

Creating profiles application software



Reference Guide

MIMAKI ENGINEERING CO., LTD. https://mimaki.com/



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Connect MYIRO-1219

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About this guide

This document explains how to operate Mimaki Profile Master 3.

Notations used in this document

Items appearing on the menu are enclosed in []. For example: [creation]. Buttons appearing in the dialogs are enclosed in ____. For example: OK .

Symbols



This symbol indicates important information that requires attention during the operation of this product.



This symbol indicates useful information.

Mimaki Profile Master 3

The features of MPM3 are described below.



Creating device profiles

MPM3 can create device profile version 3.5 or later for the RasterLink series. Device profile version 3.5 can be installed in RasterLink version 4.11 or later. MPM3 cannot create device profiles older than version 3.0.

Editing device profiles

MPM3 can edit profiles that have already been created. MPM3 can edit device profile version 3.5 or later. MPM3 cannot edit device profiles older than version 3.0. \rightarrow Refer to "Chapter 3 Editing a device profile" (P. 37).

Reducing changes in printer colors

Changing a printer head, media, or ink can cause a change in print colors. MPM3 can reduce such changes in color by calibrating the device profile. \rightarrow Refer to "Chapter 4 Suspending the creation of a device profile" (P. 41).

Reducing color difference between printers

Even printers of the same model will have color differences, due to the use of different print heads, media feeding mechanisms, and other printer features.

MPM3 can reduce such color differences between printers by adjusting the device profiles.

 \rightarrow Refer to "Chapter 7 Color-matching of the multiple printers of the same model (Equalization)" (P. 67).

Emulating the color of a target printer

MPM3 can emulate the color of a target printer. \rightarrow Refer to "Chapter 8 Color-matching multiple printers of different models (Emulation)" (P. 83).

Registering profiles in RasterLink

You can use this software to register profiles in RasterLink.

Operation wizard

The operation of creating device profile is rather complex, which requires printing with a printer or measuring the color with a colorimeter.

MPM3 uses an operation wizard to guide the user through the process.

Profiles created by MPM3

Device profile

An output profile used in the RasterLink series is called a "device profile".

The file extension for a device profile is "icc". Although device profiles comply with the ICC format, they are extended to include original information from Mimaki. When a device profile is installed in Raster-Link, RasterLink can print images using the quality set in the device profile.



CMYK profile

An input profile used in the RasterLink series. It expresses the color of CMYK input data.

RGB profile

An input profile used in the RasterLink series. It expresses the color of RGB input data.

Monitor profile

A profile to express the color displayed by the monitor. This profile is used in the application software.

Restrictions of MPM3 trial version

The trial version of MPM3 has the following restrictions.

- 60-day trial period.
- · Cannot add new media.
- · Cannot create an ICC profile (CMYK / RGB / monitor profile).
- · Cannot use the emulation function.

Chapter 1 Before creating a device profile

Starting MPM3

1

Double-click the MPM3 icon.



• MPM3 starts, and the main menu is displayed.

3	Mimaki Profile Master3 – 🗖 🗙
Device Profile	
O ICC Profile	Create Device Profile
Option	Manage Device Profile

Operation menu tree

Device Profile	Cre	eating Device Profile		
Control Polite		Terrererererererererererererererererere		
		Editing profiles		
			- 0 10	Edit Resume Calibration Equalization Emulation Copy Install
			- 7 2	Edit Resume Daily Confirm Readjustment Color Matching Copy Install
[ICC Profile]	Cr	eate CMYK Profile		
toronic Profile Create Monitor Profile Create Monitor Profile	o A	Create CHIC (relation of the second of the s	Create CM wizard	/IYK Profile
	Cr	eate RGB Profile		
		Course hills finalise. Allow prine the chart with the target Color (Sale Glave chart) ta save the chart data. Allow prine the chart with the target Color (Sale Glave chart) target Prine a chart mage Measure a chart mage Measure a chart mage Color (Sale Glave chart) target Measure a chart mage Color (Sale Glave chart) target Color (Sale Glave chart) tar	Create R0 wizard	GB Profile
		net and		
		Create INFORMULT FUDILE Create Restance Restance Create Restance Restance Restance Create Restance Restance Restance Create Create Create Create Create Create Create Create Create	Create Mo wizard	onitor Profile
	L	Next Cancel		

Option

3		Mimaki Profile Naster3	- • ×
Device Profile			
O ICC Profile	\mathbf{Q}	Manage Media	
Option	۹.	Colorimeter	
	÷	miscellaneous	
	8	User information	

Manage Media

ND.	Media name	Media material	Ada
1	Test1	Terpsuin	
2	Test2	PVC Gloss	Dele
<			>

Colorimeter

				Settnigs	
Colo	rimeter: ^I ro		•	Setting	Connection check
Mea Si	sured valu elect unit s	e ystem to dis	play values		
v	L*a*b*	Lch	□ xyz	Density (D)	

Miscellaneous

Disalari			
Display			
Unit	mm	¥	
Language	Foolish	~	
congooge	cingian i		
Color Matching mode	standard	~	
Output Port			
Check device			
US82.0			
USB2.0			
USB2.0 Output Time-out	3 🗘	ec	
USB2.0 Output Time-out Output Buffer Leng	3 0 1 gth 4096 0 1	iec (B	
USB2.0 Output Time-out Output Buffer Leng Ethernet	3 🗘 1 gth 4096 🗘 1	iec (B	
USB2.0 Output Time-out Output Buffer Leng Ethernet Output Time-out	3 0 1 4096 0 1	iec (B	
USB2.0 Output Time-out Output Buffer Leng Ethernet Output Time-out Output Ruffer Leng	3 0 1 4096 0 1	ec (B vec	

User Information

	User information	×
Serial Key User name	mimaki	
	OK キャンセル	

Selecting a colorimeter

A colorimeter must be selected before creating a device profile. Colorimeter settings are saved, and therefore you do not need to select a colorimeter again unless you change the colorimeter.

Click [Colorimeter].

• The Set Colorimeter dialog appears.

3	Mimaki Profile Master3 – 🗖	×
Device Profile		
O ICC Profile	Manage Media	
Option	Colorimeter	
	misc. miscellaneous	
	User information	

2 Select a colorimeter model.

• Refer to "Chapter 18 Setting the colorimeter" (P. 195) for details.

	Settnigs	×
Colorimeter: i1Pro v	Setting Connection check	
Measured value Select unit system to display values		
✓ L*a*b* Lch XYZ	Density (D)	
	OK Cancel	

Chapter 2 Creating a device profile

Workflow for creating a device profile

The steps described below show the workflow for creating a device profile.



Creating a device profile

Starting the wizard

1

Click [Create Device Profile] to start the wizard for creating the device profile.

3	Mimaki Profile Master3 – 🗖 🗙
Device Profile	
O ICC Profile	Create Device Profile
Option	Manage Device Profile

Setting the device profile conditions

STEP1: Select a printer and ink set

Select the target printer from the printer list. Select the target ink set from the ink set list. 2 - 🗆 🗙 [Create condition] Printer Inkset Media STEP1 Printer and Inks ect Printer and Inkset 2 Inkset Printer ES3 CMYKLcLm SS21 CMYKLcLm 昇華転写インク53 BMYKLbLm STEP2 JFX200-4Color+SP Media JFX200-6Color+SP STEP3 Output settings JFX500-4Color 2 JFX500-4Color+2 stagger JV150-4Color JV150-8Color JV300-4Color JV33-4Color JV33-8Color Next Cancel

STEP2: Select media

3 Courts and then	Create Device Prof	ile - Setup conditions	
[Create Condition] Printer JV300-8Color Inkset 昇華転与インク54 B	Select a Media		
Media	Printer and Inkset No. Media	name Media ma	terial
	1 TEST1	Others	
	Media		
	STEP3		
	Output settings		
			Add

• To add new media, click [Add].

資

	Addition of media
Media name	TEST2
Media material	Acrylic 🗸
	Add Cancel

Enter the name of the media and select the media material from the drop down list.

STEP3: Set the printing conditions

Set the parameters of the printing conditions.

3	(Create Device Prof	ile - Setup conditions		- 🗆 🗙
[Create condition] Printer JV300-8Color Inkset 昇華転写インク54 B Media テスト1	STEP1 Printer and Inkset	Setup output sett	ngs		ו
	STEP2	Resolution	720x1080 VD	~	
	Media	Pass	12	*	
	STEP3	Scan direction	Bi-direction	~	
	Output settings	High speed	ON	*	
		Layer	1	~	
		Halftone	ILL diffution	*	
		<u> </u>			•
			P	rev Complete	Cancel

Print resolution	Scan resolution x feed resolution VD/ND (VD: Variable Dots ND: Normal Dots).
Pass	Scan count needed to complete 1 scan line
Scan direction	Printing with uni-direction or bi-direction
High speed	High speed scan or normal speed scan
Layer	Overprint count
Halftone	Halftone method (ILL Diffusion: Diffused dither pattern MFD1: Error diffusion)

Creating a device profile

STEP1: Set unique printer parameters

Set the unique printer parameters that might effect the print quality.

The unique parameter functions and content are different for each printer. Specify the values you want to set on the printer. These unique parameters are included in a device profile, and RasterLink uses them automatically without the need for additional settings by the operator.

3	Create Device Profile - V3 Profile 1
Printer JV300-4Color Inkset B53 CMYk Media name test Resolution 360x360 VD Pass 1 Scan direction Bi-direction High speed OFF Overprint Itime(s) Halftone ILL diffusion	STEP1 Switch heater settings on/off. Printer Property Check heaters where you want to set. Adjust a heater temperature on the printer, and then put the value. Pre heater temp 40 Printe Property STEP3 Single/Double ink limit STEP3 Over Three inks density limit STEP3 Over Three inks density limit STEP3 STEP3 Step5 Save

	1	Unique parameters of the printer	Set the unique parameters of the printer.	
ſ	2	Import	Load parameters from the specified device profile.	

STEP2: Setting variable dots

This step appears when Variable Dots is selected. Set the mixture rate for large dots, medium dots, and small dots.



• Click [Import] to load parameters from the specified device profile.

STEP3: Limit ink to a primary color and 2 mixed colors

Set the ink limit for the primary color and 2 mixed colors. Print the ink limit chart. Make a visual determination of the maximum ink points. For light ink, the combination of dark ink and light ink is assumed as a primary color.

3	Create Device Profile - V3 Profile
Printer V300-8Color Inkset Sublimation54 Media name Text1 Resolution 220X1080 VD Pass 12 Scan direction B-direction High speed High speed ON Overprint 10me(s) Haltone 1LL diffusion	STEP1 Print a one or two ink color mixed chart. And visually judge each STEP2 Print a one or two ink color mixed chart. And visually judge each STEP2 Print a one or two ink color mixed chart. And visually judge each STEP2 Print a one or two ink color mixed chart. And visually judge each STEP3 Print a chart image Step3 Print a one or two ink color mixed chart. And visually judge each Step3 Print a one or two ink color mixed chart. And visually judge each Step3 Print a one or two ink color mixed chart. And visually judge each Step3 Print a one or two ink color mixed chart. And visually judge each Step3 Print a one or two ink color mixed chart. And visually judge each Step3 Print a one or two ink color mixed chart. And visually judge each Step3 Print a one or two ink color mixed chart. And visually judge each Step3 Print a one or two ink color mixed chart. And visually judge each Step3 Print a one or two ink color mixed chart. And visually judge each Step3 Print a one or two ink color mixed chart. And visually judge each Step3 Print a one or two ink color mixed chart. And visually judge each Step3 Print a one or two ink color mixed chart. And visually judge each Step3 Print a one or two ink color mixed chart. And visually judge each Step3 Print a one or two ink
	Over Three inks density limit Test Print

2

Click [Print].

- The ink limit chart is printed with no ink limit.
- Refer to "Chapter 12 How to print charts" (P. 159) for detailed settings for printing charts.





Set the ink limit.

· Check the ink limit of the 2 mixed colors, as described below.

- A : Do gradient patches maintain differences in color?
- **B** : Are small characters clear?
- C : Are patch boundaries clear?





- (1) Get ink limit of primary color r / g / b from 2 mixed color R / G / B respectively.
 - r = R(140%) / 2 = 70% g = G(120%) / 2 = 60% b = B(100%) / 2 = 50%
 - (2) Calculate ink limit of C / M / Y / K.
 - For K, use the determined value on the chart.
 - C = (g(60%) + b(50%))/2 = 55% M= (r(70%) + b(50%))/2 = 60% Y= (r(70%) + g(60%))/2 = 65%

4	Set the	"Option".	
-		Unearization STEP6 Over Three inks density limit STEP7 Gray Balance Option Suspend Creation Prev Next	
	Test Print Import	You can print your test image. (Ink limit parameters are reflected here.) Refer to "Chapter 12 How to print charts" (P. 159) for details. You can load parameters from the specified device profile.	

STEP4: Setting Light ink

This step appears when light ink is selected. Select the mixture rate for light ink and dark ink.

<text>



· Click [Import] to load parameters from the specified device profile.

STEP5: Set linearization

Adjust the gradient from a density of 0% to 100% so that primary colors appear smooth and the gradient increases continuously. When light ink is used, primary colors consist of a mixture of light ink and dark ink. Print the linearization chart, and then use a colorimeter to measure the printed chart. Then linearization is automatically adjusted.

_

3	Create	Device Profile - V3 Profile	
Printer JV300-8Color Inkset Sublimation54 BM Media name Text1 Resolution 720x1080 VD Pass 12 Scan direction Bi-direction High speed ON Overprint 1time(s) Halftone ILL diffusion	KLDLM STEP2 Variable Dot STEP3 Single/Double ink limit	Print and Measure a chart for Linearization Print a chart image	
	Light Ink	Option	
	STEP6 Over Three inks density limit STEP7	Test Print Edit Import	
	Gray Balance	Suspend Creation	

2

Click [Print].

- Print the linearization chart. This job is printed without linearization.
- Refer to "Chapter 12 How to print charts" (P. 159) for details.



The figure indicates the conditions when i1Pro is selected.

Measure the chart image.

- Measure the color of patches on the linearization chart.
- Refer to "Chapter 13 How to measure color with a colorimeter" (P. 163) for details.

1	Cl	nart measure	ment : Line	arization [[1st]		- 🗆 🗙
Measurement M	lode Measure at Page 1	~	Row number 1	✓ Colur	mi	Whole display	~
L* a* b*							
						Cancel	Next

The figure indicates the conditions when i1Pro is selected.



STEP6: Limit ink to 3 mixed colors

Set the ink limit for 3 mixed colors or more.

Print the ink limit chart. Make a visual determination of the maximum ink points.

The ink limit for 3 mixed colors does not affect the ink limit for the primary color or 2 mixed colors.

	Create D	evice Profile - V3 Profile			-
Printer JV300-8Color Inkset Sublimation54 BMYKLbLm Media name Test1 Resolution 720x1080 VD	STEP3	Print a three ink color m	ixed chart. And visu	ally judge o	each ink density
Pass 12 Scan direction Bi-direction High speed ON Overonint 1time(s)	STEP4		Print a chart	: image	
Halftone ILL diffusion		Single/Double ink limit	•	Over Three	e inks density lin
	Linearization	Black 100%	ana 104	Black	100%
		Yellow 100%	300 🐨 🤫	Yellow	100%
	Over Three inks density limit	Magenta 100%		Cyan Magenta	100%
	Gray Balance	Option Test Print Import		Su	spend Creation

2 °

Click [Print].

- Print the ink limit chart.
- Print the ink limit chart. The ink limit for the primary color and 2 mixed colors is applied.
- Refer to "Chapter 12 How to print charts" (P. 159) for details.







Gray Balance	Option
STEP8 ICC Profile STEP9	Test Print Import
Save Save	Prev Next Cancel

Test PrintYou can print your test image. (Ink limit parameters are reflected here.)
Refer to "Chapter 12 How to print charts" (P. 159) for details.ImportYou can load parameters from the specified device profile.

STEP7: Set the gray balance

This step appears when dye-sublimation ink is selected.

Adjust the mixture rate for C, M, and Y to produce gray.

Print the gray balance chart, and then measure color of patches on the gray balance chart.

The gray balance is then adjusted automatically.

Print and Measure a chart for Gray Balance
Print a chart image
Tale
ation Measure a chart image
death linit
Load measurement file
Test Print
Edit
Import
ofile
Suspend Creation

2

Click [Print].

- Print the gray balance chart.
- Refer to "Chapter 12 How to print charts" (P. 159) for details.



The figure indicates the conditions when i1Pro is selected.

Measure the chart image.

- Measure the color of patches on the gray balance chart.
- Refer to "Chapter 13 How to measure color with a colorimeter" (P. 163) for details.

	Chart mea	asurement : GrayBalance [1st]		- 🗆 🗙
Measurement Mode Stripe Patch	Measure at Page 1 v	Row number 1 🗸 Column	Whole display	v
L* b*				
			Cancel	Next

The figure indicates the conditions when i1Pro is selected.



STEP8: Create an ICC profile

Print the chart of the ICC profile, and measure the color of the patches on the chart. After measurement, the operation proceeds to the "Edit ICC profile settings" step.

3	Create	Device Profile - V3 Profile	-
Printer JV300-8Color Inkset Sublimation54 BMYKLL Media name Test1 Resolution 720x1080 VD	STEP3	Print and Measure charts for ICC Profi created.	le. After measurement, ICC pro
Pass 12 Scan direction Bi-direction High speed ON Overprint tlime(s) Halftone II Li diffusion	STEP4	Prin	t a chart image
	STEP5	Measu	ire a chart image
	STEP6 Over Three inks density limit	Option	
	-	Load measurement file	
	STEP7	Test Print	
	Gray Balance	Edit	
	STEP8	Import	
	ICC Profile		
	STEP9		Suspend Creation

2

Click [Print].

- Print the ICC profile chart.
- Refer to "Chapter 12 How to print charts" (P. 159) for details.

		Image Edit	
Layout Rotation Mirror Position(Scan)	OFF OFF 0.00mm	Input Scan 603.0 Feed 397.1 Output Scan 603.0 Feed 397.1	mm Media Scan 1200.0 mm mm Feed ROLL mm mm Detect Media Size
Position(Feed) Print Condition	0.00mm		
Label print Output Port	Small Size	g utility (10 per second	
Output Port	File		
			Print Cancel

The figure indicates the conditions when i1Pro is selected.

Measure the chart image.

- Measure the color of the patches on the chart for the ICC profile.
- Refer to "Chapter 13 How to measure color with a colorimeter" (P. 163) for details.



The figure indicates the conditions when i1Pro is selected.



• This function modifies the parameters for Grey Component Replacement (GCR).


1	Maximum ink vol- ume (Total)	Set the maximum total for C, M, Y, and K ink at the darkest part.
2	Maximum ink vol- ume (Black)	Set the maximum amount of K ink.
3	Black ink starting point	Set the starting point for black ink. To decrease the granularity of black dots, set the starting point in the range from 40 to 60.
4	Black ink curve	Select the shape of the black ink curve. You can select a "shape" from small to big. A bigger shape uses more black ink.

Set the "Option".	
	STEP6 Over Three inks density limit STEP7 Gray Balance STEP8 O ICC Profile STEP9 Save Suspend Creation Prev Prev Next Cancel
Load measurement file	You can use the measured values of an ICC chart that you have saved before
Edit	The following dialog window appears. Edit ICC profile settings This function controls a kind of Gray Component Replacement (GCR). Improvement on Yellow This function removes cyan ink from areas that consist of pure yellow in the image data. It also adjusts yellow gradients to maintain the hue and a contin- uous tone. Use this function after the "Edit ICC profile setting" step.
	Edit ICC profile
	Improvement on Yellow
	Edit ICC profile settings Cancel
Test Print	You can print your test image. (The ICC profile that is created is reflected
Import	Nere.) Refer to "Chapter 12 How to print charts" (P. 159) for details. You can load parameters from the specified device profile.

STEP9: Save the ICC profile

Save the ICC profile and complete the operation for creating a device profile.



(Important!)

- RasterLink distinguishes device profiles by those parameters; printer, ink set, printing resolution, media. If RasterLink has a device profile which parameters are same as you want to install, the device profile RasterLink has is overwritten by the device profile you install even which has another file name.
- If you install multiple device profiles which have same those parameters, the uncertain device profile is installed finally.

Chapter 3 Editing a device profile

Starting to edit a device profile

Selecting a device profile to edit

A device profile that has already been created can be edited.





Editing a device profile

You can use the functions described below to edit a device profile.

- · Selection of preset for mixture rate for large dots, medium dots, and small dots
- · Selection of preset for mixture rate for light ink and dark ink
- Linearization for primary color
- Ink limit for 3 mixed colors
- Gray balance for CMY color
- Function for "Improvement on Yellow" and "Edit ICC profile setting"

Start to edit a device profile.

(1) Select a device profile.

- (2) Click [Edit...].
 - The Edit dialog appears.
 - Refer to "Chapter 2 Creating a device profile" (P. 17) for details.

T			Pr	ofile manage	ment				×
2 Add to list		Resume	Calibration	Equalization	Emulation	Install	om list		
File Name F	Printer	Inkset	Media name	Media material	Resolution	Version	Туре	Creator's Na	
UJF-7151_6C U	UJF-7151-6C	LH-100 CMYK	For printer r	Others	600x900 VD	3.4	Full Color	RasterLink	
Prev	3			Device Profile Edit	-		- x		
	9 8 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9	rinter COUDE-CONF instat 5521 CONF Media Tame Manad GMC/SIF Meniad GMC/SIF Social Particular Conference of the Social Social Particular Social Particular Soc	700) Proter Proper Linearization Distribution Data Linearization Distribution Cray Balance Distribution	Y Ø Switch heater set Adjust a heater tere Ø Pre heater ter Ø Print heater to Ø Post heater to Ø Post heater to Ø Switch top blower Select a top blower Top blower pow Selects wave form.C Wave form	ings on/off. you want to set. perature on the printer, np <u>50 of deg</u> mp <u>60 of deg</u> settings on/off. power of the printe er OFF hanging the waveform v Dot volume S (WFS	and then put the value, ree Celsius ree Celsius ree Celsius v v v v v v v v v v v v v			
						Import Complete	Cancel		

Chapter 4 Suspending the creation of a device profile

Suspending the creation of a device profile

You can suspend the process of creating a device profile, and resume it later.

The creation process can be suspended in operation steps where the [Suspend Creation] button appears in the device profile creation wizard.

The example below illustrates how to suspend the process in operation step 8 "Create an ICC profile".

Click [Suspend Creation].

• Use the pop-up dialog box to save a working data file with the data of the work in progress.

3		Create E	Device Profile - V3 Profile - 🗆 🗙
Printer Inkset Media name Resolution	JV300-8Color Sublimation54 BMYKLbLm Test1 720x1080 VD	Single/Double ink limit	Print and Measure charts for ICC Profile. After measurement, ICC profile is created.
Pass Scan direction High speed Overprint	12 Bi-direction ON 1time(s)	STEP4	Print a chart image
Halftone	ILL diffusion		•
		Linearization	Measure a chart image
		STEP6	Option
			Load measurement file
		Gray Balance	Edit
		STEP8	Import
		STEP9	Suspend Creation
		Save Save	
			Prev Next Cancel

Resuming the creation of a device profile

Load the working data file you saved when you suspended the creation process, and resume the device profile creation process from the step during which the process was suspended.





Select a working data file, and add it to the list.

"3"				Pr	ofile manager	ment			– 🗆 ×
	Add to list		Resume Copy	Calibration	Equalization	Emulation	1nstall		
	File Name	Printer	Inkset	Media name	Media material	Resolution	Version	Туре	Creator's Na
_									
_									
-									
-									
	Prev								

3 Resuming the creation process

- (1) Select a working data file.
- (2) Click [Resume].
 - The operation step during which the process was suspended is displayed.

Add to list	Edit	Resume		<u> </u>				
File Name	Printer		Calibration	Equalization	Emulation	-9-0 -		
U JV300GrossP		Inkset	Media name	Media material	Resolution	Version	Туре	Creator's Na
	CJV300-8Color	SS21 CMYKL	Gross PVC	PVC Gloss	540x720 VD	3.5	Full Color	MPM
Prev								
	P Printer Iniset Recludor Sonn dire High spee Overprint High spee	7/009-8C/sof Suβinstanci-6 MPV/LLM Terti 720-100 V0 1000 Bufwetton 6 ON 110mm(d) 1LL diffesion	STE2 Stript Coulde Hit A Stript Jok STE7 Unextaction STE7 Over Three inits deni STE7 Over Three inits deni STE7	reate Device Profile - V3	Profile aure charts for ICC Profil Print Print d measurement file Test Print Edit Import	e. After measurement, K a chart image e a chart image	C profile is	
			Seve Seve			Prev N	ext Cancel	

Chapter 5 Color Matching

Color matching

You may want to match printer color in the following cases.

- Match new color with previous one. Return change in color to the original one; change due to the replacement of ink jet head, temporal change of nozzle, or environmental change.
- Match color with that of another printer of the same model.
- Color is not the same among multiple printers of the same model.
- Match color with that of a target printer.
- Set a target printer, and match color with that of the target printer.

How to match color

MPM3 has two color matching modes as described below.

Classic

Execute a function for each color matching target.

- Calibration (Refer to Chapter 6)
- Function to match new color with previous one.

Function to match color with that of a target printer.

- Equalization (Refer to Chapter 7) Function to match color with that of another printer of the same model.
- Emulation (Refer to Chapter 8)

Standard

Execute a function for each operation. (Refer to Chapter 9)

- Daily Confirm Confirm the temporal change of printer.
- Readjustment Use this function to readjust color, after performing color matching or defining a reference color.
- Color Matching Match color with a target environment.

Switching color matching mode

Switch [Color Matching mode].

Select [Opti	on] - [Miscellaneous] from the main window.	
2 In [Option] v • Select either "St	window, switch [Color Matching mode]. tandard" or "Classic" for [Color Matching mode].	
	Miscellaneous	
	Display	
	Unit mm V	
	Language English V	
	Color Matching mode Standard V	
	Output Port	
	Check device	
	USB2.0	
	Output Time-out 3 sec	
	Ethernet	
	Output Irme-out 3 sec Output Buffer Length 4006 KB	
	OK Cancel	

3

Select [Device Profile] - [Manage Device Profile] from the main window.

The tool bar switches in the [Profile Management] window.

Classic

			P	rofile manage	ment	_		
Add to list	Edit	Resume	Calibration	Equalization	Emulation	1nstall		
File Name	Printer	Inkset	Media name	Media material	Resolution	Version	Туре	Creator's Name
CJV3004CSS21	CJV300-4Color	SS21 CMYK	Mimaki GPVC[PVC Gloss	720x1080 VD	3.3	Full Color	mimaki
CJV3008CSS21	CJV300-8Color	SS21 CMYKLcL	Mimaki GPVC[PVC Gloss	720x1080 VD	3.3	Full Color	mimaki
JV300.icc	CJV30-8Color	AS-100 CMYK	PVC Gloss	PVC Gloss	720x1080 VD	3.0	Full Color	
JFX200-4C.icc	JFX200-4Color	LH-100 CMYK	PVC Gloss	PVC Gloss	300x450HQ VD	3.2	Full Color	
JV33-4C.icc	JV33-4Color	AS-100 CMYK	PVC Gloss	PVC Gloss	340x/20 VD	3.0	Full Color	
Prev	-							

Standard

3			F	Profile manage	ment			- 🗆 ×
Add to list	Edit	Resume	Daily Confirm	Readjustmen	t Color Match	hing	11	
File Name	Printer	Inkset	Media name	Media material	Resolution	Version	Туре	Creator's Name
CJV3004CSS21	CJV300-4Color	SS21 CMYK	Mimaki GPVC[PVC Gloss	720x1080 VD	3.3	Full Color	mimaki
CJV3008CSS21	CJV300-8Color	SS21 CMYKLcL	Mimaki GPVC[PVC Gloss	720x1080 VD	3.3	Full Color	mimaki
JV300.icc	CJV30-8Color	AS-100 CMYK	PVC Gloss	PVC Gloss	720x1080 VD	3.0	Full Color	
JFX200-4C.icc	JFX200-4Color	LH-100 CMYK	PVC Gloss	PVC Gloss	300x450HQ VD	3.2	Full Color	
JV33-4C.icc	JV33-4Color	AS-100 CMYK	PVC Gloss	PVC Gloss	540x720 VD	3.0	Full Color	
Prev								

Chapter 6 Maintaining color of output of the printer (Calibration)

Calibration

There are usually changes in the colors that are printed by an inkjet printer based on inkjet head replacement, differing inkjet nozzle conditions due to daily use, and changes in the environment where the printer located. The calibration process adjusts the currently printed color to the color that was printed previously, before such changes or alternations were made.

MPM3 calibration makes adjustments to the device profile for this purpose.



(mportant!) • The use of a D50 light source is assumed when calculating color differences. The same results cannot be obtained when using the light sources in your environment. Note that the actual appearance will differ from the calculated values.

Calibration workflow

The workflow for calibration is described below.

Set the printer's reference color for calibration.

Refer to "Setting the calibration reference color" (P. 54).

If the difference between the latest printed color and the reference color for calibration is within the required range, no calibration is required before printing.

Refer to "Workflow for printing without calibration" (P. 57).

If the color difference is not within the required range, make adjustments to the device profile for calibration.

Refer to "Setting calibration" (P. 59).

If the difference between the latest printed color and the calibrated color is within the required range, use the calibrated device profile for printing.

Refer to "Workflow for printing with calibration" (P. 65).

If the color difference falls outside of the required range, make additional adjustments to the device profile for calibration.

Refer to "Setting calibration" (P. 59).

Setting the calibration reference color

Before calibration, take the latest color sample of the printer and record the color values as the calibration reference color.

The calibration reference color is set at beginning of calibration and it can be updated afterward.

The operation flow of setting the calibration reference color is described below.

Start the calibration wizard. Refer to "Starting the calibration" (P. 53). Print the Calibration chart. Refer to "Printing and measuring colors on a calibration chart" (P. 54). Measure the color of patches on the chart. Refer to "Printing and measuring colors on a calibration chart" (P. 54).

Starting the calibration

Open "Manage Device Profile", and select the device profile to be calibrated.

1	Click [Manage De	vice Profile].	
_		3	Mimaki Profile Master3	- 🗆 ×
		Device Profile		
		O ICC Profile	Create Device Profile	
		Option	Manage Device Profile	

2 Load the device profile to the list table. 3 Select the device profile to be calibrated. 4 Click [Calibration]. □ × Profile ma 🍀 Install C Resume Calibration Add to list Emulation Eelete from list Copy Fo File Nar Prin Inkse Media name Туре Creator's Na Media material Re Prev

Setting the calibration reference color

Click [Create Base	Color data]	
ener [energie Base		
3	Calibration	- 🗆 ×
Printer UJF-7151-6Color Inkset LH-100 CMYK	bration information Basis Color	
Resolution 600x900 VD Pass 12 Scan direction Uni-direction High speed ON	There is no color basis data. Calibration need to create color basis data.	Create Basis Color data
Overprint 1time(s) Halftone ILL diffusion	Existing Calibration data	
	Creation date Comment	Confirm Color difference
		Confirm printer condition
	Create Calibration data	
		Add Calibration data
		OK Cancel

Printing and measuring colors on a calibration chart

Calibration requires the measurement of the printed color to study the current status or the result of calibration. For this purpose, the same chart is often used. This chart is called the Calibration chart. The Calibration chart is also used for equalization and emulation.

3	Create Basis Color data
Printer UF-7151-6Color Inkset LH-100 CMYK Media name Trial_Vedia1 Resolution 600x900 VD Pass 12 Scan direction Uni-direction High speed ON Overprint 1time(s) Halftone ILL diffusion	Create Basis Color data Print and Measure a chart for Calibration Print a chart image Measure a chart image Option Load measurement file

2

Click [Print].

- Print the calibration chart.
- Refer to "Chapter 12 How to print charts" (P. 159) for details.



The figure indicates the conditions when i1Pro is selected.

Click [Measure the chart image].

• Refer to "Chapter 13 How to measure color with a colorimeter" (P. 163) for details.

- 20	Chart measurement : CalibrationTarget [1st]	- 🗆 🗙
Measurement Mode Stripe Patch	Measure at Page 1 v Row number 1 v Column Whole display	· •
L* a* B*		
	Cancel	Next

The figure indicates the conditions when i1Pro is selected.



Workflow for printing without calibration

Usually, calibration is not required shortly after the calibration reference color is set. Periodically measure the current printed color to find the difference between the current printed color and the calibration reference color, and then check if this color difference is within the required range.

The operation for checking the color difference is described below.

С	Checking the status of the printer, and measuring the colors on a calibration chart						
	STEP 1 : Check the color difference						

STEP 1 : Check the color difference

Check the color difference between the current printed color without and the calibration reference color.

B		Calibrat	ion	
Printer UI-7151-6004 Inkest LIH-100 (PH) Media name Trial_Media1 Resolution 600:900 VD Peas 12 Scan direction Uni-direction High speed ON Overprint 1time(s) Haiftone ILL diffusion	Colibration information	Basis Color Create Date 201 Existing Calibration	6-05-10 13:35:05	Re-create Basis Color



- A chart is printed without calibration here.
 - For operation procedure, refer to "Printing and measuring colors on a calibration chart" (P. 54).



3

Check the color difference.

• The color difference between the current printing color and the calibration reference color are shown. Check if the color difference is within the required range.

3		Confirm printer condition	- 🗆 🗙
[Profile Info.] Printer UJF-7151-6Color	Confirm current	Print and Measure a chart for Cal	libration
Inkset LH-100 CMYK Media name Trial_Media1 Resolution 600x900 VD Pass 12 Scan direction Uni-direction		Pr	rint a chart image
High speed ON Overprint 1time(s) Halftone ILL diffusion		Mea	asure a chart image
		Option	
		Load measurement file	
		Test Print	
		Color difference between the targ	get
		Current	
		Ave. delta E 2.97	Color difference type
		Cyan 5.63	deltaE v
		Magenta 7.07	
		Yellow 2.91	
		Red 2.88	
		Green 2.81	
		Blue 4.57	
		3 Colored Gray 2.22	
			Complete Cancel

Setting calibration

Set calibration when the color difference between the current printed color and the calibration reference color is not within the required range.

Calibration data is created and added to the selected device profile.



First, click [Add Calibration data]

3			Calibra	ation	- 🗆 ×
Printer Inkset	UJF-7151-6Color LH-100 CMYK	Calibration information	Basis Color		
Resolution Pass Scan direction High speed	00x900 VD 12 Uni-direction ON	-direction	Create Date 20	016-05-10 13:35:05	Re-create Basis Color data
Halftone	Itime(s) ILL diffusion		Existing Calibrat	tion data	
			Creation date	Comment	Confirm Color difference
					Confirm printer condition
			Create Calibrati	ion data	
					Add Calibration data
					OK Cancel

STEP1: Adjust ink limit.

Printing and measuring a chart can automatically match print density to that of the reference color.



• If the reference color is set in MPM3.1.8 or earlier, a chart can not be printed or measured.

Click [Print a chart image].

3			Create Calibration data	- 🗆 ×
Printer Inkset Media name Resolution	CJV300-8Color SS21 CMYKLcLm 純正塩ピ 720x1080 VD	STEP1	Print and Measure charts for Ink Limit.	
Pass Scan direction High speed Overprint	16 n Bi-direction ON 1time(s)	STEP2	Print a chart image	
Halftone	ILL diffusion	STEP3	Measure a chart image	
		STEP3	e Load measurement file Edit	
			Prev Ne	xt Cancel



Click [Print].

- Print the ink limit measuring chart.
- For operation procedure, refer to "Chapter 12 How to print charts" (P. 159).



3

Δ

Measure the chart image.

- Measure the chart according to the display.
- For operation procedure, refer to "Chapter 13 How to measure color with a colorimeter" (P. 163). Display the measurement window by connecting to the colorimeter.

Set options.

• Load measurement file • Edit You can use the measured values you have saved before. The ink limit window appears to edit ink density.

	Ink Limit ×
Magenta	100%
Black	100%
Cyan	100%
Yellow	100%
	OK Cancel

STEP2: Adjust linearization

Adjust the linearization parameters.

For operation procedure, refer to "STEP5: Set linearization" (P. 27) in "Chapter 2 Creating a device profile" (P. 17).

3		Create Calibration data – 🗖 🗙
Printer CJV300-8Color Inkset SS21 CMYKLcLm Media name Mimaki GPVC[SPC706] Resolution 720x1080 VD	STEP1	Print and Measure a chart for Linearization
Pass 16 Scan direction Bi-direction High speed ON Overcitet Itime(s)	STEP2	Print a chart image
Halftone ILL diffusion	Linearization	
	STEP3 Gray Balance	Measure a chart image
	STEP4	(i) Measurement and editing is not done.
	Confirm Color difference	Option
	STEP5	Load measurement file
	Complete	Edit
		Prev Next Cancel

STEP3: Adjust the gray balance

Adjust the gray balance parameters.

For operation procedure, refer to "STEP7: Set the gray balance" (P. 31) in "Chapter 2 Creating a device profile" (P. 17).

3		Create Calibration data 🛛 🚽 🗖 🗙
Printer CJV300-8Color Inkset SS21 CMYKLcLm Media name Mimaki GPVC[SPC706] Resolution 720x1080 VD	STEP1	Print and Measure a chart for Gray Balance
Pass 16 Scan direction Bi-direction High speed ON Overprint 1time(s)	STEP2	Print a chart image
Halftone ILL diffusion		
	STEP3 Gray Balance	Measure a chart image
	CTED4	Measurement and editing is not done.
	Piii Continui Color difference	Option
	STEPS	Load measurement file
	Complete	Edit
		Prev Next Cancel

STEP4: Check the color difference

Print the Calibration chart with calibration, and measure the color of the patches on it. Then, check the color difference between the calibrated color and the calibration reference color.

Print a Calibration chart and measure the color of the patches on - it.

• For operation procedure, refer to "Printing and measuring colors on a calibration chart" (P. 54).



2 Check the color difference.

- After the color is measured, the color difference values are shown.
- The color difference between the calibrated color and the calibration reference color is shown. Check if the color difference is within the required range.



STEP5: Add the calibration data to the device profile

Add the calibration data to the selected device profile.



Specify the name of the calibration data added to the selected device profile, and click [Complete].

• Specify the name of the device profile to be saved, and then install this device profile in RasterLink.



Workflow for printing with calibration

Measure the current calibrated printed color, and periodically find the difference between the current calibrated color and the calibration reference color. Check if the color difference is within the required range. If the color difference is out of the required range, re-adjust the calibration data.

3	Calibration	
Printer UF-7151-8-Color Inkset LH-100 CMYK Media name Trial Medial Resolution 600:X000 VD Pass 12 Sona direction Uni-direction High speed ON Overprint Itime(s) Helftone ILL diffusion	n information Basis Color Create Date 2016-05-10 13:35:05 Existing Calibration data Creation date Comment 2016-05-10 14:4 Create Calibration 1 Create Calibration data	Re-create Basis Color da

2

Click "Confirm current" tab.

• The color difference measured previously is shown. (If this is the first operation after calibration, the color difference values are all 0s.)

• If you want to measure the color difference in the current state, click the [Confirm current] tab.

8		Confirm Color di	fference			
[Profile Info.] Printer UJF-7151-6Color Inkset LH-100 CMYK Media name Trial_Media1 Resolution 600x900 VD	Last result of color difference	The last result of Last result of col	the color di	fference is as follo	ws: eating calibr	ation
Pass 12 Scan direction Uni-direction		Ave. delta E	0.00	Ave. delta E	1.25	Color difference type
High speed ON		Cyan	0.00	Cyan	0.66	deltaE Y
Overprint 1time(s) Halftone ILL diffusion		Magenta	0.00	Magenta	0.76	
		Yellow	0.00	Yellow	0.55	
[Calibration information]		Red	0.00	Red	1.03	
Title Calibration 1		Green	0.00	Green	0.88	
		Blue	0.00	Blue	0.96	
		3 Colored Gray	0.00	3 Colored Gray	1.85	
						Cancel



• A chart is printed with calibration here.

For operation procedure, refer to "Printing and measuring colors on a calibration chart" (P. 54).



4

Check the color difference.

- After the colors are measured, the color difference values are shown.
- The color difference between the current calibrated printed color and the calibration reference color is shown. Check if the color difference is within the required range. When the color difference is outside its permissible range, the calibration settings need to be reconfigured.
- Click [Complete], the pop-up window of saving ICC profile.
- Specify the name of ICC profile. Then the result of measurement is saved to ICC profile.

8			Confirm Color diffe	rence			-	. 🗆 🗙
[Profile Info.] Printer	UJF-7151-6Color	Last result of color difference	Print and Measure	charts, afte	r display differenc	e color value	es.	
Inkset Media name Resolution	LH-100 CMYK Trial_Media1 600x900 VD	Confirm current			Print a chart ima	ge		
Pass Scan direction	12 n Uni-direction				-			
High speed Overprint Halftone	ON 1time(s) ILL diffusion			1	1easure a chart in	nage		
[Calibration inf	ormation]		Option					
Create Date Title	2016-05-10 14:42:54 Calibration 1		Load me	asurement f	ile			
			Tes	t Print				
			Color difference between the target					
			Current		At the time of cr	eating calibr	ation	
			Ave. delta E	2.56	Ave. delta E	1.25	Color diffe	rence type
			Cyan	3.60	Cyan	0.66	deltaE	~
			Magenta	4.30	Magenta	0.76		
			Yellow	0.83	Yellow	0.55		
			Red	3.68	Red	1.03		
			Green	2.85	Green	0.88		
			Blue	3.11	Blue	0.96		
			3 Colored Gray	1.76	3 Colored Gray	1.85		
			<u> </u>				Complete	Cancel

Chapter 7 Color-matching of the multiple printers of the same model (Equalization)

Equalization

There are often differences in the colors printed by inkjet printers, even if the model and ink set are the same. Equalization brings the colors printed by a printer closer to those of the printer selected as the target. This is achieved through equalization of MPM3 to adjust the device profile.



(mportant!) • The use of a D50 light source is assumed when calculating color differences. The same results cannot be obtained when using the light sources in your environment. Note that the actual appearance will differ from the calculated values.

Equalization workflow

The equalization workflow is described below.

Select the reference printer (target printer).
Refer to "Selecting the reference printer" (P. 70).
Set equalization.
Refer to "Setting equalization" (P. 71).
Print with equalization while the color difference between the latest printed color and the target reference color is within the required range.
Refer to "Workflow for printing with equalization" (P. 81).
Adjust the device profile for equalization when the color difference falls outside of the required range.
Refer to "Setting equalization" (P. 71).
Re-set equalization if the color of the target printer changes.
Refer to "Setting equalization" (P. 71).

Selecting the reference printer

Select the reference printer. Measure the color of the target printer and set the target reference color. This target reference color is the goal of equalization.

The target reference color is set with the following procedure.

Select the print conditions for the target printer.

Refer to "STEP1 : Select the target device profile" (P. 74).

Print the Calibration chart with the target printer, measure the color of the patches on it, and record the color values as the target reference color.

Refer to "STEP2 : Measure the target reference color" (P. 75).

Print the Calibration chart with the printer to be equalized, and measure the color of the patches on it.

Refer to "STEP3 : Confirm the color difference" (P. 76).

Check the color difference between the color of the printer to be equalized and the target reference color.
Setting equalization

Check the color difference between the color of the printer to be equalized and the target reference color. If the color difference is out of the required range, create the equalization data for the printer to be equalized.



• Multiple sets of equalization data can be added to the device profile.

- RasterLink can select the equalization data when printing.
- If multiple sets of equalization data for multiple printers are set in the device profile, RasterLink can support multiple printers with a single device profile.



• Equalization will be insufficient if the print conditions differ between the reference printer and the printer to be equalized.

Starting the equalization

Open "Manage Device Profile" and select the device profile to be equalized.

3	Ν	4 Mimaki Profile Master3	
De	vice Profile		
	C Profile	Create Device Profile	
\$ op	tion	Manage Device Profile	

2 Load the device profile onto the list table.

Select the device profile to be equalized.

Click [Equalization].

3

4

"3 "				Pro	ofile manager	nent			- • ×
Add to I	list Edit	0	Resume Copy	Calibration	Equalization	Emulation	Install	m list	
	D	-	T-1	**-d:	Made and and	Baseliation	Manatana	T	~
UJF-7	151_6C UJF-7	151-6C	LH-100 CMYK	For printer r	Others	600X900 VD	3.4	Full Color	RasterLink
Prev]								

Starting the equalization wizard

Click [Add Equalization data].

3			Equal	ization	- 🗆 ×
Printer Inkset Media name	UJF-7151-6Color LH-100 CMYK Trial Media1	Equalization information	Equalization inf	ormation	
Resolution Pass Scan direction High speed Overprint Halftone	NDC-INSIGN 600x900 VD 12 Uni-direction ON 11time(s) 1LL diffusion		Create Equalizat	Comment	Confirm Color difference
					Add Equalization data
					OK Cancel

Setting the target reference color

Setting the target reference color for equalization

STEP1 : Select the target device profile

STEP2 : Measure the target reference color

STEP3 : Confirm the color difference

STEP1 : Select the target device profile

Select the print conditions for the reference printer.



(Important!)

• The selected device profile is used to study the color of the reference printer. This profile is not edited by equalization. However, the profile will be edited if the same profile was

selected on the table on the Manage Device Profile screen when starting equalization.

STEP2 : Measure the target reference color

To get the color values for the reference, print the Calibration chart with the reference printer and measure the color of the patches on it.

This sets the target reference color.



• For operation procedure, refer to "Printing and measuring colors on a calibration chart" (P. 54).



STEP3 : Confirm the color difference

Print the Calibration chart with the printer to be equalized and measure the color of the patches on it.



3

Check the color difference.

• The color difference between the current printed color of the printer to be equalized and the target reference color is shown. Check if the color difference is within the required range. If there is no problem with the color difference, click [Cancel] to exit equalization.



Adding equalization data

Use the following method to add equalization data.

Adding equalization data
STEP1: Adjust ink limit.
STEP2: Adjust linearization
STEP3: Adjust the gray balance
STEP4: Check the color difference
STEP5: Add equalization data to the device profile

STEP1: Adjust ink limit.

Printing and measuring a chart can match print density to that of target.

For operation procedure, refer to "STEP1: Adjust ink limit." (P. 60) in "Chapter 6 Maintaining color of output of the printer (Calibration)" (P. 49).

3		Equalization - Create Data	- 🗆 🗙
Printer JFX200-4Color Inkset LH-100 CMYK Media name PVC Gloss Resolution 300x450HQ VD	STEP1	Print and Measure charts for Ink Limit.	
Pass 12 Scan direction Bi-direction High speed OFF Overprint 1time(s) Helfkness III diffusion	STEP2	Print a chart image	
	STEP3 Gray Balance	Measure a chart image	
	STEP4	Option Load measurement file Edit	
		Prev Next	Cancel

STEP2: Adjust linearization

Adjust the linearization parameters.

For operation procedure, refer to "STEP5: Set linearization" (P. 27) in "Chapter 2 Creating a device profile" (P. 17).

3	Equa	ization - Create Data 🛛 🗕 🗖 🗙
Printer JFX200-AColov Insket LH-100 CMVK Media mare PVC Gloss Resolution 3004SM2 VD Pass 12 Scan direction Bu-direction High speed OFF Overprint Tame(s) Haltfore ILL diffusion	STEP1 Print a STEP2 Linewization STEP3 Gray Balance	ization - Create Data – D × nd Measure a chart for Linearization Print a chart image Measure a chart image
	STEA Option	Load measurement file Edit Prev Next Cancel

STEP3: Adjust the gray balance

Adjust the gray balance parameters.

For operation procedure, refer to "STEP7: Set the gray balance" (P. 31) in "Chapter 2 Creating a device profile" (P. 17).

3		Equalization - Create Data	- 🗆 ×
Printer JFX200-4Co Inkset LH-100 CM Media name PVC Gloss Resolution 300x450HQ	VD Ink Limit	Print and Measure a chart for Gray Balance	
Pass 12 Scan direction Bi-direction High speed OFF	n STEP2	Print a chart image	
Halftone ILL diffusio	n Linearization	•	
	STEP3 Gray Balance	Measure a chart image	
	STEP3 Confirm Color difference	Option Load measurement file Edit	
		Prev Next	Cancel

STEP4: Check the color difference

Print the Calibration chart with calibration and measure the color of the patches on it. Check the color difference between the equalized color and the equalization reference color.

Print a Calibration chart and measure the color of the patches on it.

• For operation procedure, refer to "Printing and measuring colors on a calibration chart" (P. 54).

3		Equalization - Create Data – 🗖 🗙
Printer JFX200-4Color Inkset LH-100 CMVK Media name PVC Gloss	STEP1	Print and Measure charts, after display difference color values.
Resolution 300x450HQ VD Pass 12	Ink Limit	Print a chart image
Scan direction Bi-direction High speed OFF	STEP2	
Overprint 1time(s) Halftone ILL diffusion	Linearization	Measure a chart image
	STEP3	Option
		Load measurement file
	STEP4	Test Print
	STEP5	
	Complete	
		Prev Next Cancel



Check the color difference.

• The color difference between the equalized color and the target reference color is shown. Check if the color difference is within the required range.



STEP5: Add equalization data to the device profile

Add equalization data to the selected device profile.



Specify the name of the equalization data added to the selected device profile, and click [Complete].

- The pop-up window of saving ICC profile, specify the name of ICC profile.
- Install this device profile in RasterLink.

Printer JF200-4Cbit Ioked L-HoOCMYK Modianame PVC Gloss Resolution 300450HQVD Pass 12 Scan direction Bridirection Ink Limit Title JFX200-4C Less than 20 characters Streptone STEP2 Uncertication STEP3 Gray Balance	3			Equal	ization - Create Data			×
STEP4 Confirm Color difference STEP5 Complete	Pinter J Inisat L Media name F Recolution 3 Pass 1 Scan direction 5 High speed C Overprint 1 Haftone II	IFX200-4Color LH-100 CMYK PVC Glass 300x450HQ VD 12 Birdinetion OFF Birdinetion OFF LLL diffusion	STEP1 Ink Limit STEP2 Linearization STEP3 Gray Balance STEP3 Confirm Color difference STEP5 Complete	Equal	Ization - Create Data JFX200-4C Less than 20 characters		- 0	×
Prev Complete Cancel						Prev	Complete Cance	el

Workflow for printing with equalization

Measure the current color of equalized printer and periodically find the difference between the current equalized color and the target reference color. Check if the color difference is within the required range. If the color difference is outside of the required range, re-adjust the equalization data.

Click [Conf	irm (Color dif	ference	e].		
	3			Equalizat	ion		- 🗆 ×
	Printer L Inkset L Media name T Resolution 6 Pass J Scan direction 0 High speed C	JJF-7151-6Color _H-100 CMYK Irial_Media1 500x900 VD L2 JNi-direction DN	Equalization information	Equalization inform Creation date 2016-05-10 19:1	Comment Cumment	 ii a	onfirm Color difference
	Halfone I	LL diffusion		Create Equalization	ı data	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Add Equalization data
							OK Cancel

2

Click "Confirm current".

- The color difference measured previously is shown.
- (If this is the first operation after calibration, the color difference values are all 0s.)
- If you want to measure the color difference in the current state, click the [Confirm current] tab.



• For operation procedure, refer to "Printing and measuring colors on a calibration chart" (P. 54).





Check the color difference.

- After the colors are measured, the color difference values are shown.
- The color difference between the current equalized printed color and the target reference color is shown. Check if the color difference is within the required range. When the color difference is outside its permissible range, the equalization settings need to be reconfigured.

3			Confirm Color diffe	rence			×	
[Profile Info.] Printer	UJF-7151-6Color	Last result of color difference	Print and Measure charts, after display difference color values.					
Inkset Media name Resolution	LH-100 CMYK Trial_Media1 600x900 VD	Confirm current			Print a chart ima	ige		
Pass 12 Scan direction Uni-direction					-			
High speed Overprint Halftone	ON 1time(s) ILL diffusion				Measure a chart in	nage		
[Calibration inf	ormation]		Option					
Title	Equalization Test1		Load me	asurement	file			
			Tes	t Print				
			Color difference be	tween the	target			
			Current		t the time of cr	eating calibr	ation	
			Ave. delta E	2.36	Ave. delta E	1.74	Color difference type	
			Cyan	1.99	Cyan	3.39	deltaE 🗸 🗸	
			Magenta	2.28	Magenta	4.32		
			Yellow	1.21	Yellow	1.69		
			Red	4.10	Red	1.70		
			Green	3.76	Green	1.69		
			Blue	2.74	Blue	2.20		
			3 Colored Gray	3.55	3 Colored Gray	2.12		
							Complete Cancel	

Chapter 8 Color-matching multiple printers of different models (Emulation)

Emulation

Emulation sets the printing color of the printer on hand (emulation printer) close to the printing color of the other printer (target printer). The other printer has it's own printing software. MPM3 emulation creates both a target profile and an emulation profile.



Important! • The use of a D50 light source is assumed when calculating color differences. The same results cannot be obtained when using the light sources in your environment. Note that the actual appearance will differ from the calculated values.

Flow of creating profiles for emulation

The operation flow of creating profiles for emulation is described below.



Creating profiles for emulation

Preparing the target printer

1

Prepare the target printer.

(1) Confirm the minimum size of the charts to measure.

• The minimum size of the charts to measure is shown in the table below. If the target printer cannot print the following chart sizes, emulation profiles can not be created.

	Colorimeter				
Mode	i1Pro/i1Pro2	i110/i1102	i1isis	Barbieri	
Standard mode	300 x 210 mm	288 x 184 mm			
Expanded color mode (Or+Gr)	293 x 216 mm	319 x 226 mm	Not supported	297 x 210 mm	
Precise mode	293 x 253 mm	294 x 205 mm			

(2) Select a printing condition.

No.	Condition
1	Printer model
2	Ink
3	Configuration of ink set
4	Media
5	Printing resolution

Preparing the emulation printer

Prepare the emulation printer.

- (1) Select a printing condition.
 - Select a printing condition close to the target's. If there is a big difference in the printing condition between the target printer and the emulation printer, there could be a drop in the accuracy of the emulation.
- (2) Prepare the device profile as the base profile.
 - Prepare the device profile of the emulation printer. This device profile is referred as the base device profile.

Selecting the base device profile

Select the device profile for the base device profile.

1	Click [Manage De	evice Profile].
_		3	Mimaki Profile Master3 – 🗆 💌
		Device Profile	
		O ICC Profile	Create Device Profile
		Option	Manage Device Profile

2 Load the device profile onto the list table.

Select the device profile as the base device profile.

Click [Emulation].

3

Δ

Ĩ			Pr	ofile manager	ment			
Add to list	Edit	Resume Copy	Calibration	Equalization	Emulation	Install	om list	
UJF-7151_6C	UJF-7151-6C	LH-100 CMYK	For printer r	Others	600x900 VD	3.4	Full Color	RasterLink
Prev	1	1		1	1	1		

Selecting the quality of the emulation

Select a mode in the pop-up dialog.



Creating profiles for emulation

Setting steps to create profiles for emulation

STEP1: Create a Target Profile

STEP2: Set the Ink Density for the Emulation Profile

STEP3: Create an Emulation Profile

STEP4: Accuracy Improvement

STEP5: Save the Profile

STEP1: Create a Target Profile

Print a chart with the target printer, measure the color of patches on the chart and create the target profile. The chart that is printed with the target printer is saved as an image file. Print the image file with the target printer.

1

Click [Save chart].

• Save the chart to print with the target printer.

3	E	Emulation - Basic mode –	□ ×
Printer JFX200-4Color Inkset LH-100 CMYK Media name PVC Gloss Resolution 300x450HQ VD	STEP1	The chart printed on the target printer and color measurement, and create a target profile.	
Pass 12 Scan direction Bi-direction High speed OFF Overprint 1time(s) Halftone ILL diffusion	STEP2	Save chart	
	STEP3	Print at environment of target	
	STEP4	Measure a chart image	
	STEP5 Save Profiles	Option Selection of existing target profile Load measurement file	
		Next	Cancel

(1) Select a chart size.

- (2) Save the printing data as an image file.
 - Specify the folder path only. An image file like "EmulationInput_Basic_00x.tif" is saved in the folder. Print the file with the the target printer.



Print chart of target

Please select the kind of charts to print by a target printer. If the package chart is not stored in print area of target printer, please select split chart.

Whole chart for Basic mode Scale of picture : 595.3 x 415.2 mm File size : 47.4 MB Ż

Measure the chart image.

- Measure the color of patches on the chart that was printed with the target printer.
- Refer to "Chapter 13 How to measure color with a colorimeter" (P. 163) for details.
- After the color is measured, the target profile is created automatically.
- After the target profile is created, a dialog window pops. Specify the filename of the target profile.



This figure shows the conditions when i1Pro is selected.

3	Input the "	Filename of ta	rget profile".
J	 The target pro 	file will be the input pr	ofile in RasterLink.
	C .		Dialog
		Please input filename of target p	profile.
		Filename of target profile :	
			OK
	0 (() "0		
4	Set the "O	ption".	
			Option
			Load mesurement file
			Next Cancel
	Selection of ex	sisting target profile	You can select a target profile that has already been created.
	Load measure	ment file	You can use measured values for the target chart that you have saved before.

STEP2: Set the Ink Density for the Emulation Profile

Printing and measuring a chart through the emulation printer can automatically match the print density to that of target.

For operation procedure, refer to "STEP1: Adjust ink limit." (P. 60) in "Chapter 6 Maintaining color of output of the printer (Calibration)".



• You can not print the chart or measure the chart if you create a target profile by importing a target profile that already exists, or if you create a target profile using the measured values measured in MPM 3.1.8 or earlier version.

3		Emula	ation - Multi-color mode	- 🗆 ×
Printer Inkset Media name Resolution Pass Scan direction High speed Overprint Halftone	CJV300-8Color SS21 CMVKLcLm 純正塩ビ 720x1080 VD 16 Bi-direction ON 1time(s) ILL diffusion	STEP1 Target Profile STEP2 Ink Limit	Please connect to the printer that created er chart.After please measure the chart. Print a chart	nulation data and print a
		STEP3 Emulate Profile	Measure a ch	art image
		STEP4	Option	
		Accuracy Improvement	Load measurement file	
		STEP5	Test Print	
		Save Profiles	Edit	
			Import	
				Prev Next Cancel

STEP3: Create an Emulation Profile

Print a chart with the emulation printer, measure the color of patches on the chart and create the emulation profile.

Printer CIV300-8Color Inkset SS21 CMVKLCLm Media name SELEBIE Resolution 720-1080 VD Pass 16 Scan direction High speed ON Overprint Time(s) Halftone ILL diffusion

2 Click [Print] to print the chart.

- Print the chart with the emulation printer.
- Refer to "Chapter 12 How to print charts" (P. 159) for details.



This figure shows the conditions when i1Pro is selected.

Measure the chart image.

- Measure the color of patches on the chart that was printed with the emulation printer.
- Refer to "Chapter 13 How to measure color with a colorimeter" (P. 163) for details.
- After the color is measured, the emulation profile is created automatically.
- After the emulation profile is created, a dialog window pops. Specify the filename of the emulation profile.



Z	

Input the "Filename of emulation profile".

• The emulation profile will be the device profile in RasterLink.

Please input filename of emulation profile.
Filename of emulation profile :
OK

STEP4: Accuracy Improvement

Print a chart with the emualtion profile and the emulation printer.

Measure the color of patches on the emulated chart, and check the color difference between the color values on the target chart and those on the emulated chart.

1

Print a chart with the emulation printer and measure the chart.

- By printing a chart with the emulation printer and measuring the chart, color difference between the color values on the target chart and those on the emulated chart is displayed.
- For the operation, refer to "STEP3: Create an Emulation Profile" (P. 92).

3		Emu	lation - Multi-color mode	- = ×
Printer Inkset Media name	CJV300-8Color SS21 CMYKLcLm 純正塩ビ	STEP1	Check the color difference after emulation optimization of emulation profile (feedba	, and if necessary ck).
Resolution Pass Scan direction	720x1080 VD 16 n Bi-direction	Target Profile	Print a chart	image
High speed Overprint Halftone	ON 1time(s) ILL diffusion	STEP2	•	
		STEP3	Measure a cha	irt image
		Emulate Profile	Color difference between the target	
		STEP4		Color difference type
				deltaE v
				Feed back
		STEP5	No color difference information.	0 times v
		Save Profiles		Feed back
				Test Print
			Option	
			Load measurement file	
				Prev Next Cancel

2

Use the Feedback function to optimize the emulation profile.

- The Feedback function optimizes the emulation profile by using the measured values of the chart printed with the last emulation profile.
- (1) Click [Feedback] to optimize the emulation profile.
- (2) Print a chart image and measure the color of patches on it again.
 - The color difference is updated.
 - If there is no change in the color difference when using the Feedback function, the limit of optimization has been reached.



STEP5: Save the Profile

Specify a folder for saving the target profile and the emulation profile.



Specify a folder as described in the pop-up dialog window.

- A new folder (EmulationYYYYMMDD_HHMMSS) is in under the folder you specify. The target profile and the emulation profile are saved in this folder.
- Import those profiles into RasterLink by using Profile Manager.
- Target profile \rightarrow Input profile

Emulation profile \rightarrow device profile

3	Emulation - Multi-color mode – 😐	×
Printer CLV300-SColoo Inkset SS21 CLMVEL Media name 純正地ど Resolution 72001080 VD Pass 16 Scan direction Bi-direction High Section Bi-direction Civerprint 1time(s) Halftone ILL diffusion	Image: Steps Steps </th <th>×</th>	×
	Prev Complete Can	cel

Printing with RasterLink

Install the saved target profile and emulation profile to RasterLink. Select the target profile and emulation profile when setting the printing conditions.



Install the target profile and emulation profile to RasterLink.

Start Profile Manager of RasterLink.

(1) Click [InputProfile] and select the folder "EmulationYYYYMMDD_HHMMSS". Select a target profile on the displayed list and install it.

2	<u> </u>	
Device Profile	Input Profile	Browse For Folder
Color mode RGB RGB CMYK CMYK CMYK CMYK CMYK CMYK CMYK CMYK	Profile name sRGB.icm AdobeRGB1998.icc WideMimakiNaturalVivid.icm WideMimakiOMYK.icm MimakiHiContrast.icm MimakiHiContrast.icm	Select folder of input profile to be installed. Search the subfolder P P Program Files P Program Files P Program Files P Program Data System Volume Information P Users Users Users Users Cx Cancel User comment

(2) Click [DeviceProfile] and select the folder "EmulationYYYYMMDD_HHMMSS". Select an emulation profile on the displayed list and install it.

eff Profile(P) Help(H) Device Profile Browse For Folder X Model Ink set Select folder of device profile to be installed. Type Ver. Media type All All All Constrained Mimaki/Products Type Ver. Media type Dif-6042/Mkll (8Col.n. LUS-120 CMYKLCLm Dif Mimaki/Products Tull color V3.5 Others UIF-7151 (6Color) LUS-120 CMYK Dif Program Files Porgram Files Pill color V3.5 Others UIF-7151 (6Color) LUS-120 CMYK Program Files (x86) Pill color V3.5 Others UIF-7151 (6Color) LUS-120 CMYK Program Files (x86) Pill color V3.5 Others Dif-7151 (6Color) LUS-120 CMYK Program Files (x86) Pill color V3.5 Others Dif-7151 (6Color) LUS-120 CMYK Program Files (x86) Pill color V3.5 Others Dif-7151 (6Color) LUS-120 CMYK Program Files (x86) Pill color V3.5 Others Dif-7151 (6Color) LUS-120 CMYK Prorogram Files Vindows Vind	ProfileManager					>
Device Profile Browse For Folder Model Ink set All All UIF-604ZMkli (8Col LUS-120 CMYKLcLm UIF-7151 (6Color) LUS-120 CMYKLcLm UIF-7151 (6Color) LUS-120 CMYKLCLM UIF-7151 (6Color) LUS-120 CMYKK UIF-7151 (6Color) LUS-120 CMYK UIF-7151 (6Color) LUS						
Model Ink set All VIF-604ZMkli (8CoL LUS-120 CMYKLcLm UIF-604ZMkli (8CoL LUS-120 CMYKLcLm UIF-7151 (6Color) LUS-120 CMYKLCM UIF-7151 (6Color) LUS-120 CMYKL UIF-7151 (6Color) LUS-120 CMYK	Browse For Folder	×				
UIF-6042Mkli (8Col LUS-120 CMYKLcLm UIF-7042Mkli (8Col LUS-120 CMYKLcLm UIF-7151 (6Color) LUS-120 CMYK UIF-7151 (6Color) LUS-120 CMYK Create date: Create dat	Select folder of device profile to be installed.		Type All v	Ver.	Media type v All	
	Jean I be subvee Page I have subvee Page Program Files Page Program Files Page Program Diles (x86) Page Program Data System Volume Information Page Users Page Volume Volume Information Page Volume Information Page Volume Information Page Volume Information Page Volume Volume Volume Information Page Volume Vol	^	Full color Full color Full color Full color Full color Full color User com	V3.5 V3.5 V3.4 V3.5 V3.5 V3.5 V3.5 V3.5	Others Others Others Polycarbonate Others Others	>
	OK Cance	el			600	ate
File Name:		ProfileManager Browse For Folder Select folder of device profile to be installed. Search the subfolder MimakiProducts PerfLogs PerfLogs Pergram Files (x86) Pergram Files (x86) PergramData System Volume Information Pile Users Pile Work Emulation20161109_131434 Dime Local Dick (ID) OK Cencel	ProfileManager Browse For Folder Select folder of device profile to be installed. Search the subfolder MimakiProducts PerfLogs PerfLogs Program Files Porgram Files Program Data System Volume Information Visers Windows Windows Windows Windows Windows Windows Windows MimakiProduction109_131434 Cancel	ProfileManager Browse For Folder Select folder of device profile to be installed. Search the subfolder MimakiProducts B PerfLogs B Program Files B Program Files (580) B Program Tiles (580) B Program Data S System Volume Information B Users B Work Emulation20161109_131434 User com CK Cancel	Browse For Folder X Select folder of device profile to be installed. Type Ver. Search the subfolder All All P and MimakiProducts Full color V3.5 Full color V3.5 Full color V3.	Browse For Folder Select folder of device profile to be installed. Select folder of device profile to be installed. Select folder of device profile to be installed. Type MimakiProducts All Part Logs Full color V3.5 Others Full color V3.5 Porgram Files Full color V3.5 Polycarbonate Full color V3.5 Porgram Files (x60) Full color Value of V3.5 Others Full color V3.5 Others Full color Value Value Value



Set the printing conditions of RasterLink.

Import the image file to be printed.

- (1) Click [Quality].
- (2) Input the name of the new color matching set and click [Add].
- (3) Select the target profile in the Input profile CMYK column.
- (4) Select the ink set and media for the emulation profile.
- (5) The emulation profile is selected and "Emulation" is displayed in the Type column.

8	RasterLink6 Ver 5.7	- = ×
File Function Tool Environments		
Working Disk (C:WijSuiteUobs\RL01;)	5 25.60 GB Available Physic. Mem. (1.9 GB) 569	844.1 MB Available Mimciki
Quality Rect_CMYK_80x50.eps		
Job List Favorite	Print Quality Color Adjust	21
Thumbnail Attribute Job Name Output Or.	Resolution Inixs et LH-100 CMVK Media Others Trial_Media 1 Resolution Resolution Resolution Trial_Media 1 Resolution Resolut	Color Matching
[17:56:57] - [UJF7151] : Started monitoring Hot Folder.	<u> </u>	

Chapter 9 How to match new color

New color matching

Previously, there were three color-matching functions for each target of color matching.([Calibration], [Equalization], [Emulation])

They have been combined into a single function called [Color Matching]. And daily color management can be performed by two independent functions: [Daily Confirm] and [Readjustment].

 The use of a D50 light source is assumed when calculating color differences. The same results may not be obtained when using other light sources in your environment. Note that the actual appearance may differ from the calculated values.

Performing each function

Follow the steps below to perform each function: [Color Matching], [Daily Confirm] and [Readjustment].



[Color Matching] function

When a target printer exists, perform [Color Matching] function.

Starting [Color Matching] function.

_	ick linanage D	evice Profile].			
	3	Mimaki Profile	Master3	- 🗆 ×	
	Device Profile		Create Device Profile		
	Option		Manage Device Profile		
2 Lo	ad a device p	rofile.			
Se	elect a device	profile for colo	r matching.		
	ick [Color Mat	chinal.			
4 ci	ick [Color Mat	Ching].	gement	-	
4 ^{сі}	ick [Color Mat	Ching]. Profile mana esume opy Daily Confirm Readjust	gement	-	
4 ^{сі}	ick [Color Mat ick [Color Color St	ching]. Profile mana esume opy Daily Confirm Readjust kset Media name Media materi S21 CMYKLcLu. Mimaki GPVC[PVC Gloss	gement I Color Matching I Resolution I Resolution I 720x1080 VD 3.3 F	ype Creator's Name ull Color mimaki	
4 ^{сı}	ick [Color Mat Image: Color Mat </td <td>ching]. Profile mana esume opy Daily Confirm Readjust kset Media name Media materi S21 CMYKLeL Mimaki GPVCL PVC Gloss</td> <td>gement Color Matching Color Matching Resolution T20x1060 VD 3.3 F</td> <td>ype Creator's Name ull Color mimski</td> <td></td>	ching]. Profile mana esume opy Daily Confirm Readjust kset Media name Media materi S21 CMYKLeL Mimaki GPVCL PVC Gloss	gement Color Matching Color Matching Resolution T20x1060 VD 3.3 F	ype Creator's Name ull Color mimski	
4 ^{сı}	ick [Color Mat ick [C	Ching]. Profile mana esume opy Daily Confirm Readjust kset Media name Media mater \$21 CMYKLeL Mimski GPVC[PVC Gloss	gement	ype Creator's Name ull Color mimaki	
4 ^{сı}	ick [Color Mat ick [C	ching]. Profile mana esume opy Daily Confirm Readjust kset Media name Media materi S21 CMYKLeL. Mimaki GPVC[PVC Gloss	gement	ype Creator's Name ull Color mimaki	
4 ^{сı}	File Name Printer In CIV3008CSS21 CIV300-8Color S	ching]. Profile mana esume opy Daily Confirm Readjust kset Media name Media materi S21 CMYKLcL Mimaki GPVCL PVC Gloss	gement Color Matching Resolution Z20x1060 VD 3.3 F Color Matching Resolution Color Matching Color Matc	ype Creator's Name full Color mimaki	



5 The [Color Matching] window appears.

3	Color Matching	×
[Base Device Profile] Printer CJV300-8Color Inkset SS21 CMYKLcLm Media name Mimaki GPVC[SPC706] Resolution 720x1080 VD Pass 16 Scan direction Bi-direction High speed ON Overprint 1time(s) Halftone ILL diffusion	Select the RIP which use in target environment: RasterLink series NOT RasterLink series Create Target data	
	Color Matching	
	C	ose

Color matching flow

Color matching flow may vary depending on RIP software used by target printers as described below.

When a target environment uses RasterLink series as RIP software

STEP1: Create information for target environment

Print charts in the target environment." (P. 106)

"Load a device profile used in the target environment." (P. 107)

"Measure the target chart." (P. 108)

"Save information in a file." (P. 109)

STEP2: Perform Equalization

"Adjust ink limit." (P. 110)

"Adjust the linearization parameters." (P. 111)

"Adjust the gray balance parameters." (P. 111)

"Print a chart for which Equalization has been carried out, and check the color difference with the target environment." (P. 112)

Check color difference, and go to STEP4 if it is satisfactory, otherwise go to STEP3.

STEP3: Perform Emulation

"Create a Target Profile." (P. 113)

"Create an Emulation Profile." (P. 113)

"Accuracy Improvement" (P. 114)

STEP4: Save the Profile

"Select media" (P. 115)

"Save the profile." (P. 115)

When a target environment uses other than RasterLink series as RIP software

STEP1: Create information for target environment.

"Print charts in the target environment." (P. 117)

"Measure the target chart." (P. 117)

"Save information in a file." (P. 118)

STEP2: Perform Emulation

"Create a Target Profile." (P. 119)

Adjust ink limit." (P. 120)

"Create an Emulation Profile." (P. 120)

"Accuracy Improvement" (P. 121)

STEP3: Save the Profile

"Select media." (P. 122)

"Save the file." (P. 122)

How to match color

Color matching for cases where a target environment uses RasterLink series as RIP software

Start



STEP1: Create information for target environment

1

Print charts in the target environment.

- Save an image to be printed in the target environment.
- (1) Click [Save chart].
 - Refer to "Click [Save chart]." (P. 89) for details.

3	Create Target data 🛛 🗕 🗖 🗙
STEP1	Print chart images on target environment. Chart images are saved in the folder whichi you select when you press [Save chart] button.
STEP2	Save chart
	You should take the following settings when chart images:
STEP3 Measure Calibration chart	After printing, please save Backup Job File which is created from the job of these images on RasterLink. Or prepare the Devie profile which you used when you printed these
STEP4	images.
Measure Emulation chart	[Emulation charts] Use generally settings.
STEP5 Save Target data	
	[Calibration chart] Color matching setting : Gray Balance Other settings(include "Color Adjust" and "Calibration are set generally settings.
	Next Cancel

(2) Print the saved image file using RasterLink series in the target environment under the following conditions.

(Important!)

• [Emulation chart] Color matching setting: Generally used settings. Other settings (include Device profile, Color Matching, pass, print direction, and color adjustment set) should be printed with generally used settings.

[Calibration chart]

Color matching setting: Gray Balance

Other settingsv(include Device profile, Color Matching, pass, print direction, and color adjustment set) should be printed with generally used settings.

- (3) After printing, obtain any of the following files from RasterLink.
 - Backup job file of printed chart.
 - Device profile used in printing.
- (4) Click [Next].
Load a device profile used in the target environment.

Load any of the following files used in printing charts in the target environment.

- Backup job file of printed chart.
- Device profile used in printing.
- (1) Click [Browse...] to select the file above.

3	Cre	ate Target data	- 🗆 🗙
STEP1 Save chart	Select the following - Backup Job File - Device Profile A part of the inform	file which you use when you print chart images. ation of the device profile is used in the Color Matching.	
Select a Target Device Profile	G:\MPM3\MPM3.1.9	9 data\CIV3004CSS21 Mimaki-GPVC-SPC706 F106366.icc	
STEP3	Information of selec	ted profile	Browse
Weasure Calibration Chart	Printer	CJV300-4Color	
STEP4	Inkset	SS21 CMYK	
Manuar Emulation about	Media name	Mimaki GPVC[SPC706]	
Measure Emulation chart	Resolution	720x1080 VD	
CTEDS	Pass	8	
	Scan direction	Bi-direction	
Save larget data	Overprint	1time(s)	
	Halftone	ILL diffusion	
_			
		Prev Next	Cancel

(2) Click [Next].

Measure the target chart.

• Measure the calibration target chart printed in the target environment.

(1) Click [Measure a chart image].

3	Create Target data	- 🗆	×
STEP1 Save chart STEP2 Select a Target Device Profile	Measure the [Calibration Target] chart which printed on target environment.		
STEP3 Measure Calibration chart	Measure a chart image		
Measure Emulation chart	Option Load measurement file	_	
	Prev Next	Ca	ncel

- (2) Click [Next].
- (3) Measure the emulation chart printed in the target environment. For operation procedure, refer to "Chapter 13 How to measure color with a colorimeter" (P. 163).

• You may choose not to measure color in this page. If that is the case, the color measurement window for emulation chart appears in a later process, as necessary. However, we recommend you measure the chart in this step, whenever it seems difficult to do so once again in the target environment.



(4) Click [Next].

Save information in a file.

• Save the target information file (mtf file).

(1) Click [Browse...] to specify a destination to save.

3	Create Target data	- 🗆 🗙
STEP1	Save Target enviroment information. When you input comment, it is useful when you select target infor C:¥Targer CJV300.mtf	mation file later.
STEP2	Comment	Browse
STEP3 Measure Calibration chart	Target: Printer #4	
STEP4 Measure Emulation chart		
STEP5 Save Target data		
	Prev	ete Cancel

(2) Click [Complete].

- The target information file is saved in the specified destination.
- (3) The message window below appears.
 - To continue color matching
 - To quit after creating target information Click [No].

The [Color Matching] main window reappears.



Click [Yes].

STEP2: Perform Equalization



(2) Click [Next].



Adjust ink limit.

- (1) Connect to a printer with which color matching should be performed, and print a calibration ink limit chart.
- (2) Measure the printed chart.
 For operation procedure, refer to "Chapter 13 How to measure color with a colorimeter" (P. 163).

3			Color Matching	- 🗆 🗙
[Base Device Pro Printer Inkset Media name Resolution Pass	file] CJV300-8Color SS21 CMYKLcLm Mimaki GPVC[SPC706] 720x1080 VD 16	STEP1	Print and Measure charts for Ink Limit.	
Scan direction High speed Overprint Halftone	Bi-direction ON 1time(s) ILL diffusion	Ink Limit		
[Target Device P Printer linket Media name Resolution Pass Scan direction High speed Oryh speed	refile) C/1903-4Color S21 CMYK Mmakia (DVCJPC706) 720(109) VD 8 Bis-rection ON ON ON Inne(s) Itu diffusion	Linearization STEP4 Grey Balance STEP5 STEP5 Confirm Color difference	Messure a chart image Option Load measurement file Edit. Prev Next	Cancel

(3) Click [Next].

Adjust the linearization parameters.

- (1) Connect to a printer with which color matching should be performed, and print a linearization chart.
- (2) Measure the printed chart.

For operation procedure, refer to "Chapter 13 How to measure color with a colorimeter" (P. 163).

8		Color Matching	- 🗆 🗙
[Base Device Profile] Printer CJV300-8Color Inkset SS21 CMYKLcLm Media name Mimaki GPVC[SPC706]	STEP1	Print and Measure a chart for Linearization	
Resolution 720x1080 VD Pass 16 Scan direction Bi-direction High speed ON	STEP2	Print a chart image	
Overprint 1time(s) Halftone ILL diffusion	STEP3		
[Target Device Profile] Printer CJV300-4Color	Linearization	Measure a chart image	
Inkset SS21 CMYK Media name Mimaki GPVC[SPC706] Resolution 720x1080 VD Pass 8 Scan direction Bi-direction High speed ON	STEP4	Option Load measurement file	
Overprint 1time(s) Halftone ILL diffusion	Confirm Color difference	Edit	
		Prev	lext Cancel

- (3) Click [Next].
- 4

Adjust the gray balance parameters.

- (1) Connect to a printer with which color matching should be performed, and print a gray balance chart.
- (2) Measure the printed chart.

For operation procedure, refer to "Chapter 13 How to measure color with a colorimeter" (P. 163).

3		Color Matching	- 🗆 🗙
[Base Device Profile] Printer CIV300-8Color Inkset SS21 CMVKLcLm Media name Mimaki GPVC[SPC706] Resolution 720x1080 VD	STEP1	Print and Measure a chart for Gray Balance	
Pass 16 Scan direction Bi-direction High speed ON	STEP2	Print a chart image	
Overprint 1time(s) Halftone ILL diffusion	—	•	
[Target Device Profile]	STEP3	Measure a chart image	
Inkset SS21 CMYK Media name Mimaki GPVC[SPC706] Recolution 220×1000 VD	STEP4	Option	
Pass 8 Scan direction Bi-direction	Gray Balance	Load measurement file	
High speed ON Overprint Itime(s) Halftone ILL diffusion	STEPS	Edit	
		Prev	t Cancel

(3) Click [Next].

5 Print a chart for which Equalization has been carried out, and check the color difference with the target environment.

- (1) Connect to a printer with which color matching should be performed, and print a calibration chart.
- (2) Measure the printed chart.
- (3) Color difference with the target is given.
- (4) Check if the color difference is acceptable.

3			Colo	or Matching				-	×
[Base Device Pr Printer Inkset	ofile] CJV300-8Color SS21 CMVKI cl.m	STEP1	Print and	Measure charts, after dis	play difference co	lor values.			
Media name Resolution	Mimaki GPVC[SPC706] 720x1080 VD	Select Target data			Print a chart imag	je			
Pass Scan direction High speed	16 Bi-direction ON	STEP2			-				
Overprint Halftone	1time(s) ILL diffusion			М	leasure a chart im	age			
[Target Device Brinter	Profile]	Linearization	Option						
Inkset Media name	SS21 CMYK Mimaki GPVC[SPC706]	STEP4		Load measurement file	•				
Resolution Pass Scan direction	720x1080 VD 8 Birdirection	Gray Balance	Color diffe	erence between the targe	et				
High speed	ON 1time(a)	STEP5			At the time of cre	ating calibration	on		
Halftone	ILL diffusion	Confirm Color difference			Ave. delta E	7.14	Color differ	ence t	ype
					Cyan	1.06	deltaE	~	
					Magenta	3.34			
					Yellow	0.88			
					Green	0.02 7.28			
					Blue	6.38			
					3 Colored Gray	2.48			
						Prev	Complete	(Cancel

- (5) Click [Complete] to display the following message.
 - Color difference is not acceptable Click [Yes] to carry out Emulation.(To next page.)
 - Color difference is acceptable

Click [NO]. The file saving window appears.

(To "Save information in a file." (P. 109))



STEP3: Perform Emulation

1

Create a Target Profile.

- (1) Different buttons are displayed according to whether an Emulation chart was measured when creating target information.
 - When not measured [Measure the chart by clicking the [Measure a chart image] that appears.
 - When measured [Create the Emulation profile] appears as describe in 2 below. Click [Print a chart image] to create a profile based on the color measurement data.

8		Color Matching	- 🗆 🗙
Printer CJV300-8Color Inkset SS21 CMYKLcLm Media name Mimaki GPVC[SP Resolution 720x1080 VD Pass 16	C706] STEP1 Target Profile	The chart printed on the target printer and color measurement, and create a target profile.	
Scan direction Bi-direction High speed ON Overprint Itime(s) Halftone ILL diffusion	STEP2	Measure a chart image	
	STEP3	Miscellaneous	
		Load measurement file	
			Next Cancel

- (2) After a profile has been created, the file input window appears.
 - Enter a file name.
- (3) Click [Next].



Create an Emulation Profile.

(1) Create an Emulation Profile. For operation procedure, refer to "STEP3: Create an Emulation Profile" (P. 92).

3	Color Matching	- 🗆 ×
Printer CJV300-8Color Inkset SS21 CMYKLcLm Media name Mimaki GPVC[SPC706] Resolution 720x1080 VD Pass 16	Create the emulation profile that the color measurement and printed chart by the printer to emulate.	
Scan direction Bi-direction High speed ON Overprint 1time(s) Halftone ILL diffusion	STEP2 Print a chart image Emulate Profile	
	STEP3	
	Accuracy Improvement Measure a chart image	
	Option	
	Load measurement file	
	Prev N	lext Cancel

(2) Click [Next].

3 Accuracy Improvement (1) Accuracy Improvement. For operation procedure, refer to "STEP4: Accuracy Improvement" (P. 94).



(2) Click [Complete].



Select media

(1) Select the target media.

The created device profile is saved as a different file with changed media name in order to distinguish from the base device profile.

3		Save Colo	or Matching Information	- 🗆 ×
STEP1	lt is ne Select	cessary to change the mec a media name:	dia name to distinguish it from base device p	rofile.
STED 2	No.	Media name	Media material	
	1	PVC Gloss	PVC Gloss	
Save Save	2	FF	FF	
	3	White PET	White PET	
				Add
-			Prev	Next Cancel

(2) Click [Next].

Save the profile.

When Emulation was performed

(1) When Equalization was performed Specify a device profile name and a destination folder to save. Specify only a destination folder to save.

3	Save Color Matching Information	-	×
STEP1	Select a folder to store files: C:\test Input comment (Option)	Browse	
	NO.4-NO.2 Color Matching		
	Prev	omplete	Cancel

- (2) Click [Complete].
 - · The file is saved.



About a file to be saved:

When Equalization was performed, the following files are saved.

•Device profile*.icc: Target information is saved as a reference color.

- •Text file containing color matching information
- File containing measured color values

When Emulation was performed, the following files are saved.

- Target profile(*.icm)
- •Emulation profile(*.mtce): Target information is saved as a reference color.
- •Text file containing color matching information
- •File containing measured color values

Color matching for cases where a target environment uses other than RasterLink series as RIP software

Start



The [Create Target data] window appears.

STEP1: Create information for target environment.

Print charts in the target environment.

• Save an image to be printed in the target environment.

- (1) Click [Save chart].
 - Refer to "Click [Save chart]." (P. 89) for details.



- (2) Print the saved image file with generally used settings (include Profile, Color Matching, print conditions, color adjustment) in the target environment.
- (3) Click [Next].

2

Measure the target chart.

- Measure the emulation chart printed in the target environment.
- (1) Click [Measure a chart image].

For operation procedure, refer to "Chapter 13 How to measure color with a colorimeter" (P. 163).

3	Create Target data -		×
STEP1 Save chart	Measure the [Emulation Multi Color] chart which printed on target environment.		
Kessure Emulation chart	Measure a chart image		
	Option Load measurement file	_	
	Prev Next	Car	ncel

(2) Click [Next].



Save information in a file.

• Save the target information file (mtf file).

(1) Click [Browse...] to specify a destination to save.

3	Create Target data	- 🗆 🗙
STEP1 Save chart STEP2 STEP2 STEP3 Messure Emulation chart STEP3 Save Target data	Create Target data Save Target environment information. When you input comment, it is useful when you select target information f C(test(ABC-Printer.mtf Comment Target=PrinterABC	Browse

- (2) Click [Complete].
 - The target information file is saved in the specified destination.
- (3) The message window below appears.
 - To continue color matching
- Click [Yes].
- To quit after creating target information Click [No].

The [Color Matching] main window reappears.

MPM3	×
? Next, do you carry out Color Matching?	
Yes No	

STEP2: Perform Emulation





• If you have continued from STEP1, go to 2.

(1) Click [Browse...] to select a file.

3			Color Matching	- 🗆 🗙
Printer Inkset Media name Resolution	CJV300-8Color SS21 CMYKLcLm Mimaki GPVC[SPC706] 720x1080 VD	STEP1 Select Target data	Select a file which contain target data.	
Pass Scan directi High speed Overprint Halftone	16 InS-direction ON Titme(() ILL diffusion	STEP2 Target Profile STEP3 Ink Limit STEP4 Emulate Profile STEP5 Accuracy Improvement	C\test\ABCPrinter.mtf	Browse
		STEP6	N	ext Cancel

(2) Click [Next].

Create a Target Profile.

(1) Click [Create Target Input Profile] to create a profile based on the color measurement data.

8		Color Matching	- 🗆 🗙
Printer CJV300-8Color Inkset SS21 CMYKLcLm Media name Mimaki GPVC[SPC706] Resolution 720x1080 VD Pass 16 Scan direction Biddirection	STEP1	Please press [Create Target Input Profile] and create a file.	
High speed ON Overprint Itime(s) Halftone ILL diffusion	Target Profile	Create Target Input Profile	
	Ink Limit		
	STEP5		
	STEP6 Create Basis Color data		
		Prev Nex	t Cancel

- (2) After a profile has been created, the file input window appears.
 - · Enter a file name.
- (3) Click [Next].



Adjust ink limit.

- Set an ink limit in the emulation environment.
- (1) Connect to a printer with which color matching should be performed, and print a calibration ink limit chart.
- (2) Measure the printed chart.

For operation procedure, refer to "Chapter 13 How to measure color with a colorimeter" (P. 163).

3			Color Matching	- 🗆 🗙
Printer Inkset Media name Resolution	CJV300-8Color SS21 CMYKLcLm Mimaki GPVC[SPC706] 720x1080 VD	STEP1	Print and Measure charts for Ink Limit.	
Pass Scan direction High speed	16 Bi-direction ON	STEP2	Print a chart image	
Halftone	ILL diffusion	Target Profile	—	
		STEP3	Measure a chart image	
		STEP4 Cinulate Porfile STEP5 Accuracy Improvement STEP5 Create Basis Color data	Option Load measurement file Edit	
			Prev Next	t Cancel

(3) Click [Next].



Create an Emulation Profile.

(1) Create an Emulation Profile. For operation procedure, refer to "STEP3: Create an Emulation Profile" (P. 92).

3			Color Matching – 🗆 🗙
Printer C Inkset St Media name M Resolution 72 Pass 10	:JV300-8Color S21 CMYKLcLm Aimaki GPVC[SPC706] 20x1080 VD 6	STEP1	Create the emulation profile that the color measurement and printed chart by the printer to emulate.
Scan direction B High speed O Overprint 11 Halftone IL	ii-direction DN time(s) LL diffusion	STEP2	Print a chart image
		STEP3	•
		Ink Limit	Measure a chart image
		STEP4 Emulate Profile	
		STEP5	Option
		Accuracy Improvement	Load measurement file
		STEP6 Create Basis Color data	
			Prev Next Cancel

(2) Click [Next].

Accuracy Improvement

(1) Improve accuracy.

For operation procedure, refer to "STEP4: Accuracy Improvement" (P. 94).



(2) Click [Next].

6

Create Base Color data

(1) Save the current color as a reference color to facilitate subsequent color matching operations. For operation procedure, refer to "Click [Create Base Color data]." (P. 54).

3			Color Matching	- 🗆 ×
Printer Inkset Media name Resolution	CJV300-8Color SS21 CMYKLcLm Mimaki GPVC[SPC706] 720x1080 VD	STEP1	Print and Measure a chart for Calibration	
Scan direction High speed Overprint	Bi-direction ON 1time(s)	STEP2	Print a chart image	
Halftone	ILL diffusion	Target Profile	•	
		STEP3	Measure a chart image	
		STEP4	Option	
		STEP5	Load measurement file	
		Accuracy Improvement		
		STEP6		
		Create Basis Color data		
			Prev Complete	Cancel

(2) Click [Complete].

STEP3: Save the Profile

1

Select media.

- The created device profile is saved as a different file with changed media name in order to distinguish from the base device profile.
- (1) Select the target media from the media list.

8		Save Co	olor Matching Information	>
STEP1	lt is ne Select	ecessary to change the me a media name:	edia name to distinguish it from base device profile.	
STED2	No.	Media name	Media material	
	1	PVC Gloss	PVC Gloss	
Save Save	2	FF	FF	
	3	White PET	White PET	
			μ	.00
			Prev Nex	tCancel

(2) Click [Next].

1	

Save the file.

(1) Specify a destination folder to save.

3	Save Color Matching Information	-		×
STEP1 Media STEP2 Save	Select a folder to store files: C\test Input comment (Option)	wse		
	NO.4-NO.2 Color Matching			
	Prev Compl	ete	Cancel	

- (2) Click [Complete].
 - · The file is saved.

About a file to be saved:

- The following files are saved.
- •Target profile (*.icm)
- •Emulation profile (*.mtce): The data created in "Create Base Color data" (P. 121) is saved as the reference color.
- •Text file containing color matching information
- •File containing measured color values

Daily Confirm

You can check temporal change based on the reference colors contained in the device profile or the emulation profile.

Starting the [Daily Confirm] function

Click [Manage Device Profile].							
	3	Mimaki Profile Master3	- 🗆 ×				
	Device Profile						
	O ICC Profile	Create Device Profile					
	Option	Manage Device Profile					



4

Load a device profile.

Select a device profile to perform [Daily Confirm].

Click [Daily Confirm].

3				P	rofile managen	nent			- 🗆 🗙
	Add to list	Edit	Resume	Daily Confirm	Readjustment	Color Match	ing	I	
	File Name	Printer	Inkset	Media name	Media material	Resolution	Version	Туре	Creator's Name
	CJV3008CSS21	CJV300-8Color	SS21 CMYKLcL	Mimaki GPVC[PVC Gloss	720x1080 VD	3.3	Full Color	mimaki
	CJV3008CSS21	CJV300-8Color	SS21 CMYKLcL	Mimaki GPVC[PVC Gloss	720x1080 VD	3.3	Full Color	mimaki
	Prev				-	-			

5	The [Daily Confirm] window appears.

3	Daily Confirm	×
(Base Device Profile) Printer C/V300-8Color Inkset SS21 CMYKLcLm Media name Mimaki GPVC[SPC706] Resolution 720x1080 VD Pass 16 Scan direction Bi-direction High speed ON Overprint 1time(s) Halftone ILL diffusion	Daily Confirm Basis Color Creation date: 2017-05-15 13:51:34 Image: Confirm Color data Calibration data Data : None	-
	OK Cancel	

Creating/re-creating a reference color

When a reference color is not defined, the current printer's color is saved as such in the device profile. You can redefine the reference color.

To create or re-create a reference color, click [Create Basis Color data] or [Re-create Basis Color data], respectively.

For operation procedure, refer to "Setting the calibration reference color" (P. 54).

Base Device Profile] Printer CIV300-SColor Inkret SS21 CMVKLm There is no color basis data. Media name Minaki GPVC(SPC706) There is no color basis data. Pass 16 Scan direction Bi-direction There is no color basis data. Haiftone ILL diffusion Create Basis Color data	[Base Device Profile] Printer C/V300-8Color Inkret SS21 CMVRLctm Media name Mimaki GPVC(SPC706) Resolution 720x1080 VD Pass 16 Scan direction Bi-direction High speed High speed 0N Calibration data Data : None Data : None Image: Confirm Color difference OK Cancel

Confirm Color difference

Perform daily confirm for color difference.

Refer to "Workflow for printing with calibration" (P. 65) for details.

If color difference is unacceptable, perform [Readjustment] as described at next page.

Readjustment

[Color difference is regarded unacceptable according to [Daily Confirm], perform [Readjustment].

Starting the [Readjustment] function

Click [Manage Device Profile].						
	3	Mimaki Profile Master3				
	Device Profile					
	O ICC Profile	Create Device Profile				
	Option	Manage Device Profile				



3

Select a device profile to perform [Readjustment].

Click [Readjustment].

3			F	Profile manager	ment			– 🗆 🗙
Add to list	Edit	Resume Copy	Daily Confirm	Readjustment	t Color Match	ing	I	
File Name	Printer	Inkset	Media name	Media material	Resolution	Version	Туре	Creator's Name
CJV3008CSS21	CJV300-8Color	SS21 CMYKLcL	Mimaki GPVC[PVC Gloss	720x1080 VD	3.3	Full Color	mimaki
CJV3008CSS21	CJV300-8Color	SS21 CMYKLcL	Mimaki GPVC[PVC Gloss	720x1080 VD	3.3	Full Color	mimaki
Prev								

The [Rea	Idjustme	nt] windo	ow appears.	
	Pinter C/V300-8Color Instet 5521 CM/NRLchm Media name & BLEBU Resolution 72b(1090 VD Pass 16 Scan direction B-idjrection High gene ON Overprint Time(s) Halftone ILL diffusion	STEP1 Ink Link STEP2 Unseritation STEP3 Gray Balance STEP4 STEP4 STEP4 Complete STEP5 Complete	Create Calibration data Print and Measure charts for Ink Limit. Print a chart image Coption Load measurement file Edit	
		-	Prev Next	Cancel

Readjustment procedure

For the procedure, refer to "STEP1: Adjust ink limit." (P. 60)~ in Setting calibration.

Chapter 10 Creating an ICC Profile

Available ICC Profiles

You can create the following three types of profiles in MPM3.

Types of profile	Details		
CMYK profile	 Profile for displaying CMYK color images on monitors with a color simulation function "Creating a CMYK Profile" (P. 130) Output profile for third-party RIP applications that support to ICC profiles 		
RGB profile	 Profile for displaying RGB color images on monitors with a color simulation function "Creating an RGB Profile" (P. 134) Output profile for the calibration printer using the printer driver 		
Monitor profile	 Profile for reproducing color on monitors "Creating a Monitor Profile" (P. 137) 		

Work Flow for Creating an ICC Profile



Creating a CMYK Profile

Starting the Create CMYK Profile Wizard

Select [ICC Profile] - [Create CMYK Profile] from the main screen.

 Image: Select Se

•

Click [Save chart].

Save the chart image as a file to print on the target printer.

3	Create CMYK Profile – 🗖 🗙
STEP1	Click [Save chart] to save the chart data. After print the chart with the target device, and measure it.
STEP2	Save chart
	—
	Measure a chart image
	① Measurement is not done.
	Option
	Load measurement file
	Next Cancel

• Specify the folder in which you want to save the file on the Save screen displayed.



2

Print the chart image saved in the target printer.

• Load the chart image to RIP, software, and so on, for the target environment, and then print.

Click [Measure a chart image]. – 🗆 🗙 З Create CMYK Profile STEP1 Click [Save chart] to save the chart data. After print the chart with the target device, and measure it.] ICC Profile Save chart STEP2 Save \cap Measure a chart image Measurement is not done. Option Load measurement file

- (1) Measure the chart image that was printed with the target printer.
 - Refer to "Chapter 13 How to measure color with a colorimeter" (P. 163) for details.
- (2) After color chart measuring is complete, the Black curve settings screen for the ICC Profile is displayed.

Next Cancel

- Refer to "Edit the ICC profile settings." (P. 34)for details on making settings.
- When you have finished making settings, click [Finish].



• When you are returned to the Create CMYK Profile screen, click [Next].



Input the save file name.

- Click [Browse...] to specify the destination in which you want to save the file.
- After making specifications, click [Complete] to save the file and exit.

3	Create CMYK Profile	- 🗆 ×
STEP1 CC Profile STEP2 Save	Pleases specify a save file name: C:¥CMYKProfile.icm	Browse
-	Prev	mplete Cancel

Creating an RGB Profile

Starting the Create RGB Profile Wizard

Select [ICC Profile] - [Create RGB Profile] from the main screen.

3	Mimaki Profile Master3 – 🗖	×
Device Profile		
O ICC Profile	Create CMYK Profile	
Option	Create RGB Profile	
	Create Monitor Profile	

•

Click [Save chart].

Save the chart image as a file to print on the target printer.

3	Create RGB Profile – 🗖 🗙
STEP1	Click [Save chart] to save the chart data. After print the chart with the target device, and measure it.
STEP2	Save chart
	Measure a chart image
	① Measurement is not done.
	Option
	Load measurement file
	Next Cancel

• Specify the folder in which you want to save the file on the Save screen displayed.



2

Print the chart image saved in the target printer.

• Load the chart image to RIP, software, and so on, for the target environment, and then print.

[Measure	a chart image].
3	Create RGB Profile – 🗖
STEP1	Click [Save chart] to save the chart data. After print the chart with the target device, and measure it.
STEP2	Save chart
	_
	Measure a chart image
	(i) Measurement is not done.
	Ontion
	Load measurement file
	Novt Con

- (1) Measure the chart image that was printed with the target printer.
- Refer to "Chapter 13 How to measure color with a colorimeter" (P. 163) for details.
- (2) After color chart measuring is complete, the profile is created automatically.
- When you are returned to the Create RGB Profile screen, click [Next].

Input the save file name.

- Click [Browse...] to specify the destination in which you want to save the file.
- After making specifications, click [Complete] to save the file and exit.

3	Create RGB Profile	- 🗆 ×
STEP1 ICC Profile STEP2 Save	Pleases specify a save file name: C:¥RGBProfile.icm	Browse
	Prev C	omplete Cancel

Creating a Monitor Profile



 Only the following colorimeter devices are supported for creating monitor profiles. This function is not available when any other colorimeter device is selected. [Supported Colorimeters] i1Pro

Preparing the Monitor

Change the monitor's settings. Make the following settings according to the monitor being used.

When the monitor has a "Color Temperature" setting.

Set the color temperature according to the environment (viewing environment) for checking printed materials. The following are frequently used for printing.

5000K	Fluorescent lamp equivalent to daylight white, standard in the printing field
6500K	Fluorescent lights: equivalent to daylight brightness (brightness during daytime cloudy weather)

When the monitor does not have a "Color Temperature" setting.

Return to the default factory settings.

For details on making monitor settings, refer to the user's guide supplied with your monitor.

Starting the Create Monitor Profile Wizard



3	Create Monitor Profile – 🗖 🗙
STEP1 O ICC Profile	Measure the monitor for ICC Profile. After measurement, ICC profile is created. Please confirm your monitor setting before the measurement.
STEP2 Save	Measure a chart image
	 Measurement is not done. Option
	Load measurement file
	Next Cancel

Attach the colorimeter

• Place the i1Pro on the white tile, and then press [Next].

Calibration
Calibration of colorimeter i1Pro
Place the colorimeter on the base white tile. Click [Next]
Back

- The screen background turns black, and the "Mesuring Monitor" screen is displayed in the center of the display.
- When multiple monitors are connected, you can measure the color of the monitors by moving the "Mesuring Monitor" screen to the monitor that is being used to create the profile.
- Move the screen so that the center of the measuring area on the left of the "Mesuring Monitor" screen is at the center of the monitor.
- Attach the monitor measuring device to the i1Pro, and then attach it to the monitor. In this situation, place the light receiver in the center of the measuring area of the "Mesuring Monitor" screen.



• After installing the colorimeter, click "Start".



	Chart measurement : MonitorReference	- • ×
	Page 1 v	Whole display 🗸
Result of measurement Measured data list		
	X Y Z	
		Finish

• To save the measurement values, set "Save measured data to the file" to ON on the following screen. Click [Finish].

Exit	×
inish monitor mesurement.	
Save measured data to the file	
Paul	L.
Back	Finis



• After making settings, click [OK].



Input the save file name.

- Click [Browse...] to specify the destination in which you want to save the file.
- After making specifications, click [Complete] to save the file and exit.

3	Create Monitor Profile	- 🗆 🗙
STEP1 ICC Profile STEP2 Save	Create Monitor Profile Pleases specify a save file name: C:¥MonitorProfile.icm	1 Browse
-	F	rev Complete Cancel

Using a Monitor Profile

Set the monitor profile in your operating system.

Windows

Right-click on the monitor profile you created.

• Select "Install Profile" from the menu displayed.

2

Open the control panel and select [Customize Desktop] - [Adjust Resolution].

• The [Screen Resolution] screen is displayed.



Click "Advanced settings".

• The monitor properties screen is displayed.

<u>.</u>	Screen Resolution – 🗖 🗙
⊕ ∋ - ↑	■ « All Control Panel Items → Display → Screen Resolution v C Search Control Panel ρ
	Change the appearance of your display
	Detest Identify
	Display: 1. LD19545 V
	Resolution: 1280 × 1024 (Recommended)
	Orientation: Landscape V
	Advanced settings
	Make text and other items larger or smaller
	What display settings should I choose?
	OK Cancel Apply



Click [Color Management...] from the "Color Management" tab.

• The [Color Management] screen is displayed.

Click [Add...].

• The "Associated Color Profile" screen is displayed.

₽.	Color Management			×
Devices All Profiles Adva	anced			
<u>D</u> evice:	Display: 1. Generic PnP Monitor - Intel(R) HD Graphics			~
	Use my settings for this device		Identify monitors	
Pro <u>f</u> iles associated wit	h this device:			
Name		File name		
<u>A</u> dd	<u>R</u> emove		Set as Default Profile	
Understanding color n	nanagement settings		Pr <u>o</u> files	
			C	llose



Select the monitor profile you installed, and then click [OK].

• You are returned to the "Color Management" screen.



7 Select the profile specified in step 6, and then click [Set as Default Profile].

	Color Managen	licit	
vices All Profiles	Advanced		
Device:	Display: 1. Generic PnP Monitor - Intel(R) HD	Graphics	
	✓ Use my settings for this device	Identify monitor	;
D (1)	No. of the second s		
Name	with this device:	File name	_
ICC Profiles			
MonitorProfile.ici	m (default)	MonitorProfile.icm	
Add	m (default) <u>R</u> emove	MonitorProfilecm Set as Default Profile	
Add	Remove	MonitorProfile.cm	



Click [Close].
Copy the monitor profile you created to the following folder.

User/login name/Library/ColorSync/Profiles/Displays/



1

Click [Display] from [System Preferences].

• The [Colors] screen is displayed.

Select the monitor profile you created from the list.



3

Close the screen.

Chapter 11 Monitor Simulation

What is Monitor Simulation?

You can reproduce (or "simulate") the color of printed material on a monitor by using a monitor configured correctly and a simulation profile that represents the color gamut of the printed material.

This chapter describes how to create an environment to simulate the results of outputting to a Mimaki printer using the RasterLink series.



Note that you may not be able to simulate the colors of the monitor and print accurately for the following reasons.

- If the color gamut of the monitor and the printed material are different, colors beyond the color gamut range cannot be reproduced.
- If there are differences in the monitor or printer characteristics, or due to individual differences.
- The way that colors in the printed material look changes depending on the lights being used in the surrounding environment.

Environment necessary for monitor simulation

You need the following devices and software when performing monitor simulation.

Devices/Software	Summary
МРМЗ	Create a monitor profile and a simulation profile.
RasterLink Series	 Output a chart to create a simulation profile.
Colorimeter	 Used for measuring monitors and printed charts. For MPM3, monitor measuring is only supported for the XRite i1Pro/i1Pro2.
Design software that supports color man- agement using ICC profiles	 This is used to display simulation results or color adjustments. This section uses Adobe Photoshop/Illustrator.
Monitor	 The monitor used on a PC on which design software is installed. Refer to "Adjusting the Monitor" for detailed specifications.
Viewing environment	 The environment for viewing printed material. Refer to "Preparing the Viewing Environment" for details.

Step1: Prepare the Viewing Environment
Step 2: Adjust the Monitor
STEP 3: Create a Simulation Profile
STEP 4: Set the simulation profile in Photoshop/Illustrator.
Step 5: Compare Printed Material and the Monitor

Step1: Prepare the Viewing Environment

Colors appear different depending on the environment in which the printed material is viewed, this is especially influenced by the color of the nearest light source and surroundings. It is therefore important to be have a constant view of the environment for the printed material.

We recommend the following viewing environment for the MPM3.

Standard lighting	CIE daylight color D50	
Luminance	2000 ±500 [lx]	

Creating the viewing environment

There are several ways of creating a suitable viewing environment.

• Case 1:

Prepare a commercially available color viewing booth

When you need precise color reproduction, we recommend using a commercially available color viewing booth.

Case 2:

Use a light source specifically for color evaluation

For this method, you need to replace indoor lights and desk lights with commercially available fluorescent lights and so on that are specifically for color evaluation. This method is cheaper than using a color viewing booth.

We recommend that not only the color of the light source, but also the color of the walls, the desk, and so on should be neutral (neutral gray).

Step 2: Adjust the Monitor

Adjust the monitor to match the monitor's viewing environment.

Regarding Monitors used in Monitor Simulation

[Minimum Monitor Specs]

sRGB cover ratio	90 %
Adobe RGB cover ratio	90%

• For the sRGB/Adobe RGB cover ratio, refer to the catalogs and user's guides for each monitor.

Adjusting the Monitor

Perform the following adjustments according to the monitor.

When you have a monitor that sup- ports hardware calibration and cali- bration software	Perform hardware calibration. Refer to the user's guide of the monitor or calibration software for details.
Except for the above	Create a monitor profile using MPM3, and then adjust the mon- itor by installing it on your operating system. Refer to 「Creating a Monitor Profile」 (P. 138) for details on creating and installing the profile.



- When adjusting the monitor, adjust the white point and brightness settings to match the light source of the viewing environment.
- When creating a monitor profile in mpm3, set the whiteness and brightness to match your viewing environment.

	Mo	onitor Profile Settings	×
Setting	D50 Printing Standard		~
White Point CIE 1 Color xy u'v'	(lluminant Temprature	CIE Illuminant D50	~
Luminance	et om	80 cd/m2	¥
Gamma	et om	2.2 (Standard)	V
Contrast Press Cont Spec	et rast Ratio ified Black Point	Native	~
		ОК	Cancel

STEP 3: Create a Simulation Profile

Create a simulation profile to reproduce the print results. Create two types of CMYK and RGB profiles according to the color mode in the image.

Creating a CMYK Simulation Profile

Use the Create CMYK Profile feature. For more information, refer to 「Creating a CMYK Profile」 (P. 131).

Select [ICC Profile] - [Create CMYK Profile] from the main screen.
 The [Create CMYK Profile] screen opens.

Click [Save chart] to save the chart image.

2

Print the chart image using the RasterLink series.

[Printing Using RasterLink6]

(1) Load the chart image you saved in RasterLink.

- (2) Select the chart image job, display the [Quality] screen, and check that the settings you normally use are displayed.
 - When using normal settings, make sure you set the color adjustment and calibration.
 - If different values have been set for "Illustration" and "Image" in color matching and color adjustment, the "Image" setting is applied to the chart image.
 - When using white ink as the backing, specify "Entire Image" in plate generation.

(3) Print the job.

Return to MPM 3 and click [Measure a chart image] to measure the printed chart.

• After measuring is complete, the "ICC Profile Settings" screen is displayed.

• Do not change the default settings.



Save the ICC Profile.

Create an RGB Simulation Profile.

Use the Create RGB Profile feature. Refer to 「Creating an RGB Profile」 (P. 135) for details.

Select [ICC Profile] - [Create RGB Profile] from the main screen.

• The [Create RGB Profile] screen opens.



Click [Save chart] to save the chart image.

3

Print the chart image using the RasterLink series.

[Printing Using RasterLink6]

- (1) Load the chart image you saved in RasterLink.
- (2) Select the chart image job, display the [Quality] screen, and check that the settings you normally use are displayed.
 - When using normal settings, make sure you set the color adjustment and calibration.
 - If different values have been set for "Illustration" and "Image" in color matching and color adjustment, the "Image" setting is applied to the chart image.
 - When using white ink as the backing, specify "Entire Image" in tile generation.
- (3) Print the job.

Return to MPM 3 and click [Measure a chart image] to measure the printed chart.

• ICC profile creation starts after measuring.



Saving the ICC Profile

STEP 4: Set the simulation profile in Photoshop/Illustrator.

Set the simulation profile you created in Photoshop/Illustrator.

Install the profile on your operating system.

When using simulation profiles created in Photoshop/Illustrator, you need to install them in your operating system.

[Windows]

Select the simulation profile you created in Windows Explorer, right-click it and select [Install Profile] from the menu displayed.



[Macintosh]

Copy the simulation profile you created to the following folder. User/login name/Library/ColorSync/Profiles/

Setting Photoshop

The explanations in this section use PhotoshopCC2017 as an example.

Start Photoshop. Select [Edit] - [Contemport

Select [Edit] - [Color Settings...] from the menu.

• When the [Color Settings] screen is displayed, make the following settings.



1. Work Spaces

RGB	The created RGB Simulation Profile.
СМҮК	The created CMYK Simulation Profile.
Gray	As it is
Spot	As it is

2. Color Management Policies

RGB	Convert to Working RGB
СМҮК	Convert to Working CMYK
Gray	Preserve Embedded Profiles
Profiles Mismatches	Set "Ask When Opening" and "Ask When Pasting" to On.
Missing Profiles	Set "Ask When Opening" to On.

3. Conversion Options

Engine	Adobe (ACE)
Intent	Relative Colorimetric
Use Black Point Compensation	ON
Use Dither	OFF
Compensate for Scene-referred Profile	OFF

4. Advanced controls

Set them all to Off.

When you have finished making settings, click [Save...] to save the settings.



Setting Illustrator

The explanations in this section use Illustrator CC2017 as an example.

Starting Illustrator Select [Edit] - [Color Settings...] from the menu. • When the [Color Settings] screen is displayed, make the following settings. Color Settings For more information on color settings, search for "setting up color management" in Help. This term is searchable from any Creative Cloud application. Settings: Custom ✓ Load... Save... Working Spaces RGB: UJF3042MKII_RGBProfile CMYK: UJF3042MKII_CMYKProfile Color Management Policies RGB: Convert to Working Space CMYK: Convert to Working Space 2 Profile Mismatches: 🗹 Ask When Opening 🛛 Ask When Pasting Missing Profiles: 🗹 Ask When Opening Conversion Options Engine: Adobe (ACE) 3 Intent: Relative Colorimetric Se Black Point Compensation (i) Hold the cursor over a setting for additional inf Less Options OK) (Cancel

1. Work Space

RGB	The created RGB Simulation Profile.
СМҮК	The created CMYK Simulation Profile.
2. Color Management Policies	
RGB	Convert to Working Space
СМҮК	Convert to Working Space
Profiles Mismatches	Set "Ask When Opening" and "Ask When Pasting" to On.
Missing Profiles	Set "Ask When Opening" to On.

3. Conversion Options

Engine	Adobe(ACE)
Intent	Relative Colorimetric
Use Black Point Compensation	ON

3

When you have finished making settings, click [Save...] to save the settings.

Click [OK].

Step 5: Compare Printed Material and the Monitor

Check how close the colors in the printed material are to the colors on the monitor.

Preparing the printed material

Print comparative images using RasterLink6. At this time you need to output using the same settings as when outputting the chart for the simulation profile.

Positioning the monitor near the viewing environment

Place the monitor as close as possible to the viewing environment to make comparisons easier.

Display the image on the monitor

Display an image on the monitor using Photoshop/Illustrator.

(Important!) • Check that "Color Settings" have been set and saved in [Chapter 11 Monitor Simulation] (P. 145) before opening.

Monitor Simulation Operations

The following shows the work flow from adjusting the image color using color matching to printing.

Step 1: Import Image into Photoshop/Illustrator
Step 2: Proof Setup
Step 3: Adjust the color
Step 4: Save
Step 5: Print

Step 1: Import Image into Photoshop/Illustrator

Display an image on the monitor using Photoshop/Illustrator.

- (Important!) Check that "Color Settings" have been set and saved in [Chapter 11 Monitor Simulation] (P. 145) before opening.
 - The following screen may be displayed when you open an image. If this happens, select "Discard the embedded profile (don't color manage)".

Embedd	nbedded Profile Mismatch					
A	The document "TestPrintv5_JapanColor.tif" has an embedded color profile that does not match the current CMYK working space.					
	Embedded: Japan Color 2011 Coated					
	Working: UJF3042MKII_CMYKProfile					
	What would you like to do?					
	O Use the embedded profile (instead of the working space))				
	Convert document's colors to the working space					
	Discard the embedded profile (don't color manage)					
	OK Cancel)				

Step 2: Proof Setup

Set Photoshop/Illustrator to display in monitor simulation mode.

[Photoshop]



Select [View] - [Proof Setup] - [Custom...] from the menu.

• The [Customize Proof Condition] screen is displayed.



Making [Customize Proof Condition] Settings

• Make the following settings. Device to Simulate: Specify the monitor profile you are currently using Rendering Intent: Absolute Colorimetric



Shift+Ctrl+Y



Click [Save] to save the settings.

• After saving, click [OK] to close the screen.



Select [View] - [Proof Setup] - [Customize...] from the menu.

• The [Proof Setup] screen is displayed.

Making [Proof Setup] Settings

• Make the following settings.

Device to Simulate: Specify the monitor profile you are currently using Rendering Intent: Absolute Colorimetric

Proof Setup
Device to Simulate: MonitorProfile.icm ~
Preserve RGB <u>N</u> umbers
Rendering Intent: Absolute Colorimetric ~
Display Options (On-Screen)
✓ Preview OK Cancel



Step 3: Adjust the color

Perform color adjustment in Photoshop/Illustrator.

Step 4: Save

Save the image.



• Do not embed profile information or perform color conversion when saving images. Photoshop

Save As			×
$\leftarrow \rightarrow \land \uparrow \blacksquare$	> This PC		Search This PC 🔎
File <u>n</u> ame:	TestPrint_Image		~
Save as <u>t</u> ype:	TIFF (*.TIF;*.TIFF)		~
	Save Options	Save: As a Copy Ngtes Alpha Channgls Spot Colors Layers	Color: Use Proof Setup: Use Proof Setup: Use Characteristic U.S. Web Coated (SWOP) v2 Other: Thumbnail
✓ <u>B</u> rowse Folders			<u>Save</u> Cancel

IllustratorPDF save

Save Adobe PDF				
Adobe PDF Preset:	[Illustrator Default]			× ¥
Sta <u>n</u> dard:	None	✓ <u>C</u> ompatibility: A	crobat 6 (PDF 1.5)	
General	Output			
Compression	Color			
Marks and Bloods	Color Conversion:	No Conversion		~
Auvanceu	Destination:			~
Security	Profile Inclusion Policy:	Don't Include Profiles		~
Summary!				
	FUI/A			
	Description			
			Save PDF	Reset

Step 5: Print

Print using RasterLink6.

You need to print using the same settings as when outputting the chart for the simulation profile.
Do not install the simulation profile in RasterLink 6.

Chapter 12 How to print charts

Printing a measurement charts

Parameters for printing a measurement chart

Specify the parameters for printing a chart as described below.



1	Scale	Images can be scaled, but measurement charts cannot be scaled.							
2	Rotation	Print images can be rotated. You can select 90, 180, 270 and 0 degrees of rotation.							
3	Mirror	Mirror images can be printed.							
4	Move	The print position on the media can be changed.							
5	Label print Print conditions can be printed. You can select the size of the characters (large, medium, small). The following items are printed. (1) Device profile name, image file name / chart name (2) Printing condition (pass count, count for overprint, scan direction, high speed mode, halftone) (3) Adjustment value for media correction, inklimit, preset for variable dot, preset for ligh ink, file name of import (4) Print parameters for test print								
6	White ink	Print white ink to make an under-color for transparency media. Print method:Select the method for printing white ink. Density : Set the density of the white ink. Slot setting : Select a slot for white ink. Specify special #1 or special #2 as the slot number. Quality : For solvent ink, sometimes dry-time is needed for every scan. You can select the printing speed from low, medium and fast.							
7	Output port	The information for the connected printer is displayed.							

Test print

MPM3 can print a specified image file to check the color and the measurement charts. The images that can be printed vary depending on the MPM3 operation step.



• Supported image formats are TIFF and BMP.

Format	ColorSpace	MPM3 operation step
СМҮК		Inklimit, Linearization, Gray balance, ICCprofile Calibration, Equalization, Emulation
	RGB	ICCprofile Calibration, Equalization, Emulation
BMP	RGB Indexed color	ICCprofile Calibration, Equalization, Emulation

 If the ink set is CMYKOrGr, Test Print is available only at the ICCprofile step. LZW compression is not supported for TIFF. (Important!)

Test print

Chapter 13 How to measure color with a colorimeter

Measurement function

Measuring the same chart two times

MPM3 has a function for measuring the same chart two times to achieve better accuracy. Re-measuring is optional. You can select it after finishing the first measurement. The measured value is processed as described below.

The average of the measured values for the first time and second time is recorded.

If the color difference between the measured values for the first time and second time is bigger than the specified value, the corresponding patch is highlighted as a warning.

You can re-measure patches where warnings appear.

- (Important!)
- For re-measurement, the entire row of the target patch is re-measured. For i1Sis, the entire chart is re-measured.
- MPM3 calculates the average of the two closest measurement values. This process is applied whenever re-measurement is performed, even for patches where no warning appeared.

Displaying measurement results

You can confirm the values for measured colors in several ways in the dialog window that is displayed after measurement. The color difference between the first measurement and the second measurement can be displayed after the second measurement.

		Ch Page 1	art mea	asurement	: Linearizat	tion [2nd]	Whole display	- • ×
4 del-E V Highligh del-E Result of m Measurec 3 Grap	v 1.00 easurement d data list phic				1			
	Measured	value L7	Re-measu	ire				
		L*	a*	b* ⊿E				
	1	64.69	0.79	0.21				
	2	63.10	0.85	1.08 1.81				
								Next

(1) Click the patch on the display.

Click the patch on the display. The patch is highlighted with a red rectangle, and the measured values and the value of the color difference are displayed.

(2) Display the measured data list.

The measurement results are displayed in the pop-up table.

			\sim	Linea	arizatior	า				×
Display	yed measur	rement valu	e (b)				✔ 108			
✓ L*	a*b*	Lch	XYZ	🗌 De	nsity (D)		√ 2回目			
	1st	L*	a*	b*	2nd	L*	a*	b*	del-E	(a)
A1		19.95	22.28	-45.44		19.97	22.11	-45.28	0.23	
A2		46.62	-65.33	11.05		46.60	-65.25	11.13	0.12	
A3		42.75	53.61	28.10		42.67	53.59	28.19	0.12	
A4		94.68	-0.10	-5.70		94.75	-0.14	-5.71	0.09	
A5		93.01	-2.77	-8.20		93.02	-2.83	-8.15	0.08	
A6		91.44	-5.47	-10.53		91.51	-5.56	-10.48	0.12	
A7		89.21	-9.27	-13.89		89.26	-9.33	-13.86	0.08	
A8		86.89	-12.84	-16.94		86.97	-13.01	-17.07	0.23	
A9		84.87	-15.84	-19.62		84.84	-15.93	-19.62	0.09	
A10		83.05	-18.05	-22.20		83.19	-17.92	-22.05	0.25	
R1		Q1 67	-10 70	-24.06		R1 63	-10 99	-72 07	0.14	>
						(d)	Save	•	Clo	se

- [a] When [delta-E] is clicked, measurement values are sorted with decreasing order of values of delta-E. Each row is related with the patch displayed in the dialog window. It is easier to select a patch by clicking the row on this list table after sorting by delta-E, when you want to pick a small patch on the chart like the ICC profile.
- **[b]** The unit system of the measurement value can be changed.

			-	-	1. (00)										
V.L.	a.p. 🔽	LCN	V XYZ	√ µ	insity (U)										
	1st	L*	a"	b*	L	c	h	х	Y	z	с	м	Y	к	
Blue		22.04	15.51	-45.50	22.04	48.07	288.83	4.38	3.53	18.38	1.85	1.64	0.71	1.68	
47		79.16	-19.70	-20.03	79.16	28.09	225.47	45.15	55.20	83.68	0.48	0.19	0.11	0.32	
A17		62.66	-29.59	-37.89	62.66	48.07	232.01	22.48	31.18	70.06	1.07	0.42	0.19	0.66	
427		53.48	-28.59	-44.14	53.48	52.59	237.07	15.08	21,49	59.10	1.45	0.61	0.26	0.88	
33		88.45	9.57	-4.23	88.45	10.47	336.16	73.73	73.01	84.00	0.06	0.17	0.10	0.13	
813		69.50	37.36	-16.30	69.50	40.76	336.43	50.73	40.05	58.86	80.0	0.59	0.23	0.35	
323		57.22	53.65	-18.95	57.22	56.90	340.55	38.19	25.15	41.06	0.11	0.97	0.38	0.51	
333		47.96	63.15	-16.29	47.96	65.22	345.54	29.51	16.76	27.19	0.15	1.37	0.54	0.64	
:9		91.64	-9.27	46.73	91.64	47.64	101.22	71.30	79.89	35.90	0.06	0.08	0.56	0.08	
19		88.44	-7.94	73.75	88.44	74.18	96.15	65.60	72.99	16.12	0.07	0.12	1.02	0.10	
29		85.51	-4.19	90.74	85.51	90.84	92.64	61.74	67.02	8.03	80.0	0.16	1.50	0.13	

- [c] The measurement values of the first measurement or second can be selected and displayed. After re-measurement, MPM3 picks the two nearest values from the first measurement, second measurement, and re-measurement. The value that is not picked is overwritten with the re-measurement value. For example, if the re-measurement value and the second measurement value are nearest, then the first-measurement value is replaced by re-measurement value.
- [d] The displayed measurement values and color difference values can be saved to a file with CSV format.

(3) Graphic display

"Graphic" shows the measured values plotted on the L*a*b* coordinates space.

- [a] Select the area of the L* axis in increments of 10%.
- [b] Select the color of plotted points.



(4) Color difference

This is displayed after the second measurement.

Select one of the following methods of displaying color differences:

delta-E delta-E2000

(5) Highlight

Patches with a greater color difference than the specified value are highlighted with a yellow rectangle.

i1Pro, i1Pro2, i1Pro3, i1Pro3 PLUS

The basic operation for measurement is shown below.

- (1) Calibrate the colorimeter.
- (2) Select stripe mode for the measurement mode.
- (3) Slide the colorimeter along the row of patches.
- (4) "Row Number" information indicates which row should be scanned.
- (5) After measuring the last row, the "Finish" and "2nd measurement" buttons are highlighted.
- (6) You can select second measurement.
- (7) After the second measurement is finished, patches that have a big color difference between the first measurement and the second measurement are highlighted with a yellow triangle.
- (8) You can re-measure the patches where a warning appears.
- (9) You can save measurement values as a file.

Calibrating the colorimeter

Calibrate the colorimeter.



Measuring the chart

Measure the colors in the measurement chart.







Slide the colorimeter from left to right.

- Slide the colorimeter so it passes through the left edge line and the right edge line.
- Push the measure button and then slide the colorimeter so it passes through the left edge line and the right edge line.





– 🗆 🗙

Completing the first measurement

After the first measurement, a dialog window for confirming the measurement values is displayed. A second measurement is available to achieve better accuracy. Click the patch on the screen to display the measurement value in the bottom window.



Completing the second measurement

You can check the color difference between the first measurement and the second measurement. You can also re-measure patches that have a big color difference.

Click [Re-measure], and click [Next] to finish measurement. Select a patch that has a big color difference and click [Re-measure].

• To finish measurement, click [Next].





Check "Saving measured values to the specified file" to save measured values as a file.

• This file is useful for recreating the device profile.



i1iO, i1iO2, i1iO3

The basic operation for measurement is shown below.

- (1) Calibrate the colorimeter.
- (2) Put the colorimeter on three points on the edge of the chart to study the positions.
- (3) Start the measurement in stripe mode.
- (4) After measurement is finished, the "Finish" and "2nd measurement" buttons are highlighted.
- (5) You can select second measurement.
- (6) After the second measurement is finished, patches that have a big color difference between the first measurement and the second measurement are highlighted with a yellow rectangle.
- (7) You can re-measure patches where warnings appear.
- (8) You can save measured values as a file.

Calibrating the colorimeter

Calibrate the colorimeter.





Calibration is performed.

Calibration	×
Calibration of colorimeter i1iO	
The calibration of the colorimeter starts.	
Calibrating Back Next	

Setting the position of the chart

Follow the instructions in the wizard to measure three points in the corners of the chart.

Click	[Start] to set	t the position of	the chart.
	10	Chart measurement : Lineariz	ation [1st] – 🗆 🗙
		i1iO	<
	Place the 1th chart. Click "Start".		Whole display 🗸
	Start Stripe		
			Cancel Next

2 Place the colorimeter in three corners of chart. Push the measurement button on the colorimeter in each corner.

Chart measurement : Lineariz: i1iO Place i1 on the color patch highlighted red. Push measurement button.	ation [1st] - • ×
1 2 3 Start Stripe v Cancel	
	Cancel Next

3 Click [Start] in Stripe mode.

Completing the first measurement

After the first measurement, a dialog window for confirming the measurement values is displayed. A second measurement is available to achieve better accuracy. Click the patch on the screen to display the measurement value in the bottom window.



Completing the second measurement

You can check the color difference between the first measurement and the second measurement. You can also re-measure patches that have a big color difference.



Click [Re-measure], and click [Next] to finish measurement.

- Select a patch that has a big color difference and click [Re-measure].
- When "Re-measure the patches exceed the specified del-E value" checked, only row which include those patches are re-measured automatically.
- To finish measurement, click [Next].



2 Click [Measurement] to re-measure the row that includes the target patch.



Check "Save measured data to the file" to save measured values as a file.

• This file is useful for recreating the device profile.

Exit		×
Finish to measure chart	Back	Finish

i1isis

The basic operation for measurement is shown below.

- (1) Place the chart on i1iSis.
- (2) Start measurement in bar-code mode.
- (3) After measurement is finished, the "Finish" and "2nd measurement" buttons are highlighted.
- (4) You can select second measurement.
- (5) After the second measurement is finished, patches that have a big color difference between the first measurement and the second measurement are highlighted with a yellow rectangle.
- (6) You can re-measure the patches where a warning appears.
- (7) You can save measured values as a file.

Starting measurement

Check "Get chart dimensions from barcode".

• The charts that MPM3 prints have barcodes for chart information.

Click [Start] to start measurement.

5 Chart	measure	ement : Lir	nearization [1st] – 🗆 🗙
i1iSis		×	
Place 1th chart Set the parameters and click "Start".			Whole display V
 Get chart dimensions from barcode. Set chart dimensions (unit:mm) 	Width	Height	
Chart size	201.5		
Size of base position bar	170.0	6.0	
Distance between the top of chart and the center of the	base positi	on 30.0	
Distance between the centers of the base position bar and	d the patch	in 14.0	
Distance between the centers of the base maker left and	185.0		
Patch size:	10.0	10.0	
Distance between the centers of the base maker and the nearest patch	12.5		
Start			
			Cancel Next

Completing the first measurement

After the first measurement, a dialog window for confirming the measurement values is displayed. A second measurement is available to achieve better accuracy. Click the patch on the screen to display the measurement value in the bottom window.



Completing the second measurement

You can check the color difference between the first measurement and the second measurement. You can also re-measure patches that have a big color difference.

Click [Re-measure], and click [Next] to finish measurement.

- Select a patch that has a big color difference and click [Re-measure].
- To finish measurement, click [Next].



2 Re-measure the whole chart.

18	F	Re-measur	re	_ 🗆 🛛
i1iSis		×		
Place 1th chart Set the parameters and click "Start".				Whole display 🗸
Get chart dimensions from barcode.				
O Set chart dimensions (unit:mm)	Width	Height		
Chart size	201.5			
Size of base position bar	170.0	6.0		
Distance between the top of chart and the center of the	pase positio	an 30.0		
Distance between the centers of the base position bar and	the patch	in 14.0		
Distance between the centers of the base maker left and	185.0			
Patch size:	10.0	10.0		
Distance between the centers of the base maker and the nearest patch	12.5			
Start				
				Cancel Next



Check "Save measured data to the file" to save measured values as a file.

• This file is useful for recreating the device profile.

Ex	it ×
Finish to measure chart	Back Finish

SpectroLFP

The basic measurement procedure is described below.

- (1) Place the chart on SpectroLFP.
- (2) Start measuring after setting the measurement mode.
- (3) After the measurement is finished, the "Finish" and "2nd measurement" buttons appear.
- (4) You can select the option for a second measurement.
- (5) After the second measurement is finished, the patches with a significant color difference between the first measurement and the second measurement are highlighted with a yellow rectangle.
- (6) You can re-measure the patches where a warning appears.
- (7) You can save the measured values to a file.

Starting measurement

13	Chart measurement : Linearization [1st] - SpectroLFP ×
Place the 1th chart. Click "Sta	t". V Column Whole display V
Scan mode Fa	t v
Measurement mode Re	
Start	
	Cancel Next
• Scan mode	
Up-down Fast	The measurement head lifts and moves to the measurement point measuring, the head drops and makes contact with the media. Thi takes longer, but it works well with uneven media with a cloth-like surf The measurement head moves to the measurement point, while touching the media. This mode is fast and works well only with
Contactless	The measurement head skims over the media to the measurement por head does not make contact with the media when measuring. Thi works with various types of surfaces, but its measurement accuracy is
	Scan mode Fast Up-down Fast Contactless
Measurement mode	
Reflection Transmission	Patches are printed on the light surface. Patches are printed on the transparency media lit from behind.
	Measurement mode Reflection V

2 Click [Start] to start measuring.
Completing the first measurement

After the first measurement, a dialog window for confirming the measurement values is displayed. You can carry out a second measurement to achieve better accuracy. Click a patch on the screen to display the measurement value in the bottom window.



Completing the second measurement

You can check the color difference between the first measurement and the second measurement. You can also re-measure patches with a significant color difference.

Click [Re-measure], and click [Next] to finish measuring.

- · Click [Re-measure] to re-measure all the patches in the chart.
- When "Re-measure the patches exceed the specified del-E value" is checked, only the rows which include those patches are re-measured automatically.
- To finish measuring, click [Next].



2 Check "Save measured data to the file" to save the measured values to a file.

• This file can be used for recreating the device profile.

Finish to measure chart		Exit	×
De als	Finish to measure chart	2	F

MYIRO-1

Refer to MYIRO-1 Operation Manual for more information on colorimetric procedures. The basic colorimetric procedures are the same as those for i1Pro, i1Pro2, i1Pro3, and i1Pro3 PLUS. ((1)~(9) on P. 167).

Calibration of the colorimeter

Calibrate the colorimeter.

With the calibration cap attached to the measurement aperture, click Next.



Calibration				
	Calibration of co	olorimeter MYI	RO-1	
			Back	Next

• The calibration is executed.

Calibration		×
Calibration of colorimeter	MYIRO-1	
Calibrating	Back	Next

Chart colorimetry

Measures the color of a colorimetric chart.



Set the colorimetric mode to strip mode.

• The line number to be read next is displayed in the colorimetric position. Confirm that.



2 Place the ruler so that the color chart is within \bigtriangleup marks of the ruler.



While pressing the colorimeter's color measurement button, slide it from left to right to read a line.



The following procedure is the same as for i1Pro, i1Pro2, i1Pro3, and i1Pro3 PLUS (P. 169).

Chapter 14 How to edit color curves

How to use color curves

Color curve editing is available for linearization, gray balance, and editing ICC profile parameters.



1	Input value	The input value of the control point is the value on the X-axis. Input value is specified in increments of 5%.					
2	Output value	The output value of the control point is the value on the Y-axis. The output value is fixed to 0 when the input value is 0. The output value is fixed to 100 when the input value is 100.					
3	Changing output value	The control point can be moved in the vertical direction. You can change only the output value by moving control point.					
4	Removing control point	To remove a control point, double click it with the left button on your mouse. Control points on both sides of the removed point are connected with a straight line. To once again display a control point that has been removed, click the point where the vertical line and the curved line intersect.					
5	To display the sub-menu, on your mouse.	click anywhere on the graph with the right button	Reset				
	Identity	Set the curved line to a diagonal line.	Identity				
	Gamma	Modify the curved line to a kind of gamma-	Gamma				
		curved line.	Minimum				
	Minimum	Modify the curved line to a line whose output	Сору				
			Paste				
		, use					

Chapter 15 Copying a device profile

Copying a device profile

A device profile is bound to a printer model, ink set, and media. Basically these parameters are specified in turn to make a device profile. But some printer models have similar specifications.

Therefore, it can be easier to modify a similar device profile rather than to create a new profile from the start. This function copies a device profile in order to create another device profile.

Selecting the original device profile

Select the device profile to copy.

1	Click [lick [Manage Device Profile].									
			Device Prof ICC Profile Option		Mimaki	Profile Master Create	3 Device Profile	2		×	
2	Load t	he d	evice	e profile	e onto	the li	st tabl	e.			
3	Select	the	devio	e profi	le as a	a base	devid	ce pro	file.		
4	Click [Copy].										×
		dd to list UJF-7151_6C	Ledit		For printer r	Profile manage Equalization	Ment	Install Delete fro	m list Full Color	Constarie Na RasterLink	

Editing the copied device profile

Use the operation wizard to edit the copied device profile.

The items for the printer, ink set, media and print condition can be modified. Refer to "Chapter 2 Creating a device profile" (P. 17), "Setting the device profile conditions" (P. 20) for details.

3		Copy - Condition settings	- 🗆 🗙
[Source] Printer UJF-7151-6Color Inkset LH-100 CMYK	STEP1	Select Printer and Inkset	
Resolution 600x900 VD		Printer Inkset	
Pass 12 Scan direction Uni-direction High speed ON	STEP2	CJV150-4Color	
Overprint 1time(s) Halftone ILL diffution	STEP3	CJV30-4Color	
[Create condition] Printer	Output settings	CJV30-8Color	
Inkset Media		CJV300-4Color	
		Alimaici CJV30-BS-4Color	
		JFX200-4Color	
		JFX200-4Color+SP	
		JFX500-4Color	
		JFX500-4Color+2 stagger	
		JV150-4Color	
		Nex	d Cancel

Chapter 16 Installing device profiles

Installing device profiles

MPM3 installs device profiles to RasterLink directly. Therefore, you are not required to operate RasterLink in order to install device profiles. RasterLink must be installed on the same PC as MPM3.

Click	[Manage	Device Prof	ïle].		_
	Device Pro	ofile e	naki Profile Master3 Create Device Prof Manage Device Pro	_ □	×
Load	the devic	e profile on	to the list tab	le.	
Select • Multipl	t the devi le profiles can	ce profile as be selected.	s a base devi	ce profile.	
Click	[Install].				
*3		Copy	Profile management	Install	X
	Ele Name Brinter	I-6C LH-100 CMYK For print	er r Others 600x900 VD	Matrice Time 3.4 Full Color	RasterLink
	Add to list Edit Ele Name Deinter UJF-7151_6C, UJF-7151	Talcot Modia as	me Media material Desolution er r Others 600x900 VD	Vaccion Tung 3.4 Full Color	RasterLink

Chapter 17 Managing media

Adding media



Click [Add].

• The dialog window for adding media pops up.

		Manage Media	×
No.	Media name	Media material	Add
			Delete
<		>	
			OK



Enter a media name.

-	Addition of media
Media name	Test1
Media material	PVC Gloss V
	Add Cancel



Click media material, and then select the material from the drop- down list.



Deleting media

1

Select the media to be deleted, and then click [Delete].



Chapter 18 Setting the colorimeter

1

2

3

Setting the colorimeter

Select the model of the colorimeter.

Name displayed	Corresponding product(s)	Manufacturer
i1Pro	i1Pro	X-Rite
	i1Pro2	X-Rite
i1Pro3	i1Pro3	X-Rite
i1Pro3 PLUS	i1Pro3 PLUS	X-Rite
i1iO	i1iO	X-Rite
	i1iO2	X-Rite
i1iO3 with i1Pro3	i1iO3(with i1Pro3 mounted)	X-Rite
i1iO3 with i1Pro3 PLUS	i1iO3(with i1Pro3 PLUS mounted)	X-Rite
i1iSis	i1iSis	X-Rite
MYIRO-1	MYIRO-1	KONICA MINOLTA
SpectroLFP	SpectroLFP	Barbieri

Click [Connection check].

• Check the connection between the PC and the colorimeter.

Select the unit system for the measured values.

• The measured values will be displayed in the selected unit system.

	S	ettnigs	×
1	Colorimeter:	4 2 Setting Connection	check
3	Measured value		
	Select unit system to display values		
	✓ L*a*b* Lch XYZ	Density (D)	
		ОК	Cancel



i1iSis

Set valuei1iSis	×
✓ Always measue a chart with bar code. OK C.	ancel

The M factor can be set with the following colorimeters:

i1Pro3, i1Pro3 PLUS, i1iO3 with i1Pro3, i1iO3 with i1Pro3 PLUS, MYIRO-1

Set valuei1Pro3				×
Advanced se M factor M0	etting O M1	⊖ M2		
			OK Cancel	

- [M factor] will be selected as "M0" if [Advanced setting] is not checked(except MYIRO-1).
- Checking [Advanced setting] allows [M factor] to be set to other than "M0"(except MYIRO-1).
- i1Pro3 PLUS and i1iO3 with i1Pro3 PLUS allows "M3" to be selected.If "M3" is selected, the polarization filter provided with the colorimeter should be mounted.



[Advanced setting] should not be checked in the following cases:

- When i1Pro2 or earlier is used and no problems occur.
 When color replacement is performed using a color collection or colorimeter with the RasterLink series.
- Do not select "M3" if measuring the color of cloth using i1iO3 with i1Pro3 PLUS.
- Do not alter the M factor while creating a device profile or while color matching.
- For calibration and daily management, do not change the M factor used when measuring the standard color to calibrate and readjust.



About M factor

 M factor refers to the lighting conditions used when measuring color.Selecting the appropriate conditions minimizes the effects primarily of fluorescent brightener in the media on the color measurement results.

Chapter 19 Miscellaneous settings

Miscellaneous settings

The following parameters can be modified.

	Miscellaneous	
Display		
Unit	mm v (1)	
Language	English v 2	
Color Matching I	node Classic	
Output Port	\bigcirc	
Check device	(4)	
USB2 0		
Output Time-	out 3 🛋 sec 🕞	
Output Buffer	Length 4096 KB	
Ethernet		
Output Time-	out 3 🗣 sec 🕟	
Output Buffer	Length 4096 KB	
		OK Canad
		UK Cancel

1	Display unit	You can switch the units between millimeters and inches.
2	Display language	Select the display language. MPM3 must be restarted for the change to take effect.
3	Color Matching mode	Change the color matching method. Refer to "Chapter 5 Color Matching" (P. 45) for details.
4	Connection Confirm	You can check whether it is connected properly with the printer.
5	USB parameters	These settings are for troubleshooting. Do not change these values.
6	Ethernet parameters	These settings are for troubleshooting. Do not change these values.

Chapter 20 User information

User information

Register a user name. The user name will be displayed in the profile as the creator's name.

			User in	formatio	n	×
(1	Serial Key					
2	User name	mimaki				
					OK	キャンセル

1	Serial Key	Serial Key of the installed MPM3.
2	User name	Set the user name for MPM3. The name is embedded in the device profile and displayed as "Creator's name".

Chapter 21 Making backups and restoring

Making backups and restoring

If MPM3 is re-installed, the information in the registered media and working files is removed. This function makes backups of such information in a different location, and restores it when MPM3 is re-installed. Backup and restoration are performed with the MPM3 utility software.

Making backups

This operation must be performed before MPM3 is uninstalled.

Start "Backup and Restoration" in Windows.

2 Click [Backup], and follow the on-screen instructions to specify a backup folder.



Restoring a backup

This operation should be performed after MPM3 is installed.



2 Click [Restore], and then follow the on-screen instructions to specify a backup folder.



Chapter 22 Error message guide

Error messages

Error messages and the solutions for the issues are described below.

Error message	Indication condition	Solutions
License re-activation is needed.	At the time of license activation	Activate your license again.
The PC configuration was changed after the activation of your license.	At the time of license activation	 Restore the following two items to the state in which the license was activated. Network connection method (LAN cable or WIFI connection) The PC motherboard Deactivate license. Update the network connection method or PC motherboard infor- mation, and deactivate your license.
		If you cannot restore the PC, exe- cute the steps described in "Deacti- vation when PC broke down". Refer to the installation guide of MPM3 for details.
Error occurred during activation.	At the time of license activation	Connect with an Ethernet adapter for license activation when using a PPP connection network adapter, or a USB connection network adapter.
This serial key is already used on another PC.	At the time of license activation	Deactivate the license on the PC where you last activated your license, and activate the license on the new PC. If the license cannot be deactivated on the PC where you last activated your license due to a PC malfunc- tion or for a similar reason, execute the steps of "Deactivation when PC broke down". Refer to the installa- tion guide of MPM3 for details.
Failed to initialize the application.	On startup	The MPM3 system file is broken.
Cannot continue this process. There is no MimakiProfileMaster3 installation folder.		
Create or import an ICC profile.	Device profile creation wizard	Creation of device profile requires an ICC profile. Create an ICC pro- file or import an ICC profile.
Creating ICC Profile failed.	At the time of creating ICC profile	A colorimetry error may have occurred. Confirm there is no uneven density on the printed chart, and repeat the color measur- ing process once again.
Failed improvement of impure yel- low. Cannot edit parameter because the ICC profile is not created by MPM3.	At the time of editing ICC profile	You are using an ICC profile cre- ated by MPMII or another applica- tion for creating ICC profiles. Since it is impossible to edit or adjust that profile with MPM3, make the adjustments with the application used for creating that ICC profile.

Error message	Indication condition	Solutions
Cannot find valid import data in the loaded file.	Import	 Make sure that you have not designated a file other than the device profile. Confirm that the ink set of the profile you are currently editing and the ink set of the selected profile are the same. When profiles with variable settings have been made, select a profile with variable settings.
The specified file is not a profile.	Loading file	Make sure that you have not desig- nated a file other than the device profile.
The specified file is not a V3 Device Profile.	Loading file	Make sure that you have not desig- nated a file other than the V3 device profile.
The process did not end success- fully.	During various operations	A colorimetry error may have occurred. Confirm there is no uneven density on the printed chart and repeat the color measuring process.
The format is not supported.	Test print	Only CMYK tiff images can be out- put during profile creation. Please select a CMYK tiff file.
Eye-One Pro [Eye-One IO, Eye- One iSis] cannot be connected.	Measuring	The colorimeter is not connected. Refer to "Chapter 23 Connecting to colorimeter" (P. 211).
Cannot read the measurement result file.	When loading the color measurement file	The specified file with color mea- surements cannot be read because the file was created by an applica- tion other than MPM3.
Failed to import the file.	Emulation Target profile import	A file other than the target profile was specified. Specify the target profile.
The selected file is not a Target profile for xx mode.	Emulation Target profile import	Specify a target profile created in the same mode as the one selected in MPM3 (Basic/Multicolor/ High Quality Mode).
The selected file is not a color mea- surement file for xx mode.	Emulation Loading color measurement file	Specify a color measurement file created in the same mode as the one selected in MPM3 (Basic/Multi- color/ High Quality Mode).
This color measurement file is not for calibration.	Calibration Loading color measurement file	Check whether the file you are using is for color measurements of different elements.
Profile installation failed.	During device profile installation	The device profile you are trying to install is not supported by Raster- Link6 on the PC. Update Raster- Link6 to the latest version.

Chapter 23 Connecting to colorimeter

Connecting to colorimeters made by X-Rite

The installation or re-installation of the device driver for a colorimeter is required when the colorimeter is connected to the PC for the first time, or when the colorimeter is replaced. Otherwise, you may not be able to connect the colorimeter to MPM3.

The following section uses an example of the Eye-One Pro2 device driver installation in Windows 10 to explain how to install the device driver for a colorimeter.

The names of device driver differ between each colorimeters of X-Rite, but operations of installing device drivers are same.

Check the colorimeter device driver in device manager



×

Q



Windows Defender

Prindows Firewall



Check the "eye-one" status.

& User Accounts



 When following caution mark is displayed next to eye-one, you need to install the eye-one device driver.



- If the caution mark is not displayed, the installation of the device driver is not required.
- When you connect Eye-One IO or Eye-One iSis, "Eye-One IO" or "Eye-One iSis" appears.
- For Eye-One IO, "eye-one" and "Eye-One IO" may be displayed. In that case, the device drivers for both Eye One and Eye One IO are to be installed.

Install the device driver


Connecting to SpectroLFP

Before connecting to SpectroLFP, install the USB driver to your PC. The following section uses an example of the SpectroLFP USB driver installation in Windows 10 to explain how to install the USB driver. The logged-in user must be the Administrator.

Insert the USB memory drive accompanying SpectroLFP

Do not connect SpectroLFP to your PC.

Insert the USB memory drive accompanying SpectroLFP into your PC.

Install the USB driver

1

Start the USB driver installer.

- Open the WindowsPC > USB DriverPC folder on the USB memory drive.
- Double-click "CDM v2.12.06 WHQL Certifed.exe" in the folder.

^	Name	Date modified	Туре	Size
	CDM v2.12.06 WHQL Certified.exe	11/6/2015 5:05 PM	Application	2,047 KB
~				



Click [Extract] to extract the driver installer.



3 After confirming that the account type of the logged-in user is Administrator, click [OK].

• If the account type of the logged-in user is not Administrator, terminate the installation and log in again as the Administrator.

GetLastError	×			
The requested operation requires elevation.				
	ОК			

Click "Run the program using compatibility settings".







6 Click [Next] to start the installation.









Click "Yes, this program worked correctly".



< Back Finish Cancel

 $10^{\text{Connect SpectroLFP}}$ to your PC, start MPM3, and check the connection.

Connecting to MYIRO-1

For details, refer to "Operation Manual" of MYIRO-1.



