Auto Color Diagnosis Guide

For safe and correct use, be sure to read Safety Information before using the machine.
# TABLE OF CONTENTS

1. Using the Auto Color Diagnosis Function

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Introduction</td>
<td>3</td>
</tr>
<tr>
<td>Disclaimer</td>
<td>3</td>
</tr>
<tr>
<td>Notes</td>
<td>3</td>
</tr>
<tr>
<td>About the Auto Color Diagnosis Function</td>
<td>4</td>
</tr>
<tr>
<td>Generating Paper Properties (When Using Fiery)</td>
<td>6</td>
</tr>
<tr>
<td>Using the &quot;ACD Property&quot; Screen</td>
<td>6</td>
</tr>
<tr>
<td>Generating Paper Properties</td>
<td>8</td>
</tr>
<tr>
<td>Printing Diagnostic Marks</td>
<td>10</td>
</tr>
<tr>
<td>Generating Paper Properties (When Using TotalFlow)</td>
<td>13</td>
</tr>
<tr>
<td>Using the &quot;Paper&quot; Screen</td>
<td>13</td>
</tr>
<tr>
<td>Generating Paper Properties</td>
<td>15</td>
</tr>
<tr>
<td>Troubleshooting</td>
<td>17</td>
</tr>
</tbody>
</table>
1. Using the Auto Color Diagnosis Function

Introduction

Disclaimer

To the maximum extent permitted by applicable laws, in no event will the manufacturer be liable for any damages whatsoever arising out of failures of this product, losses of documents or data, or the use or non-use of this product and operation manuals provided with it.

Make sure that you always copy or have backups of important documents or data. Documents or data might be erased due to your operational errors or malfunctions of the machine. Also, you are responsible for taking protective measures against computer viruses, worms, and other harmful software.

Notes

Contents of this manual are subject to change without prior notice.

Some illustrations in this manual might be slightly different from the machine.

In no event will the manufacturer be responsible for any documents created by you using this product or any results from the data executed by you.
About the Auto Color Diagnosis Function

This function uses the in-line sensor to scan the printed colors while a continuous print run is in progress, and suppresses color deviation without stopping the machine.

Monitoring and Adjusting Colors Automatically

To suppress color deviation during a continuous print run, the machine compares the recently printed colors to the colors initially printed at the beginning of the print run, and adjusts the colors automatically.

- The sequence of performing the color adjustment varies on different paper sizes. When printing on A3 paper for example, the machine generates comparison base information while printing up to 8 pages from the job and compares the information with the colors printed on the 8th to 16th pages. The machine performs color compensation based on the comparison result after the 20th page.
- You cannot enable or disable the Auto Color Diagnosis function individually for each print job.
- You need a sufficient number of measurement points in the image to be printed for the function to be effective.

Generating and Registering Paper Properties

To adjust colors correctly, generate paper properties for each paper type. When generated, this information is stored in the machine’s data storage. The machine reads the properties of the paper used for printing from the storage and-adjusts colors according to the information.

Supported Paper

The paper supported by the Auto Color Diagnosis function is as follows:
### About the Auto Color Diagnosis Function

<table>
<thead>
<tr>
<th>Paper attributes</th>
<th>Requirements</th>
</tr>
</thead>
<tbody>
<tr>
<td>Paper size</td>
<td>279 mm (11 inches) vertically or more × 420-700 mm (16.6-27.6 inches) horizontally (including custom and banner paper)</td>
</tr>
<tr>
<td>Paper weight</td>
<td>Paper weight &quot;3&quot; or greater</td>
</tr>
<tr>
<td>Paper type</td>
<td>Plain paper, recycled paper, high gloss paper, gloss paper, matte paper, or synthetic paper</td>
</tr>
<tr>
<td>Paper color</td>
<td>White</td>
</tr>
</tbody>
</table>

**Note**

- You cannot use the Auto Color Diagnosis function when printing on a sheet of paper that has been manually selected instead of selected from the media catalog.
- Use of the Auto Color Diagnosis function is not recommended on paper of paper weight "2" or less. Images on the back side of such paper may show through.
Generating Paper Properties (When Using Fiery)

To use the Auto Color Diagnosis function, print the color chart and generate paper properties for each paper type. When generated, this information is stored in the machine's data storage and used for adjusting colors when printing is performed.

To adjust colors properly, perform calibration before generating paper properties.

**Important**
- Colors are adjusted using the Auto Color Diagnosis function when printing is performed on the paper for which paper properties are generated.

**Note**
- Up to 9 sheets of paper are required to generate paper properties.
- Generate this information again after:
  - Changing the information registered in the paper catalog
  - Changing the printing speed in the paper settings
  - Replacing the Line Sensor
  - Changing the maximum density (D-MAX) while performing calibration

Using the "ACD Property" Screen

The "ACD Property" screen displays a list of paper types that can be used on the machine. In the screen, you can generate paper properties, check the generation status, and specify the accuracy setting of the information.

Viewing the generation status of paper properties

2. Log in with a user name and password.

   When a large number of items is registered in the paper catalog, it may take a few minutes to display the "ACD Property" screen.
3. Check the generation status of paper properties in the "ACD Property" screen.

<table>
<thead>
<tr>
<th>Display item</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
<td>Registered paper name</td>
</tr>
<tr>
<td>Weight (gsm)</td>
<td>Paper weight</td>
</tr>
<tr>
<td>Paper size</td>
<td>Paper size (standard/inch/mm)</td>
</tr>
<tr>
<td>Tray</td>
<td>Number of the tray where the paper is currently loaded</td>
</tr>
<tr>
<td>ACD status</td>
<td>Paper properties are not generated.</td>
</tr>
<tr>
<td></td>
<td>Paper properties are generated.</td>
</tr>
<tr>
<td></td>
<td>Because the Auto Color Diagnosis function does not support paper types, paper properties cannot be generated.</td>
</tr>
<tr>
<td>ACD last updated</td>
<td>The last registration time of paper properties</td>
</tr>
</tbody>
</table>

Specifying generation accuracies for paper properties

You can specify generation accuracies for paper properties from High Accuracy or Standard. You cannot modify this information after it is generated. Specify settings before generating the information.
1. Click [Settings] in the bottom left corner of the "ACD Property" screen.

<table>
<thead>
<tr>
<th>Name</th>
<th>Value</th>
<th>Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>Long700x330</td>
<td>75</td>
<td></td>
</tr>
<tr>
<td>Long1030x330</td>
<td>75</td>
<td></td>
</tr>
<tr>
<td>kyoko</td>
<td>350</td>
<td>SR</td>
</tr>
<tr>
<td>test</td>
<td>216</td>
<td></td>
</tr>
<tr>
<td>PODG-128 SRA3</td>
<td>118</td>
<td>SR</td>
</tr>
<tr>
<td>TEST_A3</td>
<td>118</td>
<td>A3</td>
</tr>
<tr>
<td>PIRAMID_A3_SEF</td>
<td>75</td>
<td>A3</td>
</tr>
<tr>
<td>t1030</td>
<td>216</td>
<td></td>
</tr>
<tr>
<td>t1260</td>
<td>216</td>
<td></td>
</tr>
</tbody>
</table>

It is recommended to execute calibration before generating ACD property.

2. Select the accuracy of paper properties, and then click [OK].
The number of patches in the color chart to be printed increases twofold when you select [High Accuracy].

Generating Paper Properties

To generate paper properties, select the paper in the "ACD Property" screen.

**Important**

- Specify the generation accuracy by following the procedure described in page 7 "Specifying generation accuracies for paper properties" before generating paper properties.

1. Load sheets of paper in the tray, and select the tray from the media catalog.
When generating paper properties, the machine prints color charts on up to 9 sheets of paper depending on the precision and paper size for generating the information. Load paper for printing charts in the paper tray.

2. Perform calibration.
3. Select the [Generate ACD Data after calibration] check box in the measurement result screen, and then click [Apply & Close].

4. On the login screen that appears, log in with the user name and password.
   When a large number of items is registered in the paper catalog, it may take a few minutes to display the "ACD Property" screen.
   When the "ACD Property" screen is not displayed, click [Launch ACD] in the "WebTools" screen.

5. In the "ACD Property" screen, select the paper loaded in Step 1.

6. Click the [Generate ACD Property] button.
   - A confirmation screen prompting you to perform calibration may be displayed. To proceed to generate paper properties, click the [Generate ACD Property] button again.
   - The color charts are printed, and paper properties are generated.

7. Confirm the generation result the information, and then click [OK].

8. Check that paper properties have been successfully generated on the "ACD Property" screen.
   Also, check that the [ACD status] field of the paper to generate paper properties is set to [Enabled].

   **Note**
   - To continue generating paper properties, select a sheet of paper with the [ACD status] field set to [Disabled], and then click [Generate ACD Property] in the bottom right corner of the screen.
   - The status and generation date of an ACD property are included automatically in the exported, imported, backed up, or restored data when performing the following operations:
Printing Diagnostic Marks

You can print groups of color patches called diagnostic marks aligned parallel to the feeding direction in the left and right margins of the paper when all of the conditions listed below are fulfilled. Diagnostic marks aid the Auto Color Diagnosis function when the number of colors contained on the printed page is insufficient.

- The length of the paper is longer than 420 mm (16.6 inches), and the width is wider than 100 mm (4.0 inches)
- The color mode of the job is set to 4-color (CMYK)
- Only one paper type is specified in the job

**Note**

- If the number of colors used on each page differs, diagnostic marks are printed on the page that has three or more color separations used for 4-color-printing. The diagnostic marks are not printed if the page is in black and white.
- Diagnostic marks are superimposed on the printed image. Use the function on a job that you are cutting off the bars afterward.

1. Display the job properties in Fiery Command WorkStation, and select the [ACD color bar] check box.
2. View the preview image to check that the diagnostic marks do not overlap on the finishing page.
   In Fiery Command WorkStation, generate preview images by selecting [Process and Hold].

3. Print the job.
   The diagnostic marks are printed.

Print size and location of diagnostic marks

Two diagnostic marks of the same pattern are printed in the right and left margins.

<table>
<thead>
<tr>
<th>Diagnostic mark attributes</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Distance from the right or left paper edge</td>
<td>When paper width is 323 mm (12.8 inches) or more:</td>
</tr>
<tr>
<td></td>
<td>• (paper width - 323 mm) / 2 + 2 mm</td>
</tr>
<tr>
<td></td>
<td>• (paper width - 12.8 inches) / 2 + 0.1 inches</td>
</tr>
<tr>
<td></td>
<td>When paper width is 323 mm (12.8 inches) or less: 2 mm (0.1 inches)</td>
</tr>
<tr>
<td></td>
<td>When paper width is 323 mm or more: (paper width-323) / 2 + 2 mm</td>
</tr>
<tr>
<td></td>
<td>When paper width is 323 mm or less: 2 mm</td>
</tr>
<tr>
<td>Distance between the upper and lower</td>
<td>11.4 mm (0.5 inches)</td>
</tr>
<tr>
<td>diagnostic marks</td>
<td></td>
</tr>
</tbody>
</table>
## Diagnostic mark attributes

<table>
<thead>
<tr>
<th>Diagnostic mark attributes</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diagnostic mark size</td>
<td>5.2 × 146 mm (0.3 × 5.8 inches)</td>
</tr>
</tbody>
</table>

**Note**

- The overall size of the diagnostic mark is 5.2 mm × 78 mm (0.3 × 3.1 inches), including the size of the blank spaces on the top and bottom sides of the diagnostic mark.
Generating Paper Properties (When Using TotalFlow)

To use the Auto Color Diagnosis function, print the color chart and generate paper properties for each paper type. When generated, this information is stored in the machine’s data storage and used for adjusting colors when printing is performed.

To adjust colors properly, perform calibration before generating paper properties.

**Important**

- Colors are adjusted using the Auto Color Diagnosis function when printing is performed on the paper for which paper properties are generated.

**Note**

- Up to 9 sheets of paper are required to generate paper properties.
- Generate this information again after:
  - Changing the information registered in the paper catalog
  - Changing the printing speed in the paper settings
  - Replacing the Line Sensor

Using the "Paper" Screen

The "Paper" screen displays a list of paper types that can be used on the machine. In the screen, you can generate paper properties, check the generation status, and specify the accuracy setting of the information.

Viewing the generation status of paper properties

2. Click [Paper] to confirm the generation status and other information about paper properties in the "Paper" screen.

In the screen, you can view the information below. To check whether the paper properties are generated and the Auto Color Diagnosis function is enabled, scroll down the right side column and check the [ACD] field.

<table>
<thead>
<tr>
<th>Display item</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
<td>Registered paper name</td>
</tr>
<tr>
<td>Tray name</td>
<td>Number of the tray where the paper is currently loaded</td>
</tr>
<tr>
<td>Size</td>
<td>Paper size (standard/inch/mm)</td>
</tr>
<tr>
<td>Weight</td>
<td>Paper weight</td>
</tr>
<tr>
<td>Color</td>
<td>Paper color</td>
</tr>
<tr>
<td>Type</td>
<td>Paper type</td>
</tr>
</tbody>
</table>
# Generating Paper Properties (When Using TotalFlow)

<table>
<thead>
<tr>
<th>Display item</th>
<th>Description</th>
</tr>
</thead>
</table>
| ACD          | Disabled: Paper properties are not generated.  
|             | Enabled: Paper properties are generated.  
|             | - Because the Auto Color Diagnosis function does not support paper types, paper properties cannot be generated. |
| Accuracy     | The accuracy of paper properties |
| Date         | The last registration time of paper properties |

## Note

- You can also view the generation status of paper properties in the screen shown below.

2. Click [ ] in the [Input Trays] column at the bottom right of the screen, and click [Manage Columns].

3. Select the [ACD] check box in the "Manage Columns" screen, and then click [OK].  
   Check the [ACD] field in the [Input Trays] column.

## Generating Paper Properties

To generate paper properties, select the paper in the "Paper" screen.
1. Load sheets of paper in the tray, and select the tray from the media catalog.
   When generating paper properties, the machine prints color charts on up to 9 sheets of paper depending on the precision and paper size for generating the information. Load paper for printing charts in the paper tray.

2. Click the [Configuration] tab, and then click [Paper].

3. In the "Paper" screen, select the paper loaded in Step 1.

4. Click the [ACD Property].

5. Click [Generate] in the "ACD Property" screen.

6. In the "Generate ACD Property" screen, select the accuracy (High accuracy/Standard), and then click [OK].
   The number of patches in the color chart to be printed increases twofold when you select [High accuracy].
   The color charts are printed, and paper properties are generated.

7. Click [CLOSE] in the "ACD Property Available" screen.

8. Check that paper properties have been successfully generated on the "Paper" screen.
   Also, check that the [ACD] field of the paper to generate paper properties is set to [Enabled].

**Note**

- To continue generating paper properties, select a sheet of paper with the [ACD] field set to [Disabled], and then click [ACD Property] in the screen.
- The status and generation date of an ACD property are included automatically in the backed up or restored data when performing the following operation:
  - Backing up or restoring the paper information using the backup/restore function under "Disk Operations" on the "Configuration" tab in the "TotalFlow" screen.
Troubleshooting

Paper properties failed to be generated
Because of a paper jam or stains on the paper, paper properties may not be generated. Remove the jammed paper and resolve the cause of jammed paper and staining, and then generate paper properties again.

The status and generation date of an ACD property cannot be restored
If a malfunction occurs on the ACD unit in the machine, the status and creation date of the ACD property that have been backed up prior to the malfunction cannot be restored. Generate the ACD property again.

The generation or accuracy setting screen of paper characteristics information is not displayed, or the generation result is not applied (When Using Fiery)
The "ACD Property" screen may not be properly updated depending on the connection status with the server. If this is the case, reload the page.
The "ACD Property" screen may not be properly updated when additional screens are displayed. Close all screens except the "ACD Property" screen, and reload the page.

Diagnostic marks are not printed (When Using Fiery)
Diagnostic marks are not printed when any of the following conditions are met:
- The paper length is less than 420 mm (16.6 inches) or the width is less than 100 mm (4.0 inches)
- The number of colors used in the page is less than three

The diagnostic mark is superimposed over images or text in the document (When Using Fiery)
Display preview images on the "Job Properties" screen, check that the diagnostic marks do not overlap on the document, and then print the document. For details about the diagnostic mark location, see page 11 "Print size and location of diagnostic marks".

Colors are unstable
Perform the following procedure to check if the Automatic Color Diagnosis function is enabled:

1. Press the [Home] icon at the center bottom of the screen.
4. Press [System Settings].
5. Select the [Administrator Settings] tab.
6. Press [Auto Color Diagnosis Unit Setting].
7. Check that all the setting items are set to [Active].