UCJV300/UCJV330/UJ330H/UJV200

Clear Ink Print Guide

This manual describes the effects that can be expressed when clear ink is used in UCJV300/UCJV330/UJ330H/UJV200 how to set and print them.
Please read this manual carefully and use it correctly.

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Notations used in this document

- Items and buttons displayed in menus and on screens are marked with square brackets ([ ]) as in [File].
- RasterLink6Plus, RasterLink7and RasterLink8 are referred to as RasterLink in together.

Screen image used in this document

- The explanation is based on the screen image of RasterLink6Plus as an example.

Symbols

Important!	• This symbol indicates important information for using this product.
Important!	• This symbol indicates useful information.

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Applicable environment

Use a printer equipped with color inks and clear ink.

● UCJV300

1. LUS-170 / LUS-175

Printer	FW Ver.2.5 or later
Ink	LUS-170 / LUS-175
Mimaki Driver	When using RasterLink6Plus: The version that is compatible with the printer you use. When using RasterLink7:Ver.5.4.2 or later When using RasterLink8:Ver.5.13.0 or later
RIP	RasterLink6Plus Ver.1.1 or later RasterLink7 Ver.1.3.2 or later RasterLink8 Ver.1.0.0 or later

2. ELS-170 / ELS-175

Printer	FW Ver.4.0 or later
Ink	ELS-170 / ELS-175
Mimaki Driver	When using RasterLink6Plus: The version that is compatible with the printer you use. When using RasterLink7:Ver.5.10.1 or later When using RasterLink8:Ver.5.13.0 or later
RIP	RasterLink6Plus Ver.2.22 or later RasterLink7 Ver.3.3.4 or later RasterLink8 Ver.1.0.0 or later

● UCJV330

1. LUS-170 / LUS-175

Printer	FW Ver.1.1 or later
Ink	LUS-170 / LUS-175
Mimaki Driver	When using RasterLink7:Ver.5.8.0 or later When using RasterLink8:Ver.5.13.0 or later
RIP	RasterLink7 Ver.3.1.0 or later RasterLink8 Ver.1.0.0 or later

2. ELS-170 / ELS-175

Printer	FW Ver.4.0 or later
Ink	ELS-170 / ELS-175
Mimaki Driver	When using RasterLink7:Ver.5.12.3 or later When using RasterLink8:Ver.5.13.0 or later
RIP	RasterLink7 Ver.4.1.3 or later RasterLink8 Ver.1.0.0 or later

● UJ330H

1. ELS-170 /E LS-175

Printer	FW Ver.1.0 or later
Ink	ELS-170 / ELS-175
Mimaki Driver	When using RasterLink7:Ver.5.12.0 or later When using RasterLink8:Ver.5.13.0 or later
RIP	RasterLink7 Ver.4.1.1 or later RasterLink8 Ver.1.0.0 or later

2. LUS-210

Printer	FW Ver.2.0 or later
Ink	LUS-210
Mimaki Driver	When using RasterLink7:Ver.5.12.4 or later When using RasterLink8:Ver.5.13.0 or later
RIP	RasterLink7 Ver.4.1.3 or later RasterLink8 Ver.1.0.0 or later

● UJV200

Printer	FW Ver.1.0 or later
Ink	LUS-210, ELS-170 / ELS-175
Mimaki Driver	When using RasterLink7:Ver.5.12.0 or later When using RasterLink8:Ver.5.13.0 or later
RIP	RasterLink7 Ver.4.1.1 or later RasterLink8 Ver.1.0.0 or later

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Setting the printer

Standard setting

When printing using this guide, set the printer as follows.

1. Turn on the printer's power.

- UCJV300: Wait until the Local mode.
- UCJV330, UJ330H, UJV200: Wait until the Media Select mode.

Important!
- If the power is already on, UJV300 set to the Local mode and UCJV330 set to the Media Select mode.

2. Select the panel to press [MAPS] setting display, as follows:

- For UCJV300

(1) With <Local> displayed, press the FUNC1 key.
(2) Use the ▲ ▼ key to select [SETUP], then press the ENTER key.
(3) Use the ▲ ▼ key to select [SETUP 1] to [SETUP 4], then press the ENTER key.
(4) Use the ▲ ▼ key to select [MAPS4], then press the ENTER key.

- For UCJV330, UJ330H, UJV200

(1) With [MENU] on the display, press the corresponding [FUNC] key.
(2) Use the ▲ ▼ key to select [Media Setting], then press the ENTER key.
(3) Use the ▲ ▼ key to select the media to be used, then press the ENTER key.
(4) Use the ▲ ▼ key to select [MAPS], then press the ENTER key.

3. Select "AUTO", as follows:

(1) Press the ENTER key.
(2) Use the ▲ ▼ key to select "AUTO", then press the ENTER key.

4. Return to <Local>, by pressing the END/POWER key several times.

When the image quality is not good

If you use the clear ink according to the procedures in this Guide, the settings will be made so that good-quality images are obtained, with the specified quality feel. Sometimes however, the image quality may be poor due to the media material or other factor. In that case, change the setting of 1-4 of the following procedures, please do a test print.

1. Turn on the printer's power.

- UCJV300: Wait until the Local mode.
- UCJV330, UJ330H, UJV200: Wait until the Media Select mode.

Important!
- If the power is already on, UJV300 set to the Local mode and UCJV330 set to the Media Select mode.

2. Select the panel to press [MAPS] setting display, as follows:

- For UCJV300

(1) With <Local> displayed, press the FUNC1 key.
(2) Use the ▲ ▼ key to select [SETUP], then press the ENTER key.
(3) Use the ▲ ▼ key to select [SETUP 1] to [SETUP 4], then press the ENTER key.
(4) Use the ▲ ▼ key to select [MAPS4], then press the ENTER key.

- For UCJV330, UJ330H, UJV200

(1) With [MENU] on the display, press the corresponding [FUNC] key.
(2) Use the ▲ ▼ key to select [Media Setting], then press the ENTER key.
(3) Use the ▲ ▼ key to select the media to be used, then press the ENTER key.
(4) Use the ▲ ▼ key to select [MAPS], then press the ENTER key.

3. Select "MANUAL", as follows:

(1) Press the ENTER key.
(2) Use the ▲ ▼ key to select "MANUAL".

4. After setting to "MANUAL", make the settings for the ink colors, as follows.

(1) Press the ENTER key.
(2) Make the setting for [COLOR], as follows.
Use the ▲ ▼ key to change level. (0 to 100%)
Changing this value will change the color image quality.
Then press ENTER .
(3) Make the setting for [SPOT], as follows.
Use the ▲ ▼ key to change level.
Changing this value will change the spot color image quality.
Then press ENTER .
(4) Return to <Local>, by pressing the END/POWER key several times.

Effect of clear ink and selection of printing method

Clear ink's effects

The effects below can be obtained by using clear ink.

Gloss feel effect - "Glossy Print"

Matte feel effect - "Matte Print"

These effects can be obtained via the "UV MODE" settings in RasterLink.

Recommended settings for printing a clear ink

To obtain a better effect of clear ink, print clear ink with the following conditions.

● UCJV300

•Glossy print

Recommended printing conditions			
Resolution	**Pass**	**Print direction**	**High speed print**
600 × 1200 VD	32/44	Bi-direction	Yes
1200 × 1200 VD	32/44	Bi-direction	Yes

•Matte print

Recommended printing conditions			
Resolution	**Pass**	**Print direction**	**High speed print**
600 × 600 VD	16/24	Bi-direction	Yes
600 × 1200 VD	32/44	Bi-direction	Yes
1200 × 1200 VD	32/44	Bi-direction	Yes

● UCJV330, UJ330H

•Glossy print

Recommended printing conditions			
Resolution	**Pass**	**Print direction**	**High speed print**
1200 × 1200 VD	16	Bi-direction	Yes
1200 × 1800 VD	24	Bi-direction	Yes

•Matte print

Recommended printing conditions			
Resolution	**Pass**	**Print direction**	**High speed print**
600 × 1200 VD	16/24/32	Bi-direction	Yes
1200 × 1200 VD	16/24/32	Bi-direction	Yes
1200 × 1800 VD	24/32	Bi-direction	Yes

● UJV200

•Glossy print

•For PVC, PET, and paper

Recommended printing conditions			
Resolution	**Pass**	**Print direction**	**High speed print**
1200 × 1200 VD	16	Bi-direction	Yes

•Matte print

•For PVC, PET

Recommended printing conditions			
Resolution	**Pass**	**Print direction**	**High speed print**
900 × 600 VD	8/12/16	Bi-direction	Yes
1200 × 600 VD	8/12/16	Bi-direction	Yes
1200 × 1200 VD	16/24/32	Bi-direction	Yes

•For Tarpaulin, Fabric

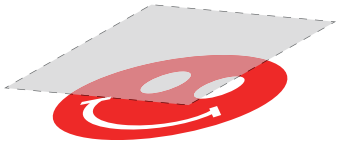
Recommended printing conditions			
Resolution	**Pass**	**Print direction**	**High speed print**
600 × 600 VD	8/12/16	Bi-direction	Yes
900 × 600 VD	8/12/16	Bi-direction	Yes
1200 × 600 VD	8/12/16	Bi-direction	Yes

•For Paper

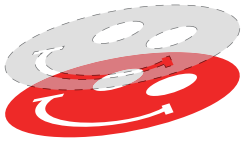
Recommended printing conditions			
Resolution	**Pass**	**Print direction**	**High speed print**
600 × 600 VD	8/12/16	Bi-direction	Yes
900 × 600 VD	8/12/16	Bi-direction	Yes
1200 × 600 VD	8/12/16	Bi-direction	Yes
1200 × 1200 VD	16/24/32	Bi-direction	Yes

Selection of clear ink printing method

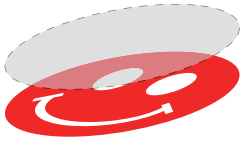
Select the method for printing clear ink.
In RasterLink, clear ink can be printed in the following way.



Printed over the whole of a color image



Printed onto valid pixels of a color image



Printed on a background other than the background of the color image (RasterLink7/ RasterLink8 only)

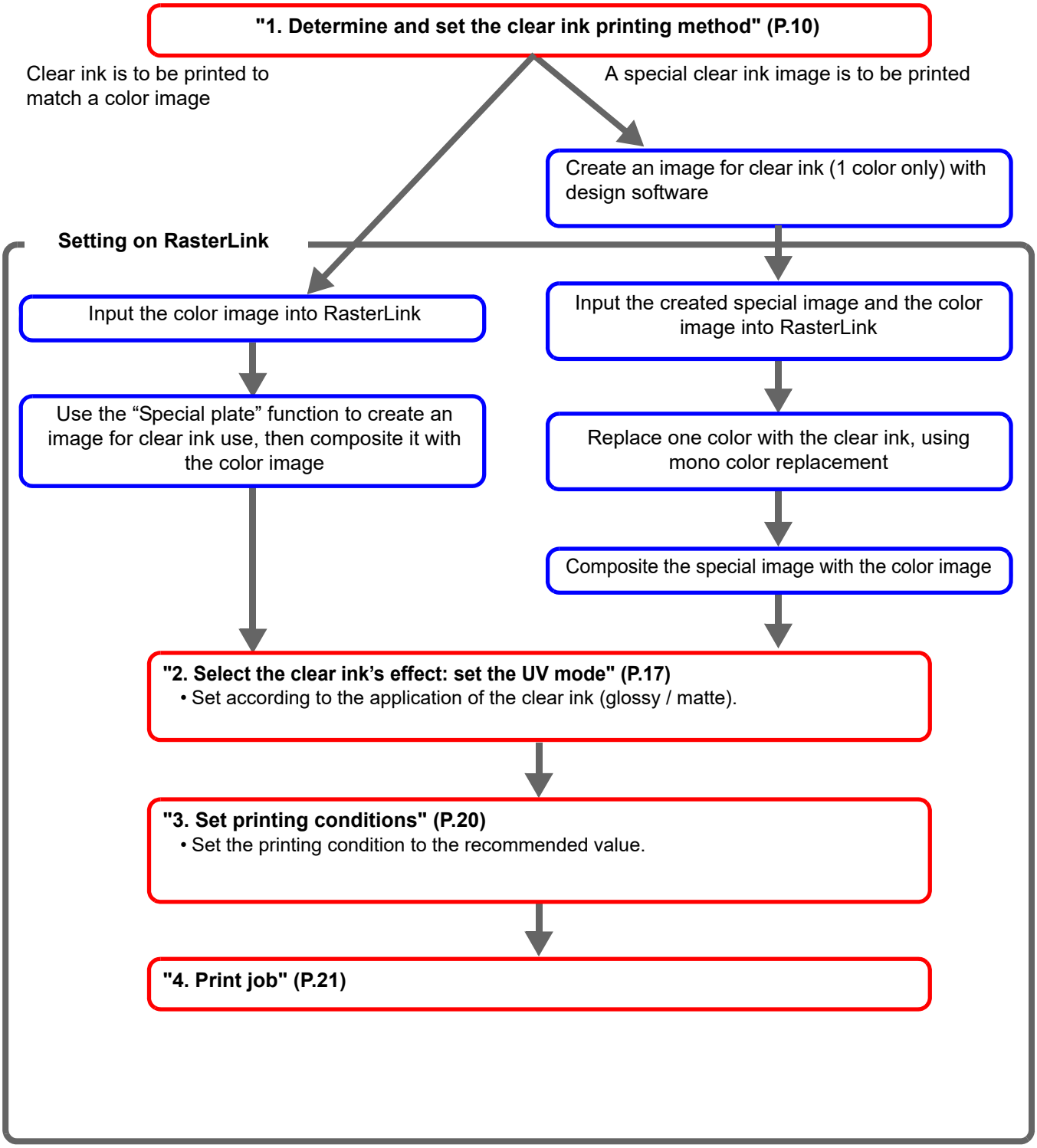
Printed as a special image for clear ink

For "Printed over the whole of a color image" and "Printed onto valid pixels of a color image" and "Printed on a background other than the background of the color image", printed on a background other than the background of the color,imagecreate a clear ink job using the “Special plate” function of RasterLink.
For “Printed as a special image for clear ink” as a special clear ink image, you must create the special clear ink image by means of design software such as Illustrator.

Printing methods

Data creation and printing procedures

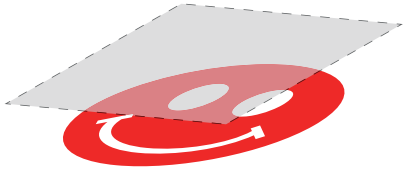
Data for clear ink is created in the following procedure and printed with RasterLink.



1. Determine and set the clear ink printing method

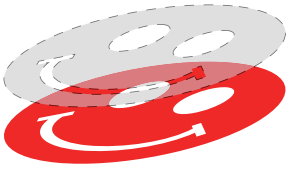
Suppose you have the following color image. You can print the clear ink in any of the four ways shown below.

Print it over the whole of the color image



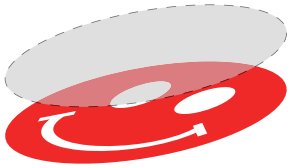
-> Go to A. Printing the clear ink over the whole of the color image

Print it onto the valid pixels of the color image



-> Go to B. Printing the clear ink onto the valid pixels of the color image

Print on a background other than the background of the color image (RasterLink7/RasterLink8 only)



-> Go to C. Printing the clear ink on top of a color image except on the background (Raster-Link7/RasterLink8 only).

Print a special image for clear ink use

-> Go to D. Printing a special clear ink image

A. Printing the clear ink over the whole of the color image

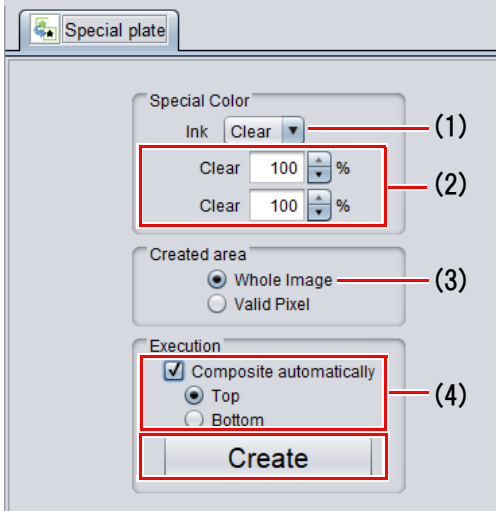
To print the clear ink over the entire color image, create a plate based on the color image on P. 10.

1. **In the [Job List], select the job that will be the basis for the plate.**

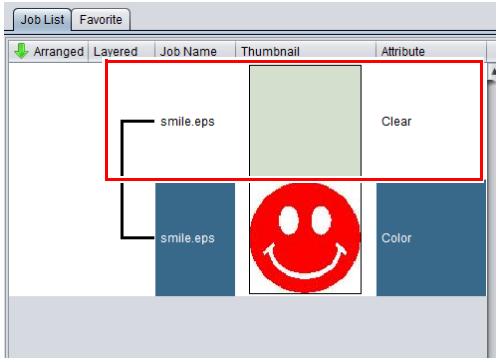
2. **Click the [Special plate] icon from the function icon.**

3. **Set as follows and click [Create].**

(1) [Ink]: Select [Clear]
(2) [Clear]: Set to 100% (2 places)
(3) [Created area]: Select [Whole image].
(4) [Composite automatically]: Check the box, and select [Top].



- The clear ink job will be created, in a composited state.



B. Printing the clear ink onto the valid pixels of the color image

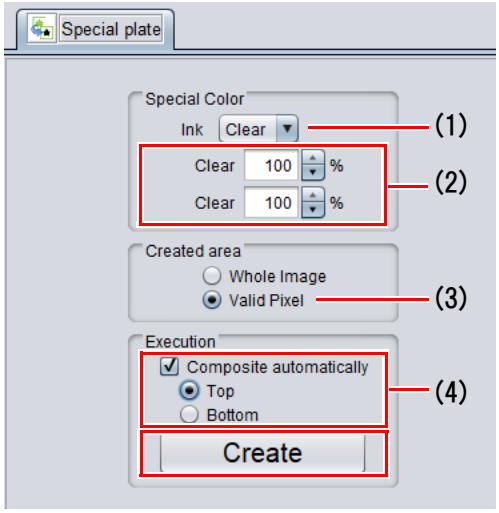
To print the clear ink on the effective pixel of the color, create the plate based on the color image of P. 10.

1. **In the [Job List], select the job that will be the basis for the plate.**

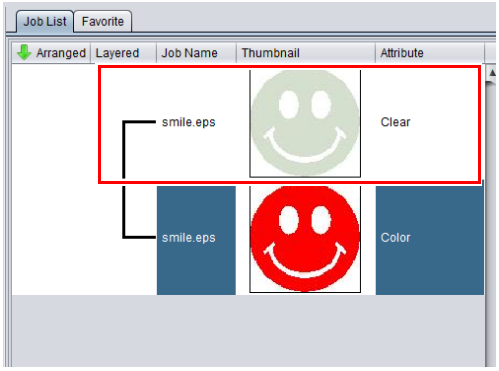
2. **Click the [Special plate] icon from the function icon.**

3. **Set as follows and click [Create].**

(1) [Ink]: Select [Clear]
(2) [Clear]: Set to 100% (2 places)
(3) [Created area]: Select [Valid Pixel].
(4) [Composite automatically]: Check the box, and select [Top].



- The clear ink job will be created, in a composited state.



C. Printing the clear ink on top of a color image except on the background (Raster-Link7/RasterLink8 only).

To print the clear ink on top of a color image except on the background, create a special plate on the basis of the image.

1. In the Job List, select the job that will be the basis for the plate.

- Click the “Special plate” function icon.

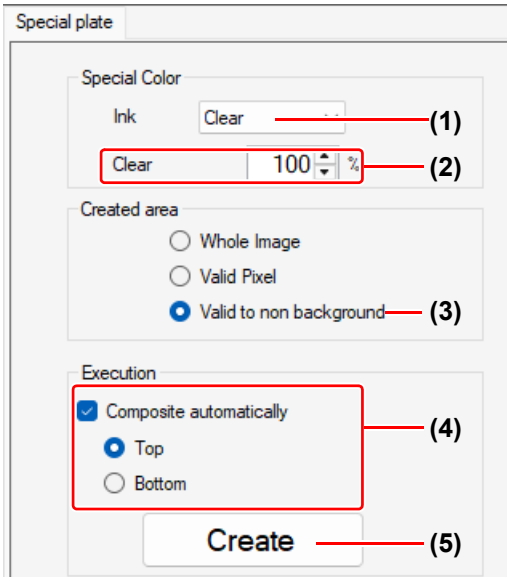
> Important!
> - Effective when the image data format is EPS, PS, or PDF and a color (including white) is specified in the data section.

2. Make the settings as follows.

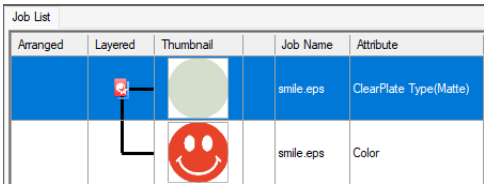
(1) [Ink]: Select “Clear”
(2) [Clear](ink volume):
•Set the recommended ink density in P.7 "Recommended settings for printing a clear ink" (if not specified, set 100%).
•When setting [To print a Clear ink at the recommended density.] to ON at [Quality], set 100%.

> Important!
> - When multiple [CLEAR] buttons are displayed, Set the above values for each of them.

(3) [Created area]: Select “Valid to non background”.
(4) [Composite automatically]: Check the box, and select “Top”.
(5) Click the [Create] button.



3. The clear ink job will be created, in a composited state.



D. Printing a special clear ink image

To print an image designed for clear ink, create a special image, separate from the color image, and carry out mono color replacement with RasterLink. After that, composite the clear ink image with the color image.

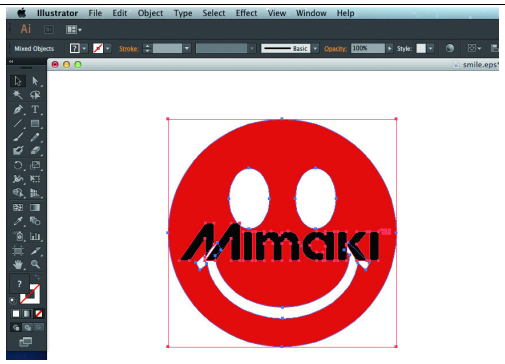
● Creating the clear ink image

1. Using design software such as Illustrator or Photoshop, create a clear ink image with the following conditions:

- Color Mode: CMYK
  Colors used: One color only - cyan or magenta or yellow or black. Set 100% density for the color. For the other colors, set 0%.
  In this procedure, black 100% is used as an example.

Make the clear ink image's size match the color image's.

You can do this by creating a non-fill/non-line path around the periphery of both images, as shown on the right.



2. Save the created image as an EPS or TIFF image.

- You are recommended to save the color image and clear ink image separately from each other after you have done the layout for them with the design software.

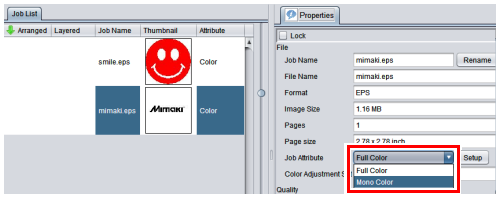
3. Read the image saved in step 2 with RasterLink.

● Setting mono color replacement

1. **In the [job list], select the clear ink job.**

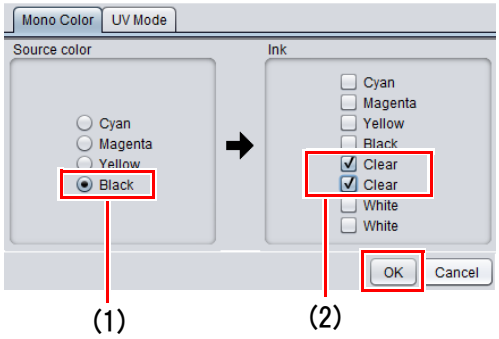
2. **Click the [Properties] icon from the function icon.**

3. **Select [Mono Color] in the [Job Attribute] pull-down menu.**



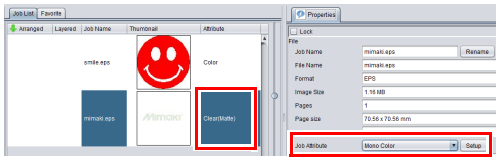
4. **Select the [Mono Color] tab and make the following settings.**

(1) [Source color]: [Black]
(2) [Ink]: [Clear] (2 places)



5. **Click the [OK].**

- Job attribute becomes [Mono Color] and [Attribute] of [Job List] becomes [Clear (Matte)].

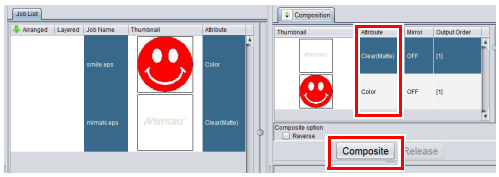


● Compositing the clear ink image with the color job

1. **In the [job list], select the color job and the clear ink job.**

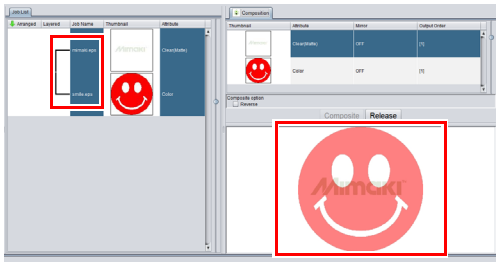
2. **Click the [Composition] icon from the function icon.**

3. **Confirm that the order of jobs on the [Composition] tab is "Clear → Color" from the top, and click [Composite].**



- If it is not, replace the job on the [Composition] tab with drag & drop.

- The job is composited.



2. Select the clear ink's effect: set the UV mode

Depending on the setting of [UV mode], the effect of clear ink can be changed.

Gloss feel effect - "Glossy Print"

-> Go to a. Setting Glossy Print

Matte feel effect - "Matte Print"

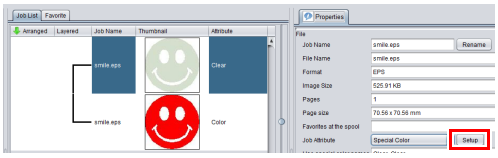
-> Go to b. Setting Matte Print

a. Setting Glossy Print

1. **In the [Job List], select the clear ink job.**

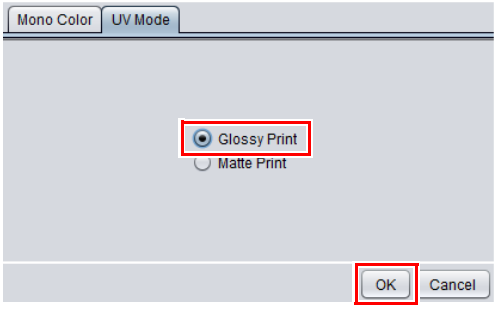
2. **Click the [Properties] icon from the function icon.**

3. **Click the [Setup] in the [Job Attribute].**

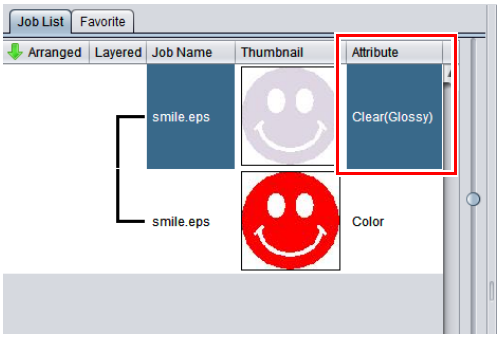


4. **Select the [UV Mode] tab and click [Glossy Print].**

5. **Click the [OK].**



- [Attribute] becomes [Clear(Glossy)].

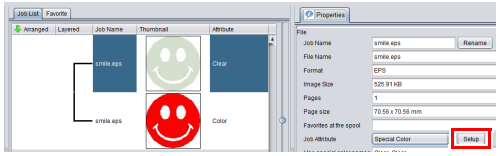


b. Setting Matte Print

1. **In the [Job List], select the clear ink job.**

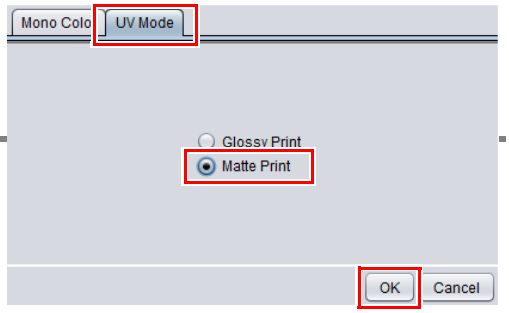
2. **Click the [Properties] icon from the function icon.**

3. **Click the [Setup] in the [Job attribute].**

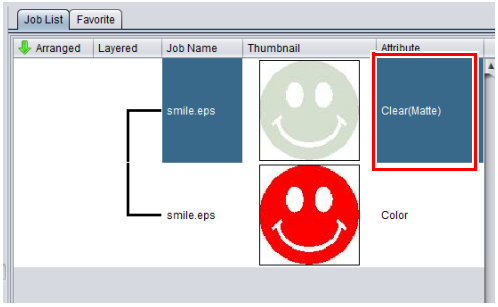


4. **Select the [UV Mode] tab and click [Matte Print].**

5. **Click the [OK].**



- [Attribute] becomes [Clear(Matte)].



3. Set printing conditions

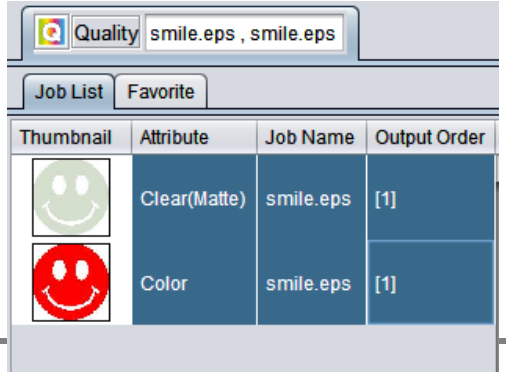
To obtain better effects from the clear ink, set according to image quality and output speed.
see below for recommended settings.
"Recommended settings for printing a clear ink" (P.7)

1. **In the [Job List], select the applicable job.**

2. **Click the [Quality] icon from the function icon.**

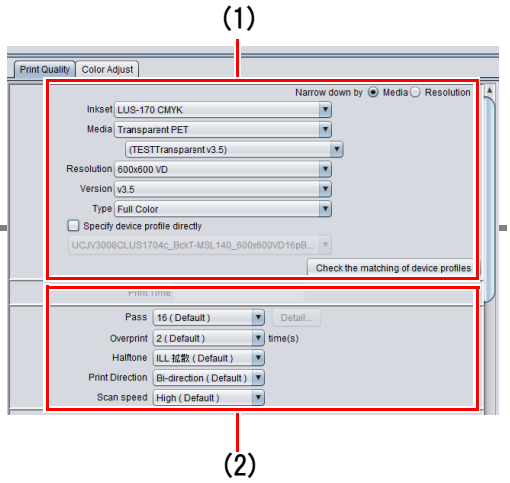
3. **Select both the color job and the clear ink job that are displayed in the [Job List].**

- Multiple jobs can be selected by holding down the CTRL key and clicking the job.
- If you select both, you can set the same conditions for these jobs.



4. **In the profile field (1), select a profile that matches the media to be printed on.**

5. **"Recommended settings for printing a clear ink" (P.7) and set the output setting field (2).**

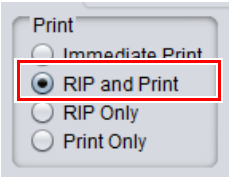


4. Print job

1. In the [Job List], select the applicable job.

2. Click the [Execution] icon from the function icon.

3. Select [RIP and Print].



4. Click the [Start].

At times like this

When printing with clear ink and white ink together

Mechanism of printing using clear ink and white ink

As follows, three layers consisting of clear ink, color image, and white ink can be printed.

Print a color image on white ink. Furthermore, print clear ink on the color image.

The job setting method differs depending on the application of the top clear ink (glossy / matte). This guide explains the setting method for each application.

Setting Matte Print

Use the [Special plate] function to create [Clear (Matte)] and [White] jobs from color images.

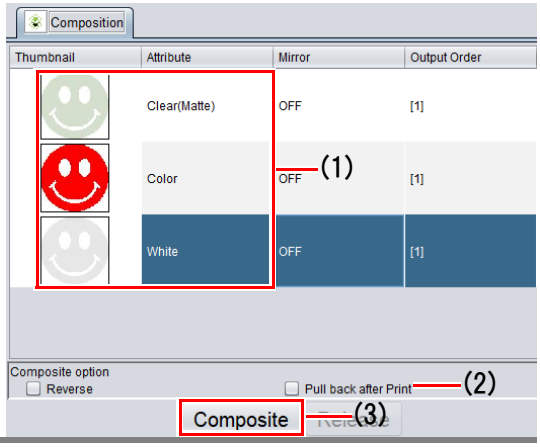
Print white ink, color image, and clear (matte) at once.

1. Select a job whose [Attribute] is [Clear (Matte)], [Color], or [White].

2. Click the [Composition] icon from the function icon.

3. Set as follows and click [Composition].

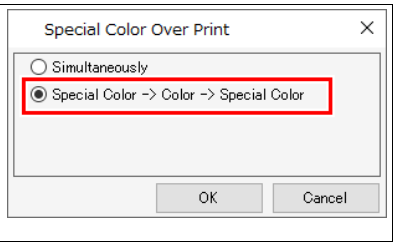
- Arrange jobs in the order of [White], [Color], [Clear (Matte)] from the bottom



4. Click the [Layer] icon from the function icon.

5. Select the [Layer Adjust] tab, click [Special Color -> Color -> Special Color] in [Color Over Print].

- In case of RasterLink7/ RasterLink8
  Click [Setup], then select [Special Color -> Color -> Special Color].



6. Click the [Quality] icon from the function icon.

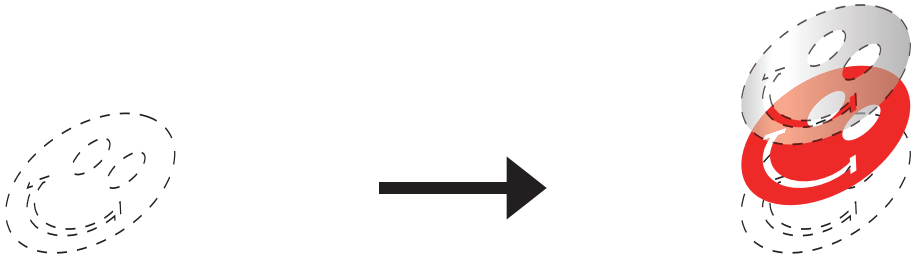
- Set the print condition.

7. Click the [Execution] icon from the function icon.

- The printing will be executed.

Setting Glossy Print

Use the [Special plate] function to create [Clear (Glossy)] and [White] jobs from color images.



(1)Print white ink (2)Pull back media (3)2-layers color and clear (glossy) print

- This printing process performs pull-back printing. Refer to " Notes on pull-back printing" (P.23) before setting up the printer.

1. Select a job whose [Attribute] is [Clear (Glossy)], [Color], or [White].

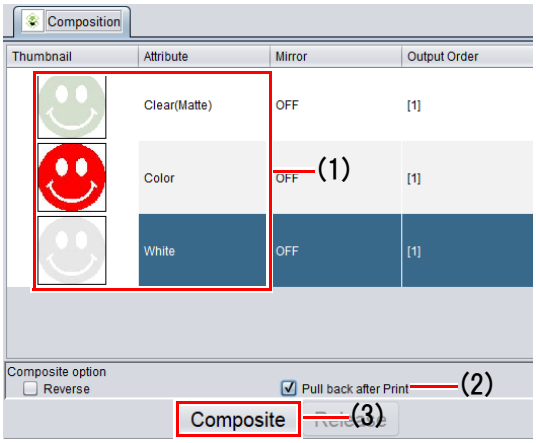
2. Click the [Composition] icon from the function icon.

3. Set as follows and click [Composition].

- Set [Clear (Glossy)] to be printed in a different order from [White] as follows.

(1) Arrange jobs in the order of [White], [Color], [Clear (Glossy)] from the bottom

(2) Select the white job and check [Pull back after Print]

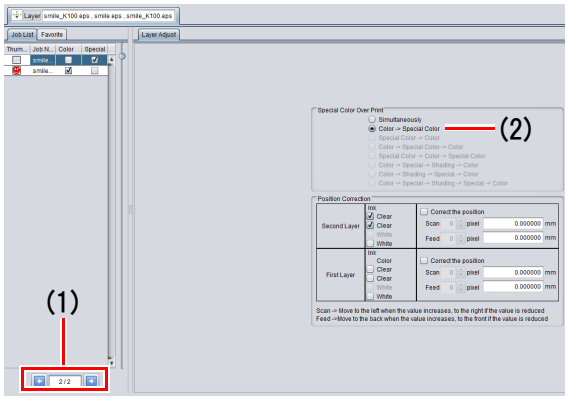


4. Click the [Layer] icon from the function icon.

5. Set as follows.

(1) [Job List]: Select [2/2]

(2) [Special Color Over Print] in [Layer Adjust]: Select [Color -> Special Color]



6. Click the [Quality] icon from the function icon.

- Set the print condition.

7. Click the [Execution] icon from the function icon.

- The printing will be executed.

Important!

- If [Special Color Over Print] in [Layer] is set to [Simultaneously] when printing a composite job that includes [Clear (Glossy)], a message will be displayed during printing. Check if [Composite] and [Layer] have been properly set up based on P. 21.

● Notes on pull-back printing

1. Prevent image misalignment

In pullback printing, the image may be misaligned between the first and second prints. Please note the following points. For details, refer to the operation manual of this machine.

1.1 About the position and number of pinch rollers (except UJ330H)

•Adjust the position according to the width of the media to be set while looking at the pinch roller guide mark on the machine.

•Use as many pinch rollers as the grid roller to be used.

1.2 Setting the pinch roller pressure (except UJ330H)

•UCJV300

For the first print, set all pinch roller pressures to [H]. For the second print after pulling back, set the pinch roller pressure at both ends to [H] and the intermediate pinch roller pressure to [OFF] (this is the default setting).

•UCJV330, UJV200

For the first print, set all pinch roller pressures to [M]. For the second print after pulling back, set the pinch roller pressure at both ends to [H] and the intermediate pinch roller pressure to [OFF] (this is the default setting).

1.3 Sheet feed (UJ330H, except rigid media)

If the tension of the media for the first and second prints is different, the image may be misaligned.

•UCJV300

By manually loosening the set media before printing, you can reduce image misalignment.

•UCJV330, UJV200, UJ330H (roll media)

Before printing, select [Media Setting]-[Feed Comp.(pull-back)] to adjust the media tension during pullback.

1.4 Logical seek settings (UJ330H, roll media only)

Printing should be performed with logical seek set to [Host] or [OFF].

1.5 Origin position adjustment (UJ330H, roll media only)

If there is a misalignment at the print start position, change the origin. For more details on how to change this setting, refer to the operation manual of this machine.

2. Image size and placement restrictions (UJ330H, except rigid media)

Due to the structure of the pinch roller and the machine, there is a limit on the size of images that can be printed with pull-back printing.

2.1 Feed direction

The maximum data length that can be printed is **1000mm**.

> Important!
> • If the print data is too long, the print surface may come into contact with the floor, which may cause quality degradation such as dirt or rubbing.

● Auto deskew (UJ330H, roll media only)

The media may become skewed during the pull-back process. RasterLink7/RasterLink8 can compensate for this skewing by scanning the register marks printed on the first layer. This function can be selected on the [General Print] screen or the [Composition] screen.
The maximum printable data length is **850mm**.

1. If the auto deskew function fails to detect the register marks

When using transparent media, register mark detection may fail.

<u>Countermeasure</u>

•In RasterLink7/RasterLink8, navigate to [General Print] - [Auto deskew] and then turn on [Fill around the registration marks].
In [Color Settings], under [Fill Color], select White.

•On the printer's panel, select [MARK DETECT] from the local mode screen to detect register marks manually. (For details, refer to "Pullback Printing" - "If mark detection fails" in the printer's operation manual.)

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