

# Spyder<sup>®</sup>PRINT

## User Guide



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## **Introduction:**

Thank you for purchasing your new Spyder®PRINT. This document will offer a step by step guide for using your SpyderPRINT to get the best possible colors from your printer.

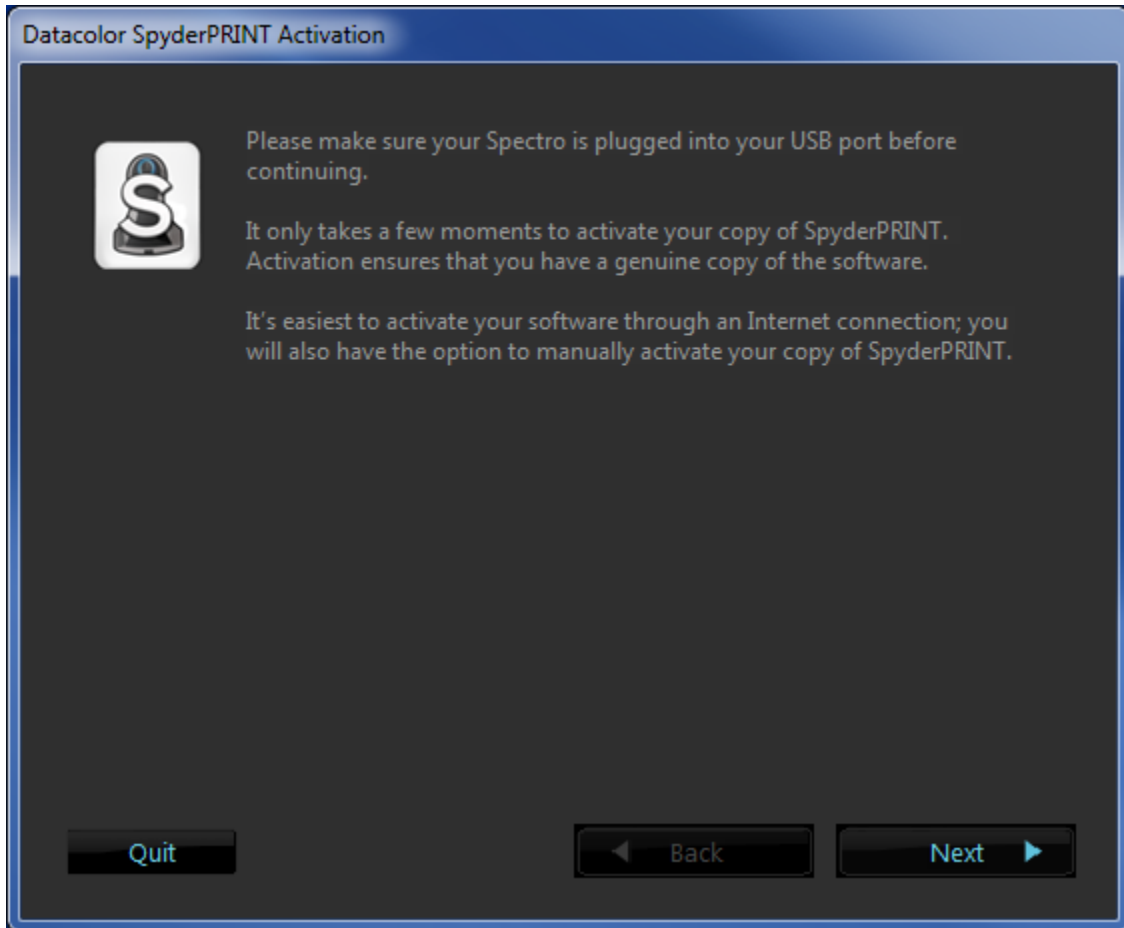
## **What's in the Box:**

- SpyderPRINT Spectrocolorimeter
- Sensor Base
- SpyderGuide
- USB cable
- Welcome Card - Including serial number, warranty information, and download instructions

## **System Requirements:**

- USB Port
- Windows 7 32/64, Windows 8.0, 8.1 32/64, Windows 10 32/64
- Mac OS X 10.7, 10.8, 10.9, 10.10
- Monitor Resolution 1280x768 or greater, 16-bit video card (24 recommended), 1 GB of available RAM, 500MB of available hard disk space
- Internet connection for software download

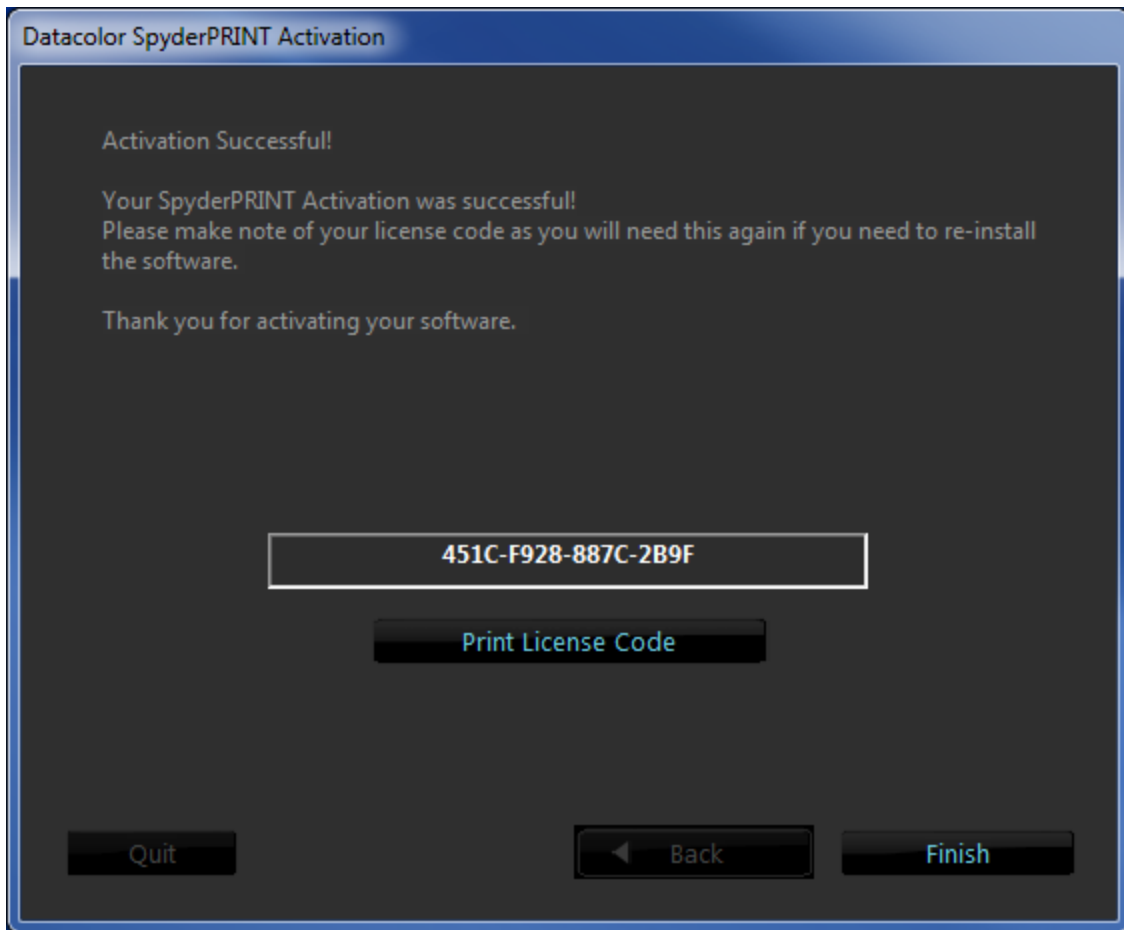
## Serialization and Activation



First, download and install the SpyderPRINT software from the Datacolor website (follow the link included in the package).

Next, make sure that your SpyderPRINT is plugged into a USB port on your computer; make sure it is a direct port, not on a keyboard, hub, or extension cable.

Enter your serial number located on the welcome card, or license code from your email if you have already registered the software on another machine. With the easy automated activation, please make sure that your computer is connected to the internet and that no firewall blocks your software from communicating with the Datacolor activation server.



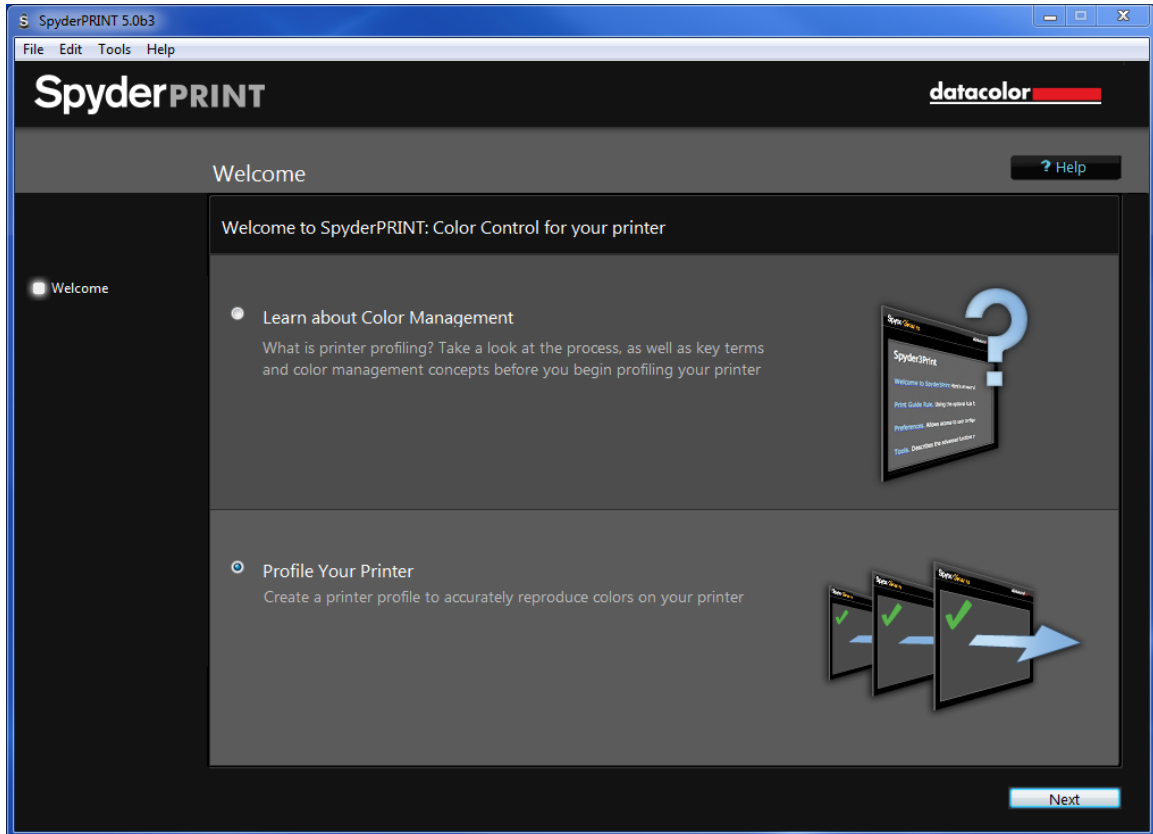
Save the email with the license code. You will need either this or the original serial number from the card in the SpyderPRINT package if you want to use the device on another computer.

## Software layout

The software that comes with your SpyderPRINT is a wizard, which will walk you through the process step by step. We have outlined the steps below to help you through the process. There are a few differences between the Windows and Mac versions that will be highlighted when necessary.

# SpyderPRINT Software

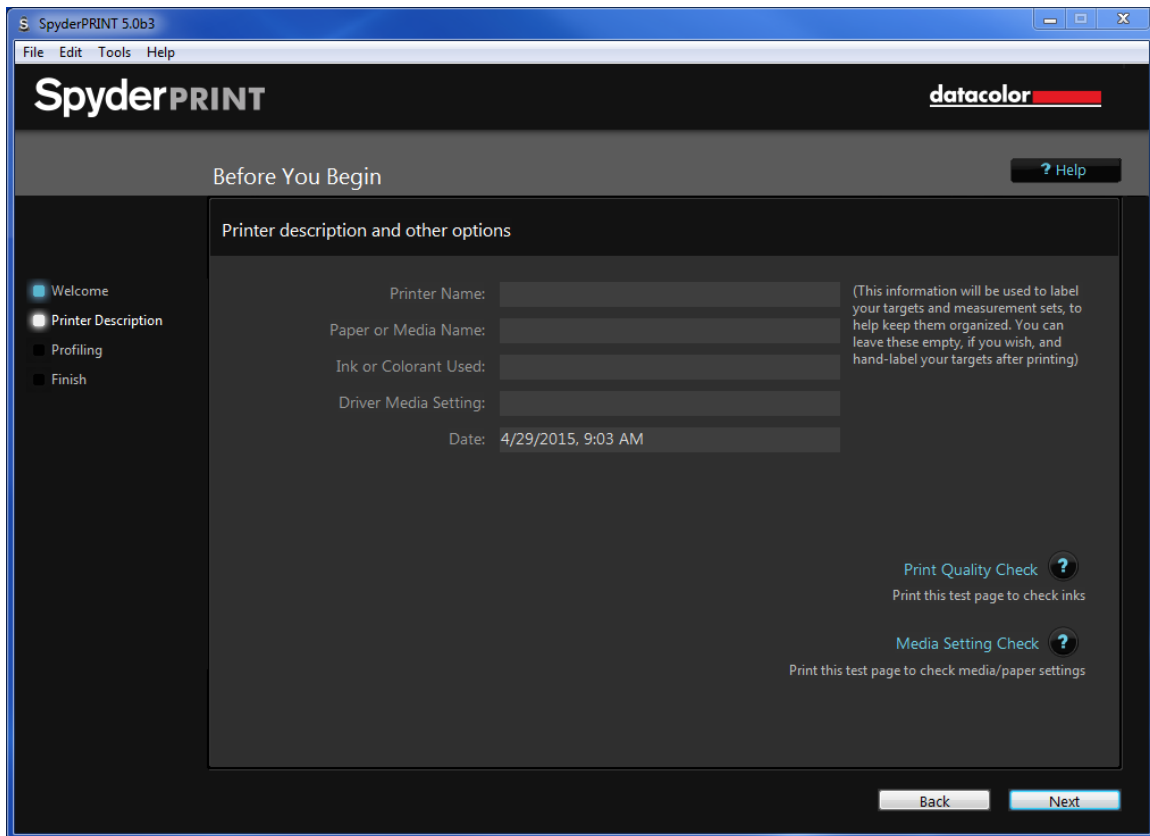
## Welcome Screen



When you run the SpyderPRINT software you will be greeted with the Welcome Screen. Here you have two choices, to “Learn about Color Management” or to “Profile Your Printer”. If you are new to Color Management you may want to go through the “Learn about Color Management” section to learn more about the process and familiarize yourself with the terms and concepts before getting started. Once you are confident you can click on the “Profile Your Printer” and click "Next".

## Before You Begin

Printer description and other options:

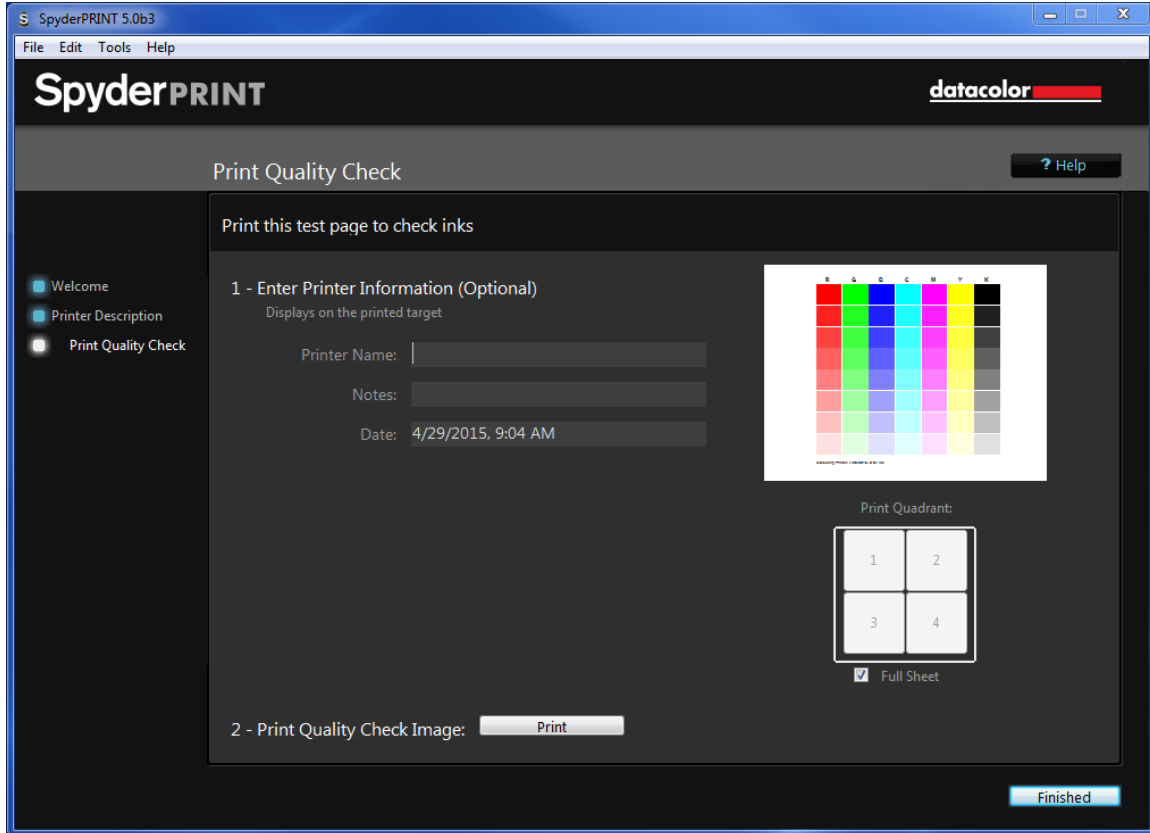


The screenshot shows the SpyderPRINT 5.0b3 software window. The title bar reads "SpyderPRINT 5.0b3" and the menu bar includes "File", "Edit", "Tools", and "Help". The main window has a dark theme with the "SpyderPRINT" logo and "datacolor" branding at the top. The current screen is titled "Before You Begin" and features a sidebar with four menu items: "Welcome", "Printer Description" (which is selected), "Profiling", and "Finish". A "Help" button is located in the top right corner of the main content area. The main content area is titled "Printer description and other options" and contains several input fields: "Printer Name:", "Paper or Media Name:", "Ink or Colorant Used:", and "Driver Media Setting:". A "Date:" field shows "4/29/2015, 9:03 AM". To the right of these fields, a note states: "(This information will be used to label your targets and measurement sets, to help keep them organized. You can leave these empty, if you wish, and hand-label your targets after printing)". At the bottom right of the main content area, there are two buttons: "Print Quality Check" with a question mark icon and the text "Print this test page to check inks", and "Media Setting Check" with a question mark icon and the text "Print this test page to check media/paper settings". At the very bottom of the window, there are "Back" and "Next" buttons.

Here you can enter the name of your printer, type of paper and ink used and any driver media settings you may be using. This information will be printed automatically at the bottom of the profiling "target" sheets to help keep track of the settings that you will eventually use when actually printing the target sheets. It is not necessary to fill in all of the fields, but can be useful down the road.

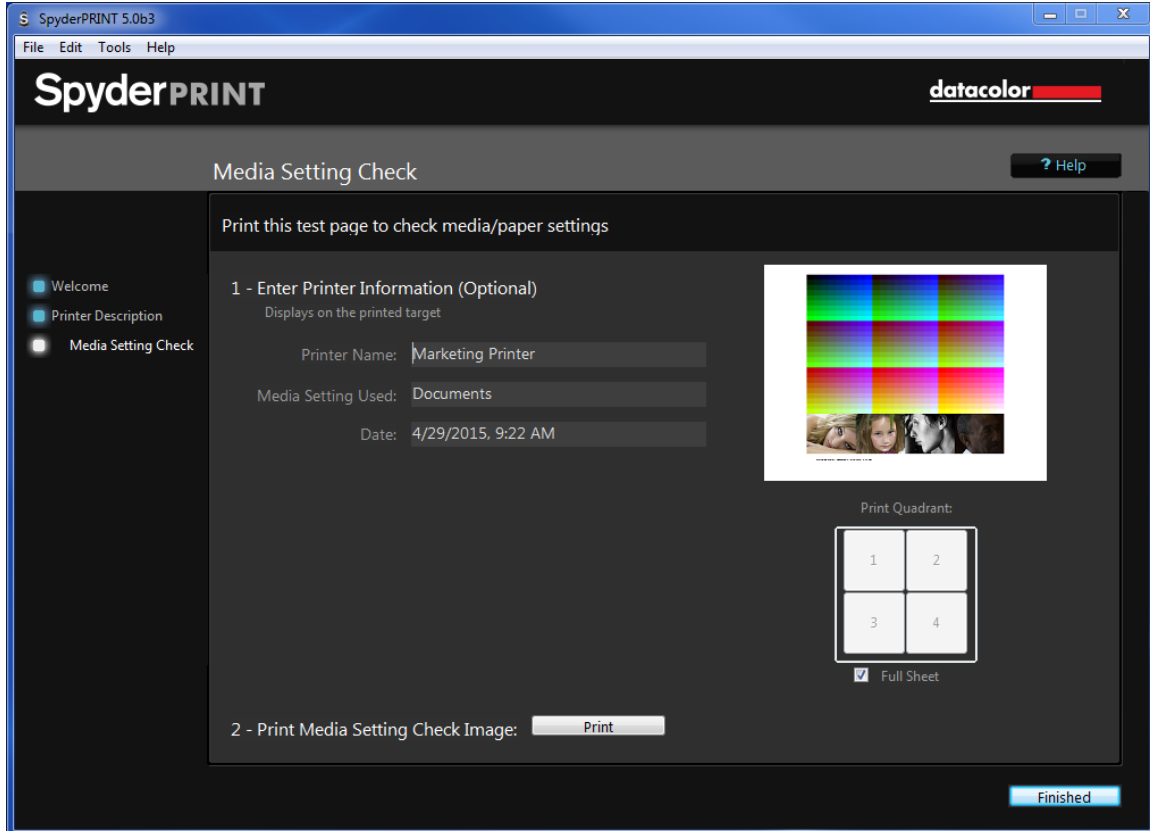


## Print Quality Check (optional)



Clicking on this will give you a test page to print to ensure that your printer is functioning properly (all inks working and nozzles not clogged). Enter your printer name and any note you would like to add; these will be displayed on the printed page. You can also choose whether to print a full page or just use a quarter page by selecting the "Full Sheet" check box. Next, click on the "Print Quality Check Image" box to proceed. A "Page Setup" box will appear. Choose the printer you wish to use, paper size, and orientation. We recommend using landscape mode when printing full sheets. Next a "Print" dialogue box will appear; check your settings and press the "Print" button.

## Media Settings Check (optional)



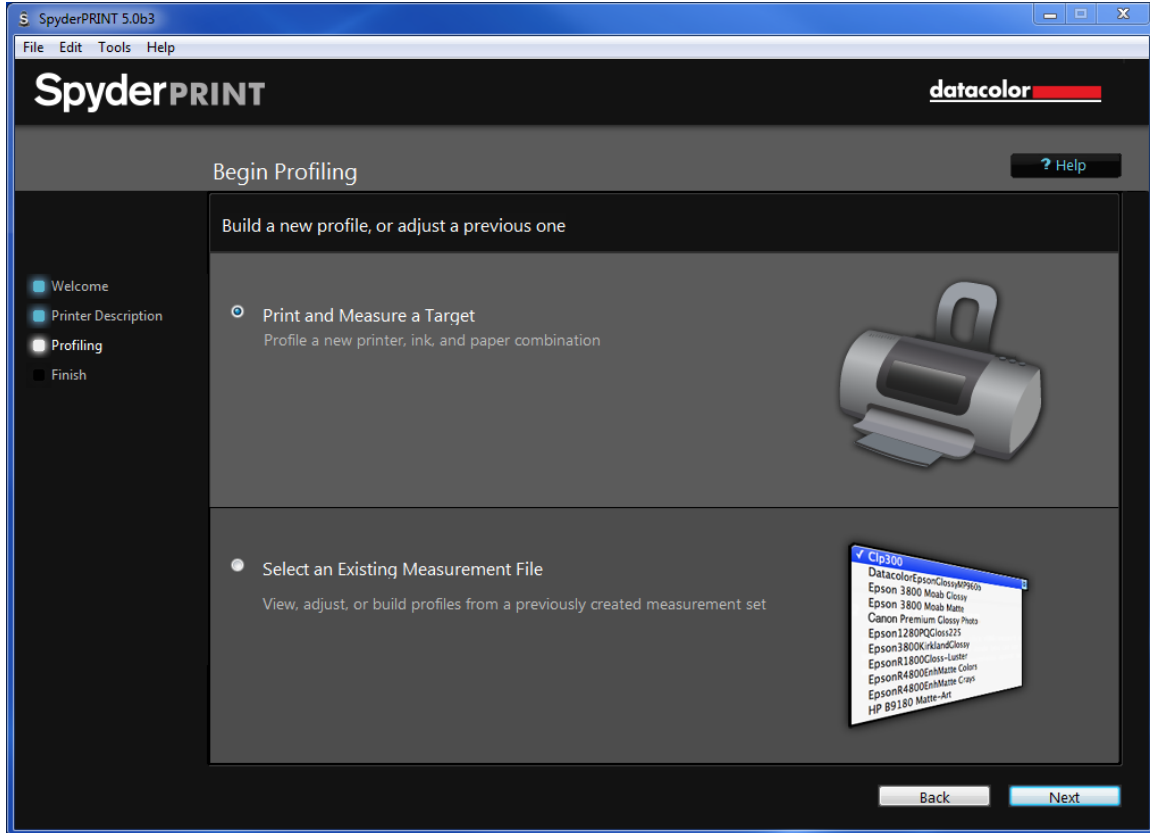
This screen lets you print a "Media Setting Check" image at different driver media settings (paper type, output resolution, etc.) to assure that the media setting choice is optimal before printing a full profiling target for the printer. If the choice is not optimal, then the resulting profile will not have the color range or detail it would have from an optimal setting, and it's likely that prints with these settings will have various kinds of cosmetic issues.

The basic idea is to print this image, with color management turned off in the driver, the same way the target sheets will eventually be printed, so that you can see how the same kind of color squares will eventually print with one or more profiling target sheets.

An example of "not optimal" would be using the wrong paper type setting for a non-standard paper type and getting too much ink on the paper, which can produce irregular mottling and streaking of printed colors.

More information is available by clicking on the help button at the top of the screen.

## Begin Profiling

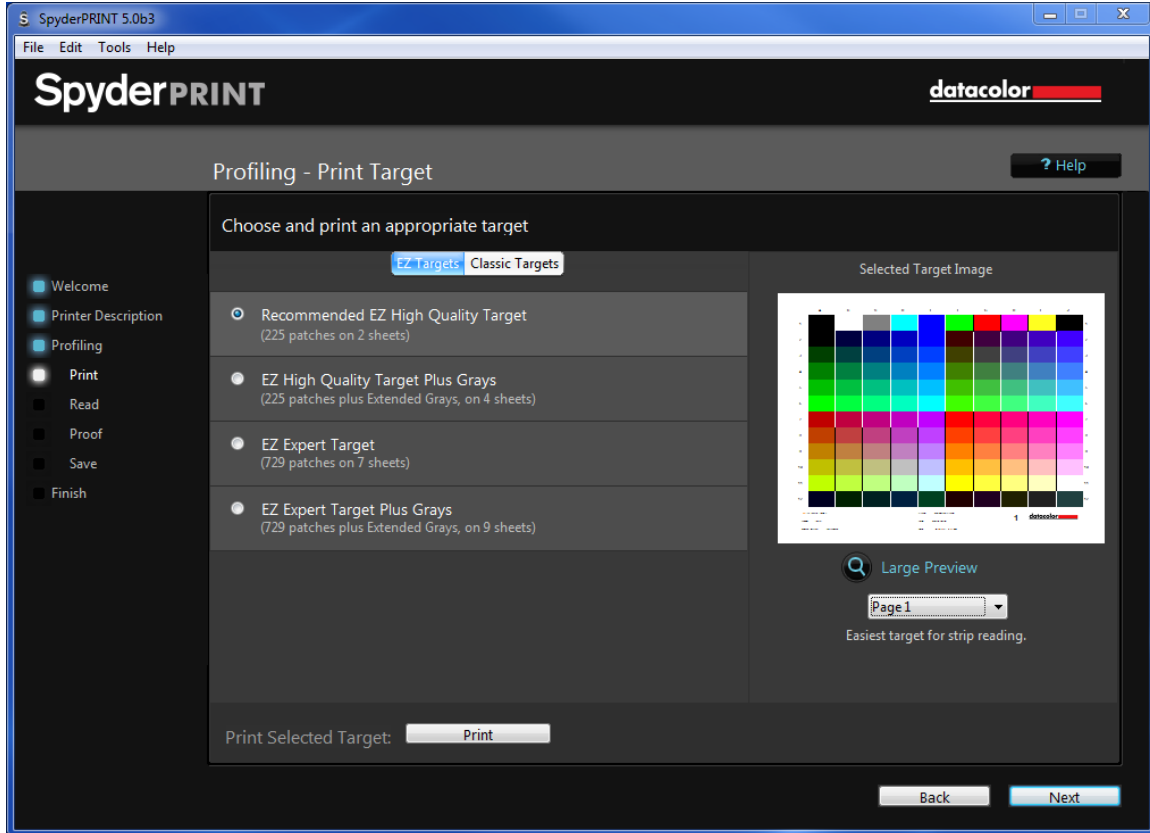


On this screen you will select whether to print and measure a Target or Select an existing measurement.

Click “Print and Measure a Target” to create a new profile.

Click “Select an Existing Measurement File” to view, adjust or build profiles from a previously created measurement set (Go to Page 26 to learn more about this setting).

## Profiling – Print Target



Here you have a number of choices regarding which test target to print out and measure.

The EZ Targets have larger, wider patches that make them easier to measure. They print on twice as many sheets of paper as the Classic Targets.

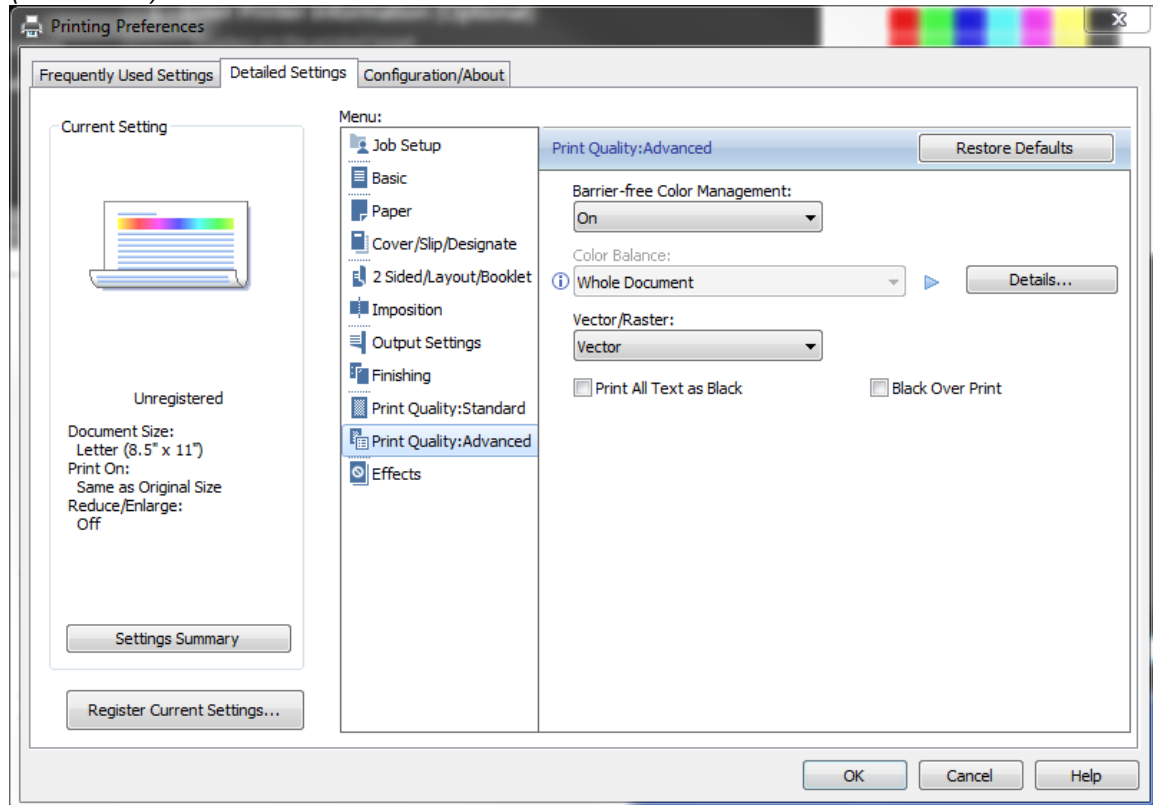
Either kind of target, EZ or Classic, can be measured with or without the SpyderGuide. The purpose of the guide is to help you align the Spectro with the rows of patches while moving from left to right whether you're measuring by patch or strip.

Most printers will perform well with the High Quality Target, with or without Extended Grays. With some printer configurations, it can be beneficial to print the extra set of Extended Grays for your profile target sheet set, even if you aren't printing Black and White. Once you have selected the appropriate target, press the "Print" button.

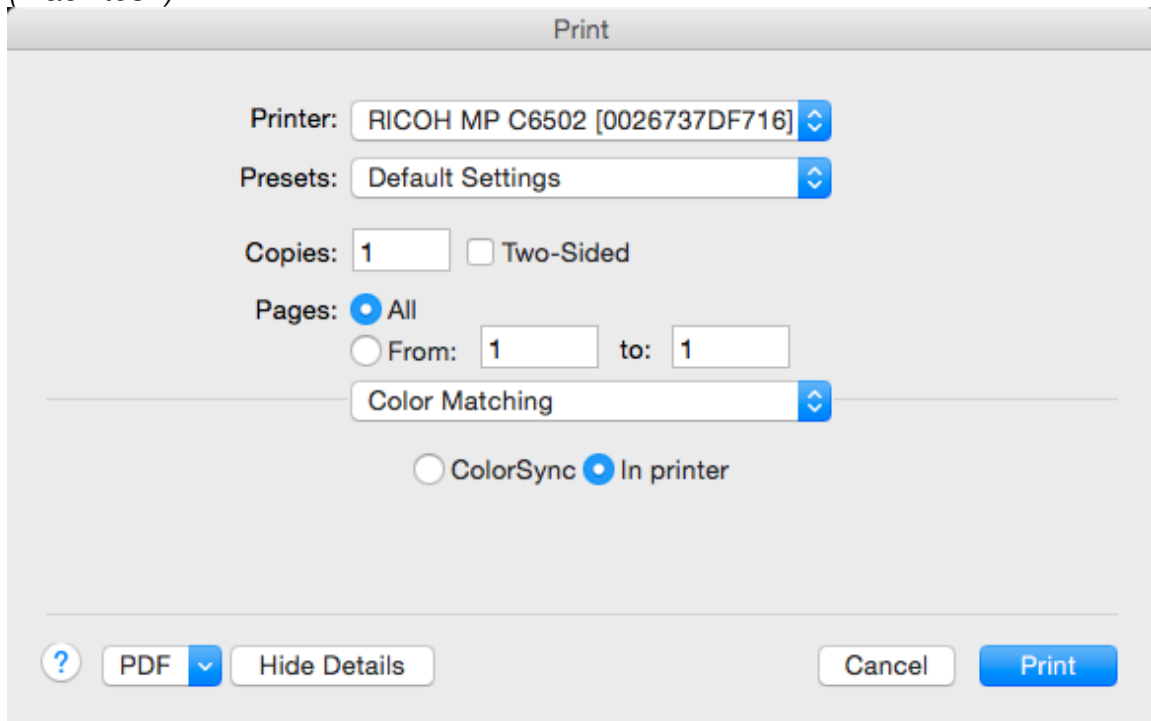
## Printing the Target

After you click "Print Target", the print dialogue box will appear on your computer. Choose the printer you are looking to create a profile for, select the appropriate paper size, set to landscape orientation, .25 inch margins (.635 centimeters), print single sided, and then we need to turn off any color management features. On a Windows machine this means turning "on" Barrier Free color management. On a Macintosh you want to turn off Color Sync and select in Printer.

*(Windows)*



(Macintosh)



Once color management has been turned off, proceed to print the pages of the target.

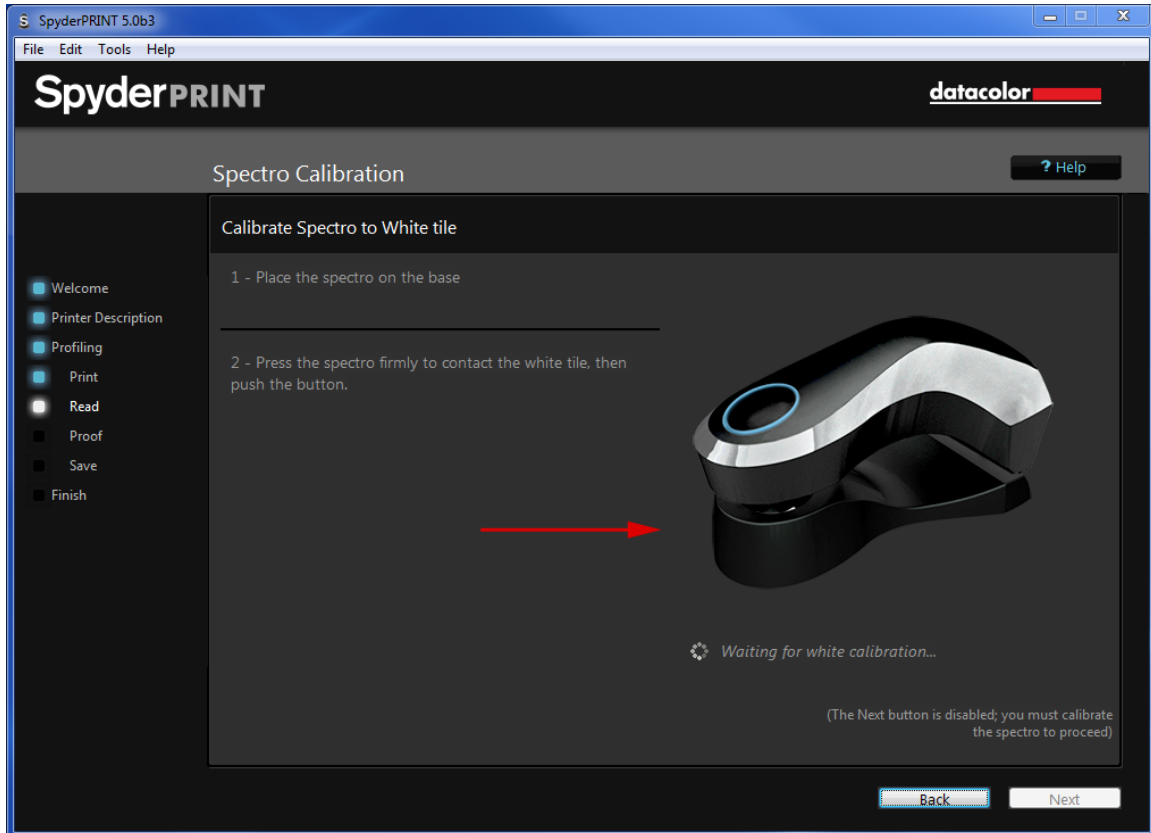
There is an option, when printing multiple target sheets, to print either **all** sheets, or just **one** at a time. To print your targets one sheet at a time, use the small target preview in the Wizard screen to switch to the page you want to print; then click the Print Target button and tell it to only print "One" sheet. Repeat this process for each sheet in the target.

With multi-sheet targets, each sheet will be automatically labeled with a page number. You must measure the sheets in the proper order to build a correct printer profile.

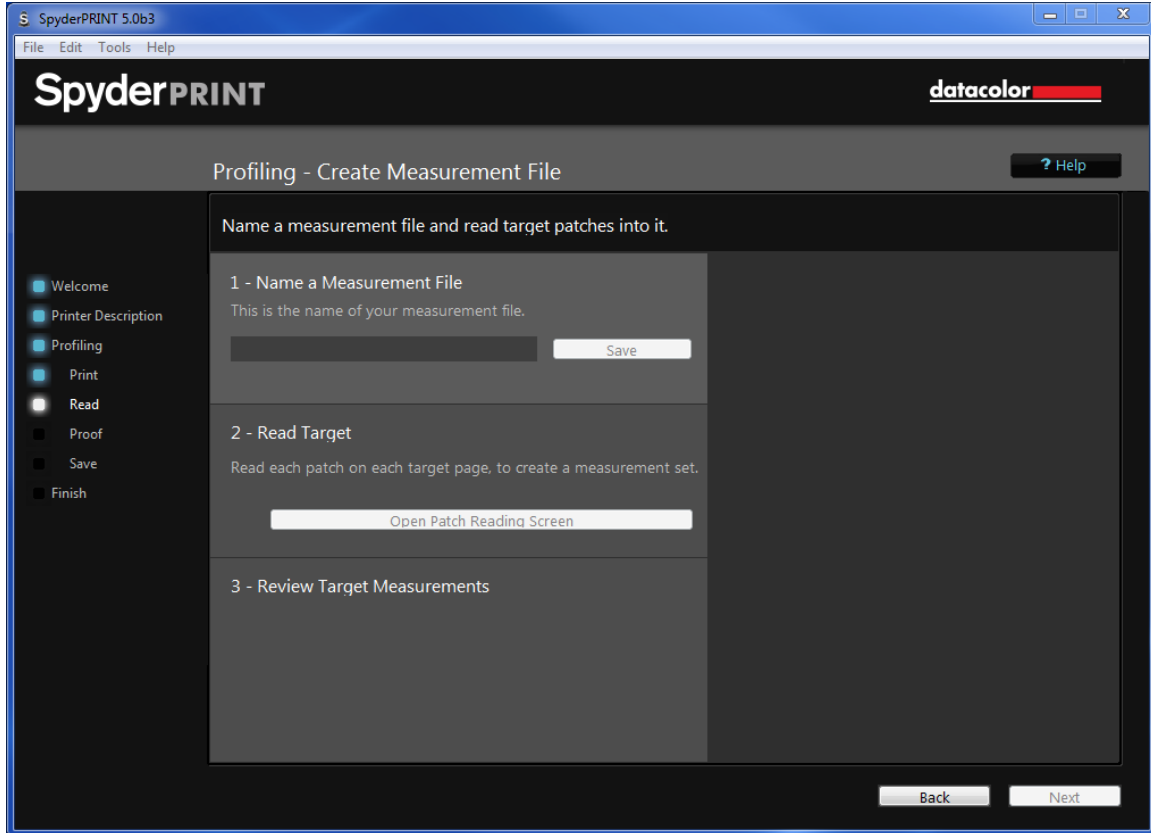
We recommend that you let the target sheets dry for at least 15 minutes after printing. Depending on the printer, paper, and ink set, you may want to wait longer. Some inks "develop", deepen and darken on certain papers more slowly, and you don't want to take measurements until (a) the ink is fully dried and won't smear during measurements, and (b) the color of the printed patches has locked in and won't change further.

## Spectro Calibration

Place your Spectro onto its base and press the button on the top, this will create a white balance for your Spectro. Make sure the white tile of the base is clean and the Spectro is aligned properly on it. It is critically important to calibrate properly to assure accurate measurements.



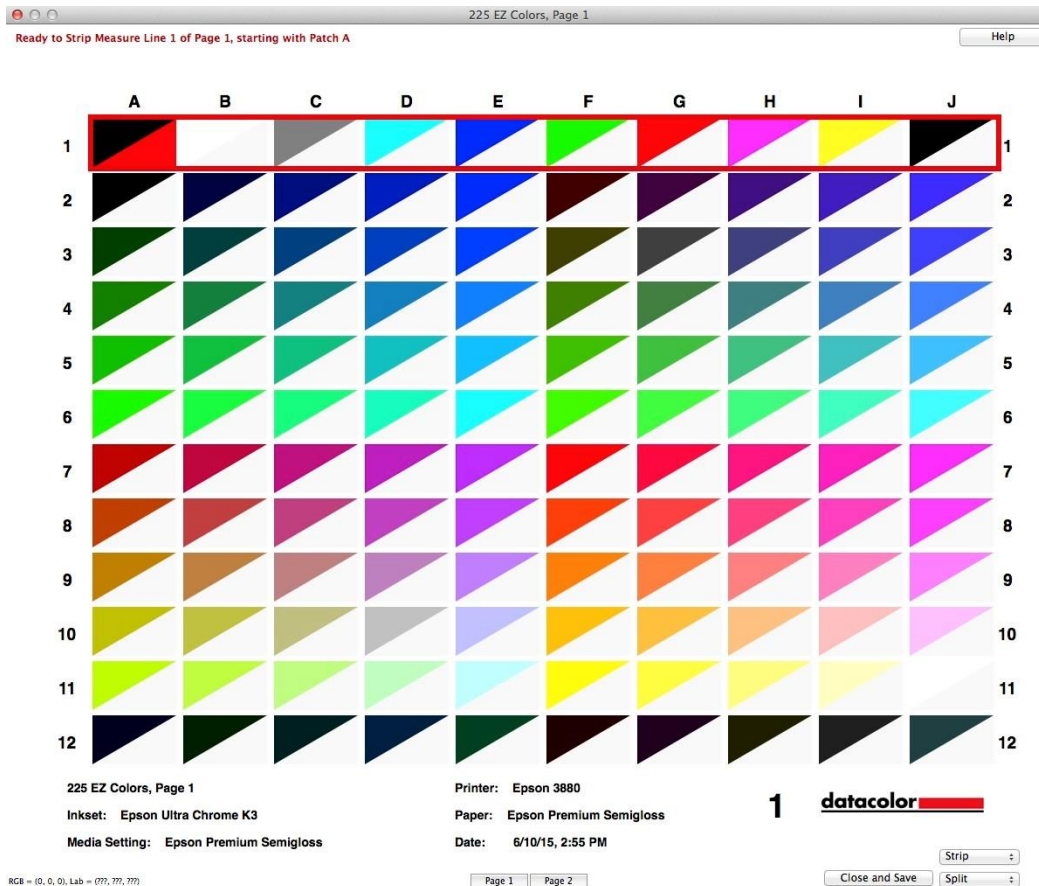
## Profiling – Create Measurement File



On step 1 you will name your Measurement File, which creates a formatted text file that will contain the measurements you are about to take. Click "Save".

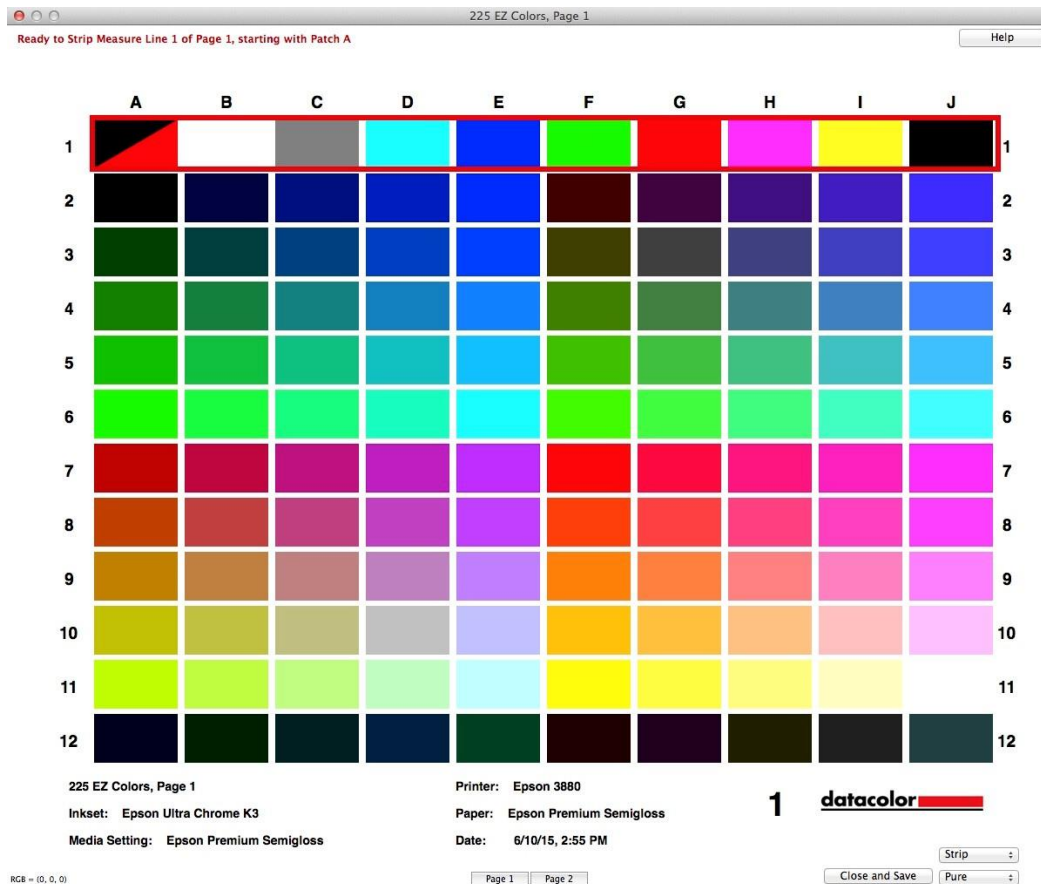
On step 2 you will be starting with an "empty" measurement file that you created in step 1. Click on the "Open Patch Reading Screen" button to begin the measurement process for the set of target sheet(s) that you've printed and allowed to dry.





This is the window that opens whenever you're going to measure patches from target prints. What you're seeing is a grid of color patch "slots" that corresponds to the physical patches printed in the Target you chose. The grid is labelled in columns by letter, and in rows by number, to also correspond to the physical target print. The bold "1" in the lower right, beneath the patches, reminds you that this is Page 1 in the target. The two popups in the lower right corner of the window are used to set the measuring mode; and the display mode. In this example, measuring mode is set to Strip (the other choice is Patch).

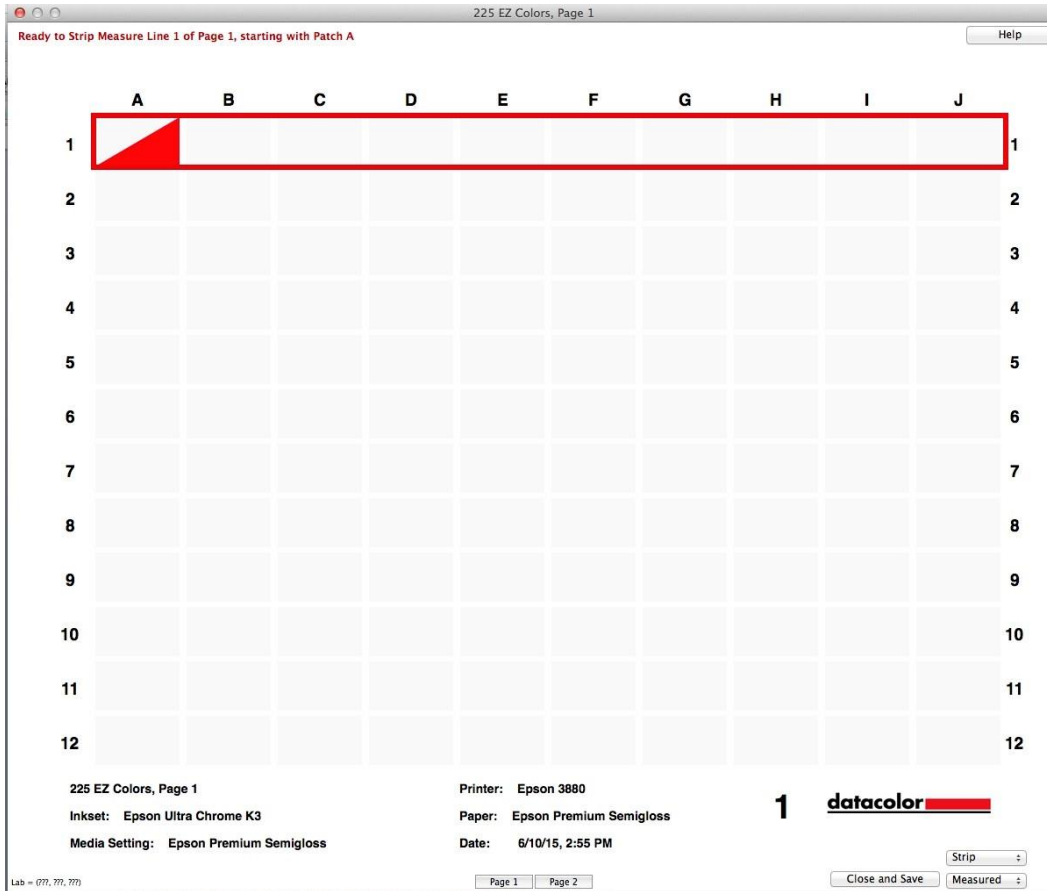
The display mode for the window defaults to "Split" (the other choices are "Pure" and "Measured"). When in Split mode, each patch rectangle is drawn in 2 colors: the upper left corner of the rectangle is drawn in the "pure" RGB color that exists for that patch in the target. The "pure" color is the "raw" RGB color that was sent through the printer driver and which, when the target has been correctly printed, will have produced an "uncalibrated" color patch for you to measure. So for example, for the red patch in the target ("full" RGB red of (255, 0, 0)", that's the pure color displayed for that patch in the window. The lower right corner of each patch rectangle is drawn in whatever color you've measured into that slot. In this example, all of the patch rectangles have "white" in the lower right corner because they're "empty" – none of them are measured yet.



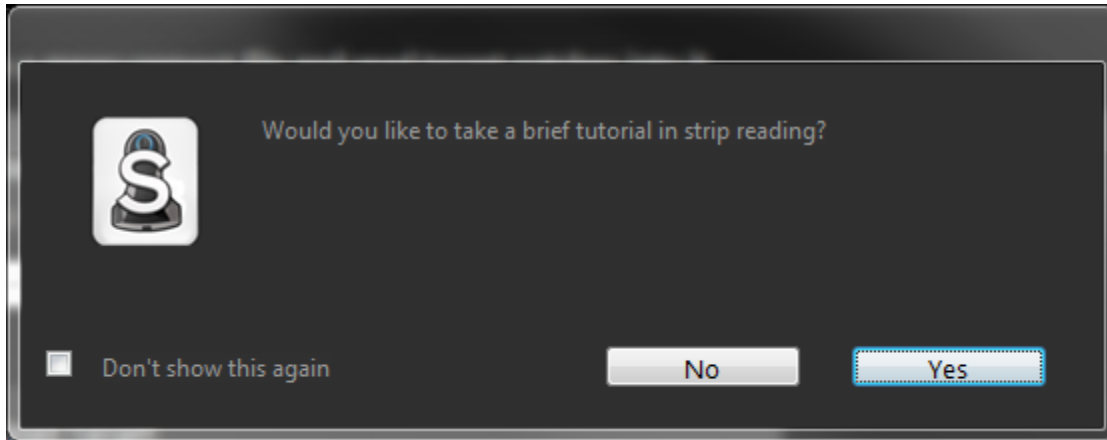
If you switch display mode to “Pure”, the entire window will redraw showing all patch rectangles filled fully with the Pure colors. This will let you quickly see what the Pure representation of the target print looks like.

It’s important to understand that these Pure colors are “ideal”, and simply represent the colors in the target image **before** you printed it.

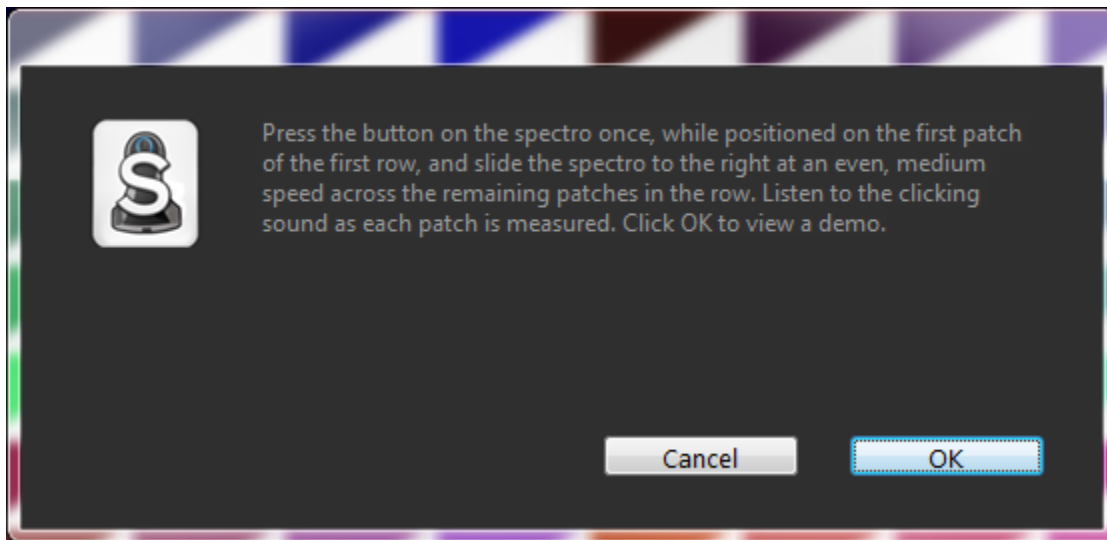
When you print the target correctly (all color management turned off), the resulting target print will be “uncalibrated” and the printed color patches will look different than these Pure “ideals”. When you measure these uncalibrated patches in the target print, SpyderPRINT will then calculate a **profile** that will correct for this uncalibrated state of the printer.



If you switch display mode to “Measured”, then all of the rectangles in the Target window are filled **only with the measured color**. Here, this means that the entire window appears with “empty” white patches because nothing has been measured yet.



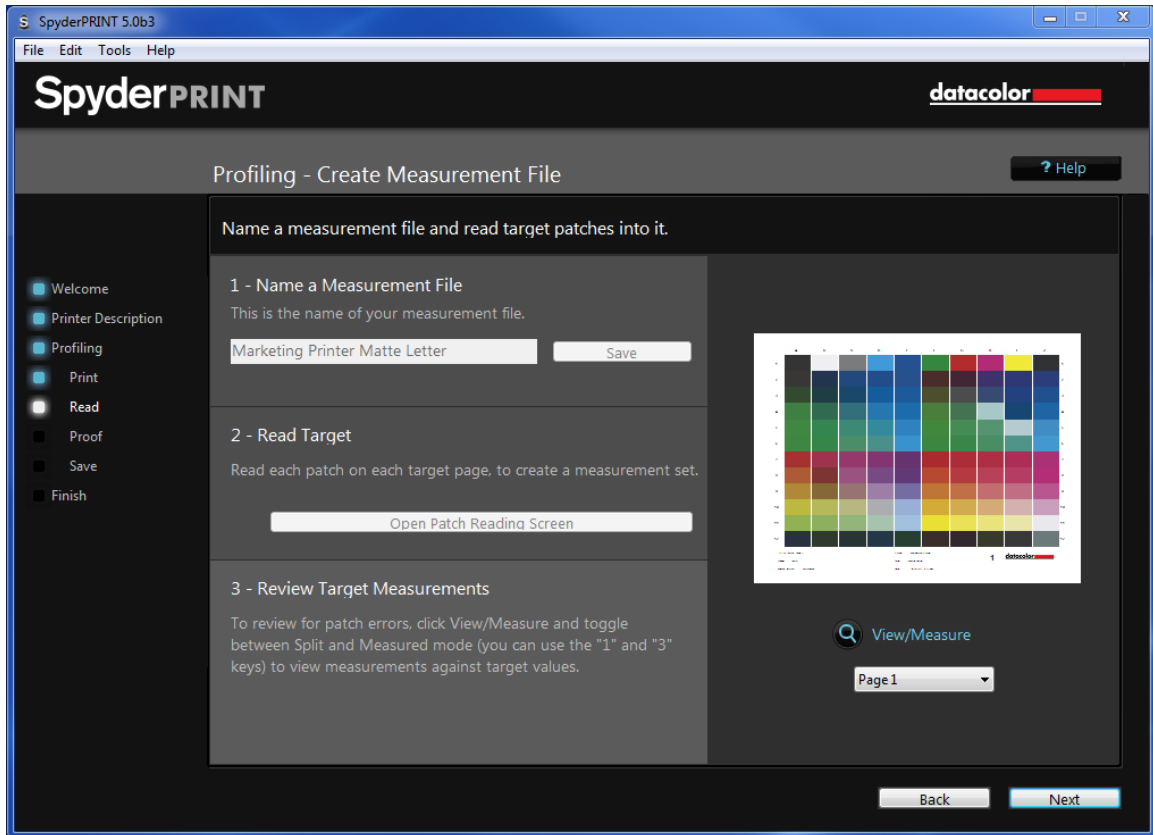
If this is your first time measuring patches in a target, you may want to take the brief tutorial on how to read the patches. The tutorial will show you the appropriate speed to read the targets if you're using strip mode, which measures by row. The other mode you can measure in is patch, which measures by each color patch. Once you feel comfortable you can begin reading your own target.



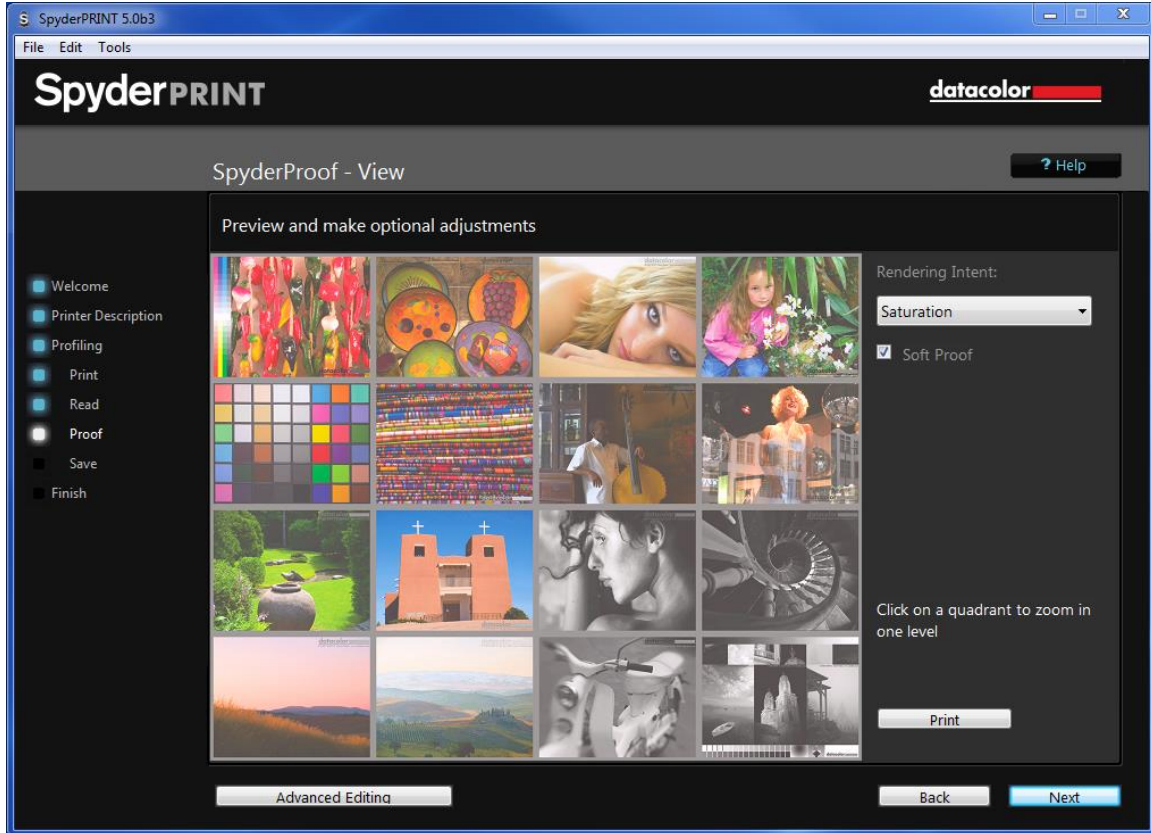
Place the Spectro on the first patch on the next line and repeat. Once this page is finished, click on the 2<sup>nd</sup> page and that will appear, repeat until all pages have been read.

Once finished you can review your targets, if there is a red box around the patch, it should be read again, this indicates some sort of an error with that particular patch. While in the View/Measure mode you can toggle back and forth between the split and measured mode to see the full size targets and measurements.

Once you are satisfied with your readings, press the next button, this will process and create your profile.



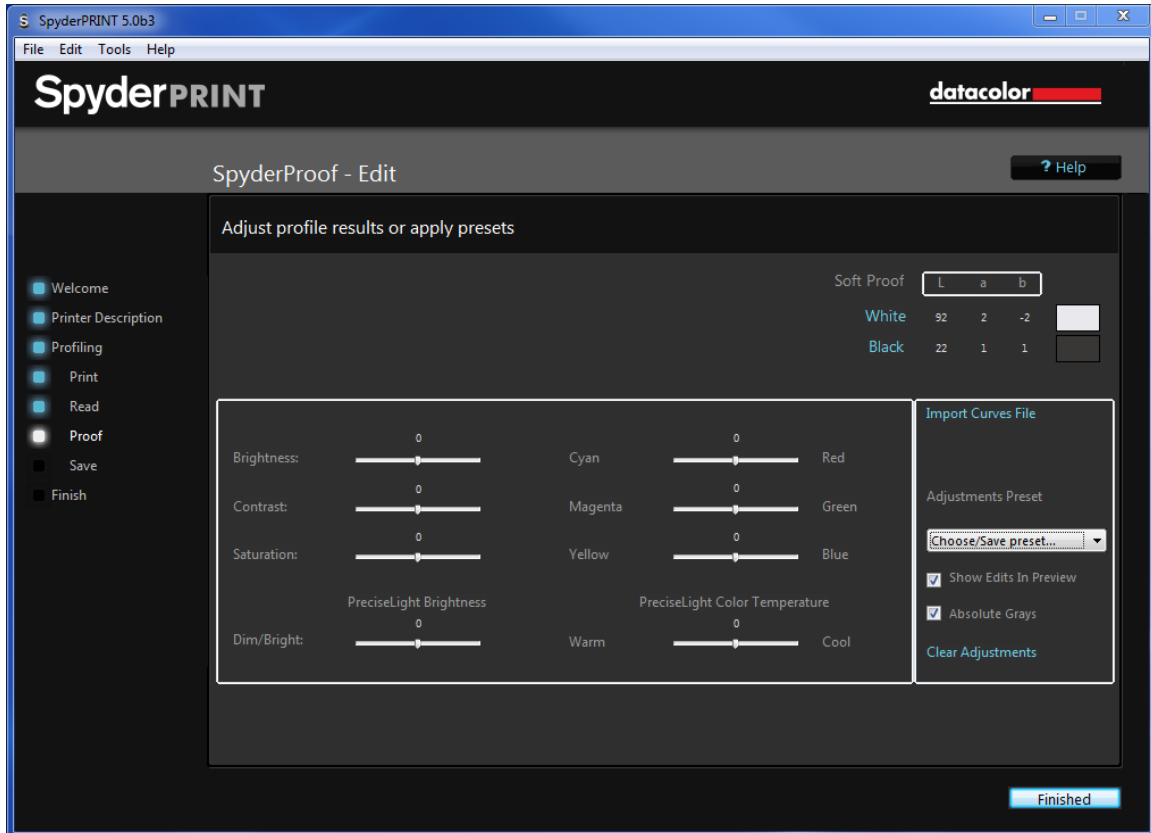
## SpyderProof View



On this page you can preview what an image looks like when soft proofed vs not soft proofed. Select your rendering intent, either: Saturations, Perceptual, Relative Colorimetric, or Absolute Colorimetric. Click on the Soft proof button below to see the difference. You can zoom into the images to see them enlarged or to zoom out.

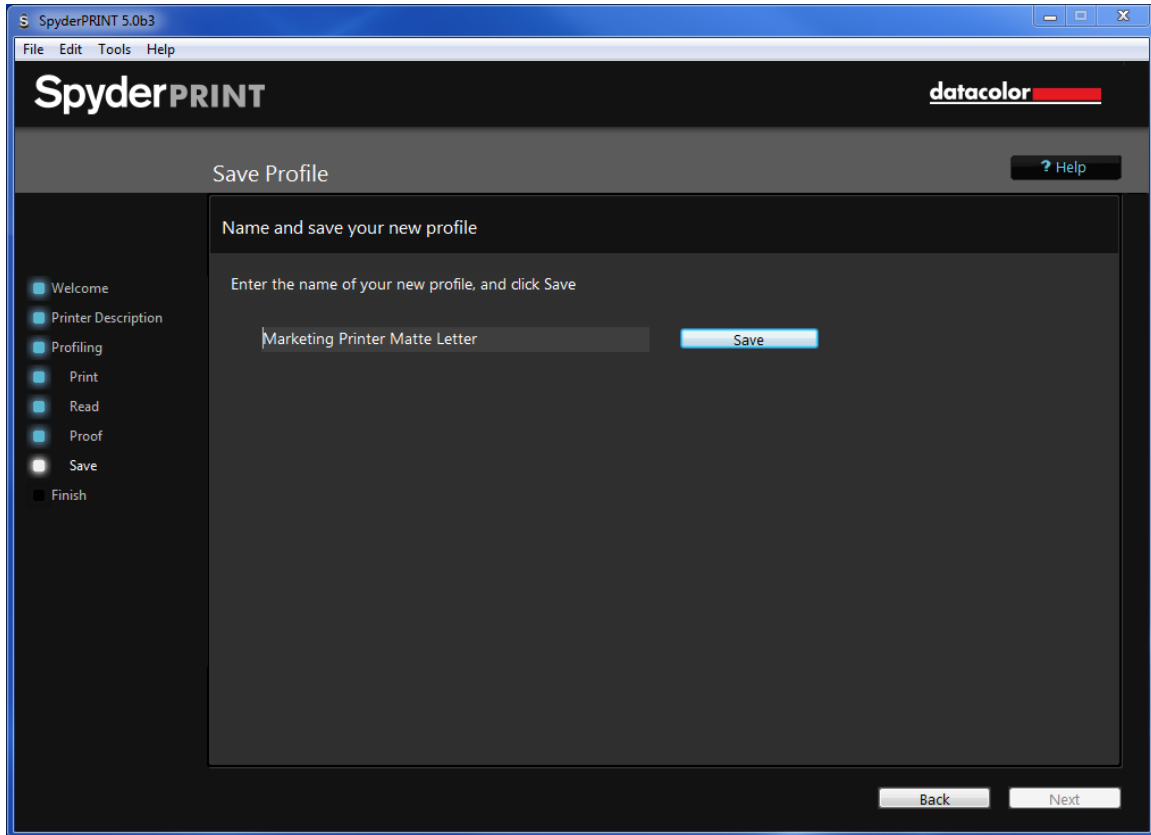
## Advanced Editing

If you wish to make changes to your profile, you can click on the Advanced editing button to bring up a series of sliders to make changes to your profile.



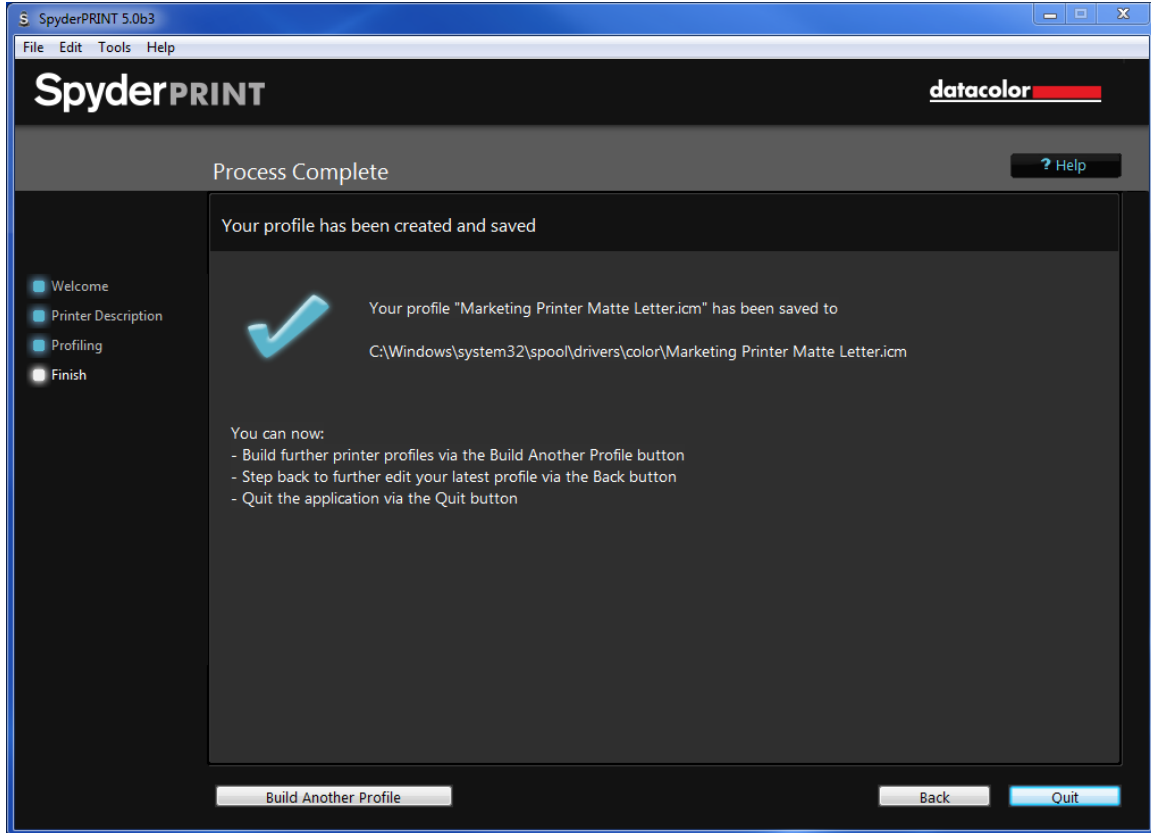
## Save Profile

Once you are happy with your profile, enter a name for it, usually with the printer and paper type, and click save.



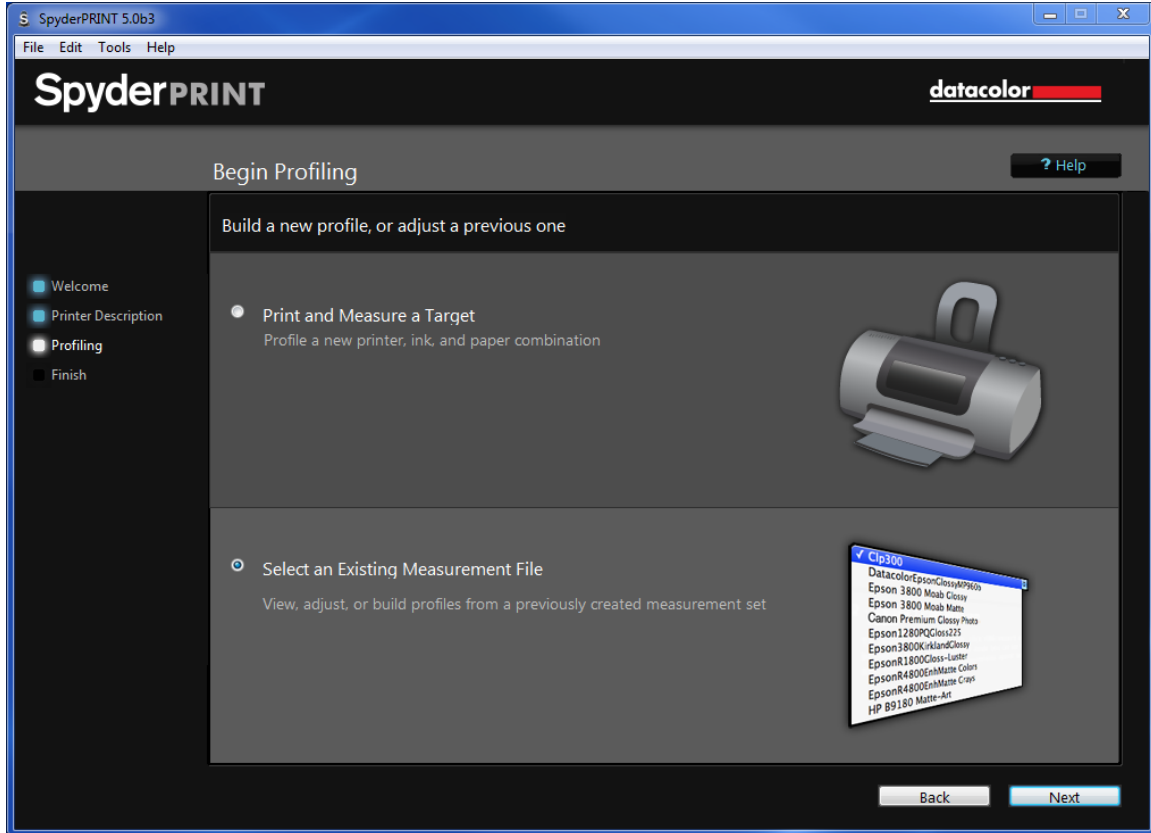


## Process Complete



Congratulations, you have finished building your profile! You can either quit the program, start building another profile, or continue editing the one you just created.

## Begin Profiling – Selecting an existing Measurement File



You can select a previously created profile to continue editing it here. You can go back in and re-read any or all of your patches and once done you can view the results in SpyderProof as well as edit them under Advanced Editing. Once completed you can re-save this file under a new or the existing name.

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