Spyder/SpyderPro Software User Guide

(Version 1.0)

Table of Contents

Instrument Specifications

Power Requirements	5V DC, 100 mA, via USB connector plugged into personal computer
Dimensions	Width: 44.8 mm Height: 76.0 mm Length: 79.1 mm Weight: 140g
Environmental Requirements	Operating Temperature: 5°C to 40° C Maximum Relative Humidity: 80% for temperatures up to 31°C decreasing linearly to 50% relative humidity at 40°C Maximum Altitude: 2,000 meters
Agency Compliance	SGS, CSA, C-Tick, CE

This product is to be used only as specified by the manufacturer, and according to the instructions for operation and maintenance provided herein. The protection of the device may be impaired if used in a manner not specified by the manufacturer.

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Introduction

Thank you for purchasing your new Spyder/SpyderPro monitor calibrator. This document will guide you through using your Spyder/SpyderPro software to get the most accurate color from your display(s).

What's in the Box

- Spyder/SpyderPro Sensor
- Serial Number
- Welcome Card with link to software and support resources
- USB-A Adapter

System Requirements

- Windows 10,11 32/64
- Mac OS X 10.14, 10.15, 11 (Big Sur), 12 (Monterey), 13 (Ventura), 14 (Sonoma)
- Monitor resolution 1280x768 or greater, 16-bit video card (24 bit recommended), 1GB of available RAM, 500 MB of available hard disk
- Internet connection for software download
- USB-C or USB-A port

Download and Activate Software

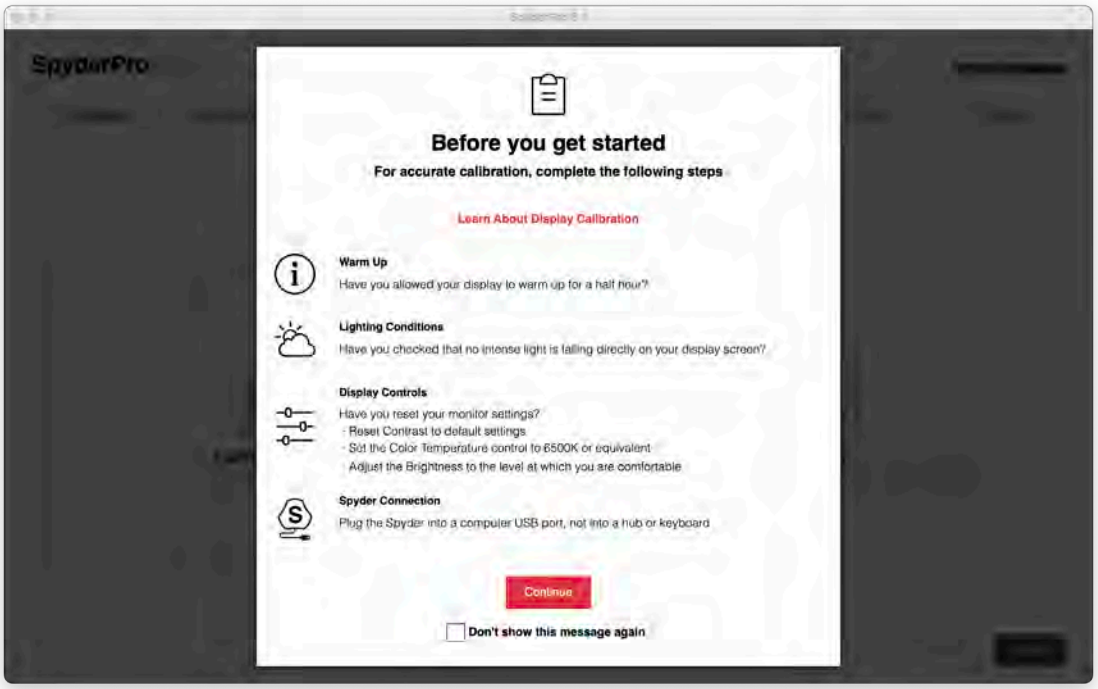
Download the software from http://goto.datacolor.com/getspyder or http://goto.datacolor.com/getspyderpro and open the file to install.

Plug your Spyder/SpyderPro into a direct port on your computer (not on a keyboard, monitor, hub, or extension cable). If your computer does not have a USB-C port, use the included USB-A adapter. This cable provides power and communications between the Spyder/SpyderPro and your computer.

Open the Spyder/SpyderPro application and follow the prompts to activate the software.

Note: Your serial number is located in the Spyder/SpyderPro box under the sensor.
A license code is provided after activation. Please reach out to Datacolor Spyder support to recover a lost license code.

Before you get started



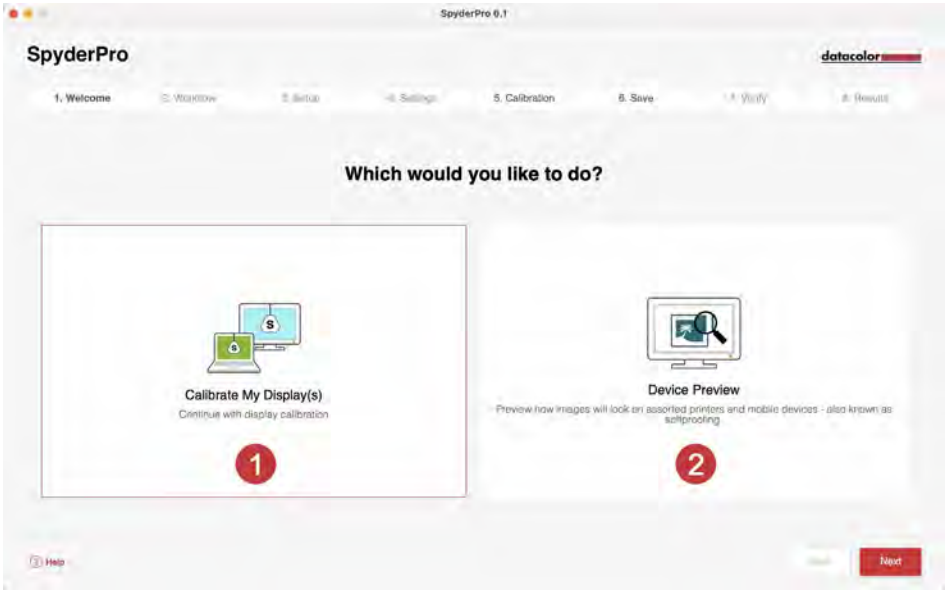
The first screen will provide you with information to set up your display and environment to achieve the best results.

- **Warm Up**
  Your display should be on for at least 30 minutes prior to calibration.
- **Lighting Conditions**
  Make sure there is no direct light falling on your display as this could have an adverse effect on your calibration.
- **Display Controls**
  Reset your display's controls to the default settings (if possible). Disable HDR, auto brightness, and other dynamic features that automatically change the look of your display.
- **Spyder/SpyderPro Connection**
  Plug in your Spyder/SpyderPro directly to a USB port on your computer. Avoid using a keyboard, monitor, hub, or extension cable port as this could prevent the device from getting the proper data flow.

Once you have completed these steps, click **Continue**.

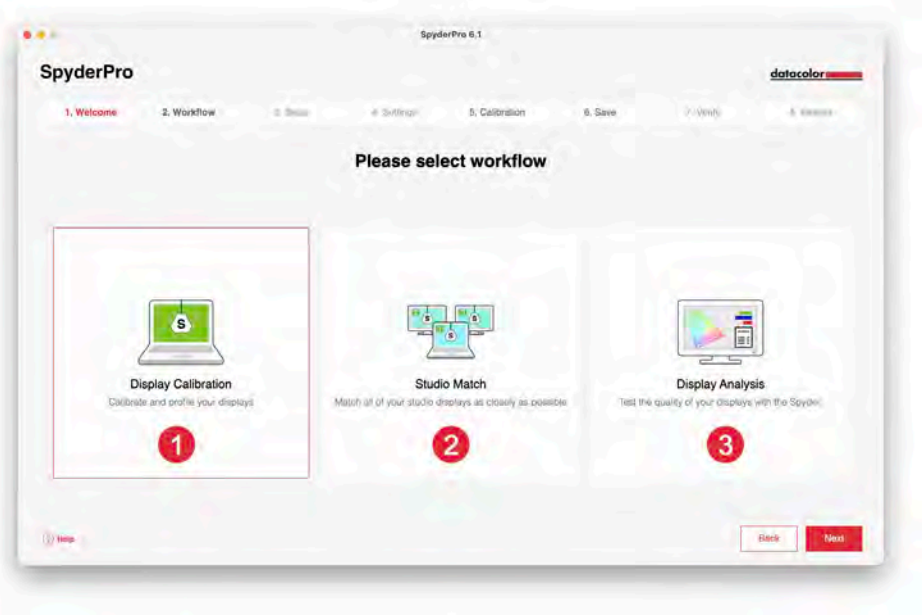
Welcome

Choose what you would like to do: **Calibrate My Display(s) (1)** or **Device Preview (2)**. Click on your selection and click **Next**.



Workflow

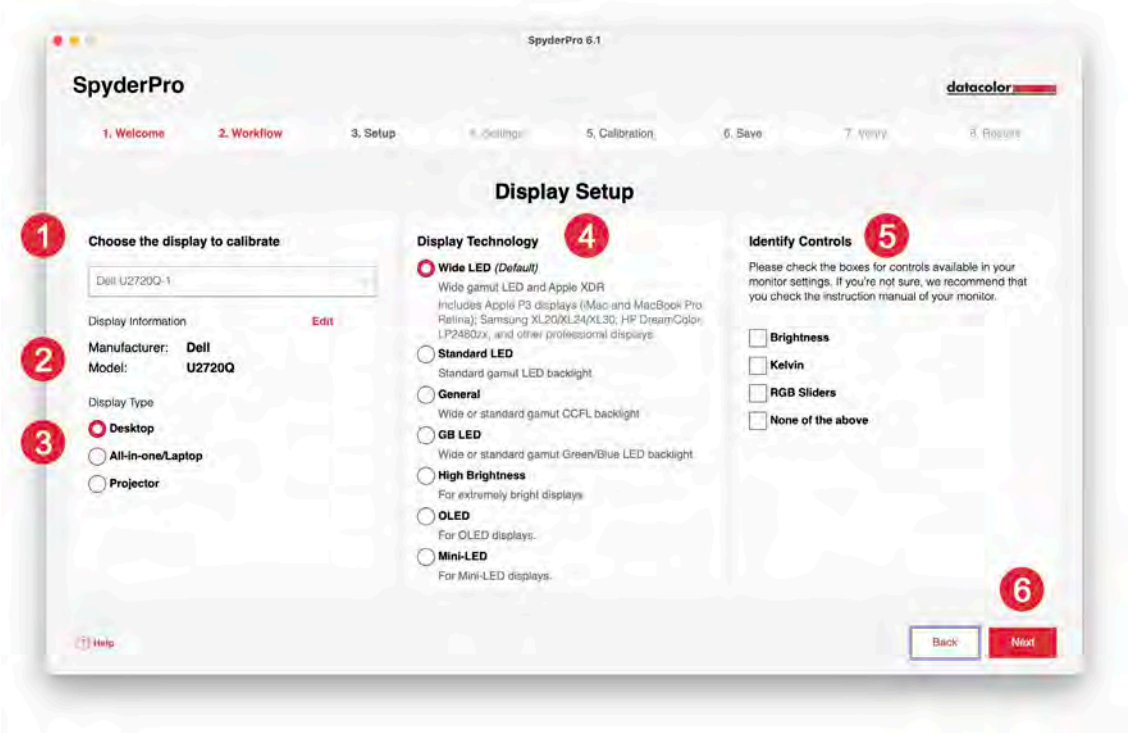
Choose a workflow: **Display Calibration (1)**, **Studio Match (SpyderPro Only)(2)**, or **Display Analysis (3)**. Click on your selection and click **Next**.



Display Calibration

Display Setup

If you have more than one display connected to your computer, choose the display you want to calibrate from the dropdown menu **(1)**. The software will automatically move to the selected display. Do not drag the software window to another display.



Ensure the **Display Information (2)** is correct. If not, click **Edit** and change the information.

Ensure the **Display Type (3)** is correct. If not, click on the correct descriptor for the display you want to calibrate.

Select the **Display Technology (4)** that best describes your monitor. Clicking on each option will provide a detailed description of each backlight type.

Identity and select (5) the controls available for adjustment for your monitor or select **None of the above**.

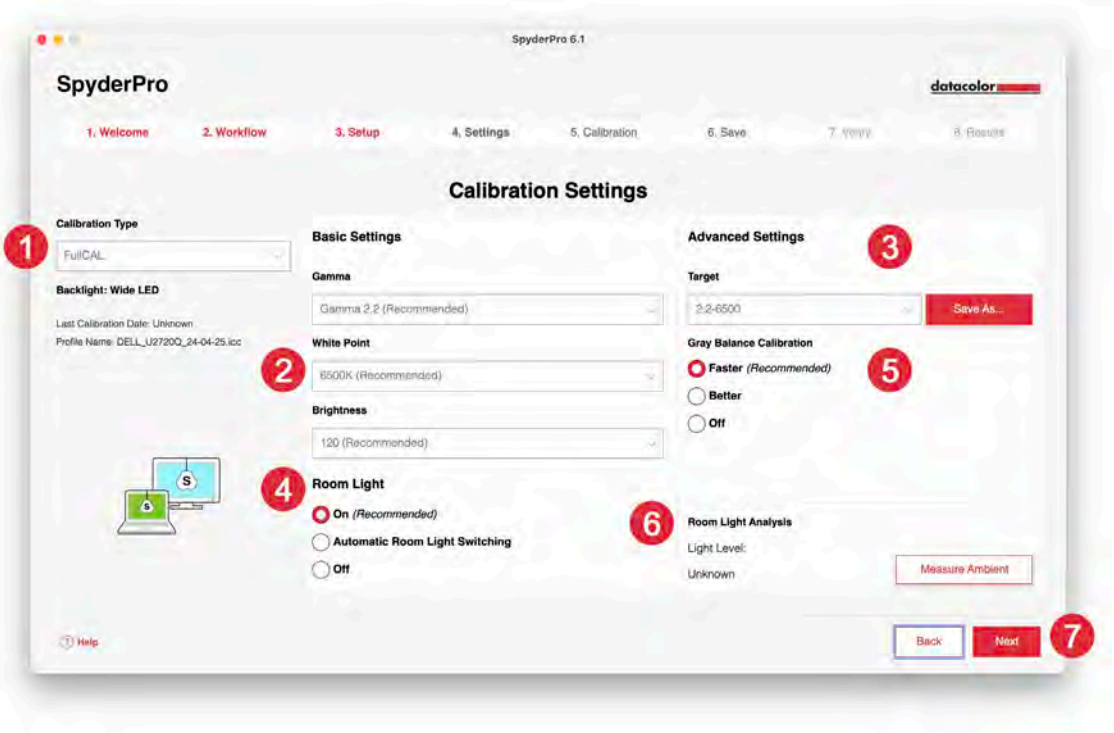
Once you have made all the necessary selections, click **Next (6)**.

Calibration Settings

Calibration Type

If this is your first time calibrating this display, you will automatically have Full Calibration selected. On subsequent calibrations you can choose to do a **FullCAL**, **ReCAL**, or a **CheckCAL**.

FullCAL (full calibration) uses the entire sequence of patch measurements to calibrate your screen.
ReCAL (recalibration) uses a subset sequence of patch measurements to update a previously created **FullCAL**.
CheckCAL (check calibration) evaluates the accuracy of your current calibration.



Select your settings for **Gamma**, **White Point**, and **Brightness** from the dropdown menus **(2)**, or select **Other** to type in your own values. Settings that are listed as (Recommended) are most commonly used for most workflows. You also have the option to select **Target (3)** settings based on industry standards that will change these settings for you from the dropdown menu **(SpyderPro Only)**.

Choose if you want to measure your **Room Light (4)** to help set the brightness of your display based on the level of lighting in your room. Selecting **On** will prompt a notification when a room light level change is detected. Selecting **Automatic Room Light Switching*** will create multiple profiles that the software will change between automatically when a room light level change is detected.

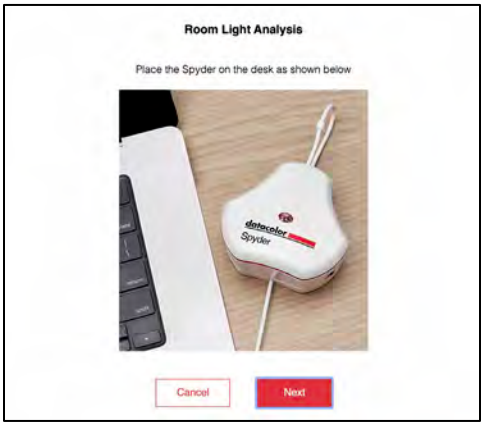
Please note, both options require the Spyder/SpyderPro sensor to be plugged into your computer to detect the changes in light.

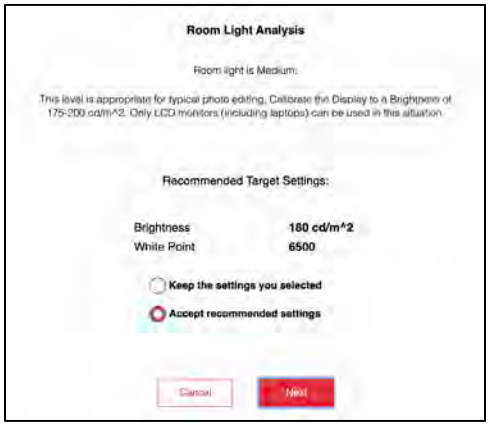
Choose if you want **Gray Balance Calibration (5)**. **Faster** will do the minimal gray balance required to get a calibration. **Better** will do an iterative gray balance by measuring more target patches to create a more precise calibration. **Off** should only be used when calibrating a front projector.

You also have the option to measure your current ambient lighting with **Room Light Analysis (6)**.

Once you have made your selections, click **Next (7)**.

If you selected **Room Light – On (***previous screen***)**, the software will take a reading of your room light. Place the Spyder/SpyderPro on your desk and ensure no direct light is falling on your display or the Spyder/SpyderPro. Click **Next** to measure your current ambient light for recommended target settings based on this measurement. Select to keep the settings you selected on the previous screen or accept these recommended settings. Click **Next**.





Calibration (FullCAL and ReCAL)

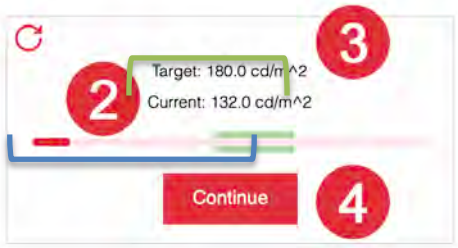
Follow the prompts to place your Spyder/SpyderPro on the screen. Remove the sensor cover. It is used as a counterweight so that the calibrator remains in place and flat against the screen.

We recommend that you slightly tilt your display back so the unit rests against the screen within the outline without you having to hold it in place. Click **Continue**/ **Next**. A series of color patches will flash on the screen.

If you selected to adjust **Brightness** on the Basic Settings, the calibration process will ask you to adjust your display to be within recommended levels.

Make adjustments. The brightness value will adjust in real time by default, or you can hit the **Update (1)** button to prompt the software to remeasure. Repeat this process until the **Current (2)** value is as close as possible to the **Target (3)** value.

Note: *The display may not be able to fall within the **Target** range. Adjust to be as close as possible.*



Once you have completed your adjustments, click **Continue (4)**.
Once the calibration measurements are completed, click **Finish**.

Save profile

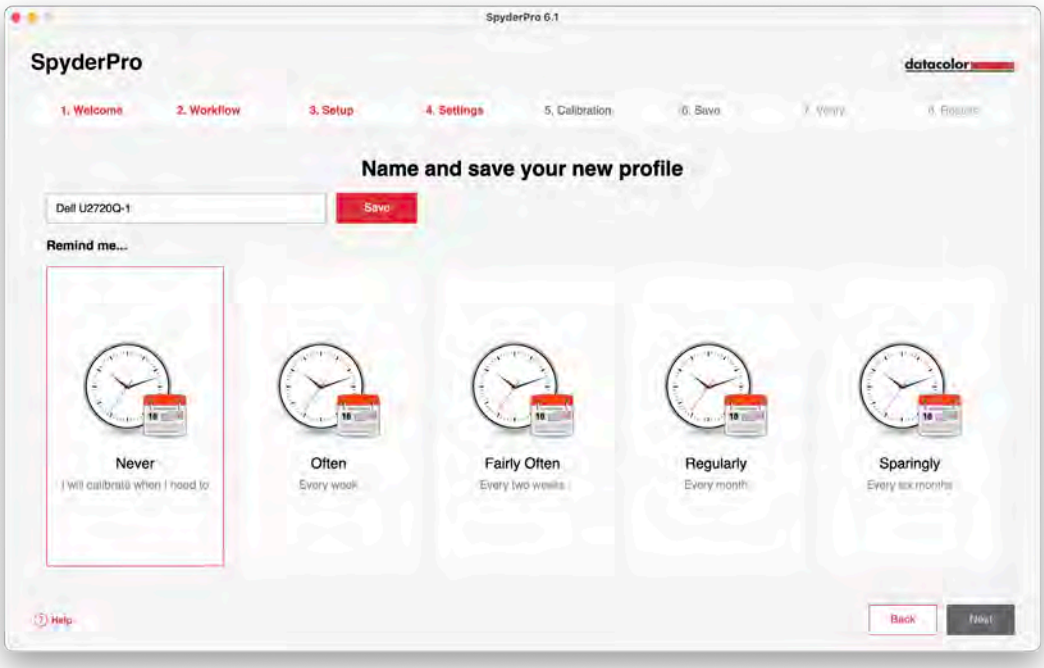
Use the default or create your own profile name. Here is a sample file name we think works best to keep an archive of your monitor profiles:

“Make_Model_yyyymmdd(date)_ver1”

You can also set a reminder when to recalibrate your display, the default reminder is 2 weeks.

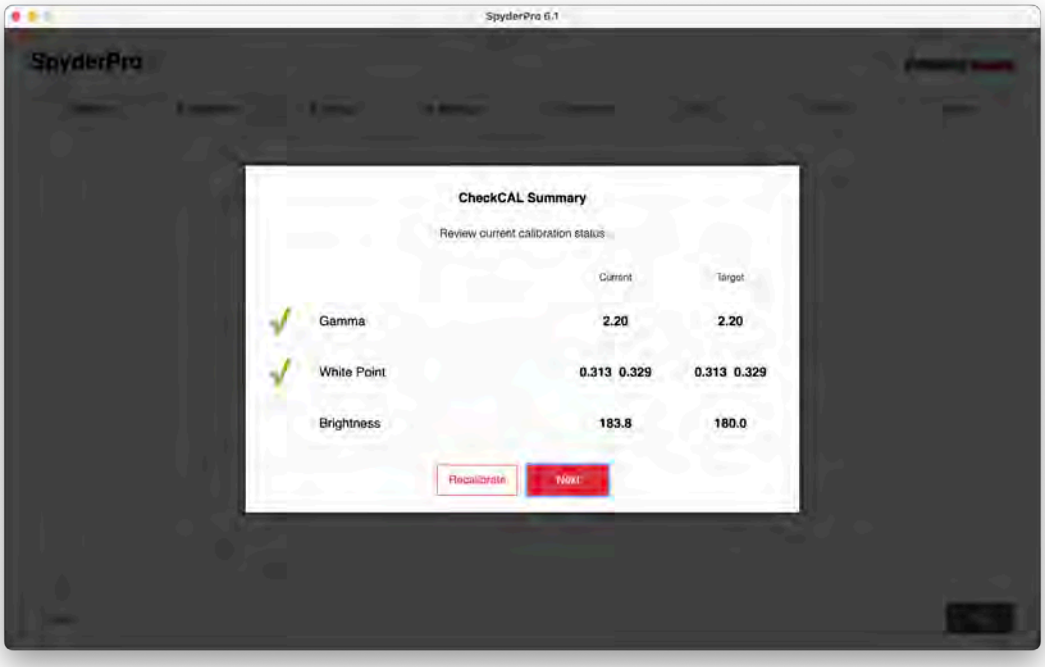
We recommend calibrating a display which is used for color critical work at least every 2 weeks. However, calibration before performing color critical work is advised to ensure colors are accurate and monitor settings are correct for your environment. Or, consider using CheckCal to confirm your calibration.

Click **Save** then **Next**.



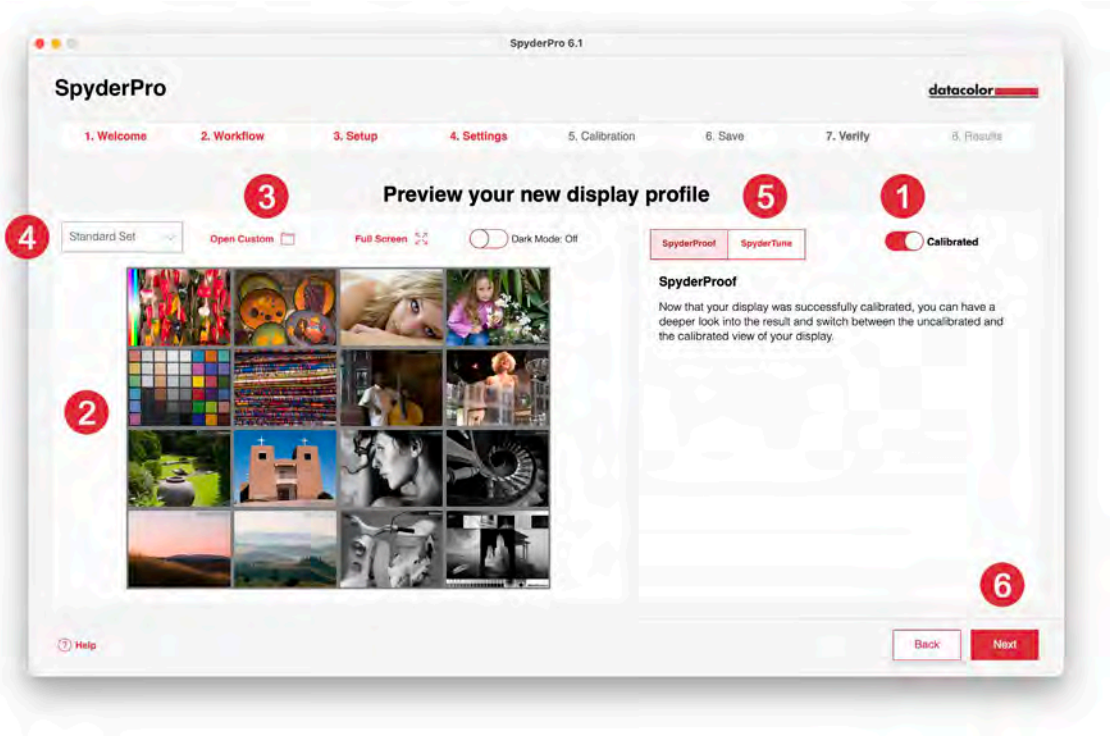
CheckCAL

A CheckCAL will allow you to quickly see if your display needs calibration. Follow the prompts to place the Spyder/SpyderPro on the screen and take measurements of a small set of color patches. When finished, a report will be generated to confirm if the current settings match your target settings. Green check marks denote a pass, and red X marks denote a value out of the acceptable range and recalibration is recommended. Click your choice to **Recalibrate** or continue with **Next**.



SpyderProof

Review the calibration results by comparing images in **Calibrated** and **Uncalibrated (1)** view by clicking the toggle.



You can click the image to zoom in for more detail.

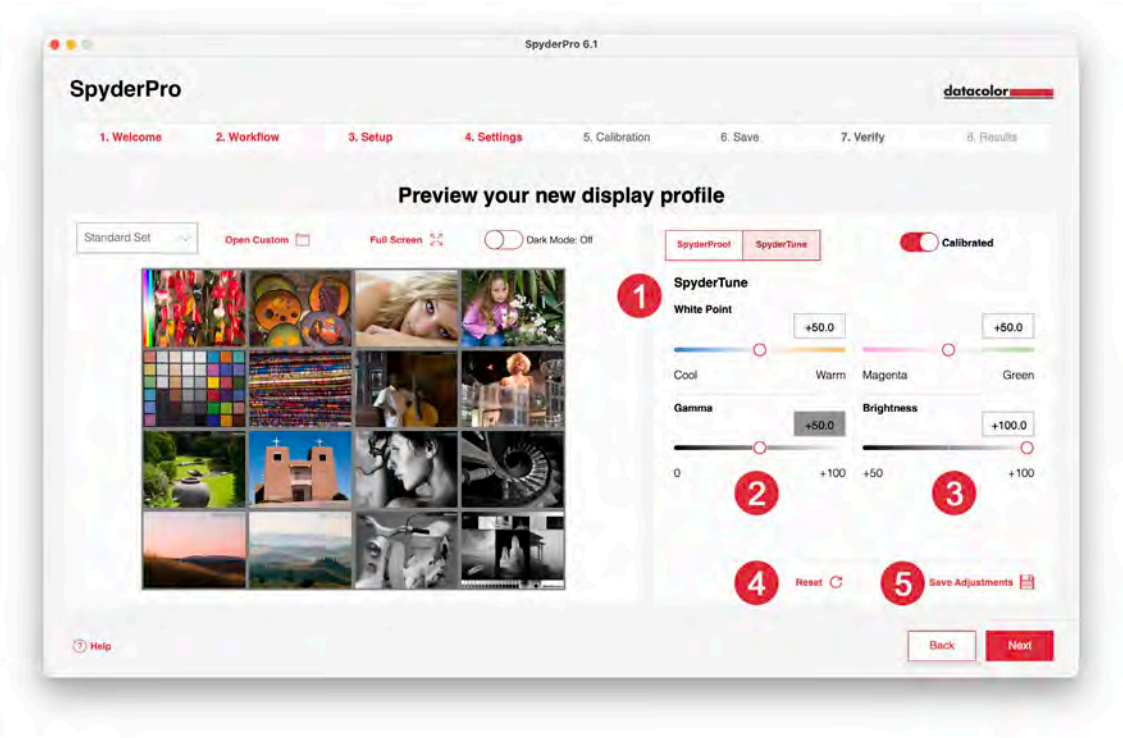
Click **Open Custom (3)** to choose a .tiff or .jpeg image from your computer files for review.

Choose from the **dropdown menu (4)** to switch between the **standard set** image or your **custom** image.

Click **SpyderTune (SpyderPro Only)(5)** or **Next (6)**.

SpyderTune (SpyderPro Only)

These settings should only be changed if you want to match multiple monitors with different backlight technologies, as it will change the precise correction done by the SpyderPro calibration.



If you are using multiple displays and they work with different backlight technologies and different panels, matching them can be difficult and a compromise to match the screens may be required to achieve alignment. **Only use SpyderTune if absolutely necessary.**

You can change the **White Point (1)** from **Cool** to **Warm** and from **Magenta** to **Green**. You can also change the intensity of the **Gamma (2)** and **Brightness (3)**.

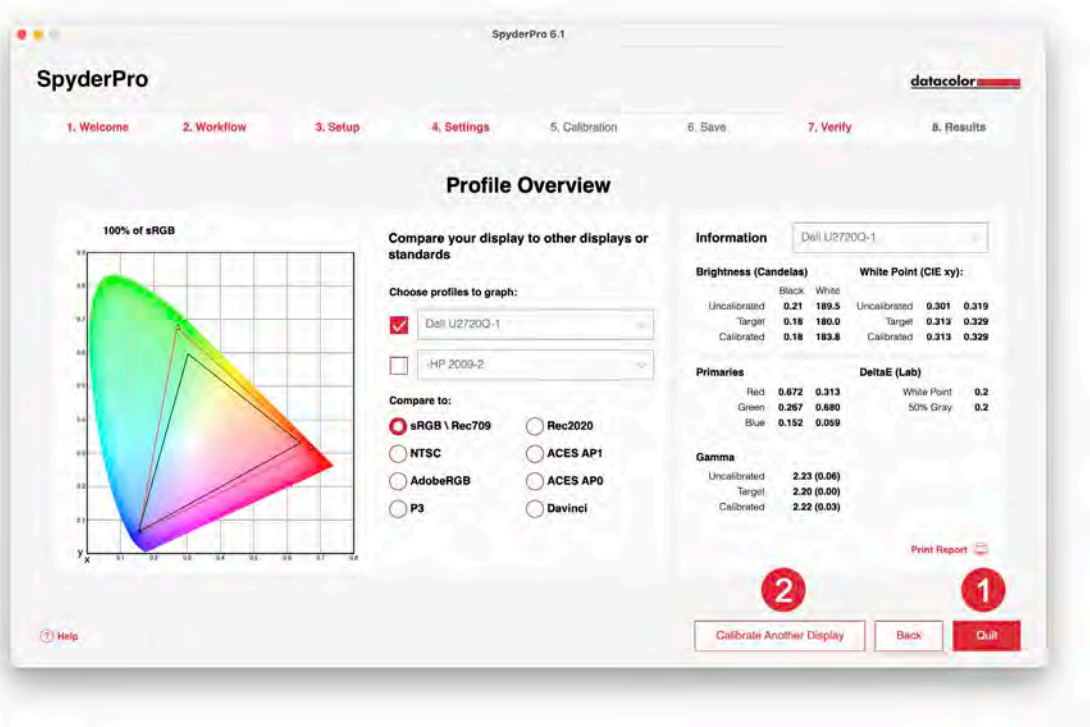
We recommend using the better display as the standard and only tune the other display profiles to match the standard view. You can click **Reset (4)** to reset the sliders to the original state of the SpyderPro calibration.

Once you have completed your adjustments, click **Save Adjustments (5)** and the profile will be updated.

Click **Next**.

Profile Overview

View your display's gamut and compare to industry standards or profiles you previously made.



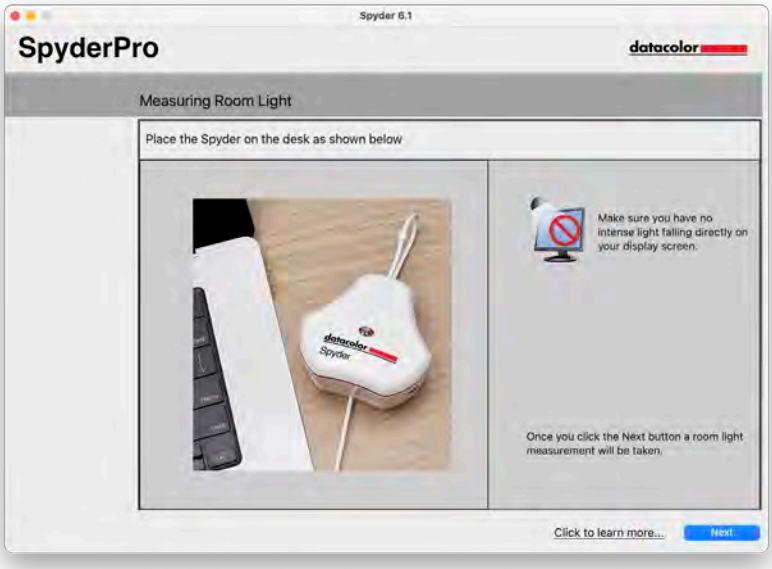
Click **Quit (1)** if you have completed your calibration(s) or **Calibrate Another Display (2)** if you have another display connected to this computer that you want to calibrate.

StudioMatch (SpyderPro Only)

Choose the displays you want to match as closely as possible. If you are matching displays from another machine, enter the **Lowest Brightness Value**. If you haven't calibrated the other machines yet, leave this blank.

Click **Next** and follow the prompts to place your SpyderPro on the screen to measure maximum brightness of your connected monitors. Ensure your brightness is set to its maximum before clicking **Measure**. Click **Finish**.

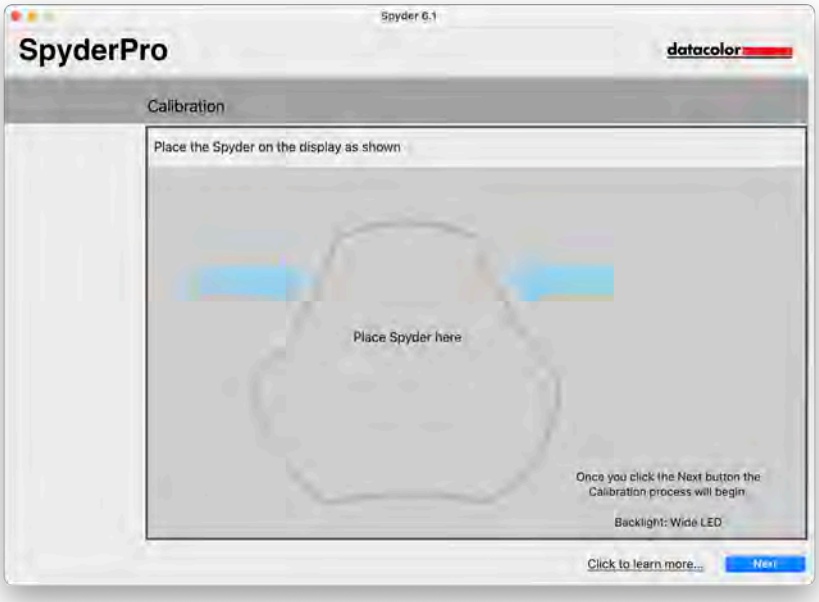
The software will take a reading of your room light. Place the SpyderPro on your desk and ensure no direct light is falling on your display or the SpyderPro. Click **Next** to measure your current ambient light for recommended target settings based on this measurement.



You can keep these recommended settings or select values from the dropdown menus. Remember the **Targeted Brightness** value if you are going to match displays from another machine. Click **Next**.

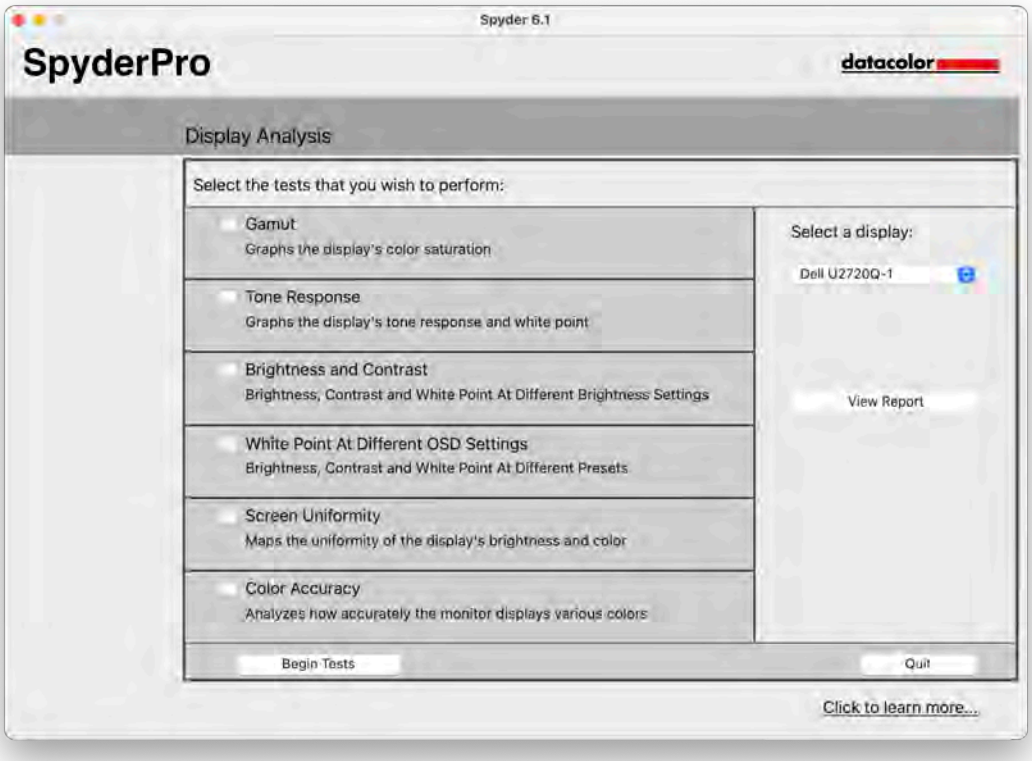
Click **Save** to create the target file. You will see the file's save location to use if you are going to match displays from another machine. Click **Next**.

The calibration process will begin. Follow the prompts and move the sensor to each display connected to your system when needed.



Display Analysis

Run a series of 6 tests on your monitor to see its strengths and weaknesses.



Select the tests you wish to perform and click **Begin Tests**. Follow the prompts to place the sensor and change the brightness on your display.

*Note: All tests other than **Color Accuracy** are performed with the current display profile disabled, to show how your display behaves in an uncalibrated state.*

When performing the Brightness and Contrast test, the first portion of the test will have you set your display to 0% brightness. Once you click **Measure** it will take about 10 seconds to perform the test. As your screen will be fully dimmed it will be difficult to see when the test is complete, please wait about 10 seconds before turning the brightness up to continue.

Once finished testing, select **View Report** to see the results of all the tests you selected.

Device Preview

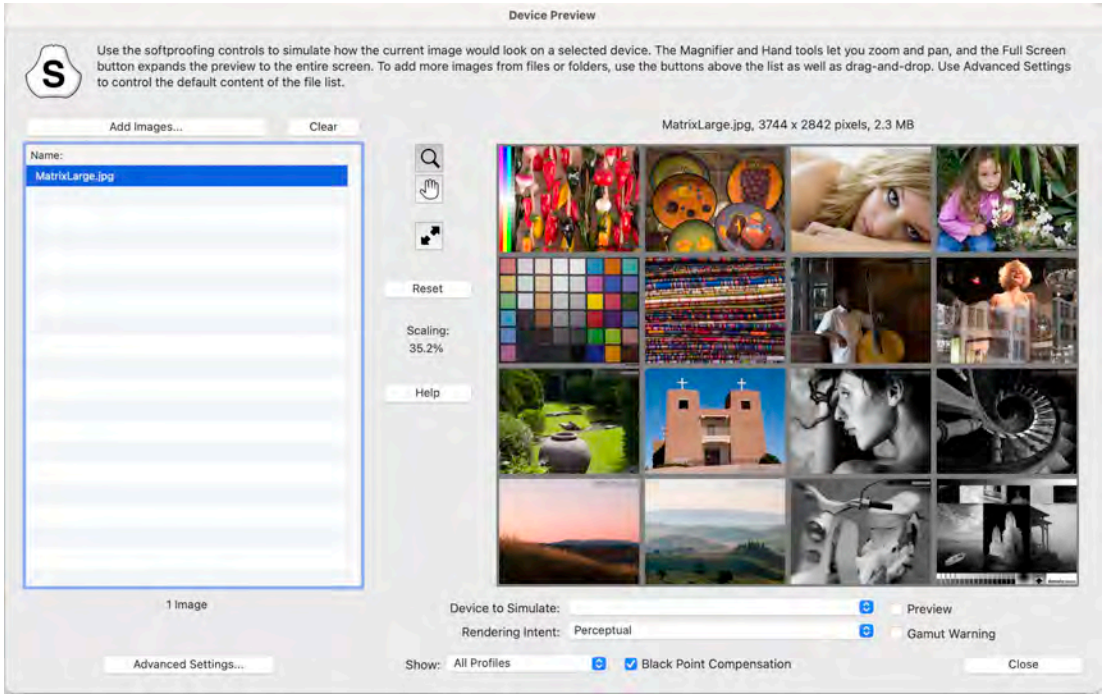
Improve Screen-to-Output matching with this workflow of tools to simulate how your photos will look in print or on a device – including home printers, online or retail printers, and certain mobile/tablet devices.

If you are using a home printer, you may already have ICC profiles installed on your computer. If you don't and would like to profile your printer, we recommend using our Spyder Print product.

If you want to soft proof for a retail or online print provider, search their website for ICC printer profiles to download and install on your computer.

To preview the look of an image on a mobile/tablet, choose the pre-installed profile to get an impression of how it will look under optimal conditions.

Click **Add Folder** or **Add Files** to add .tiff or .jpeg images to the soft proof list.
Select a profile from the **Device to Simulate** dropdown.
The preview area will simulate your selected image from the soft proof list using the selected profile.



Check or uncheck the **Preview** to turn the simulation on or off. The appearance of your image is based on the **Rendering Intent**. The Rendering Intent is how out of gamut information is translated to the paper or device being simulated.

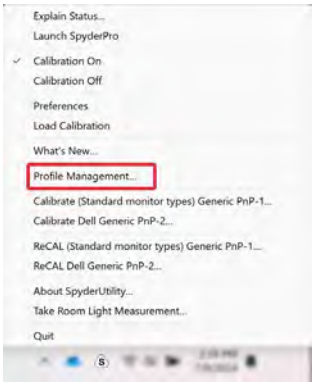
The **Gamut Warning** shows what parts of your image are out of gamut for the paper or device you are simulating.

SpyderUtility

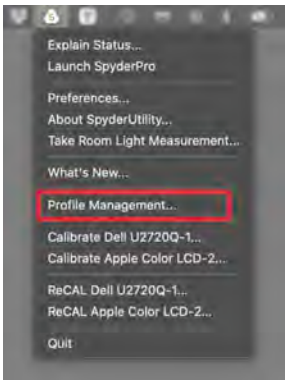
Profile Management Tool

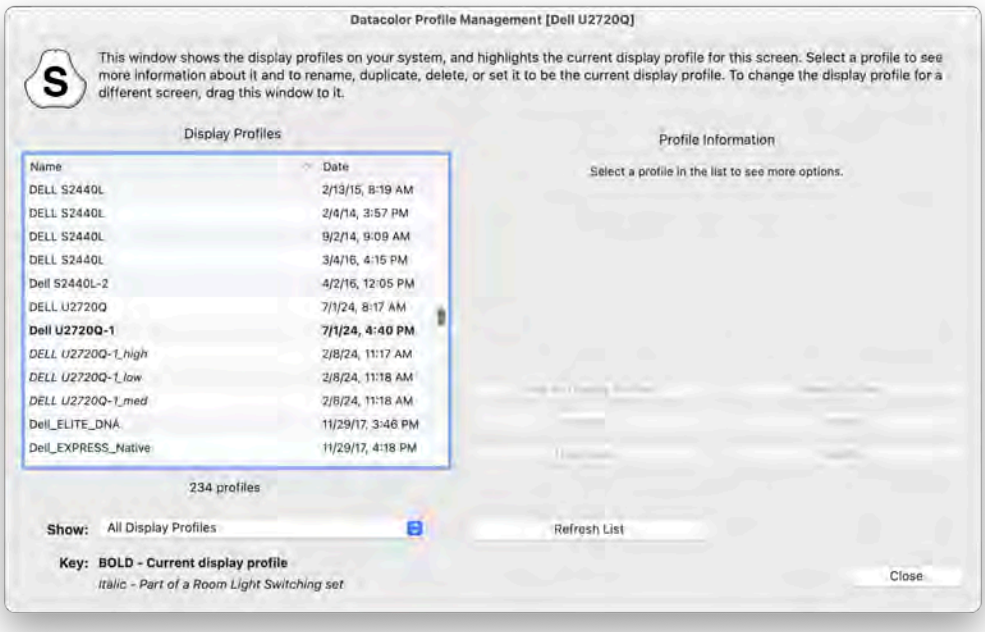
Have complete monitor profile flexibility and control with this tool that allows you to turn off, switch, delete, and rename existing profiles.
Click on the SpyderUtility icon in the menu bar/system tray and click **Profile Management**.

Windows



Mac





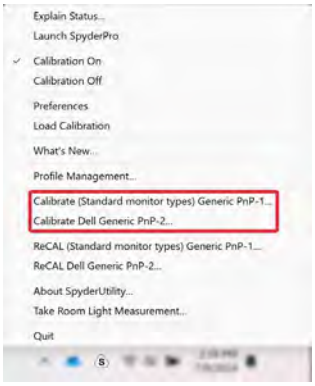
The profile in the list that is bold is the current display profile.

Manually move the Profile Management window to another display to work with the profiles for that display.

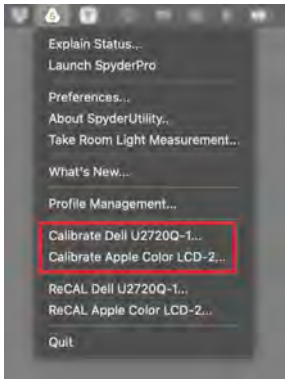
1-Click Calibration

A recalibration can also be performed using the ‘1-click calibration method’. Click on the SpyderUtility icon in the menu bar/system tray. Then select the monitor you would like to calibrate. Complete the calibration process as you would normally. 1-Click Calibration will use the calibration setting from your last calibration.

Windows



Mac



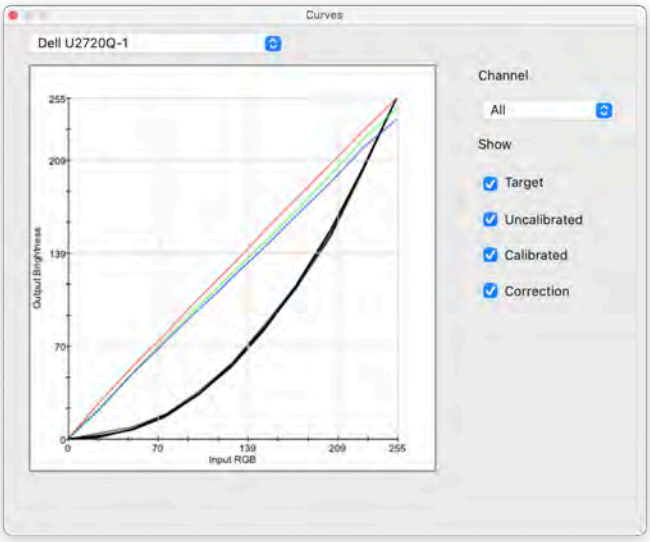
**Note: 1-Click Calibration is only available for your monitor(s) after you have completed a full calibration in the software.

Appendix

Tools (SpyderPro Only)

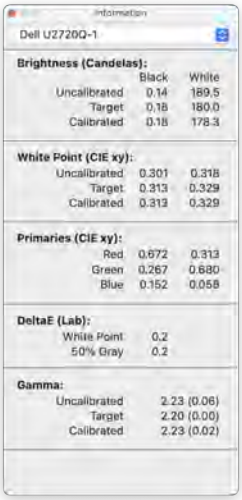
Curves

Compare the different gamma and white point adjustment parameters of your display in the form of a graphical curves.



Information

View a report of absolute values for the current calibration of the selected display.



Colorimeter

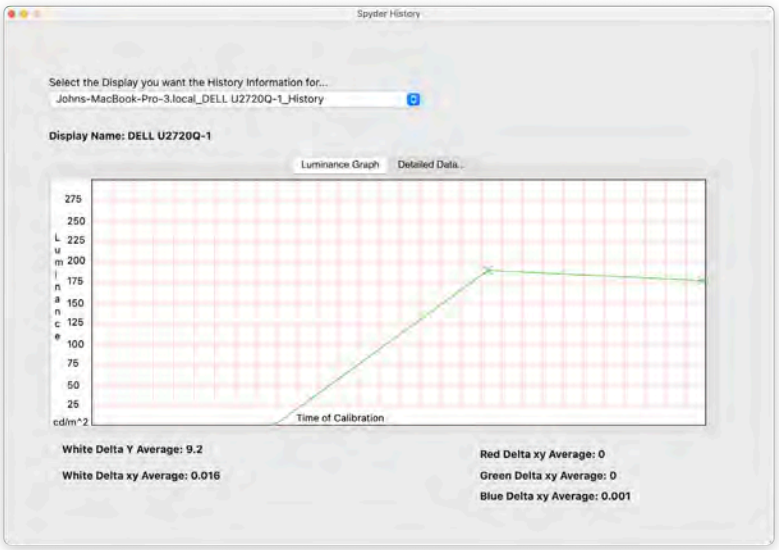
Use your Spyder/SpyderPro to measure any RGB color value on the screen.

Use the **Backlight (1)** dropdown to select the backlight technology that corresponds to your display.

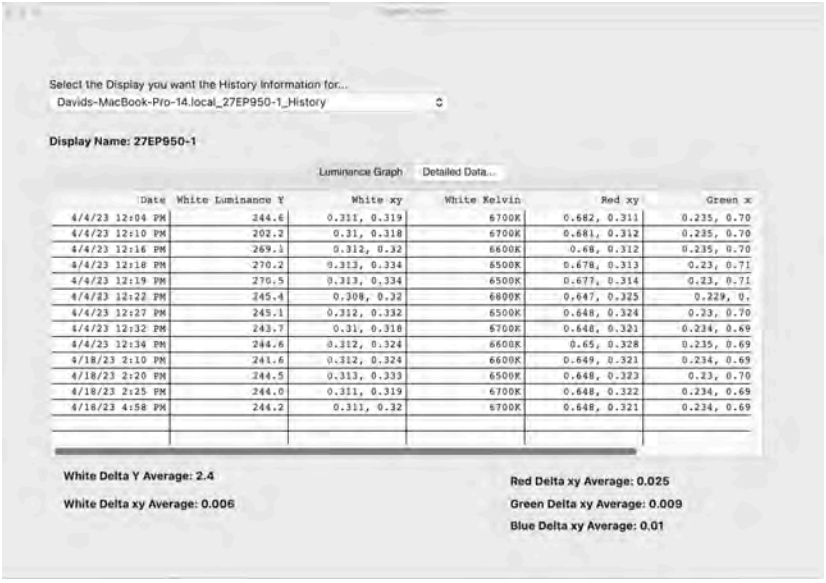
After typing in your RGB values, hang your Spyder/SpyderPro on the display on the color patch in the window and select **Take Reading (2)** . The results are displayed in different sets of coordinates.

History

You'll typically change the Brightness settings of your display to match a Brightness target setting from the Calibration Settings screen. This window shows you luminance data measured during your display calibrations.

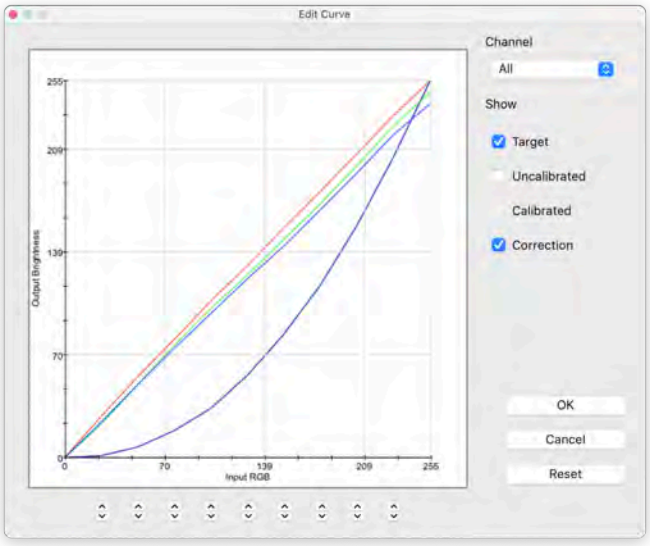


Use the dropdown to switch between displays which have saved calibration results for your computer. Switch between the **Luminance Graph** and **Detailed Data...** to see the history as a graph or numeric values.



Edit Curves

Adjust the **Calibrated** curve using the arrows **(1)** below the graph to change each control point.



As you adjust the shape of the **Calibrated** curve, you'll see the effect of these changes in real time on your calibrated display.

Click **OK** to save the results into a Target (.tgt) file and use as a gamma calibration target in the future.

Support

For answers to Frequently Asked Question or additional support, Datacolor provides technical support at no additional charge. If you have a question, please visit our support site:
spyder-support.datacolor.com