How to verify print accuracy to a standard

Fiery Color Profiler Suite

4.9

What is it?

Fiery® Color Profiler Suite software provides integrated color management functions and quality control for printing systems. It extends the color capabilities of Fiery Driven™ printers with the most advanced color management tools available for profile creation, inspection, editing, and color quality assurance. Modular functions ensure color accuracy and consistency across design and office applications for all types of media, increasing productivity and accelerating return on investment.

Why should I use it?

1. If you are matching a Fiery Driven printer to industry standards such as ISO, PSO, GRACoL, or SWOP; you can use the Fiery Color Profiler Suite Verify module to evaluate the color accuracy of prints with the press standard.

2. For color-critical print buyers, the Verify module allows color quality to be monitored on a regular basis. This way, when the customer approves a print run, future reprints will be consistent.
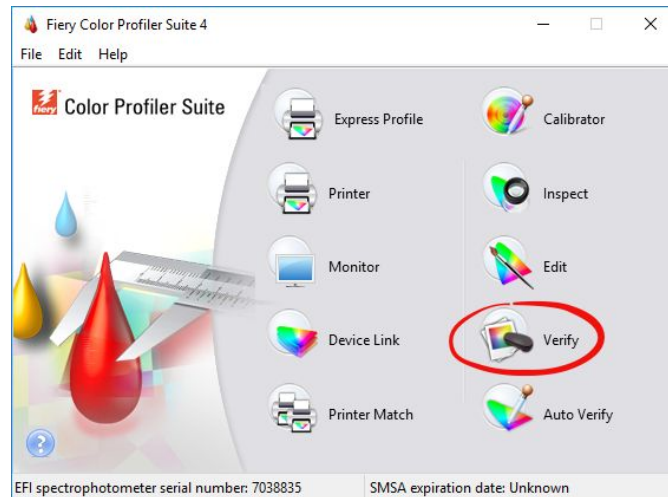
Before you begin

It is important to note that an output profile and associated calibration are only as good as the condition of the print engine at the time of profile creation. These instructions assume that the print engine is in good working order and is in a stable production environment. To pass color verification, EFI™ recommends that you use a high-quality media, with a custom profile for the chosen media installed on the Fiery server. If you want to verify on lower-quality media such as uncoated stock, consider verifying to a reference with a small color gamut such as SWOP5 or PSO Uncoated / Forgra 52.

To learn how to create a custom printer profile, reference the How-to guide: *Achieve accurate and consistent color with printer profiles* fiery.efi.com/cps/howto/printerprofiler or *Create output profiles with Express Profiler* fiery.efi.com/cps/howto/expressprofiler.

Let's get started

First time: Setting Fiery Color Verifier preferences

1. Launch Fiery Color Profiler Suite and select **Verify**.

2. Next, select **Preferences.**

3. Under the Print settings, select the Fiery server from the Server menu, or click the + to locate and add a Fiery server.

4. Select the chart (media) size you have loaded in the printer that you wish to verify.

5. Now, select the spectrophotometer from the Instrument menu that you will use to measure the reference chart. For this example, select **EFI ES-2000**.

   a. In Settings, the measurement mode for the instrument should be set to the same setting that was used when you made the output profile you are about to verify.

   b. Select the appropriate measurement mode. M0 or M1 are common measurement modes. For this example, select **M0** and click **OK**.

6. Click **OK** to close the Preferences window. For future verification sessions, you can skip starting in the Preferences menu, and can instead start with the steps in the next section.

7. Now that you have set the Preferences, the next section will show you how to print and measure the reference chart.

Step by step

Printing Fiery Color Verifier patches

> *Unless you have just created the calibration set and profile you are about to test, re-calibrate the Fiery server using the calibration set that you will use for the verification.*

1. In Fiery Color Verifier, select the reference preset you want to use for verification. For this example, select **ISO 12647-7 Control Wedge 2013 + GRACOL2006**. You can add a new reference preset in Preferences for standards that are not listed.

2. Click **Print**.

3. In the Patch Layout window, verify the chart size.

4. If you plan to use these same settings for all future patch layout pages, check **Remember settings and do not show dialog again** to skip this step when you perform verification again.

5. Click **Print** to continue.

6. In the Fiery Measure Job Properties window, choose the preset at the top-right-hand corner that Color Profiler Suite created when you made the calibration set and profile you want to verify.

   a. This will set the color and media settings you used when you created the custom profile for the paper you are using.

   b. In the Color tab, click on **Basic Setting** to check that the CMYK source profile matches the reference you are verifying against, such as GRACoL or ISO Coated.

   c. Set Gray processing for CMYK to **Off.**

   d. Click **OK** to continue.

   e. You may want to save a new server preset named for the output profile or media you are verifying, and add the word "verify" at the end of the preset name. To do this, select **Save Preset** in the Presets drop down menu at the top-right-hand corner.

   f. You can then use this preset for future verification of this output profile / media without the need to check all the settings each time.

7. Select **OK** to print the patch page. Retrieve the patch page and follow the Fiery Color Verifier wizard steps to measure the patches. Click **Next** when you've completed measuring.

8. Color Verifier will launch.

9. When Verifier opens, you will see the values for your reference preset already loaded in the left column of Fiery Verifier. The measured values from the patch page will show in the right column of Fiery Verifier.

You have now completed measuring the patch pages. In the next section, you will review the results.

Reviewing the results

1. The Verifier window will display your results.

2. In the results area in the lower right-hand corner, you will see a Passed or Not Passed message to show whether your print complies with the reference you tested it against. Delta E results are displayed on several tabs. This way, if the result displays Not Passed, you can see which patches failed.

3. In the upper left of the window, you also can review the L a b values of each color patch that you measured, and the Delta E between the target value in the left column and the actual measurement value in the right column. This will provide you with details on each color patch you measured.

4. To pass verification, the measurements must be within the variances in a standard tolerance set. By default, Color Profiler Suite uses the ISO 12647-8 (wedge) compliance setting. This standard requires that, when calculating the values from your printed wedge compared with the press reference (such as GRACoL), they must not exceed the following limits:

   - Average ΔE76 of all patches in test wedge: 3.0
   - Maximum ΔE76 of all patches in test wedge: 8.0
   - ΔE76 for paper white of your media compared to the press reference profile: 3.0
   - ΔH (hue difference) for primaries and overprints CMYKRGB: 4.0
   - Average ΔCh (chromatic difference) for CMYK: 2.5

   You have completed the verification procedure. If the verification passes, this indicates that your Fiery Driven digital printer is printing within the tolerance of the target you selected. Maintain your color workflow with routine calibration. You should perform this procedure on a regular schedule to ensure that you continue to meet the color standards your customers require.

   If verification fails, you should re-calibrate and perform the verification procedure again. If this does not result in a verification pass, consider updating the output profile.

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