

Execution timing of the user

Controller RU-509 ExColor/G7	During basic operation				During expert operation				During the custom screen change			
	IC-602		IC-308/IC-415		IC-602		IC-308/IC-415		IC-602		IC-308/IC-415	
	Equip	Not Equip	Equip	Not Equip	Equip	Not Equip	Equip	Not Equip	Equip	Not Equip	Equip	Not Equip *1
	-	-	-	-	-	-	-	-	Ex	G7	Ex	G7
2.1 Select screen ↓	-	-	-	-	-	-	-	-	○	○	○	○
Maximum density adjustment reset ↓	-	-	-	-	-	-	-	-	-	-	-	-
2.2 Gamma Automatic Adjustment ↓	-	-	-	-	○	○	○	○	○	○	○	○
2.3 Density Balance Adjustment ↓	-	-	-	-	-	-	-	-	●	●	●	●
2.4 Maximum Density Initial Adjustment ↓	-	-	-	-	-	-	-	-	-	-	-	-
2.5 Maximum Density Auto Adjustment (RU) ↓	-	-	-	-	○	-	○	-	-	-	-	-
2.6 Maximum Density Adjustment ↓	-	-	-	-	-	○	-	○	-	-	-	-
2.7 Color Density Control Setting ↓	-	-	-	-	-	-	-	-	-	-	-	-
2.8 Color Density Control (Manual Adjustment) ↓	-	-	-	-	○	-	○	-	●	-	●	-
2.9 IC-602 Calibration ↓	-	●	-	-	-	●	-	-	-	●	-	-
2.10 Exact Color ↓	-	-	-	-	-	-	-	-	●	-	●	-
2.11 G7 Calibration ↓	-	-	-	-	-	-	-	-	-	●	-	●
2.12 IC-308/IC-415 Calibration	-	-	-	●	-	-	-	●	-	-	●	●

*1: When a gradation problem occurs in the highlighted area after the implementation of adjustment, adjust in the following order: Gamma Automatic Adjustment, [Printer Gamma Sensor Adjustment](#), [Printer Gamma Offset Adjustment](#), Density Balance Adjustment, IC-308 Calibration

2. QUALITY ADJUSTMENT

2.1 Select screen

2.1.1 Execution timing

- : Indispensable item
- : Execution-recommended item

Execution timing of CE

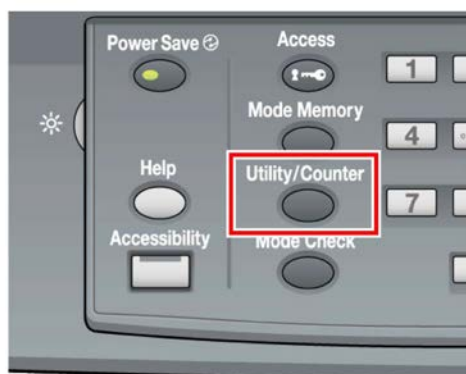
Controller	During installation						After the replacement of the drum, the developer, the developing unit, or the charging corona					
	IC-602				IC-308/IC-415		IC-602				IC-308/IC-415	
	Equip		Not Equip		Equip	Not Equip	Equip		Not Equip		Equip	Not Equip
RU-509	Ex	G7	Ex	G7	-	-	Ex	G7	Ex	G7	-	-
ExColor/G7	Ex	G7	Ex	G7	-	-	Ex	G7	Ex	G7	-	-
2.1 Select Screen	○		○		○	○	-	-	-	-	-	-

Execution timing of the user

Controller	During basic operation				During expert operation				During the custom screen change			
	IC-602		IC-308/IC-415		IC-602		IC-308/IC-415		IC-602		IC-308/IC-415	
	Equip	Not Equip	Equip	Not Equip	Equip	Not Equip	Equip	Not Equip	Equip	Not Equip	Equip	Not Equip
RU-509	-	-	-	-	-	-	-	-	Ex	G7	Ex	G7
ExColor/G7	-	-	-	-	-	-	-	-	Ex	G7	-	-
2.1 Select Screen	-	-	-	-	-	-	-	-	○	○	○	○

2.1.2 Procedure

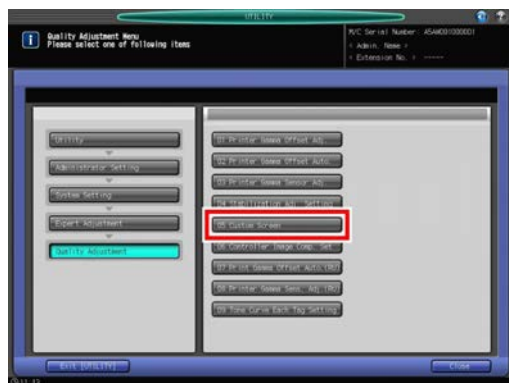
1. Press Utility/Counter on the machine's control panel.



2. Press [Administrator Setting].



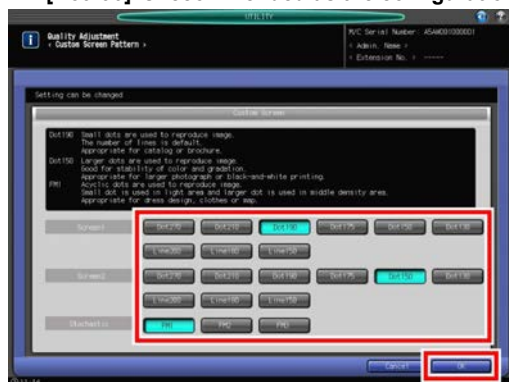
3. Press [System Setting] on the [Administrator Setting Menu] screen, and then press [Expert Adjustment], [Quality Adjustment], and [Custom Screen] in sequence.



4. Press the screen to be assigned to each screen type: [Screen 1], [Screen 2], and [Stochastic]. After setting, press [OK].

NOTE

- **[Dot190] is recommended as the configuration for [Screen 1].**



2.2 Gamma automatic adjustment

2.2.1 Execution timing

- : Indispensable item
- : Execution-recommended item

Execution timing of CE

Controller	During installation						After the replacement of the drum, the developer, the developing unit, or the charging corona					
	IC-602				IC-308/IC-415		IC-602				IC-308/IC-415	
	Equip		Not Equip		Equip	Not Equip	Equip		Not Equip		Equip	Not Equip
RU-509	Ex	G7	Ex	G7	-	-	Ex	G7	Ex	G7	-	-
ExColor/G7	Ex	G7	Ex	G7	-	-	Ex	G7	Ex	G7	-	-
2.2 Gamma Automatic Adjustment	○		○		○	○	○		○		○	○

Execution timing of the user

Controller	During basic operation				During expert operation				During the custom screen change			
	IC-602		IC-308/IC-415		IC-602		IC-308/IC-415		IC-602		IC-308/IC-415	
	Equip	Not Equip	Equip	Not Equip	Equip	Not Equip	Equip	Not Equip	Equip	Not Equip	Equip	Not Equip
RU-509	-	-	-	-	-	-	-	-	Ex	G7	Ex	G7
ExColor/G7	-	-	-	-	-	-	-	-	Ex	G7	Ex	G7
2.2 Gamma Automatic Adjustment	-	-	-	-	○	○	○	○	○	○	○	○

2.2.2 Procedure

1. On the touch panel of the main body, press [Adjustment] on the [MACHINE] screen.
2. Press [Execute Adjust Operation] on the [Adjustment Menu] screen.
3. Press [Gamma Automatic Adj.] and press [OK].
4. Press [Exit [ADJUSTMENT]].

2.3 Density balance adjustment

2.3.1 Execution timing

- : Indispensable item
- : Execution-recommended item

Execution timing of CE

Controller RU-509 ExColor/G7	During installation						After the replacement of the drum, the developer, the developing unit, or the charging corona					
	IC-602				IC-308/IC-415		IC-602				IC-308/IC-415	
	Equip		Not Equip		Equip	Not Equip	Equip		Not Equip		Equip	Not Equip
	Ex	G7	Ex	G7	-	-	Ex	G7	Ex	G7	-	-
2.5 Density Balance Adjustment	•		•		•	•	•		•		•	•

Execution timing of the user

Controller RU-509 ExColor/G7	During basic operation				During expert operation				During the custom screen change			
	IC-602		IC-308/IC-415		IC-602		IC-308/IC-415		IC-602		IC-308/IC-415	
	Equip		Not Equip		Equip	Not Equip	Equip	Not Equip	Equip	Not Equip	Equip	Not Equip
	-	-	-	-	-	-	-	-	Ex	G7	Ex	G7
2.5 Density Balance Adjustment	-	-	-	-	-	-	-	-	•	•	•	•

2.3.2 Procedure

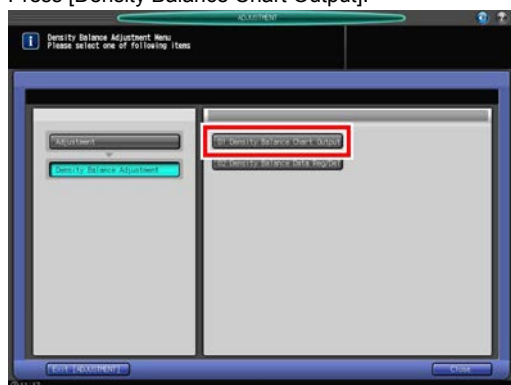
(1) For i1Pro/i1Pro2/ES-1000/ES-2000

NOTE

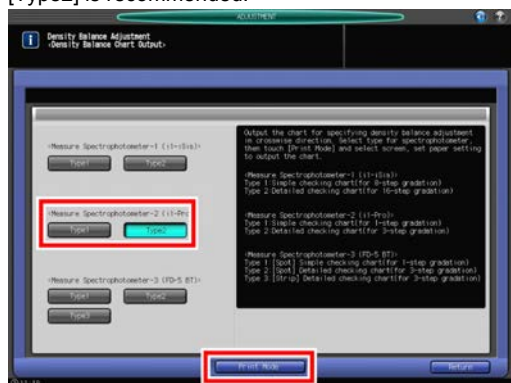
- To measure the chart, use the X-rite Measure tool. Install the tool in advance.
You can download the X-rite Measure tool at the following Web site. After installing the tool, restart the computer.
ProfileMaker 5 v5.0.10:

http://www.xrite.com/product_overview.aspx?ID=757&Action=Support

- On the touch panel of the main body, press [Adjustment] on the [MACHINE] screen.
- Press [Density Balance Adjustment] on the [Adjustment Menu] screen.
- Press [Density Balance Chart Output].



- Select the desired chart type from "Measure Spectrophotometer-2", and press [Print Mode]. [Type2] is recommended.



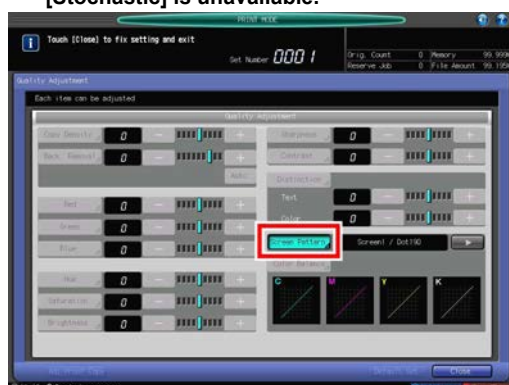
- Press [Quality Adj.].



6. Press [Screen Pattern] and select the screen that is changed at "Change setting of Custom Screen" in the adjustment items (screen for Density balance adjustment).

NOTE

- [Stochastic] is unavailable.



7. Select paper for chart output.

NOTE

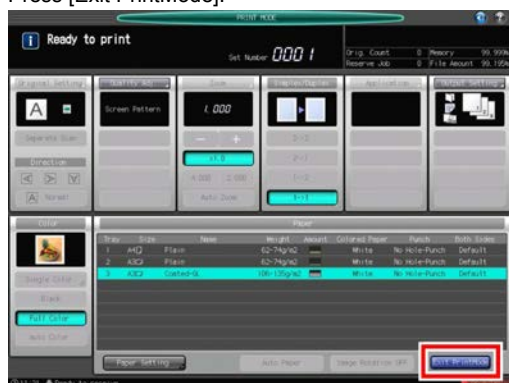
- Load 12 x 18, SRA3, 11 x 17, or A3 paper in a tray, then select that tray.
Load the paper of paper type and weight that you want to register on the density balance adjustment data into the target tray.
- This machine selects the density balance adjustment data to apply a job in accordance with the following priority.
Priority 1: Screen > Priority 2: Paper Type > Priority 3: Weight > Priority 4: Registered Order
(If there is no density balance adjustment data for the screen that corresponds to a job, the job is output without correcting its density balance.)



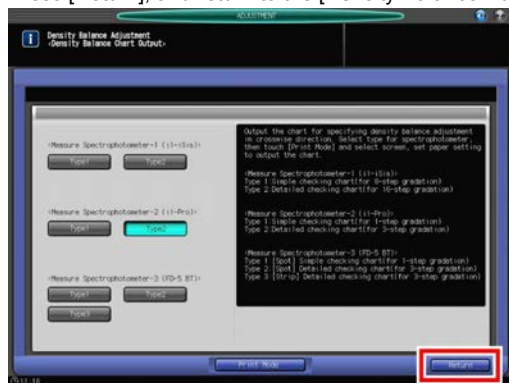
8. Press Start on the control panel to output the color chart.



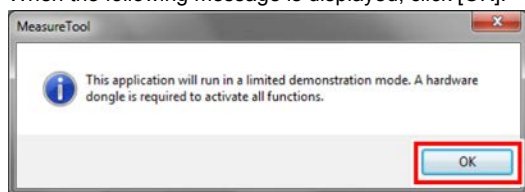
9. Press [Exit PrintMode].



10. Press [Return], and return to the [Density Balance Adjustment Menu] screen.



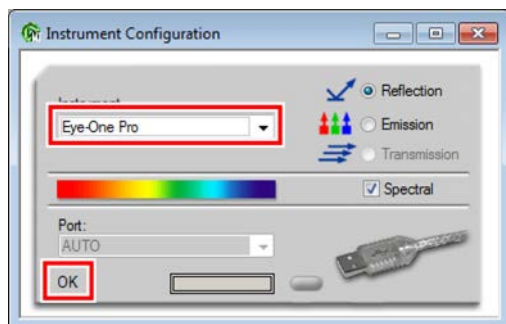
11. On the computer where the X-rite Measure tool. I has been installed, select [Start] - [All Programs] - [X-Rite] - [ProfileMaker Pro 5.0.10] - [MeasureTool].
12. When the following message is displayed, click [OK].



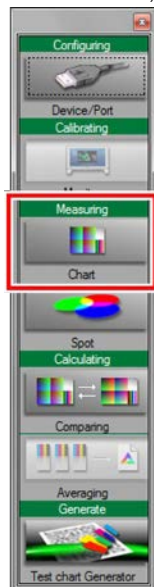
13. Connect the instrument to the computer. From the menu, click [Configuring].



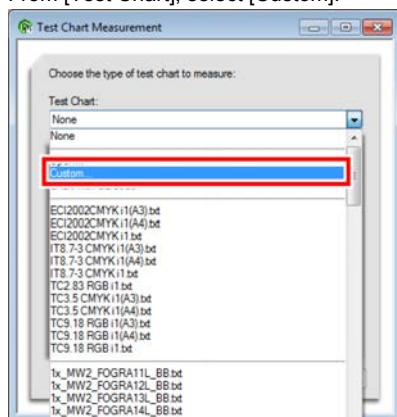
14. In [Instrument], select [Eye-One Pro]. When [OK] is displayed, close the screen.



15. From the menu, click [Measuring].

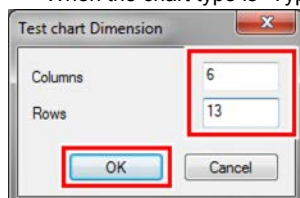


16. From [Test Chart], select [Custom].

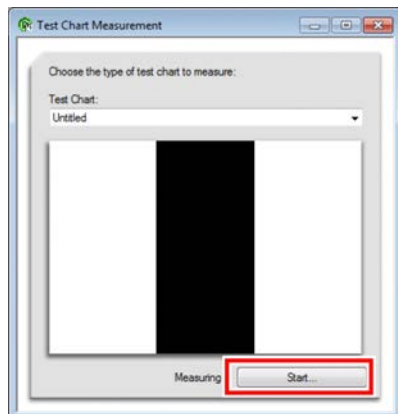


17. Specify [Columns] and [Rows], and click [OK].

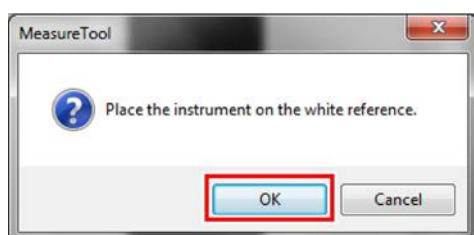
- When the chart type is "Type 1": [Columns] = 6, [Rows] = 5
- When the chart type is "Type 2": [Columns] = 6, [Rows] = 13



18. Click [Start].



19. When the following message is displayed, horizontally place the spectrophotometer on the calibration dock and click [OK].



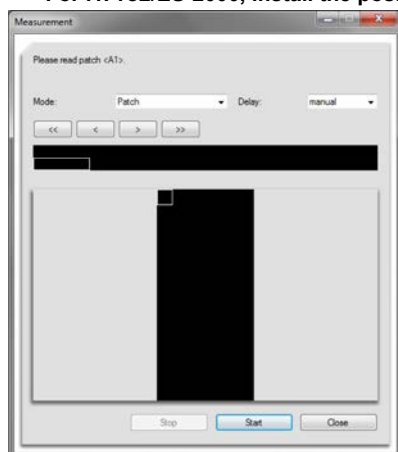
20. Stack 10 sheets of blank paper whose type is the same as that of the paper where chart has been printed, and place the printed chart on top of it.

21. When the following screen is displayed, place the spectrophotometer on the patch at the top in the upper left, and press the button for the spectrophotometer.

When beep sounds, check that the read patch is displayed on the screen.


NOTE

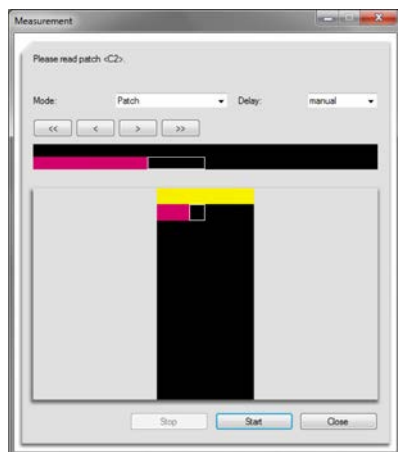
- For i1Pro2/ES-2000, install the positioning target to the spectrophotometer before you measure the color.



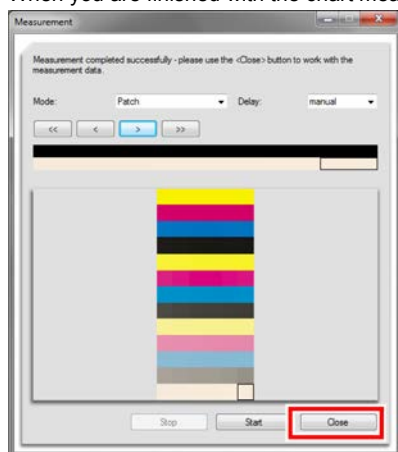
22. Continuously, place the spectrophotometer on the next right patch, and press the button for the spectrophotometer. Measure all the patches in the same operation.

NOTE

- If you place the spectrophotometer on the wrong place (patch), click the  button to go back to the previous patch position.
- The white portion where it is displayed that nothing is printed is also part of the patch. Do not forget to measure it. If not measured, an error will occur.



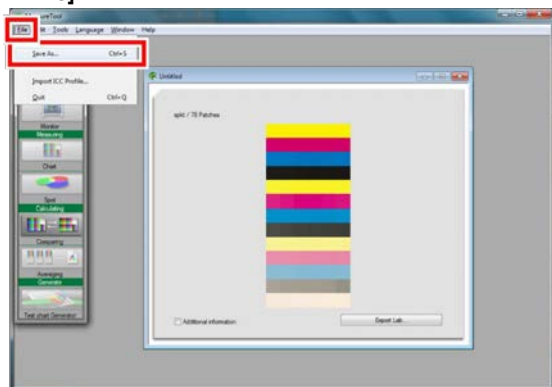
23. When you are finished with the chart measurement, click [Close].



24. From the [File] menu, select [Save As].

NOTE

- If you use [Export Lab], an error occurs when registering the color adjustment data. When saving the data, always use [Save As].



25. Specify the destination to save.

Specify USB memory or the computer connected to the machine via the network.

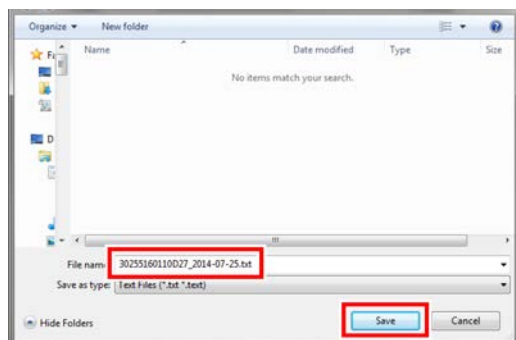
Destination to save	Description
USB Memory	Connect the USB memory to the computer. Create a folder, "C1070\ADJUST_DATA," in the root (immediately below) of the USB memory, and specify the place as the destination to save.
Computer on the network	Open the computer connected to the network used by the machine, and specify a desired folder.

26. Enter the file name to save the measured data and click [Save].

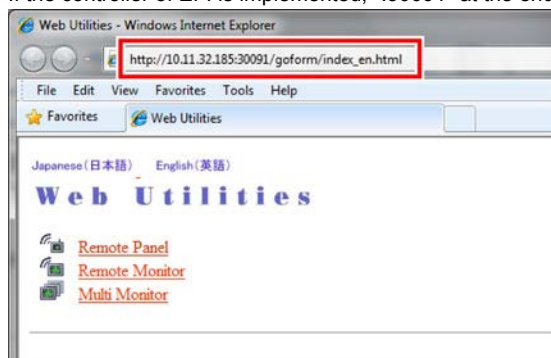
Specify the "14-character identification number printed on the chart" + "_" (underscore) + "character string of up to 21 characters."
Example: 30255160110D27_2014-07-25.txt

NOTE

- When you save in a USB memory, go to "[R.2.3.2.\(4\) Added procedures \(Registration of color measurement data using a USB memory\)](#)".



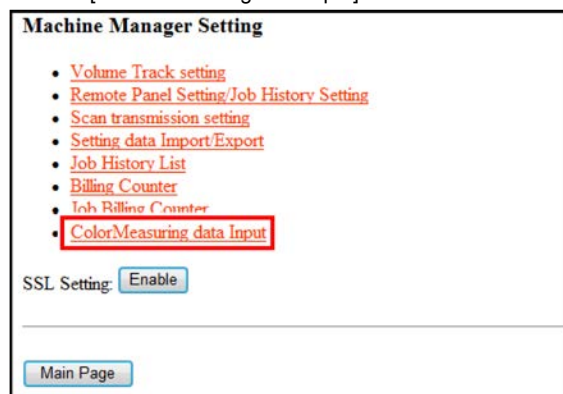
27. On the computer on the network where the measured data has been saved, open a Web browser.
 28. In the URL field, enter "http://IP address of the machine (or the host name):30091" and press the Enter key.
 If the controller of EFI is implemented, ":30091" at the end of the IP address is unnecessary.



29. Click [Machine Manager Setting], and enter the administrator ID and password.



30. Click on [Color Measuring data Input].



31. Enter the file name for colorimetric data into [File Name], click [Browse] on the side of the file path, and select the colorimetric data saved in the computer.
 32. Click [Upload].
 Colorimetric data is saved in the machine.

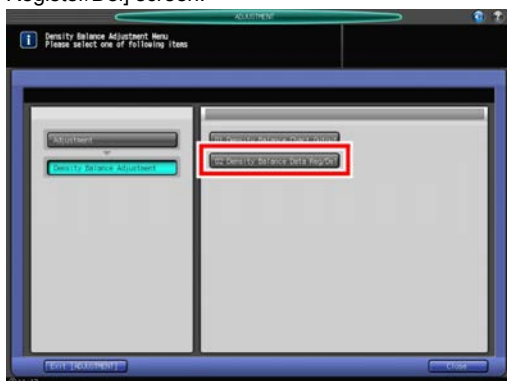
ColorMeasuring data Input

ColorMeasuring data

File Name

File Path

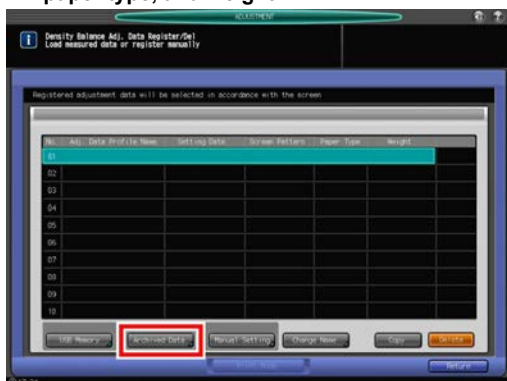
33. Press [Density Balance Data Reg/Del] on the [Density Balance Adjustment Menu] screen to display the [Density Balance Adj. Data Register/Del] screen.



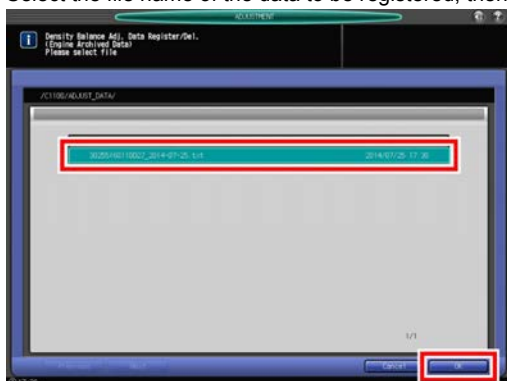
34. Select any one row in the list of 10 profiles, and press [Archived Data].

NOTE

- No more than 10 pieces of data can be registered, however, the data can be overwritten. If desired, select the data to be overwritten.
- The colorimetric data can be synthesized and registered. To synthesize data, select the row having the same screen type, paper type, and weight.

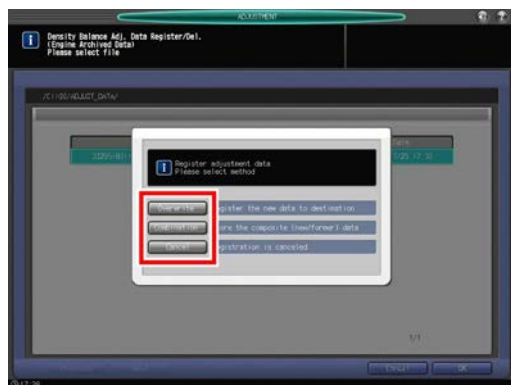


35. Select the file name of the data to be registered, then press [OK].

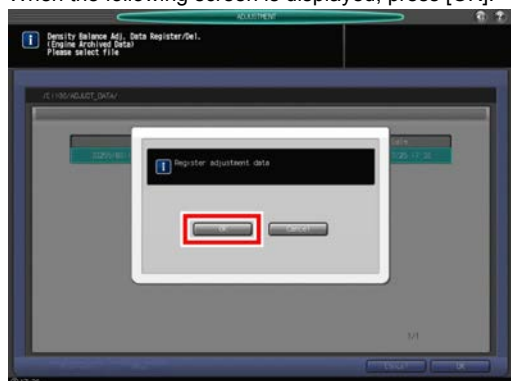


NOTE

- With a row of the existing data selected in step 34, a confirmation dialog is displayed. To synthesize the selected data with the new data, press [Combination]. If conditions for screen type, paper type, or weight do not correspond to each other, [Combination] dims.



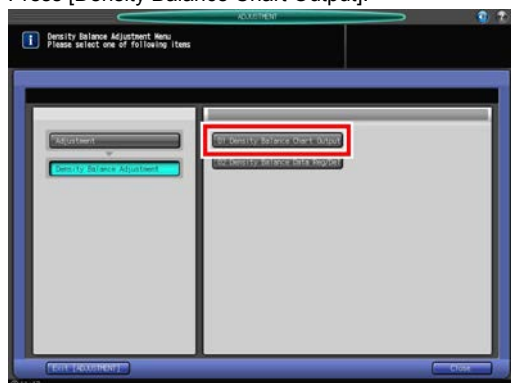
36. When the following screen is displayed, press [OK].



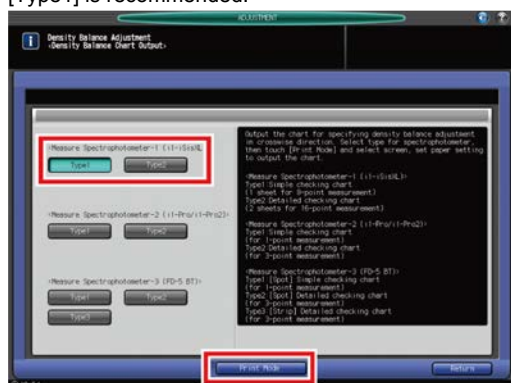
(2) For i1iSis

NOTE

- To measure the chart, use the X-rite Measure tool. Install the tool in advance.
You can download the X-rite Measure tool at the following Web site. After installing the tool, restart the computer.
ProfileMaker 5 v5.0.10:
http://www.xrite.com/product_overview.aspx?ID=757&Action=Support
- On the touch panel of the main body, press [Adjustment] on the [MACHINE] screen.
 - Press [Density Balance Adjustment] on the [Adjustment Menu] screen.
 - Press [Density Balance Chart Output].



- Select the desired chart type from "Measure Spectrophotometer-1", and press [Print Mode].
[Type1] is recommended.



- Press [Quality Adj.].



6. Press [Screen Pattern] and select the screen that is changed at "Change setting of Custom Screen" in the adjustment items (screen for Density balance adjustment).

NOTE

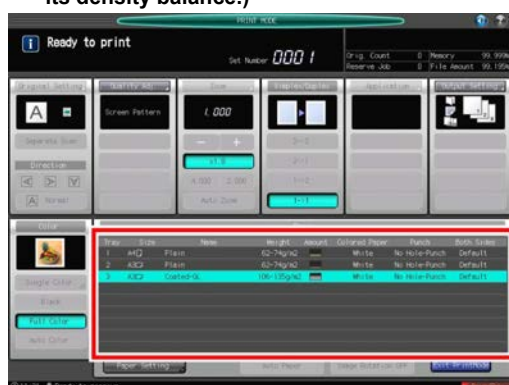
- [Stochastic] is unavailable.



7. Select paper for chart output.

NOTE

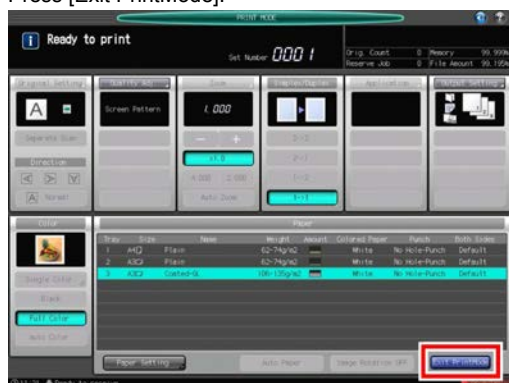
- Load 12 x 18, SRA3, 11 x 17, or A3 paper in a tray, then select that tray.
Load the paper of paper type and weight that you want to register on the density balance adjustment data into the target tray.
- This machine selects the density balance adjustment data to apply a job in accordance with the following priority.
Priority 1: Screen > Priority 2: Paper Type > Priority 3: Weight > Priority 4: Registered Order
(If there is no density balance adjustment data for the screen that corresponds to a job, the job is output without correcting its density balance.)



8. Press Start on the control panel to output the color chart.



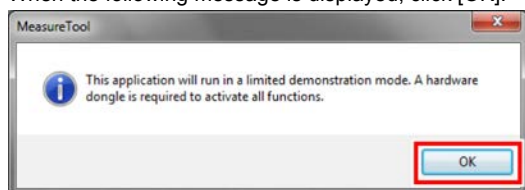
9. Press [Exit PrintMode].



10. Press [Return], and return to the [Density Balance Adjustment Menu] screen.



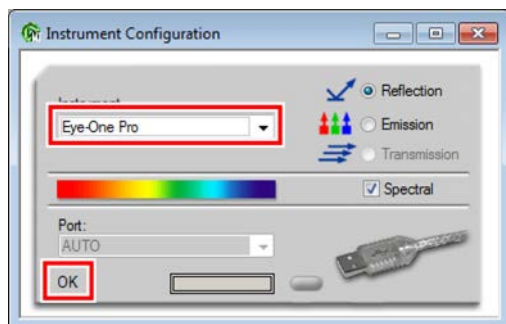
11. On the computer where the X-rite Measure tool. I has been installed, select [Start] - [All Programs] - [X-Rite] - [ProfileMaker Pro 5.0.10] - [MeasureTool].
12. When the following message is displayed, click [OK].



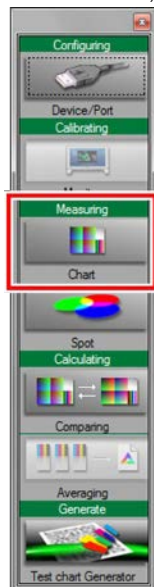
13. Connect the instrument to the computer. From the menu, click [Configuring].



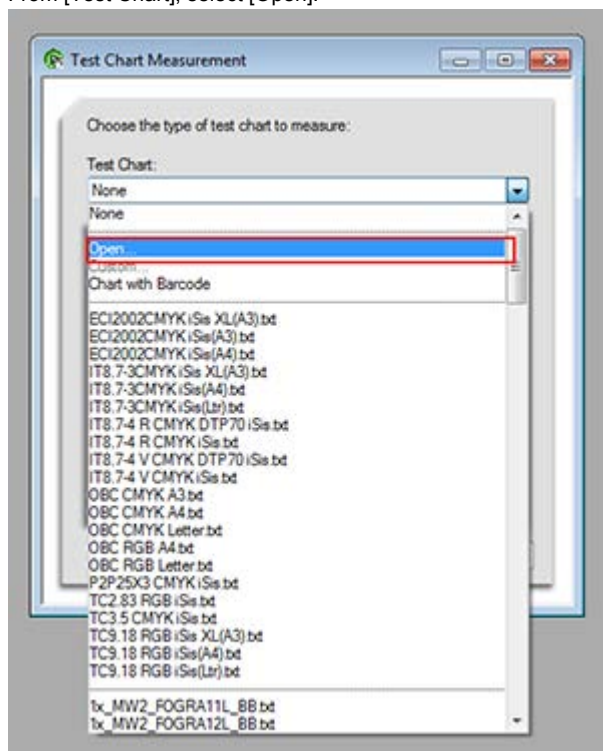
14. In [Instrument], select [Eye-One Pro]. When [OK] is displayed, close the screen.



15. From the menu, click [Measuring].



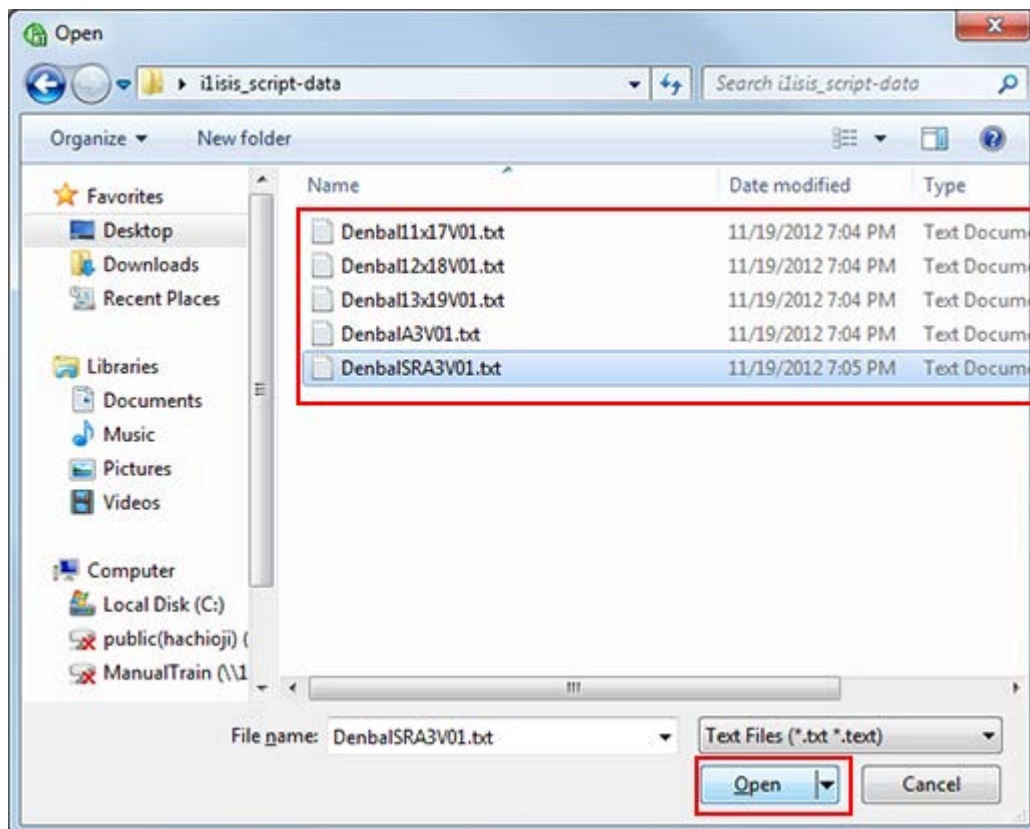
16. From [Test Chart], select [Open].



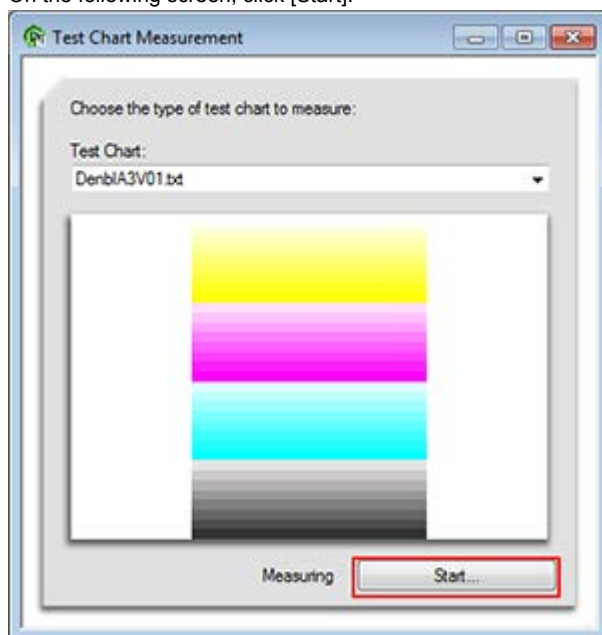
17. Select the script data for measurement according to the paper size, and click [Open].

NOTE

- For details about the script data, contact your service representative.
 - Denbal1117V01.txt: Data for the paper of 11 x 17 inches
 - Denbal1218V01.txt: Data for the paper of 12 x 18 inches
 - Denbal1319V01.txt: Data for the paper of 13 x 19 inches
 - DenbalA3V01.txt: Data for the A3 paper
 - DenbalSRA3V01.txt: Data for the SRA3 paper



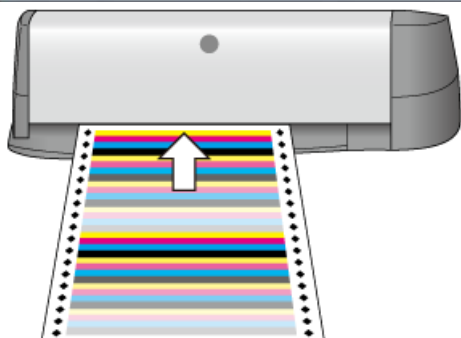
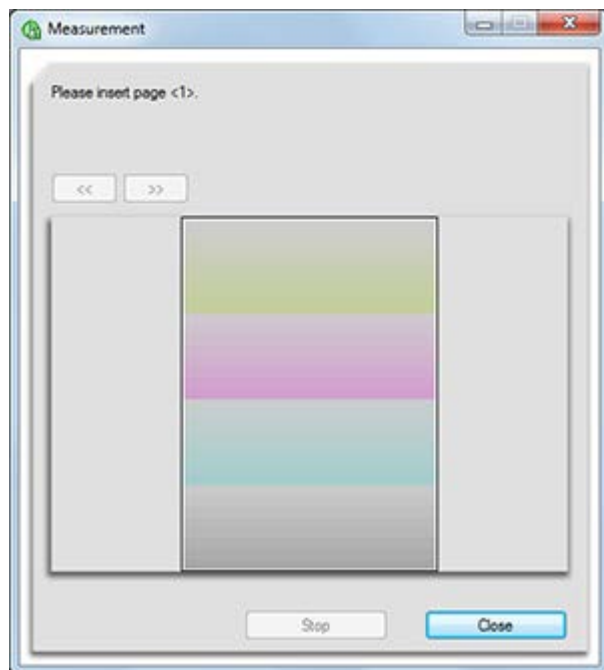
18. On the following screen, click [Start].



19. When the following message is displayed, insert the chart into i1iSis.

NOTE

- Cut off the left side of the chart using scissors or such other tools so that the length between the left end of the chart and the black diamond symbol (◆) becomes about 10 mm.
- Align the left end of the paper to the left end of the insert opening of i1iSis, and automatically feed the paper one by one. When correctly inserted, the chart is pulled in a few centimeters and comes back a little, and then after a little while, reading starts.



20. From the [File] menu, select [Save As].

NOTE

- If you use [Export Lab], an error occurs when registering the color adjustment data. When saving the data, always use [Save As].

21. Specify the destination to save.

Specify USB memory or the computer connected to the machine via the network.

Destination to save	Description
USB Memory	Connect the USB memory to the computer. Create a folder, "C1070\ADJUST _DATA," in the root (immediately below) of the USB memory, and specify the place as the destination to save.
Computer on the network	Open the computer connected to the network used by the machine, and specify a desired folder.

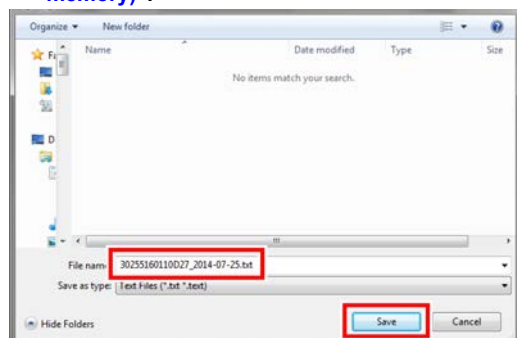
22. Enter the file name to save the measured data and click [Save].

Specify the "14-character identification number printed on the chart" + "_" (underscore) + "character string of up to 21 characters."

Example: 30255160110D27_2014-07-25.txt

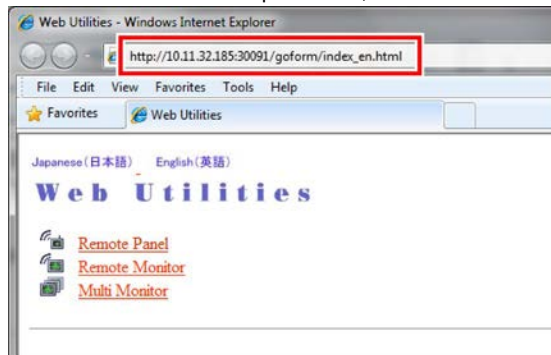
NOTE

- When you save in a USB memory, go to "[R.2.3.2.\(4\) Added procedures \(Registration of color measurement data using a USB memory\)](#)".



23. On the computer on the network where the measured data has been saved, open a Web browser.

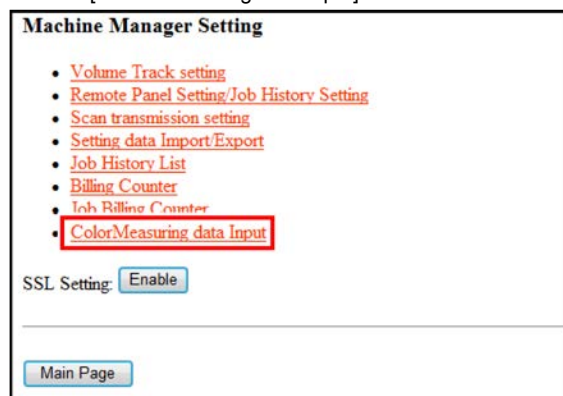
24. In the URL field, enter "http://IP address of the machine (or the host name):30091" and press the Enter key.
If the controller of EFI is implemented, ":30091" at the end of the IP address is unnecessary.



25. Click [Machine Manager Setting], and enter the administrator ID and password.

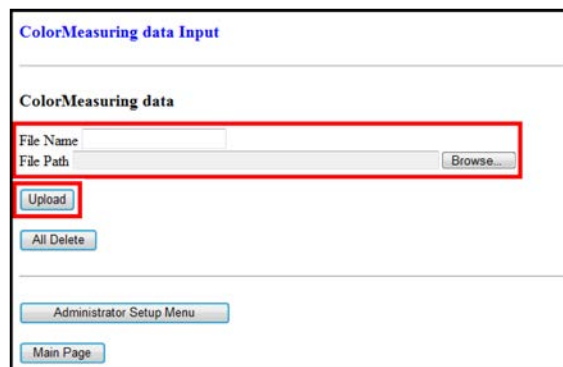


26. Click on [Color Measuring data Input].

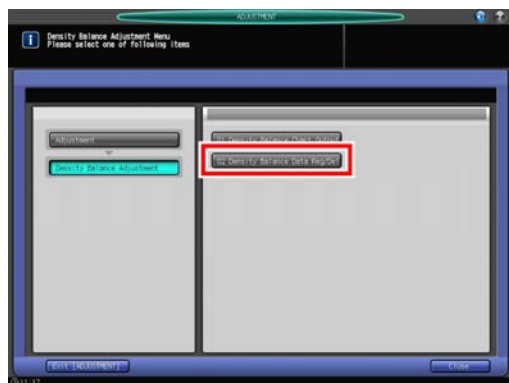


27. Enter the file name for colorimetric data into [File Name], click [Browse] on the side of the file path, and select the colorimetric data saved in the computer.

28. Click [Upload].
Colorimetric data is saved in the machine.



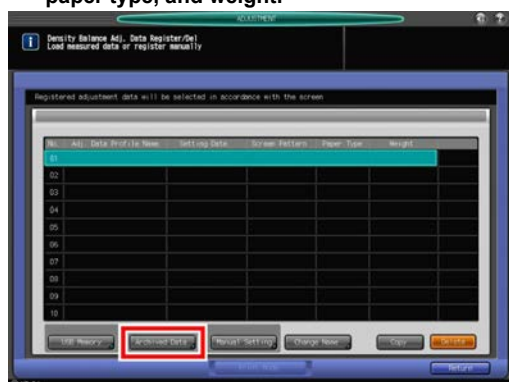
29. Press [Density Balance Data Reg/Del] on the [Density Balance Adjustment Menu] screen to display the [Density Balance Adj. Data Register/Del] screen.



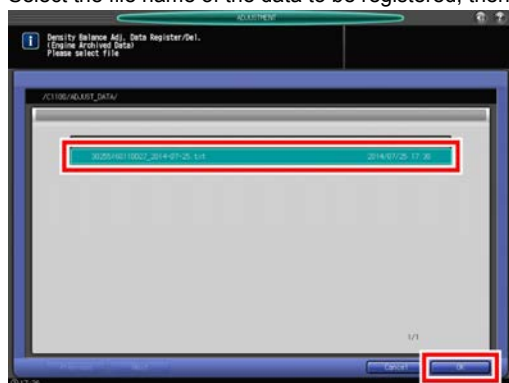
30. Select any one row in the list of 10 profiles, and press [Archived Data].

NOTE

- No more than 10 pieces of data can be registered, however, the data can be overwritten. If desired, select the data to be overwritten.
- The colorimetric data can be synthesized and registered. To synthesize data, select the row having the same screen type, paper type, and weight.



31. Select the file name of the data to be registered, then press [OK].

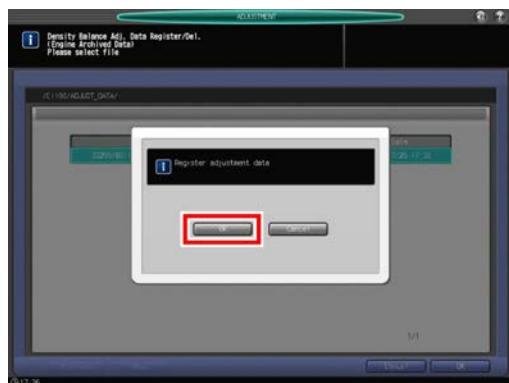


NOTE

- With a row of the existing data selected in step 30, a confirmation dialog is displayed. To synthesize the selected data with the new data, press [Combination]. If conditions for screen type, paper type, or weight do not correspond to each other, [Combination] dims.



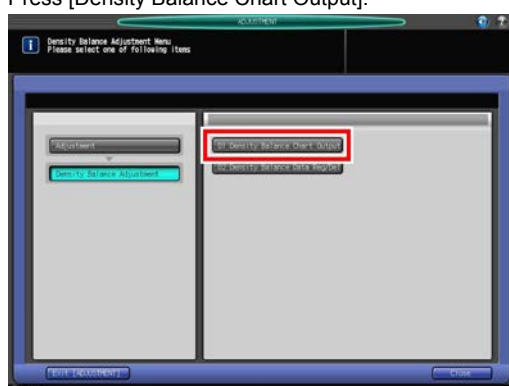
32. When the following screen is displayed, press [OK].



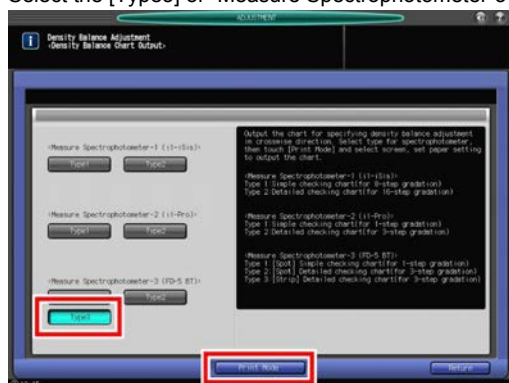
(3) For FD-5BT

NOTE

- To measure the chart, use the Color Care measure. Install the Color Care measure in advance.
To use Color Care measure, you need to acquire a license key. For details, refer to the user's guide that comes with Color Care measure.
- On the touch panel of the main body, press [Adjustment] on the [MACHINE] screen.
 - Press [Density Balance Adjustment] on the [Adjustment Menu] screen.
 - Press [Density Balance Chart Output].



- Select the [Type3] of "Measure Spectrophotometer-3", and press [Print Mode].



- Press [Quality Adj.].



- Press [Screen Pattern] and select the screen that is changed at "Change setting of Custom Screen" in the adjustment items (screen for Density balance adjustment).

NOTE

- [Stochastic] is unavailable.



7. Select paper for chart output.

NOTE

- Load 12 x 18, SRA3, 11 x 17, or A3 paper in a tray, then select that tray.
Load the paper of paper type and weight that you want to register on the density balance adjustment data into the target tray.
- This machine selects the density balance adjustment data to apply a job in accordance with the following priority.
Priority 1: Screen > Priority 2: Paper Type > Priority 3: Weight > Priority 4: Registered Order
(If there is no density balance adjustment data for the screen that corresponds to a job, the job is output without correcting its density balance.)



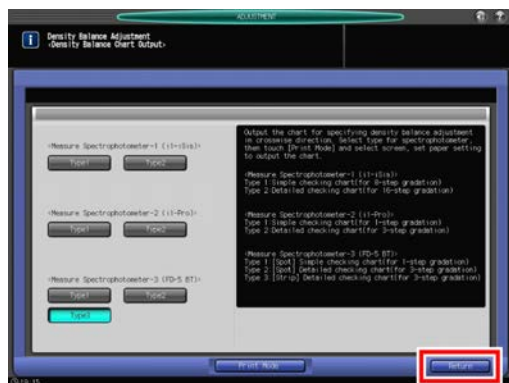
8. Press Start on the control panel to output the color chart.



9. Press [Exit PrintMode].



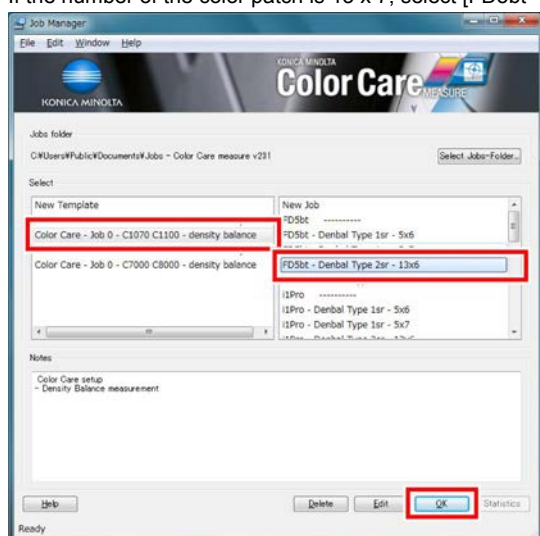
10. Press [Return], and return to the [Density Balance Adjustment Menu] screen.



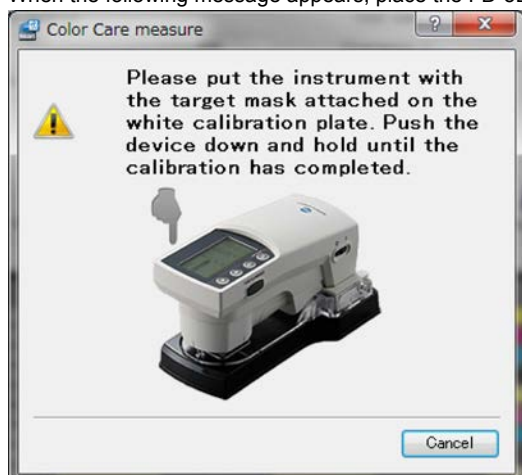
11. On the computer where the Color Care measure. I has been installed, select [Start] - [All Programs] - [Konica Minolta Color Care] - [Color Care measure].
12. Connect FD-5BT to the computer, and activate the power of FD-5BT.



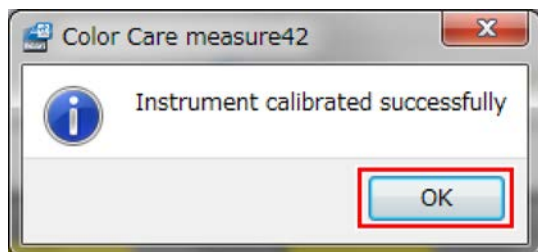
13. Click [Color Care - Job 0 - C1070 C1100 - density balance]. Then, click [FD5bt - Denbal Type 2sr - 13x6], and click [OK]. If the number of the color patch is 13 x 7, select [FD5bt - Denbal Type 2sr - 13x7].



14. When the following message appears, place the FD-5BT on the white calibration plate, and press the FD-5BT.



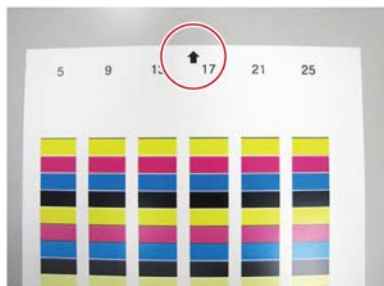
15. When the following message is displayed, click [OK].



16. Stack 10 sheets of blank paper whose type is the same as that of the paper where chart has been printed, and place the printed chart on top of it.

NOTE

- Make sure that the arrow of the chart points up when you place the charts.

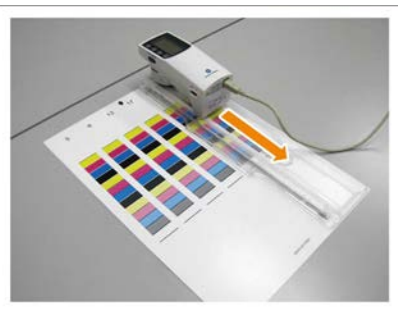
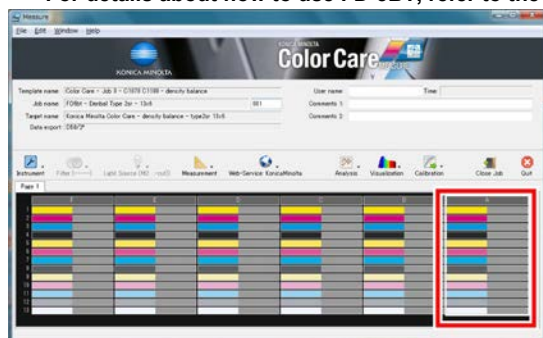


17. Click [A], and measure charts from the right row (the row which has larger numbers).

- Hold down the side button of FD-5BT. When "bleep" sounds, slide FD-5BT while holding down the side button. Slide FD-5BT to the bottom side, then release the side button.

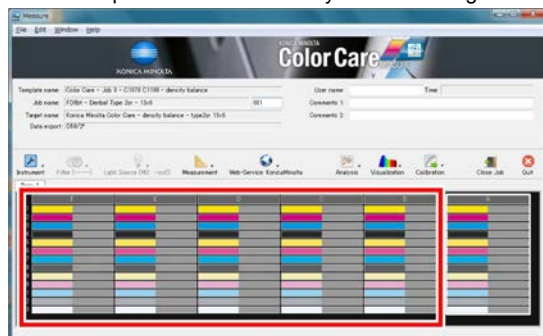
NOTE

- For details about how to use FD-5BT, refer to the manual supplied with the spectrophotometer.

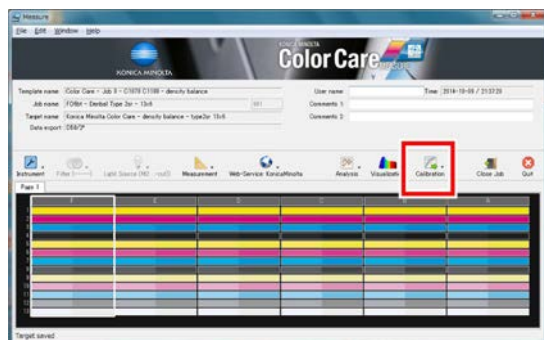


18. Likewise, measure the rest of the rows.

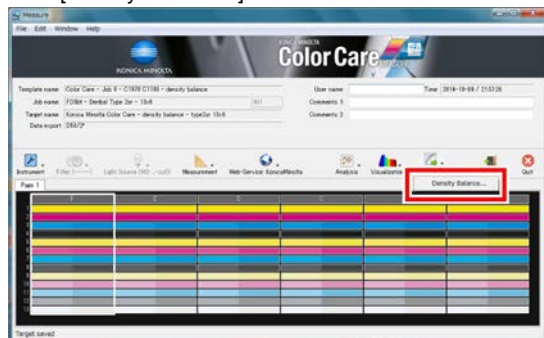
Click the alphabet of the row that you measure again when you mistake the row (patch) that you measure.



19. After you finish the chart measurement, click [Calibration].



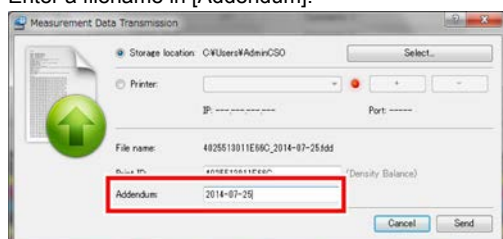
20. Click [Density Balance...].



21. Enter the 14-digit identification number that is printed to the chart in [Print ID].
Example: 4025513011E66C

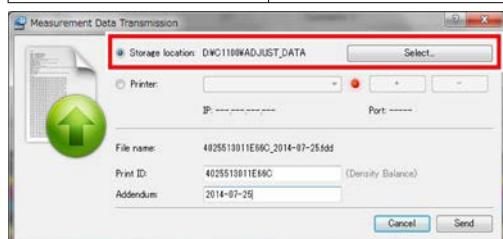


22. Enter a filename in [Addendum].



23. Save the measurement data to the USB memory or the machine.

Destination to save	Description
USB Memory	Connect the USB memory to the computer, and click [Storage location] and [Select...]. Create a folder, "C1070ADJUST_DATA", in the root (immediately below) of the USB memory, and specify the place as the destination to save. Finally, click [Send].
Computer on the network	Connect the computer to the same network as the machine, and move on to the next step.

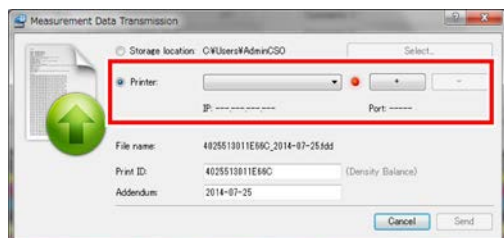


NOTE

- When you save in a USB memory, go to "R.2.3.2.(4) Added procedures (Registration of color measurement data using a USB memory)".

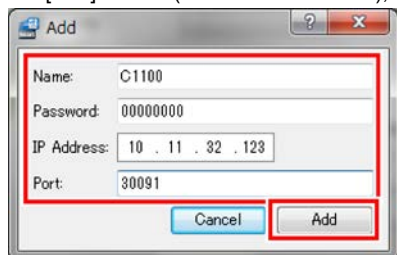
24. Click [Printer], and click [+].

If you have added the machine as the destination to save, select the machine from [Printer].



25. Enter the information of the machine, and click [Add].

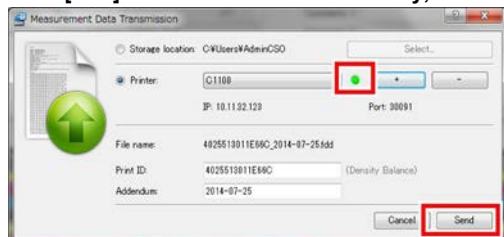
- [Name]: Any name
- [Password]: Administrator password
- [IP Address]: The IP address of the machine
- [Port]: 30091 (when IC-602 is used), 80 (when EFI controller is used)



26. Click [Send].

NOTE

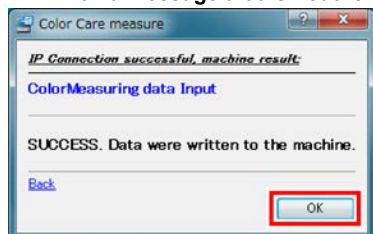
- If [Add] has not finished successfully, the lamp remains red.



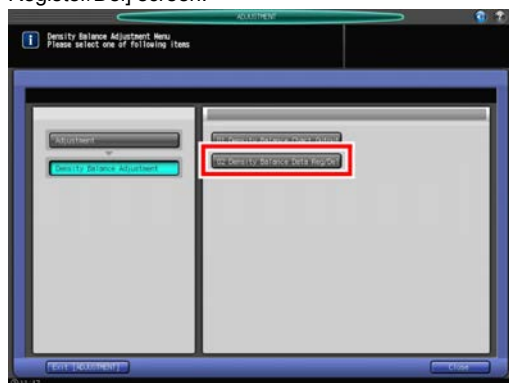
27. When the following message appears, click [OK].

NOTE

- When a message that is not the following appears, check the information of [Add] again.



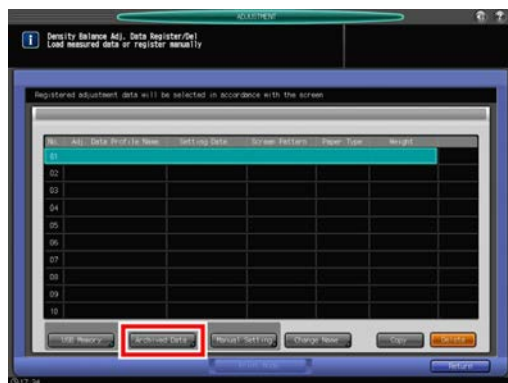
28. Press [Density Balance Data Reg/Del] on the [Density Balance Adjustment Menu] screen to display the [Density Balance Adj. Data Register/Del] screen.



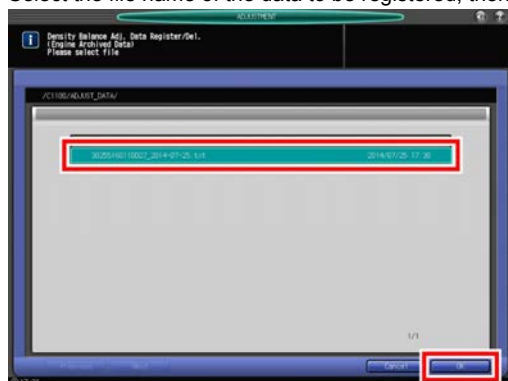
29. Select any one row in the list of 10 profiles, and press [Archived Data].

NOTE

- No more than 10 pieces of data can be registered, however, the data can be overwritten. If desired, select the data to be overwritten.
- The colorimetric data can be synthesized and registered. To synthesize data, select the row having the same screen type, paper type, and weight.



30. Select the file name of the data to be registered, then press [OK].

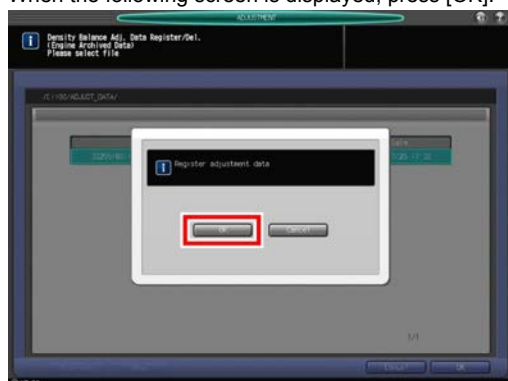


NOTE

- With a row of the existing data selected in step 29, a confirmation dialog is displayed. To synthesize the selected data with the new data, press [Combination]. If conditions for screen type, paper type, or weight do not correspond to each other, [Combination] dims.

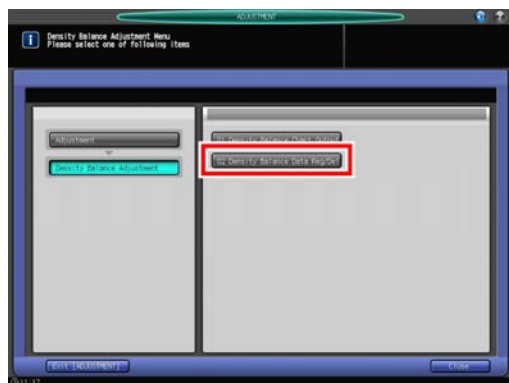


31. When the following screen is displayed, press [OK].



(4) Added procedures (Registration of color measurement data using a USB memory)

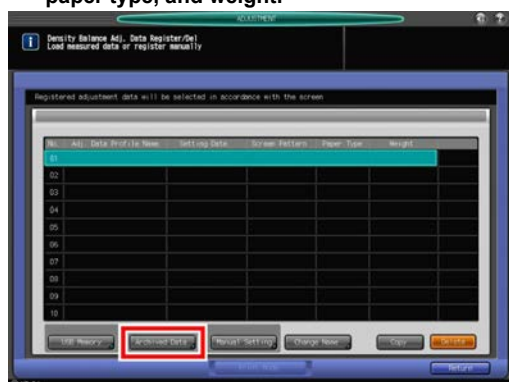
1. Press [Density Balance Data Reg/Del] on the [Density Balance Adjustment Menu] screen to display the [Density Balance Adj.



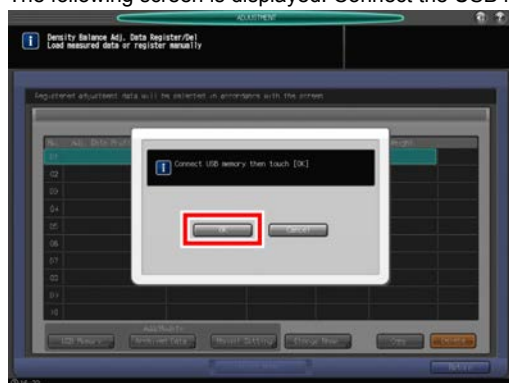
2. Select any one row in the list of 10 profiles, and press [USB Memory].

NOTE

- No more than 10 pieces of data can be registered, however, the data can be overwritten. If desired, select the data to be overwritten.
- The colorimetric data can be synthesized and registered. To synthesize data, select the row having the same screen type, paper type, and weight.



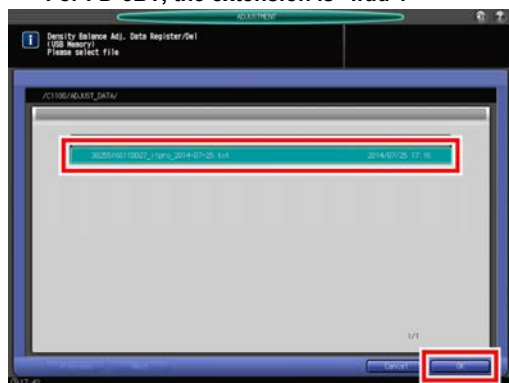
3. The following screen is displayed. Connect the USB memory where the measured data has been saved to the main body, and press [OK].



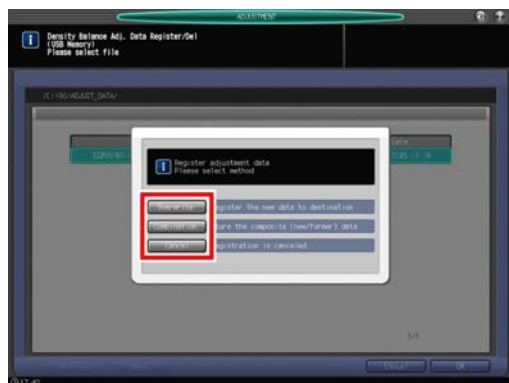
4. Select the file name of the measured data to be registered and press [OK].

NOTE

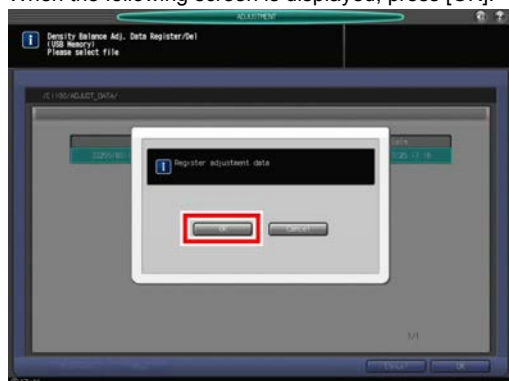
- For FD-5BT, the extension is ".fdd".

**NOTE**

- With a row of the existing data selected in step 2, a confirmation dialog is displayed. To synthesize the selected data with the new data, press [Combination]. If conditions for screen type, paper type, or weight do not correspond to each other, [Combination] dims.



5. When the following screen is displayed, press [OK].



2.4 Maximum density initial adjustment

2.4.1 Execution timing

Note

- Maximum density initial adjustment is already adjusted at the factory setting.

●: Indispensable item

○: Execution-recommended item

Execution timing of CE

Controller	During installation						After the replacement of the drum, the developer, the developing unit, or the charging corona					
	IC-602				IC-308/IC-415		IC-602				IC-308/IC-415	
	Equip		Not Equip		Equip	Not Equip	Equip		Not Equip		Equip	Not Equip
RU-509	Ex	G7	Ex	G7	-	-	Ex	G7	Ex	G7	-	-
ExColor/G7	Ex	G7	Ex	G7	-	-	Ex	G7	Ex	G7	-	-
2.4 Maximum Density Initial Adjustment	○		○		○	○	○		○		○	○

Execution timing of the user

Controller	During basic operation				During expert operation				During the custom screen change			
	IC-602		IC-308/IC-415		IC-602		IC-308/IC-415		IC-602		IC-308/IC-415	
	Equip	Not Equip	Equip	Not Equip	Equip	Not Equip	Equip	Not Equip	Equip	Not Equip	Equip	Not Equip
RU-509	-	-	-	-	-	-	-	-	Ex	G7	Ex	G7
ExColor/G7	-	-	-	-	-	-	-	-	Ex	G7	Ex	G7
2.4 Maximum Density Initial Adjustment	-	-	-	-	-	-	-	-	-	-	-	-

2.4.2 Adjustment target value of C1070/C1070P/C1060/C1060L (reference)

The following shows the target density according to the spectrophotometer and the standard paper.

Acceptable target density range of each color Y, M, C: -5% to +5%, K: -5% to +10%

(1) Spectrolino (recommended)

Standard paper	Type of paper	Y	M	C	K
POD GLOSS COAT 128 g/m ² (coated, for Japan)	Coated-GL	0.98	1.54	1.51	1.85
MOHAWK EVERYDAY DIGITAL COATED SILK WHITE 118 (coated, for North America)	Coated-GL	0.97	1.52	1.52	1.82

Konica Minolta Semi Gloss Reference 130 (coated, for Europe)	Coated-GL	0.97	1.53	1.49	1.77
Mondi Color Copy 90 g/m ² (Plain)	Plain	0.93	1.45	1.39	1.65

(2) FD-7, FD-5BT (recommended)

Standard paper	Type of paper	Y	M	C	K
POD GLOSS COAT 128 g/m ² (coated, for Japan)	Coated-GL	0.98	1.59	1.55	1.91
MOHAWK EVERYDAY DIGITAL COATED SILK WHITE 118 (coated, for North America)	Coated-GL	0.98	1.58	1.58	1.87
Konica Minolta Semi Gloss Reference 130 (coated, for Europe)	Coated-GL	0.98	1.58	1.55	1.82
Mondi Color Copy 90 g/m ² (Plain)	Plain	0.94	1.50	1.44	1.70

(3) ES-1000, ES-2000, i1Pro, i1Pro2 (with UV filter)**Note**

- **Absolute value:** This value (density) includes the density of the paper
- **Relative value:** This value (density) excludes the density of the paper

Absolute value

Standard paper	Type of paper	Y	M	C	K
POD GLOSS COAT 128 g/m ² (coated, for Japan)	Coated-GL	0.98	1.53	1.54	1.88
MOHAWK EVERYDAY DIGITAL COATED SILK WHITE 118 (coated, for North America)	Coated-GL	0.97	1.52	1.54	1.82
Konica Minolta Semi Gloss Reference 130 (coated, for Europe)	Coated-GL	0.97	1.53	1.50	1.77
Mondi Color Copy 90 g/m ² (Plain)	Plain	0.93	1.45	1.39	1.66

Relative value (Relative)

Standard paper	Type of paper	Y	M	C	K
POD GLOSS COAT 128 g/m ² (coated, for Japan)	Coated-GL	0.90	1.46	1.48	1.81
MOHAWK EVERYDAY DIGITAL COATED SILK WHITE 118 (coated, for North America)	Coated-GL	0.90	1.48	1.50	1.77
Konica Minolta Semi Gloss Reference 130 (coated, for Europe)	Coated-GL	0.89	1.47	1.44	1.71
Mondi Color Copy 90 g/m ² (Plain)	Plain	0.87	1.38	1.32	1.59

(4) i1iSis XL

Standard paper	Type of paper	Y	M	C	K
POD GLOSS COAT 128 g/m ² (coated, for Japan)	Coated-GL	0.98	1.55	1.55	1.90
MOHAWK EVERYDAY DIGITAL COATED SILK WHITE 118 (coated, for North America)	Coated-GL	0.96	1.54	1.55	1.85
Konica Minolta Semi Gloss Reference 130 (coated, for Europe)	Coated-GL	0.96	1.55	1.52	1.81
Mondi Color Copy 90 g/m ² (Plain)	Plain	0.92	1.47	1.41	1.68

2.4.3 Adjustment target value of C71hc (reference)

The following shows the target density according to the spectrophotometer and the standard paper.
Acceptable target density range of each color Y, M, C: -5% to +5%, K: -5% to +10%

(1) Spectrolino (recommended)

Standard paper	Type of paper	Y	M	C	K
POD GLOSS COAT 128 g/m ² (coated, for Japan)	Coated-GL	1.03	1.48	1.15	1.85
MOHAWK EVERYDAY DIGITAL COATED SILK WHITE 118 (coated, for North America)	Coated-GL	1.02	1.48	1.13	1.82
Konica Minolta Semi Gloss Reference 130 (coated, for Europe)	Coated-GL	1.02	1.47	1.11	1.77

Mondi Color Copy 90 g/m ² (Plain)	Plain	0.98	1.38	1.06	1.65
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(2) FD-7, FD-5BT (recommended)

Standard paper	Type of paper	Y	M	C	K
POD GLOSS COAT 128 g/m ² (coated, for Japan)	Coated-GL	1.02	1.54	1.21	1.91
MOHAWK EVERYDAY DIGITAL COATED SILK WHITE 118 (coated, for North America)	Coated-GL	1.01	1.54	1.19	1.87
Konica Minolta Semi Gloss Reference 130 (coated, for Europe)	Coated-GL	1.01	1.53	1.17	1.82
Mondi Color Copy 90 g/m ² (Plain)	Plain	0.98	1.43	1.12	1.70

(3) ES-1000, ES-2000, i1Pro, i1Pro2 (with UV filter)**Note**

- **Absolute value:** This value (density) includes the density of the paper
- **Relative value:** This value (density) excludes the density of the paper

Absolute value

Standard paper	Type of paper	Y	M	C	K
POD GLOSS COAT 128 g/m ² (coated, for Japan)	Coated-GL	1.03	1.49	1.18	1.88
MOHAWK EVERYDAY DIGITAL COATED SILK WHITE 118 (coated, for North America)	Coated-GL	1.02	1.49	1.16	1.82
Konica Minolta Semi Gloss Reference 130 (coated, for Europe)	Coated-GL	1.02	1.48	1.14	1.77
Mondi Color Copy 90 g/m ² (Plain)	Plain	0.98	1.39	1.09	1.66

Relative value (Relative)

Standard paper	Type of paper	Y	M	C	K
POD GLOSS COAT 128 g/m ² (coated, for Japan)	Coated-GL	0.95	1.42	1.12	1.81
MOHAWK EVERYDAY DIGITAL COATED SILK WHITE 118 (coated, for North America)	Coated-GL	0.95	1.44	1.12	1.77
Konica Minolta Semi Gloss Reference 130 (coated, for Europe)	Coated-GL	0.94	1.42	1.08	1.71
Mondi Color Copy 90 g/m ² (Plain)	Plain	0.92	1.32	1.02	1.59

(4) i1iSis XL

Standard paper	Type of paper	Y	M	C	K
POD GLOSS COAT 128 g/m ² (coated, for Japan)	Coated-GL	1.01	1.49	1.17	1.90
MOHAWK EVERYDAY DIGITAL COATED SILK WHITE 118 (coated, for North America)	Coated-GL	1.00	1.49	1.15	1.85
Konica Minolta Semi Gloss Reference 130 (coated, for Europe)	Coated-GL	1.00	1.48	1.13	1.81
Mondi Color Copy 90 g/m ² (Plain)	Plain	0.97	1.39	1.07	1.68

2.4.4 Preparation

1. Prepare a standard paper.

Note

- **When there is no standard paper, do not change the maximum density initial adjustment at the installation.**
When there is the standard paper, perform the density balance adjustment with the combination of Dot190 (screen) and the standard paper in advance.

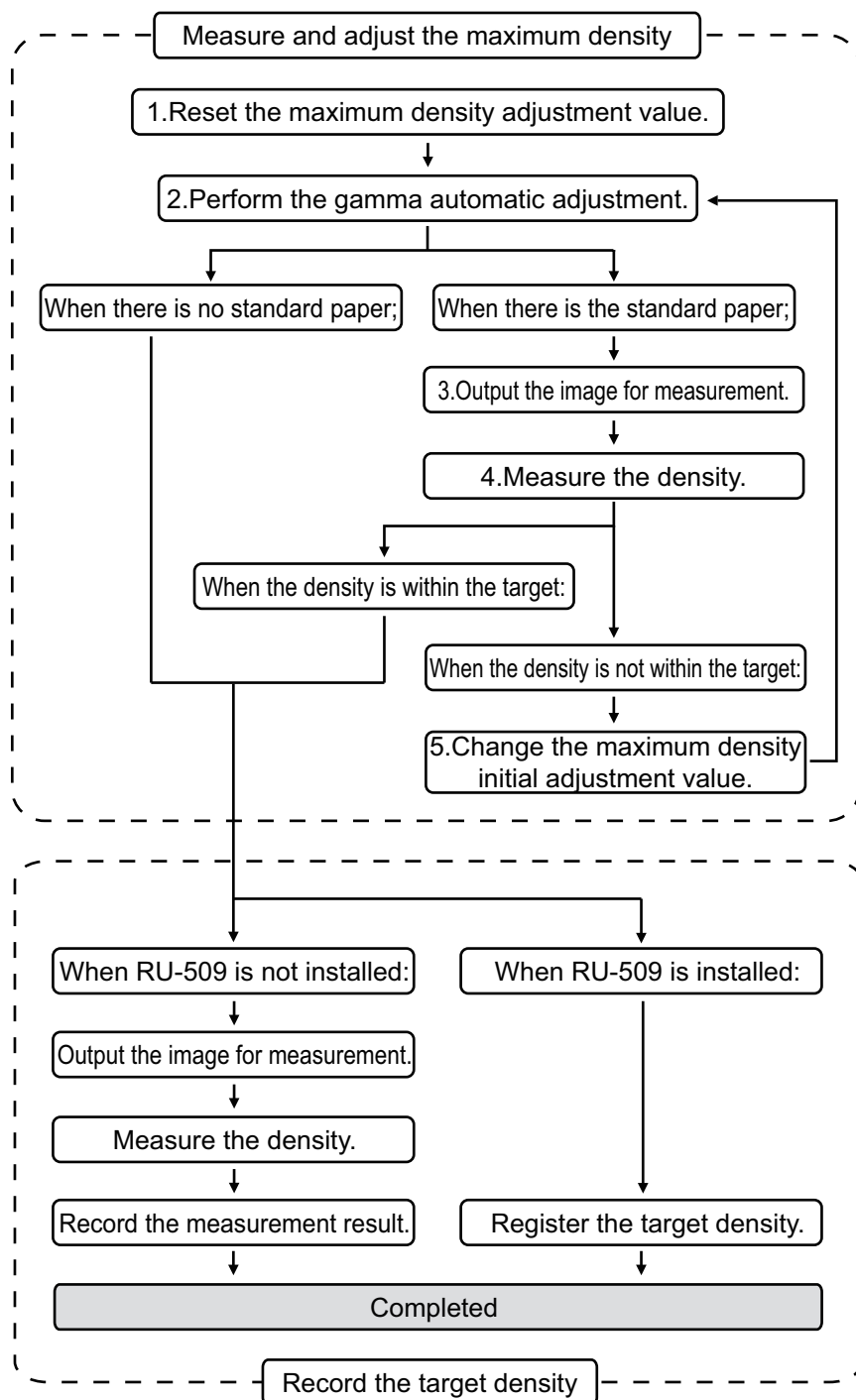
2. Prepare one of the following spectrophotometers.
 - Spectrolino (recommended), FD-7, FD-5BT (recommended)
 - ES-1000, ES-2000, i1Pro, i1Pro2 (one of the spectrophotometers that EFI controller recommends)
 - Other spectrophotometers (such as i1iSis XL)
3. Specify one paper for the daily density management.

Note

- **Standard papers are recommended. However, when the user assigns the paper, counsel with the user and decide the paper.**
- **Perform the density balance adjustment with the combination of Dot190 (screen) and the paper for the density management in advance or before the record of target density.**

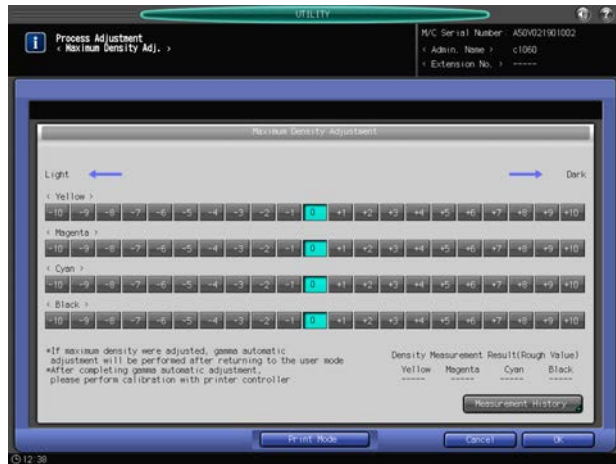
2.4.5 Procedure for the setup

(1) Adjustment flow



(2) Measurement and adjustment procedures of the maximum density

1. Press [Utility/Counter] - [03 Administrator Setting] - [01 System Setting] - [05 Expert Adjustment] - [06 Process Adjustment] - [02 Maximum Density Adjustment].
2. "Maximum Density Adjustment screen"
Select "0" for all adjustment values of YMCK and press [OK].



3. Enter the service mode and perform the gamma automatic adjustment. (Refer to [1.4.4.6 Gamma Automatic Adjustment \(Drum Peculiarity Adjustment\)](#))
4. Select Screen1 (Dot190) in the "Test Pattern Output Mode" on the service mode and output the test pattern number 69. (Refer to [1.4.13.17 Test pattern number 69 Maximum density adjustment pattern](#))

Note

- Use standard papers.

When there is no standard paper, proceed to (c) Recording the target density (when RU-509 is installed) or (d) Recording the target density (when RU-509 is not installed). (Refer to [1.4.4.9.\(6\).\(c\) Recording the target density \(when RU-509 is installed\)](#), [1.4.4.9.\(6\).\(d\) Recording the target density \(when RU-509 is not installed\)](#))

When there is the standard paper, perform the density balance adjustment with the combination of Dot190 (screen) and the standard paper in advance.

5. Measure the density on the test pattern number 69 that you output.

The method differs depending on the spectrophotometer that you use.

- Measure the density with Spectrolino (Refer to [1.4.4.9.\(8\).\(a\) Measure the density with Spectrolino](#))
- Measure the density with FD-7, FD-5BT (Refer to [1.4.4.9.\(8\).\(b\) Measure the density with FD-7, FD-5BT](#))
- Measure the density with ES-1000, ES-2000, i1Pro (Refer to [1.4.4.9.\(8\).\(c\) Measure the density with ES-1000, ES-2000, i1Pro, i1Pro2](#))
- Measure the density with i1Sis XL (Refer to [1.4.4.9.\(8\).\(d\) Measure the density with i1Sis XL](#))

Note

- For the method to measure the density with other spectrophotometers, refer to the manual of each spectrophotometer.

6. Check the measurement result of each color.
Compare the result with the adjustment target value (reference). When the density is within the target, the operation is complete. When the density is not within the target density, perform the following adjustments.
7. Go back to the top screen of the service mode.
8. "Service Mode menu screen"
Press [02 Process Adjustment].
9. "Process Adjustment Menu screen"
Press [02 Drum Peculiarity Adj.].
10. "Drum Peculiarity Adjustment Menu screen"
Press [05 Max Density Initial Adj.].
[Service Mode] → [Process Adjustment] → [Drum Peculiarity Adj.] → [Max Density Initial Adj.]
11. "Maximum Density Initial Adjustment screen"
Adjust the value according to the result of each color. Then, press [OK].
 - The result is lower than the target density: increase the value of the target color.
 - The measurement result is higher than the target density: decrease the value of the target color.
 Setting range: -10 to +10

Note

- The change differs according to the paper.

(Reference) The change for POD GLOSS COAT 128 g/m² (Spectrolino)

- Y: Changes for $\Delta 0.012$ by one step
- M: Changes for $\Delta 0.021$ by one step
- C: Changes for $\Delta 0.026$ by one step
- K: Changes for $\Delta 0.021$ by one step

12. Perform the step 3 to step 6, and check the measurement result.
When the density is not within the target density, perform the adjustments again.

(3) Recording the target density (when RU-509 is installed)

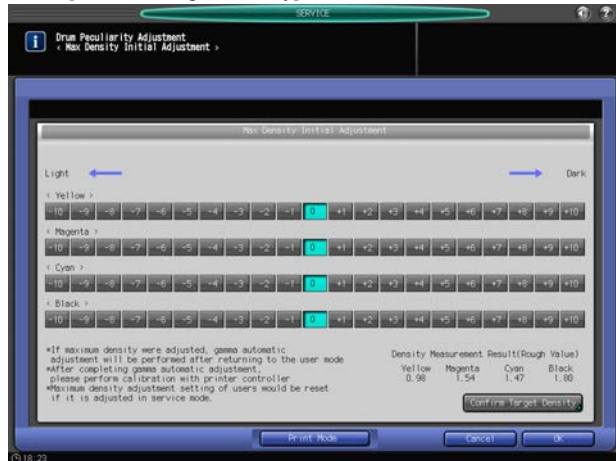
1. Specify a paper for the daily density management and place the papers on the tray.

Note

- Standard papers are recommended. However, when the user assigns the paper, counsel with the user and decide the paper.
- Perform the density balance adjustment with the combination of Dot190 (screen) and the paper for the density management before the record of target density.

2. "Maximum Density Initial Adjustment screen"
Press [Print Mode].

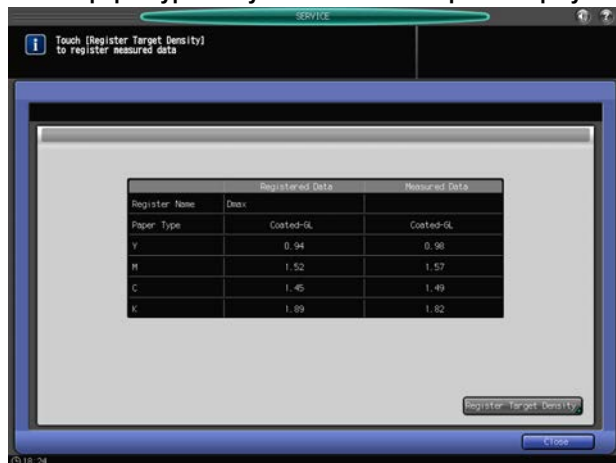
3. "Print Mode screen"
Select the paper for the density management. Press the start key and output the chart.
4. "Maximum Density Initial Adjustment screen"
Press [Confirm Target Density].



5. "Confirm Target Density screen"
Press [Register Target Density].

Note

- The information of the registered target density is displayed on the "Registered Data" column.
- The density data that you measured on the step 3 is displayed on the "Measured Data" column.
- The paper type that you used on the step 3 is displayed on the "Paper Type" column.



6. "Register Target Density screen"
Input the registered name of the target density data.
 7. Press [OK] and register (update) the target density data.
- Note**
- When you press [Cancel], the target density data is not registered (updated).
8. "Maximum Density Initial Adjustment screen"
Press [Confirm Target Density], and check that the information on "Registered Data" is updated.

(4) Recording the target density (when RU-509 is not installed)

1. Specify a paper for the daily density management and place the papers on the tray.
Note
 - Standard papers are recommended. However, when the user assigns the paper, counsel with the user and decide the paper.
 - Perform the density balance adjustment with the combination of Dot190 (screen) and the paper for the density management before the record of target density.
2. Select Screen1 (Dot190) in the "Test Pattern Output Mode" on the service mode and output the test pattern number 69. (Refer to [I. 4.13.17 Test pattern number 69 Maximum density adjustment pattern](#))
Note
 - Use paper for the daily density management.
3. Measure the density on the test pattern number 69 that you output.
The method differs depending on the spectrophotometer that you use.
 - Measure the density with Spectrolino (Refer to [I.4.4.9.\(8\).\(a\) Measure the density with Spectrolino](#))
 - Measure the density with FD-7, FD-5BT (Refer to [I.4.4.9.\(8\).\(b\) Measure the density with FD-7, FD-5BT](#))
 - Measure the density with ES-1000, ES-2000, i1Pro (Refer to [I.4.4.9.\(8\).\(c\) Measure the density with ES-1000, ES-2000, i1Pro, i1Pro2](#))
 - Measure the density with i1Sis XL (Refer to [I.4.4.9.\(8\).\(d\) Measure the density with i1Sis XL](#))

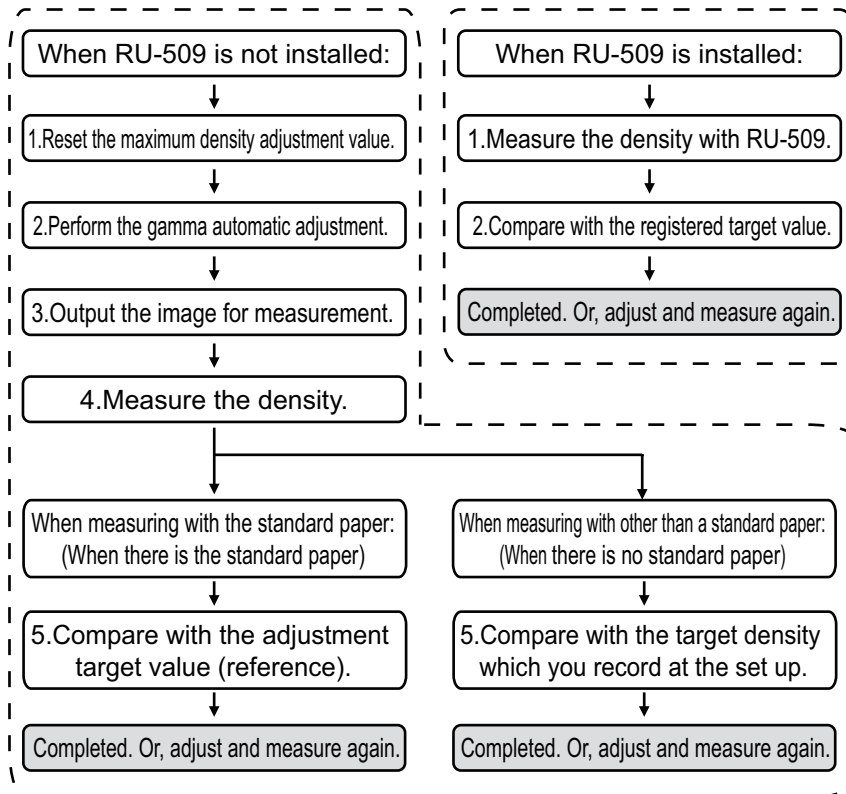
Note

- When you measure the target density, use the spectrophotometer of the user.
- For the method to measure the density with other spectrophotometers, refer to the manual of each spectrophotometer.

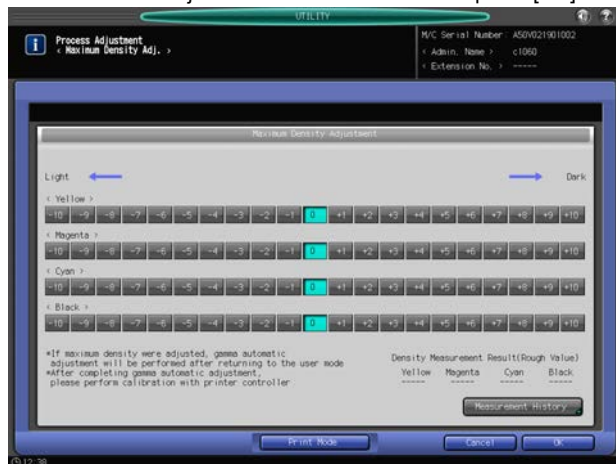
- Write down the measurement results of the YMCK maximum density.

Note

- Be sure to inform each color measurement result of YMCK to the user because the result is the target value for daily maximum density management.

2.4.6 Procedure for maintenance**(1) Adjustment flow****(2) When RU-509 is not installed**

- Press [Utility/Counter] - [03 Administrator Setting] - [01 System Setting] - [05 Expert Adjustment] - [06 Process Adjustment] - [02 Maximum Density Adjustment].
- "Maximum Density Adjustment screen"
Select "0" for all adjustment values of YMCK and press [OK].



- Enter the service mode and perform the gamma automatic adjustment. (Refer to [I.4.4.6 Gamma Automatic Adjustment \(Drum Peculiarity Adjustment\)](#))
- Output the test pattern number 69 in the "Test Pattern Output Mode" on the service mode. (Refer to [I.4.13.17 Test pattern number 69 Maximum density adjustment pattern](#))

Note

- Use standard papers.

When there is no standard paper, use paper for the daily density management.

Perform the density balance adjustment with the combination of Dot190 (screen) and the standard paper, or the combination of Dot190 (screen) and the paper for the density management in advance.

5. Measure the density on the test pattern number 69 that you output.

The method differs depending on the spectrophotometer that you use.

- Measure the density with Spectrolino (Refer to [I.4.4.9.\(8\).\(a\) Measure the density with Spectrolino](#))
- Measure the density with FD-7, FD-5BT (Refer to [I.4.4.9.\(8\).\(b\) Measure the density with FD-7, FD-5BT](#))
- Measure the density with ES-1000, ES-2000, i1Pro (Refer to [I.4.4.9.\(8\).\(c\) Measure the density with ES-1000, ES-2000, i1Pro, i1Pro2](#))
- Measure the density with i1Sis XL (Refer to [I.4.4.9.\(8\).\(d\) Measure the density with i1Sis XL](#))

Note

- **When you print the test pattern on the paper for the daily density management, use the spectrophotometer of the user.**
- **For the method to measure the density with other spectrophotometers, refer to the manual of each spectrophotometer.**

6. Check the measurement result of each color.

When you measure the density with the standard paper, compare the result with the adjustment target value (reference). When the density is within the target, the operation is completed. When the density is not within the target density, perform the following procedures. When you measure with the paper for the daily density management, compare the result with the target density that you recorded on the setup. When the value is within the target density, the operation is complete. When the density is not within the target density, perform the following procedures.

7. Go back to the top screen of the service mode.

8. "Service Mode menu screen"

Press [02 Process Adjustment].

9. "Process Adjustment Menu screen"

Press [02 Drum Peculiarity Adj.].

10. "Drum Peculiarity Adjustment Menu screen"

Press [05 Max Density Initial Adj.].

[Service Mode] → [Process Adjustment] → [Drum Peculiarity Adj.] → [Max Density Initial Adj.]

11. "Maximum Density Initial Adjustment screen"

Adjust the value according to the result of each color. Then, press [OK].

- The result is lower than the target density: increase the value of the target color.
- The measurement result is higher than the target density: decrease the value of the target color.

Setting range: -10 to +10

Note

- The change differs according to the paper.

(Reference) The change for POD GLOSS COAT 128 g/m² (Spectrolino)

- **Y: Changes for Δ0.012 by one step**
- **M: Changes for Δ0.021 by one step**
- **C: Changes for Δ0.026 by one step**
- **K: Changes for Δ0.021 by one step**

12. Perform the step 3 to step 6, and check the measurement result.

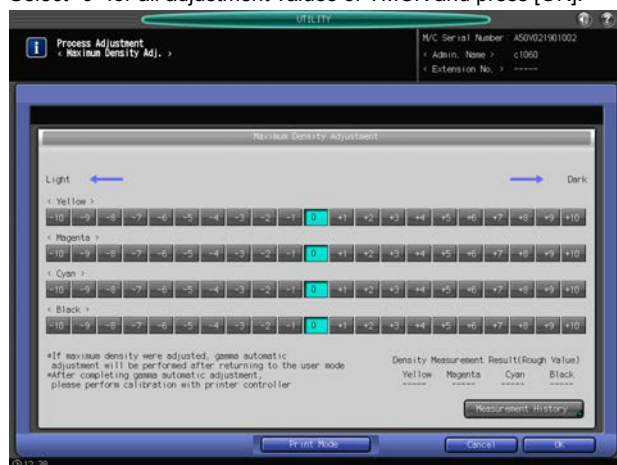
When the density is not within the target density, perform the adjustments again.

(3) When RU-509 is installed

1. Press [Utility/Counter] - [03 Administrator Setting] - [01 System Setting] - [05 Expert Adjustment] - [06 Process Adjustment] - [02 Maximum Density Adjustment].

2. "Maximum Density Adjustment screen"

Select "0" for all adjustment values of YMCK and press [OK].



3. Select [Service Mode] - [02 Process Adjustment] - [02 Drum Peculiarity Adj.] - [05 Max Density Initial Adj.].

4. "Maximum Density Initial Adjustment screen"

Press [Print Mode].

5. "Print Mode screen"

Place a paper for the density management, that you specify on the step 1 of the target density registration, on the tray. Then, change the paper setting of the tray to the setting that is the same as the paper setting on the target density registration.

Note

- If you conduct the tray select of the print mode on [Utility/Counter] - [03 Administrator Setting] - [01 System Setting] - [05 Expert Adjustment] - [06 Process Adjustment] - [03 Max. Density Auto Adj. (RU)], you can change the paper setting of the tray to the setting that is the same as the paper setting on the target density registration. (Refer to [R.2.5 Maximum density auto adjustment \(RU\)](#))

- Select the paper for the density management. Press the start key and output the chart.

Note

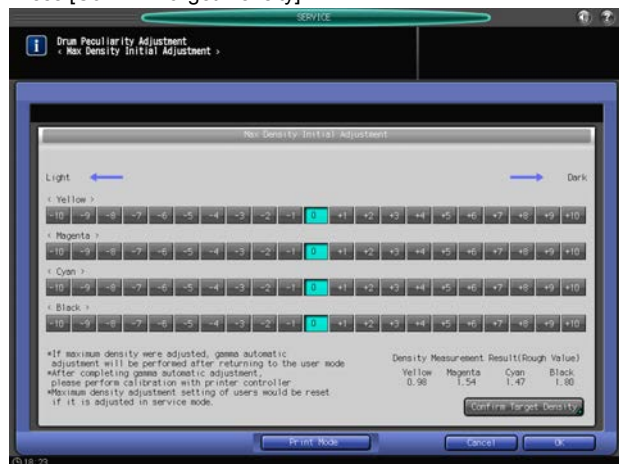
- At this time, the color sensor of the RU measures the color of the chart.

- "Print Mode screen"

Press [Exit PrintMode].

- "Maximum Density Initial Adjustment screen"

Press [Confirm Target Density].

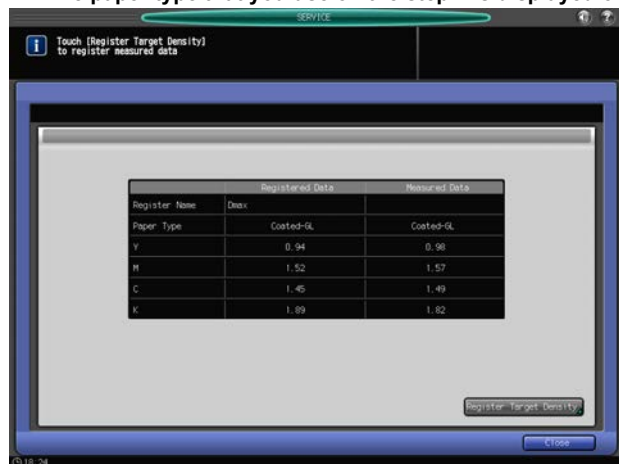


- "Confirm Target Density screen"

Compare the "Registered Data" and the "Measured Data".

Note

- The information of the registered target density is displayed on the "Registered Data" column.
- The density data that you measured on the step 4 is displayed on the "Measured Data" column.
- The paper type that you use on the step 4 is displayed on the "Paper Type" column.



- When the "Measured Data" is not within the standard range (Y, M, C: -5% to +5%, K: -5% to +10%) compared with the "Registered Data", change the adjustment value according to the measurement result of each color. Then, repeat step 4 to step 7.

- When the measurement result is lower than the target density: Increase the value of the target color.
- When the measurement result is higher than the target density: Decrease the value of the target color.

Setting range: -10 to +10

- When the Y, M, C, K values on the "Measured Data" are within the standard values, press [Close].

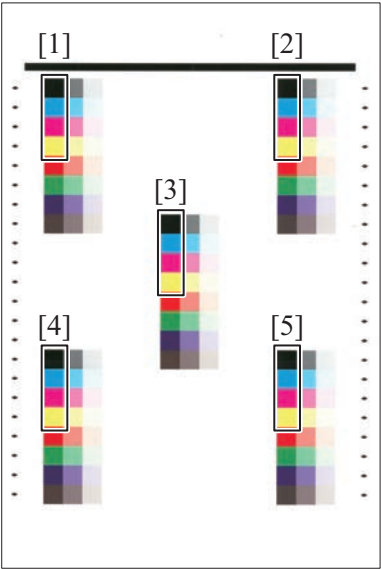
Note

- If you press [Register Target Density], the registered data of the target density value is updated. Therefore, do not press [Register Target Density].

2.4.7 Measure the density with the spectrophotometer

(1) Measure the density with Spectrolino

Measure the averaged density of the 5 patches for CMYK.

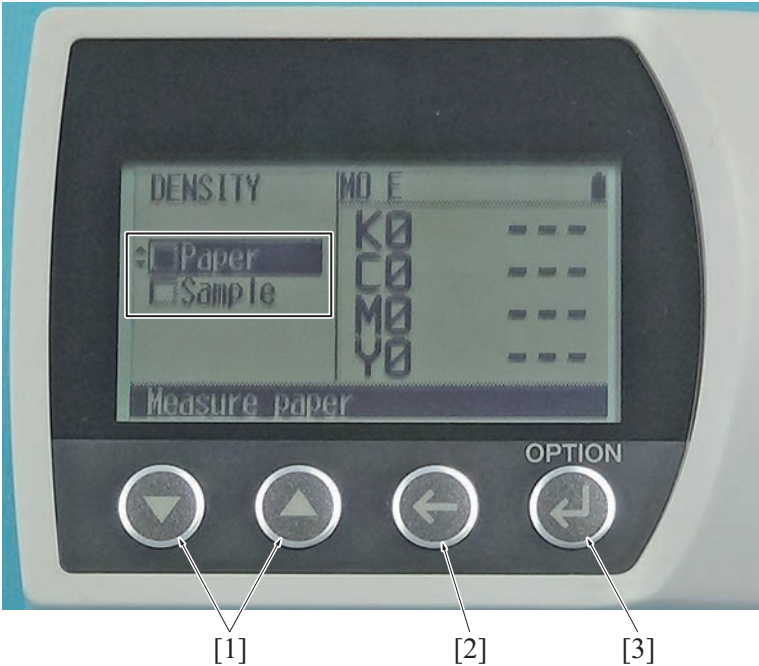


[1]	Measurement patch 1	[2]	Measurement patch 2
[3]	Measurement patch 3	[4]	Measurement patch 4
[5]	Measurement patch 5		-

The color measurement condition of Spectrolino
· The light source of the measurement: D50
· White standard: Abs
· The visual field of the measurement: 2 degrees
· Filter: UV Cut (Spectrolino), M2 light (FD-7)
· Density: ANSI T
· Measurement mode: Reflectance

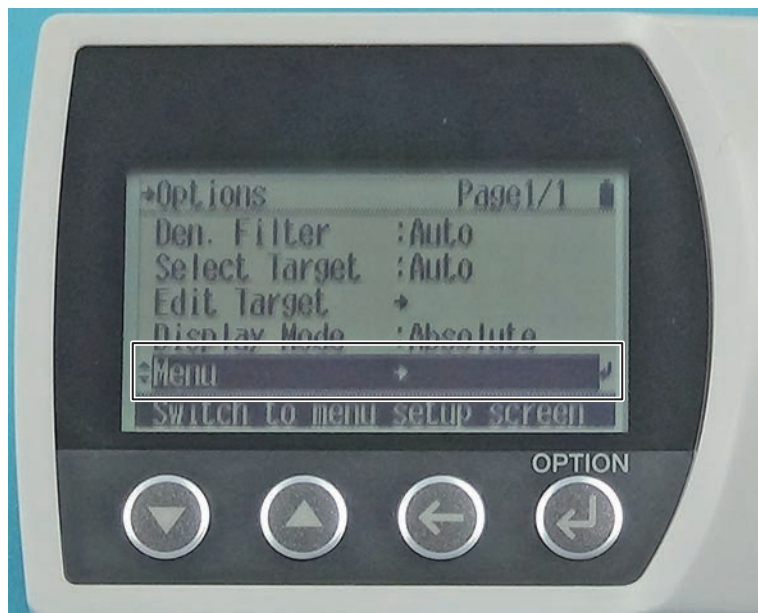
(2) Measure the density with FD-7, FD-5BT

1. Activate FD-5BT.
2. Use the up down move button [1] on the home screen, and move the cursor to [Sheet] or [Sample].

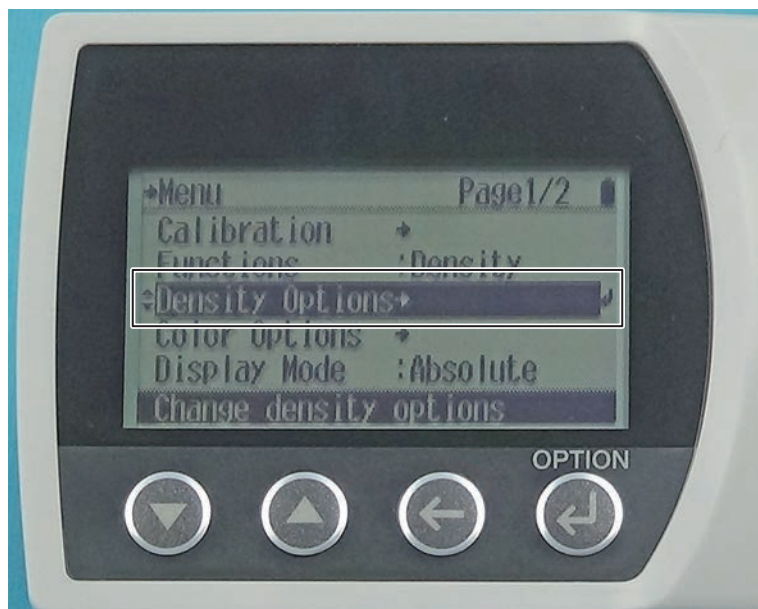


[1]	Up Down move button	[2]	Return button
[3]	OPTION button		-

3. Press the OPTION button and display the option screen.
4. Move the cursor to [Menu] on the option screen, and press the OPTION button.



5. Move the cursor to [Density Options] on the menu screen, and press the OPTION button.

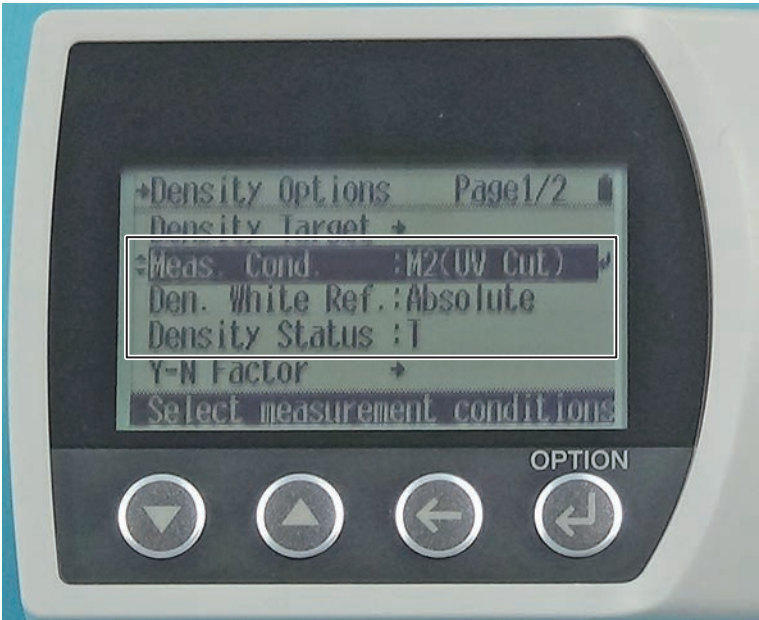


6. Change the following items to the configurations mentioned in the table.

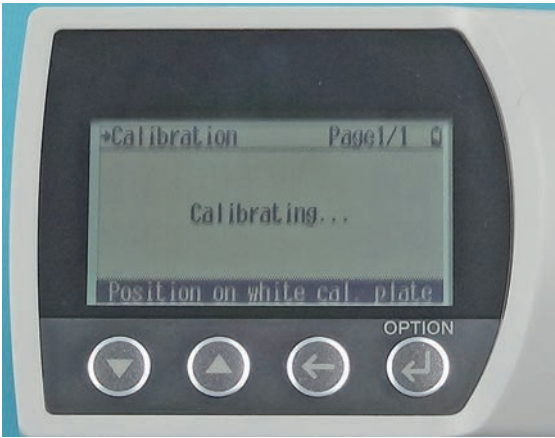
Setting item	Configurations
Means. Cond.	M2 (UV Cut)
Den. White Ref.	Absolute value
Density Status	T
Density Filter	Auto

Note

- For detailed information on the configuration, refer to the manual attached to FD-7 or FD-5BT.

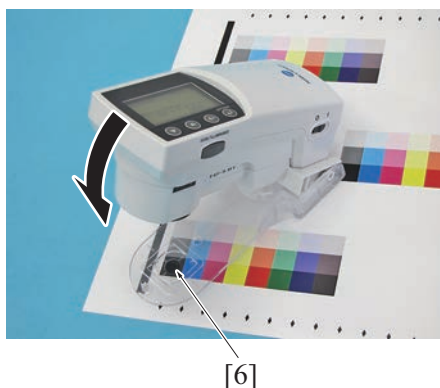
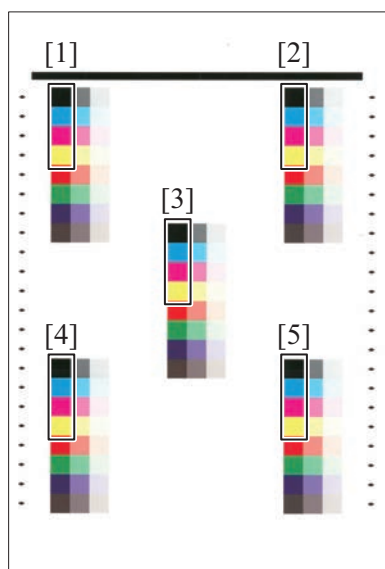


- 7. Press the return button and the menu screen is displayed.
- 8. Move the cursor to [Calibration] on the menu screen, and press the OPTION button.
- 9. Press the FD-5BT on the white calibration plate [1], and perform the white calibration.



[1]	White calibration plate	-
-----	-------------------------	---

- 10. When "Calibrating..." is no longer displayed, take the FD-5BT away from the plate.
- 11. Press the return button twice, and the menu screen is displayed.
- 12. After you move the cursor to [Sample], move the opening of the FD-5BT [6] on the patch that you measure.
Press the FD-5BT and measure the density of CMYK patches [1] [2] [3] [4] [5] on the test pattern number 69.



[1]	Measurement patch 1	[2]	Measurement patch 2
[3]	Measurement patch 3	[4]	Measurement patch 4
[5]	Measurement patch 5	[6]	Opening

13. Calculate the average of the maximum density for each of C, M, Y, and K by the 5 patch densities of CMYK which you measured. Use Excel or another application for the calculation.

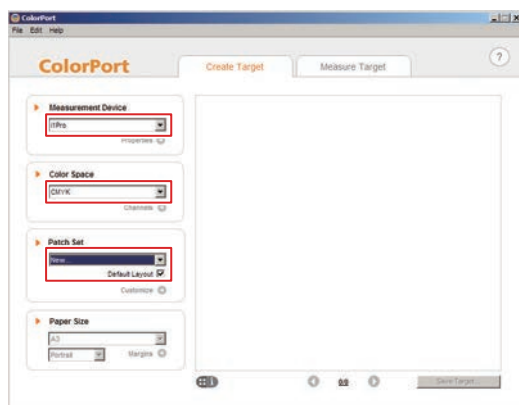
(3) Measure the density with ES-1000, ES-2000, i1Pro, i1Pro2

- The following procedure describes how to measure the density using ColorPort (X-Rite Corporation) as an example.
- Start "ColorPort".

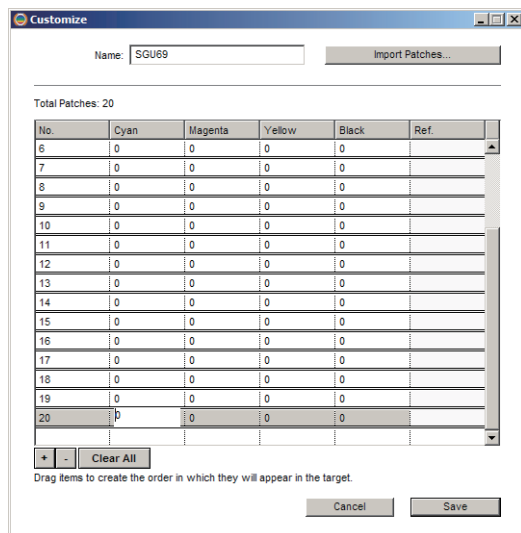
Note

- ColorPort is just one example of a color measurement application. Konica Minolta does not guarantee its measurement accuracy.
- Color Port can be downloaded from the following URL.
http://www.xrite.com/product_overview.aspx?Action=support&ID=719

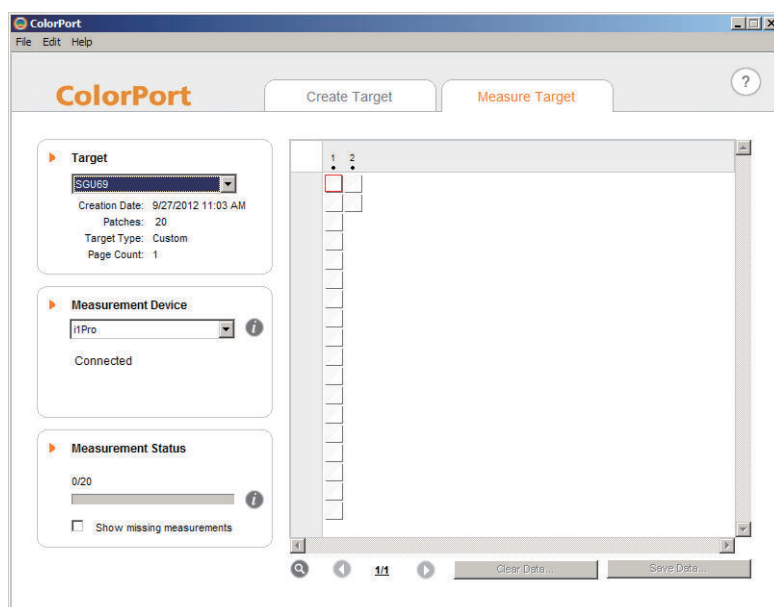
- Create a target.
 - Select [i1Pro] on [Device].
 - Select [CMYK] on the [Color Space].
 - Select [New] on [Patch Set].



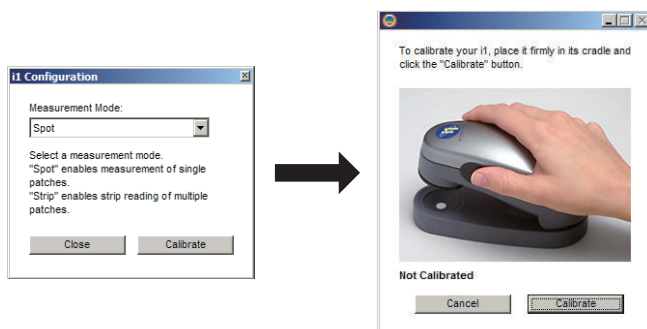
- The "Customize Screen" appears. Enter any name on [Name].
- Click [+] until [Total Patches] reaches to [20].
- Click [Save] and save the target to any directory. Select TIFF for [Files of Type].



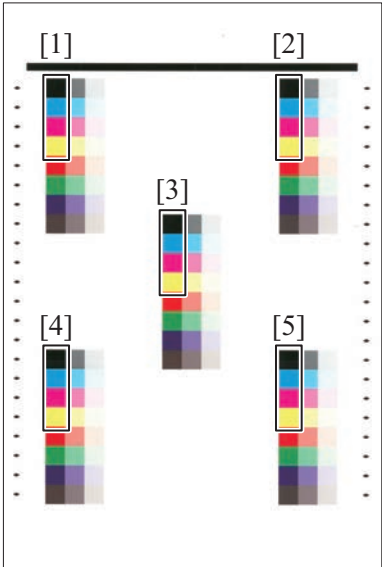
4. Adjust the setting of the measurement condition
 1. Click [Measure Target] tab.
 2. Select the target that you created on [Target].
 3. Select [i1Pro] on [Device].



5. Perform the calibration
 1. Select [Spot] on [Measurement Mode] of the "Configuration Screen". Click [Calibrate].
 2. Follow the instructions on the screen and perform the calibration.

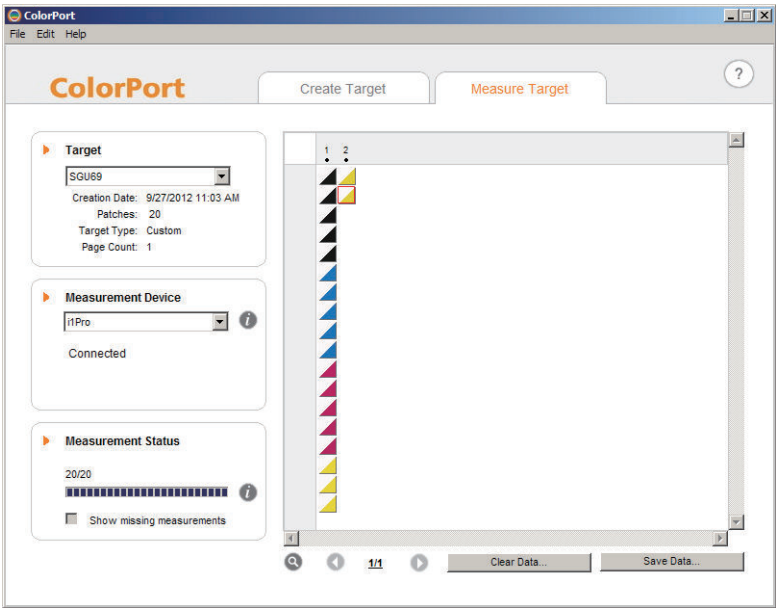


6. Measure the target
 1. Measure the averaged density of the 5 patches [1] of CMYK.

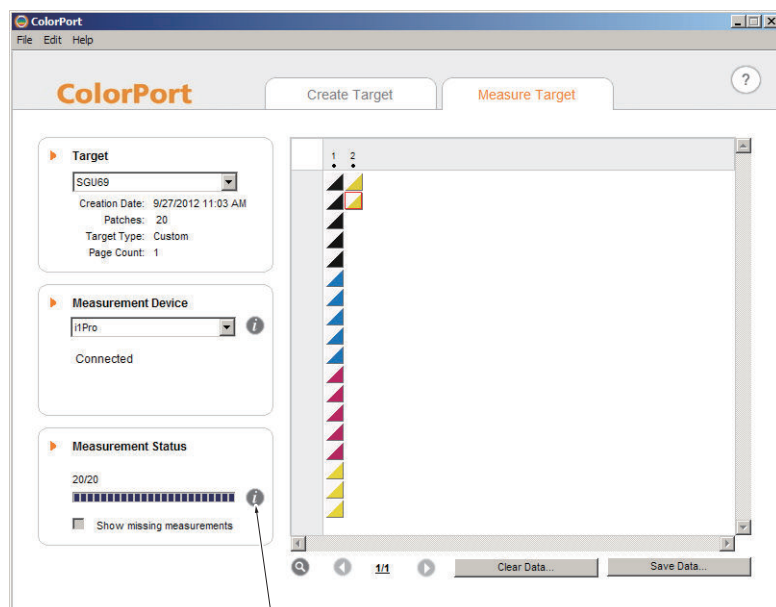


[1]	Measurement patch 1	[2]	Measurement patch 2
[3]	Measurement patch 3	[4]	Measurement patch 4
[5]	Measurement patch 5		-

7. Check the result
1. Select the patch that you want to check.

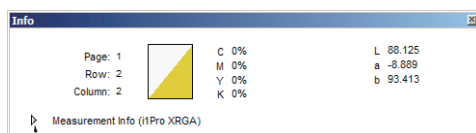


2. Click [1].



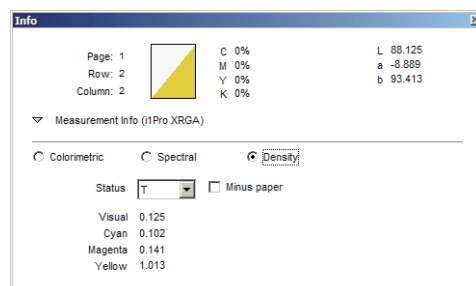
[1]

3. Click [Measurement Info] on the "Info Screen".

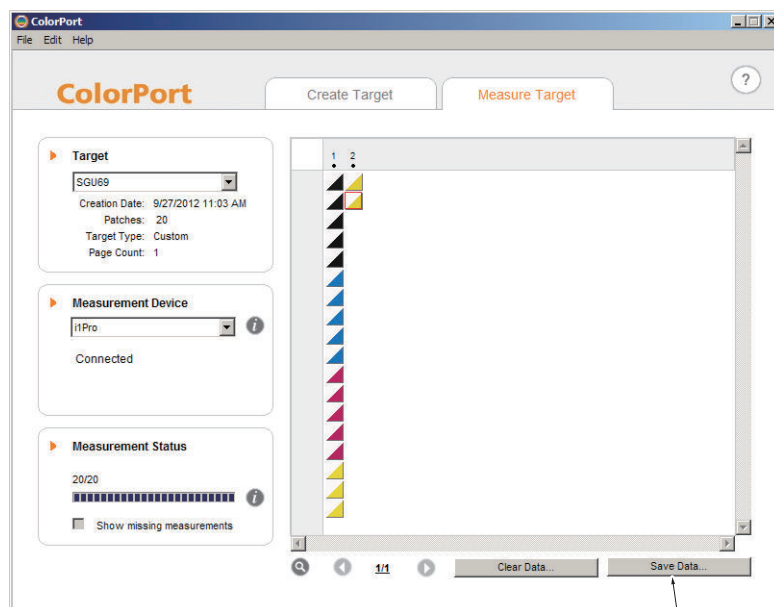


[1]

4. Select [Density] on the "Info Screen". Select [T] for [Status].
5. Check the result.

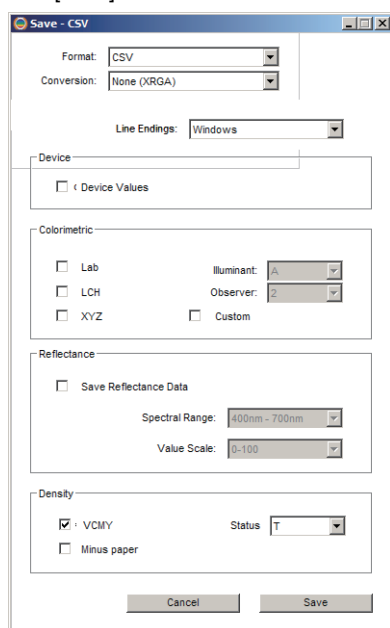


8. Save the data
1. Click [Save Data] [1].



[1]

2. Select the format that you want to output on [Format].
3. Be sure that all the items on [Device] and [Colorimetric] are not checked.
4. Check [VCMY] on [Density]. Select [T] on [Status].
5. Click [Save].



9. Open the saved CSV file in Excel.

	A	B	C	D	E	F
1	1.876	1.878	1.876	1.894		
2	1.864	1.867	1.864	1.884		
3	1.853	1.855	1.854	1.876		
4	1.936	1.939	1.936	1.955		
5	1.893	1.895	1.892	1.912		
6	0.814	1.557	0.487	0.218		
7	0.81	1.536	0.485	0.216		
8	0.806	1.518	0.483	0.218		
9	0.829	1.589	0.499	0.228		
10	0.836	1.573	0.508	0.24		
11	0.711	0.329	1.563	0.834		
12	0.713	0.331	1.575	0.843		
13	0.723	0.339	1.635	0.867		
14	0.739	0.357	1.593	0.861		
15	0.743	0.36	1.605	0.874		
16	0.1	0.077	0.114	0.981		
17	0.098	0.075	0.112	0.986		
18	0.104	0.081	0.117	0.984		
19	0.127	0.104	0.141	1.003		
20	0.126	0.102	0.14	1.011		
21						
22						
23						

10. Calculate the average maximum density [1] of each of the 5 colors (Y, M, C, K).

	A	B	C	D	E	F
1		1.864	1.868	1.863	1.869	
2		1.821	1.825	1.818	1.829	
3		1.878	1.884	1.875	1.885	
4		1.908	1.912	1.906	1.915	
5		1.845	1.851	1.842	1.853	
6						
7	AVG of Black	1.8632				
8		0.92	1.791	0.569	0.253	
9		0.922	1.786	0.572	0.254	
10		0.928	1.815	0.575	0.257	
11		0.928	1.822	0.575	0.259	
12		0.933	1.79	0.583	0.267	
13	AVG of Cyan	1.8008				
14		0.736	0.355	1.693	0.924	
15		0.738	0.36	1.698	0.944	
16		0.74	0.36	1.695	0.94	
17		0.75	0.368	1.699	0.941	
18		0.759	0.38	1.705	0.962	
19	AVG of Magenta		1.6922			
20		0.099	0.074	0.116	1.029	
21		0.099	0.074	0.116	1.032	
22		0.1	0.076	0.117	1.029	
23		0.123	0.099	0.14	1.043	
24		0.12	0.095	0.137	1.043	
25	AVG of Yellow				1.0352	
26						
27						
28						

[1]

11. Perform the maximum density initial adjustment when the 5 calculated average maximum density values do not match the target values. (Refer to "R.2.4.5 Procedure for the setup"))

(4) Measure the density with i1iSis XL

1. Start "ProfileMaker Measure tool".

Note

- ProfileMaker is just one example of a color measurement application. Konica Minolta does not guarantee its measurement accuracy.
- ProfileMaker5 can be downloaded from the following URL.
http://www.xrite.com/product_overview.aspx?ID=757&Action=support

2. Prepare the script data for the test pattern number 69.

Note

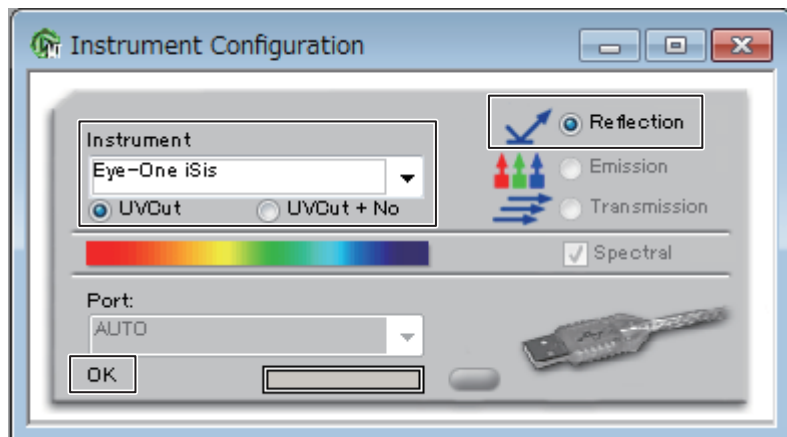
- For the script data, be sure to contact the support section of Konica Minolta.

3. Connect the USB dongle to the PC.

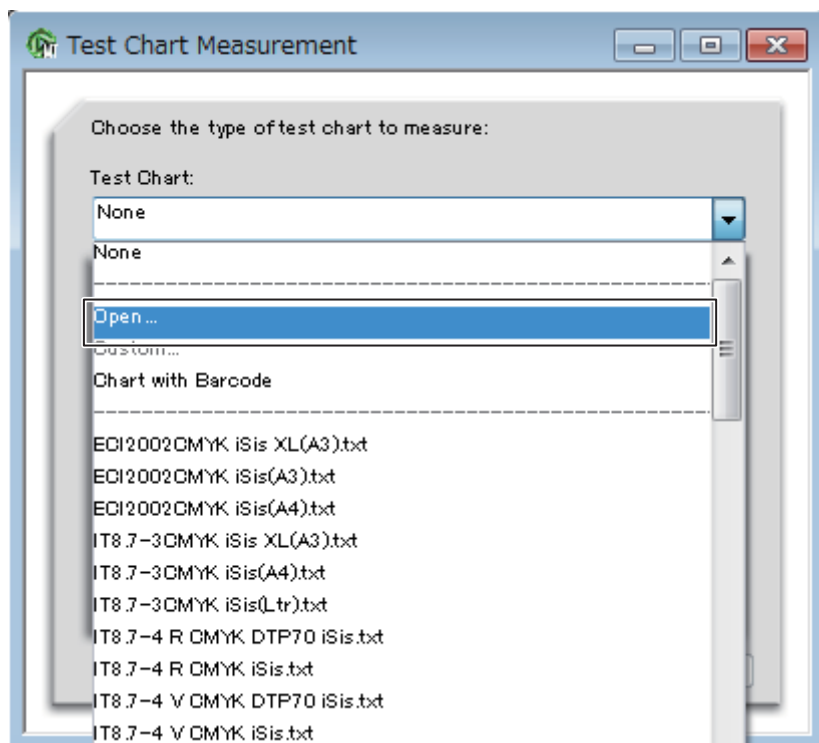
Note

- When there is no USB dongle, you cannot measure density.

4. Click [Instrument Configuration].
5. Select [Eye-One iSis] at the [Instrument] and select [Reflection].
When [OK] is displayed, close [Instrument Configuration].



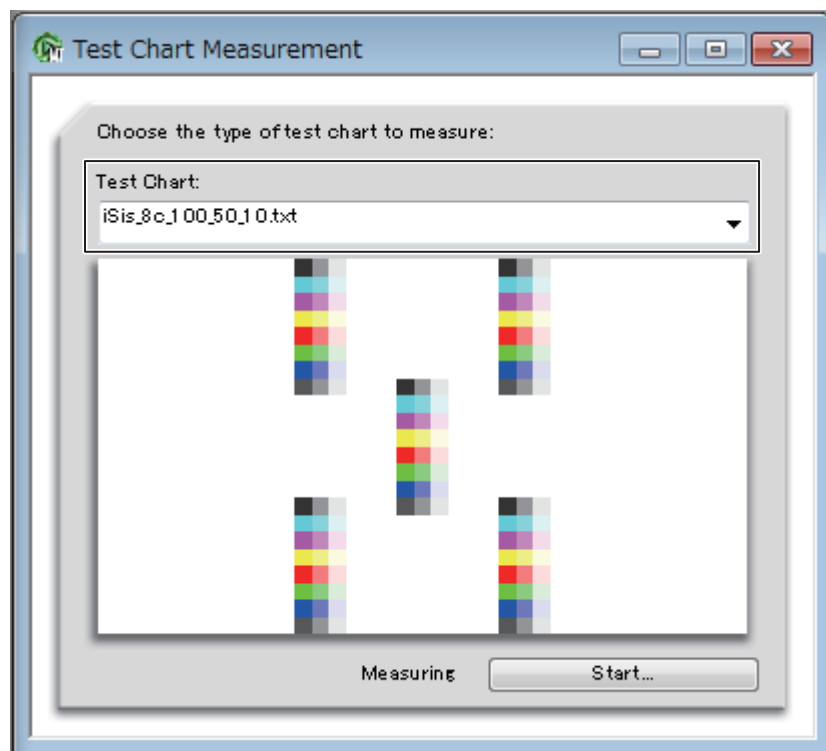
6. Click [Chart] and display [Test Chart Measurement].
Select [Open...] from [Test Chart].



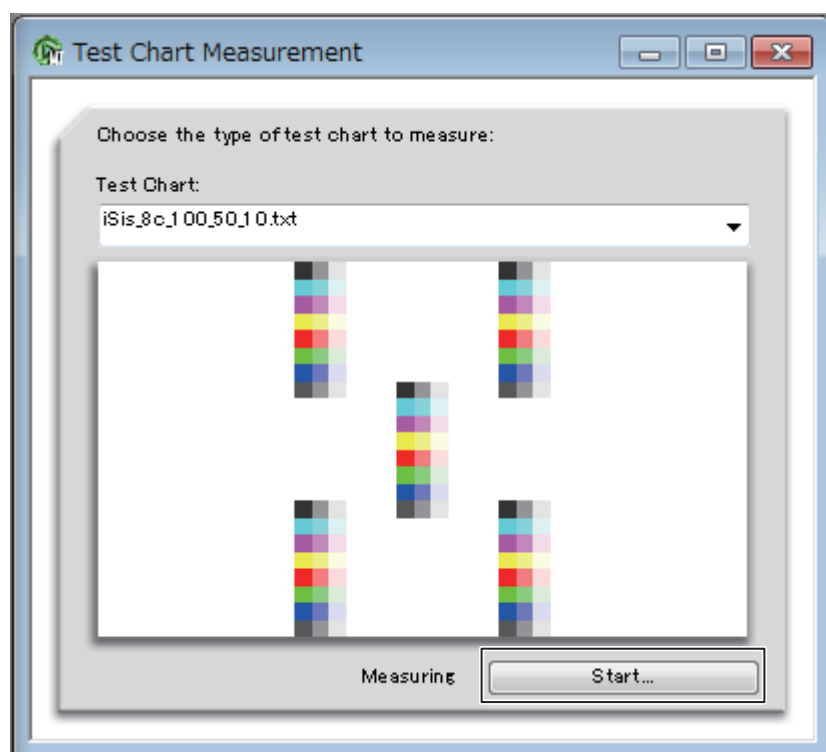
7. Select the script data (iSis_8c_100_50_10.txt) for i1iSis.

Note

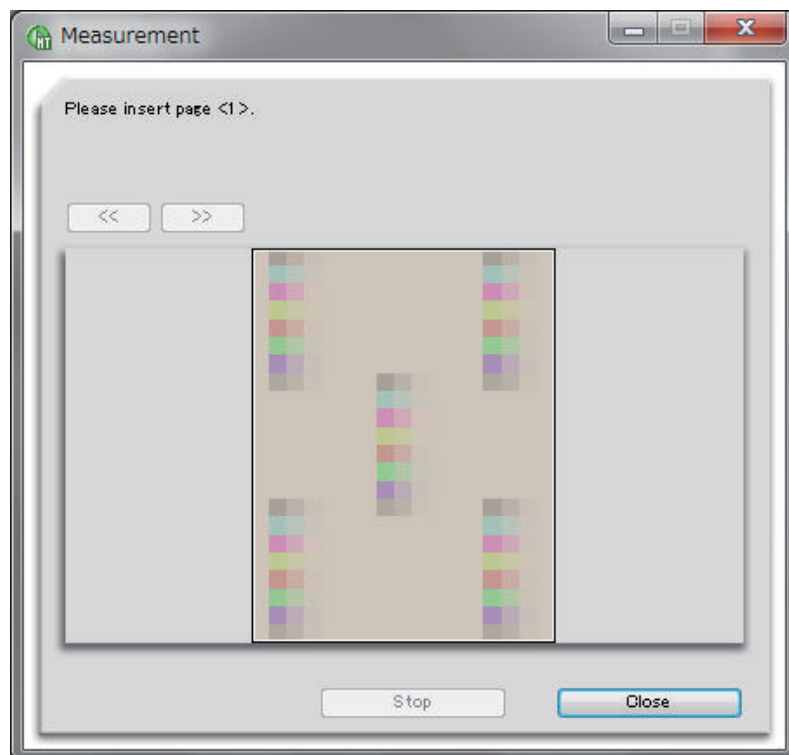
- For the script data, be sure to contact the support section of Konica Minolta.



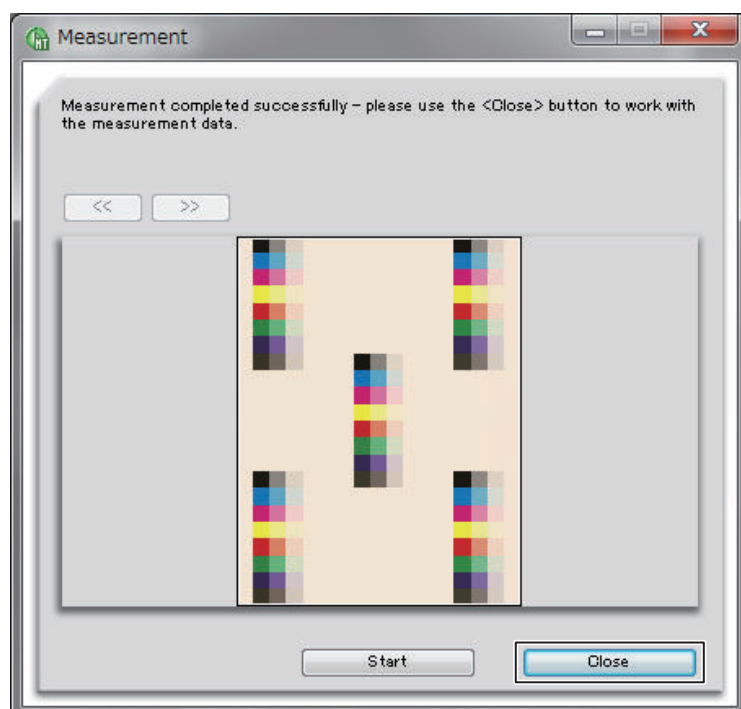
8. Click [Start...].



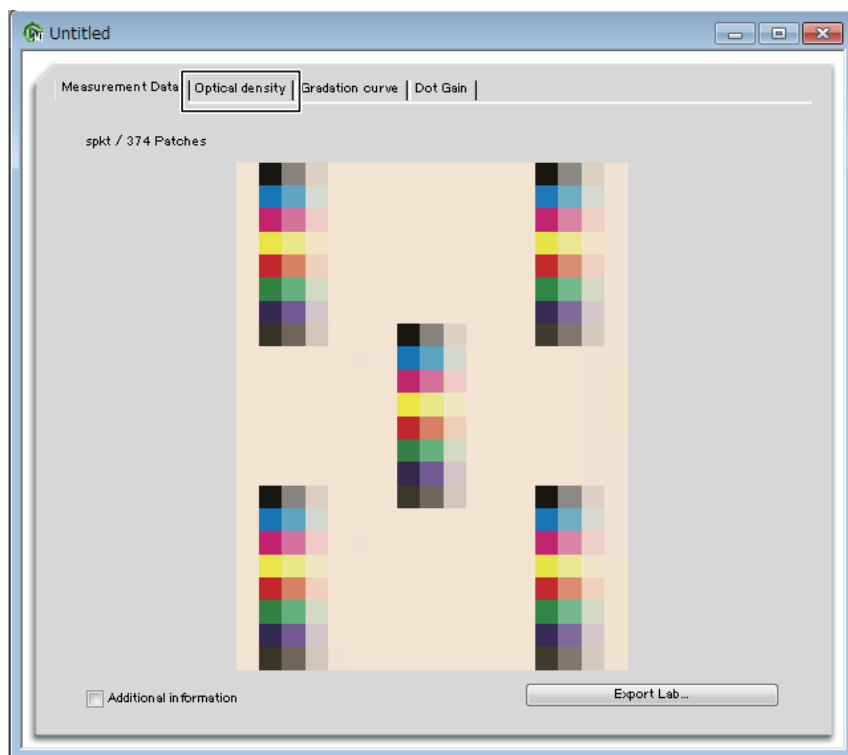
9. Insert the test pattern number 69 to i1iSis XL.



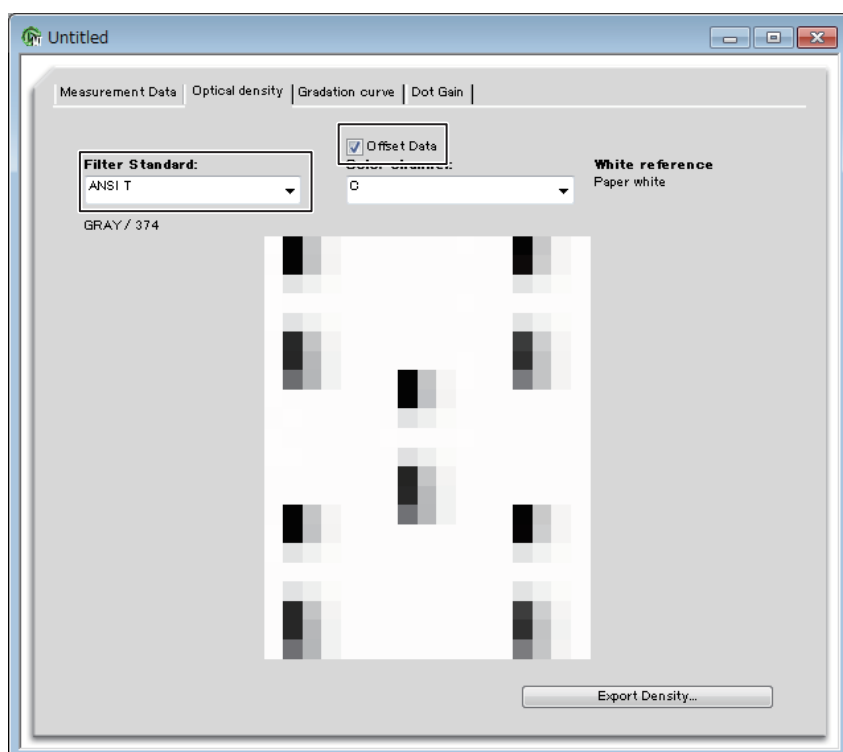
10. When the measurement normally finishes and the following message is displayed, click [Close].



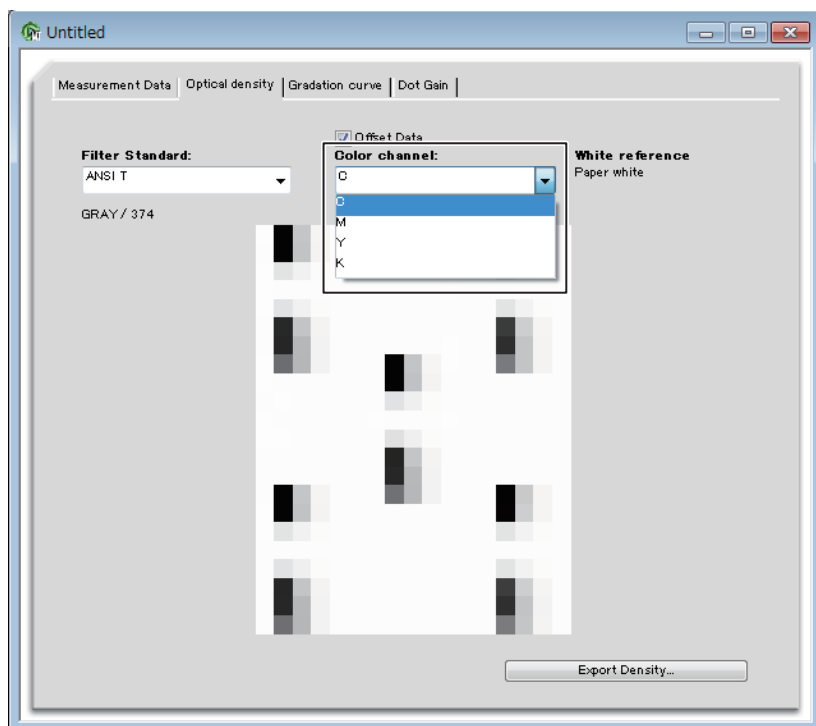
11. Click the [Optical density] tab.



12. Select [ANSI T] at the [Filter Standard], and check the [Offset Data].



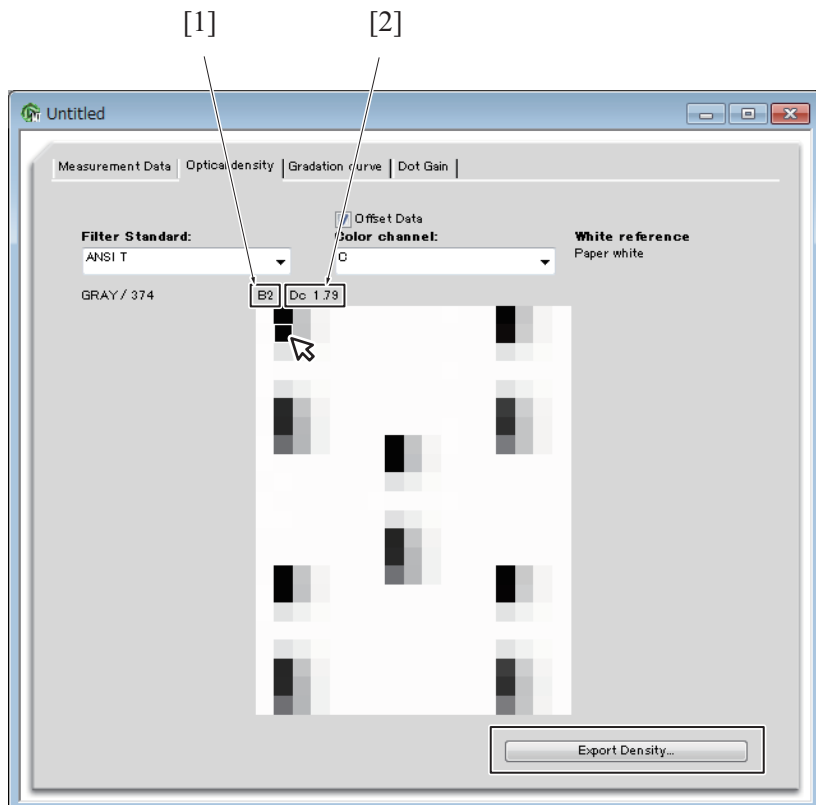
13. Select a desired color from C, M, Y, or K at the [Color Channel].



14. Click [Export Density...] and save the text file (.txt).

Note

- When you move the mouse on the patch, you can confirm the positioning information [1] and the density information [2] of the patch.



[1] Positioning information of the patch

[2] Density information of the patch

15. Open Excel. Select the saved text file (.txt) from [File] - [Open].

16. Calculate the average of the 5 maximum density patch for each color: Y, M, C, and K.

- Maximum density patch position of Y: B4, B18, H11, N4, N18
- Maximum density patch position of M: B3, B17, H10, N3, N17
- Maximum density patch position of C: B2, B16, H9, N2, N16
- Maximum density patch position of K: B1, B15, H8, N1, N15

	A	B	C	D	E	F	G	H	I	J
1	LGOROWL	22								
2	LGOMCCM	UseCMYKSep								
3	ISis_INFO	DensityStandard=ANSIA	Illumination=D50	Observer=TwoDegree	ColorSpace=CIELab	Type=0	NumberOfRo			
4	DENSITY_Y	FANSI T								
5	DENSITY_Y	Paper white								
6	DENSITY_Y	CYes								
7	CREATED	7/17/2014	# Time: 14:11							
8	KEYWORD	SampleID								
9	KEYWORD	SAMPLE_NAME								
10	NUMBER_C	10								
11	BEGIN_DATA	FORMAT								
12	SampleID	SAMPLE_N	CMYK_C	CMYK_M	CMYK_Y	CMYK_K	Dc	Dm	Dy	Dk
13	END_DATA	FORMAT								
14	NUMBER_C	374								
15	BEGIN_DATA									
16	1	A1	0	0	0	0	0	0	0	0
17	2	A2	0	0	0	0	0	0	0	0
18	3	A3	0	0	0	0	0	0	0	0
19	4	A4	0	0	0	0	0	0	0	0
20	5	A5	0	0	0	0	0	0	0	0
21	6	A6	0	0	0	0	0	0	0	0
22	7	A7	0	0	0	0	0	0	0	0
23	8	A8	0	0	0	0	0	0	0	0
24	9	A9	0	0	0	0	0	0	0	0
25	10	A10	0	0	0	0	0	0	0	0
26	11	A11	0	0	0	0	0	0	0	0
27	12	A12	0	0	0	0	0	0	0	0
28	13	A13	0	0	0	0	0	0	0	0
29	14	A14	0	0	0	0	0	0	0	0
30	15	A15	0	0	0	0	0	0	0	0
31	16	A16	0	0	0	0	0	0	0	0
32	17	A17	0	0	0	0	0	0	0	0
33	18	A18	0	0	0	0	0	0	0	0
34	19	A19	0	0	0	0	0	0	0	0
35	20	A20	0	0	0	0	0	0	0	0
36	21	A21	0	0	0	0	0	0	0	0
37	22	A22	0	0	0	0	0	0	0	0
38	23	B1	0	0	0	100	1.97	1.96	1.97	1.96
39	24	B2	100	0	0	0	1.79	0.46	0.17	0.83
40	25	B3	0	100	0	0	0.27	1.44	0.72	0.64
41	26	B4	0	0	100	0	0.01	0.04	0.94	0.03
42	27	B5	0	100	100	0	0.29	1.36	1.71	0.65
43	28	B6	100	0	100	0	1.63	0.54	1.1	0.92

2.5 Maximum density auto adjustment (RU)

2.5.1 Execution timing

- : Indispensable item
- : Execution-recommended item

Execution timing of CE

	During installation						After the replacement of the drum, the developer, the developing unit, or the charging corona					
	IC-602				IC-308/IC-415		IC-602				IC-308/IC-415	
	Equip		Not Equip		Equip		Equip		Not Equip		Equip	
Controller	RU-509											
ExColor/G7	Ex	G7	Ex	G7	-	-	Ex	G7	Ex	G7	-	-
2.5 Maximum Density Auto Adjustment (RU)	-	-	-	-	-	-	-	-	-	-	-	-

Execution timing of the user

	During basic operation				During expert operation				During the custom screen change			
	IC-602		IC-308/IC-415		IC-602		IC-308/IC-415		IC-602		IC-308/IC-415	
	Equip	Not Equip	Equip	Not Equip	Equip	Not Equip	Equip	Not Equip	Equip	Not Equip	Equip	Not Equip
Controller	RU-509											
ExColor/G7	-	-	-	-	-	-	-	-	Ex	G7	Ex	G7
2.5 Maximum Density Auto Adjustment (RU)	-	-	-	-	○	-	○	-	-	-	-	-

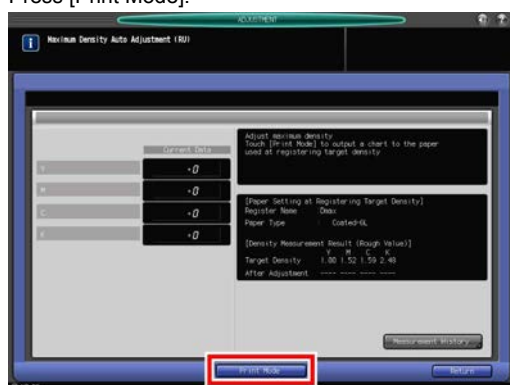
2.5.2 Procedure

NOTE

- To enable this function, CE must specify the target maximum density value (target density) in advance.
- Before you carry out Maximum Density Auto Adjustment (RU), check that the configuration of Screen 1 is Dot190. If Screen 1 is not configured to Dot190, perform "R.2.1 Select screen", and change Screen 1 to Dot190.

- Carry out Maximum Density Auto Adjustment (RU) using the paper that is used to register the target maximum density value (target density).

1. Press [Adjustment] on the [MACHINE] screen.
2. Press [Max.Density Auto Adj. (RU)].
3. Press [Print Mode].



4. Load the paper that has been used to register the target density into the tray.
5. Select the tray containing paper, then press [OK].

NOTE

- The paper profile of the tray is automatically switched to the paper profile that has been used to register the target density.



6. Press Start on the control panel to output the chart.



7. When the adjustment is completed, you automatically return to the [Maximum Density Auto Adjustment] screen. Check the adjustment result.
The auto adjustment result is displayed in [Current Data].



8. Press [Return] to return to the [Process Adjustment Menu] screen.

NOTE

- If [Maximum Density Auto Adjustment] is carried out, the paper profile of the tray that has been used for auto adjustment is switched to the paper profile that has been used to register the target density, and it is not returned to the paper profile that has been used before adjustment. After the adjustment is completed, return to the original paper profile.
When you configure the DIPSW57-4 to "1", the paper profile automatically returns the paper profile that has been used before adjustment.

2.6 Maximum density adjustment**2.6.1 Execution timing**

- : Indispensable item
- : Execution-recommended item

Execution timing of CE

Controller RU-509 ExColor/G7	Installation						After the replacement of the drum, the developer, the developing unit, or the charging corona					
	IC-602				IC-308		IC-602				IC-308	
	Equip		Not Equip		Equip	Not Equip	Equip		Not Equip		Equip	Not Equip
	Ex	G7	Ex	G7	-	-	Ex	G7	Ex	G7	-	-
2.6 Maximum Density Adjustment	-		-		-	-	-		-		-	-

Execution timing of the user

Controller RU-509 ExColor/G7	During basic operation				During expert operation				During the custom screen change			
	IC-602		IC-308		IC-602		IC-308		IC-602		IC-308	
	Equip	Not Equip	Equip	Not Equip	Equip	Not Equip	Equip	Not Equip	Equip	Not Equip	Equip	Not Equip
	-	-	-	-	-	-	-	-	Ex	G7	Ex	G7
2.6 Maximum Density Adjustment	-	-	-	-	-	○	-	○	-	-	-	-

2.6.2 Procedure

1. Place the paper for the daily density management on the tray.
2. Output a job that includes the maximum density (density: 255) of Y, M, C, and K.

Note

- A job that has the patch of 4 colors (Y, M, C, and K) x 5 in the entire paper (a job such as test pattern number 69) is recommended.
- Be sure to output the job in Screen 1 (Dot 190).

3. Measure the maximum density of Y, M, C, and K on the output.

The method differs depending on the spectrophotometer that you use.

- Measure the density with Spectrolino (Refer to [I.4.4.9.\(8\).\(a\) Measure the density with Spectrolino](#))
- Measure the density with FD-7, FD-5BT (Refer to [I.4.4.9.\(8\).\(b\) Measure the density with FD-7, FD-5BT](#))
- Measure the density with ES-1000, ES-2000, i1Pro, i1Pro2 (Refer to [I.4.4.9.\(8\).\(c\) Measure the density with ES-1000, ES-2000, i1Pro, i1Pro2](#))
- Measure the density with i1iSis XL (Refer to [I.4.4.9.\(8\).\(d\) Measure the density with i1iSis XL](#))

Note

- For the method to measure the density with other spectrophotometers, refer to the manual of each spectrophotometer.

4. Check the measurement result of each color.

Compare the result with the target density value that you record at the setup. When the density is within the target density, the operation is complete. When the density is not within the target density, perform the following procedures.

Acceptable target density range of each color Y, M, C: -5% to +5%, K: -5% to +10%

5. Press [Utility/Counter] - [Administrator Setting] - [System Setting] - [Expert Adjustment] - [Process Adjustment] - [Maximum Density Adjustment].

6. "Maximum Density Adjustment screen"

Adjust the value according to the result of each color. Then, press [OK].

- The result is lower than the target density: increase the value of the target color.
- The measurement result is higher than the target density: decrease the value of the target color.

Setting range: -10 to +10

Note

- The change differs according to the paper.

(Reference) The change for POD GLOSS COAT 128 g/m² (Spectrolino)

- Y: Changes for Δ0.006 by one step
- M: Changes for Δ0.01 by one step
- C: Changes for Δ0.013 by one step
- K: Changes for Δ0.01 by one step

7. Press [Exit [UTILITY]].

8. Perform the step 2 to step 4, and check the measurement result.

When the density is not within the target density, perform the adjustments again.

2.7 Color Density Control Setting

2.7.1 Execution timing

- : Indispensable item
- : Execution-recommended item

Execution timing of CE

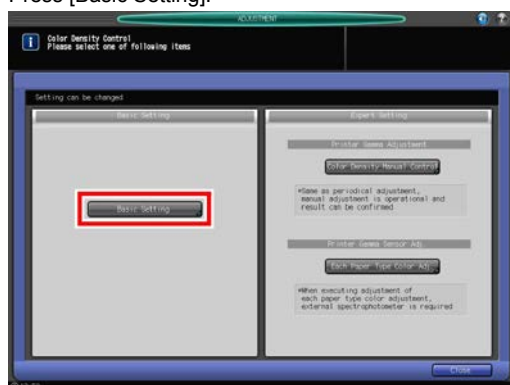
Controller RU-509 ExColor/G7	During installation						After the replacement of the drum, the developer, the developing unit, or the charging corona					
	IC-602				IC-308/IC-415		IC-602				IC-308/IC-415	
	Equip		Not Equip		Equip	Not Equip	Equip		Not Equip		Equip	Not Equip
	Ex	G7	Ex	G7	-	-	Ex	G7	Ex	G7	-	-
2.7 Color Density Control Setting	●		-		●	-	-		-		-	-

Execution timing of the user

Controller RU-509 ExColor/G7	During basic operation				During expert operation				During the custom screen change			
	IC-602		IC-308/IC-415		IC-602		IC-308/IC-415		IC-602		IC-308/IC-415	
	Equip		Not Equip		Equip	Not Equip	Equip	Not Equip	Equip	Not Equip	Equip	Not Equip
	-	-	-	-	-	-	-	-	Ex	G7	Ex	G7
2.7 Color Density Control Setting	-	-	-	-	-	-	-	-	-	-	-	-

2.7.2 Procedure

- Press [Adjustment] on the [MACHINE] screen.
- Press [Color Density Control].
- Press [Basic Setting].



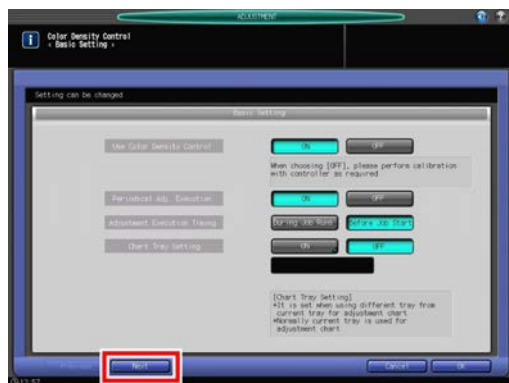
- Specify each item as follows:
 - [Use Color Density Control]: [ON]
 - [Periodical Adj. Execution]: [ON]
 - [Adjustment Execution Timing]: [Before Job Start]
 - [Chart Tray Setting]: [OFF]

NOTE

- [Adjustment Execution Timing] is a configuration for a job that contains different screens and paper types. When you want to prior the color unification within 1 job, select [Before Job Start]. When you want to prior the color unification within multiple jobs, select [During Job Runs].



- Press [Next].



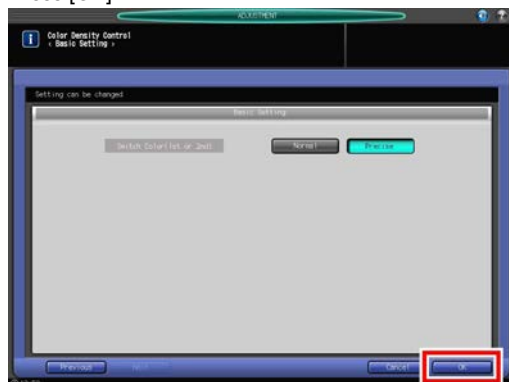
6. Specify each item as follows:
[Switch Color (1st or 2nd)]: [Precise]

NOTE

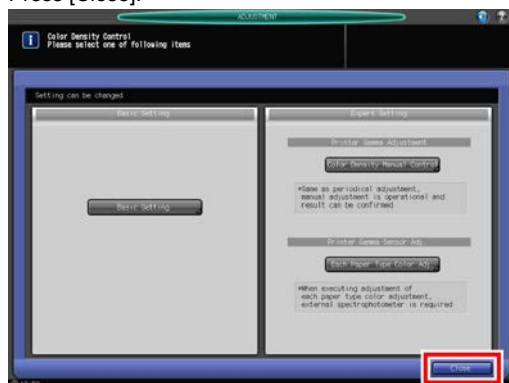
- Select [Precise] or [Normal] depending on the situation.
When you select [Precise], both the 1st color (YMCK) and the 2nd color (RGB) are corrected. When you want to prior the quality, select [Precise].
When you select [Normal], only the 1st color (YMCK) is corrected. Select [Normal] when you want to reduce the amount of paper you use for color density control.



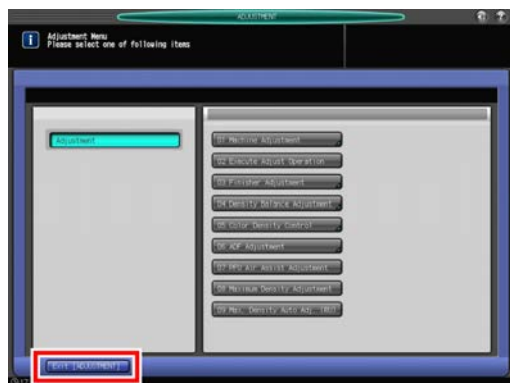
7. Press [OK].



8. Press [Close].



9. Press [Exit [ADJUSTMENT]].



2.8 Color Density Control (Manual Adjustment)

2.8.1 Execution timing

- : Indispensable item
- : Execution-recommended item

Execution timing of CE

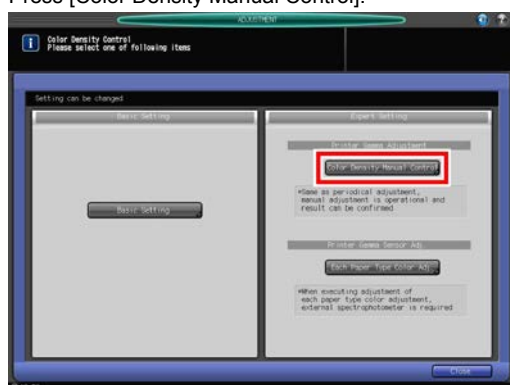
Controller RU-509 ExColor/G7	During installation						After the replacement of the drum, the developer, the developing unit, or the charging corona					
	IC-602				IC-308/IC-415		IC-602				IC-308/IC-415	
	Equip	Not Equip			Equip	Not Equip	Equip	Not Equip			Equip	Not Equip
	Ex	G7	Ex	G7	-	-	Ex	G7	Ex	G7	-	-
2.8 Color Density Control (Manual Adjustment)	●	-	-	-	●	-	●	-	-	-	●	-

Execution timing of the user

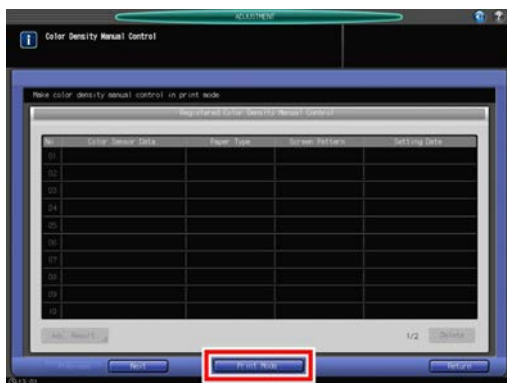
Controller RU-509 ExColor/G7	During basic operation				During expert operation				During the custom screen change			
	IC-602		IC-308/IC-415		IC-602		IC-308/IC-415		IC-602		IC-308/IC-415	
	Equip	Not Equip	Equip	Not Equip	Equip	Not Equip	Equip	Not Equip	Equip	Not Equip	Equip	Not Equip
	-	-	-	-	-	-	-	-	Ex	G7	Ex	G7
2.8 Color Density Control (Manual Adjustment)	-	-	-	-	○	-	○	-	●	-	●	-

2.8.2 Procedure

1. Press [Adjustment] on the [MACHINE] screen.
2. Press [Color Density Control].
3. Press [Color Density Manual Control].



4. Press [Print Mode].



5. Press [Quality Adj.].



6. Press  of [Screen Pattern] to select a screen.



7. Press [Close].



8. Press Start.
A chart is printed out, and calibration is carried out.

2.9 IC-602 Calibration

2.9.1 Execution timing

- : Indispensable item
- : Execution-recommended item

Execution timing of CE

Controller RU-509 ExColor/G7	During installation						After the replacement of the drum, the developer, the developing unit, or the charging corona					
	IC-602				IC-308/IC-415		IC-602				IC-308/IC-415	
	Equip		Not Equip		Equip	Not Equip	Equip		Not Equip		Equip	Not Equip
	Ex	G7	Ex	G7	-	-	Ex	G7	Ex	G7	-	-
2.9 IC-602 Calibration	-		•		-	-	-		•		-	-

Execution timing of the user

Controller RU-509 ExColor/G7	During basic operation				During expert operation				During the custom screen change			
	IC-602		IC-308/IC-415		IC-602		IC-308/IC-415		IC-602		IC-308/IC-415	
	Equip	Not Equip	Equip	Not Equip	Equip	Not Equip	Equip	Not Equip	Equip	Not Equip	Equip	Not Equip
	-	-	-	-	-	-	-	-	Ex	G7	Ex	G7
2.9 IC-602 Calibration	-	•	-	-	-	•	-	-	-	•	-	-

2.9.2 Procedure (for i1Pro/i1Pro2/ES-1000/ES-2000, or FD-5BT)

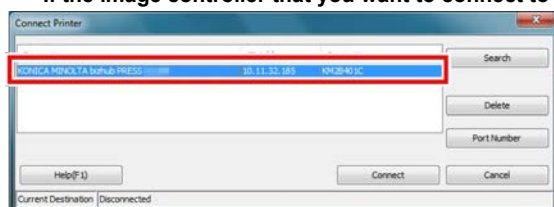
NOTE

- IC-602 calibration is adjustment for the case of not using [Color Density Control]. Normally, use of [Color Density Control] is recommended.

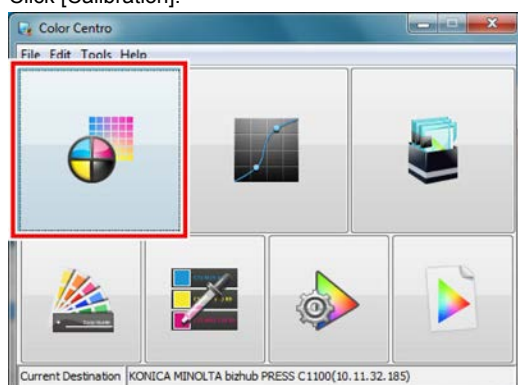
- Open the Start menu, and then click [All Programs] - [KONICA MINOLTA] - [Color Centro] - [KONICA MINOLTA Color Centro].
- Select the image controller.

NOTE

- If the image controller that you want to connect to is not displayed, click [Search] to search for it.



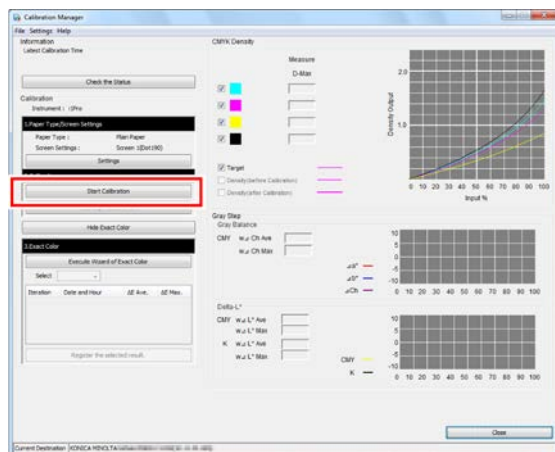
- Click [Connect].
Color Centro starts, and the launcher screen becomes available.
- Click [Calibration].



- Check that [Start Calibration] is enabled.

NOTE

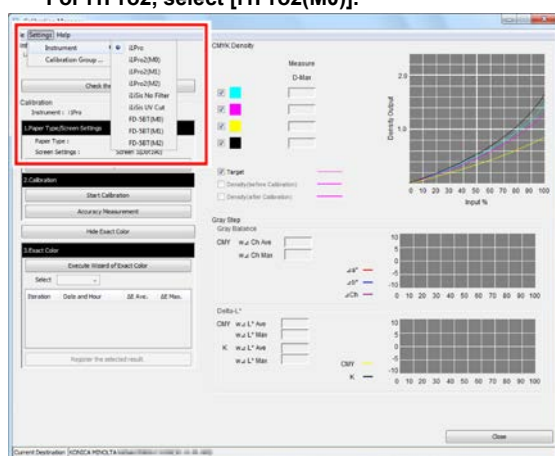
- If it appears dimmed, the color density control is set to Enable. Change [Use Color Density Control] to [OFF].
([MACHINE] screen - [Adjustment] - [Color Density Control])



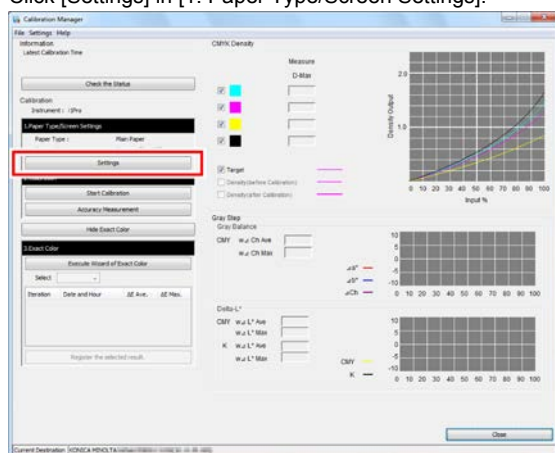
6. Activate the power of FD-5BT, Select [Instrument] on the [configuration] menu, then select [FD-5BT(M0)].

NOTE

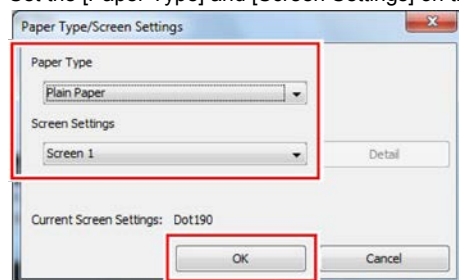
- For i1Pro, select [i1Pro].
- For i1Pro2, select [i1Pro2(M0)].



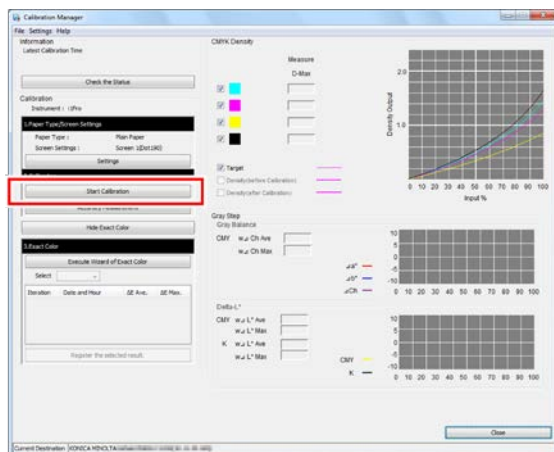
7. Click [Settings] in [1. Paper Type/Screen Settings].



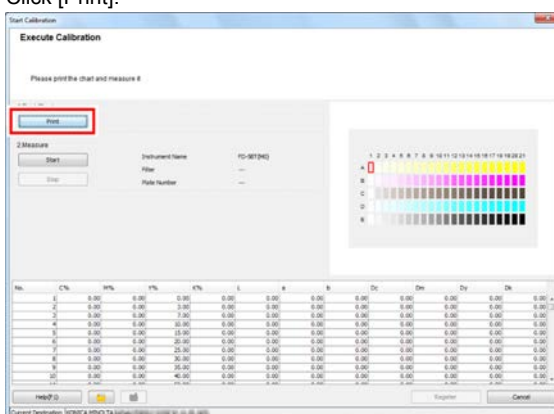
8. Set the [Paper Type] and [Screen Settings] on the [Paper Type/Screen Settings] screen and click [OK].



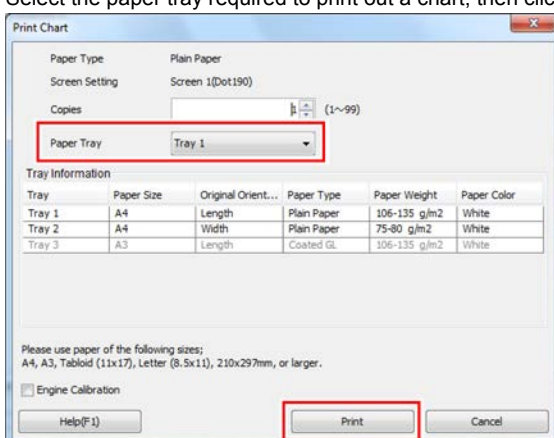
9. Click [Start Calibration].



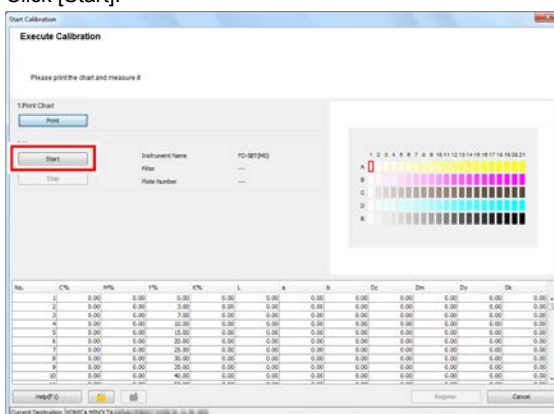
10. Click [Print].



11. Select the paper tray required to print out a chart, then click [Print].



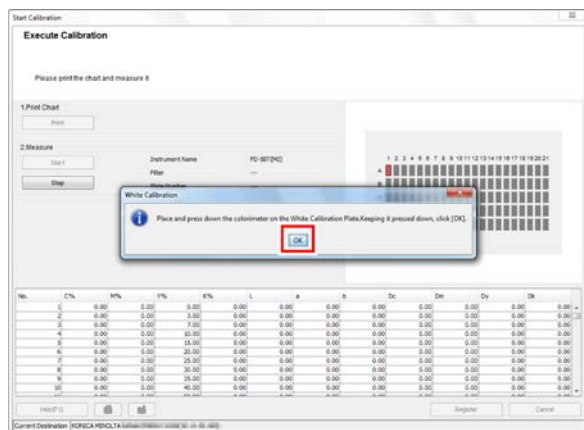
12. Click [Start].



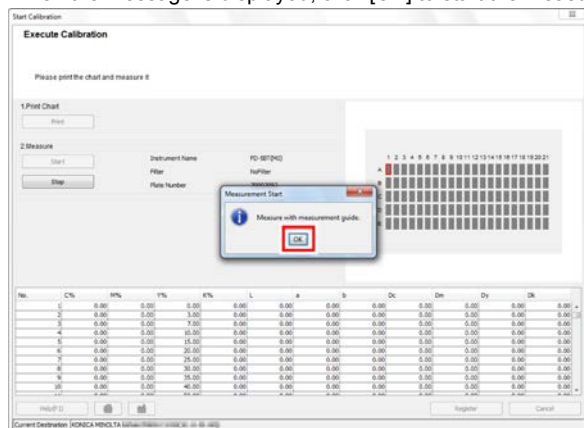
13. When the following message is displayed, place the instrument flat on the calibration dock and click [OK].

NOTE

- For FD-5BT, click [OK] while you press down the FD-5BT.



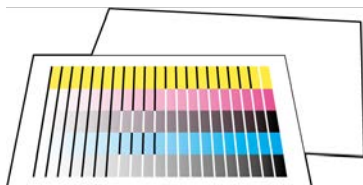
14. When the message is displayed, click [OK] to start the measurement.



15. Prepare the printed chart.

NOTE

- Place 5 to 10 blank sheets of the same color under the printed chart so that it will not be affected by the color of the working table.
- If a ruler is available, align it on the chart.
- To make the measurement, remove the FD-5BT from the target mask.



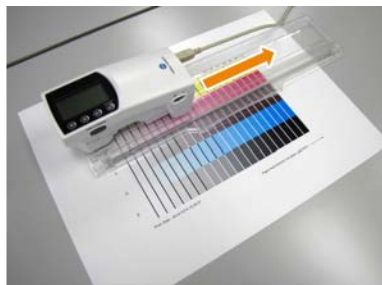
16. Carry out the measurement in sequence from row A.

- Hold down the side button of i1Pro/i1Pro2 or FD-5BT. When "bleep" sounds, slide i1Pro/i1Pro2 or FD-5BT while holding down the side button.

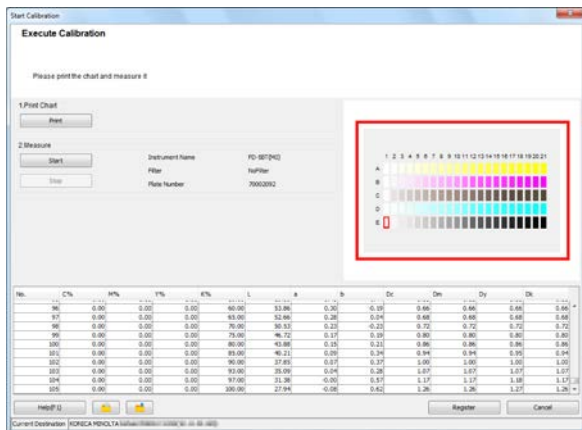
Slide the spectrophotometer to the opposite side, then release the side button.

NOTE

- For details about how to use i1Pro/i1Pro2 or FD-5BT, refer to the manual supplied with the spectrophotometer.



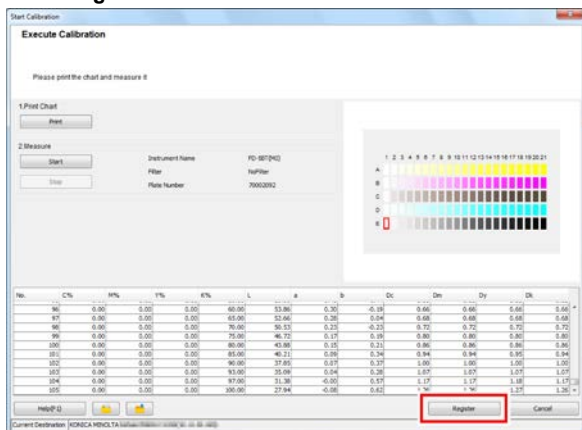
17. Likewise, measure rows B to E.



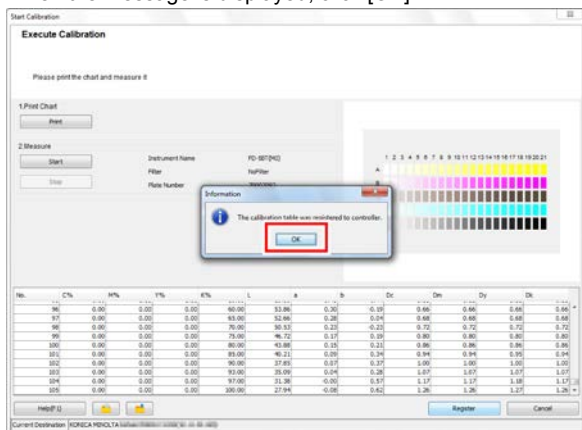
18. When the measurement is completed, click [Register].

NOTE

- Unregistered calibration data is erased when Color Centro is closed.

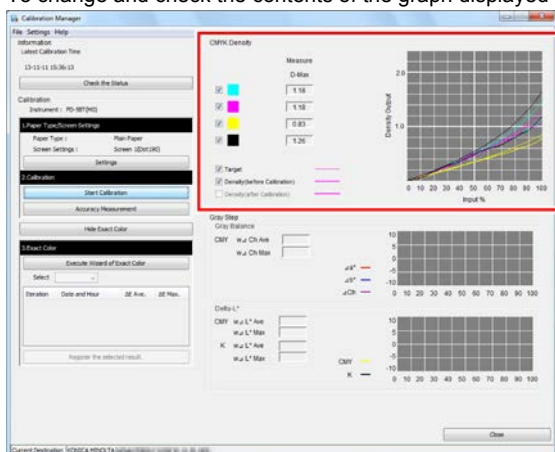


19. When the message is displayed, click [OK].

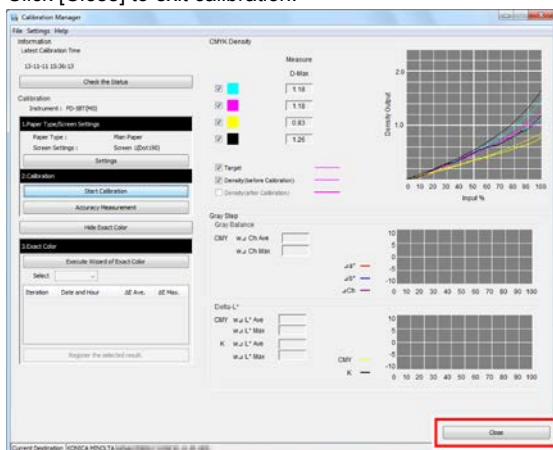


20. Check the calibration data measurement result using the graph displayed in the [Density Output] area.

To change and check the contents of the graph displayed in the [Density Output] area, adjust the check boxes on the left-hand side.



21. To execute calibration several times, repeat procedures 7 to 20.
 22. Click [Close] to exit calibration.

**NOTE**

- To view the previous calibration setting, select [Check the Status].

2.10 Exact Color**2.10.1 Execution timing**

- : Indispensable item
- : Execution-recommended item

Execution timing of CE

Controller	During installation						After the replacement of the drum, the developer, the developing unit, or the charging corona					
	IC-602				IC-308/IC-415		IC-602				IC-308/IC-415	
	Equip		Not Equip		Equip	Not Equip	Equip		Not Equip		Equip	Not Equip
RU-509	Ex	G7	Ex	G7	-	-	Ex	G7	Ex	G7	-	-
ExColor/G7	Ex	G7	Ex	G7	-	-	Ex	G7	Ex	G7	-	-
2.10 Exact Color	●	-	●	-	-	-	●	-	●	-	-	-

Execution timing of the user

Controller	During basic operation				During expert operation				During the custom screen change			
	IC-602		IC-308/IC-415		IC-602		IC-308/IC-415		IC-602		IC-308/IC-415	
	Equip	Not Equip	Equip	Not Equip	Equip	Not Equip	Equip	Not Equip	Equip	Not Equip	Equip	Not Equip
RU-509	-	-	-	-	-	-	-	-	Ex	G7	Ex	G7
ExColor/G7	-	-	-	-	-	-	-	-	Ex	G7	Ex	G7
2.10 Exact Color	-	-	-	-	-	-	-	-	●	-	●	-

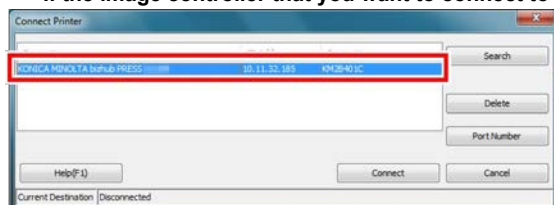
2.10.2 Procedure (for i1Pro/i1Pro2/ES-1000/ES-2000, or FD-5BT)**NOTE**

- Color Centro is a Java application. If Java applications are blocked by a firewall, permit network connections for the Java applications.
- To log on, you need the IP address and the port number of the image controller. (Default port number: 30081)
 On the control panel, you can check the IP address in [TCP/IP Setting] and the port number in [JSP Setting]. You can proceed to [TCP/IP Setting] and [JSP Setting] in the following order.
 [Administrator Setting] - [Network Setting] - [NIC Setting]
 The JSP setting is a setting that relates to a connection with a Java application server.

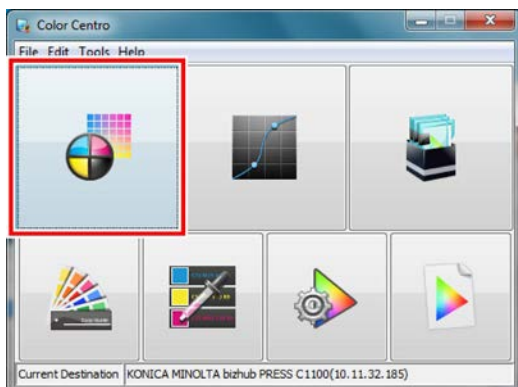
- Open the Start menu, and then click [All Programs] - [KONICA MINOLTA] - [Color Centro] - [KONICA MINOLTA Color Centro].
- Select the image controller.

NOTE

- If the image controller that you want to connect to is not displayed, click [Search] to search for it.



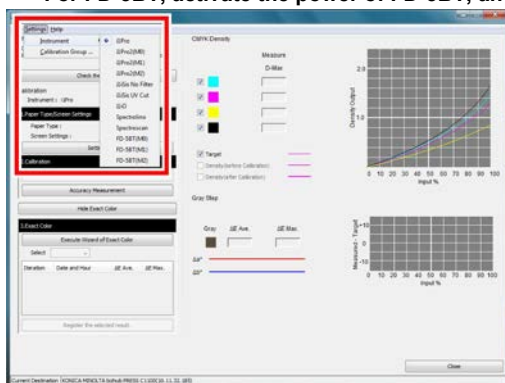
- Click [Connect].
 Color Centro starts, and the launcher screen becomes available.
- Click [Calibration].



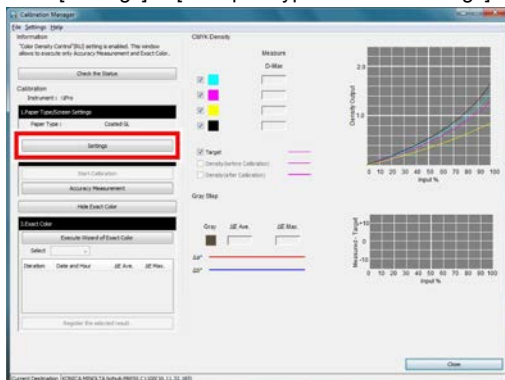
5. Select [Instrument] on the [configuration] menu, then select [i1Pro].

NOTE

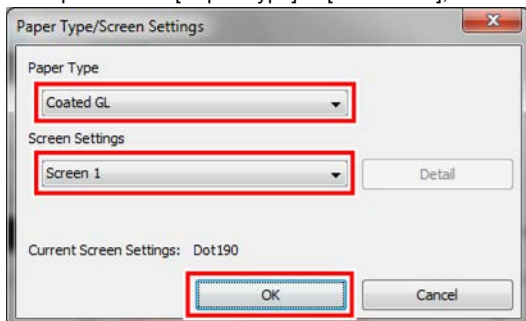
- For i1Pro2, select [i1Pro2(M0)].
- For FD-5BT, activate the power of FD-5BT, and select [FD-5BT(M0)].



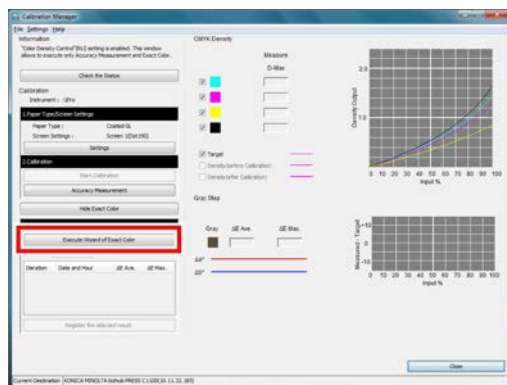
6. Click [Settings] in [1. Paper Type / Screen Settings].



7. Set the [Paper Type] and [Screen Settings] on the [Paper Type/Screen Settings] screen and click [OK].
Example: Set the [Paper Type] to [Coated GL], and the [Screen Setting] to [Screen 1] (default).



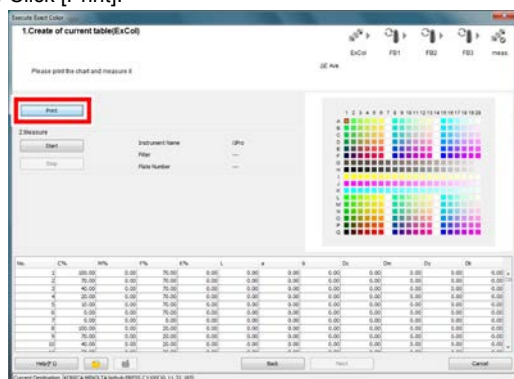
8. On the [Calibration Manager] screen, click [Execute Wizard of Exact Color] under [3. Exact Color].



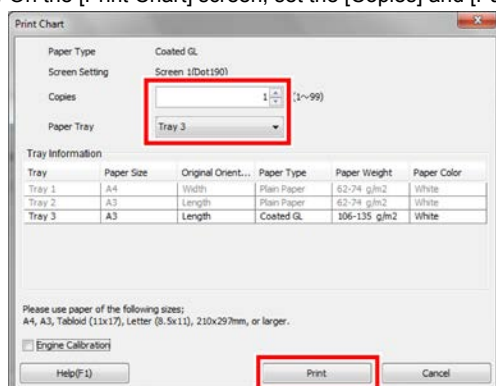
9. On the [Operation steps] screen, click [Next].



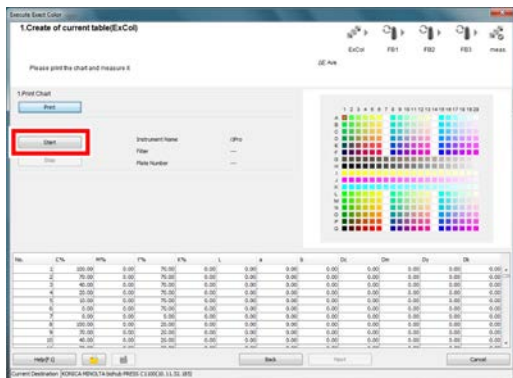
10. Click [Print].



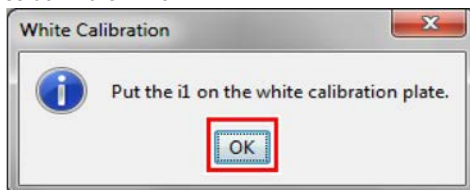
11. On the [Print Chart] screen, set the [Copies] and [Paper Tray]. After setting, click [Print].



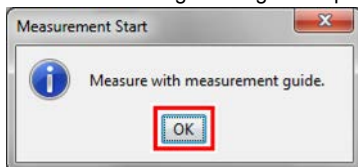
12. Click [Start].



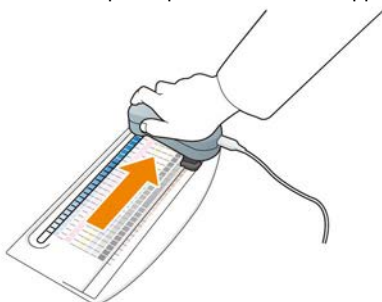
13. When the following message is displayed, place the instrument flat on the calibration dock and click [OK].
For FD-5BT, click [OK] while you press down the FD-5BT.



14. Stack 10 sheets of blank paper whose type is the same as that of the paper where chart has been printed, and place the printed chart on top of it.
15. When the following message is displayed, click [OK].



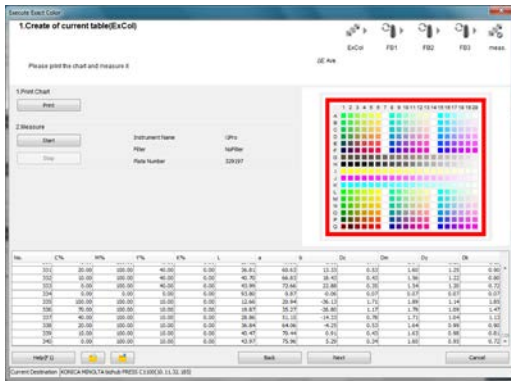
16. Carry out the measurement in sequence from row A.
- Hold down the side button of i1Pro/i1Pro2 or FD-5BT. When "bleep" sounds, slide i1Pro/i1Pro2 or FD-5BT while holding down the side button.



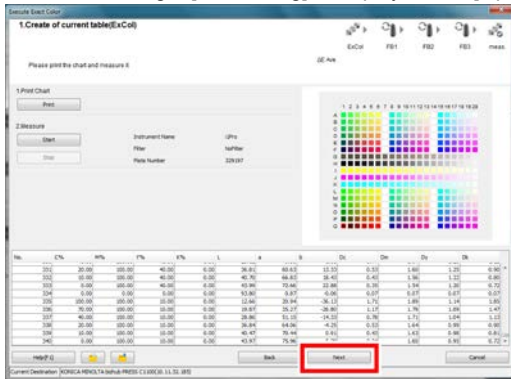
NOTE

- For FD-5BT, use the FD-5BT after you release the lock lever of the target mask and remove the target mask.
- For details about how to use i1Pro/i1Pro2 or FD-5BT, refer to the manual supplied with the spectrophotometer.

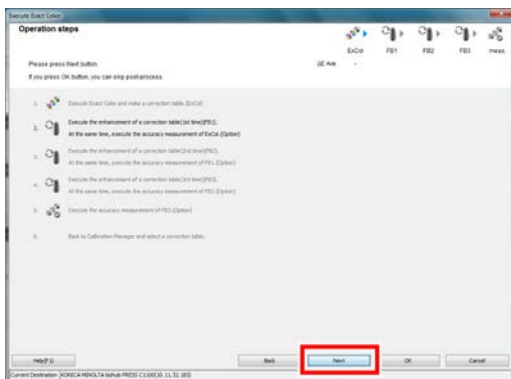
17. Likewise, measure rows B to Q.



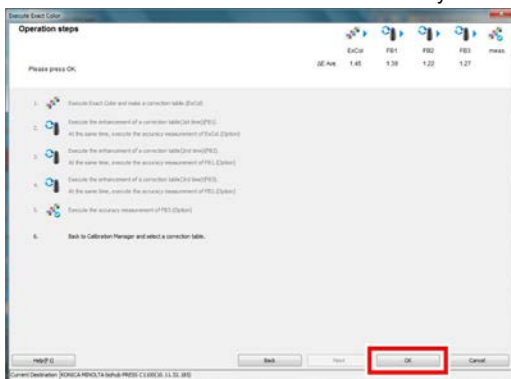
18. After you finish the chart measurement, click [Next].
After the message, [Calculating] is displayed, the [Operation steps] screen is displayed.



19. Click [Next] and perform the rest of the measurement by following the instructions on the screen.
Perform the rest of the measurement with the same procedures, in order of "2. The 1st enhancement of a correction table (FB1)", "3. The 2nd enhancement of a correction table (FB2)", "4. The 3rd enhancement of a correction table (FB3)", and "5. The accuracy measurement of FB3".



20. After the measurement of the "5. The accuracy measurement of FB3", click [OK] on [Operation steps] screen.

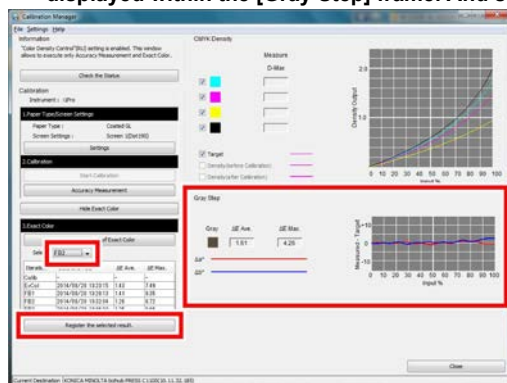


21. Change the measurement number on the right side of [Select] and check the [DE Ave], [DE Max] values, and the [Da] [Db] graph of the Gray displayed within the [Gray Step] frame.
As for the Gray, check the information within the [Gray Step] frame and select the calibration data that has the smallest difference from the target. Then click [Register the selected result.]

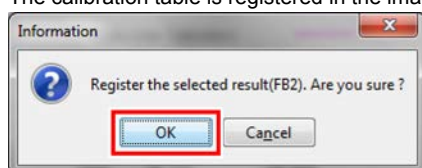
NOTE

- When you put a priority on the gray reproducibility of the low density, check the left half of the [Δa] [Δb] graph that is displayed within the [Gray Step] frame. And select the calibration data that [Δa] and [Δb] values are close to "0".

- When you put a priority on the gray reproducibility of the high density, check the right half of the Δa Δb graph that is displayed within the [Gray Step] frame. And select the calibration data that Δa and Δb values are close to "0".



22. Click [OK] on the [Information] screen.
The calibration table is registered in the image controller.



2.11 G7 Calibration

2.11.1 Execution timing

- Indispensable item
- Execution-recommended item

Execution timing of CE

Controller	During installation						After the replacement of the drum, the developer, the developing unit, or the charging corona					
	IC-602				IC-308/IC-415		IC-602				IC-308/IC-415	
	Equip	Not Equip	Equip	Not Equip	Equip	Not Equip	Equip	Not Equip	Equip	Not Equip	Equip	Not Equip
RU-509	Ex	G7	Ex	G7	-	-	Ex	G7	Ex	G7	-	-
ExColor/G7	-	-	-	-	-	-	-	-	-	-	-	-
2.11 G7 Calibration	-	•	-	•	-	-	-	•	-	•	-	-

Execution timing of the user

Controller	During basic operation				During expert operation				During the custom screen change			
	IC-602		IC-308/IC-415		IC-602		IC-308/IC-415		IC-602		IC-308/IC-415	
	Equip	Not Equip	Equip	Not Equip	Equip	Not Equip	Equip	Not Equip	Equip	Not Equip	Equip	Not Equip
RU-509	-	-	-	-	-	-	-	-	Ex	G7	Ex	G7
ExColor/G7	-	-	-	-	-	-	-	-	-	-	-	-
2.11 G7 Calibration	-	-	-	-	-	-	-	-	-	•	-	•

2.11.2 Procedure (for i1Pro/i1Pro2/ES-1000/ES-2000, or FD-5BT)

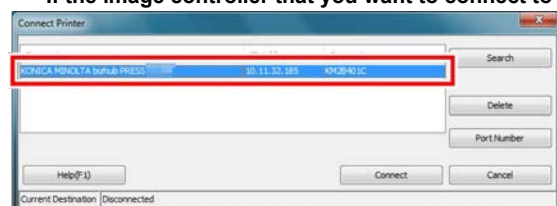
NOTE

- Color Centro is a Java application. If Java applications are blocked by a firewall, permit network connections for the Java applications.
- To log on, you need the IP address and the port number of the image controller. (Default port number: 30081) On the control panel, you can check the IP address in [TCP/IP Setting] and the port number in [JSP Setting]. You can proceed to [TCP/IP Setting] and [JSP Setting] in the following order.
[Administrator Setting] - [Network Setting] - [NIC Setting]
The JSP setting is a setting that relates to a connection with a Java application server.
- In Color Centro, Exact Color is configured as default. You can use only either Exact Color or G7 calibration. To switch to G7 calibration, configure the DIPSW55-1 to "1".

- Open the Start menu, and then click [All Programs] - [KONICA MINOLTA] - [Color Centro] - [KONICA MINOLTA Color Centro].
- Select the image controller.

NOTE

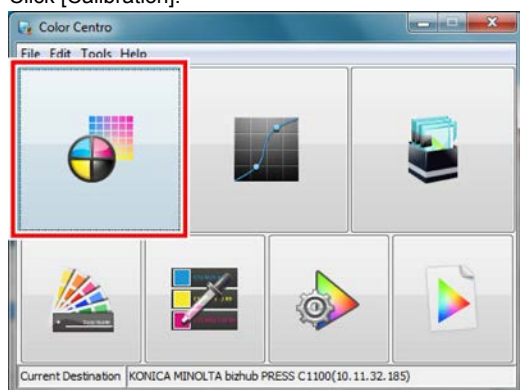
- If the image controller that you want to connect to is not displayed, click [Search] to search for it.



- Click [Connect].

Color Centro starts, and the launcher screen becomes available.

4. Click [Calibration].



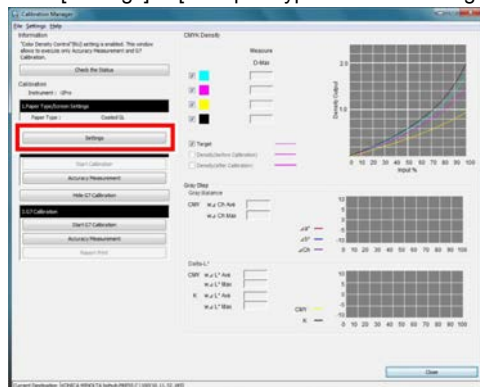
5. Select [Instrument] on the [configuration] menu, then select [i1Pro].

NOTE

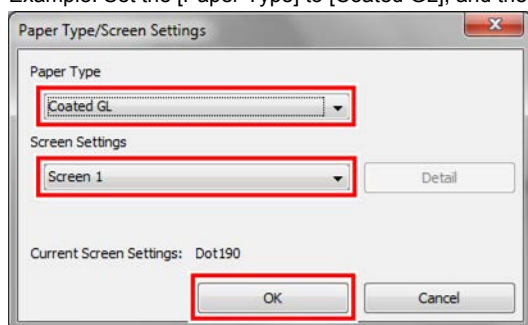
- For i1Pro2, select [i1Pro2(M0)].
- For FD-5BT, activate the power of FD-5BT, and select [FD-5BT(M0)].



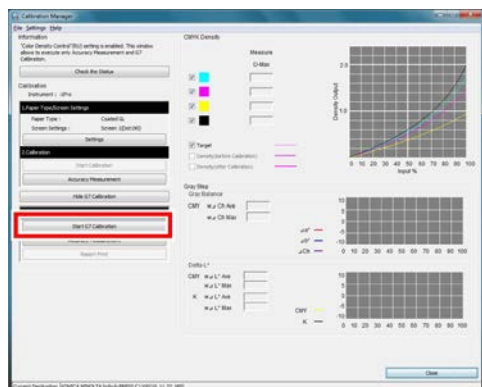
6. Click [Settings] in [1. Paper Type / Screen Settings].



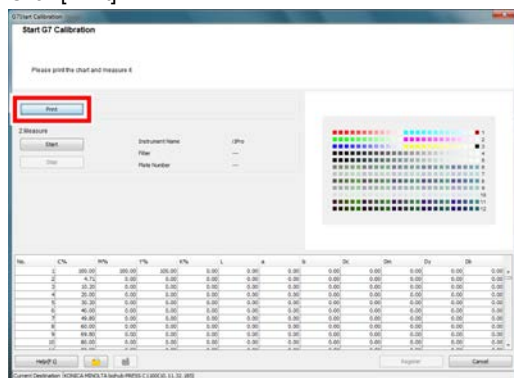
7. Set the [Paper Type] and [Screen Settings] on the [Paper Type/Screen Settings] screen and click [OK].
Example: Set the [Paper Type] to [Coated GL], and the [Screen Setting] to [Screen 1] (default).



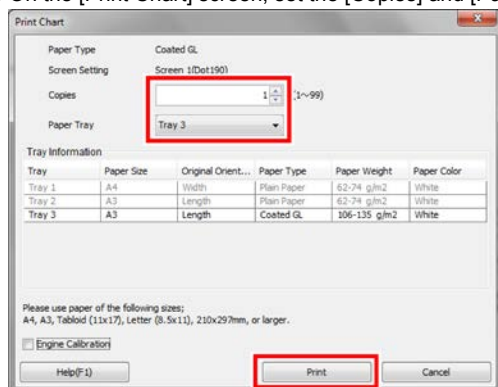
8. On the [Calibration Manager] screen, click [Start G7 Calibration] under [3. G7 Calibration].



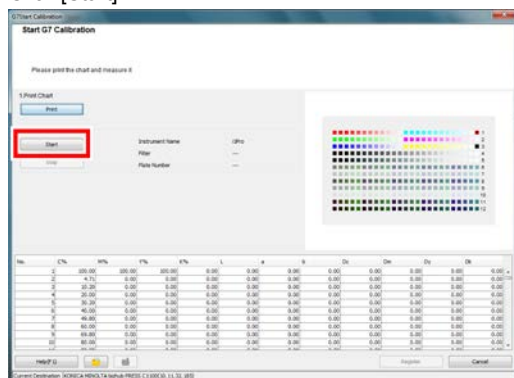
9. Click [Print].



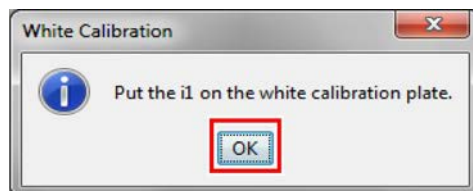
10. On the [Print Chart] screen, set the [Copies] and [Paper Tray]. After setting, click [Print].



11. Click [Start].

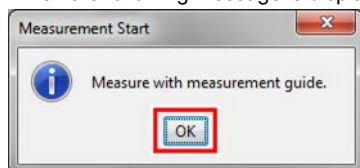


12. When the following message is displayed, place the instrument flat on the calibration dock and click [OK].
For FD-5BT, click [OK] while you press down the FD-5BT.



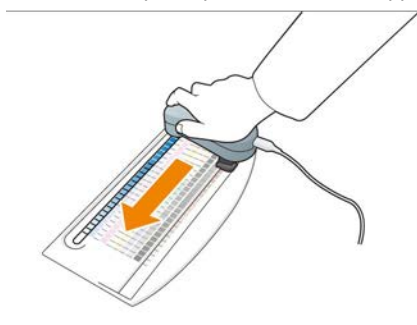
13. Stack 10 sheets of blank paper whose type is the same as that of the paper where chart has been printed, and place the printed chart on top of it.

14. When the following message is displayed, click [OK].



15. Carry out the measurement in sequence from the 1st row.

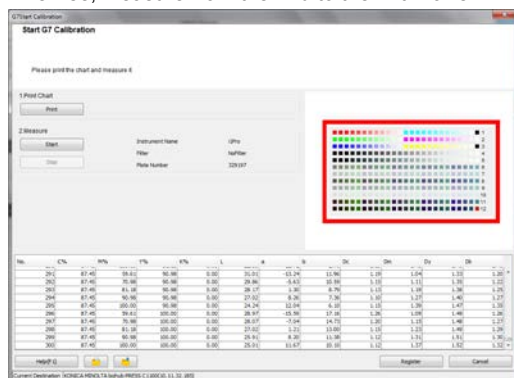
- Hold down the side button of i1Pro/i1Pro2 or FD-5BT. When "bleep" sounds, slide i1Pro/i1Pro2 or FD-5BT while holding down the side button. Slide the spectrophotometer to the opposite side, then release the side button.



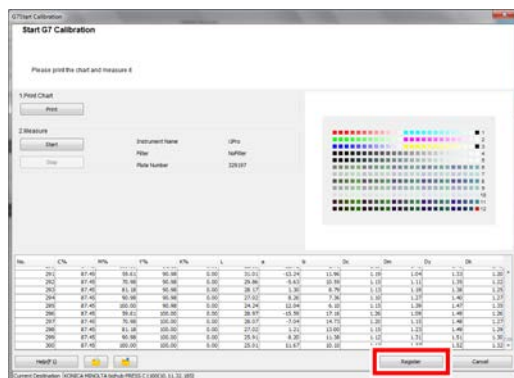
NOTE

- For FD-5BT, use the FD-5BT after you release the lock lever of the target mask and remove the target mask.
- For details about how to use i1Pro/i1Pro2 or FD-5BT, refer to the manual supplied with the spectrophotometer.

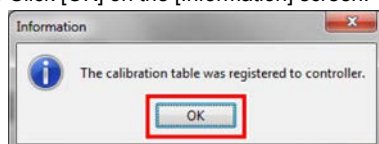
16. Likewise, measure from the 2nd to the 12th rows.



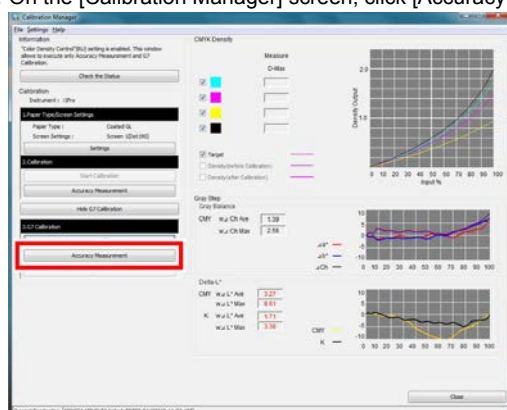
17. After you finish the chart measurement, click [Register].



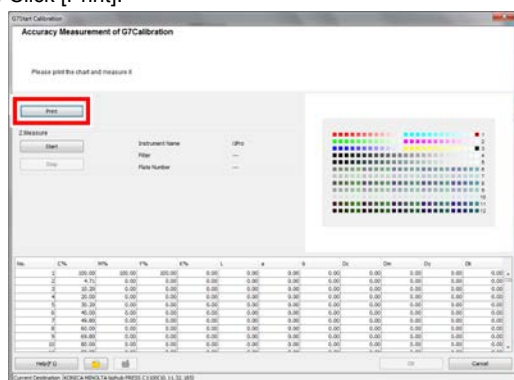
18. Click [OK] on the [Information] screen.



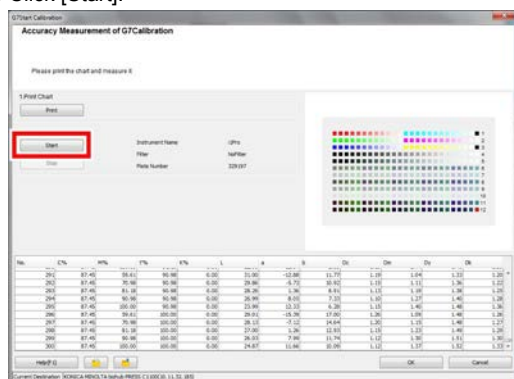
19. On the [Calibration Manager] screen, click [Accuracy Measurement] under [3. G7 Calibration].



20. Click [Print].



21. Click [Start].



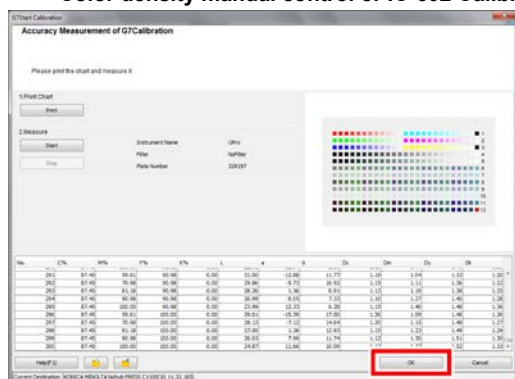
22. Measure the chart using the instrument. After you finish the chart measurement, click [OK].

NOTE

- When the values of ΔCh and ΔE^* are not G7 standard as the result of the accuracy check, the dialogue is displayed. You can choose to recalculate and register the calibration table to fit in the target range or register as is in the dialogue. Conduct the recalculation.

If you recalculate and the values of ΔCh and ΔE^* are still not G7 standard, check the following adjustment items.

- Gamma automatic adjustment
- Density balance adjustment
- Maximum Density Auto Adjustment (RU) or Maximum density adjustment
- Color density manual control or IC-602 Calibration

**NOTE**

- The measurement results (Gray Step) are displayed on [Calibration Manager] screen. When [Report Print] is clicked, the measurement results for G7 calibration is printed.

**2.12 IC-308/IC-415 Calibration****2.12.1 Execution timing**

- : Indispensable item
- : Execution-recommended item

Execution timing of CE

Controller	During installation						After the replacement of the drum, the developer, the developing unit, or the charging corona					
	IC-602				IC-308/IC-415		IC-602				IC-308/IC-415	
	Equip		Not Equip		Equip	Not Equip	Equip		Not Equip		Equip	Not Equip
RU-509	Ex	G7	Ex	G7	-	-	Ex	G7	Ex	G7	-	-
ExColor/G7	Ex	G7	Ex	G7	-	-	Ex	G7	Ex	G7	-	-
2.12 IC-308/IC-415 Calibration	-	-	-	-	●	●	-	-	-	-	●	●

Execution timing of the user

Controller	During basic operation				During expert operation				During the custom screen change			
	IC-602		IC-308/IC-415		IC-602		IC-308/IC-415		IC-602		IC-308/IC-415	
	Equip	Not Equip	Equip	Not Equip	Equip	Not Equip	Equip	Not Equip	Equip	Not Equip	Equip	Not Equip
RU-509	-	-	-	-	-	-	-	-	Ex	G7	Ex	G7
ExColor/G7	-	-	-	-	-	-	-	-	Ex	G7	Ex	G7
2.12 IC-308/IC-415 Calibration	-	-	-	●	-	-	-	●	-	-	●	●

2.12.2 Procedure (for i1Pro/i1Pro2/ES-1000/ES-2000)

- Use a USB cable to connect EFI Spectrometer ES-1000/ES-2000 to your computer.

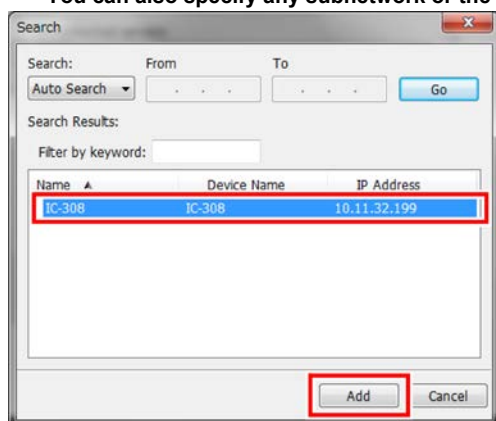
NOTE

- For details about how to use EFI Spectrometer ES-1000/ES-2000, refer to the manual supplied with the spectrophotometer.

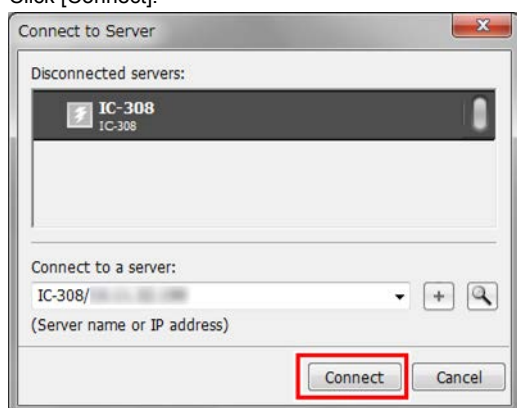
- Open the Start menu, and then click [All Programs] - [Fiery] - [Fiery Command WorkStation 5].
- Select a Fiery Color Server to be connected, then click [Add].

NOTE

- You can also specify any subnetwork or the IP address range to search for the desired Fiery Color Server.



- Click [Connect].

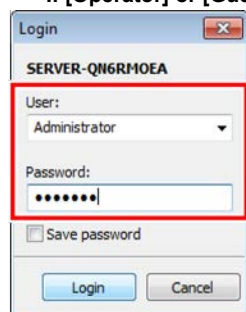


- Select the user privileges, then enter the password.

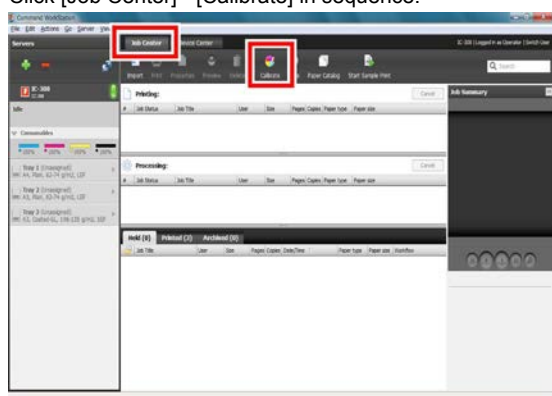
NOTE

- The default password is "Fiery.1."

If [Operator] or [Guest] is selected for user privileges, you do not need to enter the password.



- Click [Login].
- Click [Job Center] - [Calibrate] in sequence.

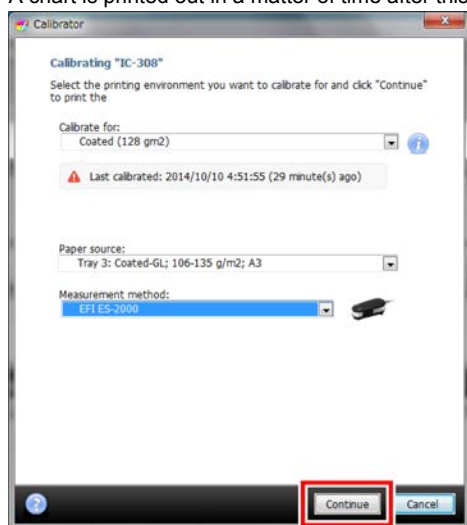


- Select the printing preferences for calibration.
Example: Configure the [Calibrate] to [Coated (128gm2)], the [Paper source] to [Tray 3], and the [Measurement method] to [EFI ES-2000].

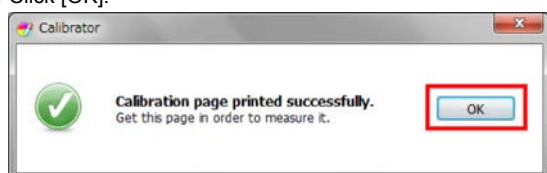


9. Click [Continue].

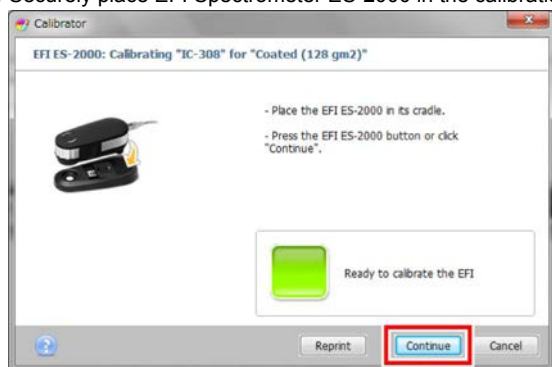
A chart is printed out in a matter of time after this machine started running.



10. Click [OK].



11. Securely place EFI Spectrometer ES-2000 in the calibration cradle, then click [Continue].



12. Stack 10 sheets of blank paper whose type is the same as that of the paper where chart has been printed, and place the printed chart on top of it.

13. Follow the instructions on the measurement window to measure color strips in sequence.


- Hold down the measurement button of EFI Spectrometer ES-2000. After you hear a beep, slide it while holding down the measurement button.
Slide EFI Spectrometer ES-2000 to the bottom of strip, then release the measurement button.

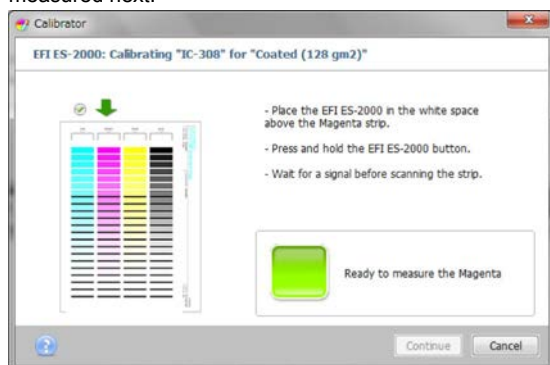
NOTE

- For details about how to use EFI Spectrometer ES-2000, refer to the manual supplied with the spectrophotometer.

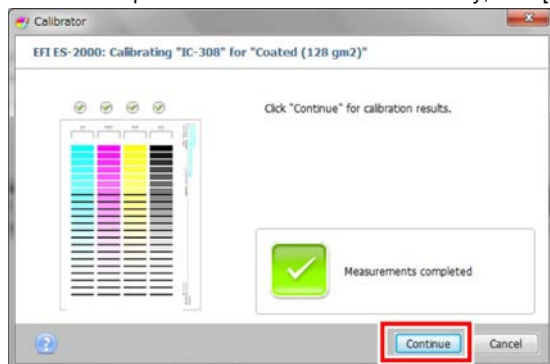


14. In the same way, measure all colors.

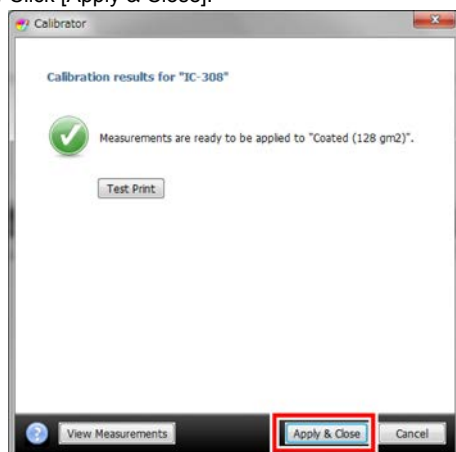
When a strip is measured successfully, a check mark is displayed at the top of the color name, and  is displayed for the color to be measured next.



15. When all the patches have been read successfully, click [Continue].



16. Click [Apply & Close].



2.13 Printer Gamma Sensor Adj.

2.13.1 Execution timing

Perform this adjustment when all the following conditions are met.

- IC-308/IC-415 is used as a controller
- RU-509 is not installed
- A gradation problem occurs in the highlighted area when all adjustments during the custom screen change are completed.

2.13.2 Procedure

Note

- Do not conduct this adjustment unless the IDC sensor is replaced.
- Be sure the Gamma Automatic Adjustment has been adjusted in advance. (Refer to [R.2.2 Gamma automatic adjustment](#))
- When you conduct this adjustment, be sure to use the plain paper or the color copy paper. Otherwise, the adjustment is not conducted properly because the color of the test pattern varies depending on the paper color.
- When you press [Reset Adj. Data] and [Yes], the adjusted Adjustment of Printer Gamma Sensor is reset to the main body ROM initial setting data (average value). Press [No] not to reset the data.
- This adjustment is the adjustment method for C1070 and C1060 and C1060L (copier version).
- When RU-509 is not connected to C1070P/C71hc (printer version), execute the calibration of the controller.

1. "Service Mode Menu screen"
Press [01 Machine Adjustment].
2. "Machine Adjustment Menu screen"
Press [03 Quality Adjustment].
3. "Quality Adjustment Menu screen"
Press [01 Printer Gamma Adjustment].
4. "Printer Gamma Adjustment screen"
Press [03 Printer Gamma Sensor Adj.].
[Service Mode] → [Machine Adjustment] → [Quality Adjustment] → [Printer Gamma Adjustment] → [Printer Gamma Sensor Adj.]
5. "Printer Gamma Sensor Adjustment screen"
Select the screen that you want to adjust.

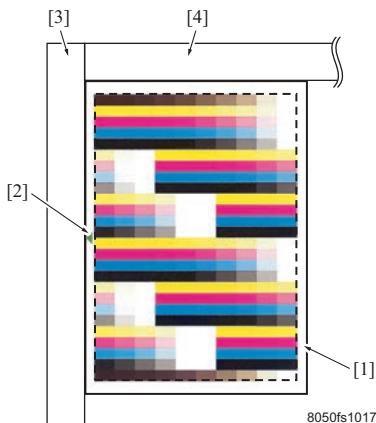
Note

- The adjustable screens are the same as the ones in Printer Gamma Offset Adjustment.

6. Press [Print Mode].
7. Place the A4 or 8 1/2 x 11 paper. Press the Start key to output the test pattern.
8. "Place output image on original glass...screen"
Returns to the adjustment screen automatically when the test pattern is printed.
Place the outputted test pattern [1] on the original glass securely against the original positioning plate/Lt [3] and the original positioning plate/Rr [4].

Note

- Place the test pattern so that the green triangular mark [2] comes to the left side. (printed side face down)



9. Place 10 sheets of copy paper (white) on top of the test pattern and close the DF or the platen cover.

Note

- Be sure to use the white copy paper. Otherwise, the printer gamma cannot be corrected properly.

10. Press [Start].
11. If the chart is scanned and it is normal, the gamma sensor adjustment and the printer gamma correction carries out, and then the "Completed" message appears.
12. When an abnormality occurs, an error code appears for every cause. Correct the error referring to the following and repeat steps 6 to 11.

Error code	Error	Descriptions
Error 1	A crossmark cannot be detected	Chart misplacement
Error 2	The chart is placed upside down	Chart misplacement
Error 3	Cannot detect the chart pattern	Different chart is placed
Error 4	Adjustment impossible	Software bug
Error 5	Value is out of standard	Readjust
Error 6	Non-volatile data abnormality	Check the installation position of the NVRAM board
Error 7	Accessing to the unassigned memory	Software bug
Error 8	Memory-related error	Software bug
Error 9	Program error	Software bug
Error 10	Chart is skewed	Chart misplacement
Error 11	Image header information read error	Software bug
Error 12	RGB data abnormalities	Chart is different, or the software bug
Error 13	Parameter setting error	Software bug

Error 31	Sensor value error	Readjust
Error 51	Regression calculation error	Readjust
Error 52	Sequential number overflow	Software bug
Error 53	Regression order error	Software bug
Error 54	Select screen information error	Software bug
Error 55	Color information error	Software bug

2.14 Printer Gamma Offset Auto.

2.14.1 Execution timing

Perform this adjustment when all the following conditions are met.

- IC-308/IC-415 is used as a controller
- RU-509 is not installed
- A gradation problem occurs in the highlighted area when all adjustments during the custom screen change are completed.

2.14.2 Procedure

Note

- Be sure the Gamma Automatic Adjustment has been adjusted in advance. (Refer to [R.2.2 Gamma automatic adjustment](#))
- When you conduct this adjustment, be sure to use the plain paper or the color copy paper. Otherwise, the adjustment is not conducted properly because the color of the test pattern varies depending on the paper color.
- To adjust the printer gamma, perform this adjustment. When a fine adjustment of the printer gamma is required, perform "[I.4.3.28 Printer gamma offset adjustment \(quality adjustment - printer gamma adjustment\)](#)."
- This adjustment method is for C1070 and C1060 and C1060L (copier version). For C1070P/C71hc (printer version), perform "[I.4.3.28 Printer gamma offset adjustment \(quality adjustment - printer gamma adjustment\)](#)" for the adjustment.
- Do not conduct this adjustment when you conduct "Output Paper Density Adj."

1. "Service Mode Menu screen"
Press [01 Machine Adjustment].
2. "Machine Adjustment Menu screen"
Press [03 Quality Adjustment].
3. "Quality Adjustment Menu screen"
Press [01 Printer Gamma Adjustment].
4. "Printer Gamma Adjustment screen"
Press [02 Printer Gamma Offset Auto.].
[Service Mode] → [Machine Adjustment] → [Quality Adjustment] → [Printer Gamma Adjustment] → [Printer Gamma Offset Auto.]
5. "Printer Gamma Offset Auto. screen"
Press [Next] or [Previous] to select the screen that you want to adjust.

Note

- The adjustable screens are the same as the ones in Printer Gamma Offset Adj.
- The printer gamma offset value of each YMCK displayed are the current values, and they are linked with the "Printer Gamma Offset Adj." values.

6. Press [Readjust]. To readjust, press [Yes], and press [No] to cancel the operation.

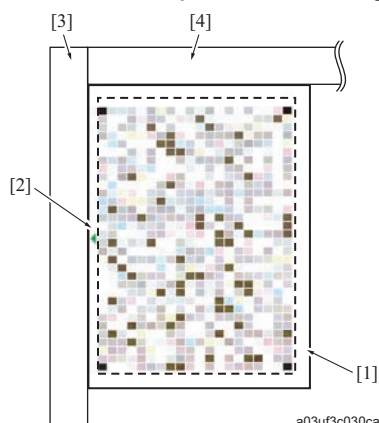
Note

- When the adjustment value greatly differs from 0, press [Reset Adj. Data] to reset the printer gamma offset value to 0. Then press [Readjust].

7. Press [Print Mode].
8. "PRINT MODE screen"
Place A4 or 8 1/2 x 11 paper and press the Start key to print a test pattern.
9. "Printer Gamma Offset Auto. screen"
Returns to the adjustment screen automatically when the test pattern is printed.
Place the outputted test pattern [1] on the original glass securely against the original positioning plate/Lt [3] and the original positioning plate/Rr [4].

Note

- Place the test pattern so that the green triangular mark [2] comes to the left side. (printed side face down)



10. Place 10 sheets of copy paper (white) on top of the test pattern and close the DF or the platen cover.

Note

- **Be sure to use the white copy paper. Otherwise, the printer gamma cannot be corrected properly.**

11. Press [Start].

12. The test pattern is scanned and the current YMCK values are updated.

Note

- **Since the scanned result at the first scan is not examined, a "Completed" message does not appear after the first scan.**
- **The quality examination of the value is made from the second scan. Make sure to repeat steps 8 to 11 several times until the message "Completed normally" appears.**

13. "Printer Gamma Offset Auto. screen"

Press [Print Mode].

14. Perform the steps 8 to 11.

15. Confirm that the message "Completed normally" appears.

If the screen shows the message other than "Completed normally", repeat steps 13 to 14.

S TROUBLESHOOTING GUIDE Ver1.7 (REPORTS FROM THE MARKET)

1. IMAGE QUALITY

1.1 Spot

1.1.1 Cyclic white spot/black spot

(1) Symptom

White spot/black spot repeatedly occurs at a certain cycle.

(2) Cause

Problem Parts	Spot Interval	Remark
Drum unit	Approx. 188 mm cycle in a single color	-
Developing unit	Approx. 44 mm cycle in a single color	-
Intermediate transfer belt	Approx. 861 mm interval.	-
1st transfer roller	Approx. 69 mm interval.	
2nd transfer roller/Up	Approx. 75 mm interval.	
2nd transfer roller/Lw	Approx. 75 mm interval.	-
Fusing belt	Approx. 311mm interval	On simplex printing, the symptom occurs on 2nd side.

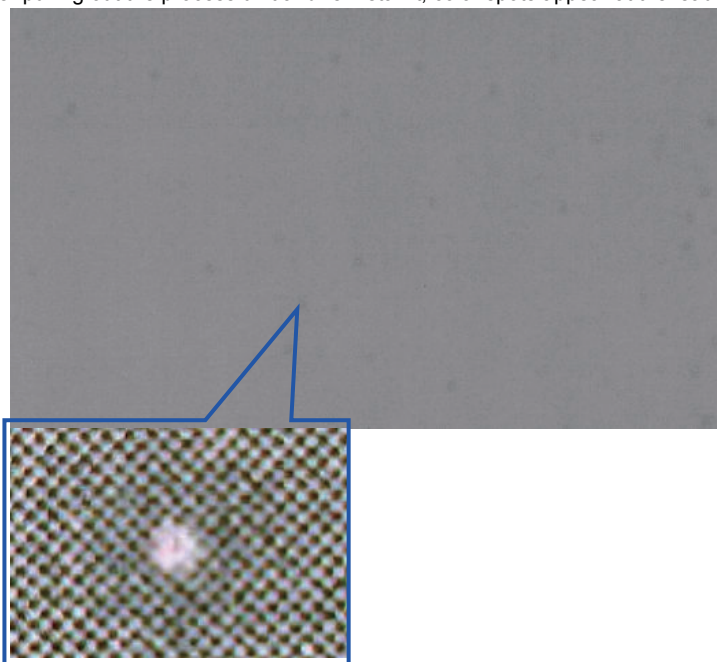
(3) Solution

After specifying the problem parts, clean and replace the subject parts.

1.1.2 Color Spots due to soilage inside machine

(1) Symptom

After pulling out the process unit and re-install it, color spots appear at the leading edge on the first ten prints.



(2) Cause

While pulling out the process unit, developer and toner coming out from the toner entrance[2] and toner exit[1] of the developing unit. It drops on the paper path, attaching to the paper and resulting in the color spots.