

Raster Link 7

Variable Print Guide

Procedure for
Creating and Printing Variable Print Data

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Introduction

This guide describes how to use the RasterLink7 software that comes with the Mimaki printer for variable printing and setup. For details of RasterLink7 operation procedures, refer to the RasterLink7 Reference Guide and other related manuals.

Precautions

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About this Guide

Notation used in this guide

- The buttons and items displayed in screens are enclosed in square brackets, such as [OK] and [Open].

Symbols used in this guide

Description		
	Important	The "Important" symbol represents information you must be familiar with when using this tool.
	Mandatory action sign	Indicates an action that must be carried out. The specifics of the mandatory action are drawn inside the symbol.
	Tip	The "Tip" symbol represents useful information to know.
	Reference information	Indicates the corresponding page for related information. Clicking the symbol takes you to the applicable page.

How to obtain this guide and related documents

The latest versions of this guide and related documents are available at the following location:

- Our official site (<https://mimaki.com/download/software.html>)

Chapter 1 Procedure for Creating and Printing Data



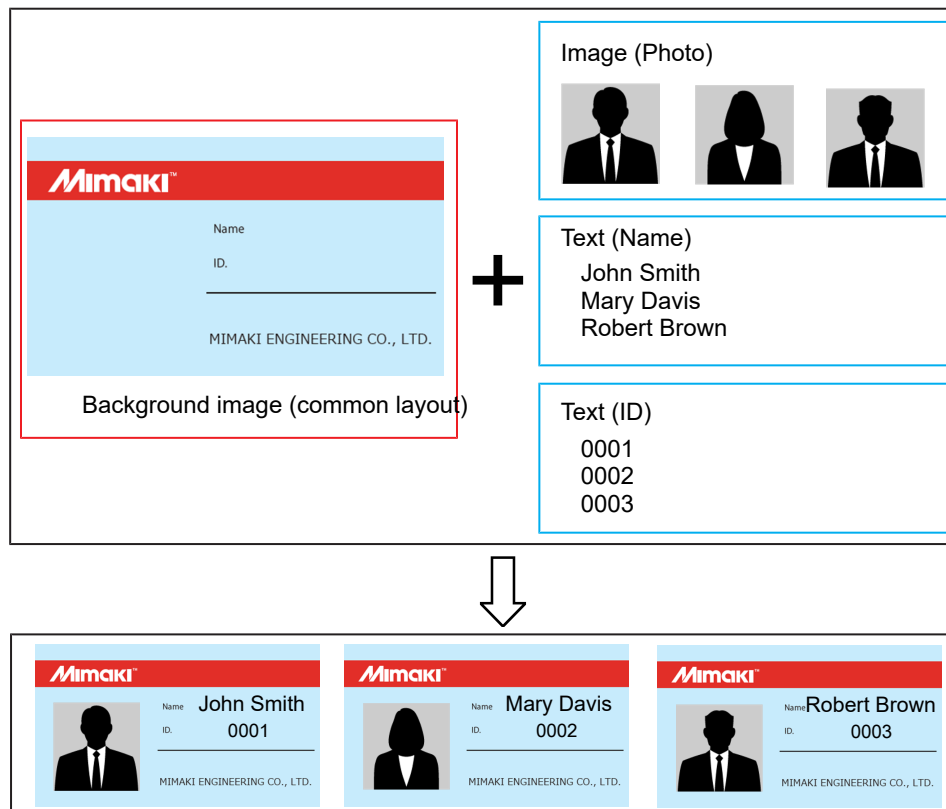
This chapter

This chapter describes how to create and print data for variable printing.

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1.1 What is Variable Printing?

Variable printing refers to producing prints by filling out a background image with variable data such as names and photos.



This chapter describes the procedure from creating a background image to creating data for variable printing and producing prints.

The following software programs are used:

1. Adobe Illustrator
2. Microsoft Excel
3. RasterLink7

1.2 Workflow

1. [Design Software] Create a background image.

 "1. Create the background image."(P. 8)

2. [Camera] Prepare face photos.

 "2. Prepare face photos."(P. 8)

3. [Excel] Create the database.

 "3. Create the database."(P. 9)

4. [RasterLink7] Load the background image.

 "4. Load a background image."(P. 11)

5. [RasterLink7] Open the Variable Edit screen.

 "5. Open the Variable Edit screen."(P. 11)

6. [RasterLink7] Load the database.

 "6. Load the database."(P. 12)

7. [RasterLink7] Enter the variable print setting name.

 "7. Enter the variable print setting name."(P. 13)

8. [RasterLink7] Set up the variable areas.

 "8. Set up the variable areas."(P. 13)

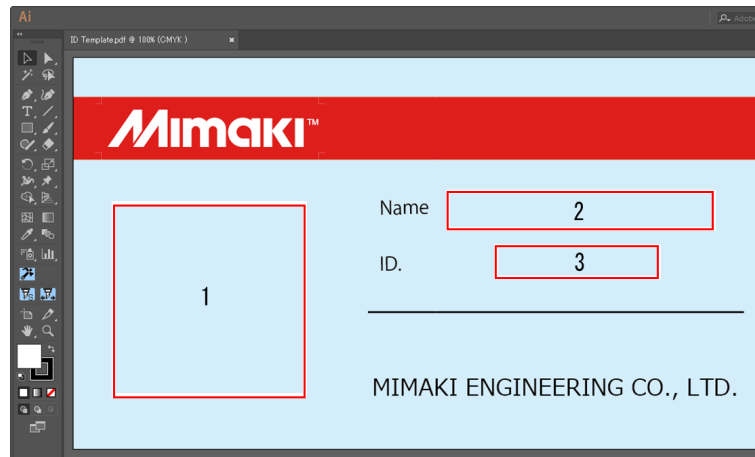
9. [RasterLink7] Print.

 "9. Print."(P. 18)

1.3 Procedure

1. Create the background image.

- 1 Create a background image including the areas to insert data (red dashed lines).



1	Area to insert the photo
2	Area to insert the name
3	Area to insert the ID number

- 2 Save the created background image.

- Background images can be saved in any of the following three formats:
PDF, EPS, PS

2. Prepare face photos.

Prepare photos to be inserted.

In this example, portrait photos are used.



- The size of the image does not need to be adjusted to fit the insertion area.
- It can be adjusted later in RasterLink.
- The following two file formats can be used:
JPEG, TIFF

3. Create the database.

Create the database to be inserted in the background image.

● To create the database in Excel

Image	Name	ID
C:\Document\VariableData\Picture1.jpg	John Smith	0001
C:\Document\VariableData\Picture2.jpg	Mary Davis	0002
C:\Document\VariableData\Picture3.jpg	Robert Brown	0003

1	Column name (Header)	Enter a "header" name in the first line of each column. Be sure to create the column name as it is used as the item name for variable print settings.
2	Data to be inserted (Data section) - If you want to insert the image, enter the file path of the image. - If you want to insert the character string, enter the character string.	Image File path = "Image file location" + "\" + "File name" - Image file location: Right-click the image file in Windows Explorer and select [Properties]. [Location] in the [General] tab, "Image file location" is displayed. - File name: Name of the file with extension. For example, the JPEG image file extension is ".jpg".

- Up to 30 columns can be set. Up to 1000 rows can be set.
- Save the database created in Excel in the **"CSV UTF-8 (comma-separated)"** format.

Important!

- If you cannot save the database in the "CSV UTF-8 (comma-separated)" format in Excel, you need to save it in the "CSV (comma-separated)" format in Excel, and then save it in the UTF-8 format in Notepad.
For details, refer to ["To save the database in the UTF-8 format"\(P. 9\)](#) on this page.

● To save the database in the UTF-8 format

1 Open the database created in Excel in Notepad.

- Right-click the database in Windows Explorer, and select [Open with] - [Notepad].

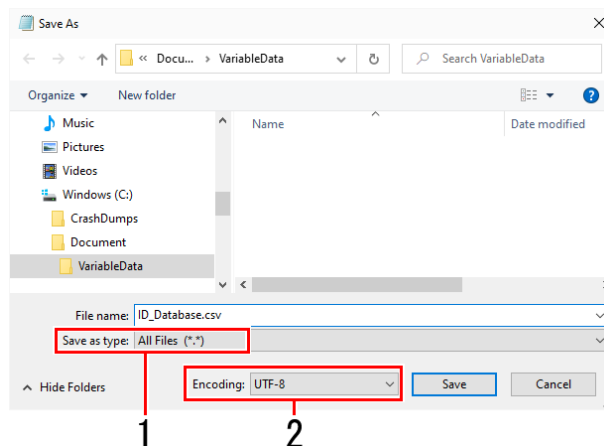
```

ID_Database.csv - Notepad
File Edit Format View Help
Image,Name,ID
C:\Document\VariableData\Picture1.jpg,John Smith,0001
C:\Document\VariableData\Picture2.jpg,Mary Davis,0002
C:\Document\VariableData\Picture3.jpg,Robert Brown,0003

```

2 Click [File] - [Save As].

3 Select the following conditions and then click [Save].



1	Save as type	Select "All files (*.*)".
2	Encoding	Select "UTF-8".

● To create the database on the RasterLink7 screen

Databases can be created, updated, and saved using the Variable Print screen.



1		Select and load a database (CSV file).
2		Save the details currently displayed on the screen to the database (CSV) file.
3		Add a column to the database (CSV file). This button is used to create a new database.
4		Add a row to the database (CSV file).
5		Delete a column from the currently selected database (CSV file).
6		Delete a row from the currently selected database (CSV file).

1 : Add a column to the database.

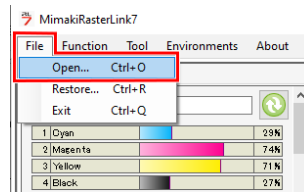
2  : Create a database by adding columns and rows as desired.

3 : Save the database to a file.

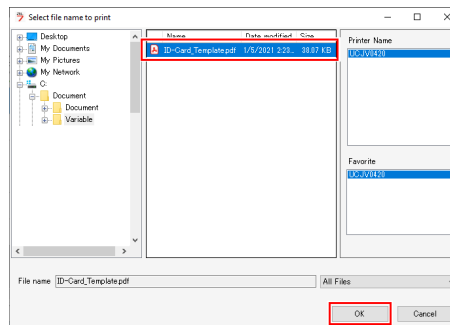
4. Load a background image.

Load the background image created in  "1. Create the background image." (P. 8) to RasterLink.

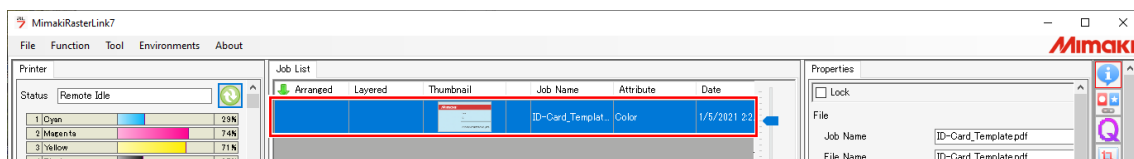
1 Select [File] - [Open] menu.



2 Select a background image from the [Select file name to print] dialog and then click [OK].

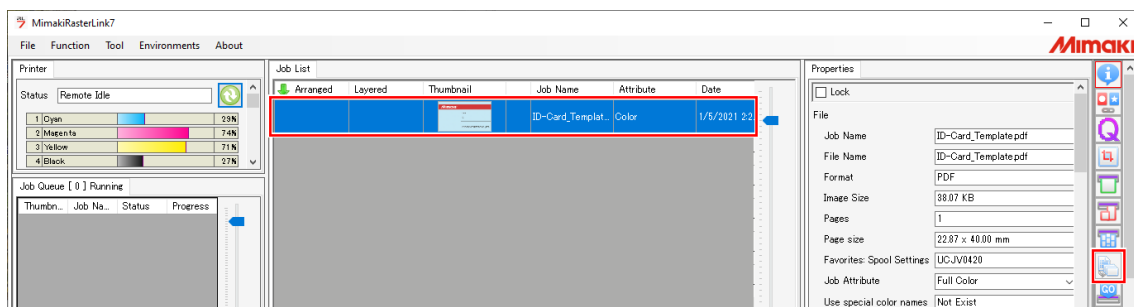


3 Check that the entered background image appears in the job list.



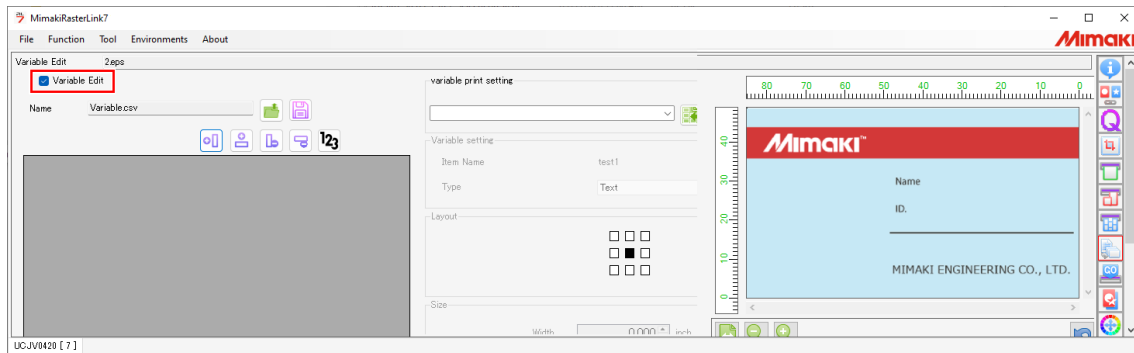
5. Open the Variable Edit screen.

1 Select the loaded background image, then select the Variable Edit icon.



2 Check the Variable Edit checkbox.

- Checking the checkbox allows you to set up variable printing and produce prints.
- If you wish to print the background image only, uncheck the check box.



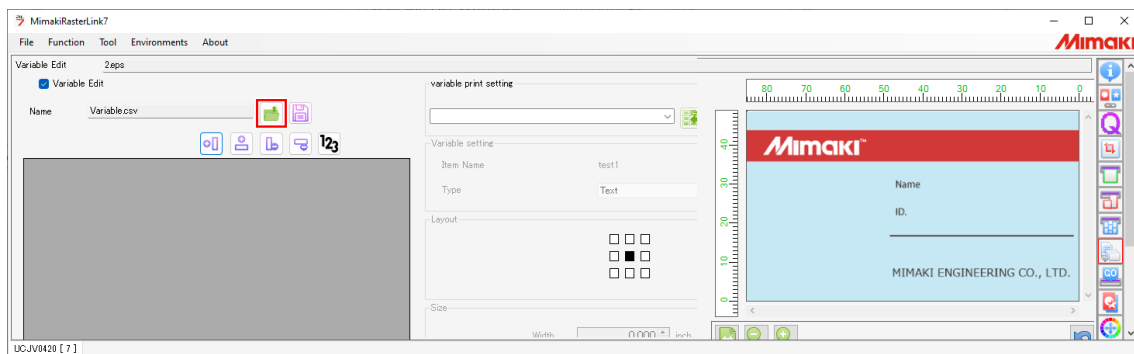
6. Load the database.

Load the database created in "3. Create the database."(P. 9).

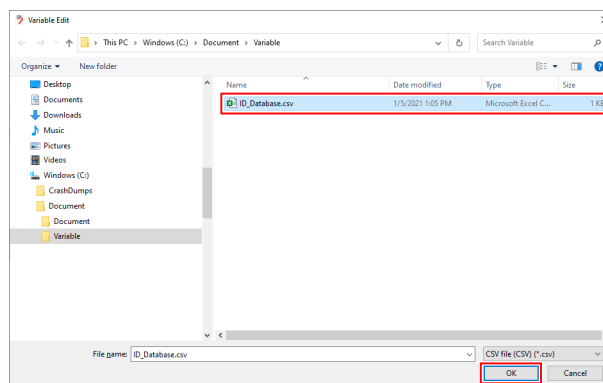


- There is no need to load the database if it was created on the Variable Edit screen.

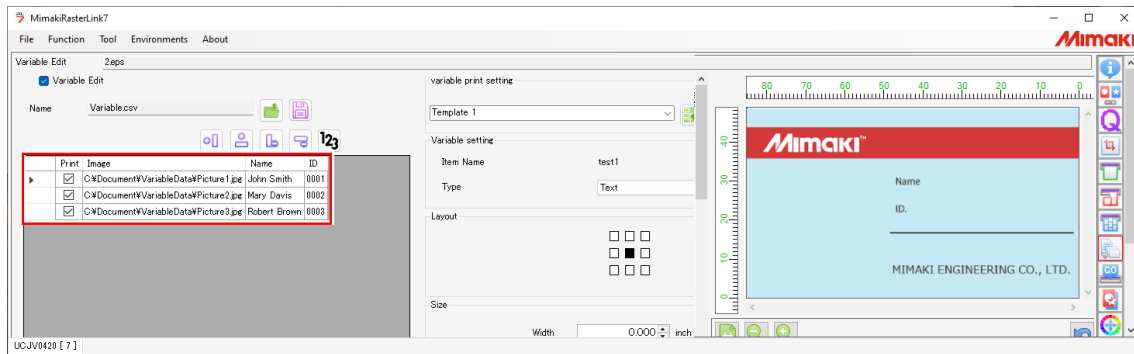
1 Click the button for loading the database (CSV file).



2 Select the database file to be loaded from the [Variable Edit] dialog and then click [Open].



3 Check that the loaded database is displayed.



7. Enter the variable print setting name.

Enter the desired variable print setting name, then click .



- Variable conditions cannot be set (the screen will not become active) unless a variable print setting name is entered.
- If a variable print setting name has been entered, the variable conditions will be saved automatically when exiting the screen.

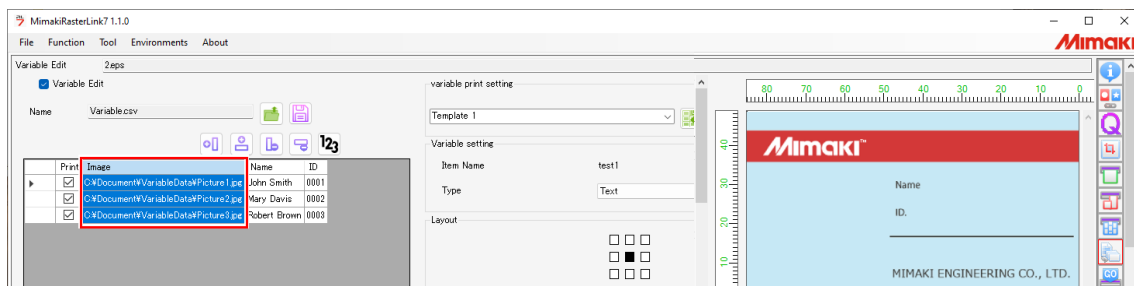


- Selecting a saved variable print setting eliminates having to reset the conditions for the variable area.

8. Set up the variable areas.

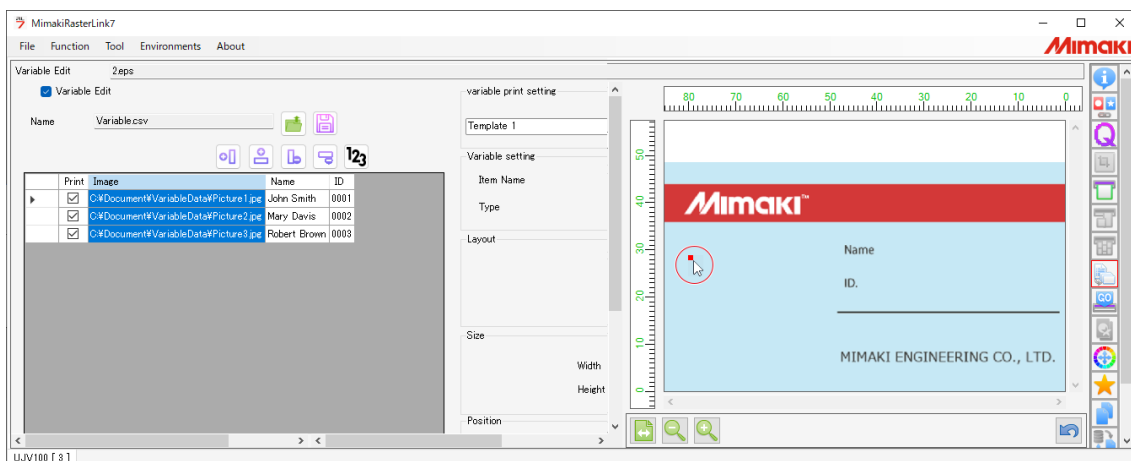
- To insert an image

1 Select the column name (Image) on the list at the upper left. (The entire column is selected.)



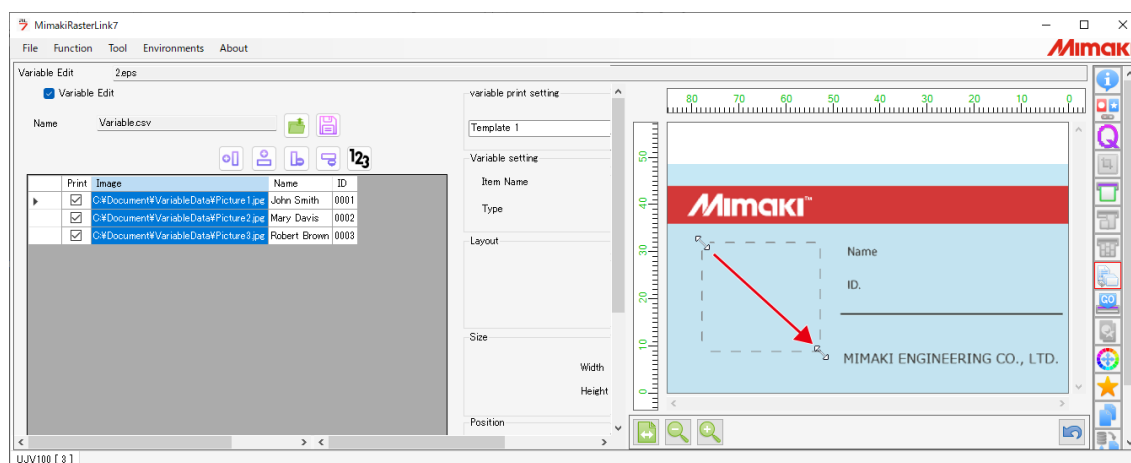
2 Specify the size and position of the variable area.

(1) Check to confirm that a red dot is displayed on the lower right preview window.



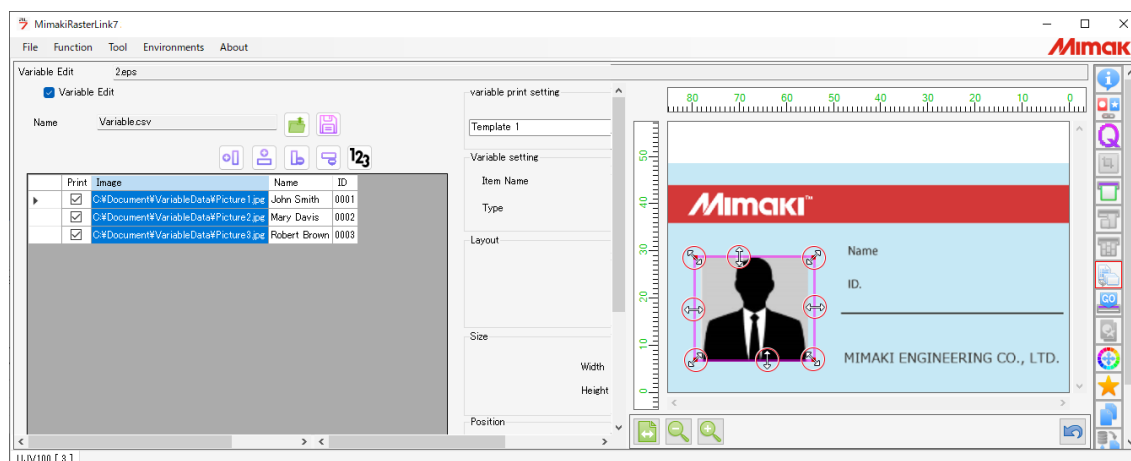
(2) Click and drag the red dot at the upper left of the variable area diagonally to the lower right to specify the variable area.

- The variable area size and position is set and the variable area is indicated by a magenta frame.
- The corresponding values are automatically updated for [Width] and [Height] in [Size] and for [Scan] and [Feed] in [Position].



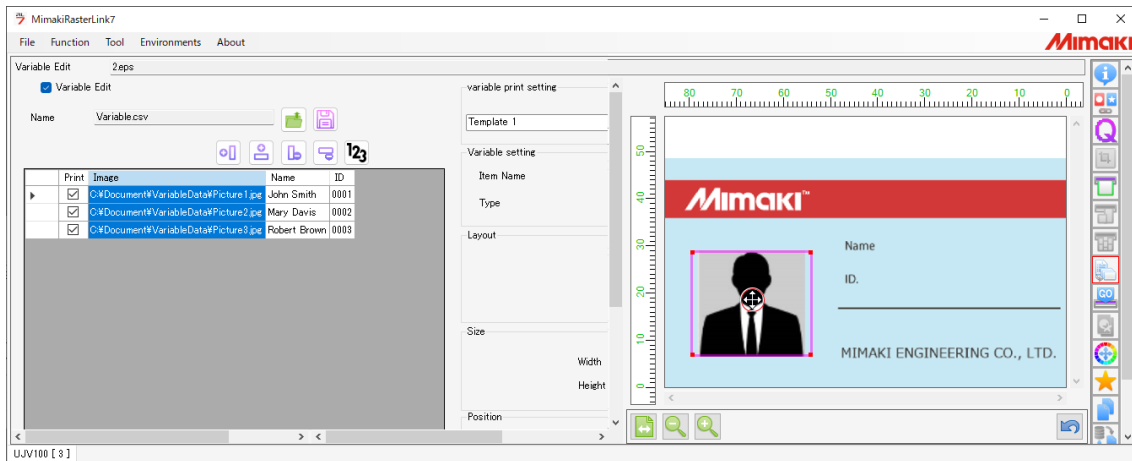
(3) Adjust the size of the variable area.

- When the cursor is moved over the magenta frame of the variable area, it changes to a horizontal, vertical, or diagonal cursor. The horizontal, vertical, or diagonal cursor can be dragged to alter the area size.



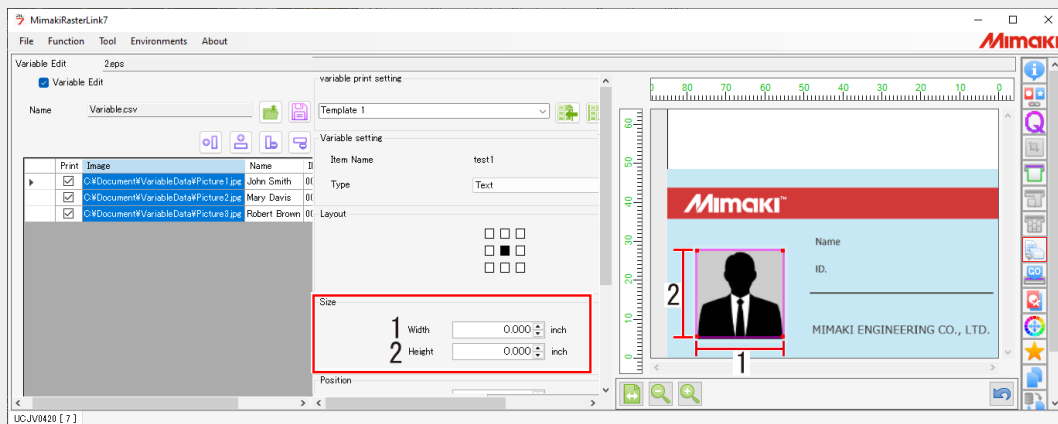
(4) Adjust the position of the variable area.

- When the cursor is moved over the variable area, it changes to a cross-shape cursor. The cross-shape cursor can be dragged to alter the area position.

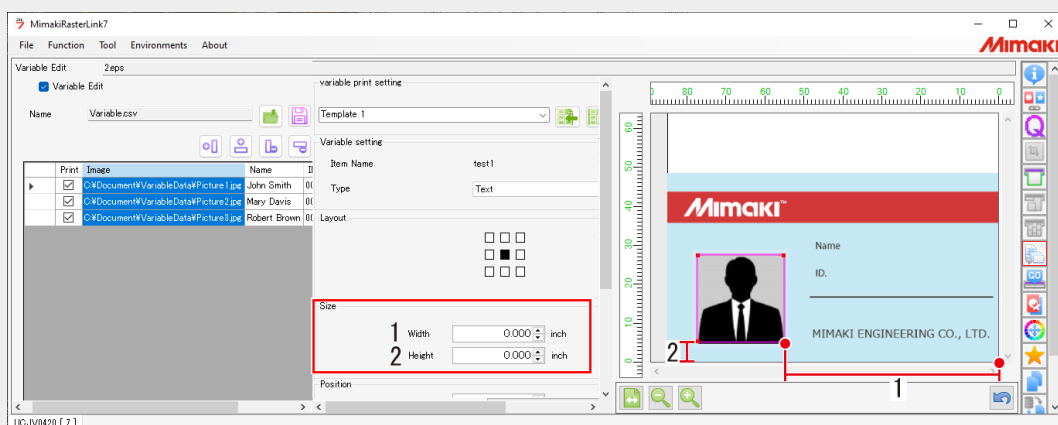


The variable area size and position can also be altered by directly entering the desired values for [Size] and [Position].

- Enter the size ([Width], [Height]) of the variable area. The size entered is indicated by a magenta frame on the preview window.

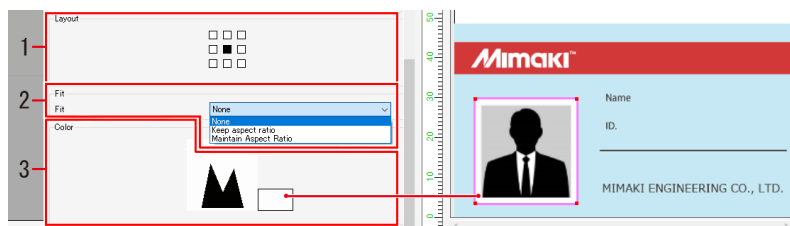


- Position the variable area by entering the [Feed] and [Scan] values from the lower right of the preview window. The variable area is repositioned at the position entered.



- Be sure to select the column name to be altered at the upper left before altering the variable area size and position on the preview window. The variable area cannot be selected on the preview window.

3 Set the layout and color.



1	Layout	Specifies the layout of the variable area.
2	Fit	• [None]: The image is displayed at its actual size. • [Keep aspect ratio]: The image is displayed with the aspect ratio fixed to that of the frame set in step 2. • [Maintain Aspect Ratio]: The image is displayed so that it fits the frame set in step 2.
3	Color	Specifies the color used for margins if the image size differs from the frame set in step 2. (If not specified, the background color will be used.)

● To insert text

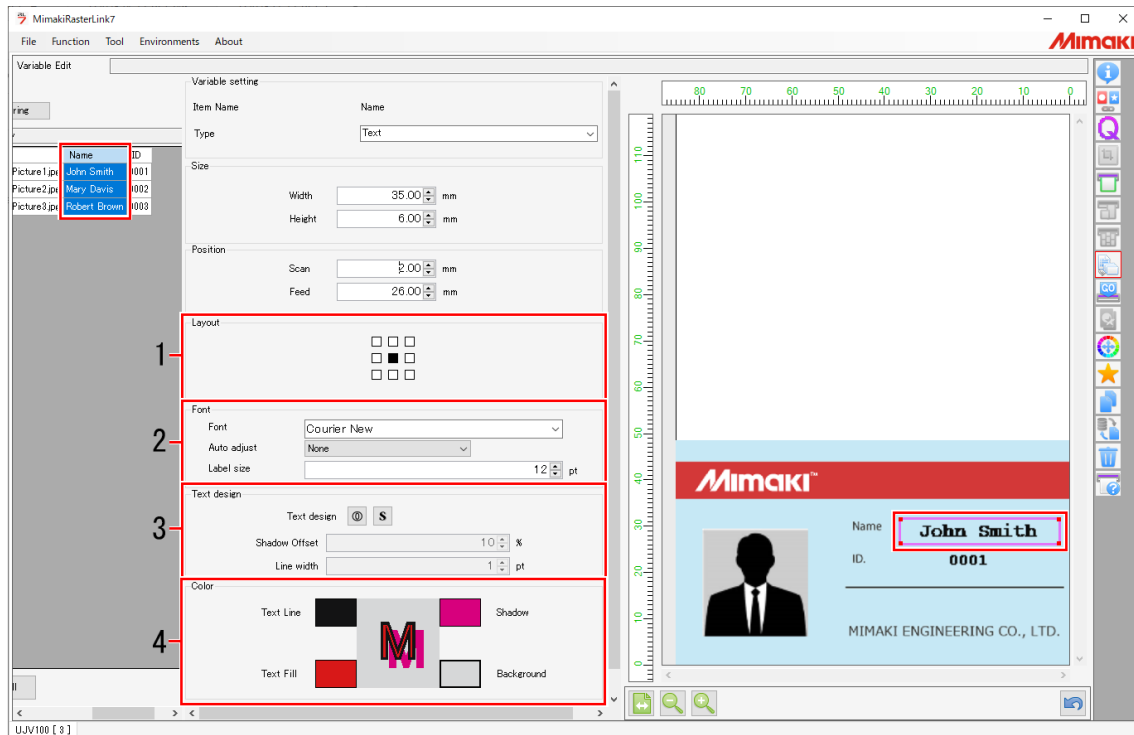
1 Select the column name (Name). (The entire column is selected.)

2 Specify the size and position of the variable area.

- For details, refer to "Specify the size and position"(P. 14).

3 Set the layout and color.

- For details, refer to  "Set the layout and color." (P. 28).



1	Layout	Specifies the layout of the variable area.
2	Font	Specifies the text font and size and whether or not automatic adjustment is used.
3	Text design	Specifies text outlines, bold font, italics, and underlining.
4	Color	Specifies the text outline, shadow, fill, and background colors.



- Right-clicking a column name or cell displays the [Copy setting]/[Paste setting] menu, allowing the settings to be copied.

Example:

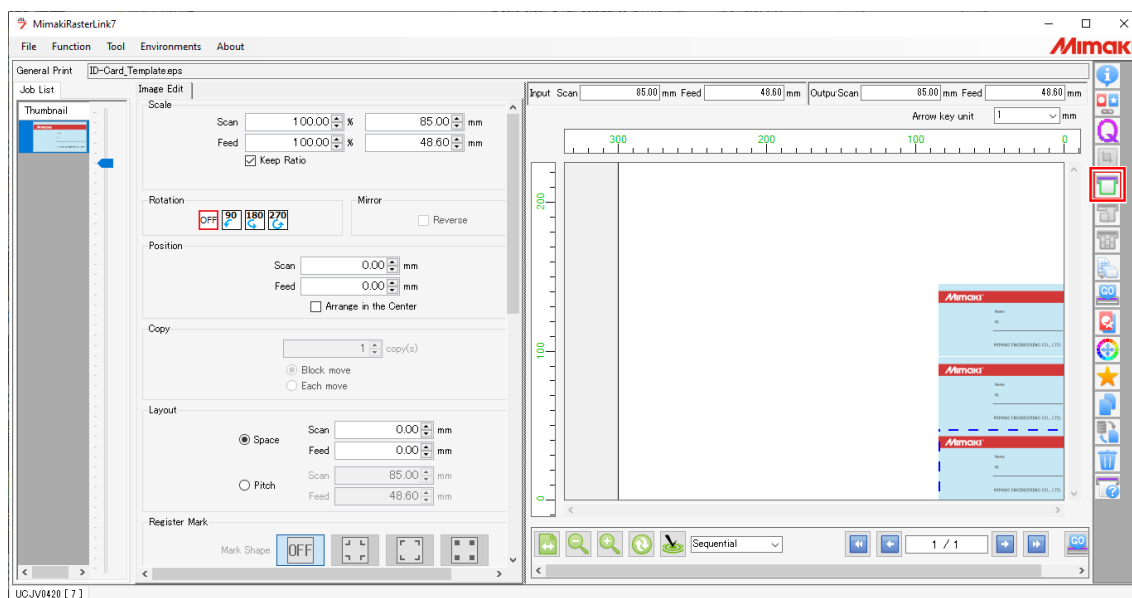
- Select the source cell, right-click, then click [Copy setting].
- Select the target cell, right-click, then click [Paste setting].
 - The condition settings are copied from the source cell to the target cell.

Print	Photo	Name	ID
☒	D:\RL7_SamplePicture\VariableData\IDphoto\IDphoto1.jpg	John Smith	1001
☒	D:\RL7_SamplePicture\VariableData\IDphoto\IDphoto2.jpg	Mary Davis	
☒	D:\RL7_SamplePicture\VariableData\IDphoto\IDphoto3.jpg	Robert Brown	

Copy setting
Paste setting

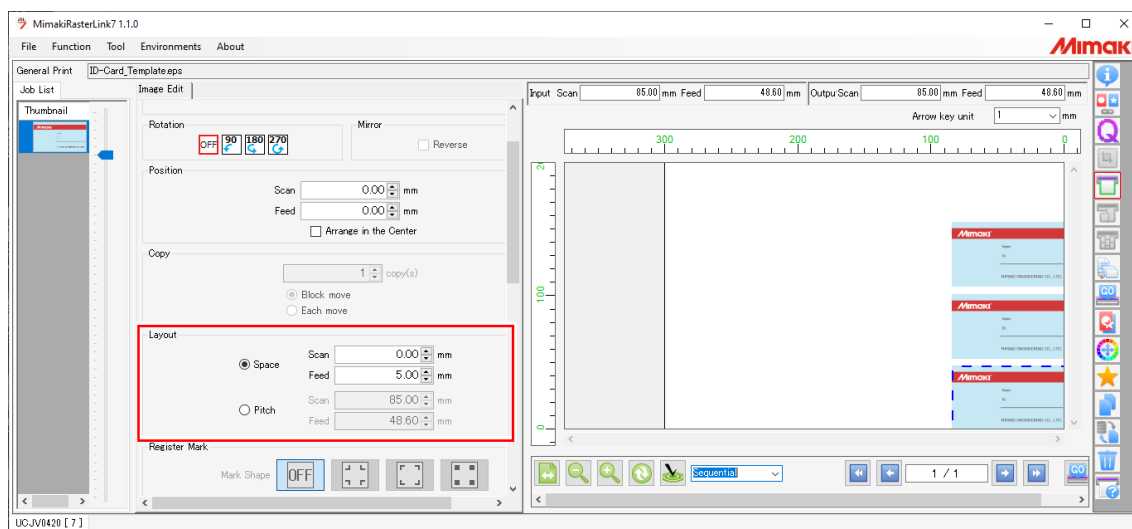
9. Print.

- 1 Select the [General Print] icon  and check the print layout.



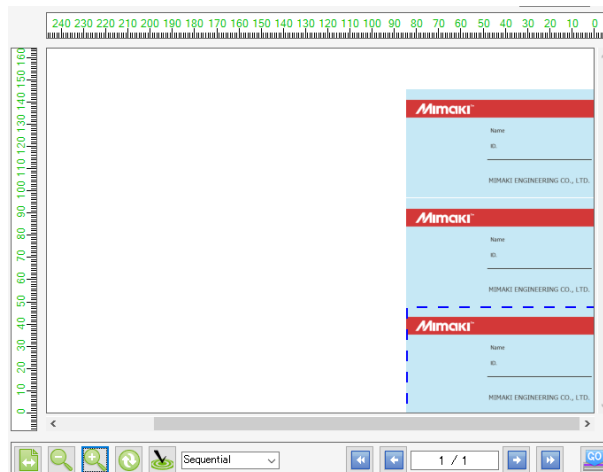
- 2 If you wish to insert space between data, enter the space values in [Layout].

- Scan: Left and right margins
- Feed: Top and bottom margins

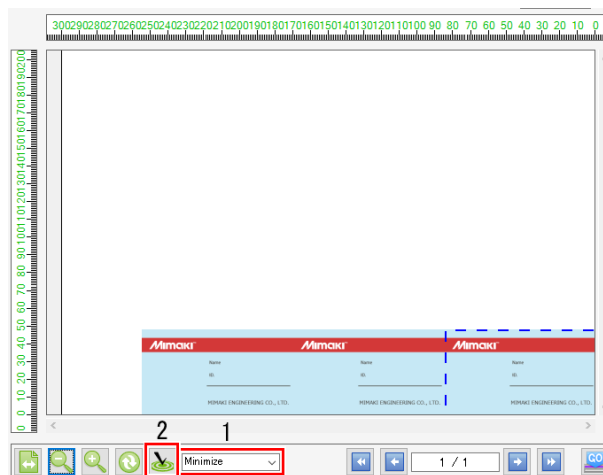


3 Vertical/horizontal arrangement

- By default, print images are arranged vertically.



- Click [Rearrangement], then select [Minimize] to rearrange images horizontally.

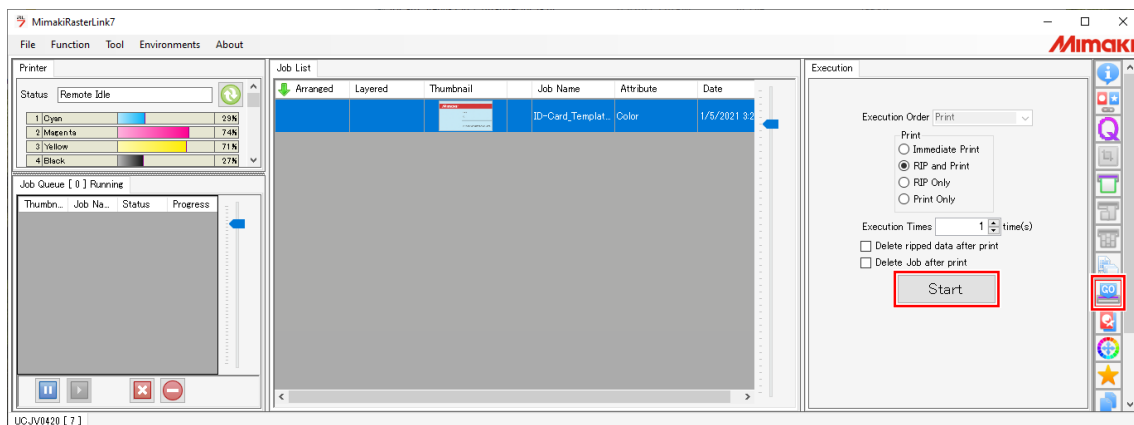


4 Select the execution icon , then click [Start].

- If there is text, test print only one line to check for setting errors and garbled characters.

Important! Depending on the combination of font and text, the following error message appears and the data cannot be printed. If the following error message is displayed, set the font to [MS Gothic] or [Yu Gothic].

- "The selected font cannot be used. Please select font again."



Chapter 2 Numbering Function



This chapter

This chapter describes the procedure for variable printing using the numbering function.

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2.1 What is the Numbering Function?

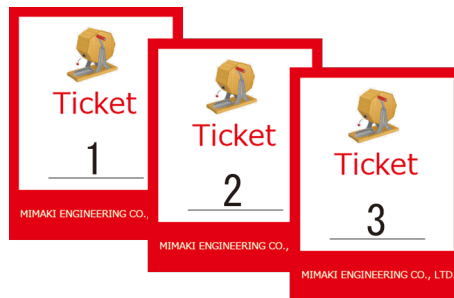
The numbering function is a function that allows numerical values to be incremented or decremented before insertion.

This chapter describes the procedure from creating a background image (common layout) to creating data for variable printing and producing prints.

The following software programs are used:

1. Adobe Illustrator
2. RasterLink7

● Sample lottery tickets



Cases for which the numbering function is effective

- Mass printing data for which only numbered data is inserted.
Example: Event lottery ticket numbers
- Inserting simple rule-based numbering.
Example: Serial numbers for limited-run products

2.2 Workflow

1. [Design Software] Create a background image.

 "1. Create the background image."(P. 24)

2. [RasterLink7] Load the background image.

 "2. Load a background image."(P. 24)

3. [RasterLink7] Open the Variable Edit screen.

 "3. Open the Variable Edit screen."(P. 25)

4. [RasterLink7] Set up numbering.

 "4. Set up numbering."(P. 25)

5. [RasterLink7] Enter the variable print setting name.

 "5. Enter the variable print setting name."(P. 27)

6. [RasterLink7] Set up the variable areas.

 "6. Set up the variable areas."(P. 27)

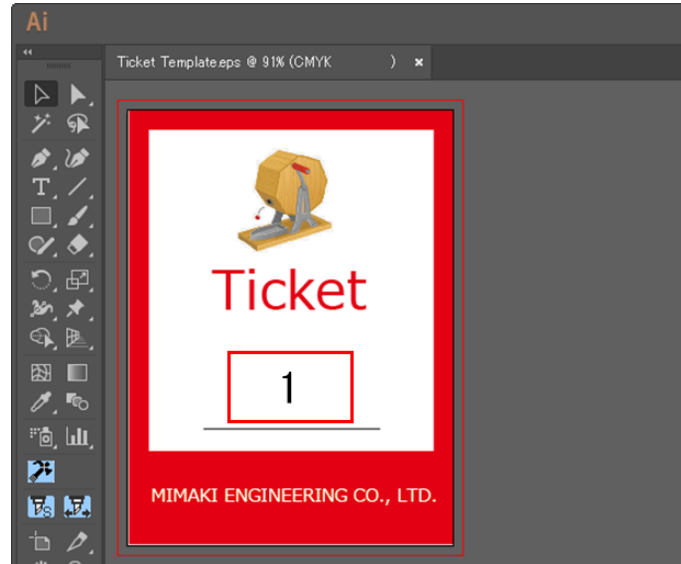
7. [RasterLink7] Print.

 "7. Print."(P. 29)

2.3 Procedure

1. Create the background image.

- 1 Create a background image including the areas to insert data (red dashed lines).



1	Area to insert numbering
---	--------------------------

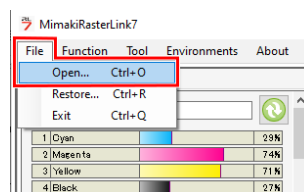
2 Save the created background image.

- Background images can be saved in any of the following three formats:
PDF, EPS, PS

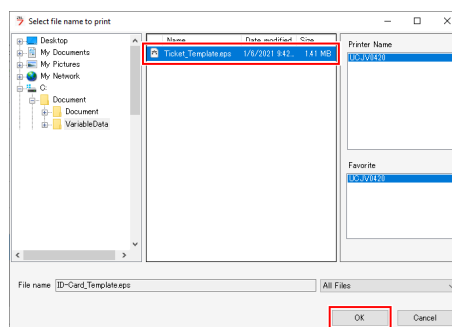
2. Load a background image.

Load the background image created in "1. Create the background image."(P. 24) to RasterLink.

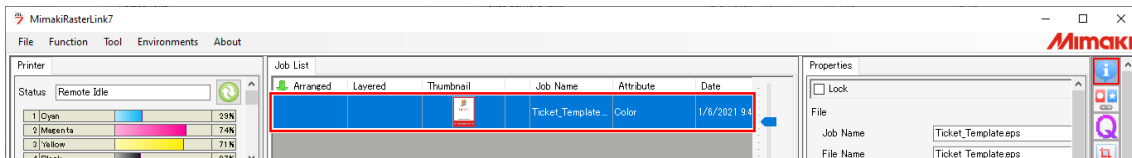
- 1 Select [File] - [Open] menu.



- 2 Select a background image from the [Select file name to print] dialog and then click [OK].

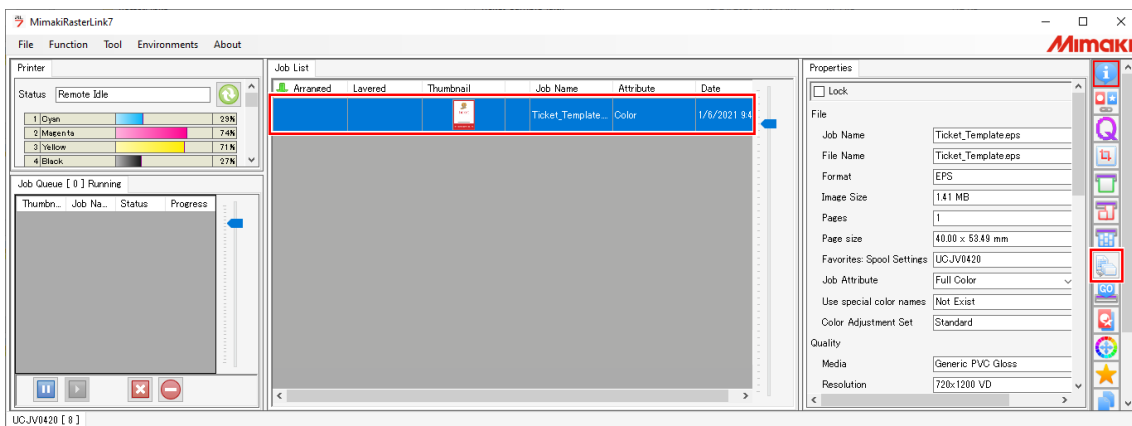


3 Check that the entered background image appears in the job list.



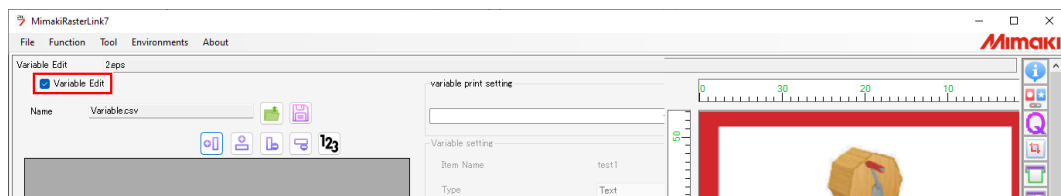
3. Open the Variable Edit screen.

1 Select the loaded background image, then select the Variable Edit icon.



2 Select the Variable Edit check box.

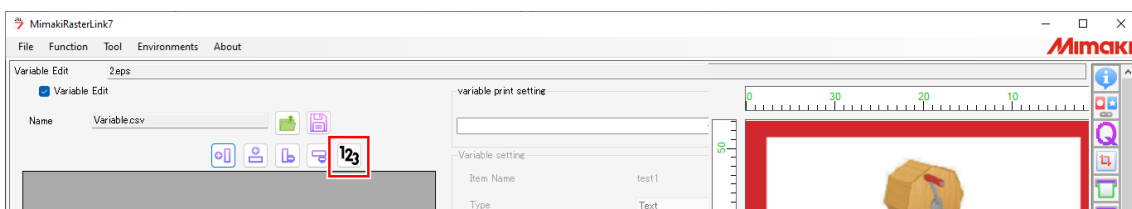
- Checking Variable Edit allows you to set up variable print and produce prints.
- If you wish to print the background image only, uncheck the check box.



4. Set up numbering.

Add the numbering data.

1 Click the [Add Numbering] icon.



2 Fill in the numbering setting fields.

- Only positive integers can be generated.
- The maximum number of digits that can be generated is 9.

The 'Edit Numbering' dialog box contains the following fields:

- 1 Start value: 1
- 2 Increment value: 1
- 3 End value: 20
- 4 Number of digits: 0
- 5 Prefix: (empty) Suffix: (empty)

1	Start value	Specifies the value from which numbering starts.
2	Increment value	Specifies the amount by which the value is incremented or decremented.
3	End value	Specifies the value at which numbering ends.
4	Number of digits	Specifies the number of digits to be zero-filled.
5	Prefix/Suffix	Specifies the characters to be added before or after the numbers. For example, No. 001

3 Click [OK] in the [Edit Numbering] dialog.

The 'Edit Numbering' dialog box is shown with the 'OK' button highlighted in a red box.

- The numbering data column is generated.

The screenshot shows the MimakiRasterLink7 software interface. On the left, the 'Variable Edit' dialog is open, showing a list of variables with checkboxes. On the right, a 'Ticket' template is displayed with a red border and the text 'Ticket' and 'MIMAKI ENGINEERING CO., LTD.'.



If the database has been loaded in advance, the numbering data column is added as shown below.

Example: Adding an employee ID numbering data column to an employee ID database

The image shows two screenshots of the 'Variable Edit' dialog. The left screenshot shows the 'Variable Edit' dialog with a list of variables. The right screenshot shows the same dialog with an additional 'Number3' column added to the list, highlighted in a red box.

- The numbering data is automatically added for the data which has already been loaded.
- If the number of data is less than the set value in [End value] (the value to end numbering), the numbering data rows after the End value are left blank.

5. Enter the variable print setting name.

Enter the desired variable print setting name, then click .

Important!

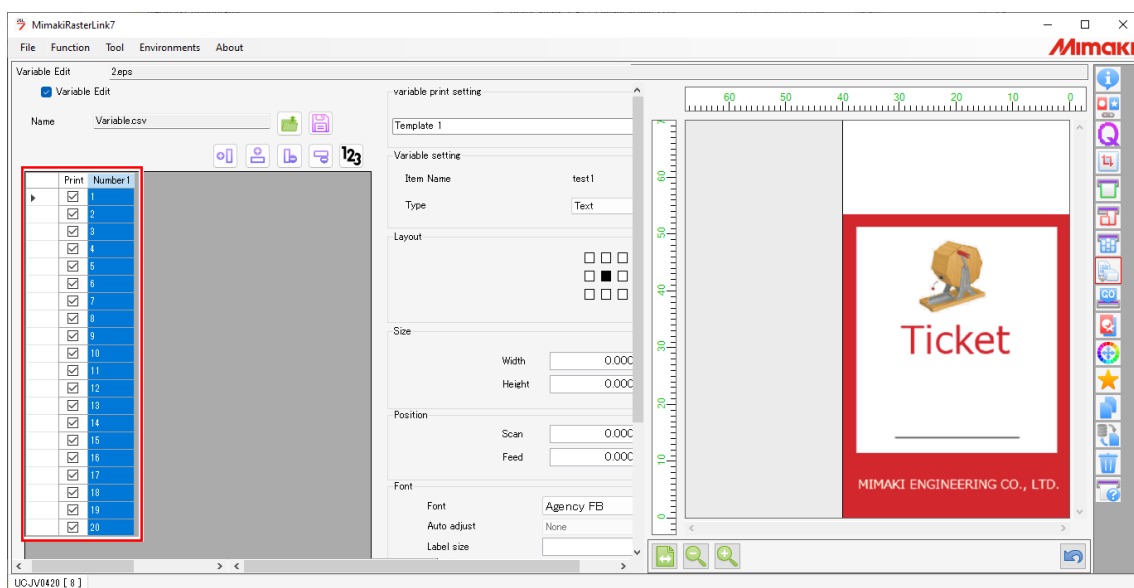
- Variable conditions cannot be set (the screen will not become active) unless a variable print setting name is entered.
- If a variable print setting name has been entered, the variable conditions will be saved automatically when exiting the screen.



- Selecting a saved variable print setting eliminates having to reset the conditions for the variable area.

6. Set up the variable areas.

1 Select the column name. (The entire column is selected.)

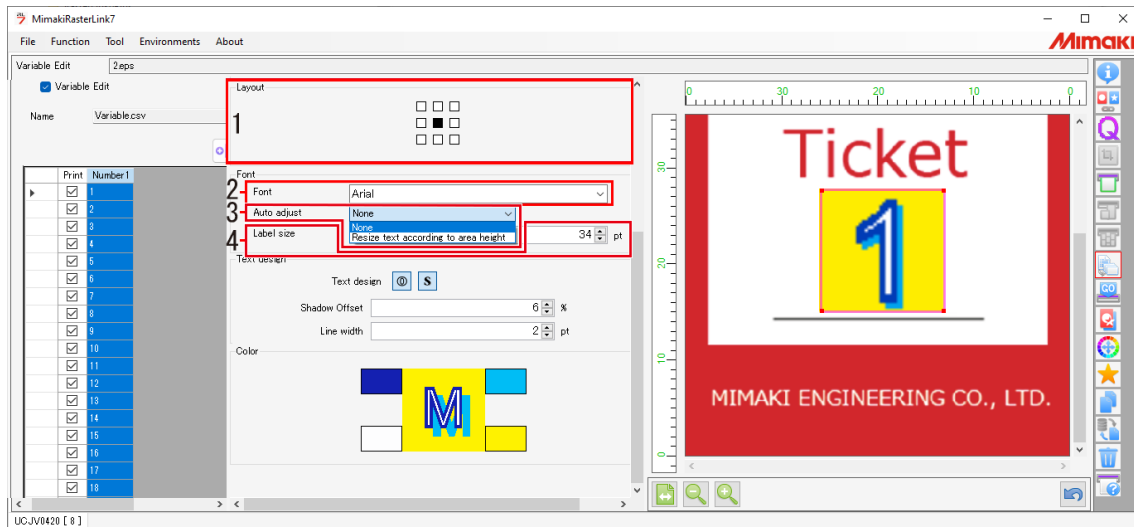


2 Specify the size and position of the variable area.

- For details, refer to  "Specify the size and position"(P. 14).

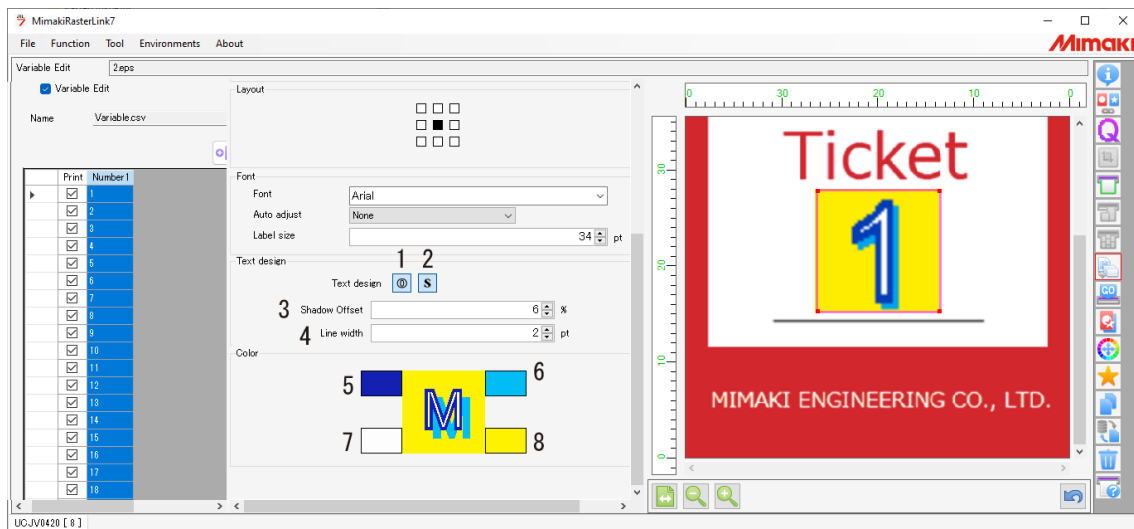
3 Set the layout and color.

- Layout and font setting



1	Layout	Selects the layout of the variable area.
2	Font	Selects the font.
3	Auto adjust	• [None]: Sets using the specified [Label size]. • [Resize text according to area height]: Automatically adjusts the text height to match the [Size] height.
4	Label size	Specifies the text size. • This applies when [None] is set for [Auto adjust].

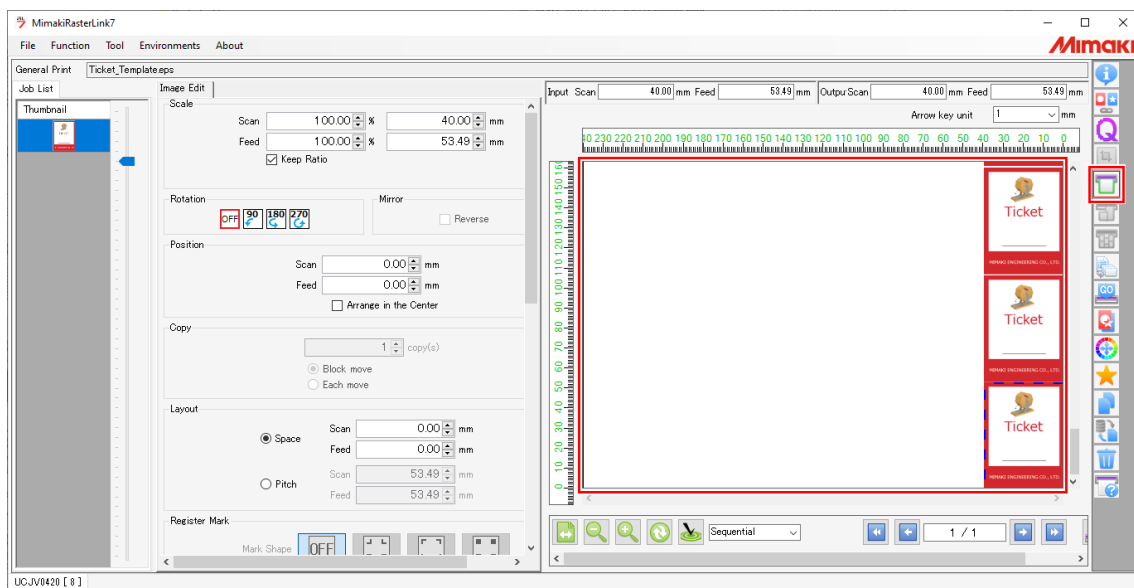
- Color setting



Text design	Applies text decoration (bordering and shadowing).	
1	[Text outline] icon	Adds outlines to the text.
2	[Shadow] icon	Adds shadows to the text.
3	Shadow Offset	Specifies the shadow offset value. • This is available when the [Shadow] icon S is enabled.
4	Line width	Enter the width of the text outline. • This is available when the [Text outline] icon ① is enabled.
Color	Specifies the text color, margin color (the background color will be used if the margin color is not specified), and color used for text design.	
5	Text outline color	Clicking this opens the color setting dialog. Sets the text outline color. • This is available when the [Text outline] icon ① is enabled.
6	Shadow color	Clicking this opens the color setting dialog. Set the shadow color. • This is available when the [Shadow] icon S is enabled.
7	Text color	Clicking this opens the color setting dialog. Set the text color.
8	Text background color	Clicking this opens the color setting dialog. Set the text background color.

7. Print.

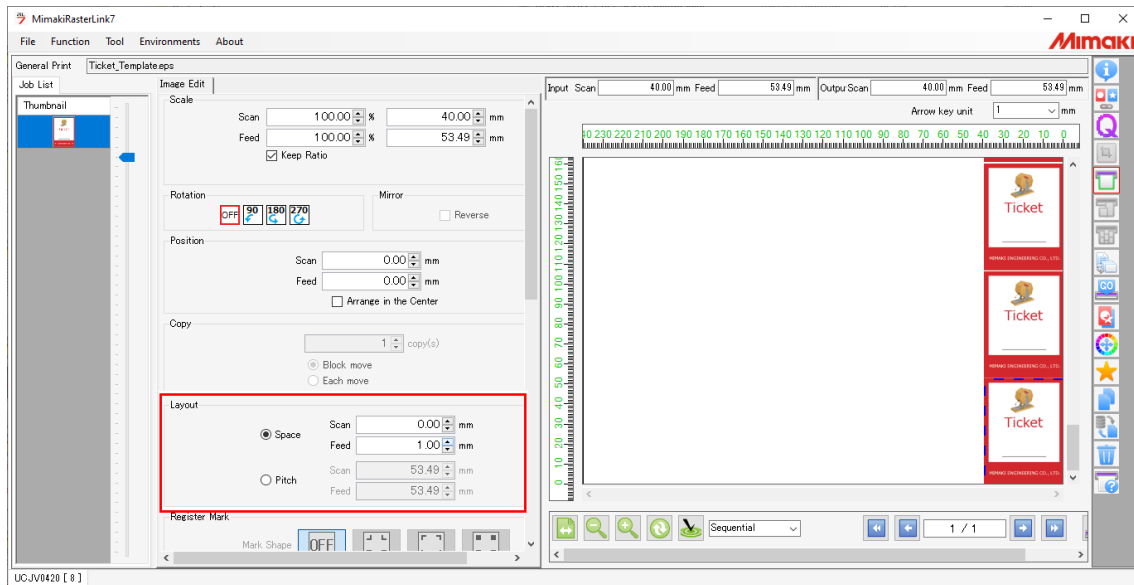
- 1 Select the [General Print] icon  and check the print layout.



2

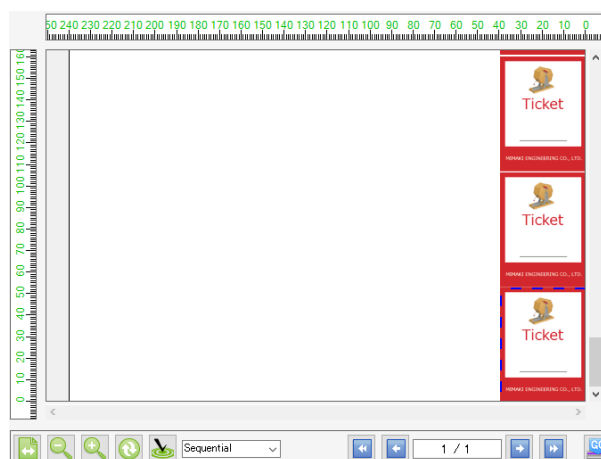
2 If you wish to insert space between data, enter the space values in [Layout].

- Scan: Left and right margins
- Feed: Top and bottom margins

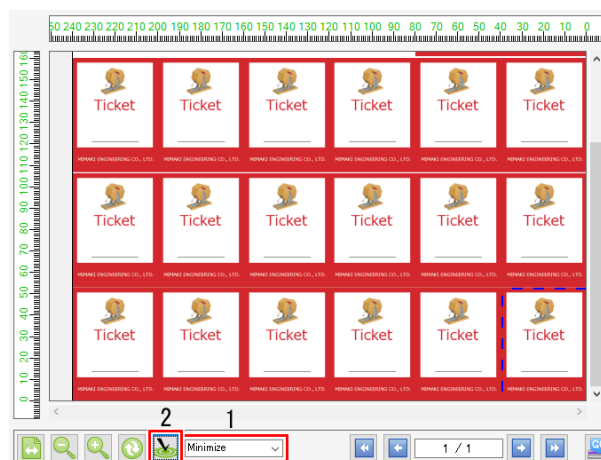


3 Vertical/horizontal arrangement

- By default, print images are arranged vertically.



- Click [Rearrangement], then select "Minimize" to rearrange images horizontally.



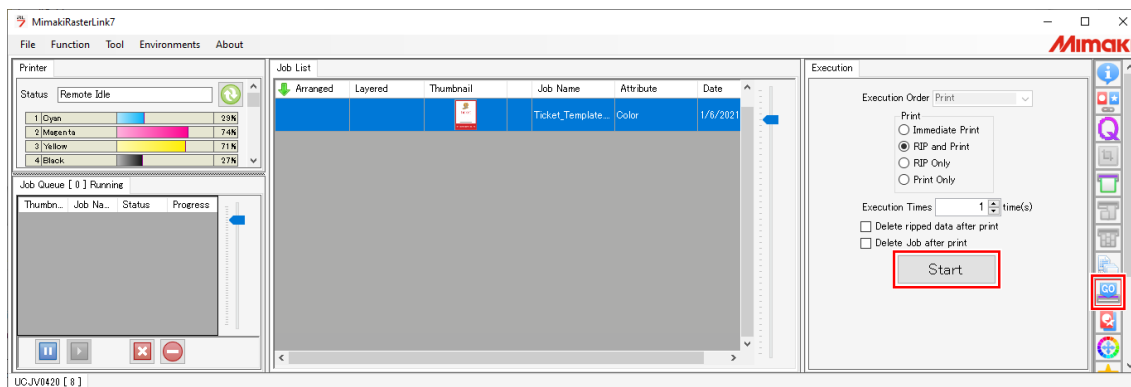
4 Select the execution icon , then click [Start].

- If there is text, test print only one line to check for setting errors and garbled characters.

Important!

Depending on the combination of font and text, the following error message appears and the data cannot be printed. If the following error message is displayed, set the font to [MS Gothic] or [Yu Gothic].

- "The selected font cannot be used. Please select font again."



Chapter 3 Troubleshooting



This chapter

Explains how to resolve problems that may arise and describes operation procedures that may be unclear.

Dealing with Error Messages	34	Printing Combined Variable Printing and	
Replacing the Database	35	Composite Printing	36
		How to Add Fonts for Variable Printing	37

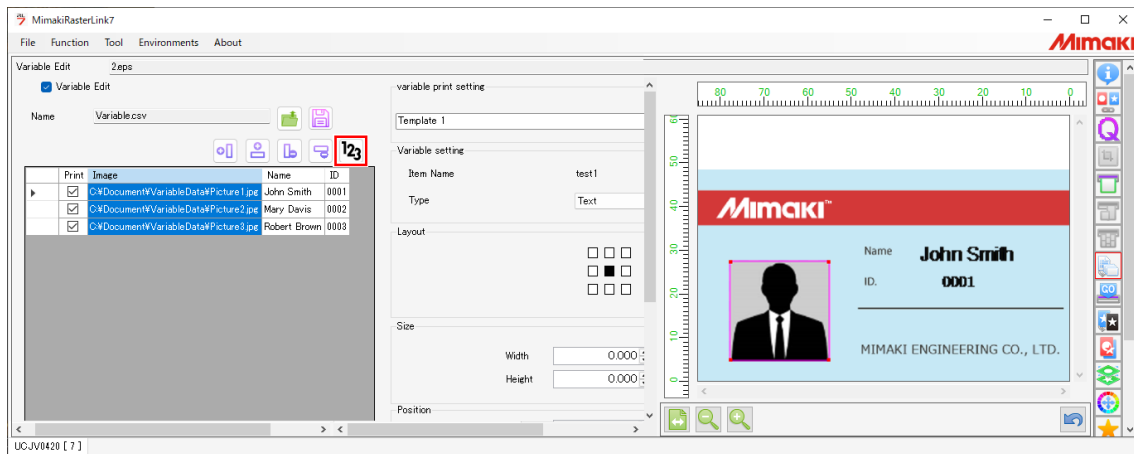
3.1 Dealing with Error Messages

Error message	Cause	Corrective action
Cannot open the specified file. The file is being used by another application. Close the application first and then reopen the file.	The selected file is already opened in another application.	Close the file in that application.
Cannot find image file path in this column.	No image data exists at the file path destination selected when the type was changed from text to image.	Place image data at the selected file path destination.

3.2 Replacing the Database

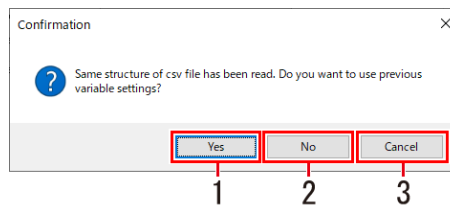
The database (CSV) can be replaced.

1 Click the button for loading the database (CSV file).



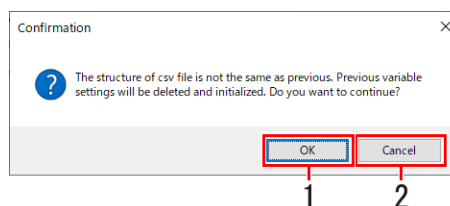
2 Load the replacement database to be used. 🖱️ "6. Load the database."(P. 12)

- The following confirmation dialog appears if the database column names in the first row (header), number of columns, and column order are the same.



1	Yes	The database is replaced retaining the variable insertion settings.
2	No	The database is replaced, deleting the previous variable insertion settings.
3	Cancel	Database replacement is canceled.

- The following confirmation dialog appears if the first row (header) of the database differs.



1	OK	The database is replaced, resetting the variable insertion settings.
2	Cancel	Database replacement is canceled.



- Replacing a database deletes the numbering settings. 🖱️ "Numbering Function"(P. 21)

3.3 Printing Combined Variable Printing and Composite Printing

Composite jobs can be created and printed consisting of the combinations shown in the following table.

An error will occur at the time of RIP processing if you attempt to create a composite job consisting of combinations not included in the table.

	1	2
2nd layer	Special plate job	Variable job
1st layer	Variable job	Special plate job

● Procedure for composite jobs including variable printing

- 1** Load the background image for variable printing.  ["4. Load a background image."\(P. 11\)](#)
- 2** Create a special plate job from the loaded job using the [Special Plates] function or the [Mono Color] function.
 - For details of how to special plates or mono color, refer to the RasterLink Reference Guide.
- 3** Combine the variable job from step 1 with the special plate job from step 2.
 - For details of how to combine jobs, refer to the RasterLink Reference Guide.
- 4** Configure the variable settings for the variable job from step 1.  ["5. Open the Variable Edit screen."\(P. 11\)](#)
- 5** Print.

Important!

The following restrictions apply when creating composite jobs that include variable printing:

- The special plate job must always be created from a variable job.
- The mirror setting cannot be used on the [Composition] screen for composite jobs that include variable printing.
- Color replacement is not available for a composite job that includes a variable job.
- The color matching settings must be matched for the variable job and special plate job. A RIP error will occur if the color matching settings differ for the variable job and special plate job.
- The following jobs are not supported to edit a variable print.
 - A composite job included color replacement settings

● Procedure for decomposing composite jobs that include variable printing

- 1** Uncheck the [Variable Edit] checkbox on the Variable Edit screen for the variable job.
- 2** Click [Release] on the [Composition] screen.

3.4 How to Add Fonts for Variable Printing

The fonts available for variable printing can be added by installing them on the operating system.

The following font types can be used in variable printing:

- TrueType fonts (.ttf, .ttc)
- OpenType fonts (.otf)

Right-click the font file, then select the following menu items according to the operating system being used:

- Windows10
 [Install for all users]
- Windows11
 [Show more options] - [Install for all users]



- Administrator privileges are required to install fonts on the operating system.

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November, 2025

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D203524-16-17112025

