

Color calibrators

Calibrate your display – just like professionals

Radius was a computer hardware firm founded by Burrell Smith, Andy Hertzfeld, Mike Boich, Matt Carter, Alain Rossman and other members of the original Mac team specializing in Macintosh equipment. Founded in May 1986, their products ranged from processor upgrade cards (Radius Accelerator) bringing Motorola 68020 processors to earlier Macintosh systems; graphics accelerators (Radius QuickColor); television tuners (RadiusTV); video capture cards (VideoVision); color calibrators (PrecisionColor); multi-processor systems (Radius Rocket) for 3D rendering and multiple OS sessions; high-end video adapters and monitors.

Without light there is no color: Light falls on an object and, depending on the color of the object, is partially absorbed. The light that is not absorbed is reflected and falls on the color receptors in the eye. These convert the incident light into stimuli, which are then sent via nerves to the brain. Here the stimuli are interpreted, and a color perception is formed.

With regard to sensory perception: each person *experiences* color differently. This is not just because no two eyes are identical, but also because color interpretation also varies from person to person. The same person can even perceive colors differently at different times and according to the mood he or she is in. Many people perceive colors independently of light. For example, in one form of synesthesia where colors are heard notes, harmonies and music are linked with certain colors: high notes mostly with light colors and low notes with dark colors.

Three values are used to define a color: First is the hue, sometimes called shade, second is the chroma and the third is the lightness. Every color can be described using these three values

and taking the type of light into consideration. This is the basis of colorimetry.

Different shades of color are arranged in a hue circle running clockwise from yellow through orange, red, violet, blue, bluish green and green back to yellow again. A color shade may be lighter or darker depending on its lightness. If the chroma of a color is reduced, then this color will be less brilliant (closer to gray). If the saturation is zero then we talk of an achromatic color. Black, white and all of the intermediate shades of grey are achromatic colors, determined by their lightness.

Thinking about all that in terms of your computer design there is really only one place to start – your monitor. If it doesn't actually display accurate colour, it's difficult to get prints right and even more so getting anyone else to produce them accurately. At it's simplest you should adjust your monitor by eye to get good brightness and contrast. There are various software tools that can help you in this. And we want to introduce the best of them, especially for you.

huey

www.pantone.com

Product Features:

- Professional-grade results; easy-to-use right out of the box.
- Software designed for calibrating and profiling all types of monitors.
- Corrects color on monitor; adapts monitor for changing room lighting.
- Applies personal preferences for viewing accurate color all of the time.
- Includes emission-only colorimeter with ambient measurement capabilities.

The huey family of products is sold exclusively through Pantone and now offers two monitor color correction devices for hobbyists, enthusiasts and professionals.

Developed in partnership with X-Rite and brought to market by Pantone, huey is based on professional-level technology but is delivered in an easy-to-use, affordable device – a true breakthrough in terms of form, function and usability. About the size of a small marker, huey delivers excellent results on LCD, laptop and CRT displays without requiring users to have any knowledge of color management. In addition, Huey is the first monitor calibration device to continually adjust the monitor as room lighting changes. huey is designed for enthusiasts just getting started with color management, huey takes less than five minutes to make onscreen color fidelity appropriate for viewing photos, playing games, creating graphics or browsing the Web. Unlike other color calibration tools on the market, huey is the first monitor calibrator to continually adjust for ambient lighting.

huey is the newest gadget for any consumer or photo hobbyist looking for absolute color and clarity. huey is distinctly different from professional monitor calibration tools on the market that require a basic understanding of color management to operate. Plus, it is the only device that continually adapts a monitor for changing room lighting.

In less than five minutes, huey can calibrate a user's monitor and adjust it based on their primary viewing activity – viewing photos, playing games, creating graphics or browsing the Web. With an affordable \$89 price tag, huey delivers accurate onscreen color, a crucial component for anyone who cares about color fidelity.

huey PRO

www.pantone.com

Product Features:

- Correct the color on virtually any computer monitor for in photos, gaming graphics, movies and web-browsing.
- Professional-grade results – Begin seeing true colors, using tools the professionals rely on.
- Sensor measures surrounding lighting conditions to ensure accurate, up-to-the minute color settings automatically.
- Revolutionary wizard-based Software guides you through the entire process, with help at every step of the way.

Pantone has introduced huey PRO, a new member to its award-winning Huey family of display calibration products. Huey PRO is designed for photographers and creative professionals to improve color clarity and consistency across multiple CRT, laptop and LCD displays.

The original huey made the once complicated task of monitor calibration simple and approachable. The new huey PRO offers additional functionality for users who frequently print photos and other graphics, share them between monitors or upload them to Web sites. About the size of a marker pen, huey PRO retains the innovative form of the original huey, as well as its ability to continually adjust the monitor as room lighting changes.

huey PRO: Designed for hobbyists and professionals looking for greater color control and consistency when working between multiple monitors, huey PRO packs advanced color correction functionality into an affordable package. Like its sibling huey, huey PRO delivers professional results without requiring expertise in color management.

With the addition of new software, huey PRO offers increased control over brightness and contrast through separate menu choices that allow users to select gamma and white point settings. An improved Help function offers hints and workflow suggestions for improving color output.

I love huey but sometimes need a greater level of control to achieve my preferred color results. The additional features of huey PRO, like extra intervals for the calibration reminder and separate gamma and color temperature pull-down settings, give me greater customization options, said professional photographer and PANTONE Innovator, Jon Canfield. The best part is that huey PRO is just as easy-to-use as huey. The simplicity of the device itself remains the same.



Eye-One Display 2

www.xrite.com

Product Features:

- Eye-One Display 2 measurement device.
- Compact colorimeter for emissive color measurements of LCD, CRT and laptop displays.
- Highest sensitivity in dark areas for better control in shadow detail and more neutral gray scale.
- Detachable ambient light head to capture ambient light measurements – also serves as a dust protector for your device!
- Easily attaches to both LCD and CRT monitors with built-in counterweight and suction cups.
- Use at multiple workstations – no additional licensing fee USB powered.

Product Description

Combination of tweaking and proofing might be eluding you simply because the color on your monitor is not accurate. The fact is, all monitors (yes, both new and old) display color differently. The only way to address this is by calibrating and profiling your monitor. Eye-One Display 2 is a professional monitor-calibration tool that lets you achieve accurate color on all types of displays – including LCDs, CRTs, and laptops. With its advanced controls, you can achieve the best possible match across multiple monitors, optimize gray balance for more neutral and better-defined grays, and even check ambient light to determine optimal room lighting for color-critical work. Eye-One Display 2 saves time and rework so your creative inspirations can be more easily realized.

Designed to meet the needs of creative professionals and discerning digital-imaging enthusiasts, Eye-One Display LT ensures reliable and accurate color onscreen. With the easy-to-use software wizard, you'll achieve consistent, predictable color on all types of monitors—LCD, CRT, and laptops—with a few simple clicks.

Eye-One Display 2 offers the next generation for monitor profiling. It provides the best monitor profile quality ever. With enhancements to both hardware and software, you'll achieve consistent, predictable color on all types of monitors – LCD, CRT and laptops! It's ideal for photographers, creative directors, publishers, and designers working in ad agencies and corporations. Profile summary report ideal for post profile analysis Profile reminder to ensure true and reliable color over time Mac and PC compatible – OS X, Windows 2000, XP.

The next generation of monitor profiling! The Eye-One Display 2 is a brand new, easy-to-use, powerful solution that provides the best monitor profile quality ever! With enhancements to both hardware and software, you'll achieve consistent, predictable color on both LCD and CRT monitors.



Eye-One Display LT

www.xrite.com

Product Features:

- Swiss-engineered i1 Display colorimeter.
- i1 Match Software with Easy Mode monitor profiling.
- Before and After calibration comparison.
- Customizable recalibration auto-reminders.
- Push Button calibration for leading industry displays.
- Removable light head for ambient measurements.
- i1 Share software for creating, evaluating and communicating color.
- Interactive training modules and Digital Pantone Library.
- Easy upgrade path to i1 Display 2 and \$200 upgrade voucher for i1Pro Bundles.

Get serious color accuracy on screen quickly and easily. The Eye-One Display LT offers an easy solution for professional calibration and profiling of all types of monitor: LCDs, CRTs and laptops.

The Pantone Display LT is a small USB device which contains a colorimeter to measure the light coming from your screen. You use the device with the supplied Eye-One match software.

The Display LT device looks identical to the Display 2 device, with the exception of a different label underneath. Both devices come in a plastic blister pack, with a software CD and printed Quick-start guide. There is a small weight to counterbalance the weight of the device when it is resting on an LCD screen. The underside of the device has small suction caps for holding it to a CRT monitor. The guidelines expressly warn you not to use the sticky pads to attach the device to an LCD screen (this is the opposite of what is suggested for using the huey). The software works well and quickly and easily produces a monitor profile.

There is a question as to just what that profile is set to. You do not get the chance to set display gamma at all, although the value used [2.2] is pretty widely used as standard these days. At least there is not the chance of accidentally using some values like D75 (7500K) and a gamma of 2.5 which you might want to try with a system like the huey. The options available with the LT version of the sensor are very limited when compared with the Display 2. However, the LT is a viable option where colour management at a default setting like 6500K/G2.2 needs to be widely rolled out in an organisation, and only graphics/imaging specialists need the more refined capabilities of the Display 2.



Spyder2Pro

www.colorvision.com

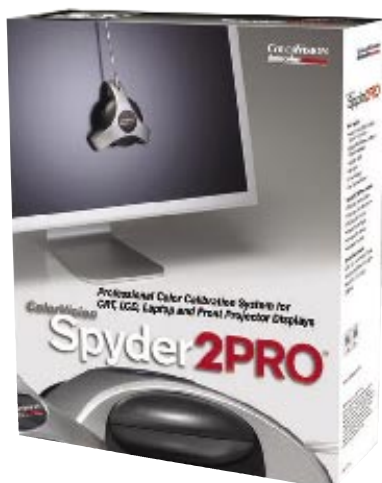
Product Features:

- Award-winning Spyder2 colorimeter, the standard for on-screen accuracy, precisely calibrates all of your CRT, LCD, and laptop displays.
- New State-of-the-Art Optical Science provides a five-fold increase in color sensitivity over previous technology with a patent-protected light baffle for accurate characterization of LCD displays.
- Sleek, Dual-Phase Hardware Design offers effortless LCD, CRT, and laptop calibration while protecting delicate LCD screens.
- Sophisticated Gray Balance and Tonal Response Algorithms provide demanding users with exceptionally smooth gradient steps and neutral grays.
- Advanced feature set including RGB Pre-Calibration function, multiple gamma and color temperature options, and multi-monitor capability.
- Easy-to-Use Calibration Wizard with comprehensive help guides you through the entire calibration process.
- Unique Before and After Viewing Feature lets you compare your display with and without calibration.
- Outstanding Reliability backed by a 2 Year hardware warranty.

Professionals require exact color matching across all aspects of their workflow, and Spyder2PRO™ delivers. The ability to calibrate to custom gamma and temperature settings, as well as perform RGB Pre-calibration offers the utmost control over the artistic process. With Spyder2PRO™ you can create profiles to your specifications and distribute them to multiple monitor and remote computers, so others can view output exactly as you do. All of this, plus front projector calibration, custom response curve targeting, Ambient PreciseLight™ and the first software-only printer profiling tool that gives fast and precise results.

A solid, easy to use bit of kit. Just when advances in monitor technology were beginning to show up some of the deficiencies in my old Spyder, along comes one that is both easier to use and more accurate. The grey scale improvements are particularly welcome, given the amount of black and white photography I do.

As ever, I'd advise you to do some research of your own before making buying decisions, but I'm more than happy with the results I get with the new Spyder. It never was difficult to use, but the attention paid to interface design in the new software is welcome. A very capable device... even if I still prefer the box that the old one came in.



Spyder2express

www.colorvision.com

Product Features:

- CRT, LCD, and laptop displays to industry standards.
- Easy Software Wizard guiding you through the calibration process in just a few steps means you don't have to be a color guru.
- New State-of-the-Art Optical Science provides a five-fold increase in color sensitivity over previous technology with a patent-protected light baffle for accurate characterization of LCD displays.
- Sleek, Dual-Phase Hardware Design offers effortless LCD, CRT, and laptop calibration while protecting delicate LCD screens.
- Outstanding Reliability backed by a 2 Year hardware warranty.
- Sophisticated Gray Balance and Tonal Response Algorithms provide demanding users with exceptionally smooth gradient steps and neutral grays.
- Unique Before and After Viewing Feature lets you compare your display with and without calibration.

Spyder2express calibrates monitors in three easy steps – simply plug it in, specify your display type, and it does the rest, automatically calibrating your monitor or laptop. Check the before-and-after. You'll see the improvement!

The ColorVision Spyder2 is a mixed performer. The limitation is in how highlights are handled. If your photography requires excellent shadow response or superb B&W performance, the Spyder2 is ideal. The included software offers the most flexibility of any of the recommended systems. Wedding photographers, or others needing to see delicate highlight details will do better with one of the above systems. ◀

by Jack S. Winberg
Consumers test done with a help of Keith Cooper
<http://www.northlight-images.co.uk>

