

CaIMAN Setup Guide

SpectraCal C6 HDR2000 Colorimeter



Rev. 1.2

Introduction

The SpectraCal C6 HDR2000 Colorimeter is one of the most advanced light measurement devices available, providing the accuracy you need for the most demanding calibration. The C6 HDR2000 Colorimeter is field-upgradeable with CalMAN 2017, meaning that supported display technologies are automatically updated when the device connects with the software. Every C6 HDR2000 Colorimeter sold is first certified in SpectraCal's calibration lab and shipped with a NIST (National Institute of Standards and Technology) certificate of accuracy.

The C6 HDR2000 is designed and specified to measure luminance accuracy at a range up to 2000 cd/m².

C6 HDR2000 Features

- Supports all display technologies including HDR, plasma, LCD LED, front-projection and OLED.
- Field upgradeable for new display technologies and calibration tables with spectral characterization technology.
- Advanced low-light handling with dynamic iris to optimize accuracy and measurement speed.
- Luminance accuracy at a range up to 2000 cd/m².
- Advanced light and color dichroic glass filters provide spectral accuracy and environmental stability over time.
- Sealed optics and sensors for increased lifespan.
- NIST certified in SpectraCal's calibration lab prior to shipping.
- Built-in ambient light diffuser and tripod mount.

C6 HDR2000 Included Parts

- SpectraCal C6 HDR2000 Colorimeter
- Professional Carrying Case
- Tripod Extension hardware
- NIST Certificate of Accuracy
- One-Year Limited Warranty

Meter Diffuser

The C6 HDR2000 includes an attached white disk diffuser for use when taking ambient light measurements or measuring direct light sources such as a projector in direct view mode. In all other modes, the diffuser is not used. The diffuser pops slightly away from the meter body and swings away from the lens.

Meter Positioning

Flat Panels / Rear Projectors

The C6 HDR2000 should be positioned with the face of the meter squarely in contact with the center of a flat panel or rear projector screen, to block ambient light. The cable counterweight can be draped over the top of the display to facilitate this.

Front Projectors

The C6 HDR2000 has a tripod mount (Figure 1) for use in non-contact mode, to measure front projector screens. The C6 HDR2000 should be placed about three feet (1 meter) back from the screen.



Figure 1. C6 HDR2000 tripod mount.

The C6 HDR2000 should be placed along the line of sight from the main/central viewing location, pointed at the center of the projector screen. In other words, the C6 HDR2000 should measure the screen from the same angle that the screen is normally viewed.

CalMAN Required Version

- CalMAN version 4.4 or newer

USB Driver

- No external drivers needed; meter is configured as a Windows HID device.

CalMAN Connection Procedure

1. Plug the C6 HDR2000 into a USB port. The built-in Windows HID driver will be installed automatically.
2. On the *Meter Settings* page, click *Find Meter*.
3. On the *Find Meters* popup dialog:
 - a. Leave *Com Port* set to default.
 - b. Leave meter search options set to default.
 - c. Click *Search*.

CalMAN Meter Settings

Meter Mode (Target Display Type)

- LCD (CCFL)
- LCD (CCFL Wide Gamut)
- LCD (CCFL Wide Gamut) - FSI
- LCD (LED White)
- LCD (LED White Wide Gamut)
- LCD (LED White Yellow) – Sharp Quattron
- LCD (LED RGB)
- LCD (LED RGB Wide Gamut) – HP LP2480zx DreamColor
- LCD (LED RG Phosphor)
- LCD (LED Blue Green)

- LCD (LED Blue Green) – HP ZBook
- LCD (LED PFS Phosphor)
- LCD (LED Quantum Dot) – Samsung 2015
- LCD (LED Quantum Dot) – Samsung 2016
- LCD (LED Quantum Dot) – Samsung 2017
- LCD (LED Quantum Dot) – Vizio RS65
- OLED (RGB)
- OLED (White) – LG, Panasonic
- CRT
- Plasma
- Projector (CRT)
- Projector (UHP)
- Projector (White LED)
- Projector (RGB LED)
- Projector (Xenon)
- Projector (Laser Phosphor)
- Projector (Laser Phosphor) – Panasonic RZ12K
- Projector (Laser Phosphor) – Panasonic RZ970
- Rear Projector (CRT)
- Rear Projector (UHP)
- Rear Projector (LED)
- Current – diffuser enabled
- Ambient Light - diffuser

Select the Meter Mode that corresponds to the display backlight/pixel technology that you wish to measure or calibrate.

Sync Mode

- Off
- On
- Auto

The Sync Mode is preset to the mode that usually works best for each different display technology. If meter readings are unstable, try the other settings. (Also, try the Source Delay Optimize.)

Standard Exposure Mode

- 1 Sample
- 3 Samples (default)
- 5 Samples
- 10 Samples
- 20 Samples
- 0.2 Fixed
- 0.5 Fixed
- 1.0 Fixed
- 1.5 Fixed
- 2.0 Fixed

Low Light Handler

When enabled, the low light handler averages multiple meter samples per measurement, when measuring light levels below the specified Low Light Trigger level.

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.

Contact Us

SpectraCal

Submit a Technical Support Request:

<http://calman.spectracal.com/techsupport.html>

spectracal.com

sales@spectracal.com

+1-925-227-2700

**PORTRAIT
DISPLAYS**

Portrait Displays, Inc.

6663 Owens Drive

Pleasanton, CA 94588 USA

portrait.com