How-to:
Calibrate printer with EFI ES-2000 spectrophotometer

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Feature overview

Achieving predictable color every time is a major challenge for any business, so calibration is the most important aspect of color printing. All toner-based print engines use mechanisms sensitive to environmental factors like humidity and temperature. Calibration is essential to maintain consistent color reproduction despite those environmental changes.

Fiery® servers offer two calibration methods, using an external measuring device like the ES-2000 (or OEM-specific X-Rite i1 PRO) spectrophotometer, or using the integrated copier scanner or ColorCal method. This how-to guide will describe the ES-2000 method of calibration.

Objectives

- Define Fiery Calibrator preferences
- Create a calibration set
- Perform job-based calibration

Calibration Preferences require an administrator login on Command WorkStation.

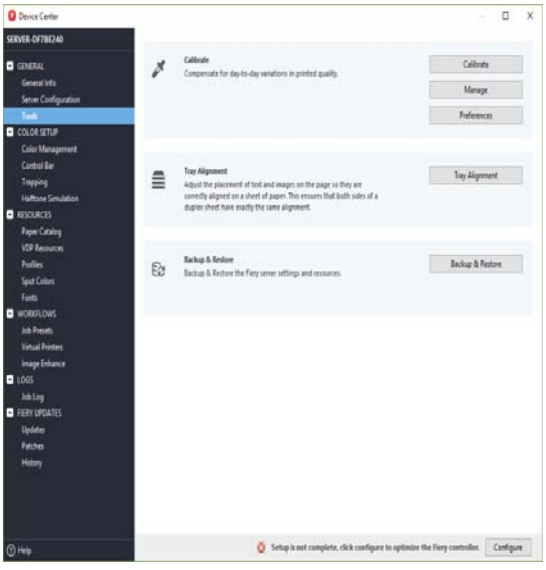
Calibration can be performed with an operator or administrator login on Command WorkStation.

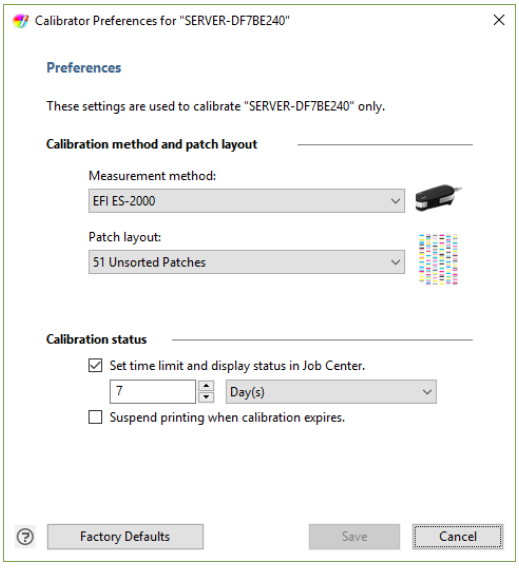
Additional resources

For additional software downloads, training resources and more, go to Fiery Online Resources.

Before you begin

- Open Fiery Command WorkStation® 6 or later and connect to at least one Fiery server running Fiery FS300/FS300 Pro.
- Log in as the administrator on Command WorkStation.
- Have the EFI ES-2000 spectrophotometer connected to the computer running Command WorkStation.



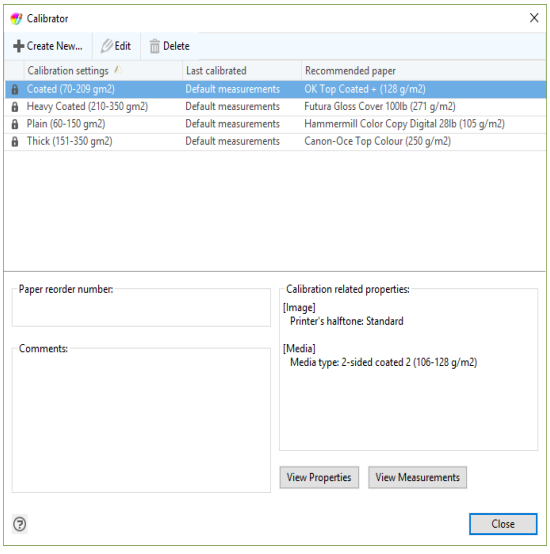


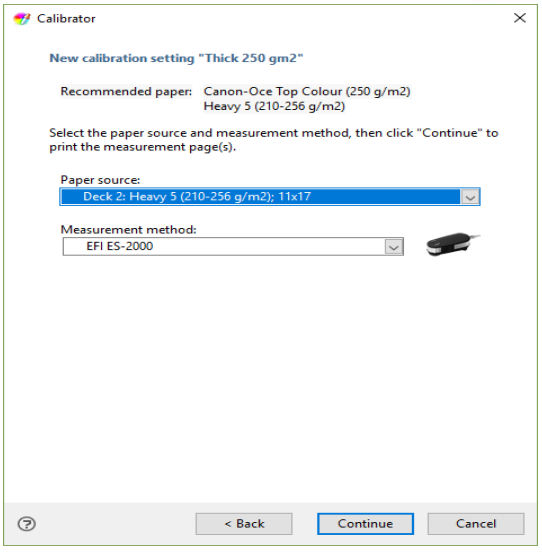
Define Fiery calibrator preferences

1. Click **Server > Device Center > GENERAL > Tools** in Fiery Command WorkStation.
2. In the Calibrate section, click **Preferences**.
3. Set the Measurement method to **EFI ES-2000** or the device that you will use to measure the calibration pages.
4. Choose the Patch Layout. For this example, select **51 Unsorted Patches**.
5. Next set the **Calibration Status**.
    a. Select the **Set time limit and display status in Job Center** check box. This enforces the length of time that can elapse between calibrations. It will also display the date and time for the last calibration for each of the media stocks used a job.
    b. Set the number of days or hours that can elapse between calibrations.
    c. Select the **Suspend printing when calibration expires** check box if your workflow will benefit from this setting. This setting is not enabled by default.

> *The additional Preference options under the heading Profiling Method and Patch Layout are settings for the Color Profiler Suite software and will only be available when Fiery Color Profiler Suite software is installed on the Command WorkStation client.*

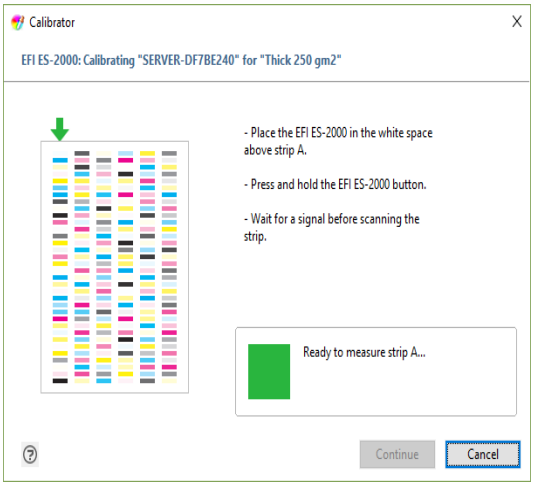
6. Click **Save** to close the Calibrator Preferences.

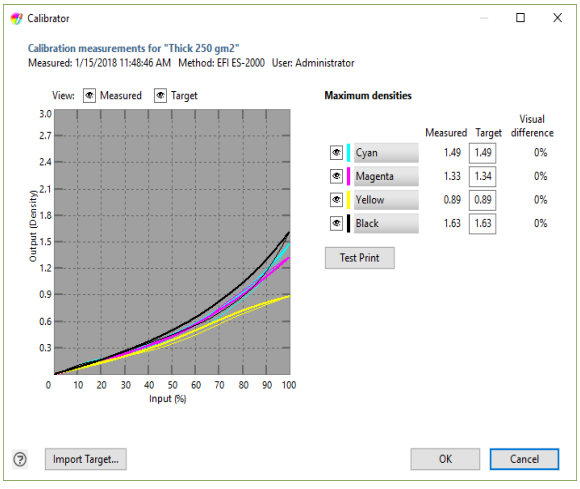




Create a calibration set

1. Click **Manage** in the Calibrate area.
2. Click **Create New** to create the new calibration set.
3. Begin by selecting an existing calibration set that is similar to the media you will be calibrating and click **OK**.
4. When prompted, name the new calibration set.
5. Complete the **Recommended Paper** text box with the media that will be used to calibrate. You may leave this blank, but it will make managing paper and media easier in the future if you fill it out.
6. Click **Properties** to open Job Properties and assign media properties such as paper size, paper weight and coating required to print.
    a. Click the **Media** icon and assign the appropriate Media Type, Media Weight, Coating, and Paper tray or Paper Catalog for your workflow.
    b. Click the **Image** icon and assign the Line/Dot type associated with this calibration set. Each Line/Dot type will need to have a unique calibration set and output profile. Note: these options will vary by printer.
7. Click **OK** to close the Job Properties. Then click **Continue**.
8. Select the **Paper Source** that will be used to print the calibration page.
9. Set the Measurement method to **EFI ES-2000** or the measurement device you have connected, and then click **Continue**.
10. The calibration page will print using the Calibration Preferences and Job Properties. Retrieve the printed page.

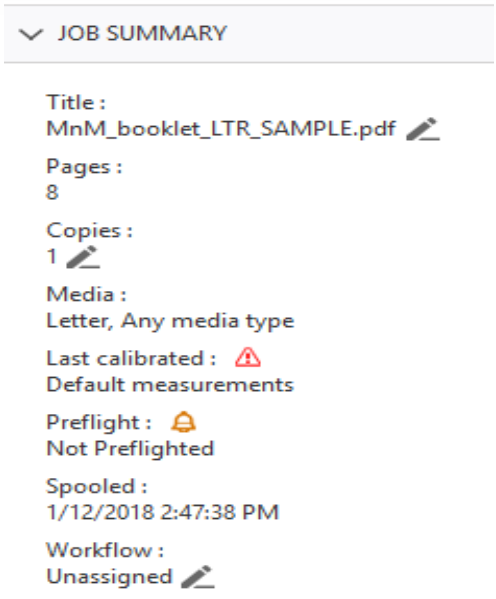


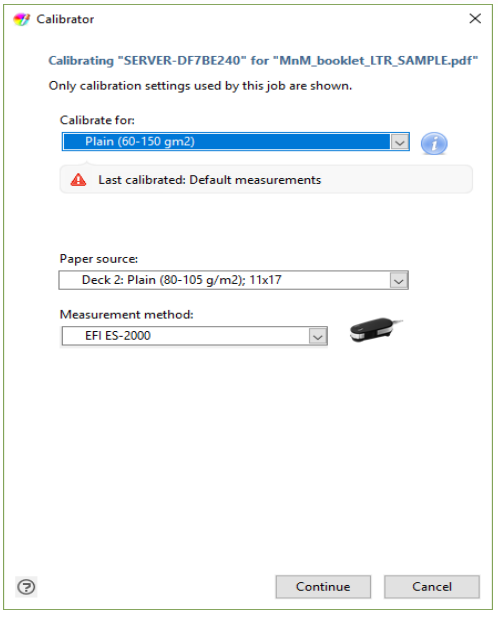


11. Follow the on-screen instructions to calibrate the ES-2000 and measure the patch page.
12. When you have successfully measured the six color strips, click **Continue** to view the calibration results.
13. To view a graph comparing the D-Max measurement values to the target curves, select **View Measurements**. Click **OK** to exit Measurements when done.

> *Review each color in the chart and compare measured vs. target D-Max for each color.*
>
> *If the visual difference is more than 5%, the printer may require servicing.*

14. After you have compared the D-Max values, select the output profile that will be associated with the new calibration set.
15. When the output profile is selected, the associated calibration will be applied.
16. Click **OK** when done and then click **Close**.
17. To learn more about creating custom output profiles, review the How-To Guide: *Achieve Accurate and Consistent Color with Printer Profiles at* www.efi.com/cps.





Perform job-based calibration

1. The **JOB SUMMARY** area of Command WorkStation will indicate if the calibration time limit has expired for the media assigned to the job. If you attempt to print a job with an expired calibration, the job will be suspended in the Print queue and highlighted in red.
2. To calibrate the media used in a job, select a job in the Held list, right-click and then select **Calibrate job…**.
3. In the Calibrator window, select the media to calibrate from the Calibrate for: option.
4. Select the Paper source with the required media.
5. Then select the Measurement method and then click **Continue**.
6. After the calibration page prints, click **OK**.
7. Follow the on-screen instructions to calibrate the ES-2000 and measure the patch page.
8. When you have successfully measured the six color strips, click **Continue** to view the calibration results.
9. You can choose **Test Print** to print a comparison page.
10. To complete the calibration, click **Apply & Close**. To immediately print the job after the calibration is applied, check **Print** {jobname] before clicking **Apply & Close**.
11. To view a graph comparing the D-Max measurement values to the target curves, select **View Measurements**.

    Review each color in the chart and compare the measured versus target D-Max for each color.

    If the visual difference is more than 5%, the printer may require servicing.

12. After you have compared the D-Max values, click **Apply & Close**.
13. The new calibration will be used with all jobs using the same media until the calibration expires again.

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