

How-to:

Use the Inline Spectrophotometric Sensors (ILS) for imagePRESS Server

Canon® imagePRESS Server B5100 and B4100 for the imagePRESS® C10000VP/C8000VP



Objectives of this guide

The Inline Spectrophotometric Sensors (in the rest of this document it will be referred to as the 'ILS') is built into the Canon imagePRESS C10000VP/C8000VP (in the rest of this document it will be referred to as the C10000). When used with the Canon imagePRESS Server B5100 or B4100 (in the rest of this document it will be referred to as the B5100) and the Fiery Color Profiler Suite software you will be able to automate the measuring process for calibration, G7 calibration, profiling and verification.

NOTE: Fiery Color Profiler Suite v4.9.4.x is required to use the Inline Sensors.

ILS & B5100/B4100 Supported Features

- **Auto Adjust Gradation Quick/Full (AAG):** This is an engine-based feature that assists with the smoothness of gradations. It measures percentages of CMYK at the 3 different engine halftone dither patterns (Gradation, Resolution, and Error Diffusion). Fiery Calibrator triggers the printing of the patterns, and the measurement data is transmitted to the engine for internal adjustment.
- **Auto Color Correct Mismatch (ACC):** This is an engine-based feature that measures and corrects the 2 color overprinting of CMY colorants (RGB). This procedure is only done after a service call that impacted the imaging system, or on the advice of Canon service personal. Fiery Calibrator triggers the printing of the internal engine patterns, and the measurement data is transmitted to the engine for internal adjustment.
- **Fiery Calibration from Fiery Color Profiler Suite (FCPS):** A Fiery Color Profiler Suite software DVD is included with each Fiery server in the top tray of the server shipping box. The Calibrator module does not require a FCPS license, just the FCPS software. The C10000 can be selected from the Calibrator module simplifying the calibration process.
- **Printer Profiling using the Printer module of FCPS:** When creating an output profile from the Printer module of FCPS you can choose the C10000 to read both the calibration targets and printer profiler targets, simplifying and automating profile creation. Purchase of the Fiery Color Profiler Suite software license option is required to activate this module.
- **G7 Calibration using the Printer module of FCPS:** The G7 gray balance calibration target selection when creating a new calibration setting will print and scan the target if the C10000 is selected, making G7 optimization a simple and touchless process. Purchase of the Fiery Color Profiler Suite software license option is required to activate this module.
- **Printer Match (common calibration) using the Printer Match module of FCPS:** The FCPS Printer Match module allows you to use a common calibration method to build profiles that match multiple printers of the same model. Both the calibration targets and printer profiler pages are automatically read when choosing the C10000. This greatly facilitates and simplifies the process. Purchase of the Fiery Color Profiler Suite software license option is required to activate this module.
- **Fiery Color Verifier with three reference preset choices:** If you set the FCPS verifier instrument preference to the C10000, Fiery Color Verifier will allow you to choose from three reference presets that are supported by the C10000: FOGRA 2.2 media wedge, FOGRA 3.0 media wedge and ISO12647-7 Control Wedge 2013. Purchase of the Fiery Color Profiler Suite software license option is required to activate this module.

NOTES:

The engine-based Shading Correction is supported: This particular engine adjustment feature does not utilize the in-line sensors, but can be accessed from Fiery Calibrator in CWS. Because of the nature of the pattern, it must be read with an ES-2000 or i1Pro2 spectrophotometer if purchased from Canon.

Licensing of Fiery Calibrator Suite requires an external measurement device: Since an ES-2000 or i1Pro2 is required for engine based Shading Correction, it's suggested that the license be registered to that device. FCPS can be registered to another external measurement device, this is just a suggestion to ensure you always have access to FCPS if you have your ES-2000 or i1Pro2 plugged in to your B5100 or client workstation.

Fiery measurement features that do not use the C10000 ILS

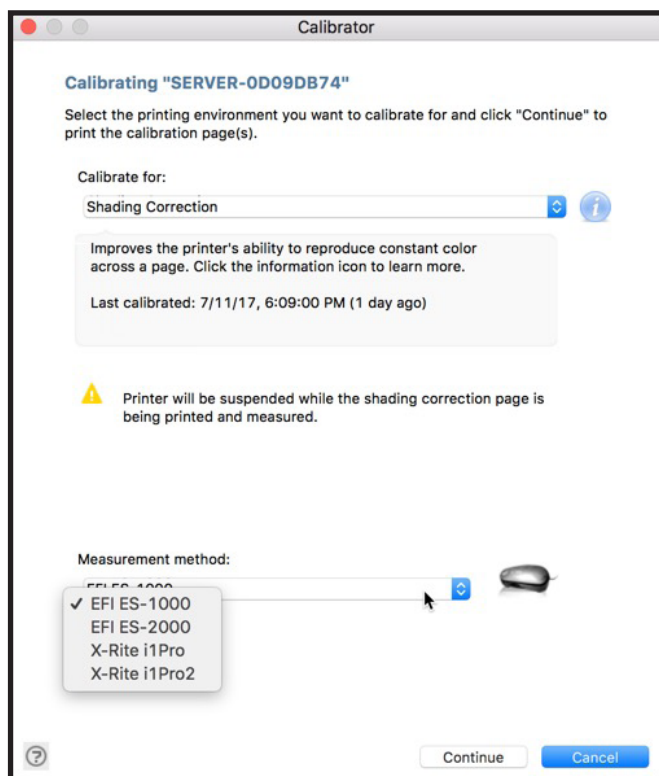
Although automated measurements with the C10000 is not supported with the following features, if a supported spectrophotometer is purchased with FCPS, the features that require measurement are fully supported. If the full capability of the Fiery server is desired the ES-2000 is recommended in order to capture spot colors using the Spot-On feature of Command WorkStation.

- Express Profile FCPS module
- Auto Verify FCPS module
- Verify FCPS module (when selecting custom or unsupported reference strips directly from the Verifier application)
- Device Link FCPS module (no measurements are needed)
- Printer Match FCPS module when selecting the New Device Link method (no measurements are needed)
- Color Verifier Assistant (from Command WorkStation Job Center)
- Calibrate module from Command WorkStation. (FCPS not Required)

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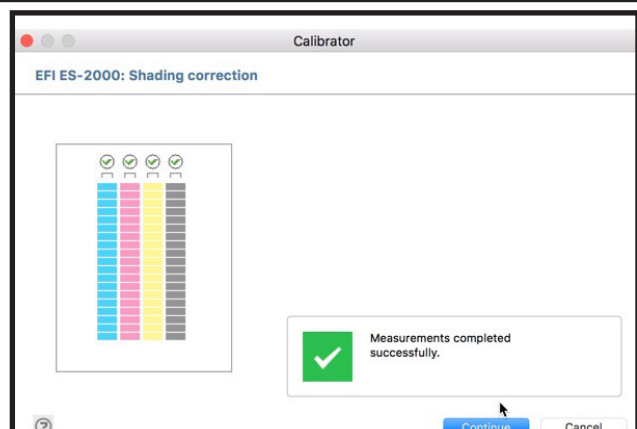
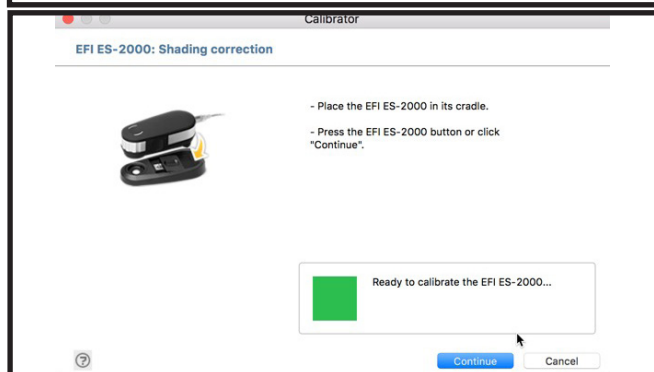
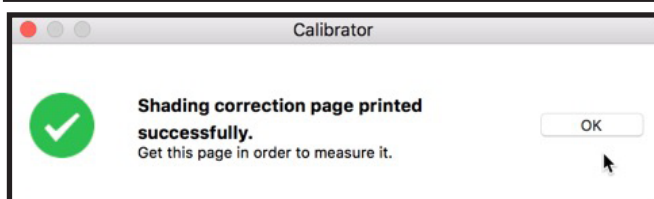
Engine Adjustments



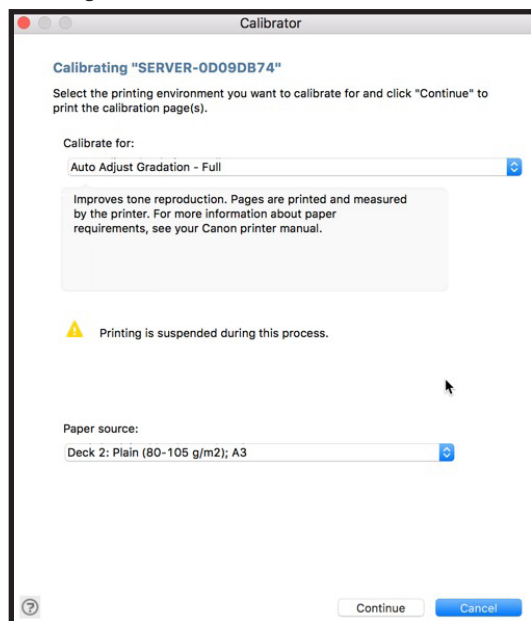
Shading Correction

(Note: Although Shading Correction does not use the ILS, it is an important process to insure a consistent color print condition.)

1. Open Calibrator from Command Workstation.
2. Under the Calibrate for: drop down select Shading Correction.
3. Select the measurement device under Measurement method
4. Click Continue
5. The shading correction page will print. Click OK to continue
6. Place your device in it's cradle to calibrate the device and click Continue
7. Follow the prompts to measure the shading correction page, and click Continue when finished.

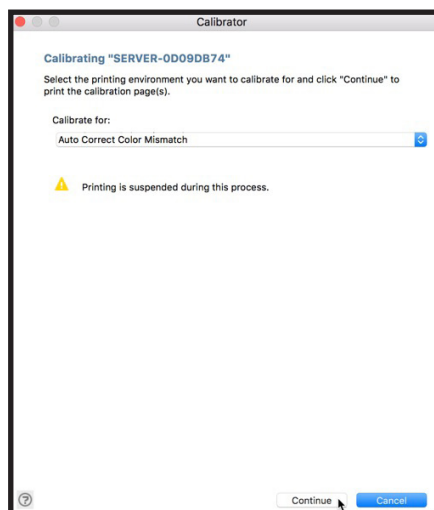
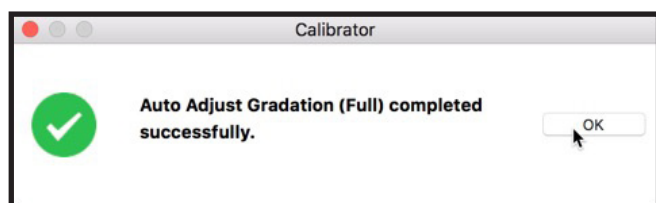


Engine Adjustments



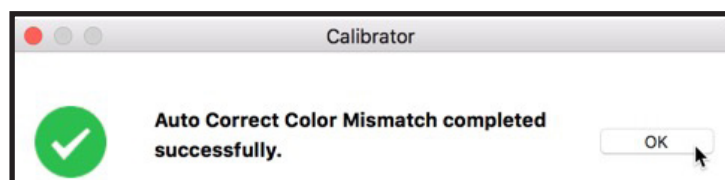
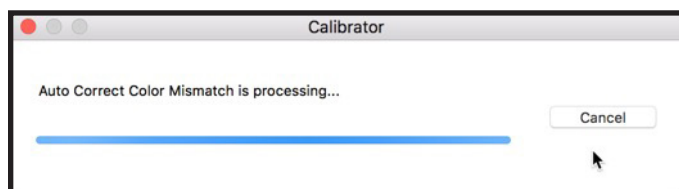
Auto Adjust Gradation (AAG)

1. Open Calibrator from Command Workstation.
2. Under the Calibrate for: drop down select Auto Adjust Gradation - Full.
3. Select your Paper source
4. Click Continue
5. The measurement pages will print and at the same time be measured by the ILS.
6. Click OK to finish.

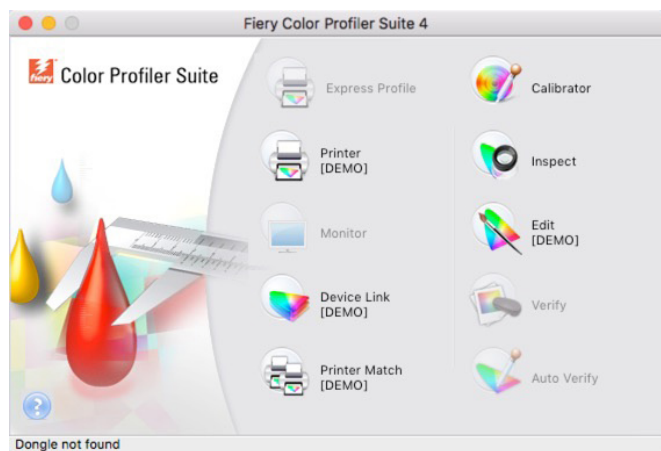


Auto Correct Color (ACC)

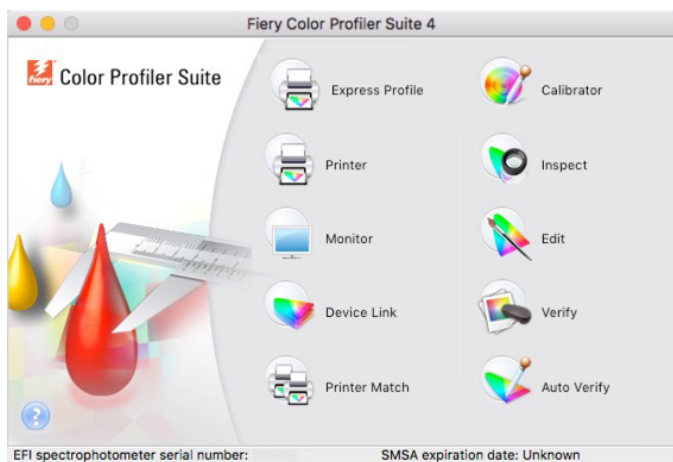
1. Open Calibrator from Command Workstation.
2. Under the Calibrate for: drop down select Auto Correct Color Mismatch. Click Continue
3. ACC will print and process.
4. When Completed, click OK to finish



Fiery Color Profiler Suite Licencing Basics

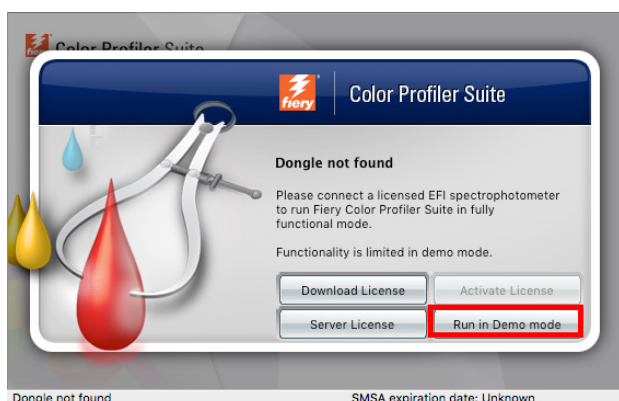


1. **Launch Fiery Color Profiler Suite (FCPS).** (If you haven't installed FCPS please follow the instructions with the DVD that shipped with your software, or you may download the software from www.efi.com)
2. If FCPS is not currently licenced to an attached measurement device, then you will see that many of the modules are either grayed out, or will only run in demo mode.
3. The Calibrator module is fully functional without a licence, and will interact with the ILS and other measurement devices.



1. If you do have an attached device with a valid licence, then you will see all the modules available.
2. In order to take advantage of the G7 Calibration, and Printer Profiling, you must have a valid FCPS licence.
3. If required, please refer to the FCPS documentation for the licencing process.

Fiery Calibration from Fiery Color Profiler Suite (FCPS)

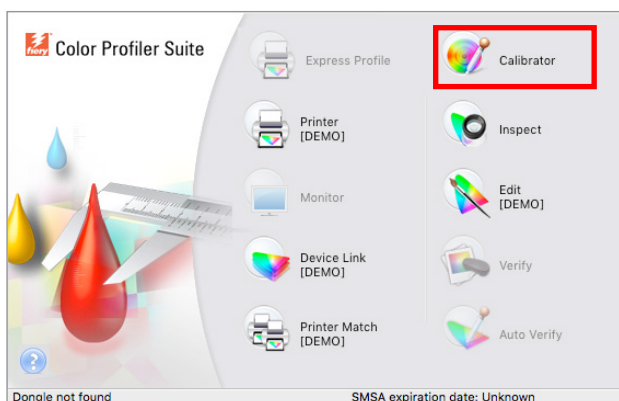


1. Start **Fiery Color Profiler Suite**

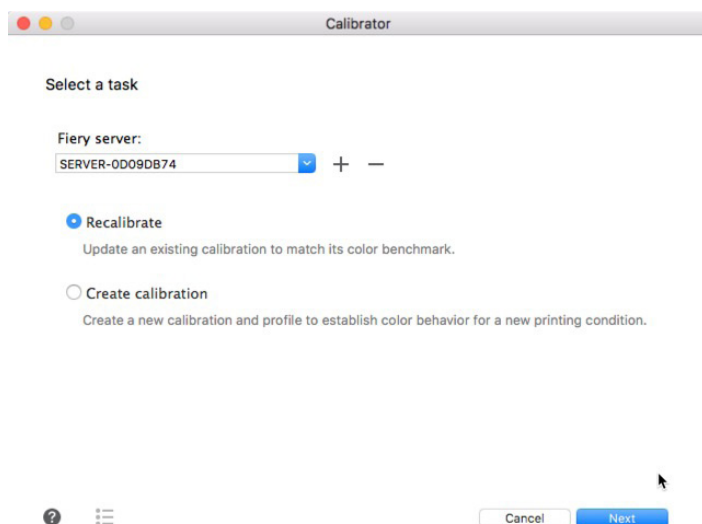
If you have not purchased and installed a license for FCPS you will need to run FCPS in Demo mode for Fiery Calibration as follows.

2. Select **Run in Demo mode**

This step will not be necessary if the license is installed and activated correctly.



3. Click on the **Calibrator** icon

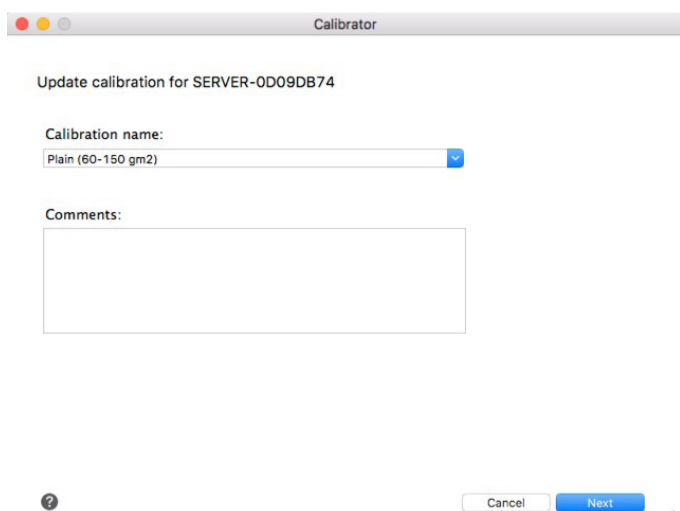


4. Select the **B5100** that you wish to calibrate.

Click the “+” symbol to discover the Fiery server if it is not listed.

5. Select **Recalibrate** and click **Next**

In this exercise we are recalibrating an existing calibration set.



Calibrator

Update calibration for SERVER-0D09DB74

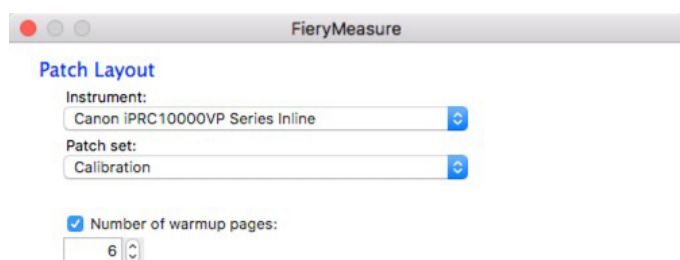
Calibration name:
Plain (60-150 gm2)

Comments:

Cancel Next

6. Select the **Calibration name** that you wish to recalibrate.

7. Click **Next**



FieryMeasure

Patch Layout

Instrument:
Canon iPRC10000VP Series Inline

Patch set:
Calibration

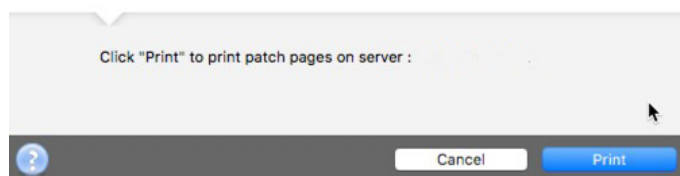
☒ Number of warmup pages:
6

8. Select the **Canon iPRC 10000VP Series Inline** for your Instrument
(You will only see the iPRC 10000VP Series Inline when connected to a B5100/B4100)

9. There is only one patch set available. It is a modified version of the 51 patch set found when using other measurement devices.

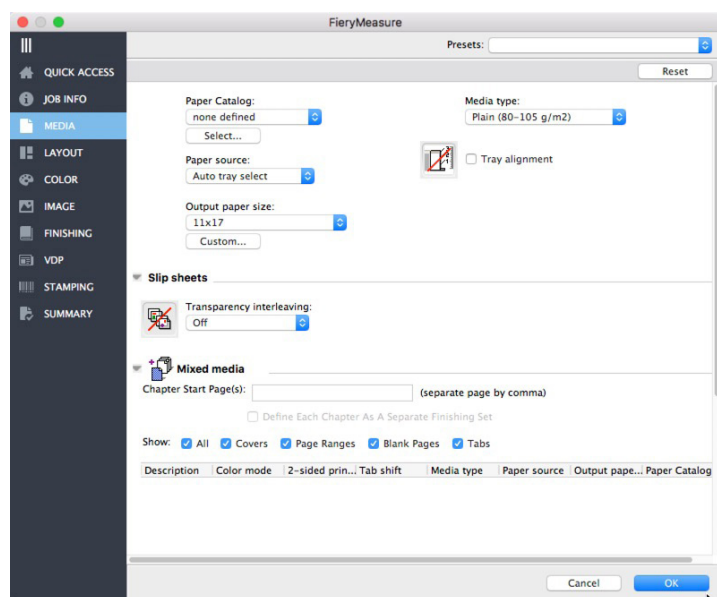
9A. Optionally select **warm up pages**

10. Click **Print**



Click "Print" to print patch pages on server :

Cancel Print

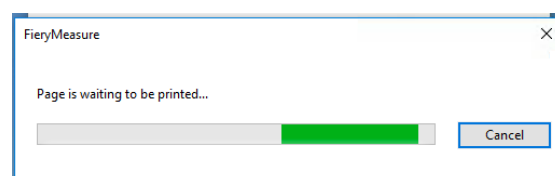


11. The **Fiery Measure** job properties window opens.

12. Select the **Media** section.

13. Select the media attributes that are defined by the calibration name, ensuring that the media size is one of the supported sizes (A3, 11x17, SRA3, 12x18, 13x19)

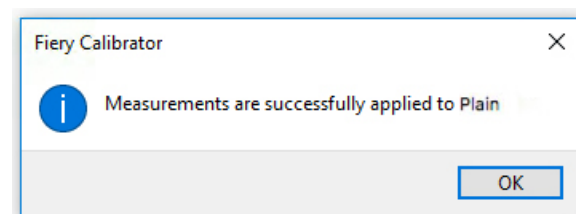
14. Click **OK** to print and measure the chart.



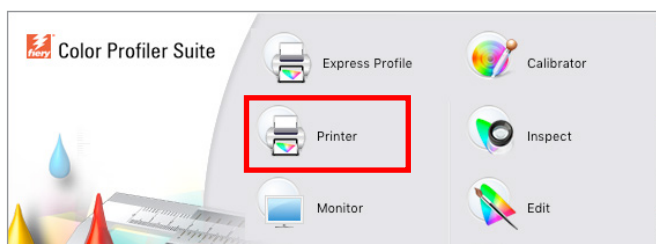
15. The **Calibration measurement results** are shown

*Ensure that the D Max values displayed are within the expected tolerance for the engine and media selected. **Reprint** or take appropriate service steps if not.*

16. Click **Apply & Close** to complete the calibration

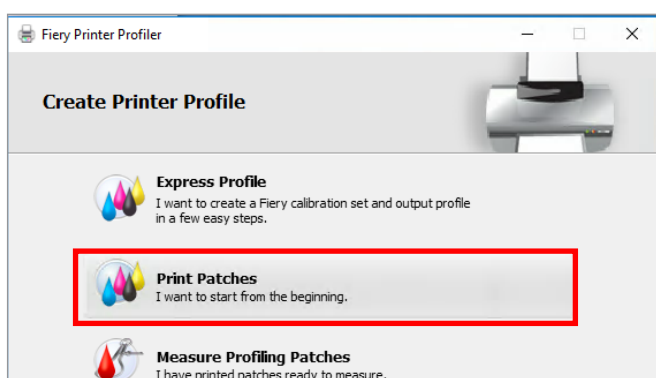


Printer Profiling using the Printer module of FCPS including G7 calibration



You must have purchased and installed a license for FCPS to use this feature.

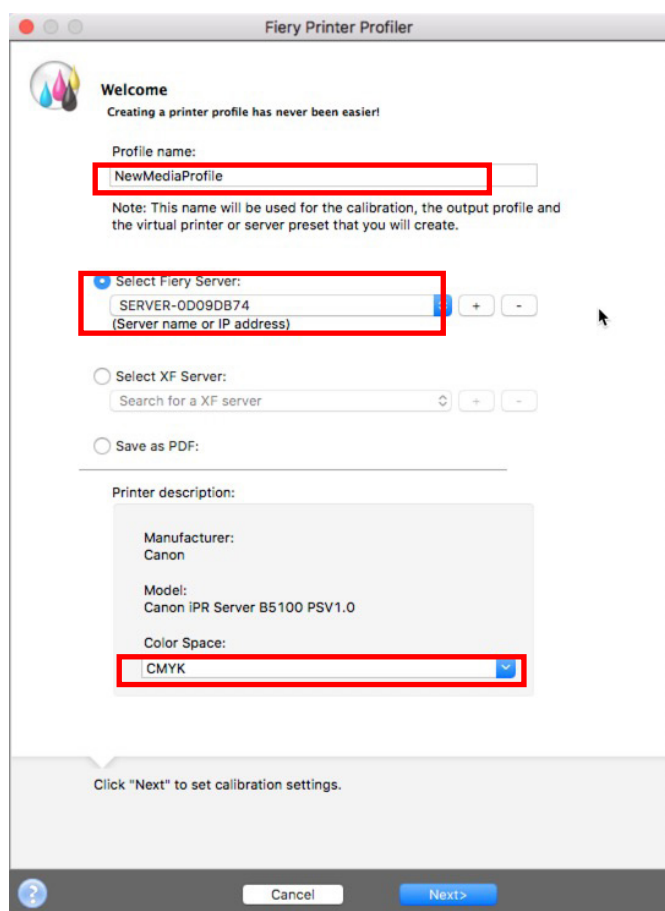
1. Start **Fiery Color Profiler Suite** (FCPS)
3. Click on the **Printer** icon.
4. Click on **Print Patches**

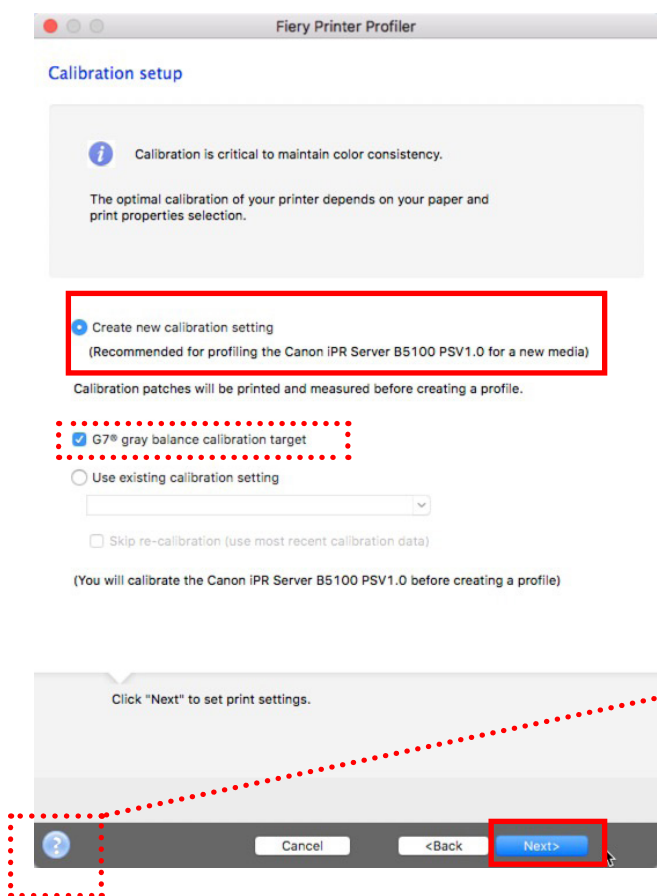


5. Enter an appropriate **name** for your profile
6. Select the Fiery server

The Fiery model appears and CMYK is preselected.


7. Click **Next**






Fiery Printer Profiler

Calibration setup

 Calibration is critical to maintain color consistency. The optimal calibration of your printer depends on your paper and print properties selection.

 Create new calibration setting
(Recommended for profiling the Canon IPR Server B5100 PSV1.0 for a new media)

Calibration patches will be printed and measured before creating a profile.


☒ G7® gray balance calibration target

☐ Use existing calibration setting

☐ Skip re-calibration (use most recent calibration data)

(You will calibrate the Canon IPR Server B5100 PSV1.0 before creating a profile)

Click "Next" to set print settings.

 Cancel <Back Next>

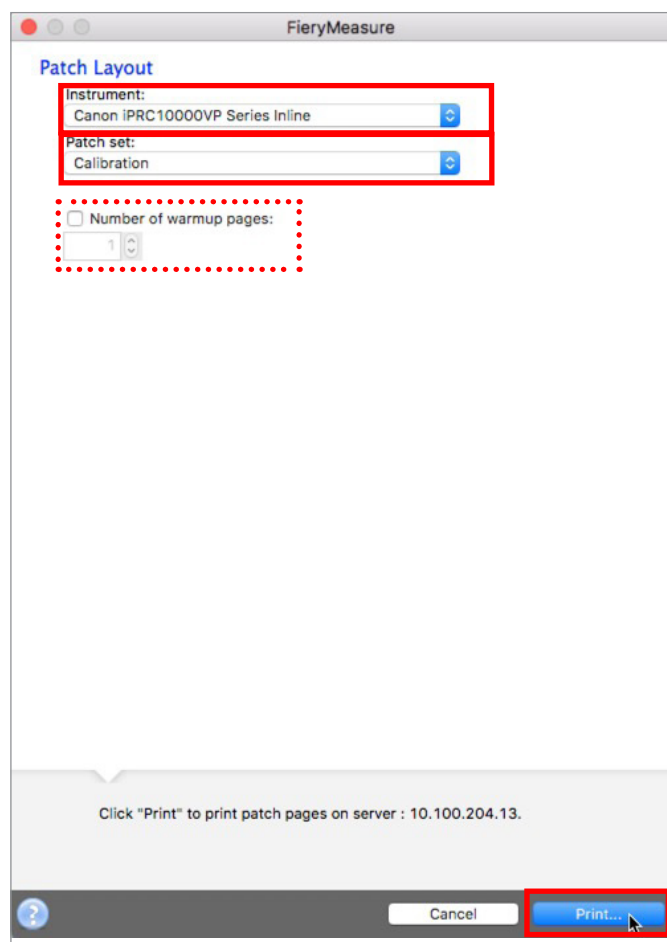
8. Select **Create new calibration setting**

9. Optionally you may check **G7 gray balance calibration target**.

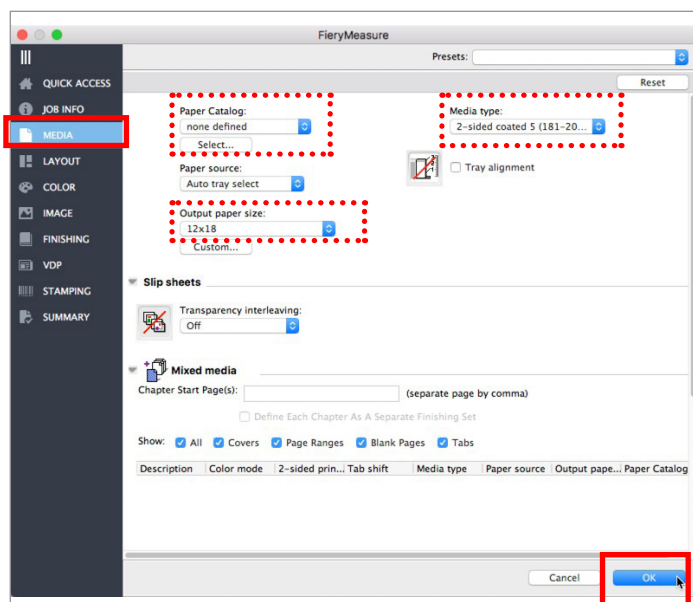
The G7 gray balance process will be covered here, but it is not required.

Refer to the contextual help icon for assistance with the G7 workflow, or visit:

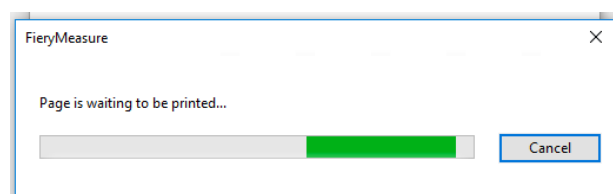
<http://fiery.efi.com/help/G7CalibrationWorkflow>

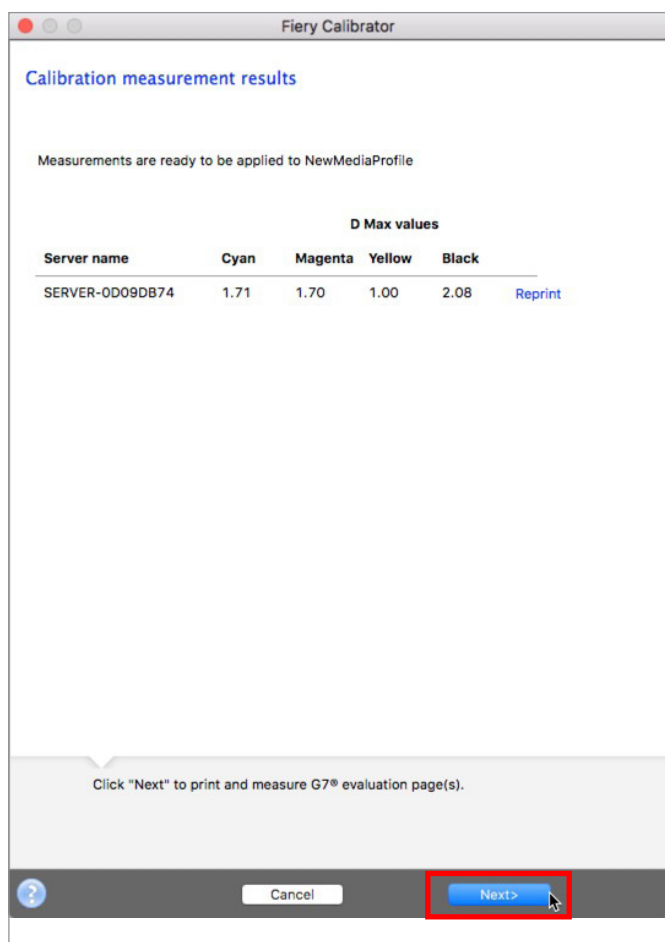


10. Select **Canon IPRC 10000VP Series Inline** from the Instrument pull-down
11. There is only one patch set available. It is a modified version of the 51 patch set found when using other measurement devices.
- 11A. Optionally select **warm up pages**
12. Click **Print**



13. The **Fiery Measure** job properties window opens.
14. Select the **Media** section.
15. Select the media attributes for the media you wish to profile, ensuring that the media size is one of the supported sizes (A3, 11x17, SRA3, 12x18, 13x19)
16. Click **OK** to print and measure the calibration chart.

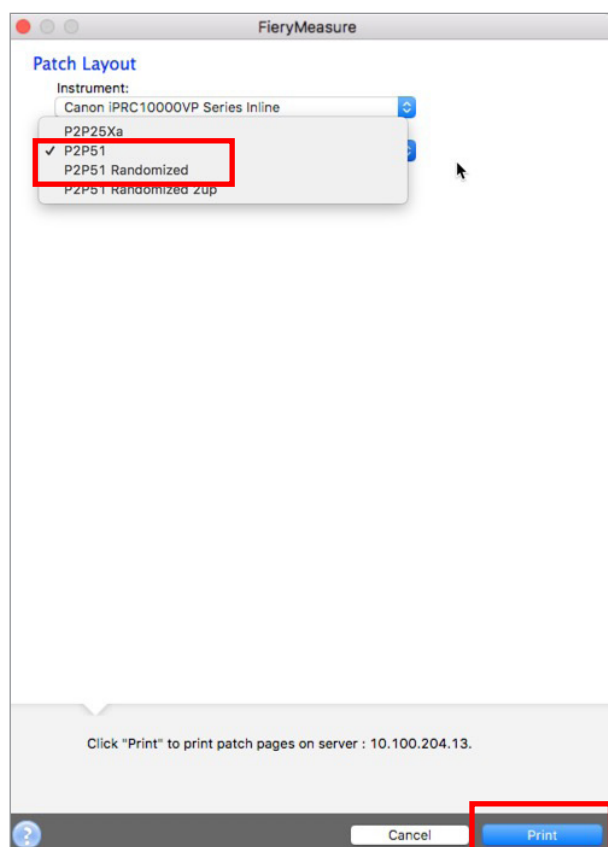




17. The **Calibration measurement results** are shown

*Ensure that the D Max values displayed are within the expected tolerance for the engine and media selected. **Reprint** or take appropriate service steps if not.*

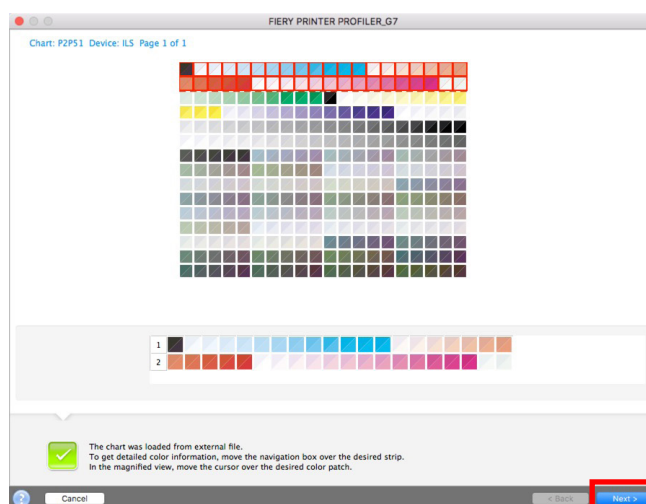
18. Select **Next** to move to the G7 Gray Balance section. If you do not choose to perform a G7 Gray Balance, then skip to step 24.

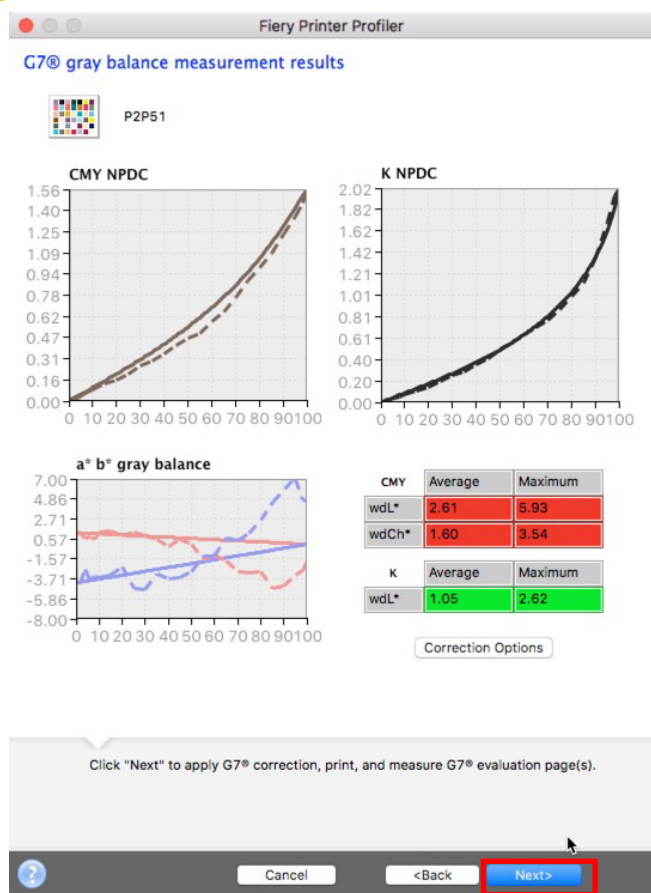


19. Select the **G7 P2P pattern** that you would like to measure. The P2P51 or P2P51 Randomized are suggested patterns

20. Select **Print** to continue.

21. The pages will be printed and measured. Click **Next** to continue

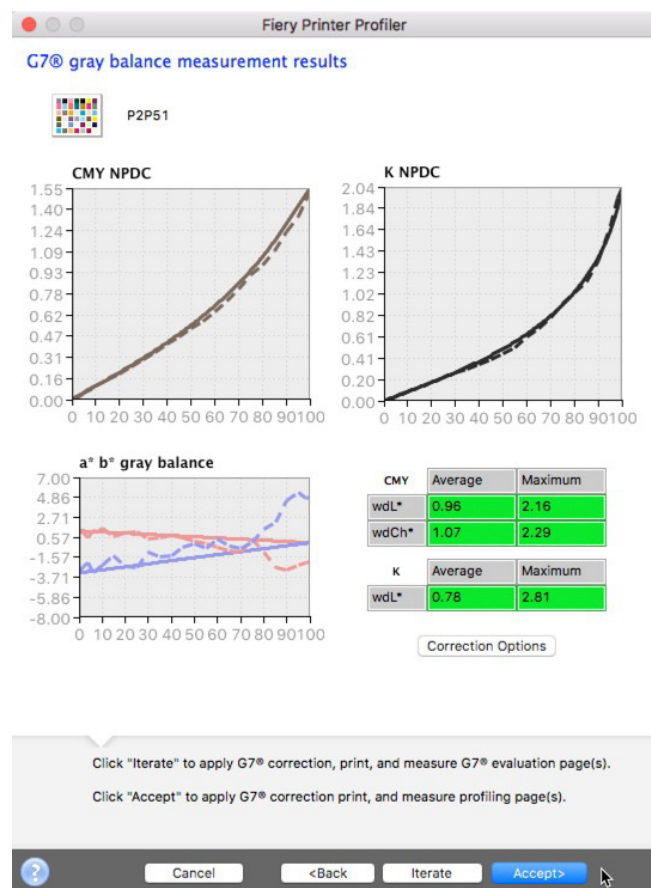




22. The **G7 gray balance measurement results** are shown

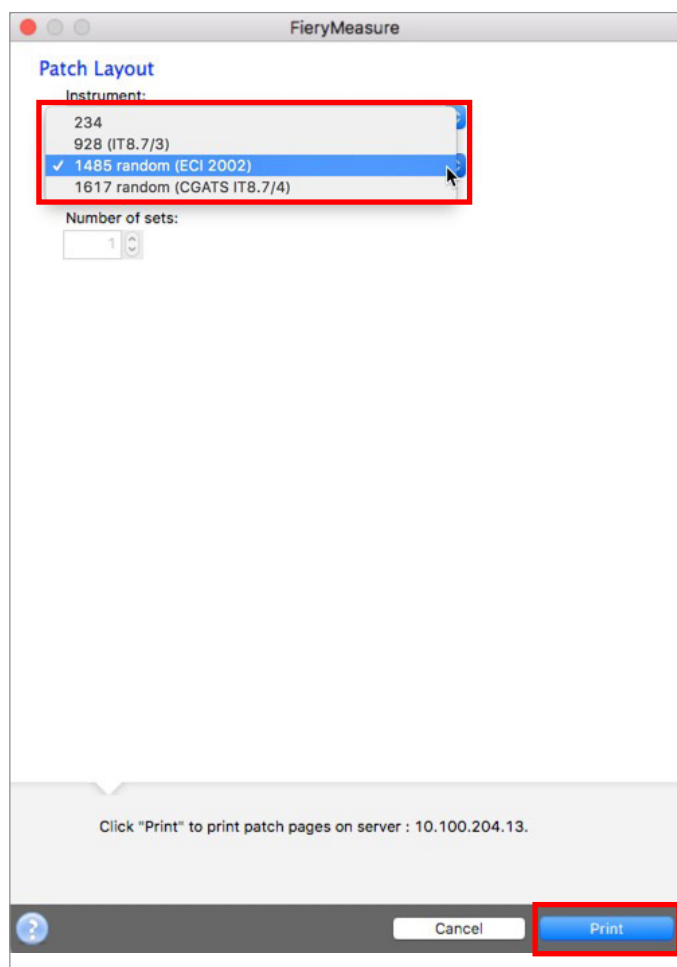
It's very likely that the process will not pass on the first measurement.

22. Select **Next** to apply the G7 correction values, and print and measure the P2P pattern again.



23. If all indicators are **green** then the G7 gray balance was **successful**. Click **Accept** to continue to printer profiling.

If there are any indicators that are red, then it's necessary to iterate again. As a general practice, if you need to iterate more than 3 times, you should stop and check the general condition of your engine.

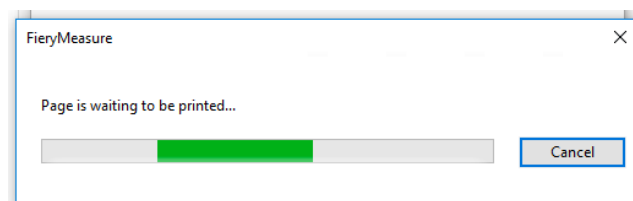


24. Select **Canon iPRC 10000VP Series Inline** from the Instrument pull-down

25. Select an appropriate number of patches from the **Patch set** pull-down.

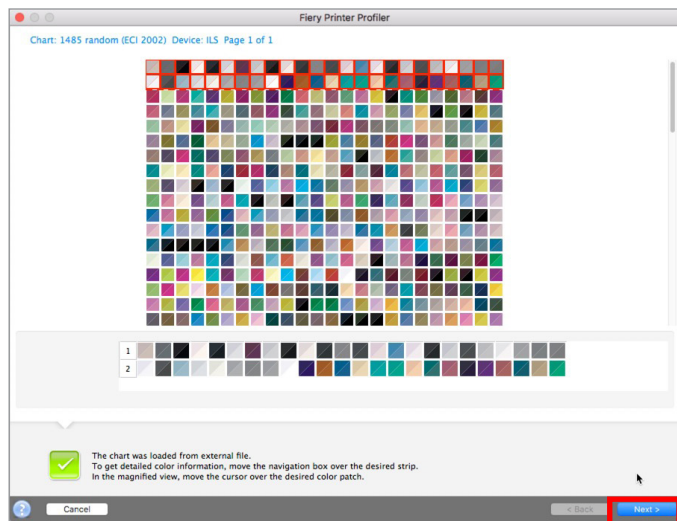
Since this will be read automatically select an appropriate number of patches for the desired precision. More patches generally provide better precision. Note that more sheets will be also be used.

26. Click **Print** to print and measure the profiler patch pages



The results of the Fiery measure module are automatically displayed.

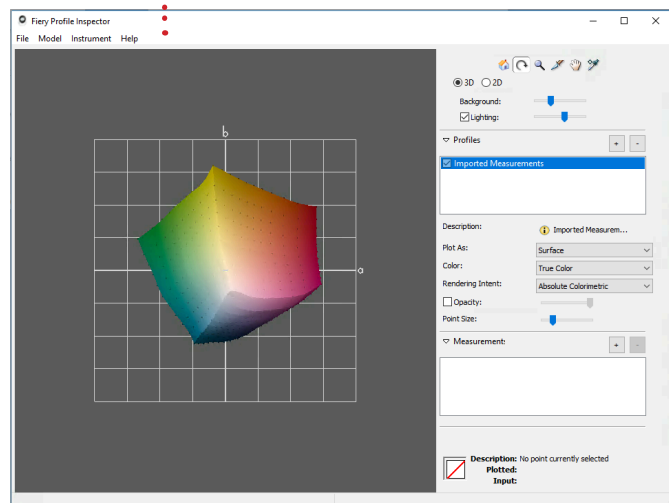
27. Click **Next** to continue

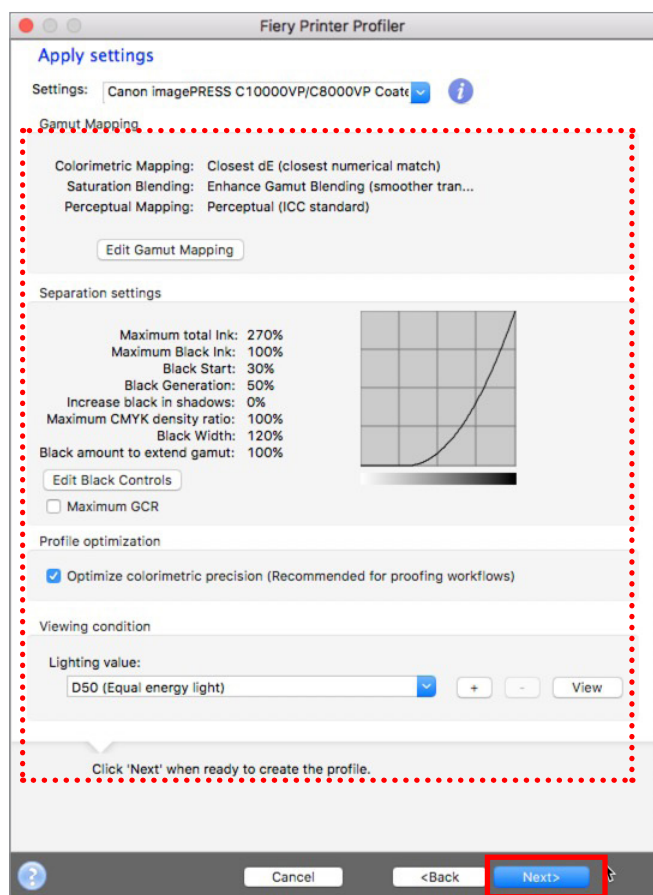




The measurements summary is displayed.

28. Review the **Maximum and Average measured variation** for anomalies. Take appropriate action as needed, based on your precision requirements. Engine service may be necessary if you determine that the DeltaE values are too high.
29. Optionally click on the **Inspect Measurements** button to review the gamut map.
30. Click **Next** to continue.



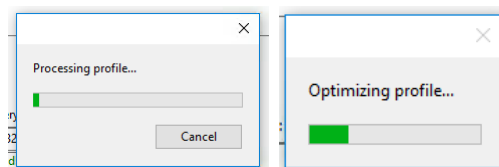


The Apply settings window is displayed.

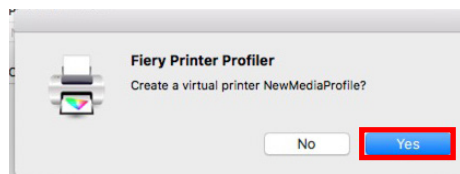
31. Make any changes as needed

Defaults are usually a good choice unless advanced features are needed. **Maximum GCR** will deliver more neutral rendering if desired, but could result in “grainer” output.

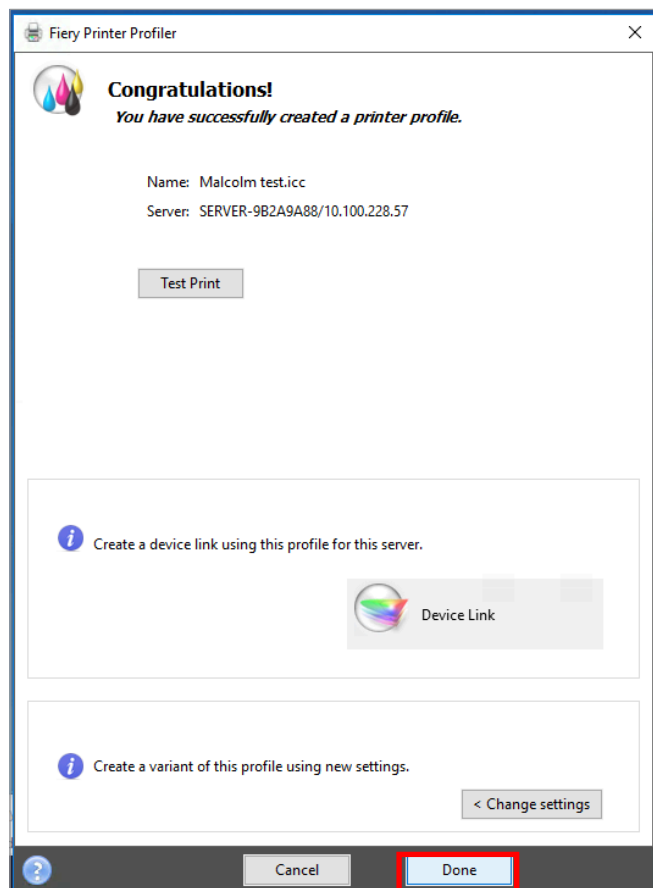
32. Click **Next** to process and optimize the profile.



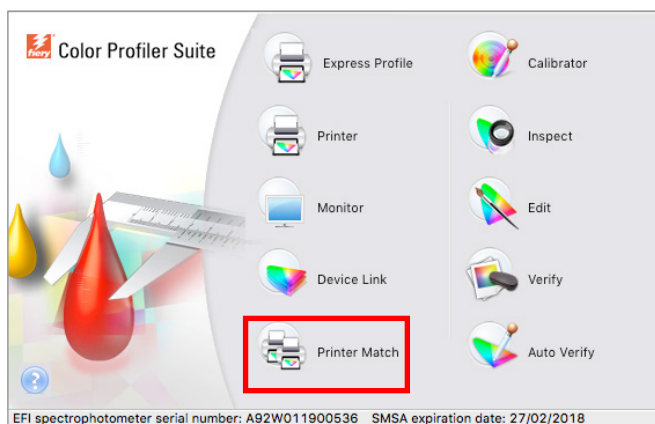
33. Click your selection to the **Create a virtual printer** selection. Recommended **Yes**



34. Click **Done**

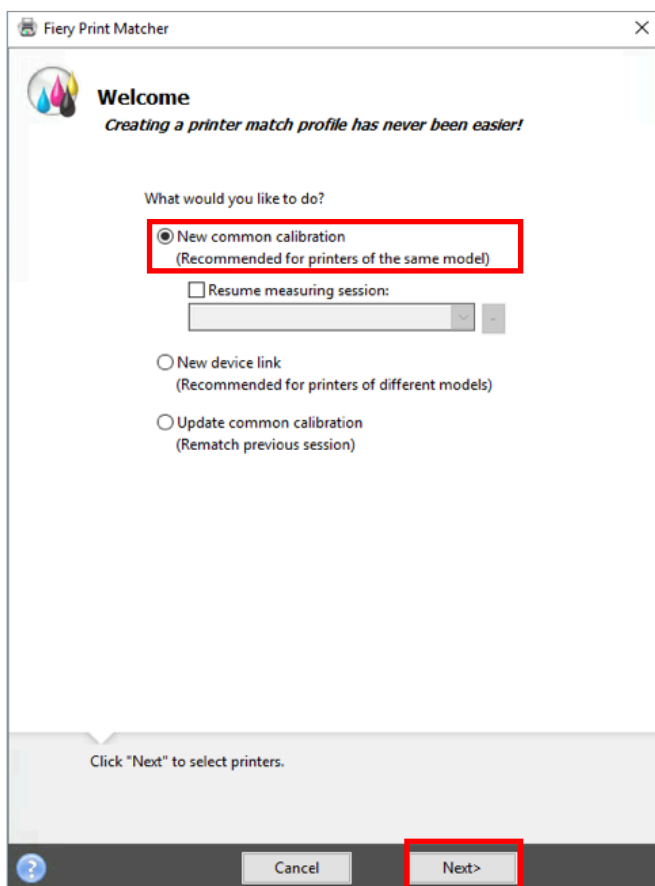


Printer Match (common calibration) using the Printer Match module of FCPS



You must have purchased and installed a license for FCPS to use this feature.

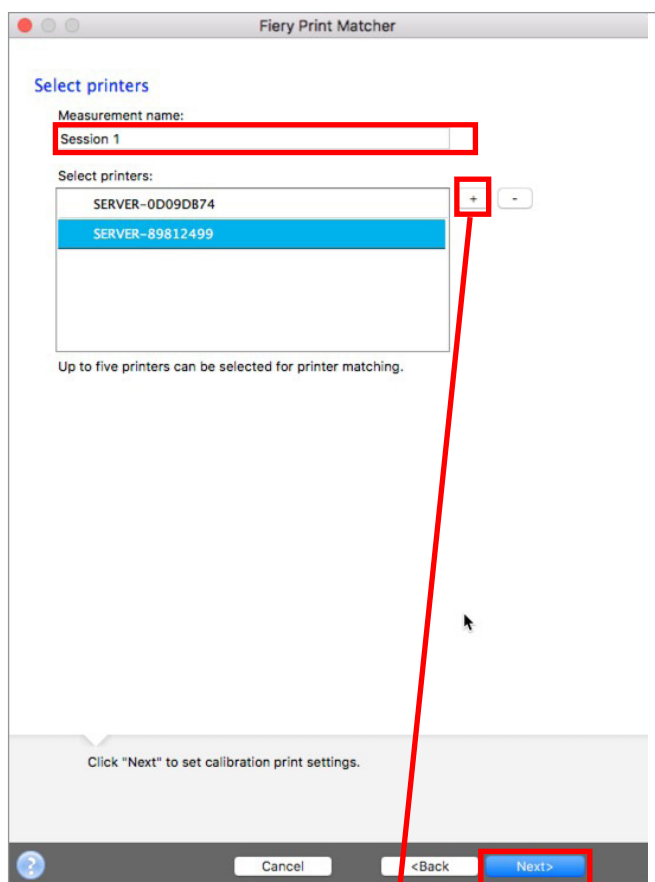
1. Start **Fiery Color Profiler Suite** (FCPS)
2. Click on the **Printer Match** icon.



3. Select **New common calibration** (or **Update common calibration**)

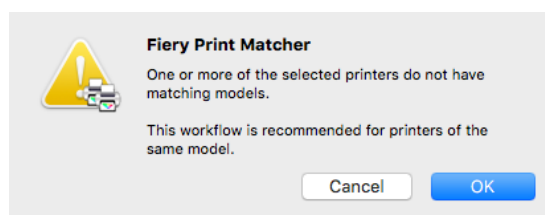
*The **New device link** selection does not trigger prints that require measurement therefore not demonstrated here, but fully supported.*

4. Click **Next** to continue.

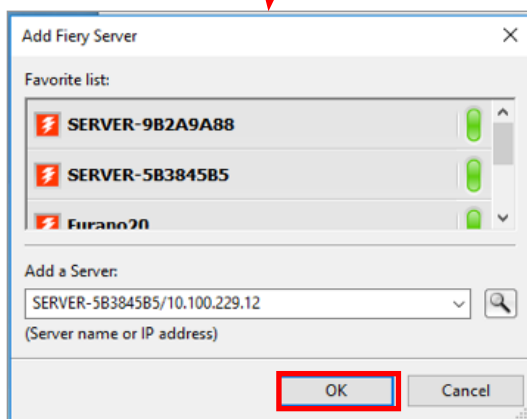


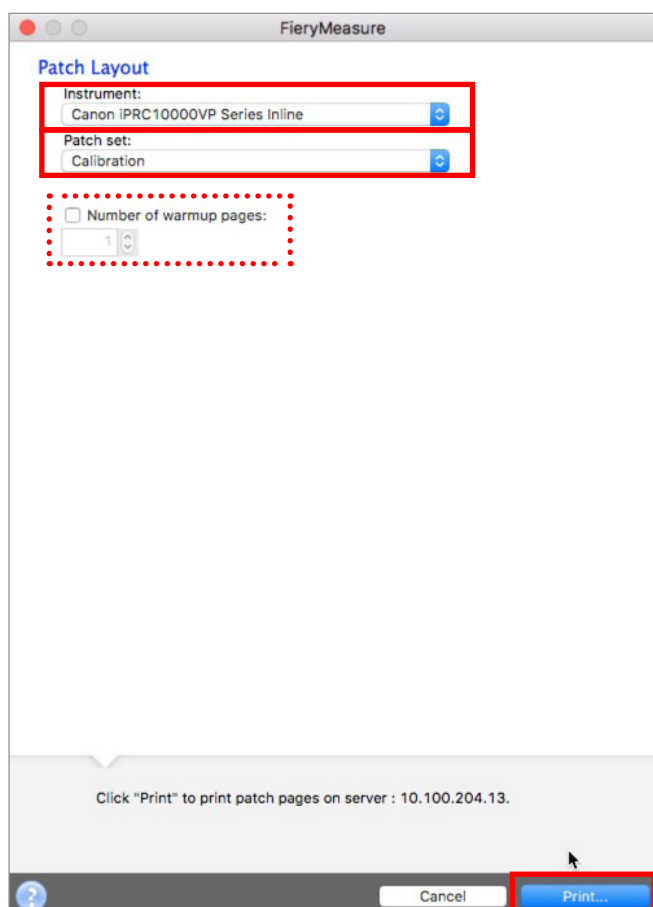
5. Enter a **Measurement name**. This name will be your suggested profile name.
6. Select up to five printers to be matched. Click the “+” to discover and add the Fiery servers.

If the press models are not exactly the same type you will receive a warning to use an alternative method, Device Link. Take appropriate action.

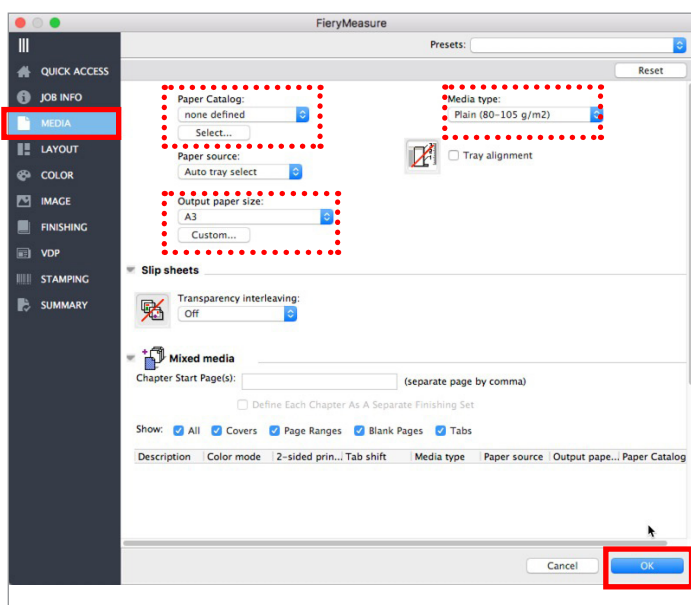


7. Click **Next** when all Fiery servers have been added.

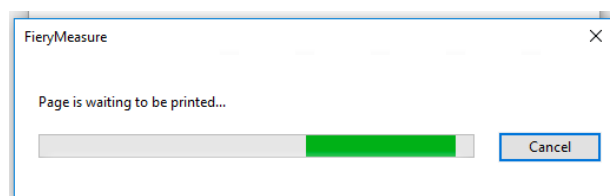


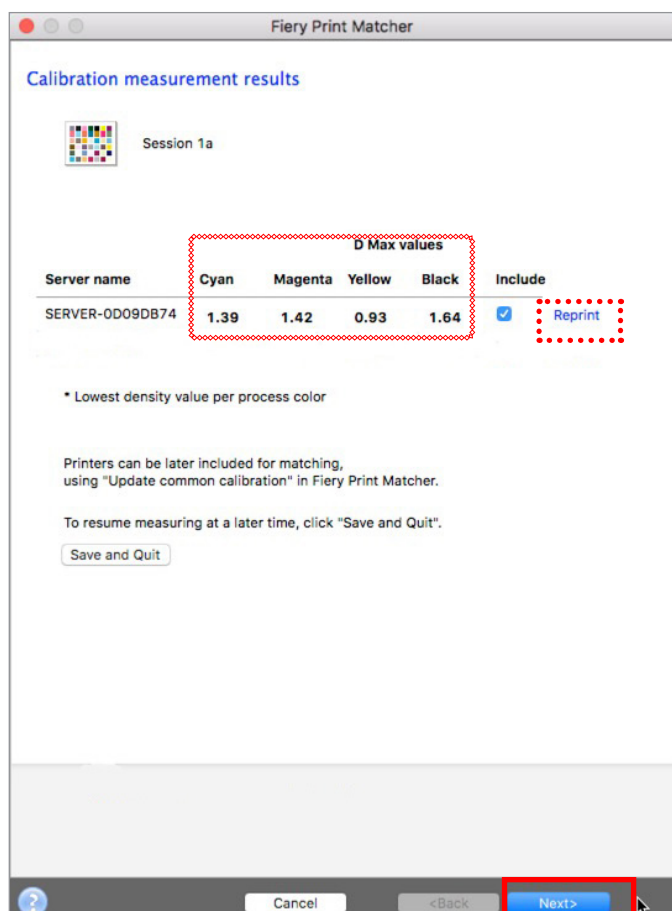


8. Select **Canon iPRC10000VP Series Inline** from the Instrument pull-down
9. There is only one patch set available. It is a modified version of the 51 patch set found when using other measurement devices.
- 9A. Optionally select **warm up pages**
10. Click **Print**



11. The **Fiery Measure** job properties window for the first server opens.
12. Select the **Media** section.
13. Select the media attributes for the media you wish to use.
14. Click **OK** to print and measure the calibration chart for the first server.

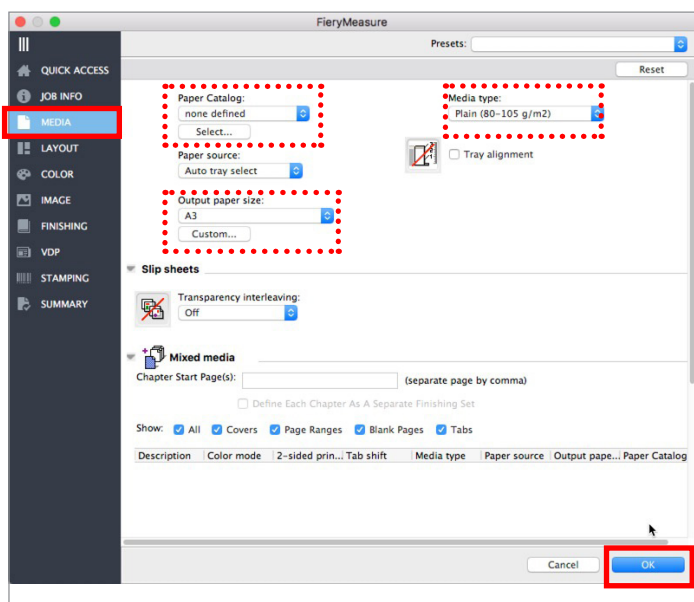




15. The **Calibration measurement results** are shown

*Ensure that the D Max values displayed are within the expected tolerance for the engine and media selected. **Reprint** or take appropriate service steps if not.*

16. Click **Next** to continue the calibration of the second (and subsequent) server(s).

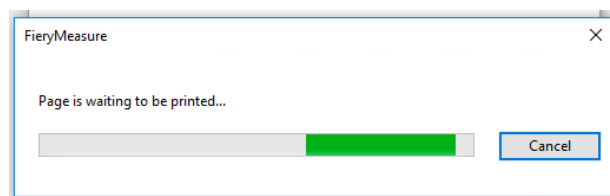


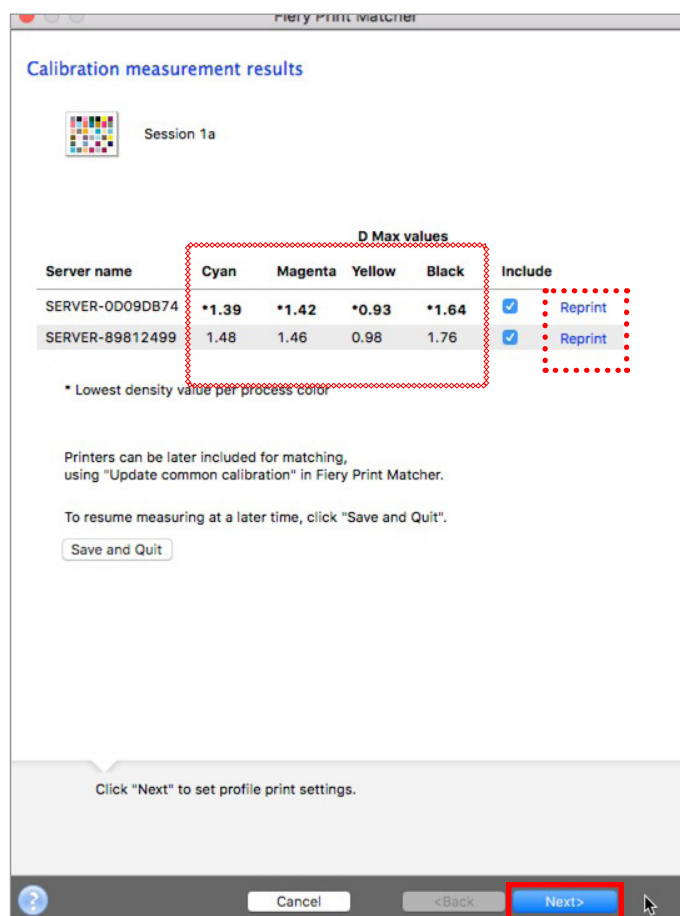
17. The **Fiery Measure** job properties window opens for the second server.

18. Select the **Media** section.

19. Select the media attributes for the media you wish to use.

20. Click **OK** to print and measure the calibration chart for the second server.



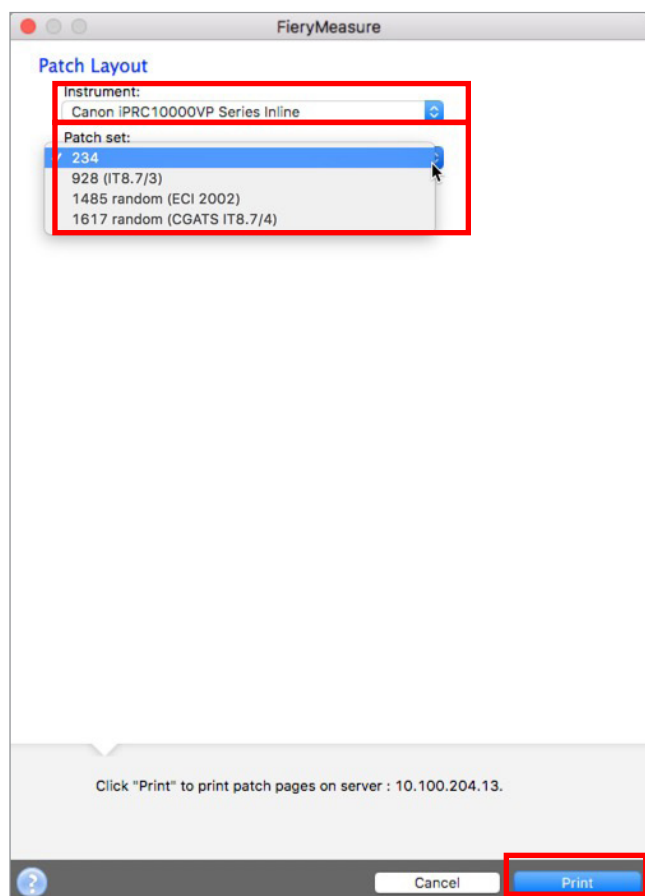


This window will display after all servers in the list have been calibrated

21. The **Calibration measurement results** for both servers are shown

Ensure that the D Max values displayed are within the expected tolerance for the engines and media selected. **Reprint** or take appropriate service steps if not.

22. Click **Next** to continue with the printer profiling process.

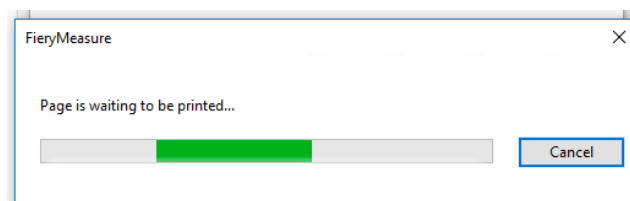


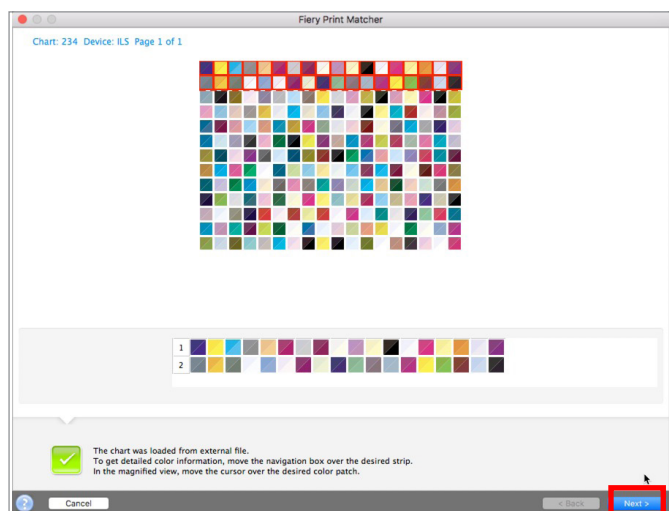
23. Select **Canon iPRC10000 Series Inline** from the Instrument pull-down

24. Select an appropriate number of patches from the **Patch set** pull-down.

Since these patches will be read automatically select an appropriate number of patches for the desired precision or standard. More patches generally provides better precision.
Note: more sheets will also be used.

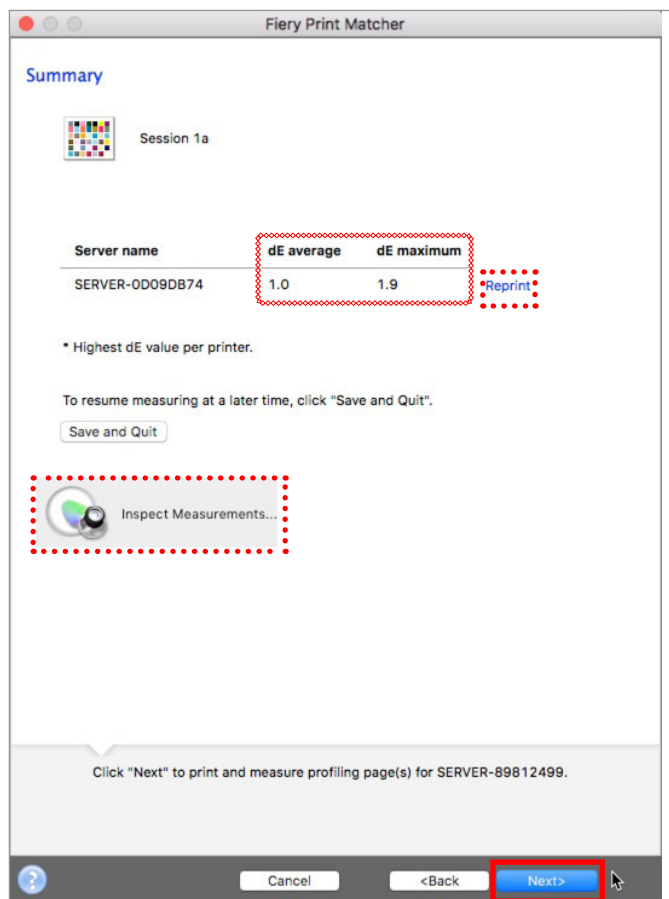
25. Click **Print** to print and measure the profiler patch pages for the first server.





The results of the Fiery measure module for the first server are automatically displayed.

26. Click **Next** to continue

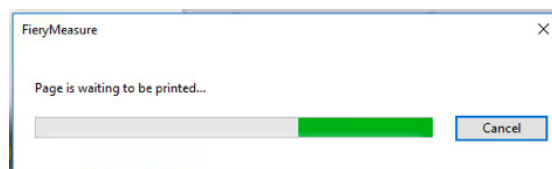


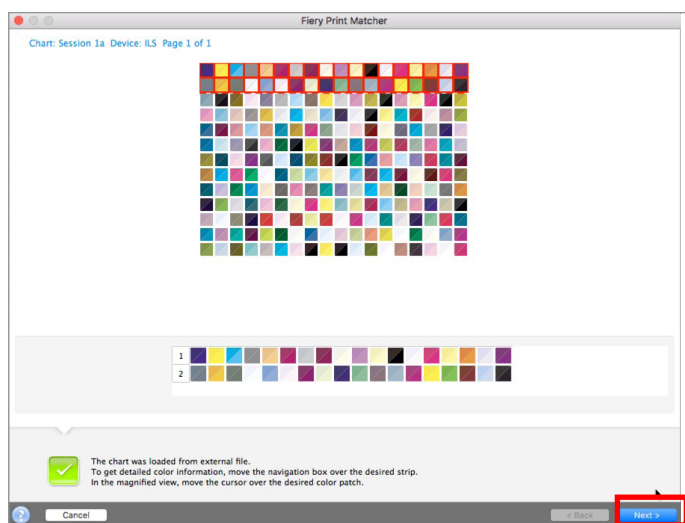
The measurements summary for the first server is displayed.

27. Review the **dE average** and **dE maximum** for anomalies. Take appropriate action as needed.

28. Optionally click on the **Inspect Measurements** button to review the gamut map.

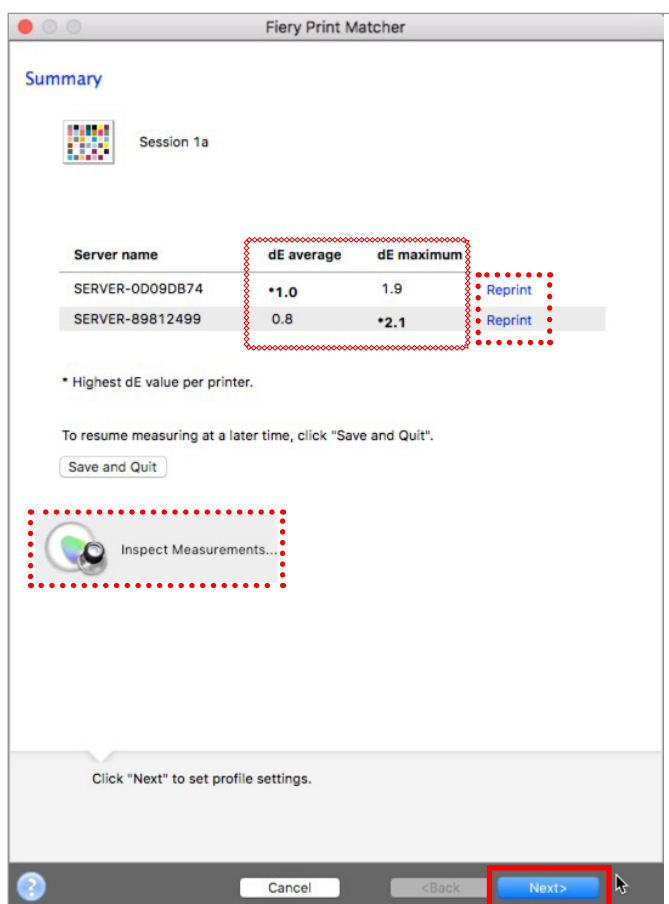
29. Click **Next** to continue printing and measuring the patch pages for the second server.





The results of the Fiery measure module for the second server are automatically displayed.

30. Click **Next** to continue

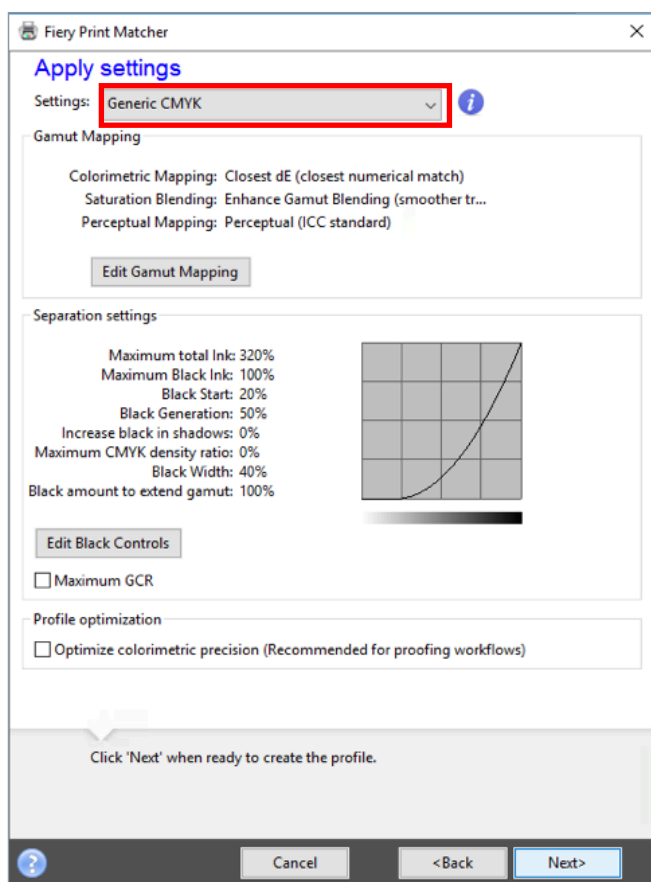


The measurements summary for both servers is displayed.

31. Review the **dE average** and **dE maximum** for anomalies. Take appropriate action as needed.

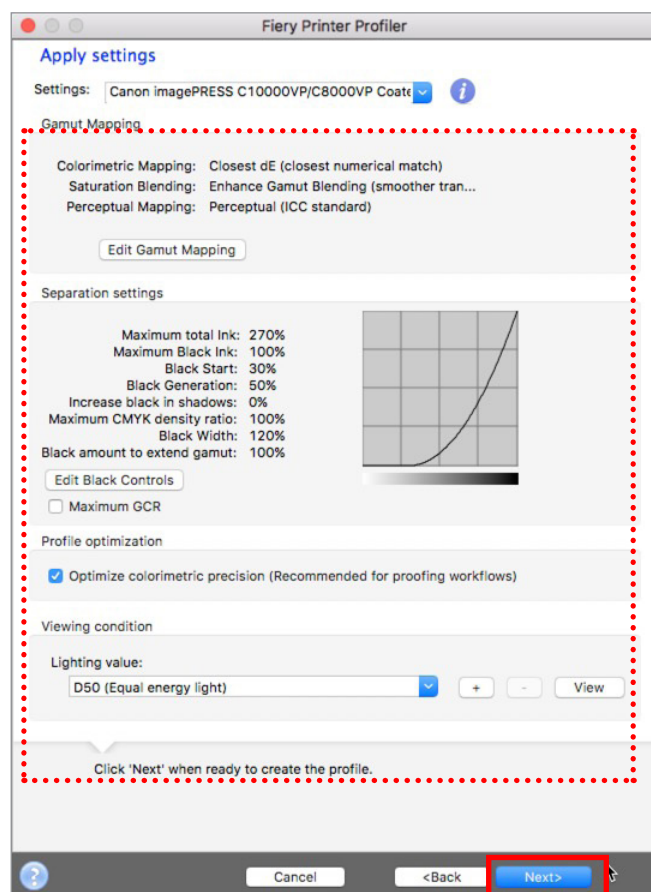
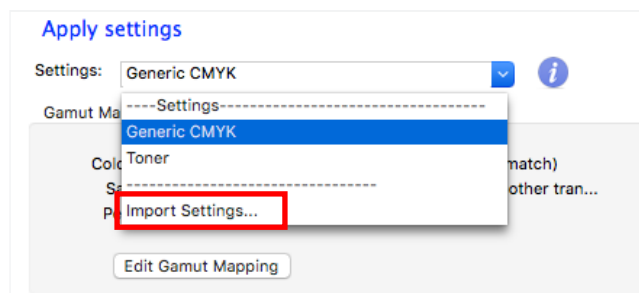
32. Optionally click on the **Inspect Measurements** button to review the gamut map(s).

33. Click **Next** to continue.

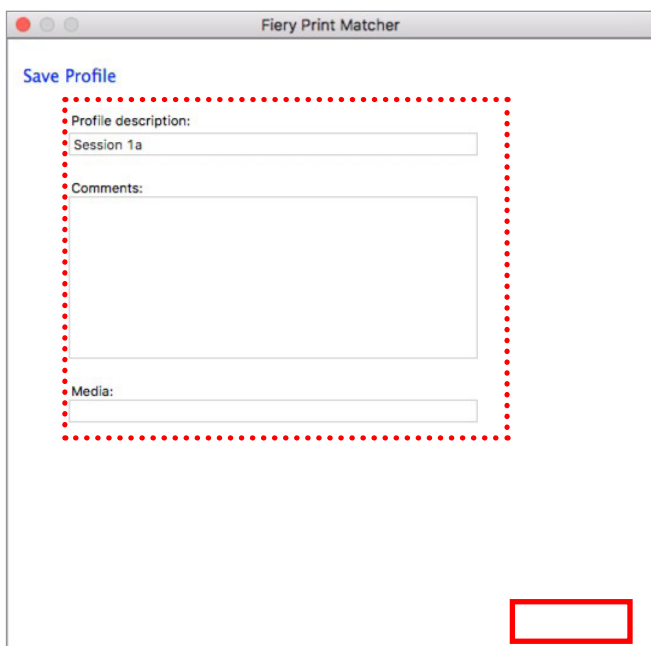


The Apply settings window is displayed.

34. Click on the **Settings** pull-down and select **Import Settings...**
35. Navigate to one of the Fiery servers that you are matching and choose a base profile that closely resembles the media that you are using.



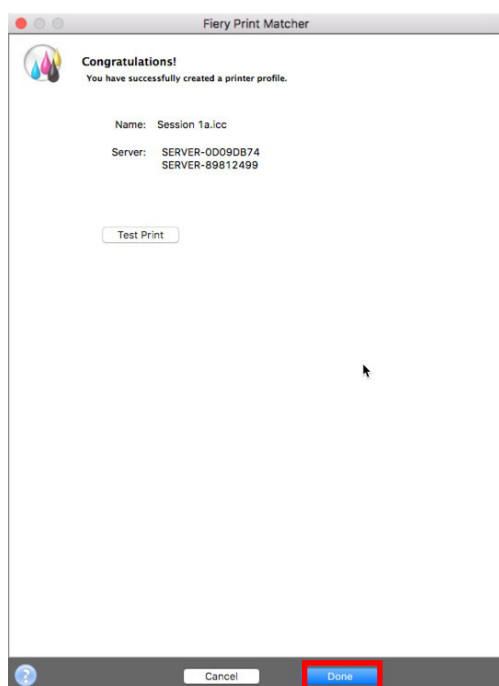
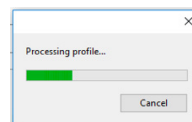
36. Once a base profile has been selected make any changes as needed for Gamut mapping and Separation settings (*defaults are usually a good choice unless advanced features are needed*)
37. Click **Next** to continue.



The screenshot shows the 'Fiery Print Matcher' window with the 'Save Profile' tab selected. A red dotted rectangle highlights the 'Profile description' section, which contains a text field with 'Session 1a', a larger 'Comments' text area, and a 'Media' text field. A red rectangle at the bottom right of the window indicates the 'Next' button.

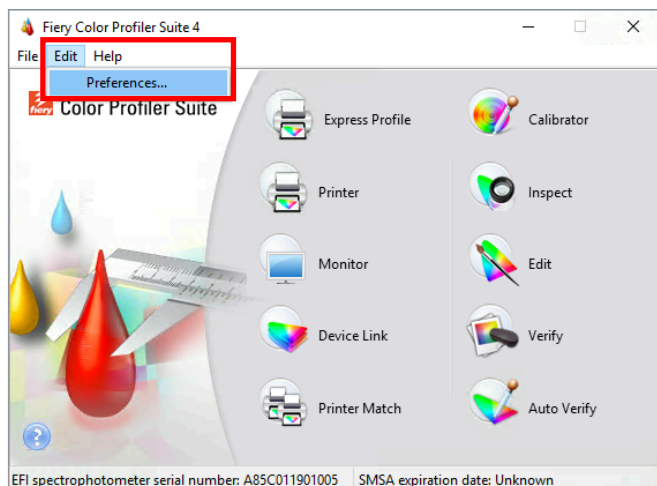
38. Fill out Comments and Media as required.
Rename the final profile description if desired.

39. Click **Next** to process and install the Print Matcher profiles and calibration sets on each server.



40. Click **Done**

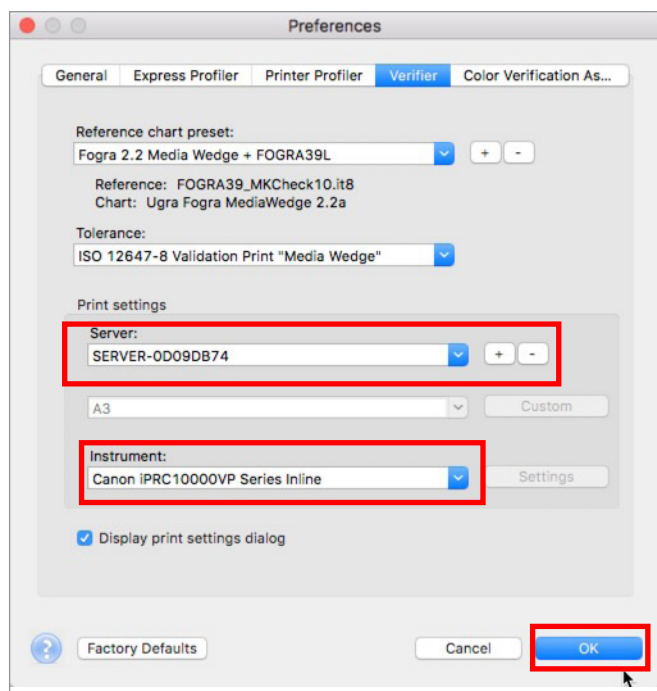
Fiery Color Verifier with five reference preset choices

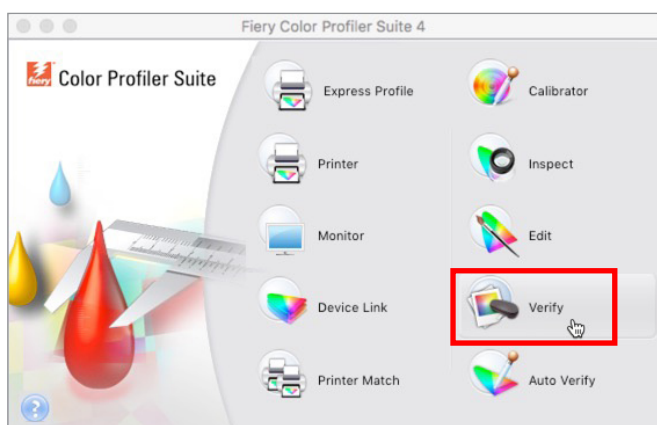


You must have purchased and installed a license for FCPS to use this feature.

The first time you use Fiery Color Verifier with the C10000 and the inline sensors you will need to set the preferences as follows.

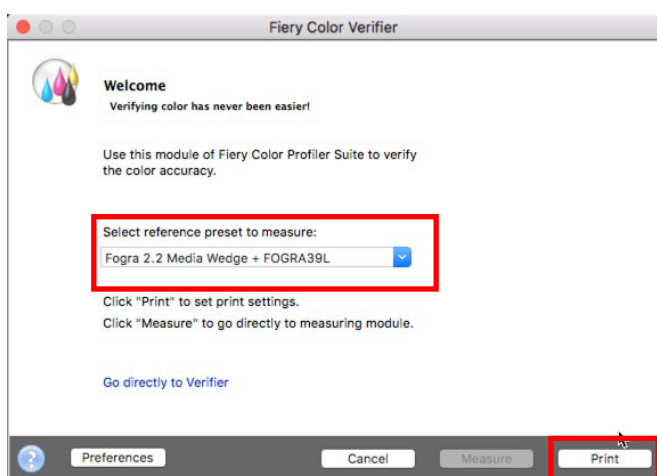
1. Start **Fiery Color Profiler Suite** (FCPS)
2. From the menu select **Edit>Preferences...**
- 3.
- 4.
5. Select the **Fiery** server. Click on the "+" to discover the Fiery server if not listed.
6. Select the **Canon iPRC10000 Series Inline** in the Instrument pull down.
7. Click **OK**





Once the Presets have been adjusted

8. Click on the **Verify** icon.



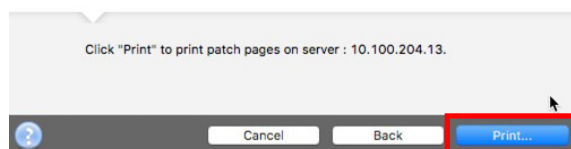
9. Select one of the five reference presets.

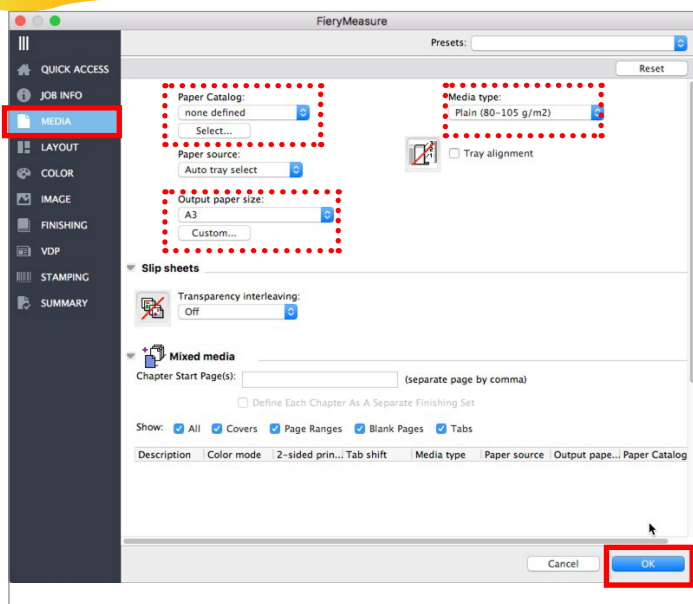
- **FOGRA 2.2 media wedge**
- **FOGRA 3.0 media wedge**
- **ISO12647-7 Control Wedge 2006**
- **ISO12647-7 Control Wedge 2013**
- **Japan Standard Color Bar**

10. Click **Print** to continue.



11. Click **Print** to continue.



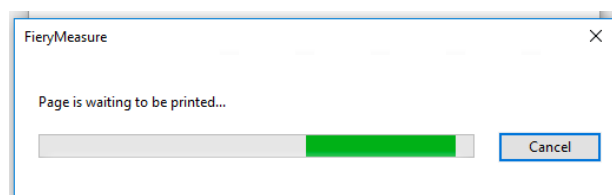


12. The **Fiery Measure** job properties window opens.

13. Select the **Media** tab.

14. Select the media attributes for the media you wish to use.

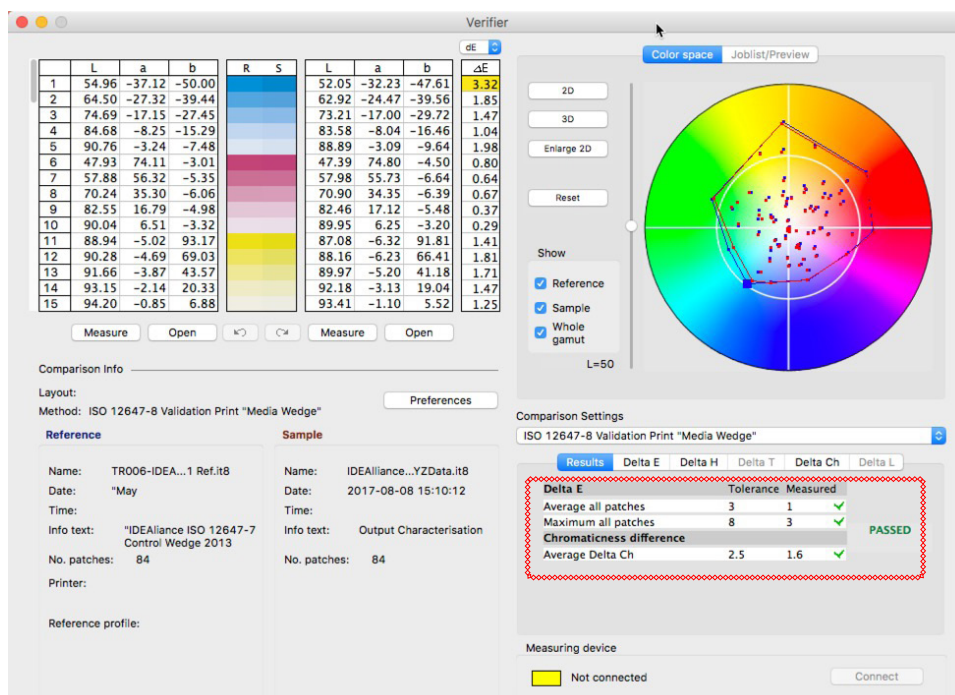
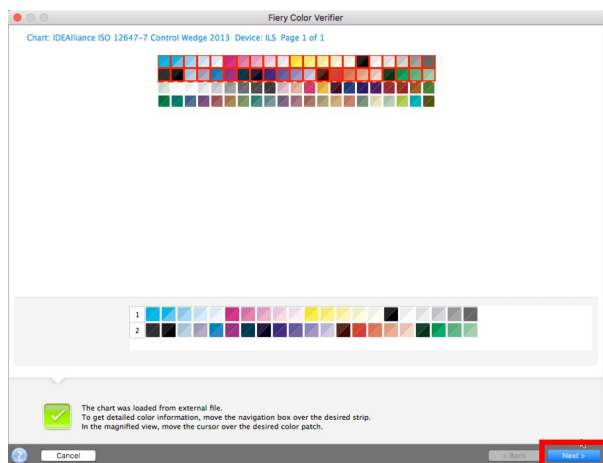
15. Click **OK** to print and measure the selected control strip.



The results of the Fiery measure module are automatically displayed with the selected control strip.

16. Click **Next** to continue and verify the measurements with the selected reference.

17. The results are displayed based on predefined tolerances.



Supported Paper Sizes and Types

Media Type	Supported
Any	No
Bond	No
Clear Film	No
Color	No
Heavy 1	Yes
Heavy 2	Yes
Heavy 3	Yes
Heavy 4	Yes
Heavy 5	Yes
Heavy 6	Yes
Heavy 7	No
Heavy 8	No
Labels	No
Thin 2	No
Matte Coated Thin	Yes
Matte Coated 1	Yes
Matte Coated 2	Yes
Matte Coated 3	Yes
Matte Coated 4	Yes
Matte Coated 5	Yes
Matte Coated 6	Yes
Matte Coated 7	Yes
Matte Coated 8	No
Matte Coated 9	No
1-Sided Coated Thin	Yes
1-Sided Coated 1	Yes
1-Sided Coated 2	Yes
1-Sided Coated 3	Yes
1-Sided Coated 4	Yes
1-Sided Coated 5	Yes
1-Sided Coated 6	Yes
1-Sided Coated 7	Yes
1-Sided Coated 8	No
1-Sided Coated 9	No

Media Type	Supported
Plain	Yes
Postcard	No
Pre-Punched 1	No
Pre-Punched 2	No
Recycled 1	No
Recycled 2	No
Recycled 3	No
Tab 1	No
Tab 2	No
Textured Paper 1	No
Textured Paper 2	No
Textured Paper 3	No
Textured Paper 4	No
Textured Paper 5	No
Textured Paper 6	No
Textured Paper 7	No
Thin 1	Yes
Translucent Film	No
Transparency	No
2 Sided Coated Thin	Yes
2-Sided Coated 1	Yes
2-Sided Coated 2	Yes
2-Sided Coated 3	Yes
2-Sided Coated 4	Yes
2-Sided Coated 5	Yes
2-Sided Coated 6	Yes
2-Sided Coated 7	Yes
2-Sided Coated 8	No
2-Sided Coated 9	No
Vellum 1	No
Vellum 2	No

Supported Paper Sizes and Types

Media Size	Supported
A3 (A3)	Yes
B4 (B4)	No
A4 (A4)	No
B5 (B5)	No
11x17 (Tabloid)	Yes
Legal (Legal)	No
Letter (Letter)	No
Statement (StatementR)	No
SRA3 (SRA3)	Yes
12x18 (TabloidExtra)	Yes
Executive (Executive)	No
13x19 (13x19)	Yes
Tab paper (Letter) (9x11)	No
Tab paper (A4) (A4TabThreeEightsInch)	No
8K (K8)	No
16K (M16KSpecialRoatated)	No
Reply postcard (DoublePostR)	No
4 on 1 postcard (DoublePostR)	No
Same as document size (SameAsPageSize)	No
Custom paper size (CustomPrintSize)	No

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