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Auto Color Diagnosis Guide

Using the Auto Color Diagnosis Function











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

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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 allows you to monitor and compensate for color deviation automatically to achieve stable color production when many copies are printed continuously.



Monitoring and Adjusting Colors Automatically

The machine generates the "master image" to be used as a reference from the original data and adjust colors automatically by comparing the scanned image of the printed page with the master image. This process stabilizes deviations in color tones and densities and allows you to maintain stable quality throughout the print run.

Note

- 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.

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.

Printing the Color Bar (When Using Fiery)

Print color bars to be used as the color reference for precise and stable color reproduction when you print a job that uses four or more colors. Use the color bars when a color deviation appears on the printed pages.

Supported Paper

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

Paper attributes	Requirements
Paper size	279 mm (11 inches) vertically or more × 420-700 mm (16.6-27.6 inches) horizontally (including custom and banner paper)
Paper weight	Paper weight other than "1"
Paper type	Plain paper, recycled paper, high gloss paper, gloss paper, matte paper, or synthetic paper
Paper color	White



• 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.

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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

- 1. Click [Launch ACD] in the "WebTools" screen.
- 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.

ACD Property										
Name	*	Weight(gsm)	Ŧ	Page size	▼ Tray	*	ACD status	-	ACD last updated	,
12*18		75		12" x 18"	Tray	4	Disabled			
TEST_A3_Artificial(Synthetic)		75		A3 SEF			Disabled			
T6200-1		75		A3 SEF			Enabled		2018/02/01 2:14:36 PM	
T6200-2		75		A3 SEF	Tray	2	Disabled			
PODG-128 A3		118		A3 SEF	Tray	3	Enabled		2018/01/31 10:02:08 AM	
TEST_A3_Black		75		A3 SEF			Not Applicable			
TEST_DLT_Plain		75		11x17 SEF			Disabled			
New media		105		A3 SEF			Disabled			
SRA3_6		350		SRA3 (320 x 450 r	nm)		Disabled			
A4_LEF_Plain		75		A4 LEF			Not Applicable			
Long700x330		75		934.866 1983.97	Tray	A	Enabled		2018/01/18 6:44:57 PM	
Long1030x330		75		934.866 2919.97			Disabled			
kyoko		350		SRA3 (320 x 450 i	nm)		Disabled			
test		216		936 1980			Disabled			
PODG-128 SRA3		118		SRA3 (320 x 450 r	nm) Tray	1	Disabled			
TEST_A3		118		A3 SEF			Disabled			
PIRAMID_A3_SEF		75		A3 SEF			Enabled		2018/02/01 8:02:17 PM	
t1030		216		934.583 2920.25			Disabled			
t1260		216		934.583 3571.09			Disabled		,	

3. Check the generation status of paper properties in the "ACD Property" screen.

In the screen, you can view the information below. To check whether the Auto Color Diagnosis function is enabled, check the [ACD status] field.

Display item	Description					
Name	Registered paper na	me				
Weight (gsm)	Paper weight					
Paper size	Paper size (standard/inch/mm)					
Тгау	Number of the tray where the paper is currently loaded					
ACD status	Disabled	Paper properties are not generated.				
	Enabled	Paper properties are generated.				
	Not Applicable	Because the Auto Color Diagnosis function does not support paper types, paper properties cannot be generated.				
ACD last updated	The last registration t	ime of paper properties				

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.

- Long700x330 75 934 Long1030x330 75 934 350 SR. kyoko 216 93 test PODG-128 SRA3 118 SR. TEST A3 118 A3 PIRAMID_A3_SEF 75 A3 t1030 216 934 t1260 216 934 < It is recommended to execute calibration before generating ACD property. Settings -DWQ655
- 1. Click [Settings] in the bottom left corner of the "ACD Property" screen.

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].
- 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.

Printing Color Bars

You can print groups of color patches called color bars aligned parallel to the feeding direction in the left and right margins of the paper. Based on the color bars that provide a point of reference of the printed colors, you can perform more precise and stable color adjustments. Use the color bars when a color deviation appears on the printed pages or when making a subtle adjustment in the color reproduction result.

The color bars can be printed when all of the following conditions are met:

- 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

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- If the number of colors used on each page differs, color bars are printed on the page that has three or more color separations used for 4-color-printing. The color bars are not printed if the page is in black and white.
- Color bars are superimposed on the printed image. Use the function on a job that you are cutting
 off the bars afterward.
- Display the job properties in Fiery Command WorkStation, and select the [ACD color bar] check box.

Job Properties —		×
Job: Scandinavia1_v2.pdf		~
Adobe PDF Print Engine Preferred	R <u>e</u> set	
JOBINFO Paper Catalog: Paper type:		^
LAYOUT Select Paper weight: Description 1620 1 00 00 00 00 00 00 00 00 00 00 00 00		
COLOR Tab shift IMAGE Instance		
FINISHING Auto tray select		
VDP Paper size:		
A3 (297 x 420 mm)		
Custom		
▼ * Mixed media		_
Chapter Start Page(s): (separate page by comma)		
Define Each Chapter As A Separate Finishing Set		
Show: 🗹 All 🗹 Covers 🗹 Page Ranges 🗹 Blank Pages 🗹 Tabs		
Description Colormodo Dunlov Tak-shift Danartuna Danaruusia L		~
Job will be processed again before printing.	<u>C</u> ancel	

2. View the preview image to check that the color bars do not overlap on the finishing page. In Fiery Command WorkStation, generate preview images by selecting [Process and Hold]. 3. Print the job.

The color bars are printed.

Print size and location of color bars

Two color bars of the same pattern are printed in the right and left margins.



Color bar attributes	Description
Distance from the right or left paper edge	 When paper width is 323 mm (12.8 inches) or more: (paper width - 323 mm) / 2 + 2 mm (paper width - 12.8 inches) / 2 + 0.1 inches
	When paper width is 323 mm (12.8 inches) or less: 2 mm (0.1 inches)
	When paper width is 323 mm or more: (paper width-323) / 2 + 2 mm
	When paper width is 323 mm or less: 2 mm
Distance between the upper and lower color bars	11.4 mm (0.5 inches)
Color bar size	5.2 × 146 mm (0.3 × 5.8 inches)
	♦ Note
	• The overall size of the color bar 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 color bar.

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.

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- 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 "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

1. Click [Configuration] in the "TotalFlow" screen.

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

Operations Jobs Configu	ration						⇒ Submit Job 🔰	Administrator	1
Paper ^	Paper (3)							T (1)	
	- Add	🖉 Edit	Duplicate	Delete	ACD Propert	v			
Printer Presets		<i>p</i>				,			
Workflow	Name	Tray name	Size	Weight	Color	Type	testA3 Information		\times
Virtual Printers	testA3	2	A3 (297 x 42	Weight 2 (63	White	Plain	Name	testA3	
Processing options	testA4		A4 (210 x 29	Weight 2 (63	White	Plain	Size	A3 (297 x 420 mm)	
Filters	testSRA3		SRA3 (320 x 4	. Weight 2 (63	White	Plain	Width	297 mm	
Color Management							Height	420 mm	
Setting							Weight	gsm)	
Drint quality							Type	Plain	
Print quality							Thickness	90 µm	
Profiles							Color	White	
Spot Colors							Coated	None	
DFE							Auto paper select	No	
Settings							Textured	None	
Shutdown							Description		
True							Paper feed direction	Short edge feed	
Fonts							2-sided (duplex) allowed	Yes	
Network									
Features							ADVANCED		
Disk Operations							Edge sensitive Side sensitive	No	

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.

Paper	^	Paper (3)							Y ()
Calibration Printer Presets		Add	🖋 Edit	Duplicate	Delete	ACD Propert	Ŷ		
Workflow		Name	Tray name	Size	Weight	Color	Type	Text	Use printer default
Virtual Printers		testA3	2	A3 (297 x 42	Weight 2 (63	White	Plain	Line art	Use printer default
Processing options		testA4		A4 (210 x 29	Weight 2 (63	White	Plain	Smooth shades	Use printer default
Filters		testSRA3	-	SRA3 (320 x 4	Weight 2 (63	White	Plain	PRINT REGISTRATION	
Color Management								Front side across feed direction	0 mm
Settings Print quality								Front side feed direction	0 mm
Profiles								Back side across feed	0 mm
Spot Colors								Back side feed direction	0 mm
Contract of the second se								ACD PROPERTY	
settings								ACD	Enabled
Shutdown								Accuracy	Standard
Trays								Date	05/09/2018, 14:40:16
Fonts								· · ·	
Network								Time created	05/09/2018, 13:23:13
Features								Time last edited	05/09/2018, 13:23:13
Dirk Operations	~							Time last used	05/09/2018, 13:25:33

Display item	Description
Name	Registered paper name
Tray name	Number of the tray where the paper is currently loaded
Size	Paper size (standard/inch/mm)
Weight	Paper weight
Color	Paper color
Туре	Paper type

Display item		Description		
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.		
Ассигасу	The accuracy of pape	er properties		
Date	The last registration ti	me of paper properties		

Note

- You can also view the generation status of paper properties in the screen shown below.
- 1. Click [Jobs] in the "TotalFlow" screen.
- Click [••••] in the [Input Trays] column at the bottom right of the screen, and click [Manage Columns].



 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].

Operations Jobs	Configur	ation						⇒ Submit Job	Administrator	1
Paper	^	Paper (3)							Y (1)	
Calibration							•			
Printer Presets		Add	🖋 Edit	Duplicate	📋 Delete 📋	ACD Propert	V 🛔			
Workflow		Name	Tray name	Size	Weight		pe	testA3 Informatio	n D	
Virtual Printers		testA3	2	A3 (297 x 42	Weight 2 (63	White	Plain	Name	testA3	
Processing options		testA4		A4 (210 x 29	Weight 2 (63	White	Plain	Size	A3 (297 x 420 mm)	
Filters		testSRA3		SRA3 (320 x 4.		White	Plain	Width	297 mm	
Color Management								Height	420 mm Weight 2 (63.1 - 80	0
Settings								Weight	gsm)	
Print quality								Type	Plain	
Profiler								Thickness	90 µm	
riones -								Costed	None	
Spot Colors								Auto paper select	No	
Drc								Prepunch	No	
Settings								Textured	None	
Shutdown								Description		
Trays								Paper feed direction	Short edge feed	
Fonts								allowed	Yes	
Network										
Features								ADVANCED		
1 COLOR CO								Edge sensitive	No	

- 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].

Vote

• 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.

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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 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.

Color bars are not printed (When Using Fiery)

Color bars 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 color bar is superimposed over images or text in the document (When Using Fiery)

Display preview images on the "Job Properties" screen, check that the color bars do not overlap on the document, and then print the document. For details about the color bar location, see page 11 "Print size and location of color bars".

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.
- 2. Press the [User Tools] (🕹) icon on the Home screen.
- 3. Press [Machine Features].
- 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].



