



CaIMAN

Setup Guide

Murideo SIX-G

Digital Video Generator

Rev. 1.2

Introduction

The Murideo SIX-G digital video generator can be automatically controlled by the CalMAN Display Calibration Software to produce measurement and calibration test patterns for SDR and HDR displays at resolutions from 640x480 up to 4096x2160.

CalMAN Required version

- 5.7.0 or later (v 5.8.1 or later for full HDR support)

CalMAN Recommended Workflows

- All available measurement and calibration workflows

Murideo SIX-G Supported Firmware

- Version 1.87 or later for full HDR support
- Version 2.42 or later for full HDR support

Murideo SIX-G Control Connection

- USB
- RS-232 serial

CalMAN Connection Procedure

Connect with a **USB cable**:

1. Install the Murideo SIX-G USB FTDI driver and connect the Murideo SIX-G to the CalMAN computer with a USB cable. (Seen by the computer as a com port.)

Note: The FTDI USB driver is available as part of the CalMAN Device Driver Pack (<http://www.spectracal.com/download.php?id=3>) or from the FTDI web site (<http://www.ftdichip.com/FTDrivers.htm>).

OR, connect with an RS-232 null-modem serial cable:

2. If the CalMAN computer has an RS-232 serial port, you can connect the Murideo SIX-G directly to the CalMAN computer with a null-modem female DB9 to 3.5mm phone plug cable (this is a slower control connection).

(tip of the phone plug to pin 2 of the DB9, ring of the phone plug to pin 3 of the DB9, sleeve of the phone plug to pin 5 of the DB9)

3. On the CalMAN *Source Settings* tab, click the “Find Source” button.
4. On the CalMAN *Find Source* dialog (Figure 1), select “Murideo - SIX-G.”

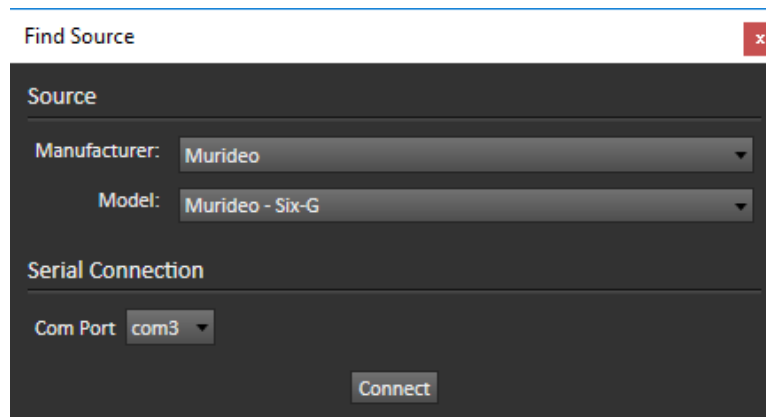
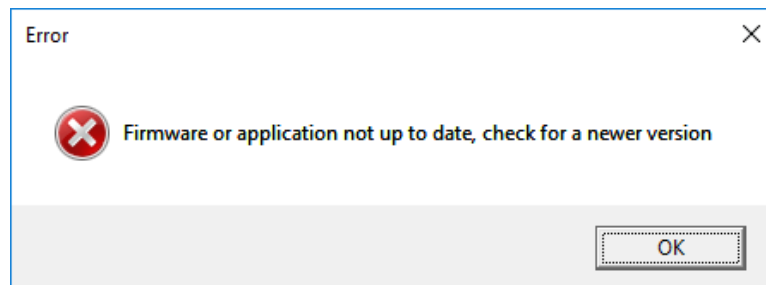


Figure 1. CalMAN Find Source dialog.

5. Select the appropriate *Com Port* (check Device Manager for the assigned com port).
6. Click *Connect* on the *Find Source* dialog.

Important: Murideo SIX-G units with version 2.xx firmware are able to select 3840x2160 resolutions in a “4K Geometry” mode. If the unit is in its 4K Geometry mode while attempting to connect to CalMAN, the following error message will be produced.



To avoid this error and connect normally, switch the Murideo SIX-G out of its 4K Geometry mode before connecting to CalMAN.

CalMAN Source Settings Tab

When “Murideo - SIX-G” is selected as the CalMAN Source on the CalMAN Source Settings tab (Figure 2), there is an *HDR* drop down box to enable or disable HDR output from the Murideo SIX-G. The drop down box options are “Off,” “HDR10,” and “Dolby Vision.”

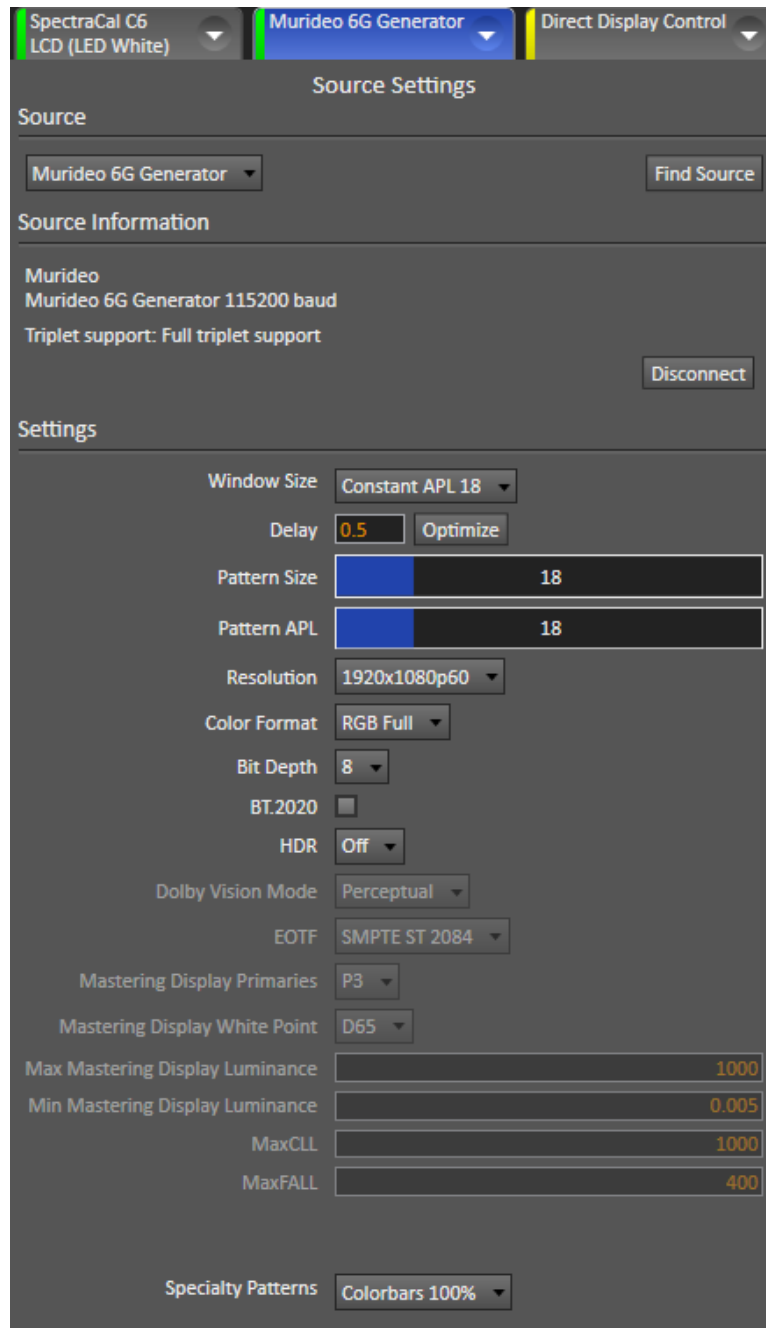


Figure 2. CalMAN Source Settings tab, with HDR mode disabled.

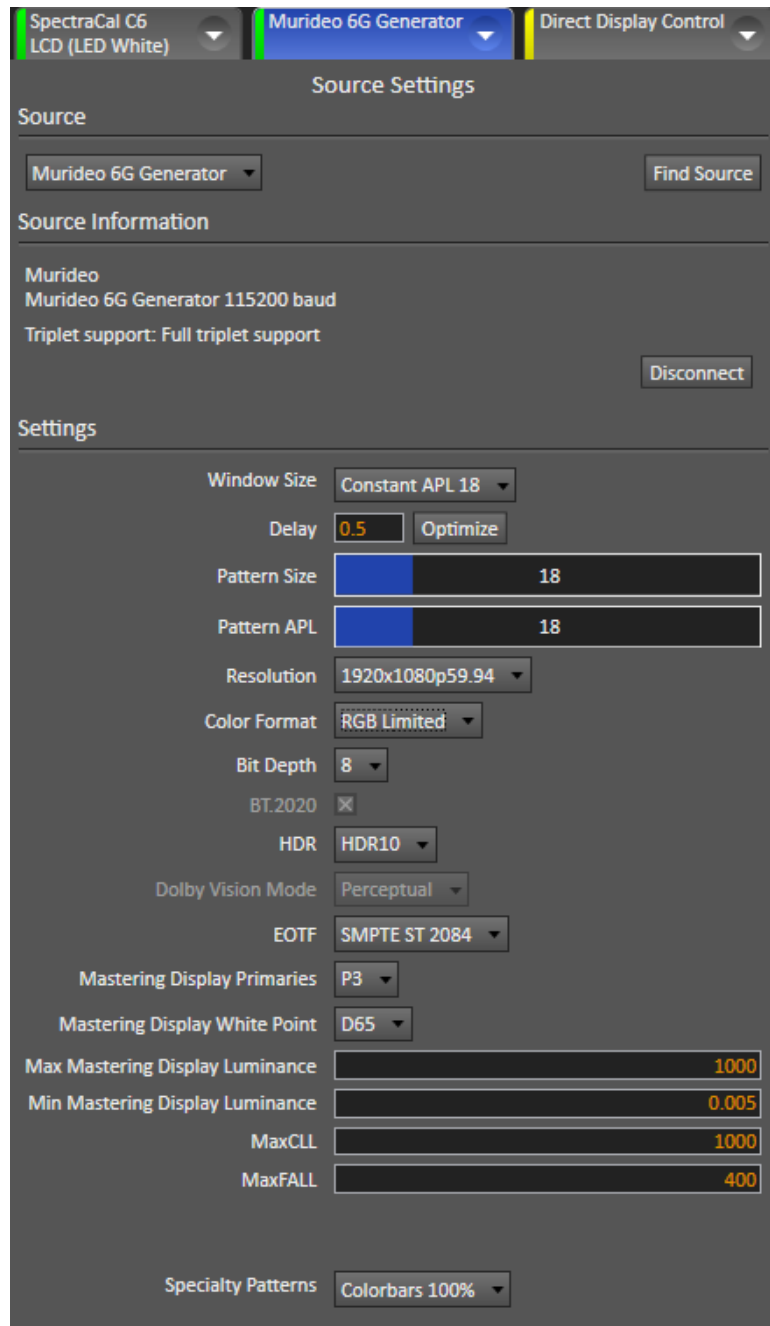


Figure 3. CalMAN Source Settings tab, with HDR10 HDR mode enabled.

For HDR10 mode, when *Mastering Display Primaries* is set to “BT.2020” on the Source Settings tab, the *Color Format* should be set to “RGB Limited,” as the Murideo SIX-G does not support YCbCr triplets through automated control.

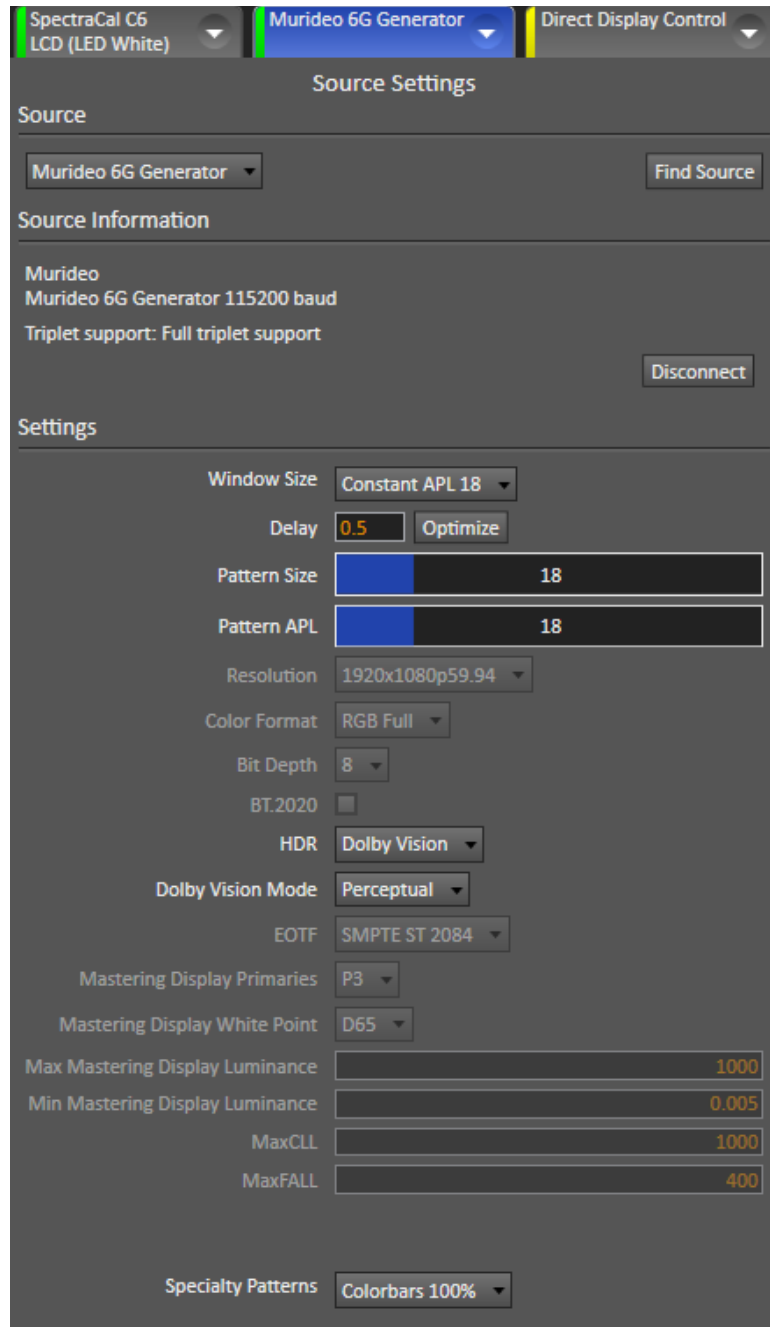


Figure 4. CalMAN Source Settings tab, with Dolby Vision HDR mode enabled.

Note: For Dolby Vision HDR mode, the Murideo resolution must be manually set to 1080p.

When Dolby Vision HDR mode is selected on the Source Settings tab, the Murideo SIX-G output mode does not change until the first pattern is selected to be displayed.

The patterns are actually 12-bit 4:2:2 YCbCr, but Dolby Vision tunnels the 12-bit YCbCr patterns through the 8-bit RGB signal path.

The Murideo SIX-G specialty patterns display to the TV screen in the Dolby Vision HDR mode, but the specialty patterns are SDR, not Dolby Vision HDR.

Dolby Vision Modes:

- *Perceptual* - To be selected when using the *Dolby Vision* workflow (not to be used with the *Dolby Vision Custom* workflow).
- *Relative* - To be used with the *Dolby Vision Custom* workflow, to perform the *Metered Calibration* steps.
- *Absolute* – To be used with the *Dolby Vision Custom* workflow, to perform the *Post Calibration* steps.

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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