

IU-1000F

Special Color Ink Guide (Basic Edition)

This manual describes how to print using spot color ink.

Spot color inks such as gloss and white can be used as a base for printing color images or as a surface layer for adding gloss to color prints.

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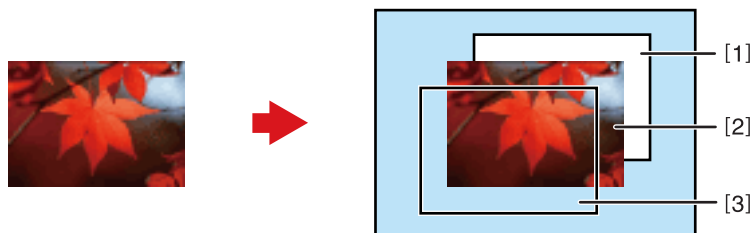
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Overview

Spot Color Printing

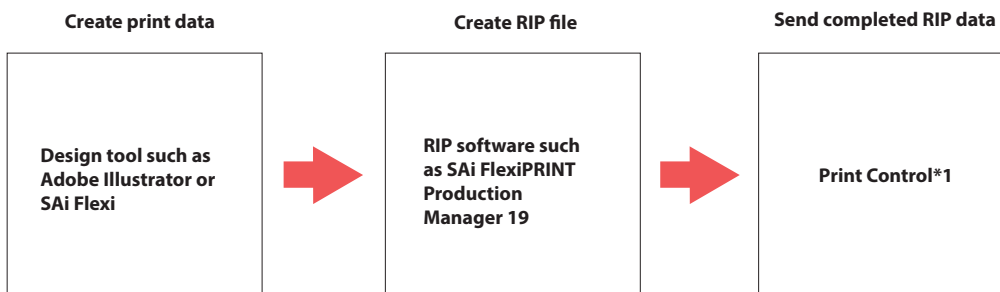
Spot color printing uses non-CMYK spot color inks. This enables printing of a color image on top of a white ink to make the colors more vivid, or printing gloss ink on top of a color image to provide a gloss finish. Primer ink can also be printed underneath a color image to improve adhesion to the media.



- [1]: Base (White or primer ink)
- [2]: Image or illustration (CMYK, etc.)
- [3]: Finish (Gloss finish with a gloss ink)

Workflow and Software Used

Workflow



*1: The official name of the software is Roland DG IU-1000F UV Print Control Center. The term "Print Control" is used in this manual.

Software

Type of software	Name of software	Function
Design software	Adobe Illustrator	Can be used to specify where to print white, gloss, and primer inks within the print data.
RIP software	SAi FlexiPRINT Production Manager 19	Can be used to create a RIP file with registered printing conditions, layout settings, and spot color information.
Printing software	Print Control	Can be used to load RIP files, to configure spot color settings, and to perform printing operations.

Available Print Types

This section describes the types of printing that use white ink (W), gloss ink (GI), and primer ink (Pr).

Print types

Print Control can be used to specify the combination of color ink, white ink, gloss ink, and primer ink. Cyan, magenta, yellow, and black are referred to as 4C.

IMPORTANT

Printing with gloss ink (GI) must be done through a separate print job than that of the other inks, and the image must be rasterized using the Standard output profile (resolution: 635 × 600 dpi).

Outputting in the same job as 4C is only possible when the print mode is "4C-GI_Standard." In such cases, the gloss ink is printed with a matte finish.



- [1]: Gloss ink
- [2]: Color ink
- [3]: White ink
- [4]: Primer ink

Color set	Application example	Overview
W - 4C		White ink is used as the base for color data.
4C - GI*1		Gloss ink is applied on top of color data.
Pr - 4C		Primer ink is used as the base of the color data.
W - 4C + GI (separate job)*2		White ink is used as the base for color data. Coating with gloss ink is performed in a separate job.
Pr - W - 4C		White ink and primer ink are used as the base of the color data.
Pr - 4C + GI (separate job)*2		Primer ink is used as the base of the color data. Coating with gloss ink is performed in a separate job.

Color set	Application example	Overview
Pr - W - 4C + Gl (separate job)*2		White ink and primer ink are used as the base of the color data. Coating with gloss ink is performed in a separate job.
4C - W		White ink is used on top of the color data. This is mainly used for reverse printing on transparent media.
Pr - 4C - W		Primer ink is used as the base of the color data, and white ink is used on top of the color data. This is mainly used for reverse printing on transparent media.

*1: This set can be used when the print mode is set to "4C - Gl _ Standard." In this case, the gloss ink has a matte finish.

*2: This set can be used when RIP is performed at Standard (635 × 600 dpi). Adjusting the UV lamp position enables printing with a gloss finish using gloss ink. (If the UV lamp position is not adjusted, a matte finish will be produced.)

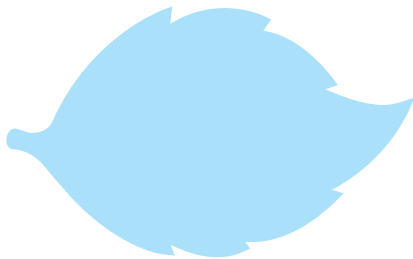
Print Data Types

Spot color print data comes in one of the following patterns.

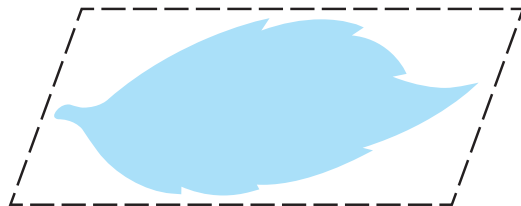
Spot color only printing

Print data for spot colors must be created.

☞ P. 6 "Creating Print Data for Spot Colors"



Print data for spot colors



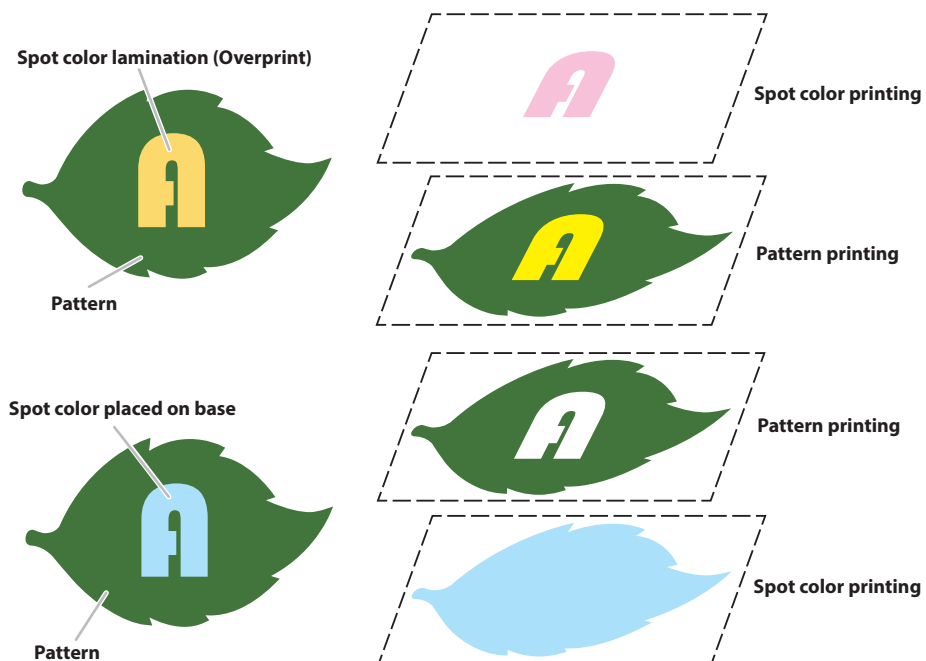
Spot color printing

Spot color printing in layers with patterns

Printing spot color with different shapes and sizes on a non-square pattern

Print data for spot colors must be created.

☞ P. 6 "Creating Print Data for Spot Colors"



Printing spot color with the same shapes and sizes throughout a square pattern (such as a photo)

Configure the spot color using RIP software.

☞ P. 8 "Creating a RIP File (Without Gloss Finish)"

MEMO

To print spot color in the same shape and size throughout a square pattern (such as a photo), the spot color can be set using the RIP software without creating spot color print data.

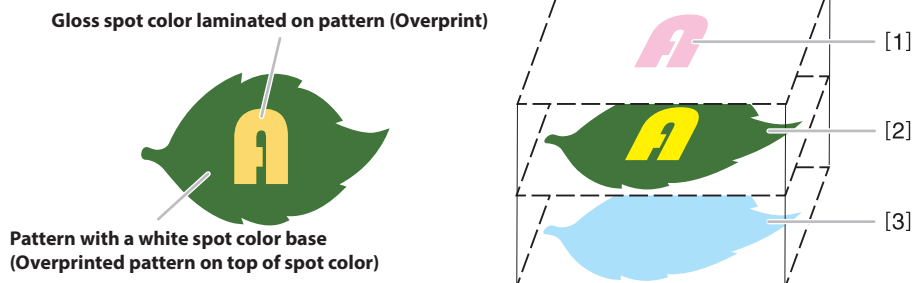


Printing

Creating Print Data for Spot Colors

This section describes how to create the following print data using Adobe Illustrator.

Laminate the pattern using gloss spot color, and print white spot color on the base.



- [1]: Finish (Gloss finish with a gloss ink)
- [2]: Image or illustration (CMYK)
- [3]: Base (White or primer ink)

Procedure

1 Configure the layer settings.

Make three layers, and stack them as shown in the figure.

Configure the settings for each layer ([1] to [3]) as follows.



	Layer name	Swatch (*1)	Overprint Fill (*2)
Layer [1]	Gloss	Spot2	On
Layer [2]	CMYK	No	On
Layer [3]	White	Spot1	Off

*1: Specify a swatch for each object within a layer.

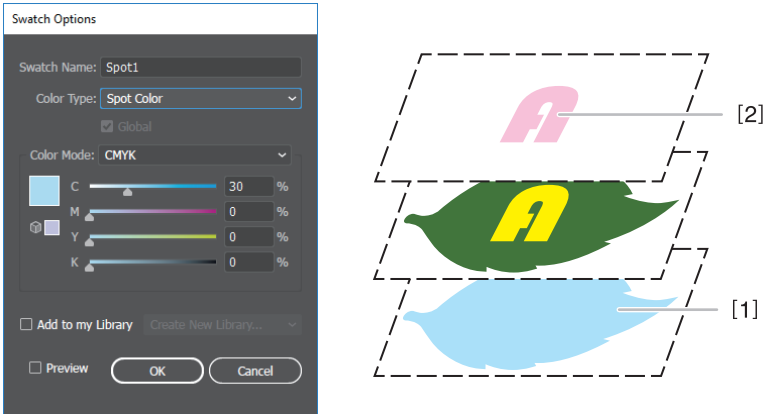
*2: "Overprint Fill" in the "Attributes" window

IMPORTANT

If the overprint settings are not configured, areas that overlap the object below will not be printed.

2 Specify a spot color.

Create two new swatches, and configure the settings as follows.



	Swatch Name	Color Type
Swatch [1]	Spot1	Spot color
Swatch [2]	Spot2	Spot color

IMPORTANT

A spot color must be specified for every object printed with white, gloss, or primer ink. This ensures the RIP software and the printer can recognize the print area for the spot color correctly. Configure the settings as indicated below.

Spot color ink	Swatch Name	Color Type
White	Spot 1	Spot color
Gloss	Spot 2	
Primer	Spot 3	

3 Save the print data.

Save the print data in EPS or PDF format.

Creating a RIP File (Without Gloss Finish)

This section describes how to create a RIP file using SAi FlexiPRINT Production Manager 19. For information on how to create files using other RIP software, contact the applicable software distributor.

MEMO

- Selecting an output profile that is suitable for the color set used for spot color printing from the general-purpose profiles available ensures output with optimal color management.
- For basic information on using the RIP software, such as how to set the media size and layout for print data, refer to the Help manual included with the software.

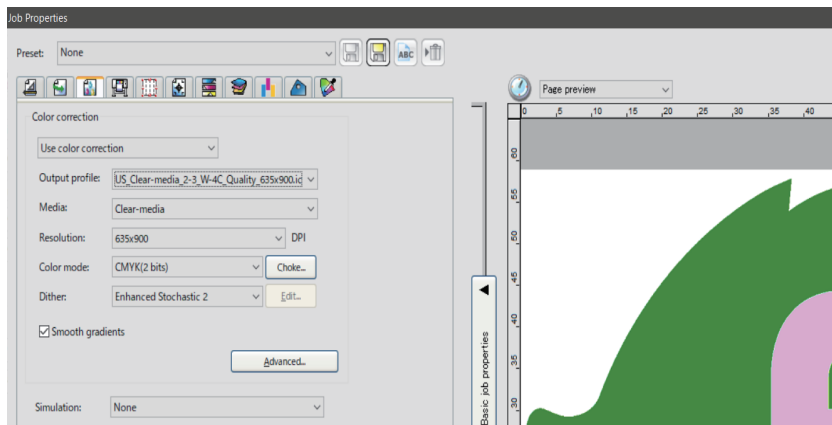
Procedure

1 Read the spot color print data or pattern print data using the RIP software.

Add the print data as a RIP software job.

2 Double-click the added job.

Double-click to open the [Job Properties] window.



3 Click the [Color Management] tab.

Select the best profile for [Output profile].

MEMO

Output profile names are structured according to the following rules. Refer to these rules to select the best profile.

US_Clear-media_2-3_W-4C_Quality_635x900.icc

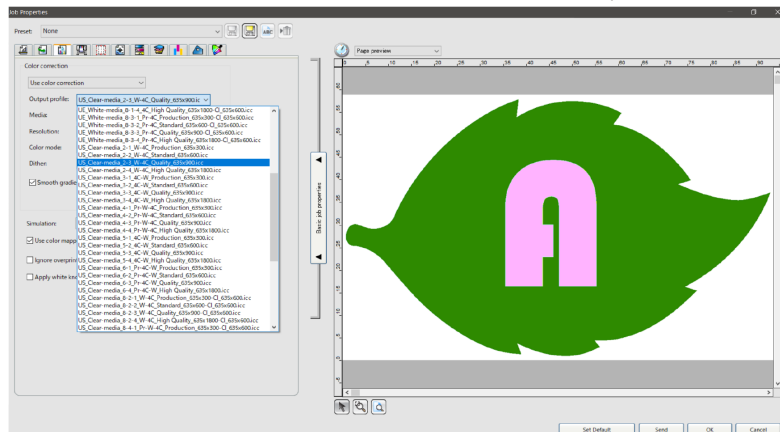
[1] [2] [3] [4]

[1]: Name of ink being used (US: US ink, UE: UE ink)

[2]: Media type (White-media: White background, Clear-media: Transparent)

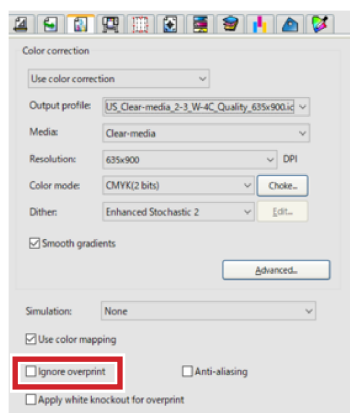
[3]: Color set (W - 4C, Pr - 4C, etc.)

[4]: Print quality and resolution (High Quality: 635 × 1800 dpi, Quality: 635 × 900 dpi, Standard: 635 × 600 dpi, Production: 635 × 300 dpi, Draft: 635 × 300 dpi)



4 Configure the overprint settings.

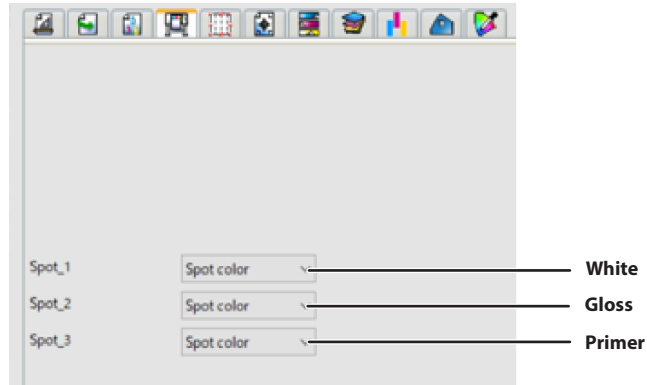
If [Overprint Fill] is set for print data objects, do not check [Ignore overprint] on the [Color Management] tab.



5 Configure the spot color settings.

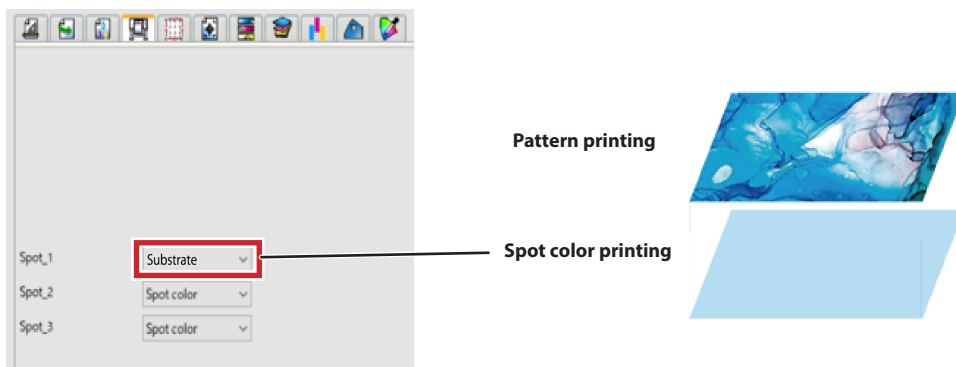
Set each spot channel to [Spot color] on the [Printer Options] tab.

Printing spot color with different shapes and sizes on a non-square pattern



Printing spot color with the same shapes and sizes throughout a square pattern (such as a photo)

* Selecting [Substrate] makes it possible to print bases with the same sizes and shapes on square photos and other patterns without creating print data for spot colors.



6 Perform RIP processing using the print data.

After configuring the job property settings, click the [Send] button to save the file to a folder.

Creating a RIP File (With Gloss Finish)

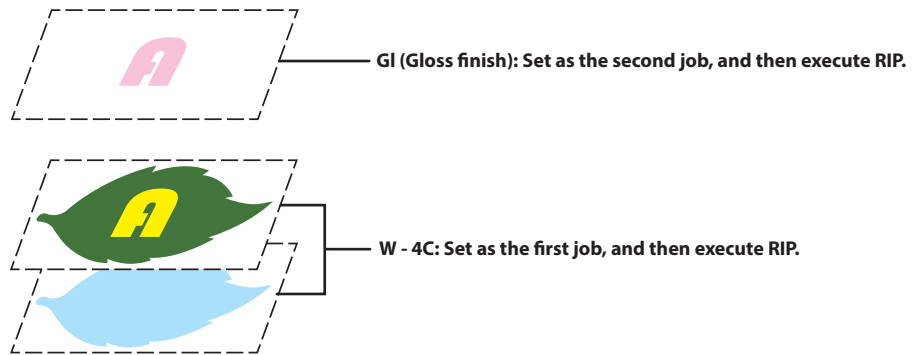
This section describes how to create a RIP file using SAI FlexiPRINT Production Manager 19. For information on how to create files using other RIP software, contact the applicable software distributor.

IMPORTANT

When applying a gloss finish with gloss ink, the job using gloss ink must be different than jobs using other inks. For gloss ink, select the "Standard 635 × 600" profile.

MEMO

- Selecting an output profile that is suitable for the color set used for spot color printing from the general-purpose profiles available ensures output with optimal color management.
- For basic information on using the RIP software, such as how to set the media size and layout for print data, refer to the Help manual included with the software.



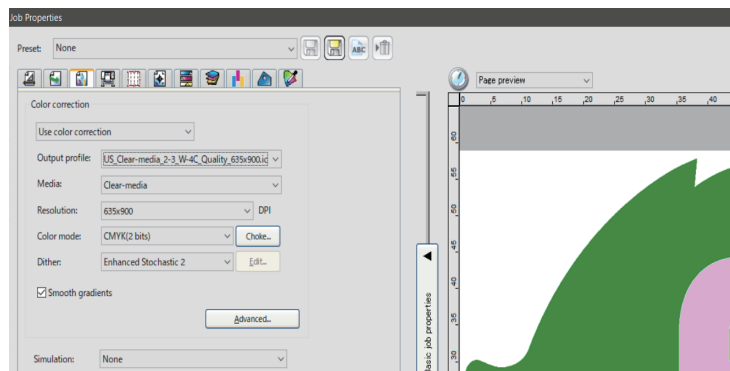
Procedure

1 Read the print data to be set as the first job using the RIP software.

Add the print data as a RIP software job.

2 Double-click the added job.

Double-click to open the [Job Properties] window.



3 Click the [Color Management] tab.

Select the [US_Clear-media_2-4_W-4C_High Quality_635 × 1800.icc] profile for printing color and white data.

MEMO

Output profile names are structured according to the following rules.

US_Clear-media_2-4_W-4C_High Quality_635x1800.icc

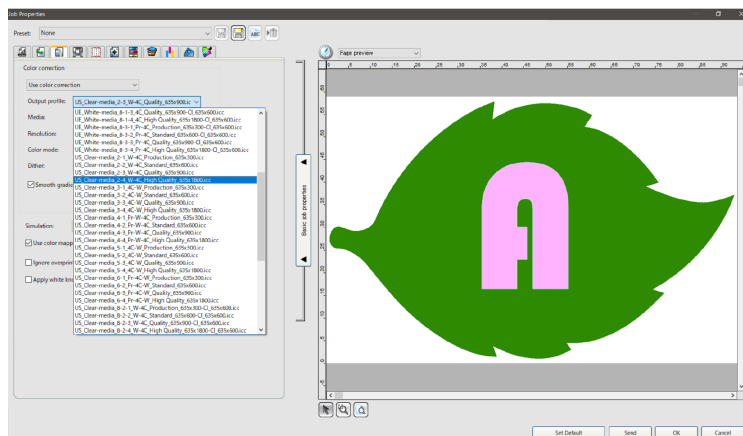
[1] [2] [3] [4]

[1]: Name of ink being used (US: US ink, UE: UE ink)

[2]: Media type (White-media: White background, Clear-media: Transparent)

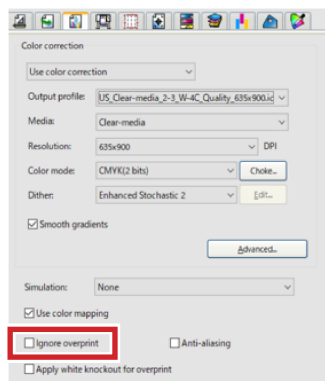
[3]: Color set (W - 4C, Pr - 4C, etc.)

[4]: Print quality and resolution (High Quality: 635 × 1800 dpi, Quality: 635 × 900 dpi, Standard: 635 × 600 dpi, Production: 635 × 300 dpi, Draft: 635 × 300 dpi)



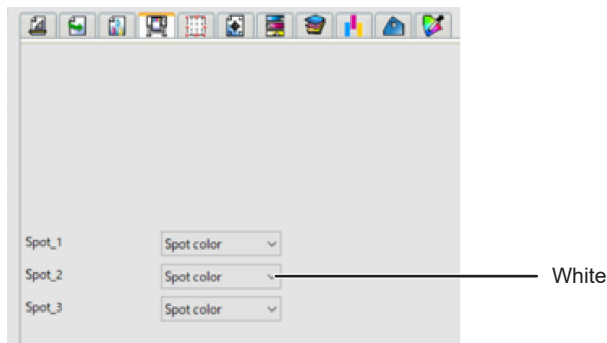
4 Configure the overprint settings.

If [Overprint Fill] is set for print data objects, do not check [Ignore overprint] on the [Color Management] tab.



5 Configure the spot color print settings.

Set each spot channel to [Spot color] on the [Printer Options] tab.



6 Perform RIP processing using the print data.

After configuring the job property settings, click the [Send] button to save the file to a folder.

7 Save the file in any folder.

8 Read the print data to be set as the second job using the RIP software.

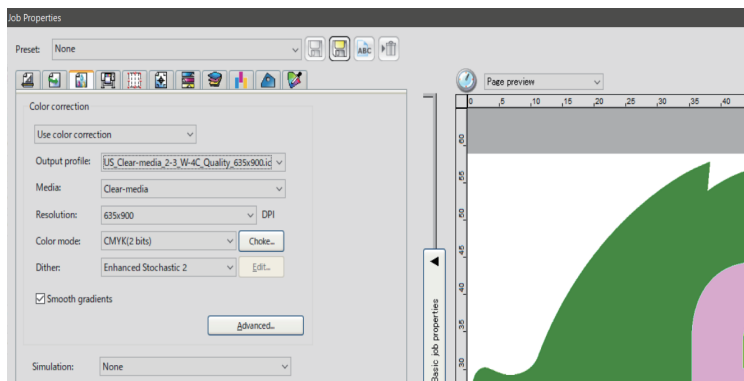
Add the print data as a RIP software job.

9 Double-click the added job.

Double-click to open the [Job Properties] window.

IMPORTANT

Configure the layout settings such as media size and data size the same as for the first job.



10 Click the [Color Management] tab.

Select the [US_White-media_1 - 2_4C_Standard_635 × 600.icc] profile for printing gloss (gloss finish).

MEMO

Output profile names are structured according to the following rules.

US_White-media_1-2_4C_Standard_635x600.icc

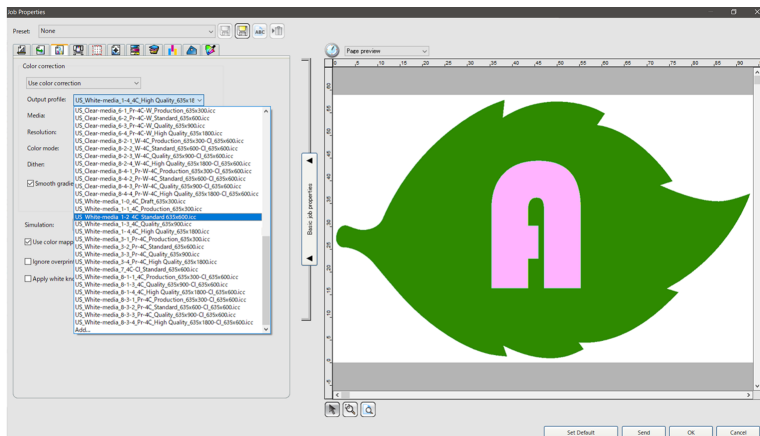
[1] [2] [3] [4]

[1]: Name of ink being used (US: US ink, UE: UE ink)

[2]: Media type (White-media: White background, Clear-media: Transparent)

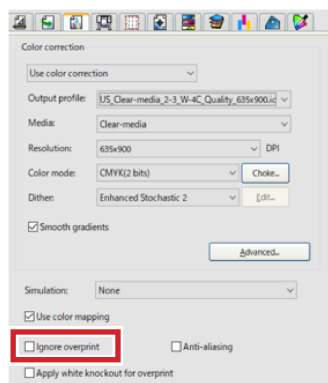
[3]: Color set (W - 4C, Pr - 4C, etc.)

[4]: Print quality and resolution (High Quality: 635 × 1800 dpi, Quality: 635 × 900 dpi, Standard: 635 × 600 dpi, Production: 635 × 300 dpi, Draft: 635 × 300 dpi)



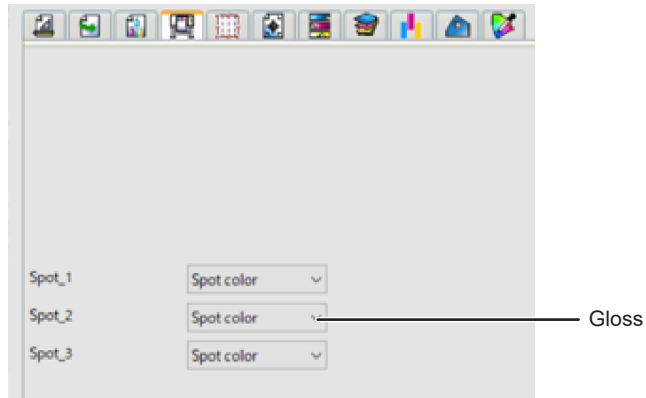
11 Configure the overprint settings.

If [Overprint Fill] is set for print data objects, do not check [Ignore overprint] on the [Color Management] tab.



12 Configure the spot color print settings.

Set each spot channel to [Spot color] on the [Printer Options] tab.

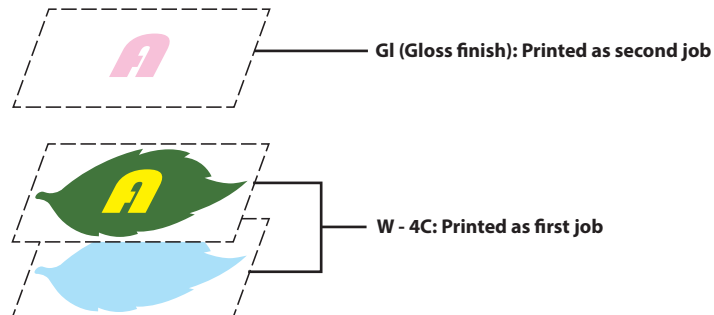


13 Perform RIP processing using the print data.

After configuring the job property settings, click the [Send] button to save the file to a folder.

Outputting Data to the Printer with Print Control

This section describes how to read a file saved through RIP processing using Print Control, and how to output the data to the printer. The following spot color printing example is used here.



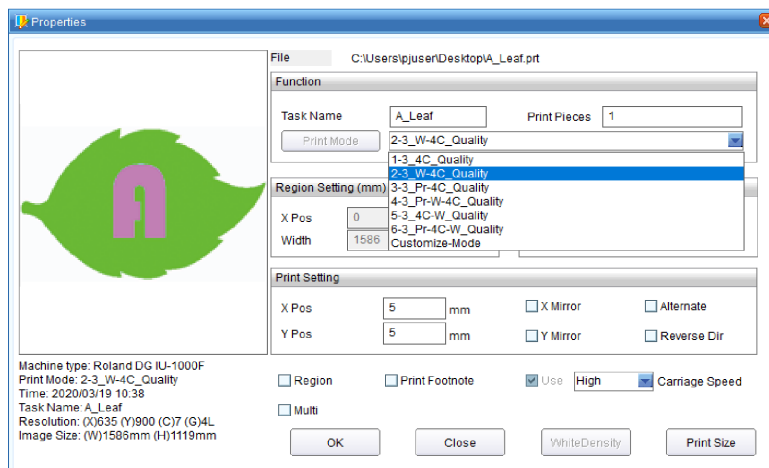
IMPORTANT

When applying a gloss finish with gloss ink, adjust the position of the UV lamp.

☞ "Adjusting the UV Lamp Position" in the Operating Instructions

Procedure

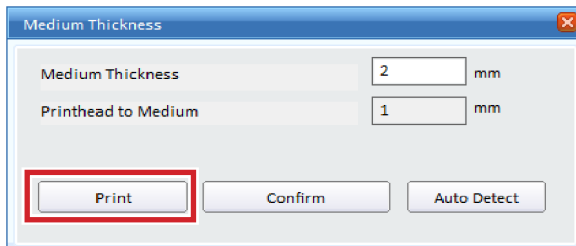
- 1 Start Print Control.
- 2 Under [Task Select], select the directory where the RIP-processed file is saved.
Double-click the file to open the [Properties] window.
- 3 Select [2 - 3 W - 4C] for the color set.



4 Click [OK].

The [Medium Thickness] window appears. Click [Print].

Printing starts.



5 Adjust the UV lamp position.

Adjust the position of the UV lamp so that it is in the position for gloss finish with gloss ink.

☞ "Adjusting the UV Lamp Position" in the Operating Instructions

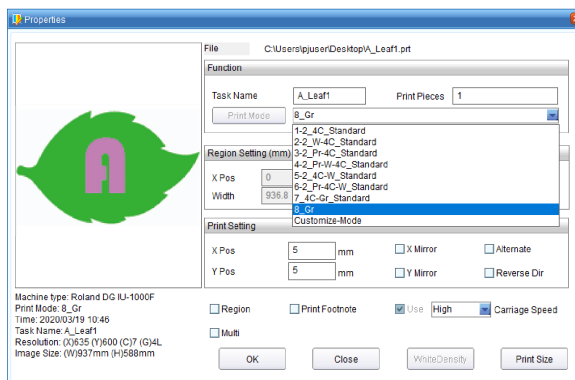
6 Select the second job for gloss ink finishing.

Double-click the file to open the [Properties] window.

7 Select [8_GI].

MEMO

The [8_GI] color set can only be selected if RIP was performed in Standard 635 × 600 dpi mode.



8 Click [OK].

The [Medium Thickness] window appears. Click [Print].

Printing starts, and the gloss ink is printed on the W-4C.

