Spyder CUBE™

User's Guide

Control color by balancing light
New 3D Cube for RAW calibration

This Guide contains product information related to the Datacolor SpyderCube™

Prepared by:
Krista Behrend
Worldwide Product Marketing Manager
C. David Tobie
Global Product Technology Manager
March 19, 2009

Introduction.....3

Problem. Solution. Feature. Benefit. 4

SpyderCube Quick Start Guide.....5

Rocket Science.....6

Full Product Description:.....7

Edge over the Competition.....8

The SpyderCube includes: 9

Warranty:.....9

Contact Us.....10

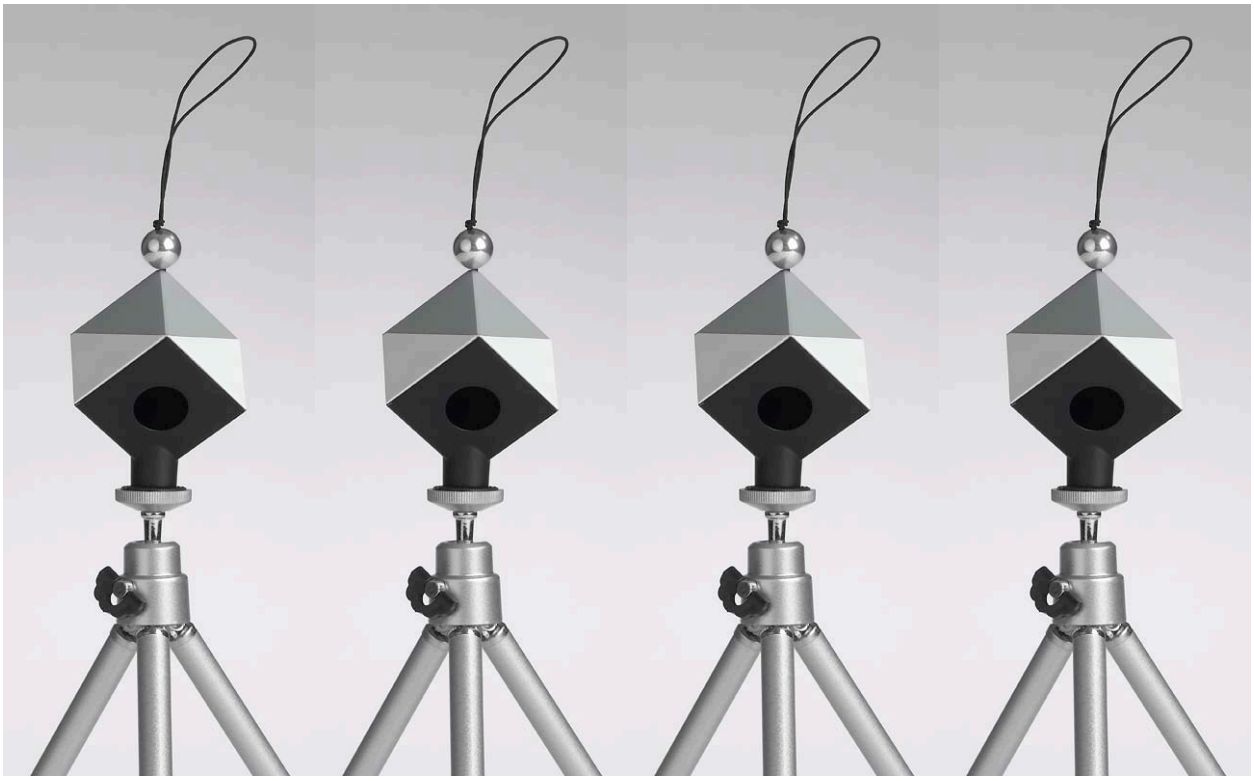
Introduction

As the digital imaging market evolves and the color management process becomes streamlined, the demand for affordable, accurate and easy-to-use color solutions across the photographic workflow has increased. Datacolor's core strategy is to leverage our intimate knowledge of a photographer's digital workflow and create color management tools dedicated to helping photographers express their vision, save time, and reduce costs. Datacolor will continue our tradition of superior products and meet the market's needs with the introduction of SpyderCube™.

With the introduction of SpyderCube, Datacolor continues its tradition of serving photographers who are skilled and passionate about their images. All photographers speak in terms of emotion and are passionate about their images in one way or another. The entry level DSLR owner is excited to take photos of their children, family events, and vacations. The Advanced amateurs are passionate about their images and they aspire to have their work look professional. The pro photographer is skilled and passionate and makes his living with his creative vision. They all want easy to use solutions for their digital workflows. They all want optimized images and accurate color from their shots, to their displays, and in their final prints.

As the digital SLR goes mainstream so does shooting in RAW format. Datacolor's SpyderCube brings a revolutionary, compact, digital color balancing tool into this photo market. The SpyderCube allows photographers to not only correct the color temperature but also the exposure, brightness and black point of their images.

Datacolor gives pro photographers and advanced amateurs color they can depend on. Spyder products allow them to faithfully reproduce on their computer displays what they captured with their cameras. Datacolor products offer a more efficient digital workflow and allow users to achieve their creative vision quickly and accurately without having to become color gurus.



Problem. Solution. Feature. Benefit.

Original Image Color Corrected with SpyderCube™

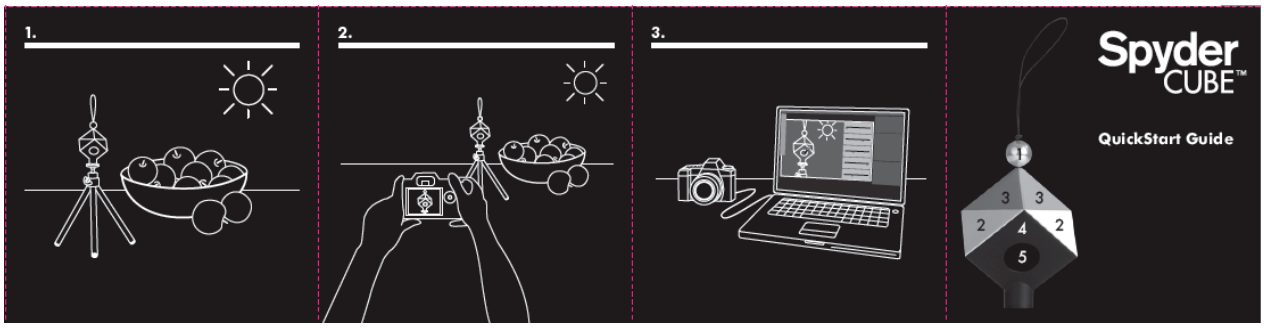
Problem
RAW Imaging offers photographers unprecedented control. But how does the photographer determine the optimal adjustments to these RAW Controls? How can images from differing conditions be corrected to a universal standard? To a camera white looks different indoors, outdoors, at sunset, and at high noon. Unfortunately, using your cameras automatic settings don't do the job.

Solution
The SpyderCube supplies spectrally neutral white and gray surfaces facing the primary and secondary lightsources, plus true black (using a black trap) and card black, and specular highlight capture. By using SpyderCube under the same lighting conditions as your photos, you can optimally adjust all the photos in RAW conversion using the information the SpyderCube shot provides.

Feature
With a fully featured RAW calibration tool you can be confident that your colors are accurate, your shadows and highlights are properly exposed, and your image is adjusted to the ideal density, regardless of the lighting conditions. The SpyderCube is spectrally neutral for ultimate control, is small enough to fit in your pocket or camera bag and gives you all the features needed to easily adjust your images in post-production. Easy enough for the advanced amateur and sophisticated enough for professionals.

Benefit
Photographers can capture accurate color and exposure and eliminate arbitrary trial and error adjustment. SpyderCube is uniquely designed to assist photographers in calibrating their RAW images by determining optimal adjustments to the key controls in RAW conversion software. Its multi-sided construction allows special attention to highlights and shadows and contains more features for image control than a gray card or white balance tool. Establishing an accurate custom white balance ensures an accurate image from the start of each new photo session.

SpyderCube Quick Start Guide



SpyderCube is uniquely designed to assist photographers in calibrating their RAW images by determining optimal adjustments to the key controls in RAW conversion software. Its multi-sided construction allows special attention to highlights and shadows and contains more features for image control than a gray card or white balance tool.

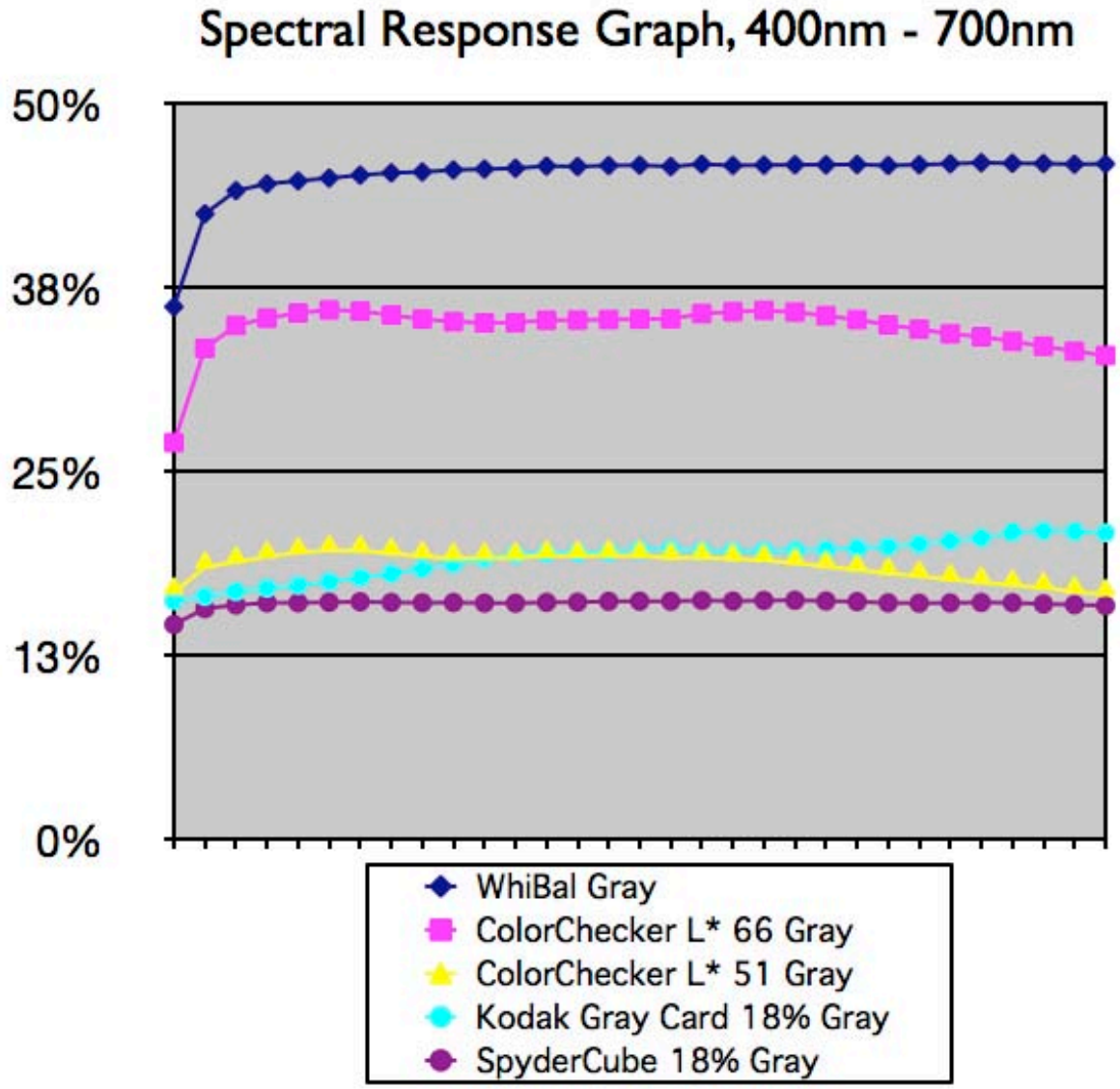
1 Chrome Ball Measures catchlight to analyze specular highlights.
2 White Face(s) Define highlights in relation to catchlight.
3 Gray Face(s) Measures color temperature and midtone response.
4 Black Face Defines shadows in relation to black trap.
5 Black Trap Defines absolute black.

Shooting the SpyderCube
Place the Cube in the lighting conditions under which you will be photographing. Orient the cube so that the lower black face, containing the black trap, is at the bottom front, and the two split white/gray faces are both visible. Take a photograph that includes the Cube. This photo will capture important information about the shooting conditions, to be used in making basic RAW adjustments.

Adjusting RAW Images
Open the image containing the SpyderCube in your RAW conversion software. The following adjustments are of key importance, and should be made in the order listed.
STEP 1: White Balance
Use the white balance tool (sometimes called gray balance tool), which is typically an eyedropper, to set the color temperature. This will also set the tint, if your software includes tint adjustment. Set by clicking on the gray section of one of the split faces. Choose the brighter face, as it represents your primary light source.
STEP 2: Exposure
Adjust exposure so that none of the color channels are clipped in your RAW converter's histogram. Keep an eye on the Cube in the image for reference as you make this adjustment.
STEP 3: Brightness
Next, brightness can be adjusted to compensate for lightening or darkening that occurred during exposure adjustment. Check the RGB values of the gray face under the primary light source; this face is 18% gray, and can be used to determine how light or dark image midtones should be.
STEP 4: Blacks
Finally, set your black levels using the black level eyedropper, if your software offers one, and clicking on the black trap. If your software does not have a black level dropper, set the blacks slider to show a clear distinction between the black in the black trap, and that of the surrounding black face.

Rocket Science

Datacolor designed SpyderCube using ABS Cycoloy, a hybrid resin that is fade proof, extremely durable, and flame / shock resistant. In addition, colors are through-pigmented for durability, and are carefully formulated to provide optimal color values, including an 18% gray which defines a new standard for spectral neutrality to provide accurate color balance under any light source. Below is a graph comparing SpyderCube's 18% gray to three older products. Note how the SpyderCube's gray forms a virtually flat line across the spectrum, as well as being closer to a true 18%.



Full Product Description:

SpyderCube™
Control color by balancing light

This is not just another gray card! Create your own custom white balance, obtain spectral neutrality data from multiple lightsources, and correct highlight and shadow details with SpyderCube. Establishing an accurate custom white balance ensures an accurate image from the start of each new photo session. Photographers can capture accurate color without a lot of after-the-fact manipulation. SpyderCube is the RAW calibration tool that belongs in every photographer's bag!

The SpyderCube makes your camera more intelligent! It captures in a single shot a wide range of color and exposure data. You simply use the cube in one of a series of images, adjust accordingly, save as a preset, and apply to an entire series of images to color correct in seconds.

Key Features

- Capture accurate color without a lot of trial and error manipulation
- Spectrally Neutral, so that Cube responds accurately to all lighting conditions
- Provides reference values to check and adjust RAW control settings
- Includes Black Trap for shadow detail control
- Allows users to instantly correct color images by setting color temperature value
- Allows users to accurately adjust shadows and highlight detail in any RAW image
- Ideal for location shooting (outdoor or indoor) and studios
- Essential for RAW conversion, and can also be used when correcting images in a JPG workflow

	SpyderCube	**Whibal**	**3step gray card/ Munsell Color**
	Datacolor	Whibal/PictureFlow LLC.	X-Rite
Target	Photographers shooting RAW	Photographers shooting RAW	Photographers shooting RAW
	3D Cube 1.5" Sq.	Flat plastic 6x3.5"	Flat Cardboard 2.5x3"
Gray Balance	Multiple Source	Single Source	Single Source
Card Black	Two	One	One
Absolute Black (blackTrap)	Yes	No	No
Card White	Two	One	One
Absolute White (Specular Highlight)	Yes	No	No
Post Production Color Balance with RAW Image Files	Yes	Yes	Yes
Protective Pouch	Yes	No	Yes
Support Videos	Yes	Yes	No

See page 8 for more information on the Color Management Market and Competitive Landscape.

Customer Needs

Color management is essential for today's complex digital imaging tools. There are so many variables with cameras, computer displays, printers, media (paper) and ink types. Photographers need a flexible solution that meets their color management needs.

Unlike your eyes, a digital camera does not automatically see whites as white. What is white? Your digital camera must answer that question every time it takes a picture. To a camera white looks different indoors, outdoors, at sunset, and at high noon. Unfortunately, using your cameras automatic settings doesn't always do the job, or do it precisely, it can easily be fooled. Most digital cameras get it wrong, or at least not quite right, about as often as they get it right – a major reason so many pictures have obvious color problems.

Edge over the Competition

Other exposure assistance products provide the user with only one type of white measurement (card-white) and possibly one type of black measurement (card-black). Other exposure assistance products provide the user with, at most, one type of gray measurement (frontal-gray). Typically these values have been used in Photoshop with the Whitepoint and Blackpoint eyedropper tools to define white and black levels.

Using a single white measurement with the eyedropper tool defines the white level in the image, clipping all white brighter than card-white to that level. This can result in whites in the image losing detail, and can cause inappropriately large blank areas surrounding metallic highlights and other specular highlight details in the image.

Similarly, using a single black measurement with the eyedropper tool defines the black level in the image, clipping all blacks darker than card-black to that level. This can result in darks in the image losing detail, and can cause inappropriately large solid black areas in the image.

Adjusting white and black points in an image already imported into Photoshop can degrade the image, showing up as a 'combed histogram' in the image's levels window, even with high bit image files.

Datacolor SpyderCube provides a metallic highlight sample brighter than card-white and a black trap darker than card-black offering two-point control of both highlight and shadow detail. SpyderCube also gives the user the white card facing directly towards the primary frontal light source, providing a more accurate white card reading. SpyderCube's dual-point white and black value data allows the user to set these values during RAW import, avoiding image quality losses caused by adjusting these values in the imported image file.

The SpyderCube's 3D configuration provides gray and white samples facing both the primary and the secondary light sources, providing the photographer with more information about mixed light sources than a single frontal sample.

Datacolor's SpyderCube will be set apart from the competition by having superior quality and featureset, and Spyder branding, at an affordable price point. SpyderCube is a revolutionary digital color balancing tool that offers more than just gray balance. Its 3D format, black trap, specular highlight ball and the ability to sample directional lightsources all at one time, set it apart from the competition.

Quick Start Guide is available in 10 languages: English, Spanish, French, German, Italian, Russian, Traditional Chinese, Simplified Chinese, Korean, Japanese

Video Tutorials are available in 3 languages: English, German, French

The SpyderCube includes:

- Datacolor SpyderCube™
- Protective pouch
- Quick Start Guide
- SpyderCube Registration Card
- 1-year Hardware Warranty

Packaging
The SpyderCube packaging actual size = 2.5" cube

Warranty:

1-Year Limited Hardware Warranty

What is covered: All parts defective in material or workmanship.
For how long: 1 year from date of purchase
What we will do: Replace the Datacolor SpyderCube™ free of charge.
What we will not do: We will not pay shipping or transportation.
Other condition: This warranty only covers the original purchaser. This warranty does not cover defects caused by mishandling or misuse of the Datacolor SpyderCube™
WE WILL NOT PAY ANY KIND OF DAMAGES CAUSED BY A DEFECTIVE SPYDERCUBE,™ INCLUDING CONSEQUENTIAL OR INCIDENTAL DAMAGES. Our total liability is limited to the purchase price of the SpyderCube™ (not including taxes or shipping charges). Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation may not apply to you.
Local and National Laws: IMPLIED WARRANTIES ARE LIMITED TO THE DURATION OF 1 YEAR FROM DATE OF PURCHASE. Some states do not allow limitations on how long an implied warranty lasts, so the above limitation may not apply to you. This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

Datacolor Online Store Return Policy:
30-day money back guarantee

Contact Us

USA
spyder.datacolor.com

Europe
www.datacolor.eu

Asia Pacific
spyder.datacolor.com