JFX200-2513/JFX200-2531
Clear Ink Print Guide

Mimaki™

This Guide explains how to obtain various kinds of printing effects by using LH-100 clear ink (LH100-CL-BA) and LUS-120 clear ink (LUS12-CL-BA) with the JFX200-2513/JFX200-2531 printer.
Read this Guide carefully before using the ink.

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Applicable environment

Printer	JFX200-2513 F.W. Ver. 2.00 or later JFX200-2531 F.W. Ver. 1.0.0 or later	
Ink	Color/Clear	It can be used in the following three combinations. • LH-100 color ink + LH-100 clear ink • LUS-150 color ink + LH-100 clear ink • LUS-120 color ink + LUS-120 clear ink
RIP	RasterLink6 Ver.4.8 or later RasterLink6Plus Ver.1.0 or later	

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Setting the printer

Before printing with this Guide, carry out setting of the printer as follows.

1. Turn on the printer's power.

- Wait until <Local> is displayed on the panel.
- If the power is already on, have the panel display <Local>.

2. Select [UV MODE] on the panel, as follows:

(1) With "Local" displayed, press the (FUNCTION) key.

(2) Use the (▲), (▼) key to select [SETUP], then press the (ENTER) key.

(3) Use the (▲), (▼) key to select [UV MODE], then press the (ENTER) key.

(4) Use the (▲), (▼) key to select [HOST].

(5) Display the [UV MODE]. Set "0%" and press the (ENTER) key

(6) Press the (ENTER) key.

(7) Return to [SETUP], by pressing the (END) key just once.

3. Select [MAPS2] on the panel, as follows:

(1) Make sure that [SETUP] is selected.

(2) Use the (▲), (▼) key to select [MAPS], then press the (ENTER) key.

(3) Use the (▲), (▼) key to select [MAPS2].

(4) Press the (END) key.

4. Select "AUTO" for [MAPS2], as follows:

```
MAPS2
: AUTO
```

(1) Use the (▲), (▼) key to select "AUTO".

(2) Press the (ENTER) key.

5. Return to "Local", by pressing the (END) key several times.

- 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. If this happens, make the setting changes below and carry out test printing.

1. Turn on the printer's power.

- Wait until "Local" is displayed on the panel.

(Important!) • If the power is already on, have "Local" displayed on the panel.

2. Select [MAPS2] on the panel, as follows:

(1) With "Local" displayed, press the [FUNCTION] key.
(2) Use the ▲, ▼ key to select [SETUP], then press the ENTER key.
(3) Use the ▲, ▼ key to select [MAPS], then press the ENTER key.
(4) Use the ▲, ▼ key to select [MAPS2].
(5) Press the END key.

3. Select "MANUAL" for ［MAPS2］, as follows:

```
MAPS2
:MANUAL
```

- Use the ▲, ▼ key to select "MANUAL".

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

(1) Press the END key.
(2) Make the setting for [COLOR], as follows.
Use the ▲, ▼ key to set PATTARN to "AUTO".
Then press ▶.

```
        COLOR       >
PATTERN:AUTO
```

(3) Make the setting for [SPOT], as follows.
Use the ▲, ▼ key to set PATTARN to "AUTO".
Then press ▶.

```
<       SPOT        >
PATTERN:AUTO
```

(4) Make the setting for [CLEAR], as follows.
Use the ▲, ▼ key to set PATTARN to "AUTO".
Then press ▶.

```
<       CLEAR
PATTERN:AUTO
```

(5) Now make the detailed settings for [CLEAR] , as follows.
Use the ▲, ▼ key to change the TYPE/LV value.
Changing this value will change the clear ink image quality.
As a rough guide, use "Type1 60%" for Glossy Print, and "Type2 100%" for Matte Print.

```
<       CLEAR
TYPE/ LV.:TYPE1/100%
```

After making the setting, press the ENTER key.
(6) Return to "Local", by pressing the END key several times.

Effects and printing with clear ink

Clear ink's effects

The effects below can be obtained by using clear ink.

Gloss feel effect - "Glossy Print"   **Matte feel effect - "Matte Print"**   **3D feel effect - "Emboss Print"**

These effects can be obtained via the "UV MODE" settings in RasterLink6.

Ways clear ink can be printed

Clear ink can be printed in the ways below with RasterLink6.
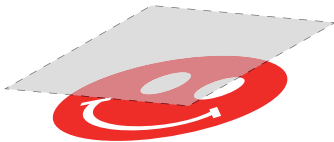
Printed over the whole of a color image   **Printed onto valid pixels of a color image**   **Printed as a special image for clear ink use**

For printing the clear ink over the whole of a color image, and for printing it onto valid pixels of a color image, create a clear ink job using the "Special plate" function of RasterLink.
For printing the 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

In order to print, you must first create clear ink data and make the settings for it on RasterLink6, using the procedure below.

```
┌─────────────────────────────────────────────────────────────┐
│         Decide the way the clear ink is to be printed         │
└─────────────────────────────────────────────────────────────┘
```

Clear ink is to be printed to match a color image

A special clear ink image is to be printed

```
┌──────────────────────────────────────┐
│ Use design software to create a special clear │
│      ink image that uses 1 color only         │
└──────────────────────────────────────┘
```

Setting on RasterLink6

```
┌──────────────────────────────┐   ┌──────────────────────────────┐
│ Input the color image into    │   │ Input the created special image and the color │
│ RasterLink6                   │   │      image into RasterLink6    │
└──────────────────────────────┘   └──────────────────────────────┘

┌──────────────────────────────┐   ┌──────────────────────────────┐
│ Use the "Special plate" function to create an │   │ Replace one color with the clear ink, using │
│ image for clear ink use, then composite it with │   │       mono color replacement    │
│          the color image       │   └──────────────────────────────┘
└──────────────────────────────┘
                                    ┌──────────────────────────────┐
                                    │ Composite the special image with the color image │
                                    └──────────────────────────────┘

┌──────────────────────────────────────────────────────────────┐
│ Set the UV mode to match the clear ink application (Glossy, Matte or Emboss effect) │
└──────────────────────────────────────────────────────────────┘

┌──────────────────────────────────────────────────────────────┐
│              Make the printing condition settings              │
└──────────────────────────────────────────────────────────────┘

┌──────────────────────────────────────────────────────────────┐
│                      Execute printing                          │
└──────────────────────────────────────────────────────────────┘
```
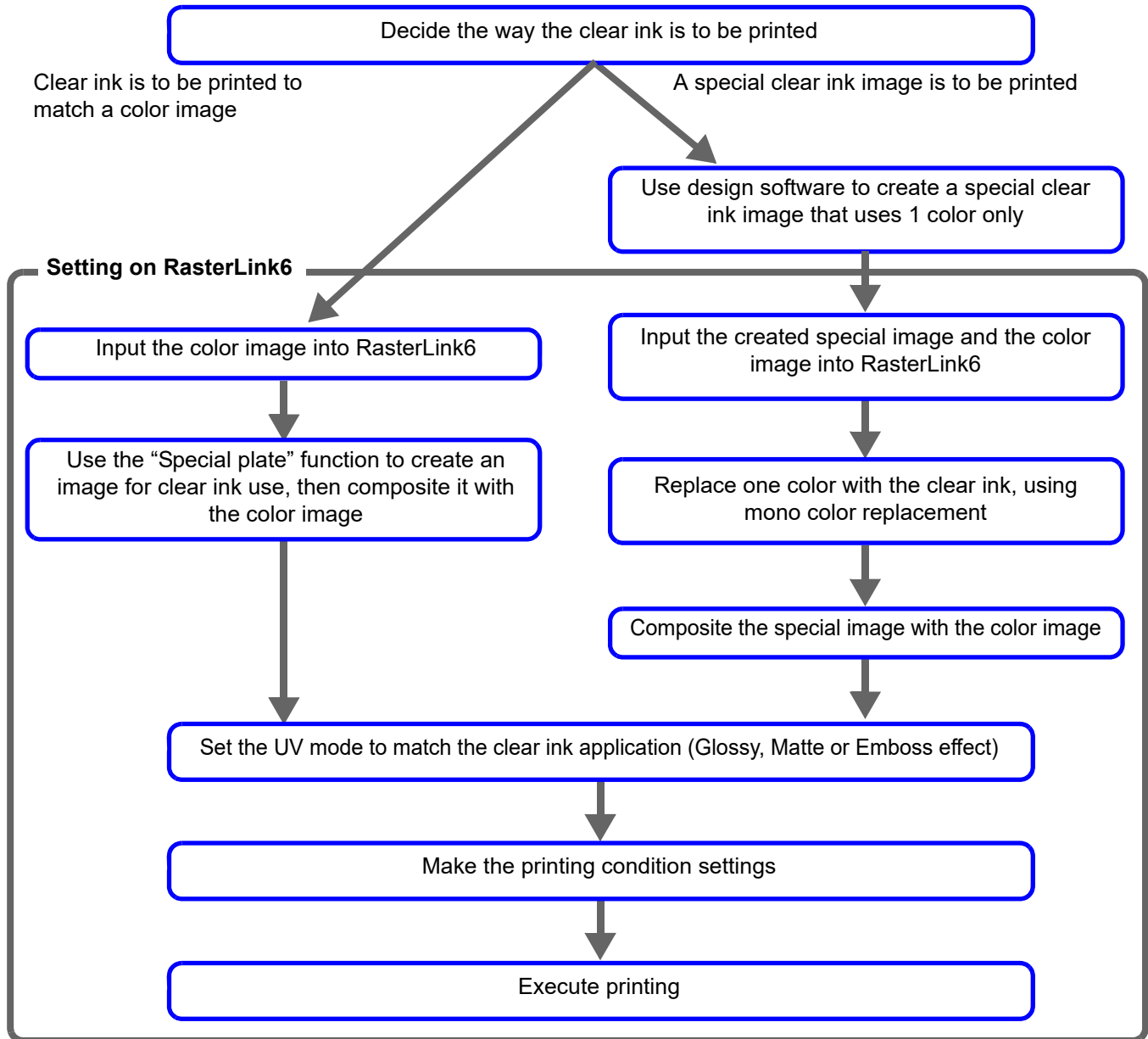
(Important!) • Creation of layer in RasterLink6 and the setting of UV mode etc will be different by the number of slots containing clear ink.
If there is a description of "Clear x 2 slot", "Clear x 1 slot, please set according to your printer.

1. Decide the way the clear ink is to be printed

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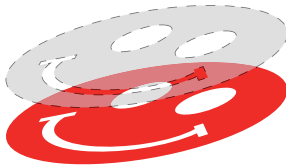

Print it over the whole of the color image
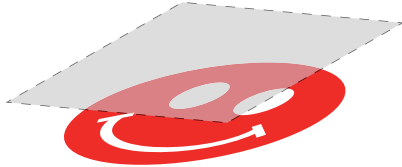
-> Go to A. Printing the clear ink over the whole of the color image

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 a special image for clear ink use

-> Go to C. 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 whole of the color image, 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.**
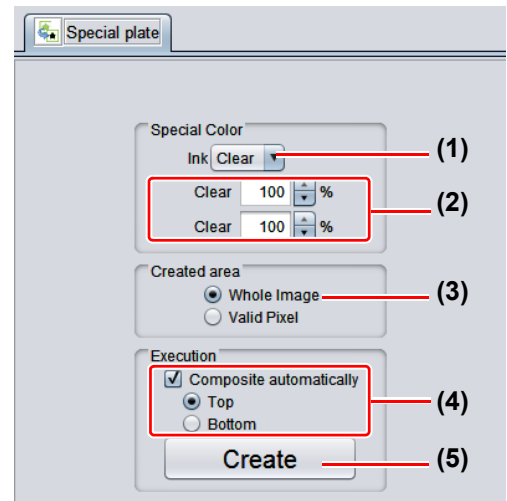
- Click the [Special plate] icon.

2. **Make the settings as follows.**

- **Clear ×2 slot**
(1) [Ink]: Select "Clear"
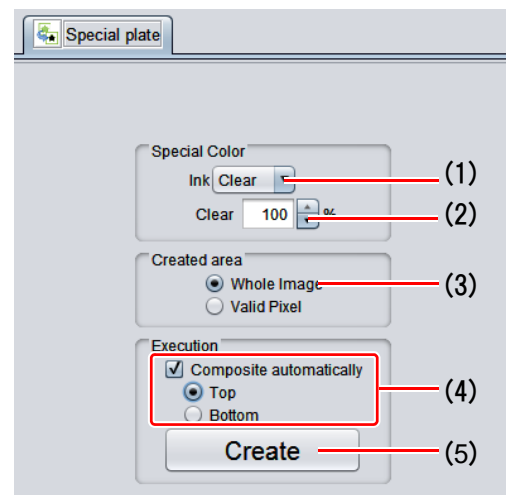**(2)** [Ink volume]: Set "100%"

> (Important!) • There are 2 slots for clear ink. Set 100% for each slot.

(3) [Created area]: Select "Whole image".
(4) [Composite automatically]: Check the box, and select "Top".
(5) Click the [Create] button.

- **Clear ×1 slot**
(1) [Ink]: Select "Clear"
(2) [Ink volume]: Set "100%"
(3) [Created area]: Select "Whole image".
(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.**
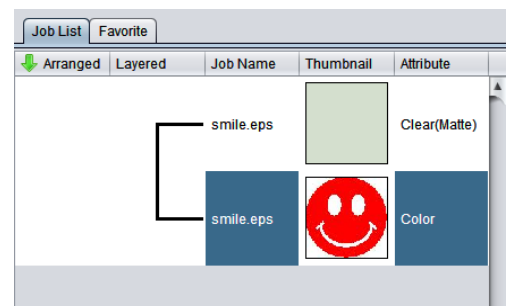
B. Printing the clear ink onto the valid pixels of the color image

To print the clear ink onto the valid pixels of the color image, 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.**
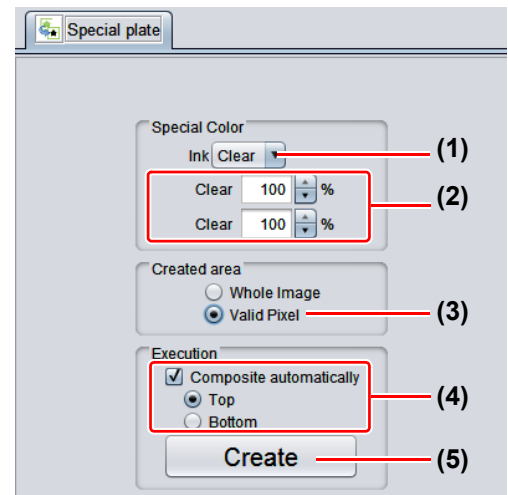
- Click the "Special plate" function icon.

2. **Make the settings as follows.**

- **Clear ×2 slot**
(1) [Ink]: Select "Clear"
**(2)** [Ink volume]: Select "100%".

> (Important!) • There are 2 slots for clear ink. Set 100% for each slot.

(3) [Created area]: Select "Valid Pixel".
(4) [Composite automatically]: Check the box, and select "Top".
(5) Click the [Create] button.

- **Clear ×1 slot**
(1) [Ink]: Select "Clear"
(2) [Ink volume]: Select "100%".
(3) [Created area]: Select "Valid Pixel".
(4) [Composite automatically]: Check the box, and select "Top".
(5) Click the [Create] button.
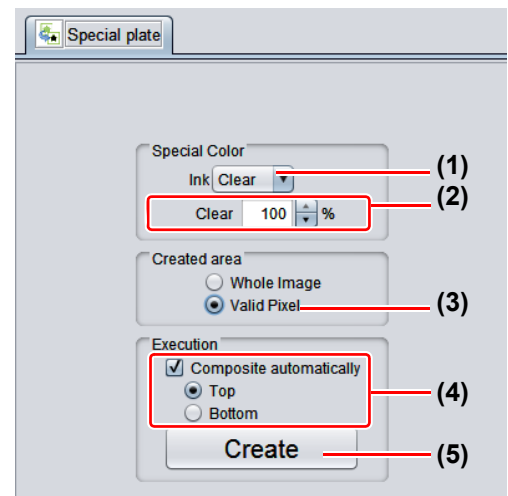
3. **The clear ink job will be created, in a composited state.**
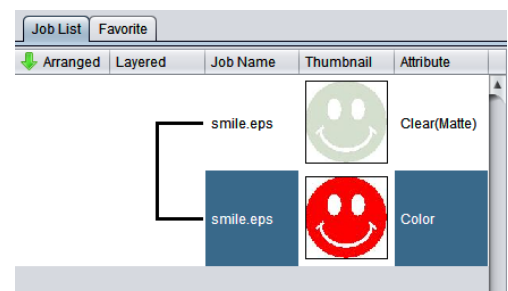
C. Printing a special clear ink image

To print an image designed for clear ink, create a special image, separate from the color image, and carry out mono color replacement with RasterLink6. After that, composite the clear ink image with the color image.

Creating the clear ink image

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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.

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.
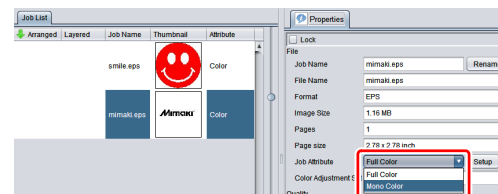

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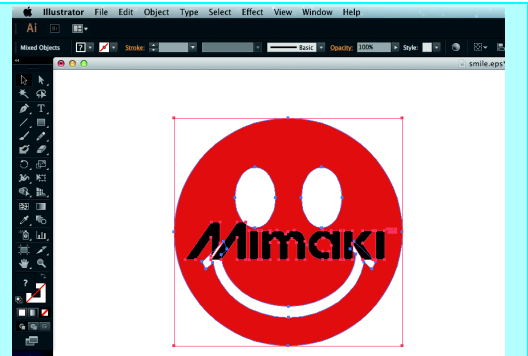
2. Save the created image as an EPS or TIFF image.

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3. Import the image saved in procedure 2 into RasterLink6.

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1. **In the job list, select the clear ink job.**
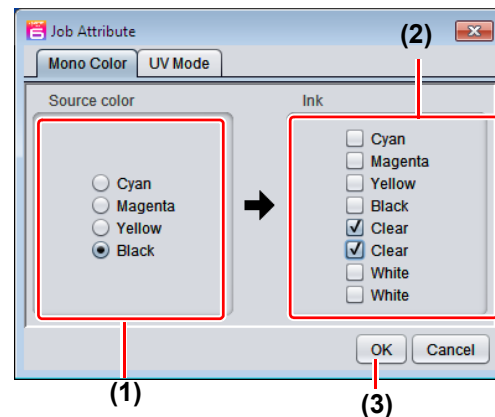
- Click the "Properties" ⓘ icon.

2. **Select "Mono color" in the [Job Attri-bute] dropdown list.**

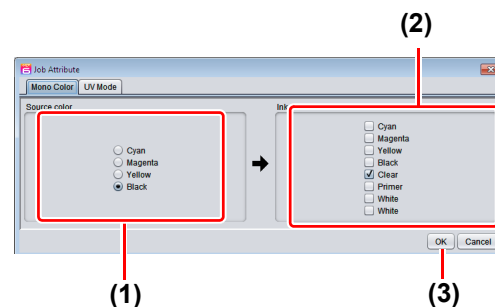**3.** **Select the [Mono color] tab.**

- **Clear ×2 slot**
  Make the settings as follows.

  (1) [Source color]: "Black"
  (2) [Ink]: "Clear" (2 "Clear" items will be displayed. Check both of them.)
  (3) Click the [OK] button.

- **Clear ×1 slot**
  Make the settings as follows.

  (1) [Source color]: "Black"
  (2) [Ink]: "Clear"
  (3) Click the [OK] button.

4. **The job's attribute is now "Mono color". In the job list, the job will have a gray thumbnail color and "Clear(Matte)" will be displayed in its "Attribute" field.**
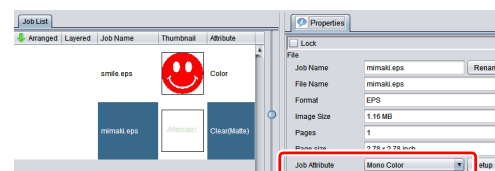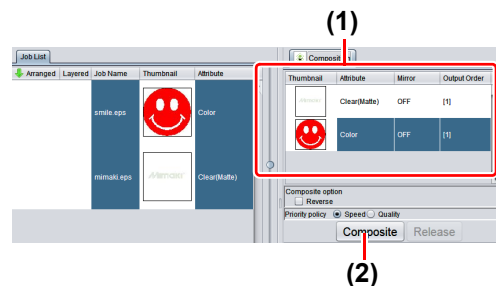
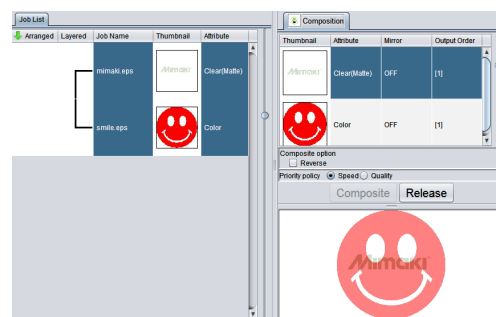# 1. In the job list, select the color job and the clear ink job.

- Click the "Composition" icon.

2. Carry out the following check.

(1) Is the clear ink job above the color job in the job list.
  - If it is not, use drag and drop to change the positions around.

(2) After the above check, click the [Composite] button.

(1)

(2)

3. The images will be composited.

💡 • Printing will be carried out in either of the following ways, depending on the [Priority Policy] setting on the 〔Composition〕 screen.

"Speed": The color image and clear ink image are printed simultaneously using special color overprinting.
In this case, the UV mode set for the color image is ignored and the conditions set for the clear ink image are used.

"Quality": The color image is printed first and the clear ink image is printed after.
In this case, the UV modes set respectively for the color image and clear ink image are applied respectively to each image.

• In the case of gloss printing, please see P.14 "a. Setting Glossy Print"

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

The clear ink's effect is determined by the [UV mode setting] in RasterLink6.

Gloss feel effect - "Glossy Print"

-> Go to a. Setting Glossy Print

Matte feel effect - "Matte Print"

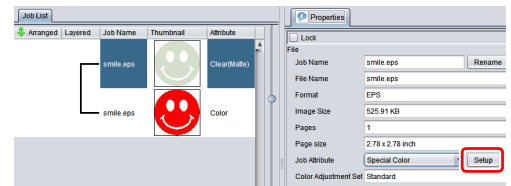-> Go to b. Setting Matte Print

3D feel effect - as "Emboss Print"

-> Go to c. Setting Emboss Print

a. Setting Glossy Print

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

- Click the "Properties" [icon] icon.
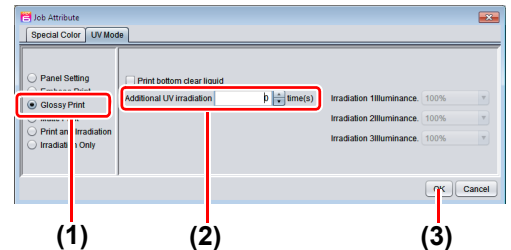- Click the [Setup] button in the [Job Attribute] field.

2. **Select the [UV Mode] tab.**

- **Clear ×2 slot**
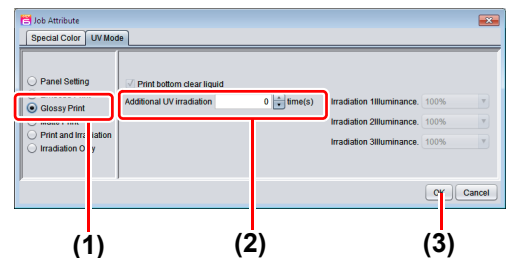 Make the settings as follows.
  (1) Select "Glossy Print" in the mode list on the left side.
  (2) Set "0" for [Additional UV irradiation].
  (3) Click the [OK] button.

 **(1)**   **(2)**   **(3)**

- **Clear ×1 slot**
  Make the settings as follows.
  (1) Select "Glossy Print" in the mode list on the left side.
  (2) Set "0" for [Additional UV irradiation].
  (3) Click the [OK] button.

  (1)   **(2)**   **(3)**

(Important!)
- When "Print bottom clear liquid" is enabled, the base clear is printed on top of the color image, and then print the glossy clear on it.
- In the case of clear × 1 slot
  Glossy print cannot be obtained without printing a base clear on top of the color image, so "Print bottom clear liquid" cannot be disabled.
- In the case of clear × 2 slot, it will be glossy without printing a base clear on top of the color image.
  If some media do not get glossy , please enable "Print bottom clear liquid".

Glossy clear

Base clear

Color image
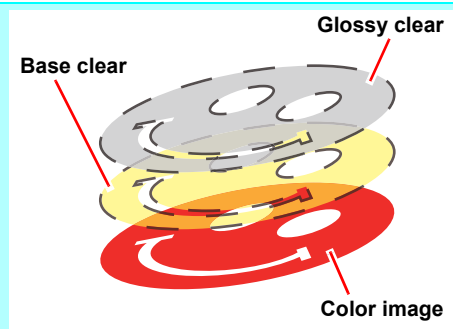
3. **Thumbnail of attribute becomes a "Clear (Glossy)".**
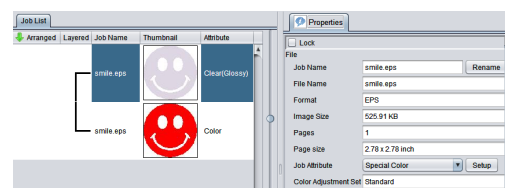
- In glossy print, print the clear image as follows by the number of slots in the clear and by the setting of the UV mode to "Print bottom clear liquid".

Clear Number of slots	Print bottom clear liquid	Synthesis conditions of synthetic screen	
		Speed priority[1]	Quality priority[2]
2	effective	After printing at the same time in the order of color image -> bottom clear, print the clear image.	After printing a color image, print the bottom clear, and finally print the clear image.
	Invalid	Print at the same time in the order of color image -> clear image.	After printing the color image, print the clear image.
1	(effective)	After printing at the same time in the order of color image -> bottom clear, print the clear image.	After printing a color image, print the bottom clear, and finally print the clear image.

*1. If the speed priority, setting of the UV mode set to the color image is ignored, and print setting of the UV mode set clear image.

*2. Each color image and clear image will be printed as of setting of UV mode set for each. The setting of UV mode of the bottom clear liquid cannot be changed.

b. Setting Matte Print

1. In the job list, select the clear ink job.

- Click the "Properties" 🛈 icon.
- Click the [Setup] button in the [Job attribute] field.

2. Select the [UV Mode] tab.

- Make the settings as follows.
(1) Select "Matte Print" in the mode list on the left side.
(2) Set "100%" for [Illumination].
  Set "○" for [Additional UV irradiation].
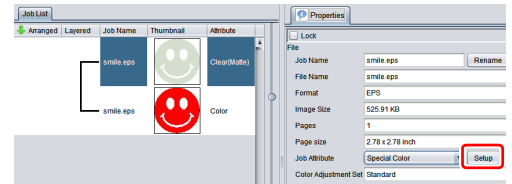**(3)** Click the [OK] button.

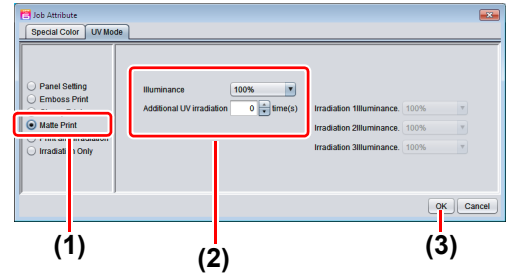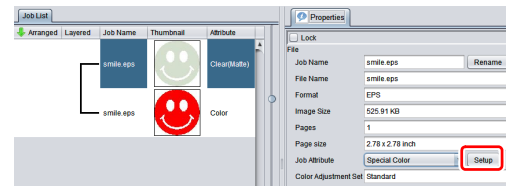(1)   (2)   (3)

c. Setting Emboss Print

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

- Click the "Properties" ⓘ icon.
- Click the [Setup] button in the [Job Attribute] field.

---

2. **Select the [UV Mode] tab.**

- Make the settings as follows.
- **(1)** Select "Emboss Print" in the mode list on the left side.
- **(2)** [Illumination]: Set "100%".
- **(3)** [Number of printings]: Set this according to the thickness of the embossing. (See "Hint!" below for rough calculation of the number of printings for the thickness).
- **(4)** Click the [OK] button.

---
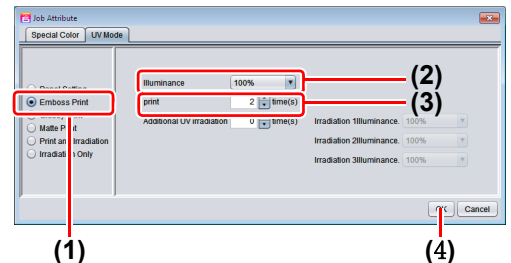
3. **Thumbnail of attribute becomes a "Clear(Emboss)".**
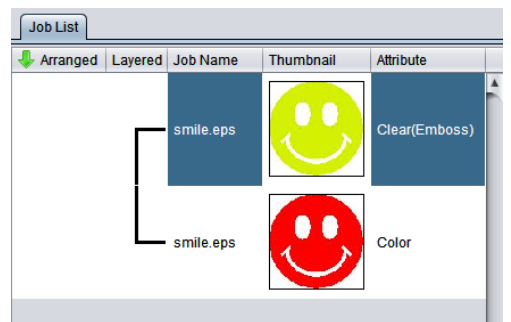
💡
- After you have set Emboss Print, the clear ink job will be printed the specified number of times after the color job is printed, regardless of the [Priority policy] settings on the [Composition] screen.
- The table below gives rough correspondences between the thickness of the embossing and the number of additional times (after the first printing) that the clear ink is printed over the color image.
  These values are for when 600x900 dpi output resolution is set.

Number of times clear ink job is printed, the clear ink job is printed the specified number of times.	LH-100 clear ink Embossing thickness [mm]	LUS-120 clear ink Embossing thickness [mm]
2	0.07	0.05
4	0.13	0.12
6	0.19	0.21
8	0.25	0.26
10	0.31	0.33
15	0.46	0.50
20	0.61	0.66

- When you specify Emboss Print, make sure that there is ample head clearance.
- If you set just Emboss Print, the finish will be matte. See P. 20 for the settings to make in order to obtain a glossy print result.

3. Set the recommended values for the printing conditions

To obtain better effects from the clear ink, use the settings below that are appropriate for the image quality and output speed that you want.

Print Mode		Output resolution	Passes	Print direction	High speed print
	High Speed	300x450HQ VD	12	Bi-direction	No
	Production	600x600 VD	16	Bi-direction	Yes
	Standard	600x900 VD	24	Bi-direction	Yes
	High quality	1200x1200 VD	32	Uni-direction	Yes

1. **In the job list, select the applicable job.**

- Click the "Quality" icon.

2. **Select both the color job and the clear ink job that are displayed in the job list.**

- You can select multiple items by holding down the CTRL key while clicking on them.
- By selecting both jobs, you can set the same conditions for both of them.

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

4. **Refer to the table above to set the output setting field (2)**
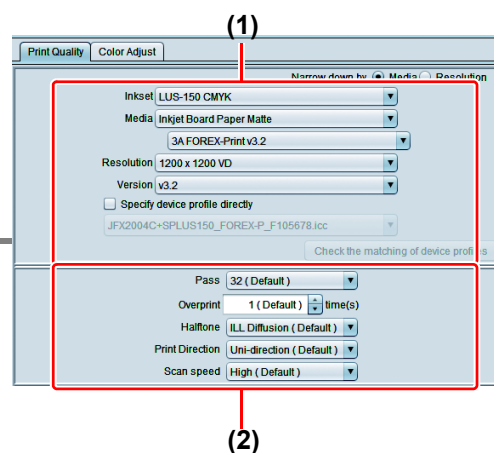
4. Execute printing

1. **In the job list, select the applicable job.**

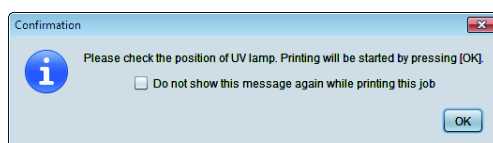 • Click the "Execution" [icon] Icon.

2. **Select "RIP and print".**

 • Click the [Start] button.

(Important!) • With RasterLink6, the following message dialog box may be displayed when the［Start］button is clicked.

Confirmation

 Please check the position of UV lamp. Printing will be started by pressing [OK].

 ☐ Do not show this message again while printing this job

 [OK]

 • Move the UV lamp to the position refer to the "JFX200-2513 Operation Manual" "JFX200-2531 Operation Manual", separate volume, then click the [OK] button to start printing.
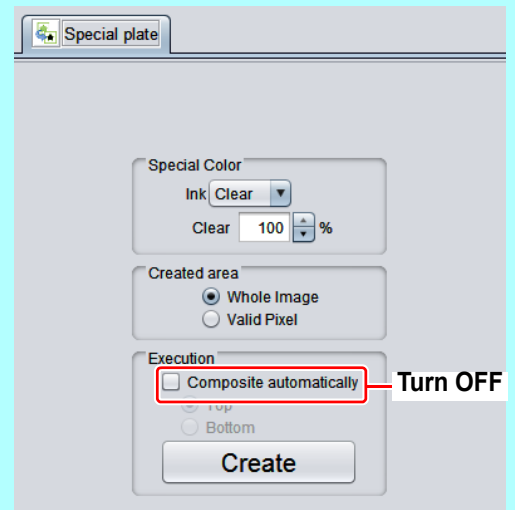
Setting glossy finish for Emboss Print

If you set just Emboss Print, the finish will be matte. To obtain a glossy finish, you must reate a Glossy clear ink job, separate from the Emboss Print clear ink job.

1. Referring to "1. Decide the way the clear ink is to be printed" (P. 7~) to , create 1 color job and 2 clear ink jobs.

(Important!)
- In the case of "A. Printing the clear ink over the whole of the color image" or "B. Printing the clear ink onto the valid pixels of the color image":
Turn off "Composite automatically" in Special plate printing before creating the clear ink job.
Otherwise it will not be possible to create multiple clear ink jobs, since a special plate cannot be made from a composited job.
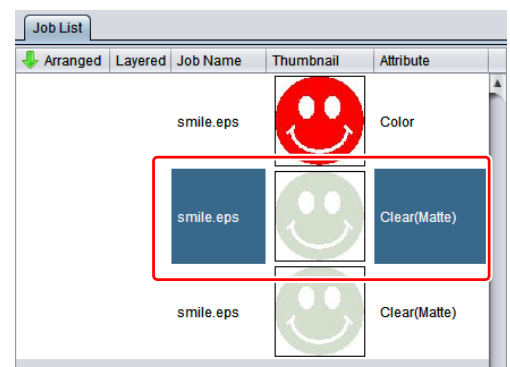Carry out the above procedure 2 times to create the 2 clear ink jobs.

Special plate

Special Color
Ink Clear
Clear 100 %

Created area
● Whole Image
○ Valid Pixel

Execution
☐ Composite automatically — **Turn OFF**
○ Top
○ Bottom

Create

- In the case of "C. Printing a special clear ink image":
Carry out the "Setting mono color replacement" procedure, then carry out the following procedure to duplicate the job.
  1. **Select the clear ink job.**
  2. **Click the "Duplicate"** icon.
  3. **Set "1" for [Number of duplicates], and click the [Duplicate] button.**
 **The clear ink job will be duplicated.**

Duplication

Duplicate counts 1
☐ Include ripped data

Duplicate
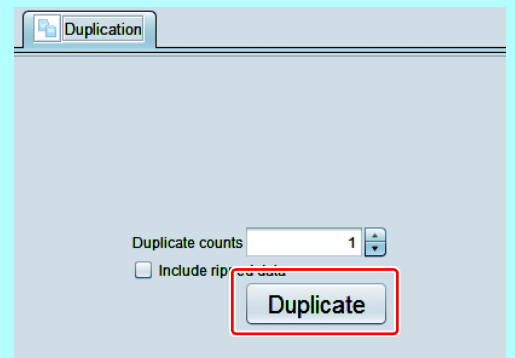
2. Choose one job of clear ink from the job list.

- Refer to "c. Setting Emboss Print"and set the thick print.

Job List

Arranged	Layered	Job Name	Thumbnail	Attribute
		smile.eps		Color
		smile.eps		Clear(Matte)
		smile.eps		Clear(Matte)

3. Choose the job of clear ink from the job list that is not selected in step 2.

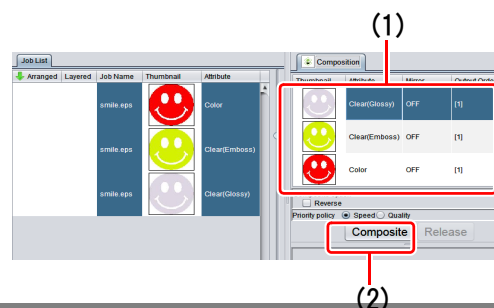- Refer to "a. Setting Glossy Print"and set the glossy print.
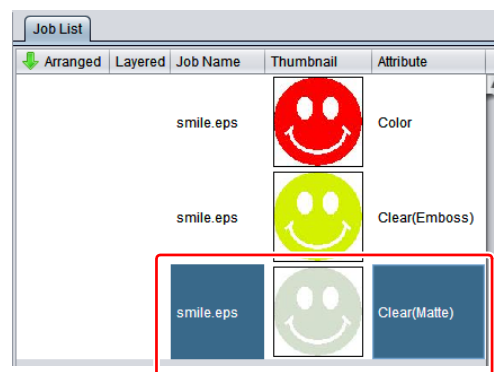
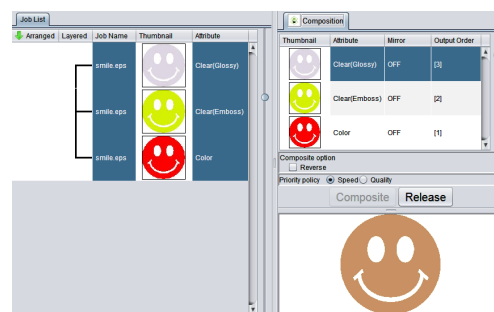## 4. Choose the color job and clear ink of step2+3 from the job list,

- Press [Composite] from function icon.

5. Check the following.

(1) From the top order of the list
Clear(Glossy) -> Clear(Emboss) ->Color
Check the order
- If the order is not as above, please replace the composition List by Drag & Drop.

(2) Press [Composite] button.

6. Synthesized.

7. Execute printing.

> (Important!) • Depending on the job settings (clear ink texture, color image or not, etc), when a particular job is printed a dialog box for specifying changeover of the UV lamp position (P. 16) may be displayed.
> If quality is emphasized, you are recommended to display this dialog box. However, once this box is displayed, printing will be halted until the box is manually closed. To print all jobs continuously, click ON for [Do not show this message again while printing this job] when the box is displayed at the time of print execution.

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