REC709, EBU, SMPTE C, DCI P3, USER1, USER2, or sRGB) into which CalMAN will automatically load the 3D LUT that it creates.

*Note: In the Konvision monitor, the ColorSpace control needs to be set to Bypass during CalMAN 3D LUT calibration.*

## Calibration Target Options

In CalMAN, under Settings > Workflow Basic Options > Target Options (Figure 5), select your desired calibration targets for the Konvision ColorSpace mode that you selected under *Display Mode Selection* on the *Display Control* tab (Figure 4).

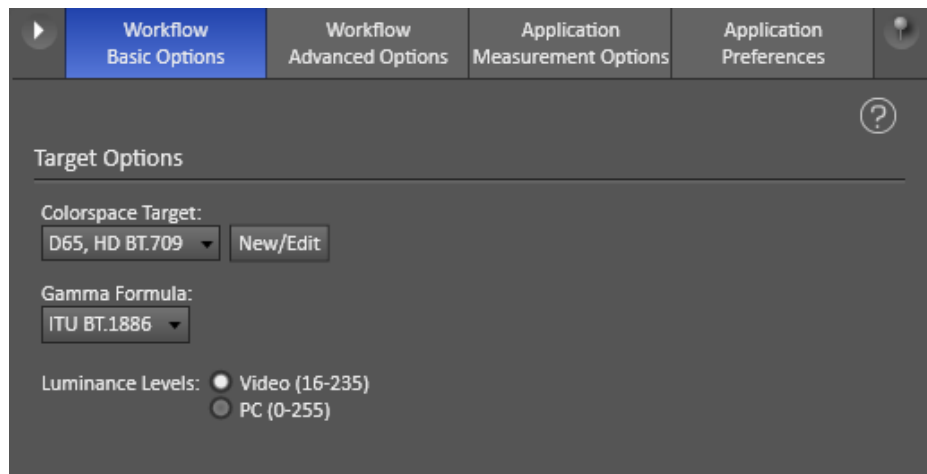


Figure 5. CalMAN Settings > Workflow Basic Options > Target Options.

## Display 3D LUT Calibration

The CalMAN *Quick Analysis* workflow will be the easiest workflow to use to create a 3D calibration LUT for the Konvision monitor.

Alternately, the *Color Cube (3D LUT)* workflow could be used.

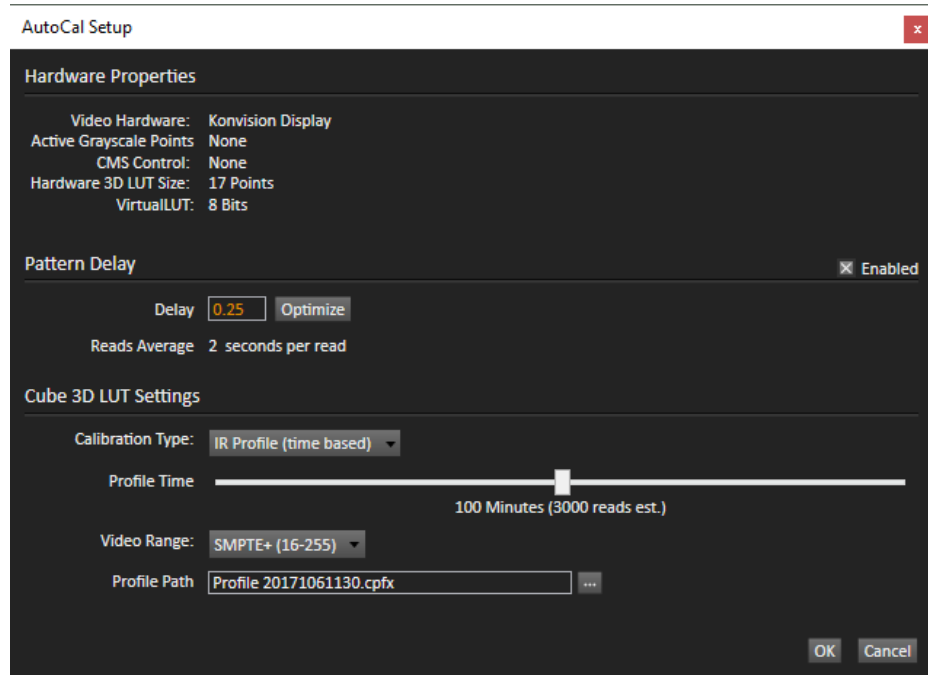


Figure 6. CalMAN 3D LUT AutoCal Setup dialog for the Konvision monitor.

To create a 3D calibration LUT for the Konvision monitor:

1. Open the CalMAN *Quick Analysis* workflow, if you haven't already done so.
2. On the workflow *Introduction* screen, click the *3D Cube LUT* button to navigate to the 3D LUT Calibration page.
3. On the 3D LUT Calibration page, click the *AutoCal* (rotating arrows) button at the right end of the meter action buttons. The *AutoCal Setup* dialog then appears (Figure 6).
4. Under *Calibration Type*, select the desired type of 3D LUT calibration process.
  - **IR Profile (time based):** Creates the best quality display calibration 3D LUT possible in the selected period of time. You select how much display quality you have time for, from 30 minutes to maximum display quality (6,000 points max). Uses Intelligent Resolution Profiling to search out the most nonlinear color space areas and correct those first.



- **IR Profile (point based):** Creates the best quality display calibration 3D LUT possible with the selected number of measurement points (1,000 - 10,000 points). Uses Intelligent Resolution Profiling to search out the most nonlinear color space areas and correct those first.
- **Lightning LUT:** Creates a display calibration 3D LUT in five minutes or less. Produces a very high quality result on professional displays with moderate linearity. Displays with significant nonlinearity may produce marginal results.

*Note: Konvision monitors are linear enough that the CalMAN Lightning LUT process is usually the best 3D LUT option.*

5. Click *OK*.

Upon completion of the AutoCal 3D LUT calibration process, CalMAN automatically loads the optimized 17x17x17 LUT calibration data into the Konvision monitor, in the previously selected ColorSpace mode.

## Calibration Validation

To validate a Konvision monitor 3D LUT calibration:

1. On the CalMAN *Source Settings* tab (Figure 3), click the *Video Passthrough On/Off* button to temporarily disable the Konvision internal test pattern generator, to allow access to the monitor's on-screen display menu.
2. In the monitor's on-screen *Imj Adjust* menu, under *ColorSpace*, select the mode that you had selected on the CalMAN *Display Control* tab (Figure 4) during 3D LUT calibration.
3. Advance to the *ColorChecker* page in the *Quick Analysis* workflow (or the *Gamma & ColorChecker* page in the *Color Cube (3D LUT)* workflow.
4. On the CalMAN *ColorChecker* page, click the *Read Series* button to measure and chart the monitor's calibrated performance.

## About / Contact

### About Portrait Displays

Portrait Displays, Inc., since 1993, is a leading application software provider (ASP) for PC, smartphone, and tablet displays. The Portrait Displays team now includes **SpectraCal**, the world's leading provider of video display calibration software. The combined companies offer value-added, feature-rich solutions to both OEM display manufacturers and end users seeking improved accuracy and manageability of their displays.

Portrait Displays, an Intel Capital Portfolio company, is a private corporation with headquarters in Pleasanton, California, USA with representatives in Europe, Taiwan, China, Japan, and Korea.

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