RIIN User's Manual

Preface

Welcome to RIIN!

RIIN is an image editing, layout, output RIP (Raster Image Processor) software created by Hoson Software. The software is mainly used for the pre-processing of digital image output, for outdoor large-scale airbrush, photo machine, printing machine, digital proofing machine customized professional output process, the use of RIP for professional digital image output, your work will become simpler, the image output effect will be more perfect!

Release notes

Version number	function	Type of change	Clarification	Update date
7.2	● Add Korean ● Add generation T-shirt function ● Add ceramic version ● Add shaped layout function ● Add matrix copy function ● Add Layout Marker function ● Add Starting Ink Function ● Support shortcut key customization ● Support PSB format import	upgrade	● Improve PDF parsing speed ● Ctrl+D to realize the function of paste and copy ● Change the default color of vector path to single black ● Spot color setting interface optimization ● Optimize the interface of color replacement ● Canvas save add save reference line function	11.15

RIIN English version

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Product Introduction

01 Features and Description

- Basic Features

Support automatic nesting for image layout

Support various image formats for sharp images, supports multiple languages, and supports footnotes.

Support print job queuing and real-time progress monitoring

- Advanced Features

Support various layout methods, such as continuous layout and irregular layout, to meet the different needs of various industries

Support printing with multiple spot colors (such as orange, green, etc.), light colors, and fluorescent colors to meet various printing process requirements

Support quick and intelligent color matching to achieve color consistency between different devices

Support intelligent background removal technology for T-shirt printing, eliminating the need for manual image processing and allowing one-click printing

02 Application

- Application in Advertising and Photographic Printing Industry

  Support a wide range of file formats and features one - click material - saving layout, job viewing, color management, and cutting functions; with high - speed RIP and vivid, delicate image quality, it meets the needs of high - quality production.

- Application in Premium Advertising, Textile Printing, and Other Special Applications

  The new - generation intelligent RIP has functions such as intelligent iterative color matching, eight - color light colors, fluorescent colors, multi - color spot colors, and multiple special spot colors, which can meet various process requirements and complete high - standard production and delivery.

- Application in UV Printing on Flatbeds, Rolls, and Powder - shaking Applications with White Ink

  Different characteristic functions are matched for different applications, such as mobile phone case workstation printing, irregular contour printing, and color block matching for sensitive colors.

03 How to Choose

version	Applicable Models
RIIN Basic Edition	Photographic printers, large format printers
RIIN UV Edition	UV flatbed printers, UV roll printers,DTF,DTG
RIIN Textile Edition	Digital textile printers, direct-to-garment inkjet printers
RIIN T-Shirt Special Edition	T-shirt printers, powder - shaking machines
RIIN Beidou Edition	Machines with high - quality requirements

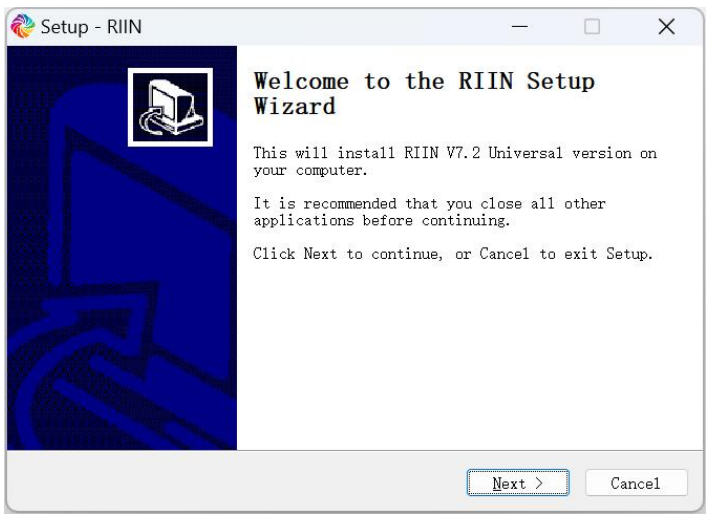
Quick Start

01 Installation and Activation

1. Decompress and run the exe file

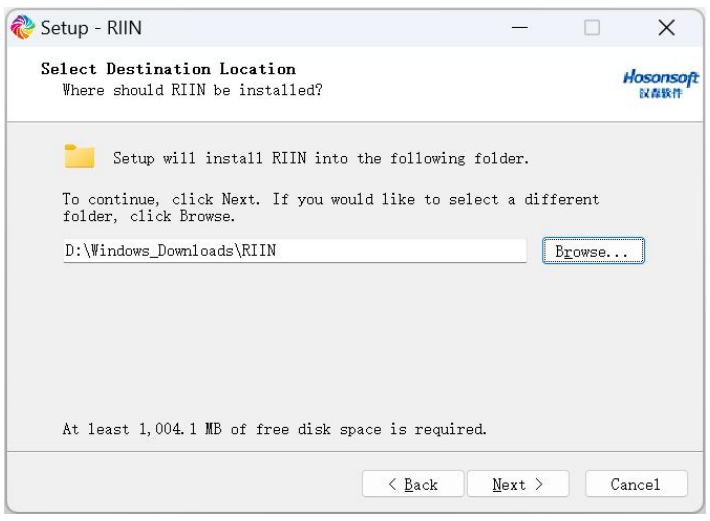
Decompress the software package into a folder with the same name, run the file with an .exe extension, and select the language.

2. Install the RIIN software according to the on - screen instructions

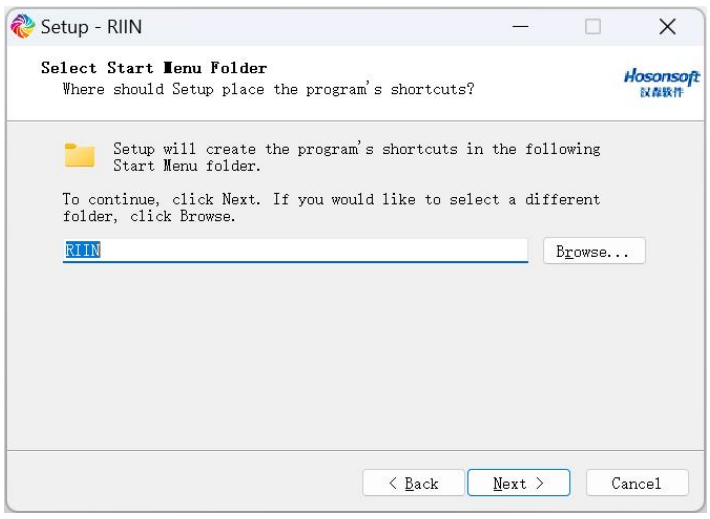


Notes:

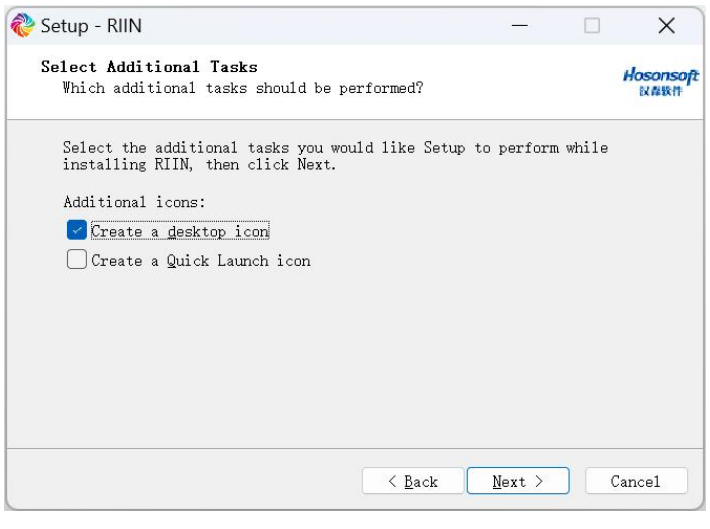
- The disk space for software installation should preferably be more than 2000MB



- It is recommended to use the default folder for placing the program shortcut

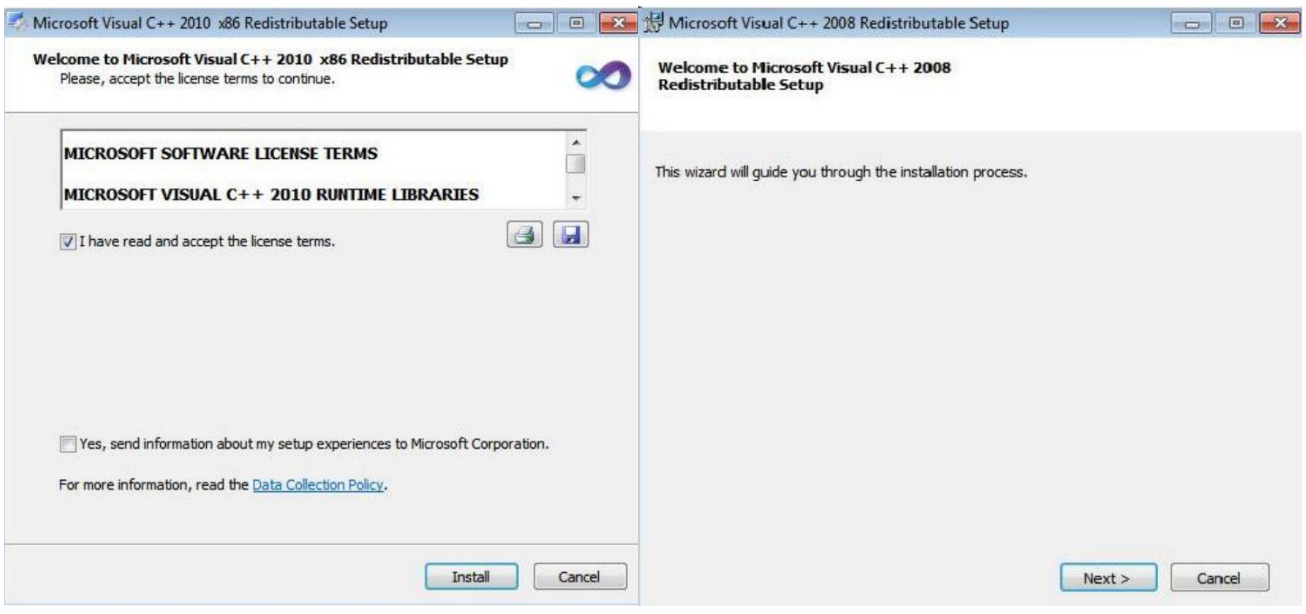


- It is recommended to check the options for creating a shortcut icon and adding it to the Quick Launch

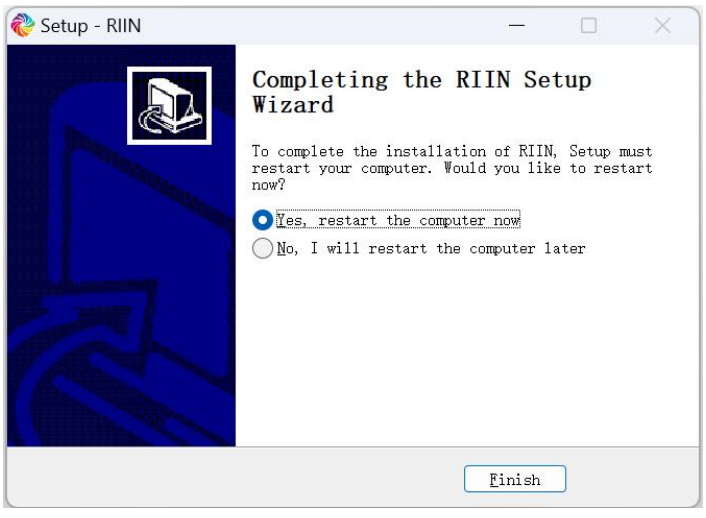


3. Install the C++ Environment

After the above operations are completed, the C++ environment installation guide will automatically pop up. Follow the prompts and click the default **[Next]** to proceed with the installation.



4. Installation Complete



Notes:

- The content displayed on the installation interface of different versions of RIIN software may vary slightly, but the installation steps are generally the same.
- If you do not succeed in installing the software on your first attempt, it is recommended that you uninstall the previously installed RIIN software before attempting the installation again.
- When using the software, please use the resolution recommended by your operating system. Other resolutions are not recommended.

5. Launch the RIIN software

There are two ways to open it:

1) Double - click the **RIIN** icon on the desktop.

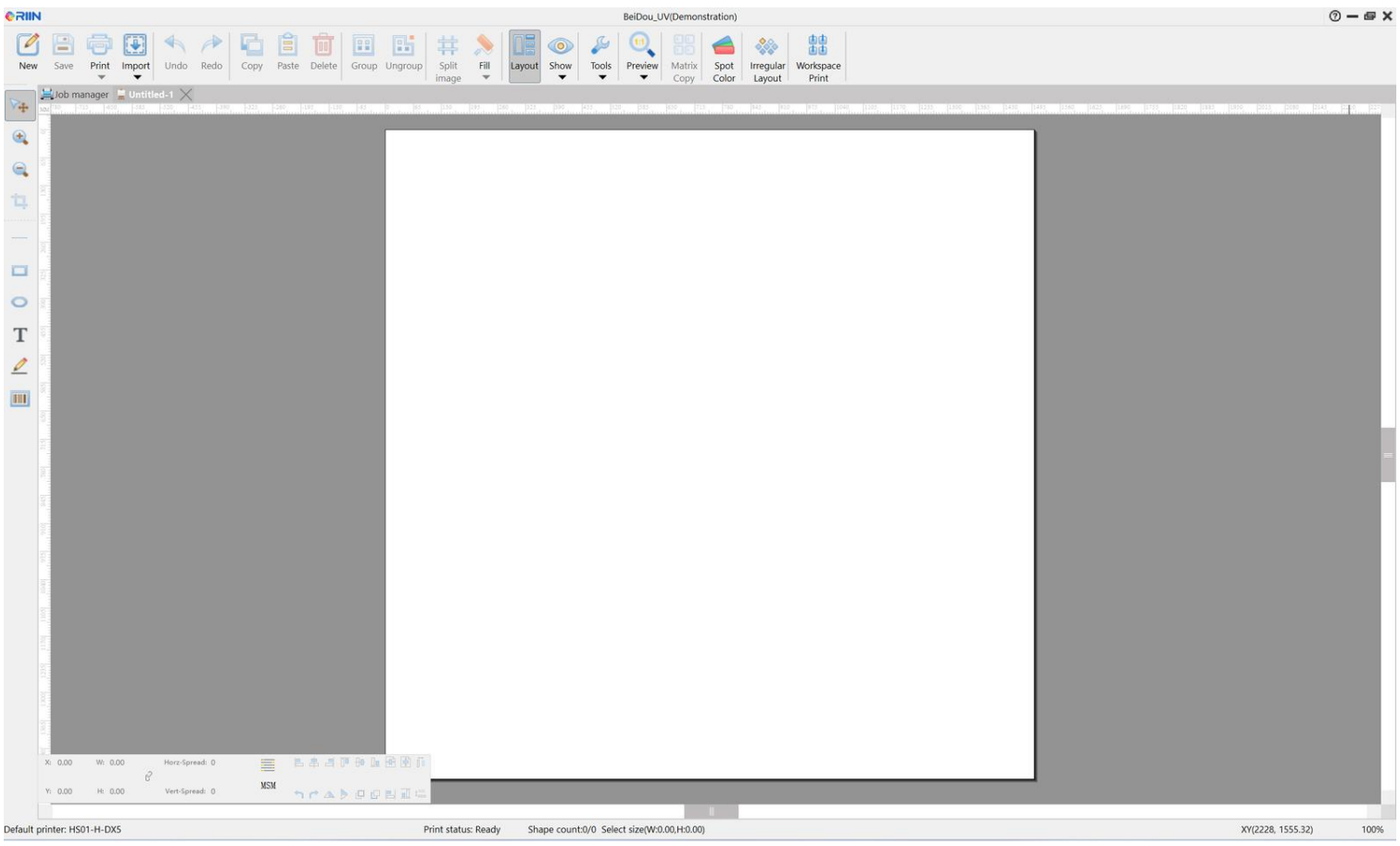
2) Search for **[RIIN]** in the computer's **[Start]** menu, find RIIN.exe, and click to open.

Notes:

- The software requires a significant amount of memory during printing. It is recommended that you close any software that you do not need to use temporarily before launching RIIN to prevent it from affecting the work efficiency of RIIN.
- If you did not choose to create a desktop shortcut icon during installation, you will have to use the second method to open it.

6. Activate RIIN

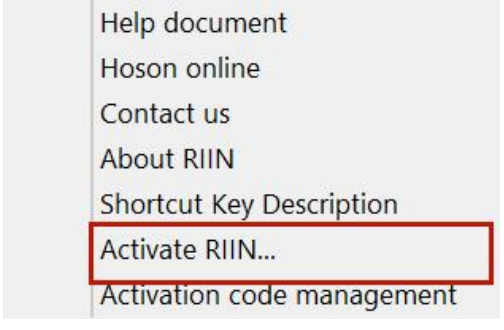
1）The interface of the RIIN software is as shown in the figure below.



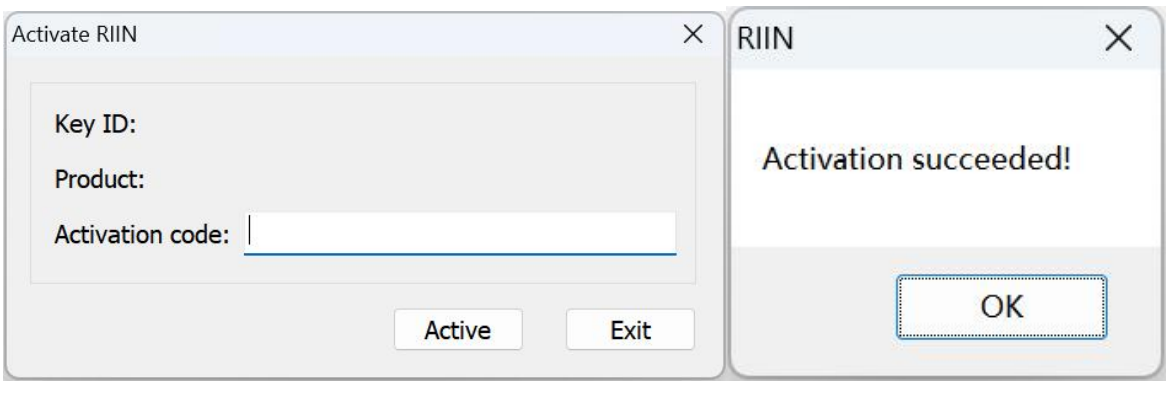
2）The top text "XX Edition (Demonstration)" indicates that the current RIIN software is not activated.

3）There are two ways to activate RIIN, one is by inserting the **Security Dongle** into the computer, and the other is by entering an activation code. The following mainly explains how to activate using an activation code.

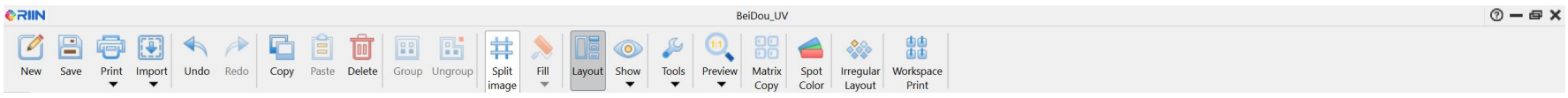
4）Click the question mark help menu in the upper right corner, a list will appear, click **[Activate RIIN]**.



5) Enter the activation code and click **[Activate]**. If the activation is successful, the words "Activation Successful" will appear.

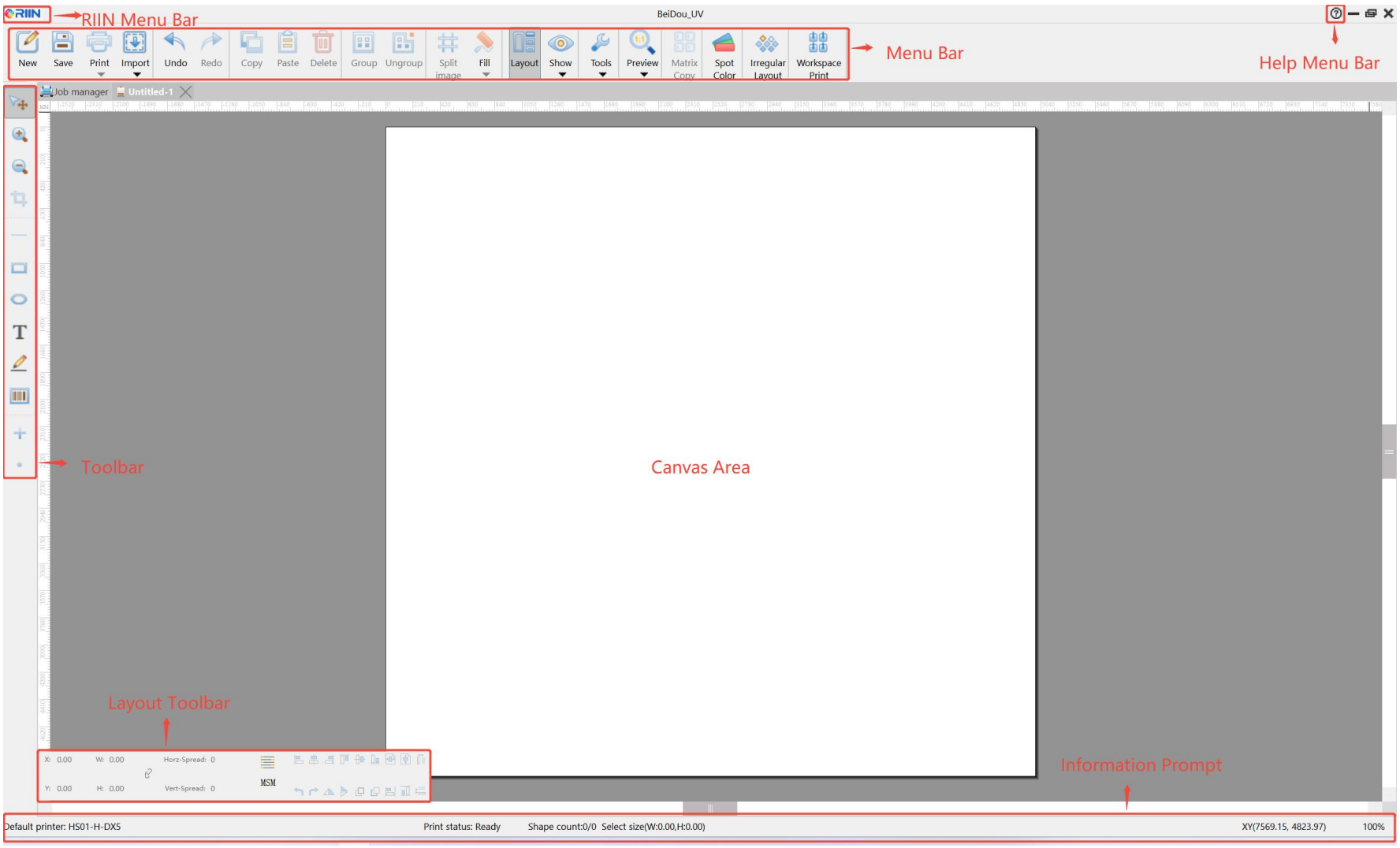


6) Return to the RIIN software interface, if the top text changes to the corresponding software version and no longer displays the words "Demonstration", then the activation is successful.



02 Interface Introduction

The RIIN interface is divided into ten functional areas, which are: menu bar, toolbar, RIIN menu bar, help menu bar, print management center, canvas area, outside canvas area, information prompt area, layout toolbar (which can be controlled to show or hide by the layout function in the menu bar), and the right-click menu. Please see the positions they occupy in the illustration below.



1. Menu Bar

The menu bar contains all the menu items for using the software's functions, including creating a new canvas project, importing

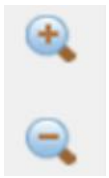
images, printing, and so on. You can complete various operations of the software through the menu.

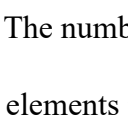
Function	Shortcut Keys	Function Details
New	Ctrl + N	Using this command, you can create a new canvas.
Save	Ctrl + S	Save the current canvas project with the current name and directory. When you save the project for the first time, the software will display the save dialog box. The default directory of the system is the file output directory in the option settings, and it is set to.rcf or.rcfx format files by default. You can name the canvas project.
Print	Ctrl + P	The entrance to the print confirmation interface. Area printing: Print by customizing a proof. For customizing the proof, please refer to the description of the proof customization operation in the following text.
Import	Ctrl + O	Import images into the canvas.
Undo	Ctrl + Z	Using this command will undo the last editing operation performed. This software supports multi-level undo. Repeatedly executing the undo command will undo the previously executed commands one by one. The number of undo steps is not unlimited.
Redo	Ctrl + Y	Using this command restores the actions that were previously undone with the undo command. If a command has been undone and new operations have been performed, the redo command will not allow the re-execution of the previously undone actions. The number of redo steps is not unlimited.
Copy	Ctrl + C Ctrl+move the mouse	Copy the selected image(s) in the current canvas project.
Paste	Ctrl + V	Paste the copied image onto the current canvas.
Copy+Paste	Ctrl + D	One-click to achieve copy and paste.
Delete	Delete	Delete the selected image(s) from the canvas.
Group	Ctrl + G	Combine the two or more selected images into one image.
Ungroup	Ctrl + U	Ungroup the combined image back into the individual images before combination.
Split Image	Alt + S	Divide one image into multiple images as desired.
Fill	/	Fill the vector graphics such as rectangles and ellipses with the color you want. Fill the vector rectangle with a picture. Under a fixed size, the picture can be ensured to be distortion-free.
Layout	Alt + L	The entrance to use the typesetting tools. The typesetting frame contains element position information such as the X-coordinate, Y-coordinate, width, height of the graphic element, and the aspect ratio constraint; one-dimensional typesetting information for horizontal and vertical distribution of graphic elements, and two-dimensional typesetting information for automatic typesetting; typesetting functions for graphic elements, including left alignment, horizontal centering, right alignment, top alignment, vertical centering, bottom alignment, horizontal centering, and vertical centering; operation functions for graphic elements, such as rotating left, rotating right, horizontal mirroring, vertical mirroring, moving up one layer, moving down one layer, equal width, and equal height.

Show	/	The entrance for setting whether to display certain content on the page. Here, you can set whether to display the ruler, select the unit of the displayed ruler, whether to show the snap-to guides, whether to show the snap-to graphic elements, set the snap distance, whether to display thumbnails, whether to show borders, whether to show dividing lines, whether to set a reminder when importing pictures, select the language, and choose the theme.
Tools	/	The entrance to clear cache, error compensation, border settings, color matching settings, and vector settings. If you want to use the relevant functions, you can find them here. The specific usage will be introduced in the advanced functions section.
Preview	/	Adjust the canvas view to the canvas height, or the canvas width, or a 100% canvas preview, or a custom canvas preview.
Spot Color	/	This is for setting up white ink spot color printing. If you want to use this function, you can directly click with the mouse to set the relevant parameters. The specific usage will be introduced in the advanced functions section.

2. Toolbar

The toolbar contains small tools for drawing vector graphics. You can draw shapes such as rectangles and ellipses via the toolbar.

Icon	Function	Function Details
	Selection Mode	It is used for switching the tool menus. When you have finished using a certain tool in the tool menu and want to use another tool in the menu, you can use the selection mode button to switch, so as to meet your needs.
	Zoom in/out	It is used to adjust the display scale of the current canvas. You can also hold down the "Ctrl" key on the keyboard while scrolling the mouse wheel. Scrolling upwards enlarges the display scale of the current canvas, while scrolling downwards shrinks it.
	Clipping image	It is used to crop the images on the canvas.
	Draw Straight Line	It is used to draw a straight line. Click the icon in the toolbar, and while holding down the "Ctrl" key on the keyboard, drag the mouse to draw a straight line.
	Draw Rectangle	It is used to draw a rectangle. Click the icon in the toolbar, place the mouse on the canvas, and then drag the mouse to draw a rectangle.
	Draw Ellipse	It is used to draw an ellipse. Click the icon in the toolbar, place the mouse on the canvas, and then drag the mouse to draw an ellipse.
	Draw Static text	It is used to draw a text on the canvas. Click the icon in the toolbar, place the mouse on the canvas and drag it. Then, enter the text content you want to add in the pop-up Add Text dialog box.
	Add Footnote	It is used to add footnotes to the graphic elements on the canvas. For adding footnotes, please refer to the description of the footnote-adding operation in

		the following text.
	Draw Static Barcode	It is used to draw barcodes in the canvas. Click the icon in the toolbar, place the mouse on the canvas and drag it to draw the barcode. Double-click the barcode, and then select the barcode type you need to use and set the variable rules in the barcode property interface. The specific usage will be introduced in the advanced functions section.

3. Information Prompt Area

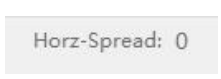
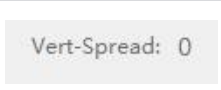
This area will provide you with various real-time information about the current software, such as the functions of menu and toolbar buttons, the currently default printer, the printing status, the number of images on the canvas, the image names, as well as the current position of the cursor, the scale of the ruler, etc.

Prompt message	Details
View the default printer	The name of the default printer of the current system is displayed at the bottom of the main interface of the software.
Printer status	The status of the printer is displayed at the bottom of the main interface of the software. If the current default printer is idle, it will show "Ready". If the current default printer is printing, it will display "Printing" and also show the printing progress.
The number of graphic elements in the canvas	The number of graphic elements on the canvas is displayed in real time at the bottom of the main interface of the software. These graphic elements include self-drawn vector graphics and imported color images.
Show the name of the graphic element	When a graphic element on the canvas is selected, the name of the graphic element will be displayed in the area at the bottom of the main interface of the software.
Show the coordinate position of the mouse	When you move the mouse on the canvas, the coordinate position of the mouse on the canvas will be displayed in real time in the area at the bottom of the main interface of the software.

4. Layout Toolbar

When there are images on the canvas, you may need to perform layout operations on the canvas images to output the images in the most material-saving way.

Icon	Function	Function Details
	Most saving material	Automatically typeset all graphic elements in the most material-saving way, and supports setting the horizontal and vertical spacing between graphic elements and canvas spacing.
	Align left	Align the other images in the selected image to the left with the image at the leftmost boundary.
	Center left and right	Align the midlines of the other images in the selected image with the midline of the image at the leftmost boundary.
	Align right	Align the other images in the selected image to the right with the image at the rightmost boundary.

	Align top	Align the other images in the selected image to the top with the image at the topmost boundary.
	Center top and bottom	Align the midlines of the other images in the selected image with the midline of the image at the topmost boundary.
	Align bottom	Align the other images in the selected image to the bottom with the image at the bottommost boundary.
	Horizontally center	Position the selected image horizontally centered on the canvas.
	Vertical center	Position the selected image vertically centered on the canvas.
	Horizontal equidistant	Space the selected three or more images equidistantly in the horizontal direction.
	Rotate left/right	Output the selected image after rotating it 90 degrees to the left. Output the selected image after rotating it 90 degrees to the right.
	Horizontal/Vertical flip	Output the selected image after mirroring it in the horizontal direction. Output the selected image after mirroring it in the vertical direction.
	Move to the top/bottom	Move the layer of the selected overlapping image up one layer. Move the layer of the selected overlapping image down one layer.
	Same width	Set the width of the selected image equal to the width of the "active image", where the active image is the last selected image and is surrounded by a black solid rectangle frame, and the width is based on the active image.
	Same height	Set the height of the selected image equal to the height of the "active image", where the active image is the last selected image and is surrounded by a black solid rectangle frame, and the height is based on the active image.
	Vertical equidistant	Space the selected three or more images equidistantly in the vertical direction.
	Horz-Spread	Arrange the selected images from left to right in sequence with the specified horizontal spacing.
	Vert-Spread	Arrange the selected images from top to bottom in sequence with the specified vertical spacing.

5. Canvas Area

When you create a canvas project, the RIIN RIP software will display a rectangular frame with black edges on the interface. This rectangular frame is called the canvas, and the area within the rectangular frame is called the canvas area. You can imagine this frame as a real canvas, and we need to perform operations (such as importing images, moving images, etc.) in this canvas area in subsequent operations.

6.Area Outside the Canvas

In the software interface, the area outside the canvas area is called **[Outside the Canvas]**, and these areas are not within the scope of operation. If you place an image in the area outside the canvas, Ruiyin RIP will remind you during printing.

7.RIIN Menu Bar

When you click on **[RIIN]** in the upper left corner of the software, the menu bar contains the following commands:

Function	Shortcut Keys	Function Details
 New	Ctrl + N	Create a new canvas.
 Open canvas	/	Open an existing canvas project (*.rcf). If you want to open a saved canvas, you need to create a new empty canvas first and then open the canvas. If you want to open multiple

		canvases, you can create canvases one by one and open new canvases in turn.
 Save	Ctrl + S	Save the current canvas project with the current name and directory. When you save the project for the first time, the software will display the save dialog box. The default directory of the system is the file output directory in the option settings, and the file is set to the.rcf format by default. You can name the canvas project. If you want to change the existing project name or path before saving, please select the Save As command.
 Save PLT File	/	Save the file in the PLT file format for cutting.
 Save as	Ctrl + Shift + S	Save the current canvas project as a new file. The software will display a dialog box asking whether to save, allowing you to rename or change the saving directory. After saving, the system will change the current file name and directory to those after using the Save As command. If you want to save the canvas project with the existing name and directory, please use the Save command.
 Canvas setting	Ctrl + Shift + M	Set the current canvas. You can set the size (i.e., width and height) of the canvas and the margins. You can determine the canvas width based on the width of the paper you will print on. If you want to set the printing margins, you can set different margins for the left, right, top, and bottom respectively. If you want to set equal margins on all sides, you can select the equal margin option, so you only need to set any one margin value, and the other three will be automatically set to the same value.
 Color manager	Ctrl + Shift + C	Enter color management to create curves and set curve parameters. For details, see the Color Management chapter.
 Printer setting	Ctrl + Shift + P	Perform printer driver setting management, set relevant printer parameters, and operate the printer. Such operations include installing printers, deleting printers, viewing printer properties, setting the printer as the default printer, custom installing printers, deleting existing manufacturers, and so on.
 Virtual Printer Install	/	After installing a virtual printer, you can select images and curves in PS and directly send the printing task to the Ruiyin software for operation.

8. Help Menu Bar

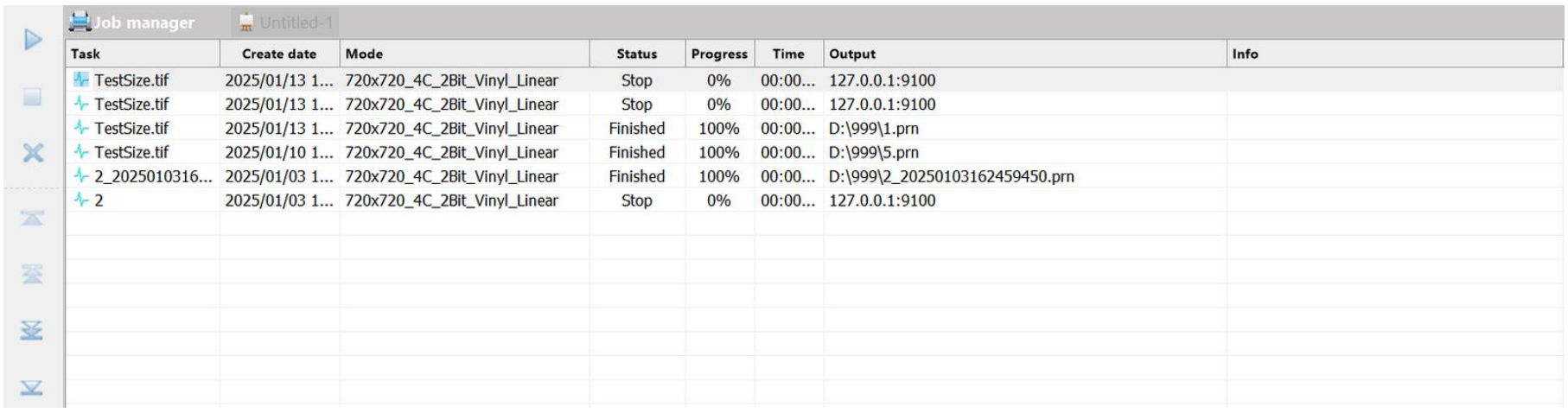
When you click on the question mark icon in the upper right corner of the software, the following menu appears:

Function	Function Details
Help Documentation	Used to open the software help documentation.
Hosonsoft Online	It is used to access the homepage of Hosonsoft Company to obtain more help information and understand the dynamics of this software.
Contact Us	It is used to send an email to our technical support, providing feedback on your usage, any problems encountered, and requirements. We will reply to you at the first opportunity after receiving the message.
About RIIN	Used to display the version information and authorization information of the software you are using.

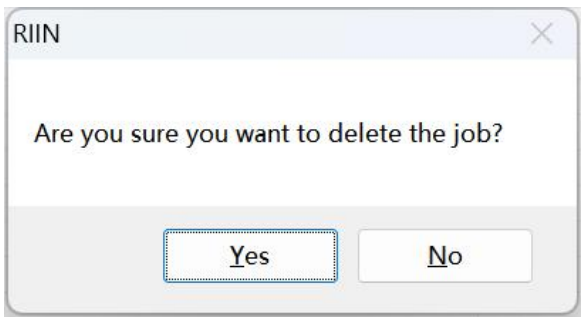
Shortcut Key Description	Details of specific operations for each software command, and you can also customize shortcut key combinations according to your operating habits.
Activate RIIN	Used for activating the RIIN software. You can bind the RIIN software by entering the activation code.
Activation Code Management	Used for managing activation codes and can jump to the activation code management platform with one click.

9. Print Management Center

When you have started printing, the software will default to jumping to the print management center interface, and of course, you can also set it not to jump to this interface. The print management center interface is shown in the figure.



Each time the software prints, a print task will be created in the print management center, and users can see the status, progress, time used, etc. of each print task in the print management center. Users can use the **[Start Printing], [Stop Printing], [Delete Task], [Move Up], [Move Down], [Move to Top],** and **[Move to Bottom]** on the left to perform corresponding operations on the task. If you want to delete a print task, select this task and click the [Delete] button on the left, and the program will pop up a confirmation dialog box, as shown in the figure:



If you click **[Yes]**, the program will delete the print task, and the print task will not be displayed in the print management center list. If you click **[No]**, the print task will still be displayed in the print management center list.

10. Right-click Menu Bar

When you right-click on the blank area of the canvas, the right-click menu will expand. The right-click menu contains the following command functions:

Function	Function Details
Import Image	/ （ all "/" indicate that they have appeared many times above）
Undo	/
Redo	/
Recover Size	Restore the selected graphic elements to their original size.
Copy	/
Paste	/
Multiple Paste	Paste multiple copies of the copied image in the current canvas and distribute them in a tiled

	pattern according to the settings.
Delete Footnote	Delete the footnote information of the graphic element. The prerequisite for performing this operation is that the graphic element has already had a footnote added.
Show Thumbnail	There are three modes to choose from: standard mode, border mode, and high-precision mode.
Group	/
Ungroup	/
Output Size	You can set the horizontal width and vertical height of the selected image.
Cut Image	Crop the selected graphic elements.
Image Attribute	You can view the basic information of the selected image in the canvas, such as file information, output information, and status information.
Edit Text	Edit the content of the text again when the text has already been created.
Storke Image	You can set the edges of self-drawn vector rectangles and ellipses, and support setting no edge, solid line, dashed line, dotted line, edge width, and edge color.
Image Trace Edge	It is used as an aid in cutting and trimming. After edge tracing of the selected picture, draw a thin edge line on the edge of the picture, and exporting the PLT can obtain the overall cutting contour of the picture.
Canvas Information	You can view the basic information of the current canvas, such as canvas properties, graphic element statistics, and other statistics.

03 Basic Operation Process

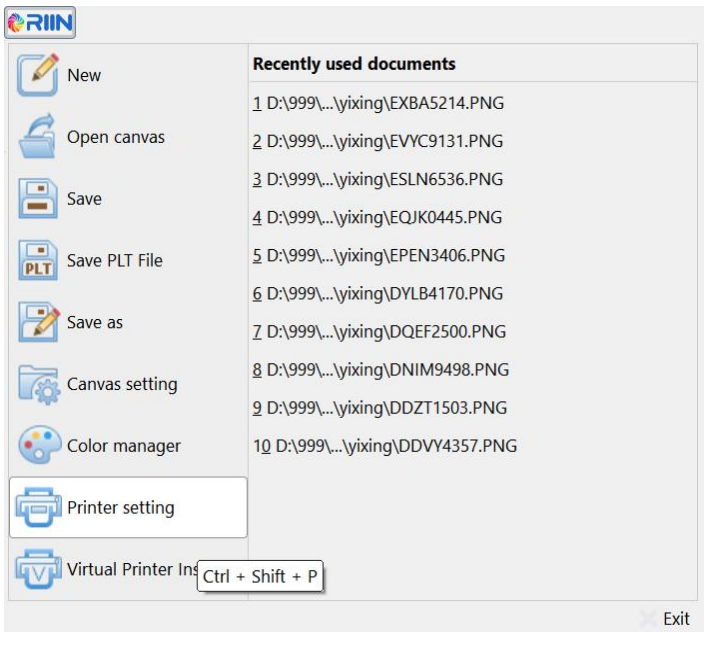
The following will demonstrate the software's operation process through an example. Suppose there is an image that needs to be printed, with a size of 2.4×2.0 meters. The image file has already been created using Photoshop (or other image processing software) and is stored in a certain directory on the disk, and the image file name is a.tif.

1. Open the RIIN Software

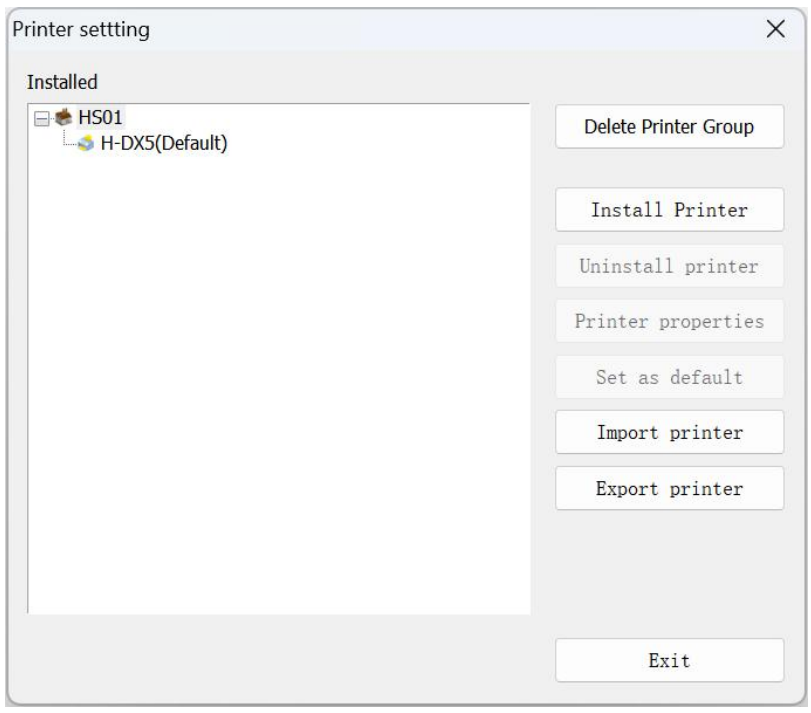
According to the previous step 01 where the RIIN software was installed and activated, you don't need to bind the software again each time you open it. You can use it immediately after opening.

2. Set Printer Parameters

Click the icon in the upper left corner of the software, that is, the **[Printer Setting]** in the RIIN menu bar (or use the shortcut key Ctrl+Shift+P), and complete the corresponding printer settings in the printer setting interface.



By default, there is already a default printer in the printer list. This is the printer driver that comes with the program, and it supports the file output port.

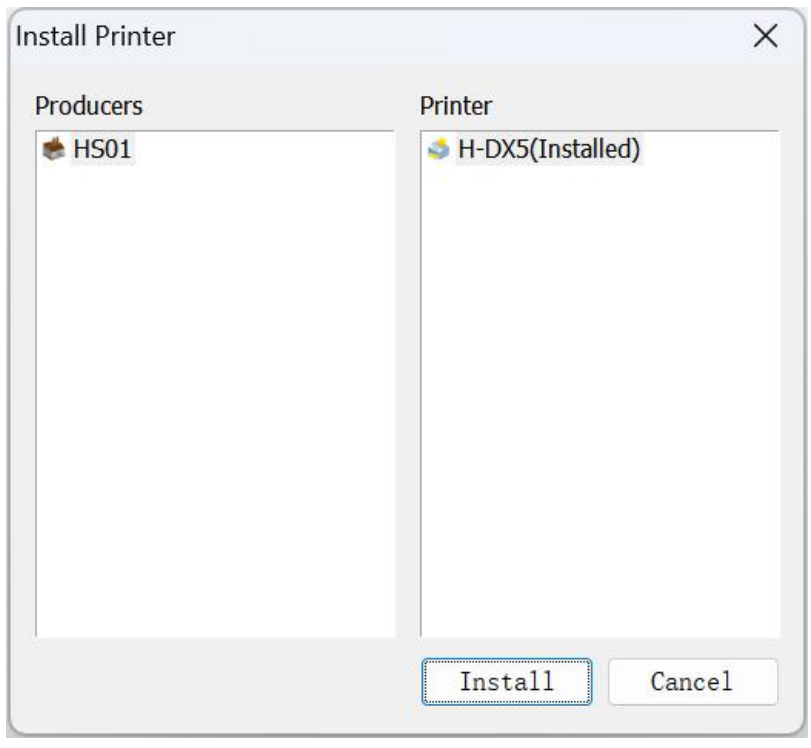


Once you have confirmed the default printer, if you do not change any printer driver settings later, you do not need to set the printer parameters again when using it subsequently, and you can directly proceed to the third step.

Common Functions of Printer Management

1）Installing a Printer:

If there is no printer in the installed printer list that meets your requirements, you can add this printer by yourself. Click the [Install Printer] button, and the program will pop up the Add Printer dialog box, as shown in the following figure:



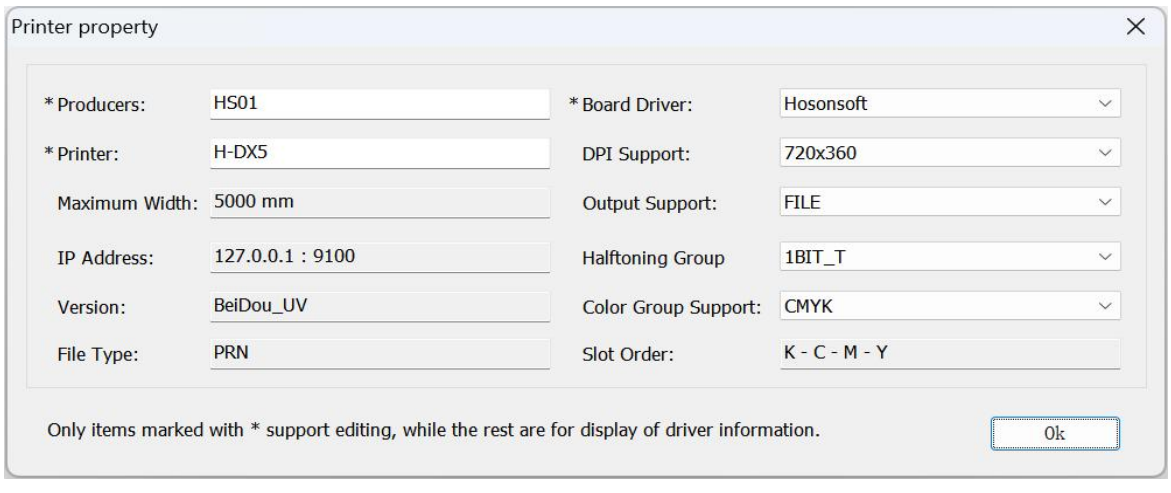
Under normal circumstances, if you have officially purchased the RIIN software, the software supplier should have already written the driver you need. There should be the printer you need in the corresponding manufacturer's printer list. Select it and click the **[Install]** button, and the newly added printer will appear in the installed printer list.

2）Uninstalling a Printer:

During your use, if you want to delete a printer from the installed printer list that you no longer use, you only need to select the printer you don't use and then click the **[Uninstall Printer].** After the operation is completed, all information about that printer will be deleted, so you should perform this operation carefully.

3）Setting Printer Properties:

Select the printer to be set, click the **[Printer Properties]** button, and the program will pop up the printer properties dialog box, as shown in the following figure:



Here, you can view parameters such as the output resolution, color combination, and output mode of the printer's work. After viewing, click **[OK]** to exit.

4）Setting as the Default Printer:

After setting the printer's parameters, you need to set the printer you selected as the default printer. Select the printer and click the **[Set as Default]** button, and the subscript of the printer will show that this printer is the default printer.

5）Importing a Printer:

During your use, if you need to import the printer driver of another model, you can import a DPF format file (this file contains plate card driver files, curves, and software drivers) to facilitate your software installation.

6）Exporting a Printer:

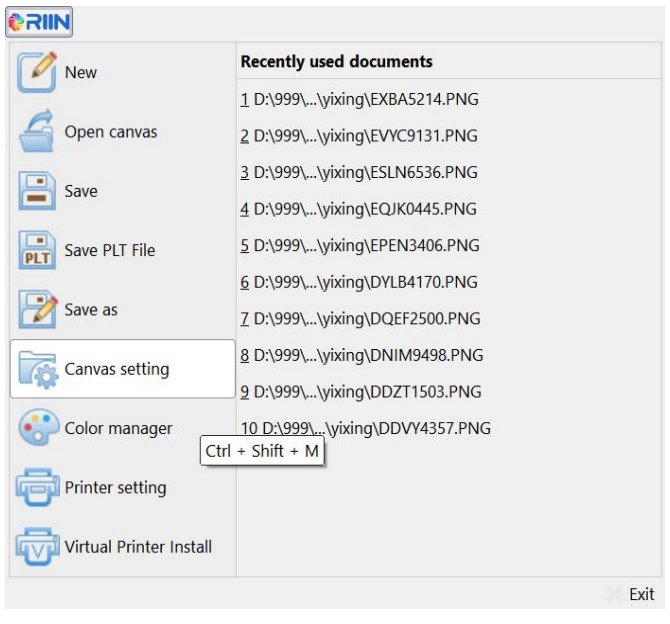
During your use, if you need to export the printer driver of this model, you can export a DPF format file for use on the printer.

3. Set Canvas Parameters

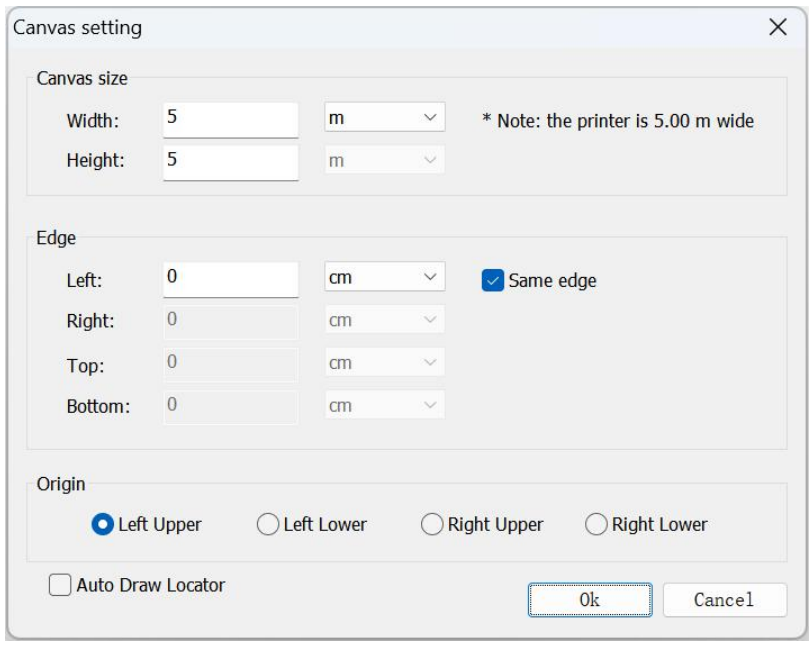
For example, if you want to print a 1.2m × 2m advertising banner for a customer, the first thing you need to do is to start the RIIN software to create a new canvas.

When creating a new canvas, the canvas in the program will have a default width and height, but usually, we need to adjust the width of the canvas according to the width of the printer paper to achieve the most paper-saving output.

Click the **[Canvas Settings]** in the RIIN menu bar (shortcut key Ctrl+Shift+M).



The program pops up a canvas setting pop-up window as shown in the figure below, where you can complete the setting of relevant parameters for canvas size and canvas margins.



Enter the size of the canvas you want to set in the width and height text boxes, but the set canvas width cannot exceed the current printer's width. The maximum width of the current printer set in the driver is displayed behind this setting box.

When setting the canvas edge margins, if the margins around are equidistant, you can select equidistant margins, so you only need to set any one margin value, and the other three will be automatically set to the same value. When setting relevant dimensions, you can choose the unit of measurement you are accustomed to. The software provides length units such as inches, millimeters, centimeters, meters, picas, and points.

After setting, click the **[OK]** button to exit.

4. Create a New Canvas

Click **[New]** in the menu bar or **[New]** in the RIIN menu bar to create a canvas that meets the parameter settings from the previous step.

5. Import Images

After successfully creating an empty canvas, you can add the image a.tif that you are going to print and output onto the canvas. After adding successfully, you will see the image you added on the canvas.

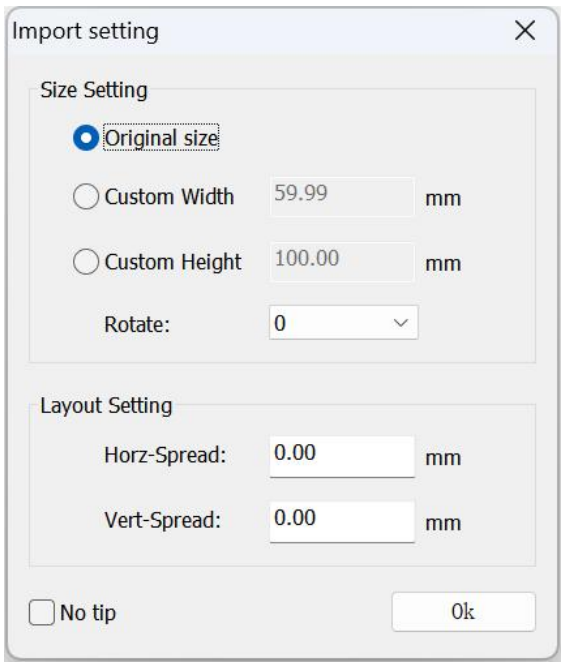
Importing images supports batch import, and there are three import methods:

1）The **[Import]** button in the menu bar

2）Right-click the mouse to display the common function menu and select **[Import Images].**

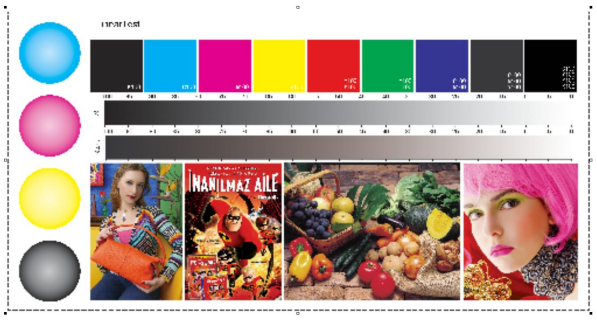
3）If you need to quickly import multiple images, click the black inverted triangle below the **[Import]** function in the menu bar, and the **[Rapid Import]** function will appear. Click it to use it. The usage method is the same as importing images, except that the imported images are presented on the canvas in border mode. When importing into the canvas, the display mode of the images is border mode, and there is no need to load thumbnails, which speeds up the process more.

Setting the Size and Spacing of Imported Images:



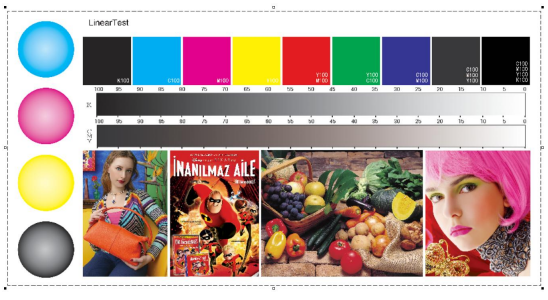
Select the image to be added, and the interface will give a reminder asking whether you want to keep the original size or customize the imported image size. When customizing the image size, you can import with the aspect ratio locked or set the aspect ratio yourself before importing. After setting, the image will be placed on the canvas. If you don't want the interface to give the reminder for importing image settings, you can set to hide this reminder (the method is to click **[Show]** in the menu bar and uncheck **[Import tip]** in the drop-down list). After hiding, there will be no reminder box when importing images again.

The software provides three display modes (which can be set in **[Display Thumbnails**] in the drop-down list of **[Show]** in the menu bar). Depending on your different settings, you will see different display results. The default display mode of the image is to show thumbnails. You can place multiple images on the same canvas, and you just need to repeat the process of adding images.



Normal Mode

Edge Mode



High Precision Mode

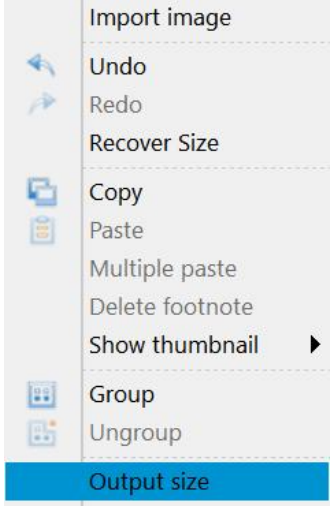
Precautions:

- If you need to print multiple copies of the same image on the canvas, you can use the software's **[Copy-Paste]** or **[Copy-Multiple Paste]** function (you can see this function option by right-clicking on the selected image), which is much faster than repeatedly adding the same image.
- When the width or length of the added image exceeds the canvas range, the software will give a reminder that the graphic element exceeds the canvas and the excess part will be automatically cropped, and whether you want to continue cropping and printing. At this time, you can choose to continue printing or appropriately adjust the image's **[Output Size]** or perform **[Split Image]**.

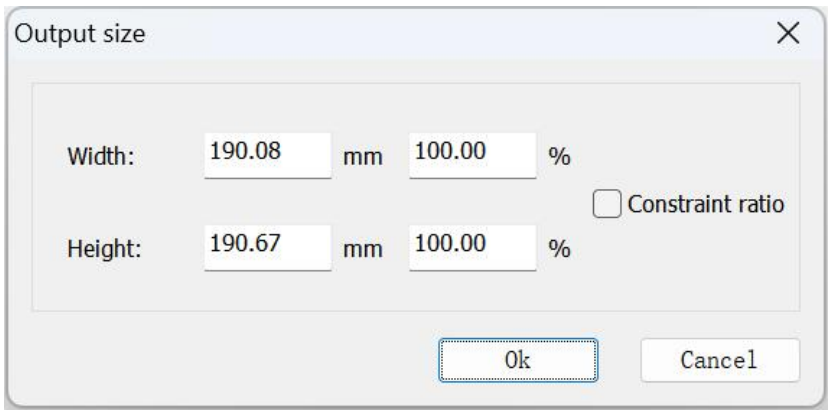
6. Setting Image Output Size and Image Layout

After adding the images, you can set the output size of the images. If there are more than one image to be printed on the canvas, you also need to complete the image layout work.

1）If you want to precisely position the output position and size of the image, you need to complete the following image settings. Select the image to be set, right-click the mouse, select the output size, and the program will pop up a dialog box as shown in the figure below.



Set the horizontal height and vertical height, and you can also use proportions to set the output size.



When you are setting the output size of the image, please input the horizontal width and vertical width separately if you do not choose to constrain the aspect ratio; if you choose to constrain the aspect ratio, then you only need to input one of the horizontal width or vertical width, and the software will automatically fill in the other item, and the output width-to-height ratio of the image will be consistent with the original width-to-height ratio of the image input.

2）In addition, you can also adjust the approximate output size of the image by using the mouse:

Select an image that is going to be adjusted, move the mouse to a certain marker block on the image (all eight small black blocks around the image are image selection marker blocks), and at this time, the mouse will change into a draggable style（↕、↔、↘、↙）,Press the left mouse button and move the mouse, and you can freely modify the output size of the image. If what you are dragging is the style ↘、↙,The program will control the image to scale proportionally in terms of width and height.

Precautions:

Modifying the output size of the image is only valid when one image is selected

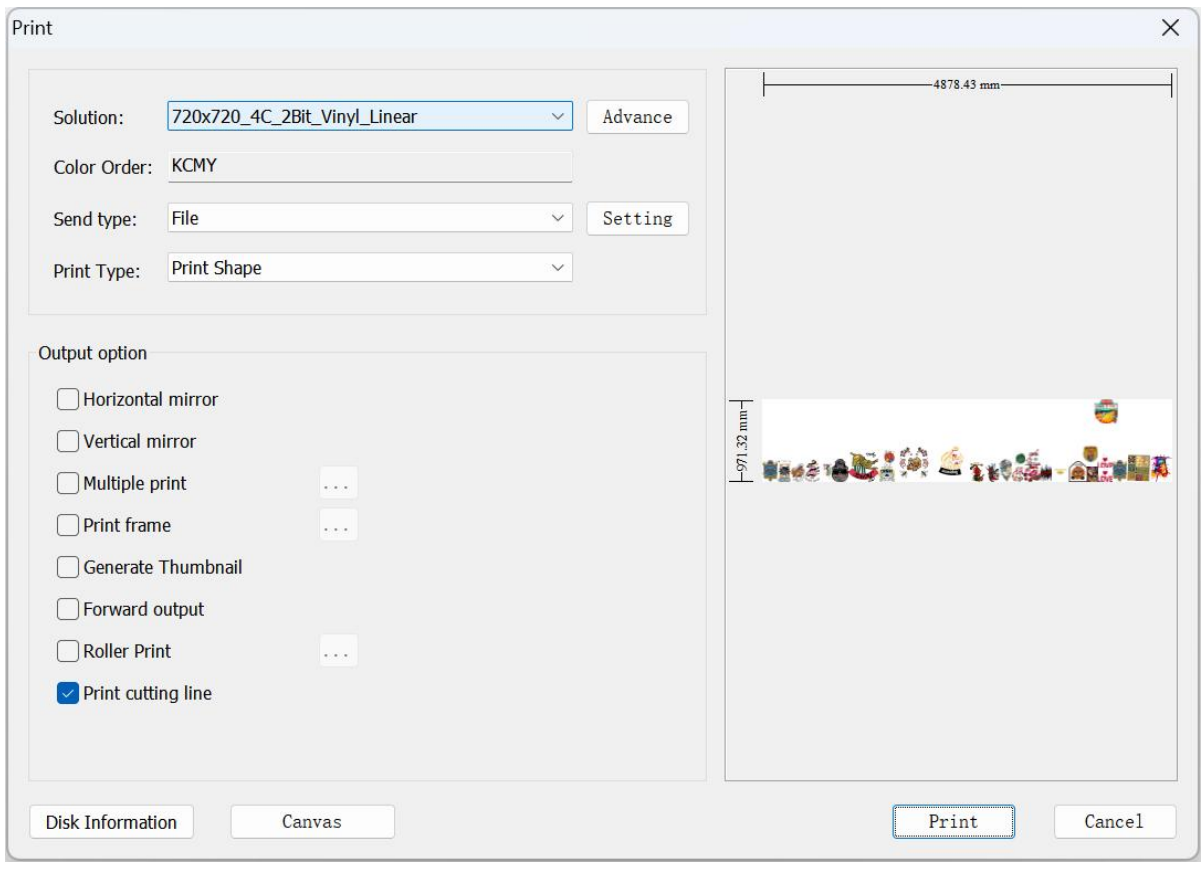
3）Image Layout: Use the layout toolbar or manually drag the images for layout. For details on using the layout toolbar, see the 02 Interface Introduction.

Precautions:

Except for operations such as **[Vertical Flip]**, **[Horizontal Flip]**, **[Rotate Right]**, **[Rotate Left]**, **[Horizontally Center]**, and **[Vertical Center],** you must select two or more images before performing other arrangement operations.

7. Basic Settings for Printing Images

Click the **[Print]** button in the RIIN menu bar (shortcut key Ctrl+P), and the program will pop up a print confirmation dialog box, as shown in the following figure:

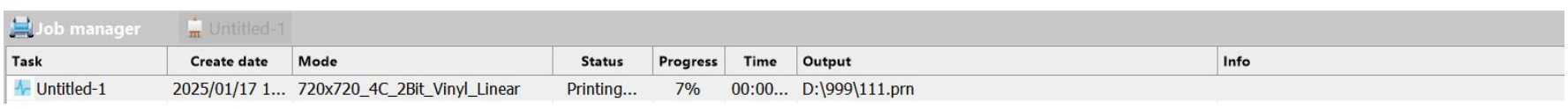


Here you can set relevant printing parameters:

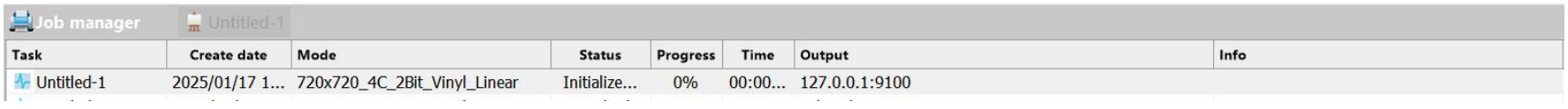
1）Solution: Select a printing solution you need for printing from all the newly created solution.

2）Set printing parameters according to your needs. The sending method can be selected as **[File]** or **[TCPIP]**. Choosing to print to the file port means generating a PRN file first, and then the printing software opens the PRN file for printing. Choosing to print to the TCPIP port means processing the image and printing simultaneously without generating a PRN file. The printing software only needs to stay open in the background and have the parameters set, which saves time and space but requires higher computer configuration.

When choosing to print to the file port and clicking the **[Print]** button on the print confirmation interface, the interface is as follows:



When choosing to print to the TCPIP port and clicking the **[Print]** button on the print confirmation interface, the progress indication is as shown in the following figure:



3）Here, the meanings of parameter progress, time, and output method need to be explained:

22% represents the percentage of the currently RIP quantity, 00:00:04 indicates that it took 4 seconds to complete 22% of the RIP process, and the output method shows the path and file name where the file is saved.

In addition, when printing to the network port, the user can pause printing. After clicking the **[Stop Printing]** button, the

program pauses printing. If the user wants to continue printing, clicking the **[Start Printing]** button allows the program to resume printing. If you want to stop printing midway, you can click the **[Stop Printing]** button, and the program will stop printing. After the program stops printing, you can perform other operations.

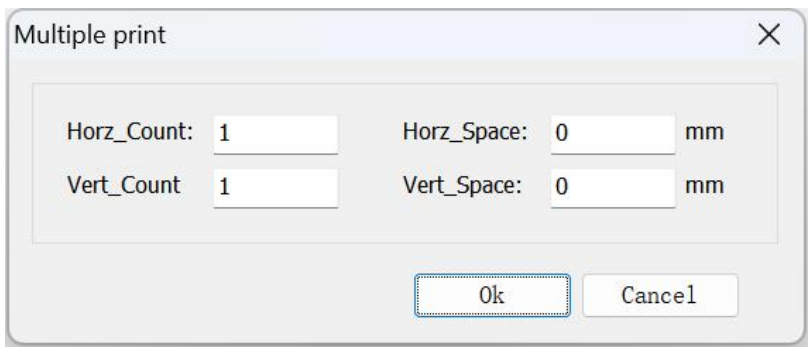
4) Printing Type: It supports **[Print Shape], [Absolute Coordinate], [Print Canvas],** and **[Canvas Width]. [Print Shape]** means only printing the effective area of the graphic elements within the canvas. **[Absolute Coordinate]** means printing from the origin position to the maximum width and height area of the graphic elements within the canvas. **[Print Canvas]** means printing the entire canvas area. **[Canvas Width]** means only printing the effective area that conforms to the canvas width and the height of the graphic elements.

5) Horizontal Mirror: Select whether the currently printed image needs horizontal mirror output.

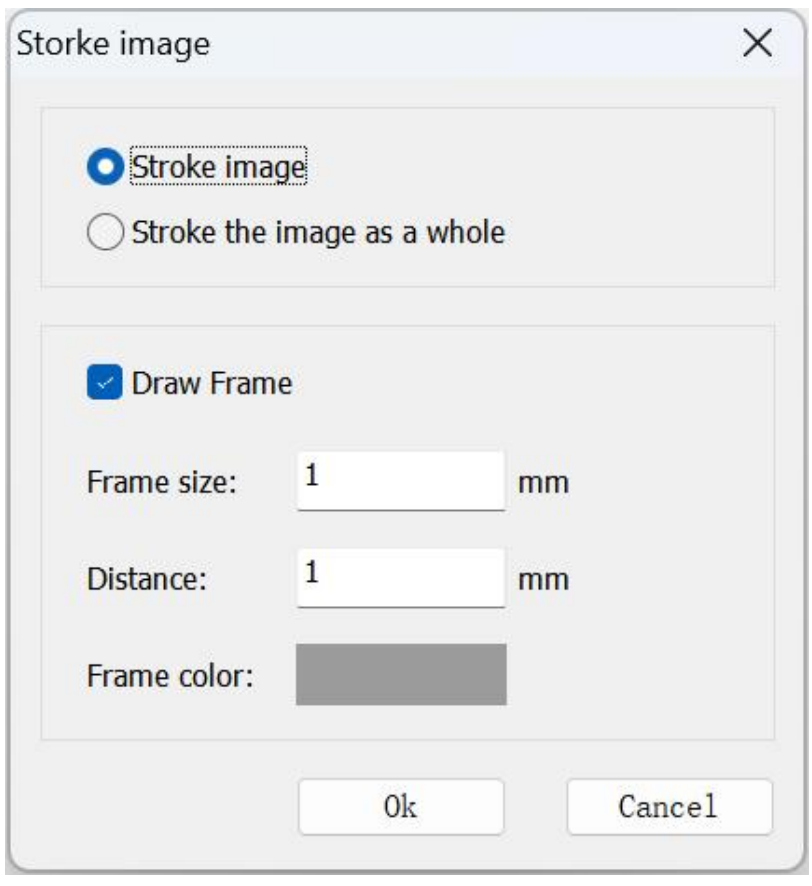
6) Vertical Mirror: Select whether the currently printed image needs vertical mirror output.

7) Multiple Print: When selecting multiple copies printing, you can set relevant information for multiple copies printing.

Clicking the three-dot button on the right side pops up the following dialog box:



8) Storke Image: Outlining the individual image or the whole. Select border printing, click the three-dot button on the right, and the following dialog box pops up:



9) Generating a JPG Preview File: When the option to generate a JPG preview file is checked, a JPG preview file with the same name will be saved in the same path while outputting the prn file in the local file mode.

10) Forward Output: Checking the forward output option will cause the graphic elements on the canvas to rotate 180 degrees for

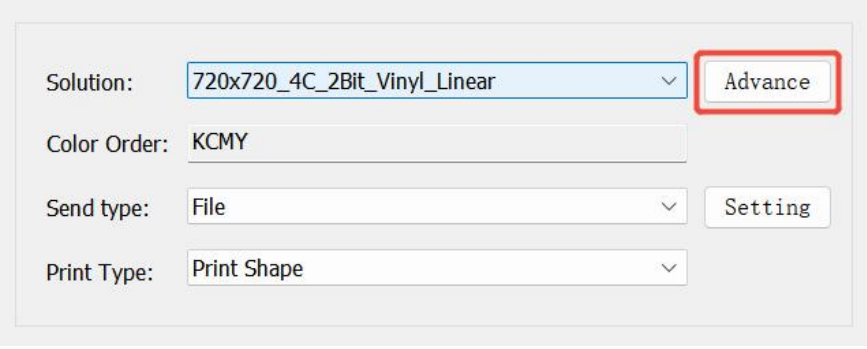
printing on the machine.

11）Canvas：Canvas settings please refer to the description of setting canvas parameters mentioned above.

12）Disk Information：Check the total storage space and available remaining space of the current computer disk.

After the above settings are completed and saved, when you click **[Print]**, you will automatically jump to the Print Management Center. You can view the current process, and you can also terminate the printing process at any time.

The above is only the basic settings for printing. In actual operations, you may also need to use advanced functions related to color. See Chapter 6 for advanced printing settings.



Precautions:

- Before printing, the software will check if any image exceeds the canvas boundary. If so, the interface will give a reminder.
- If the printing output is in a file format, you will need to enter the storage location and name of the file by yourself.
- The time required for printing is related to the size of the image to be printed. The larger the image, the longer the printing time.

8. End of Printing

After printing is completed, you can exit the RIIN software, or you can create a new canvas project for another printing task.

Precautions:

- The relevant parameters of the printer settings and canvas settings will be saved automatically by the software. If the parameter settings you use next time remain unchanged, you can skip steps 2 and 3 in your printing process.
- Before printing, you can adjust the printing color parameters by clicking on the color management module in the software's menu bar to make the printing effect more in line with your needs.
- When printing starts, the software will occupy a large amount of memory. If your memory configuration is low, it will slightly extend the printing time.

04 Detailed Explanation of Basic Functions

1. Select Image

1）Select a single image:

Click the left mouse button on the image you want to select, and the image will be selected.

2）Select multiple or all images:

You can directly click the left mouse button in the blank area around the candidate image, hold down the left button and move the mouse, and you will see a dashed rectangle. When you release the left mouse button, the images within this dashed rectangle will be marked as selected. You can also hold down the Ctrl key and click the images you want to select one by one with the left mouse

button, and you can achieve the same purpose. You can use the shortcut key Ctrl + A on the canvas interface to select all the images on the canvas.

3）Deselect Image:

When you click the left mouse button in the non-image area of the canvas, all the images on the canvas will be marked as unselected.

2. Undo and Redo

1）The software will create a backup for each of your valid actions. If you make an operational mistake or want to return to the previous canvas state, you can click the **[Undo]** button in the menu bar (or the **[Undo]** item in the right-click menu or use the shortcut key Ctrl + Z). At this time, the canvas will update to the state before the current operation. You can perform this operation continuously until the canvas returns to the state you desire.

2）If you undo a canvas action and then want to restore to the next canvas state, you can click the **[Redo]** button in the menu bar (or the **[Redo]** item in the right-click menu or use the shortcut key Ctrl + Y). At this time, the canvas will update to the next state of the current operation. You can perform this operation continuously until the canvas returns to the state you desire.

Precautions:

The number of steps that can be executed for undoing and redoing is not unlimited, and you need to pay attention to this when editing the canvas.

3. Group and Ungroup

1）Group Image:

Select two or more images to be grouped, and click the **[Group]** button in the menu bar (or the **[Group]** menu item in the right-click menu or use the shortcut key Ctrl + G) to complete the grouping of the images.

2）Ungroup Image:

Select the grouped images, and click the **[Ungroup]** button in the menu bar (or the **[Ungroup]** menu item in the right-click menu or use the shortcut key Ctrl + U) to complete the disbanding of the images.

Precautions:

A single image does not respond to grouping and Ungrouping.

4. Copy, Paste, and Multiple Pastes

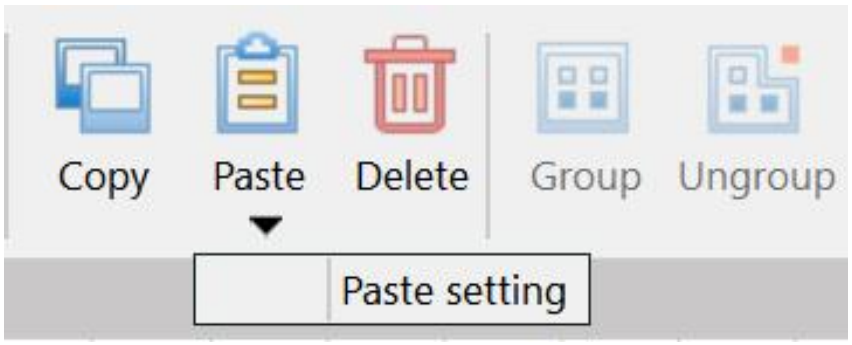
1）Copy Images:

Select the image to be copied, and click the **[Copy]** button in the menu bar (or the **[Copy]** menu item in the right-click menu or use the shortcut key Ctrl + C) to complete the image copying.

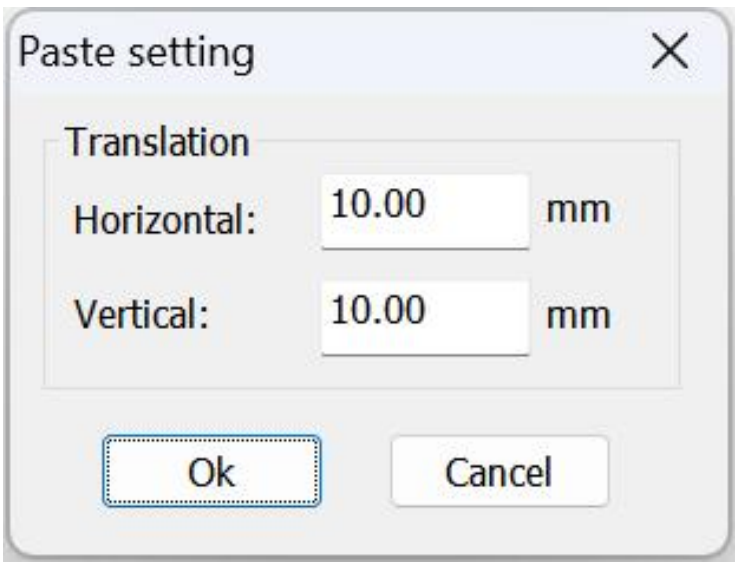
2）Paste Images:

After you have completed copying the image, you can paste the copied image onto the canvas at any time. Click the **[Paste]** button in the menu bar (or the **[Paste]** menu item in the right-click menu or use the shortcut key Ctrl + V) to complete the image pasting.

If you need to set the parameters for image tiling, you can click the black inverted triangle below the **[Paste]** function in the menu bar, and the **[Paste Settings]** function will appear.



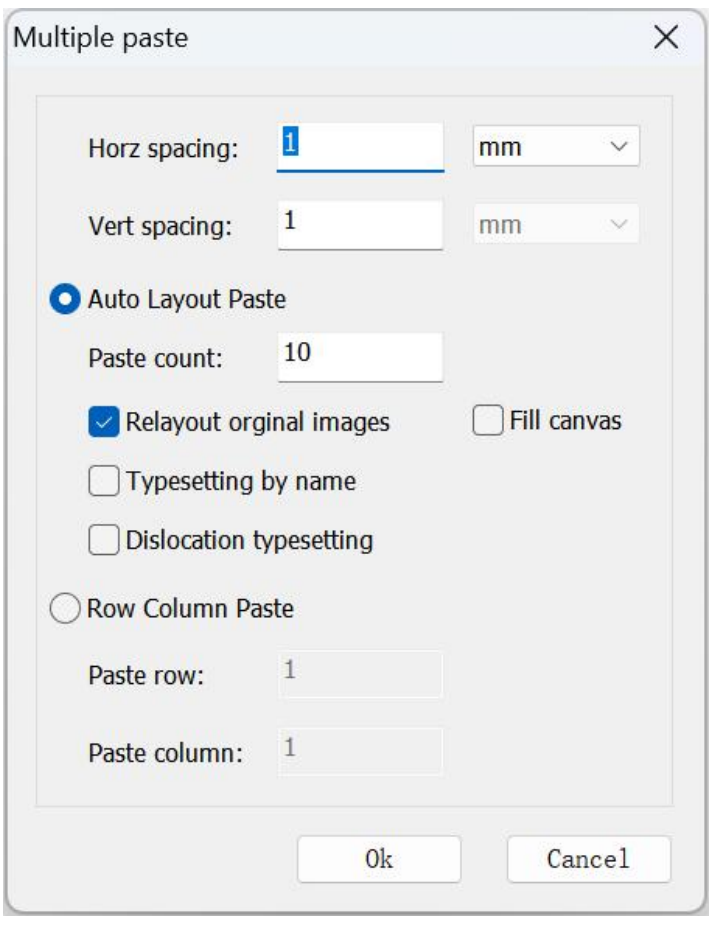
Click will pop up a pop-up window as shown in the following figure:



You can change the horizontal and vertical distances to set the positional relationship between the copied image and the original image.

3）Multiple Paste:

After you have completed copying the image and want to paste multiple copies of the same image on the canvas, you can do this by pasting the image multiple times. Click the [Multiple Paste] button in the right-click menu, and the program will pop up a dialog box as shown in the following figure:



You need to set the following values here:

- Specify the number of images to be pasted. If you select "Fill the entire canvas", the program will paste images onto the

canvas until there is not enough space on the canvas.

- Specify the horizontal and vertical spacing when pasting onto the canvas. You can choose the unit of length measurement you are familiar with. The software provides units of measurement such as inches, millimeters, centimeters, meters, picas, points, etc. for you to choose from.
- Specify the number of rows and columns for pasting. If you set row and column pasting, the program will paste the number of rows and columns you have set onto the canvas.

After setting the parameters, click the **[OK]** button, and the program will start pasting the images in the way you specified.

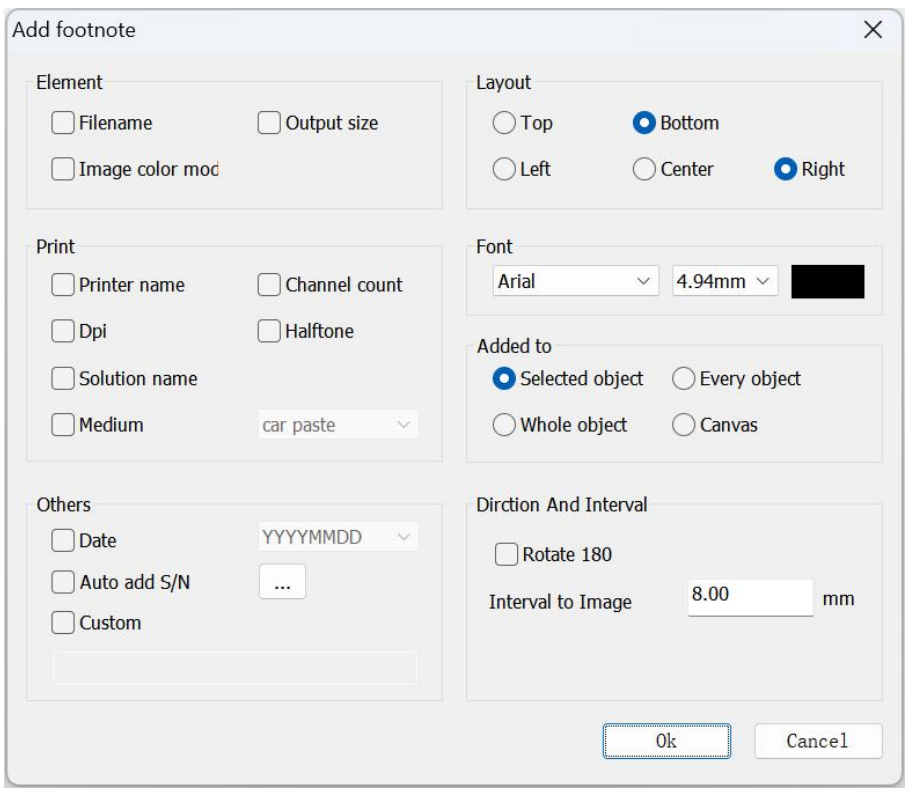
5. Save/Open the Canvas

When you have finished editing a canvas project file, you can save this canvas file for future use. Click the **[Save]** button in the Ruiyin menu bar (or the **[Save]** button in the menu bar or the shortcut key **[Ctrl+S]**), and the program will pop up a save file dialog box.

You select the storage path and storage file name of the canvas project here, and then click the save button. The program will save all the information related to the current printing task in the file you specified (the file name is the name you entered, and the file extension is.rcf). Later, you can use the **[Open Canvas]** function to load the canvas project file into the RIIN software, and the software interface will return to the state when you saved the canvas project file. You can continue to edit this canvas or directly output it.

6. Add Footnotes

When you need to add footnotes to the images in the canvas, you can click the **[Add Footnotes]** button on the toolbar, and the program will pop up the following dialog box:

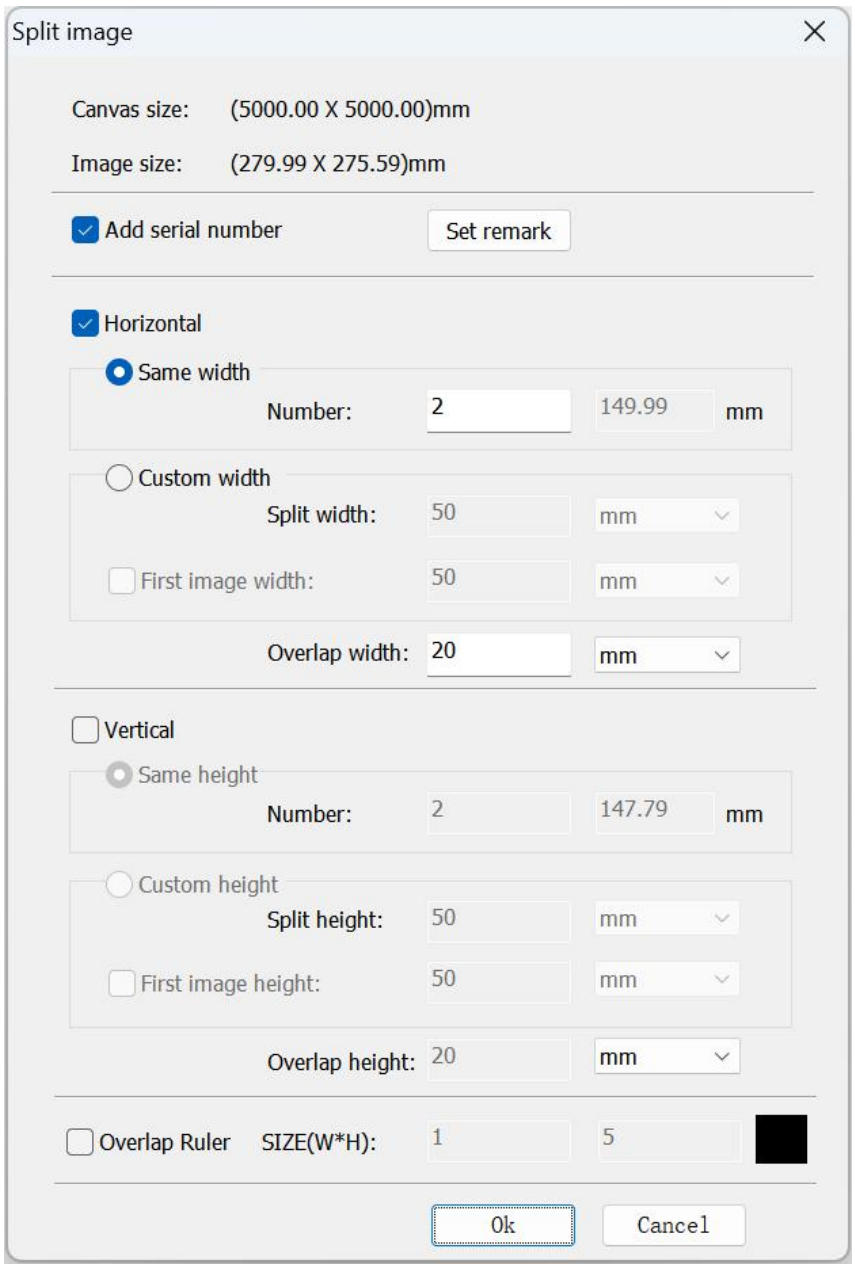


After setting the footnote information you want to add in the adding footnotes interface, click the **[OK]** button, and the footnotes will be added. You will be able to see the added footnote information in the printed output of your images.

7. Split Image

When the output size of an image on the canvas exceeds the canvas, you can try rotating the image. If part of the rotated image still exceeds the canvas, then you can complete the printing by segmenting the image.

Select the image that needs to be segmented, and click the [Split Image] button in the menu bar (or use the shortcut key Alt + S), and the program will pop up a dialog box as shown in the following figure.



The default segmentation width for horizontal segmentation is the difference between the current canvas width and the horizontal canvas margin (default is 2 centimeters), and the default overlapping width is 2 centimeters. You can separately specify the width of the first horizontal segmentation block.

The default segmentation height for vertical segmentation is the difference between the current canvas height and the vertical canvas margin (default is 2 centimeters), and the default overlapping height is 2 centimeters. You can separately specify the height of the first vertical segmentation block.

Of course, you can modify the segmentation parameter values according to your segmentation intention. The width and height of the current canvas and the image to be segmented are displayed above the segmentation setting box, and you can set them by referring to these values. When setting, you can select the unit of length measurement you are familiar with. The software provides units of measurement such as inches, millimeters, centimeters, meters, picas, points, etc. for you to choose from.

After setting, click the OK button to complete the image segmentation.

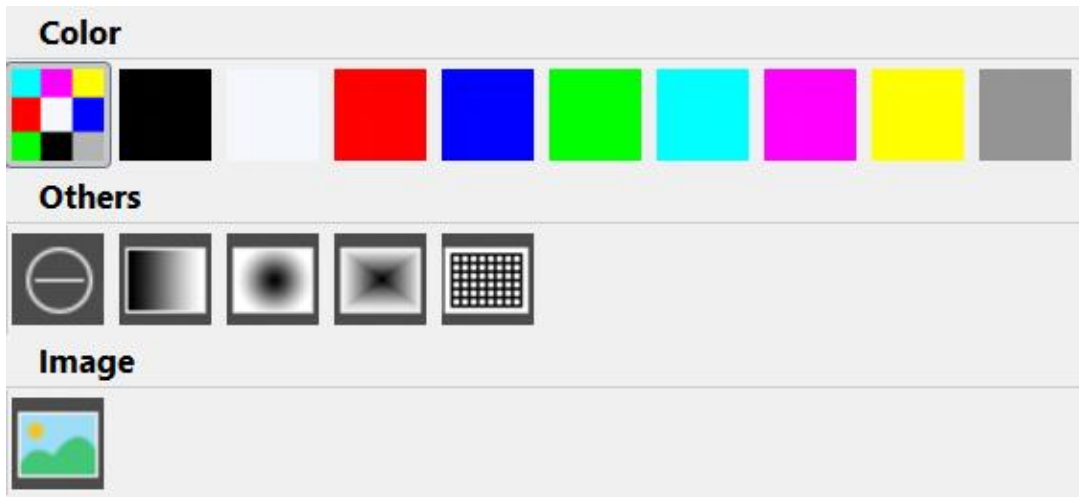
Precautions:

1）The software does not support image segmentation for grouped images.

2）If you need to restore the segmented image, click the **[Undo]** button in the menu bar (or the **[Undo]** item in the right-click menu or use the shortcut key Ctrl + Z) to return to the state of the image before segmentation.

8. Fill

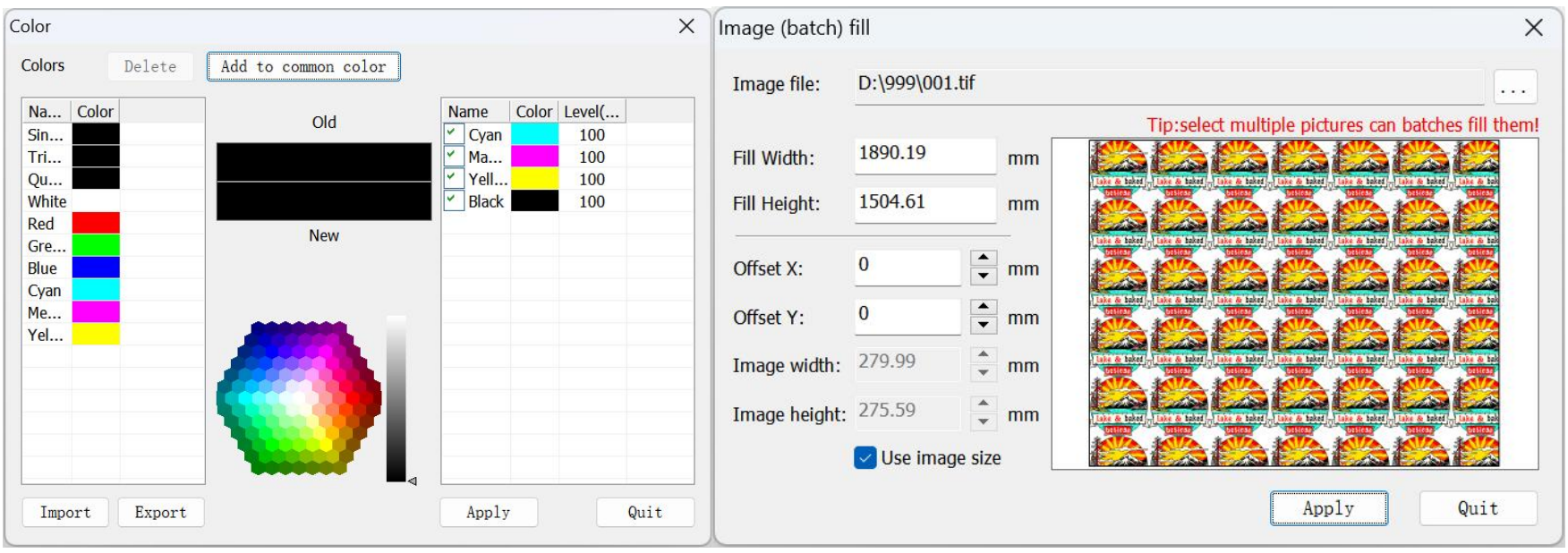
Sometimes when you draw a rectangle or an ellipse on the canvas using the tools on the toolbar and you want to fill it with color, you can use the color fill function.



After selecting the rectangle or ellipse to be filled, click the fill option in the Ruiyin menu bar. You can use the colors from the default commonly used color palette, or you can select the color you want to fill from the color library by yourself. After the operation is completed, the rectangle or ellipse will be filled with the color you desire.

If you draw a rectangle on the canvas using the tools on the toolbar and you want to fill it with an image, you can choose image fill. After selecting the image to be filled and setting a fixed size, you can proceed (batch processing of images is also possible).

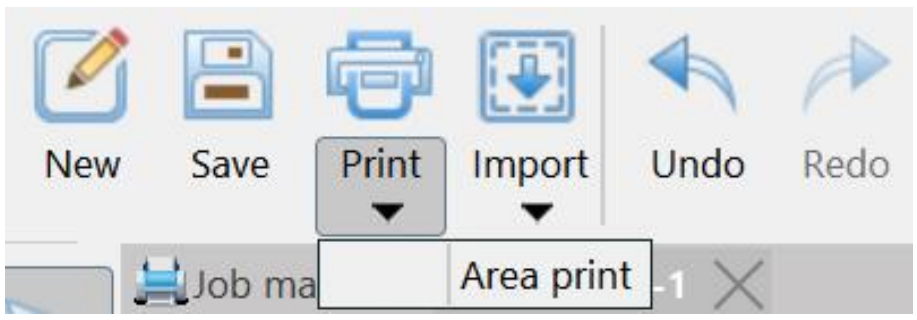
The color library and image fill pop-up windows are shown in the following figure.



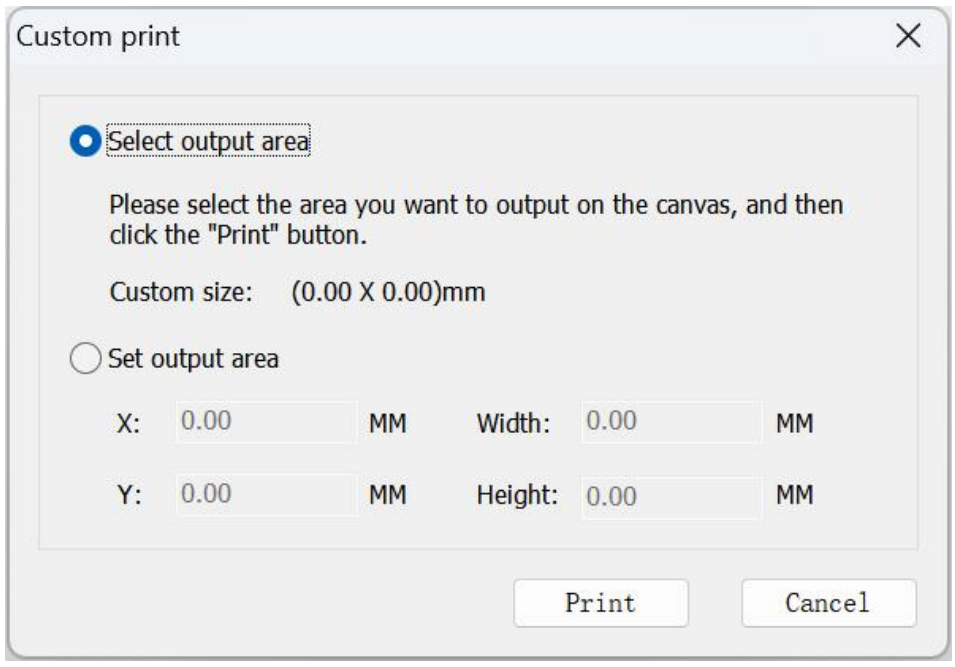
9. Area Print (Custom Sample)

If you want to preview the output effect of the canvas before outputting it, RIIN supports area printing, and you can customize a sample for the current canvas.

You need to click the black inverted triangle below the **[Print]** function in the menu bar, and the **[Area Print]** function will appear.



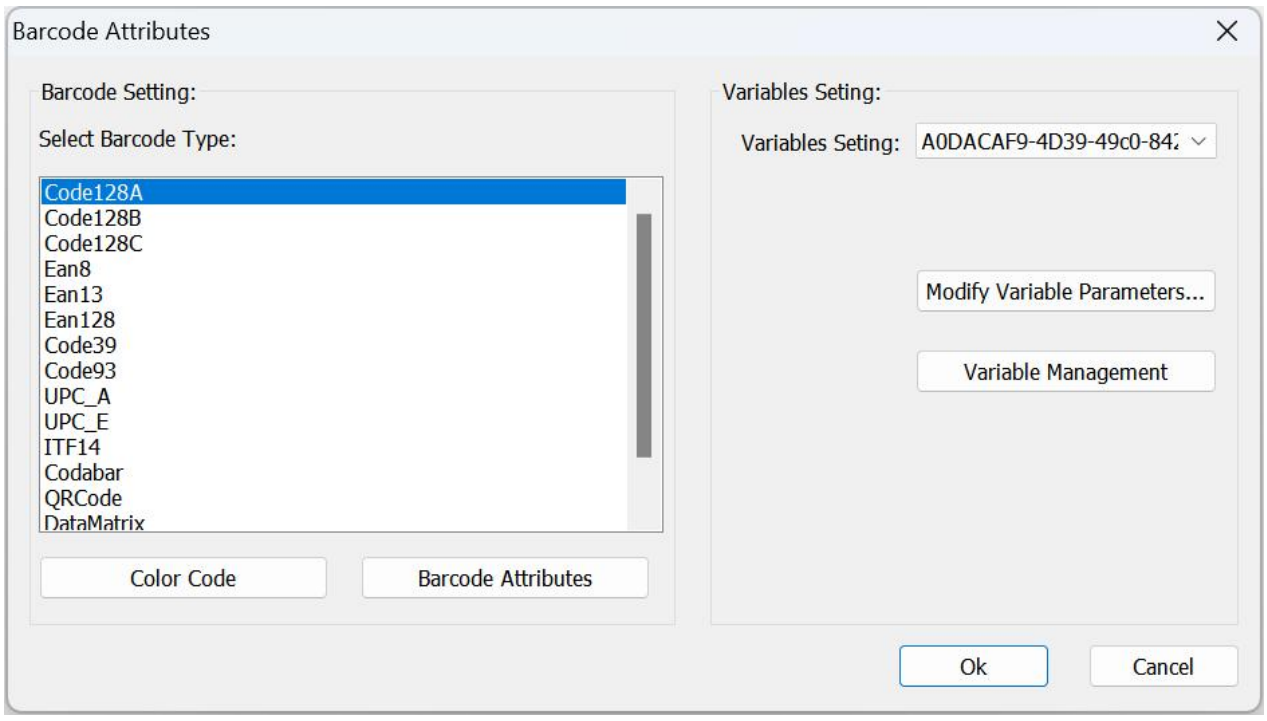
Clicking will pop up a pop-up window as shown in the following figure:



After clicking area print, there will be an additional red rectangle on the canvas, and the image within this rectangle is the sample to be output. Before outputting, you use the mouse to adjust the position and size of this rectangle. After adjustment, you click the **[Print]** button on the custom sampling dialog box to directly output the sample.

10. Barcodes

Click  on the toolbar,place the mouse on the canvas and drag the mouse to draw a barcode. Double-click the barcode, and the following barcode attribute interface will appear:



Currently, 15 types of barcodes are supported, namely Code128A, Code128B, Code128C, Ean8, Ean13, Ean128, Code39, Code93, UPC_A, UPC_E, ITF14, Codabar, QRCode, DataMatrix, PDF417.

1） Code128A code has unlimited length; the characters supported by Code128A code: 0~9, A~Z, control characters (the actual code supports ASCII codes 0-95).

2）Code128B code has unlimited length; the characters supported by Code128B code: 0~9, A~Z, a~z, characters (the actual code supports ASCII codes 0-126).

3） Code128C code has unlimited length; the characters supported by Code128C code: 0~9.

4） Ean8 code length: 7 + 1, 7 valid data digits plus 1 check digit; the characters supported by Ean8 code: 0~9.

5） Ean13 code length: 12 + 1, 12 valid data digits plus 1 check digit; the characters supported by Ean13 code: 0~9.

6）Ean128 code has unlimited length; the characters supported by Ean128 code: all ASCII codes.

7）Code39 code has unlimited length; the characters supported by Code39 code: 0~9, A~Z,., /, -, +, $, %, space (7 characters).

8）Code93 code has unlimited length; the characters supported by Code93 code: all ASCII codes.

9）UPC_A code length: 11 + 1, 11 valid data digits plus 1 check digit; the characters supported by UPC_A code: 0~9.

10）UPC_E code length: 7 + 1, 7 valid data digits plus 1 check digit; the characters supported by UPC_E code: 0~9.

11）ITF14 code length: 13 + 1, 13 valid data digits plus 1 check digit; the characters supported by ITF14 code: 0~9.

12）Codabar code has unlimited length; the characters supported by Codabar code: 0~9, A~D,., /, -, +, $, : (6 characters).

13）The characters supported by QRCode: numbers, letters, characters, Chinese characters.

14）The characters supported by DataMatrix: numbers, letters, characters.

15）The characters supported by PDF417: numbers, letters, characters, Chinese characters.

Currently, three variable rules are supported, namely serial number, calendar, and text.

Note: The so-called "variable" refers to the rule bound to the barcode, which stipulates how the barcode changes. For example, if a serial number variable is bound to a QRCODE two-dimensional code, and 100 sheets are printed, and the serial number is custom edited from 001 to 100, the QR code pattern will change, and the result scanned by the code scanner will be from 001 to 100.

05 Show

1. Guidelines

1）Place the mouse in the ruler area, hold down the left mouse button and drag the mouse to pull out a guideline.

2）Place the mouse on the guideline and hold down the Ctrl key, the mouse will turn into a double-headed arrow, and you can drag the guideline.

3）Drag the guideline back to the ruler area, and the guideline will disappear from the canvas.

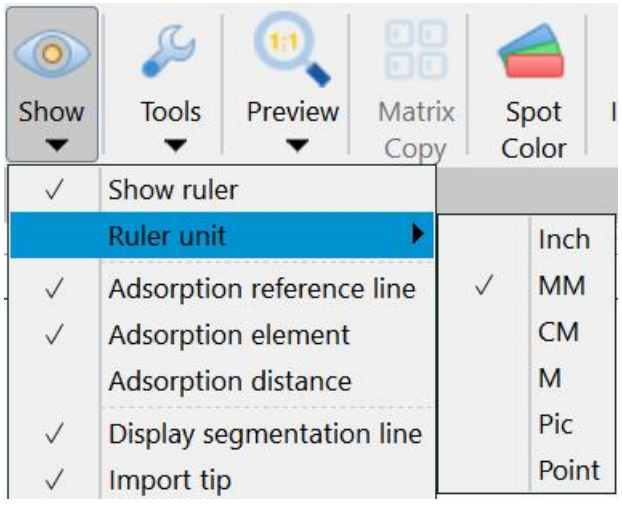
2. Auto Alignment Lines

When there are two or more graphic elements on the canvas, when you drag a certain graphic element, auto alignment lines will automatically appear. The auto alignment lines can assist the user in typesetting the page.

3. Adjusting the Rulers

Adjusting the Rulers: To display the actual size and position of the canvas and images, the RIIN RIP software has set up rulers (including horizontal and vertical rulers). You can judge the size of the canvas and images and the position of images on the canvas through the scales on the rulers to help you complete the typesetting operation.

You can click the **[Show]** button in the menu bar and select whether to display the rulers and the scale units of the rulers for the current canvas according to your needs.



There are six types of ruler scales: inches, millimeters, centimeters, meters, picas, points.

4. Adsorption Reference Line, Adsorption Element, Adsorption Distance

You can select **[Adsorption reference line]** in the **[Show]** button in the menu bar. When moving an object (such as a graphic, text, etc.), the edge or center of the object will automatically snap to these guidelines.

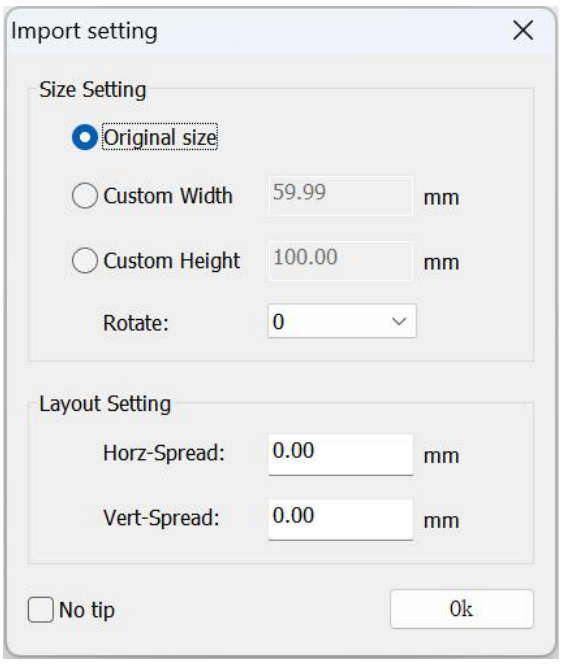
You can also set **[Adsorption element]**. When an object (graphic element) is moved, its edge or center will automatically snap to the edge or center of other objects.

You need to set the **[Adsorption distance]**. The snapping distance refers to the proximity or tolerance range when an object snaps to a guideline or another object. When the object moves within a certain distance, it will be automatically snapped to the target position.

5. Import Tip

If you want to keep the original size of the imported images each time, you can select not to display the import image setting pop-up window in the **[Show]** button in the menu bar.

After canceling the display of imported images, the following pop-up window will no longer appear when importing images:



You can also check **[No Tip]** at the lower left of the pop-up window, which has the same effect as the above operation.

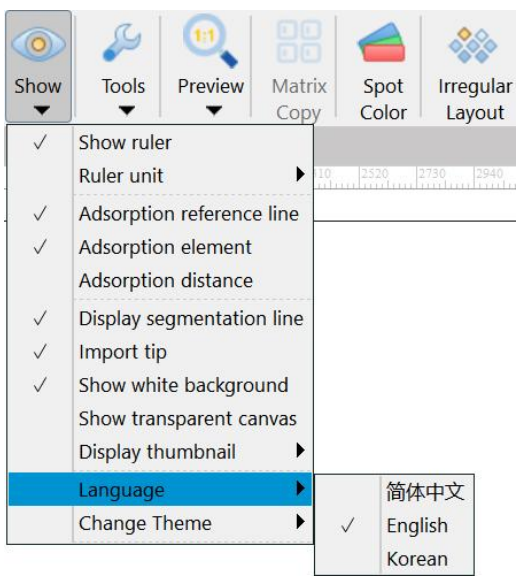
6. Display Segmentation Lines, White Background, Transparent Canvas

You can select whether to display dividing lines when segmenting images, whether to display a white background in the canvas outer area, and whether to display a transparent canvas in the canvas area in the **[Show]** button in the menu bar.

7. Language

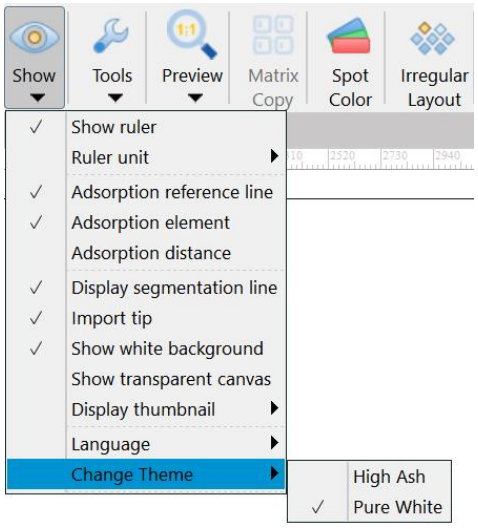
The current RIIN supports 3 languages, namely Simplified Chinese, English, Korean, You can select the corresponding

language in the **[Show]** button in the menu bar, as shown in the following figure:



8. Change Theme

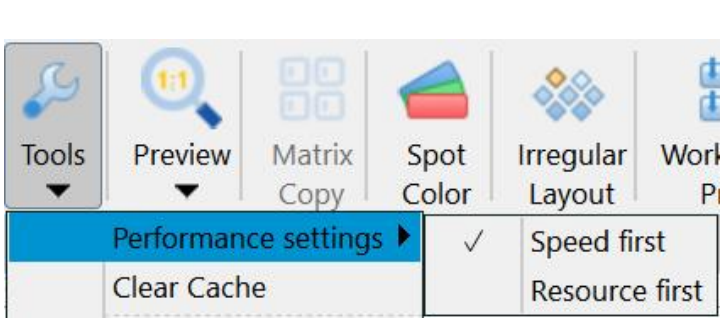
If you have a preference for the software's theme, RIIN offers two themes, [High Ash] and [Pure White], for you to choose from.



Tools

01 Performance Settings

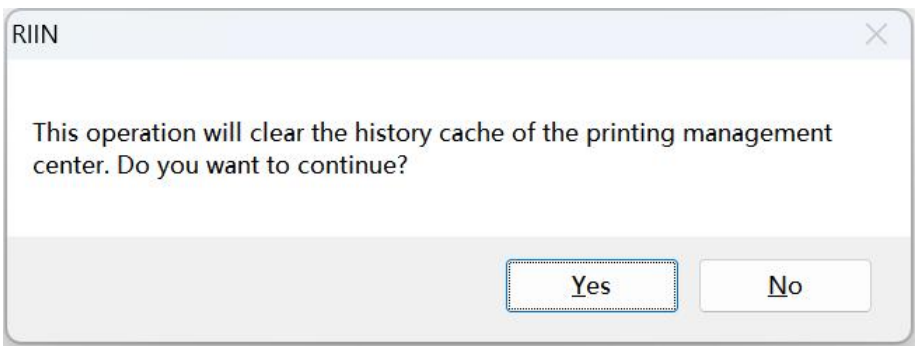
When using the software for RIP tasks, when you need to complete the RIP task as soon as possible and do not need to save CPU and memory of the computer, you can select the **[Speed first]** option; when you need to run multiple software and perform RIP tasks simultaneously, you can select the **[Resource first]** option.



02 Clear Cache

Sometimes you may feel that the software runs slower after long-term use, which may be due to the generation of a relatively large number of cache files during the use process.

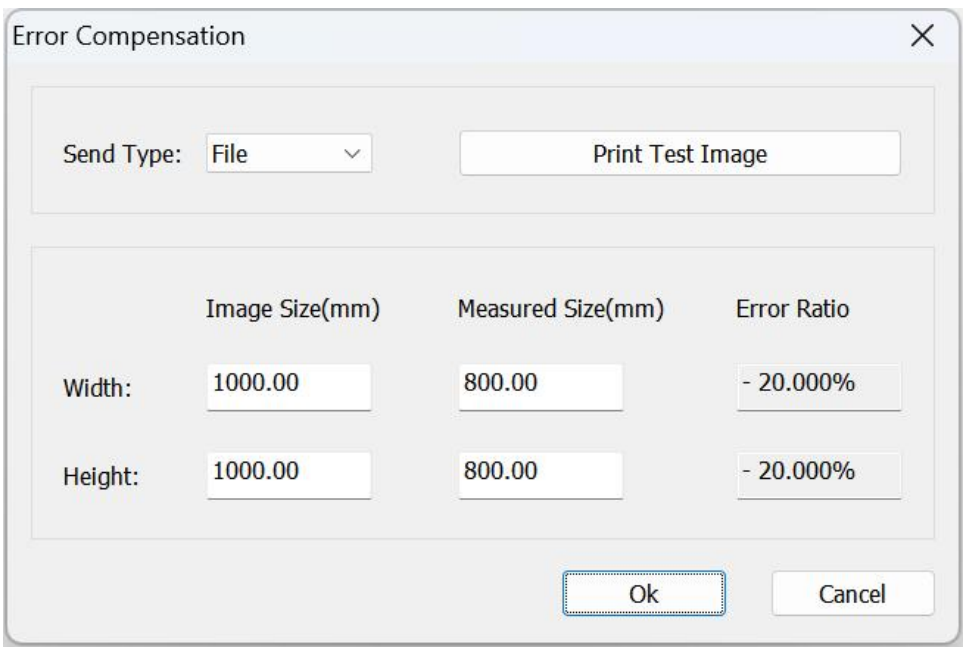
You can try clicking the **[Clear Cache]** button in the **[Tools]**, and the following interface will appear:



Click **[Yes]** to clear the cache, and click **[No]** not to clear the cache. Clearing the cache here means clearing the temporary files stored in the folder named Jobs.

03 Error Compensation

When there is a deviation between the actual picture size printed by the machine and the theoretical size, you will use the size error compensation function. Click the **[Tools]** button in the menu bar and select **[Error Compensation]**, and the following interface will appear:



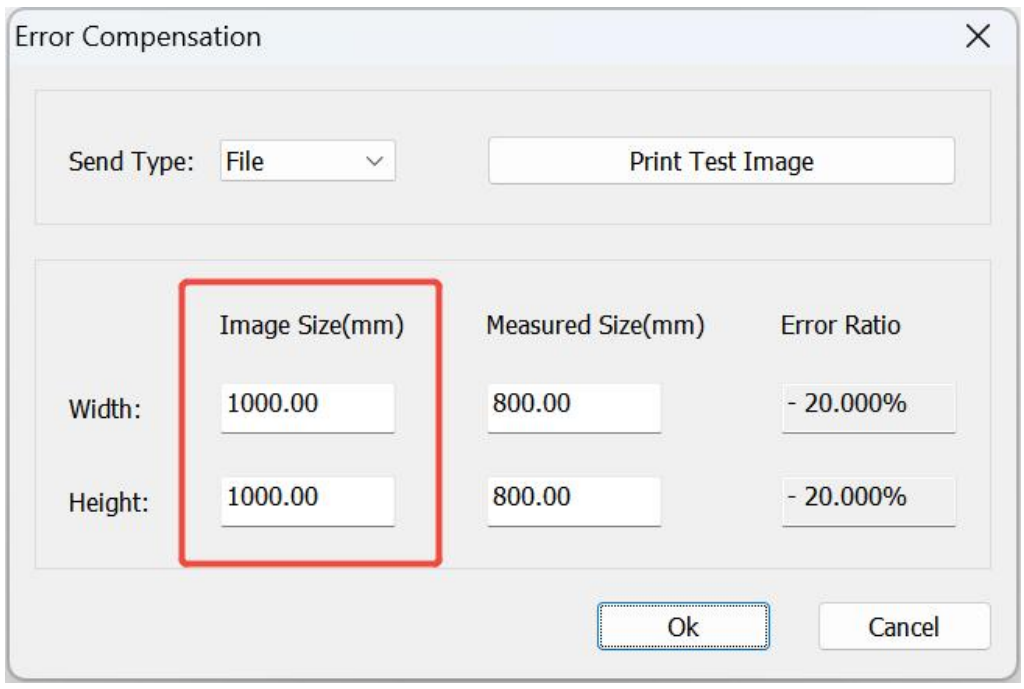
This function has two usage methods, one is to use the default test image, and the other is to independently select a test image.

1）Using the default test image

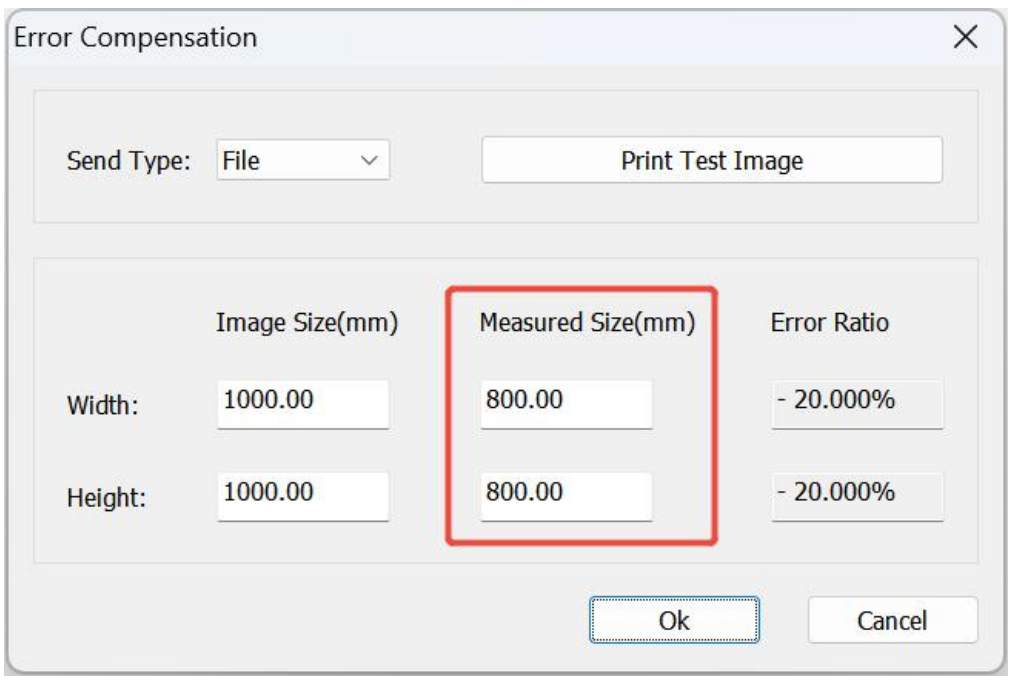
The default test image is a rectangular image with a right-angled border, which is convenient for users to measure the actual size. The steps for using it are as follows:

Select the way to print the test image. If you select the file, the corresponding printing file will be generated, and then it will be loaded and printed through the printing control software. If you select the network, you need to connect to the printing control software to print while processing.

Set the ideal size of the test image.



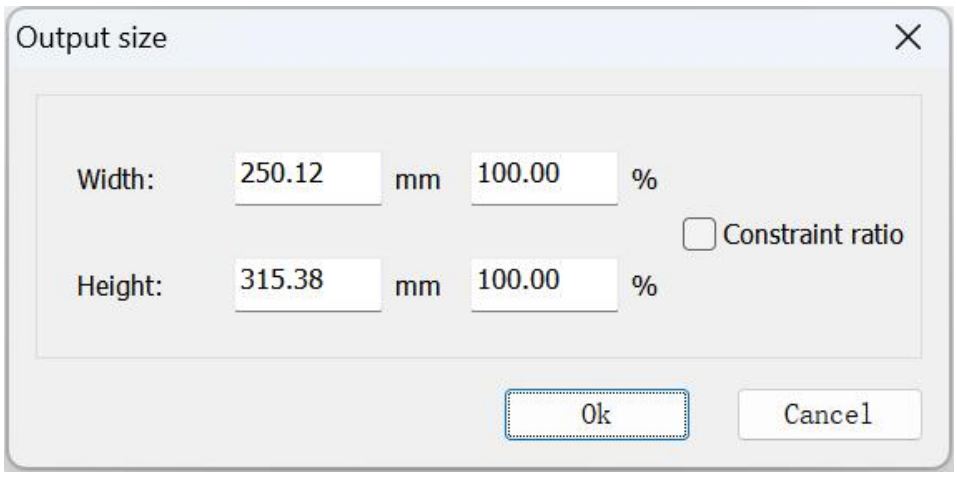
Measure the actual printed image size, enter it into the position shown by the printed measurement size, and click OK to complete the setting.



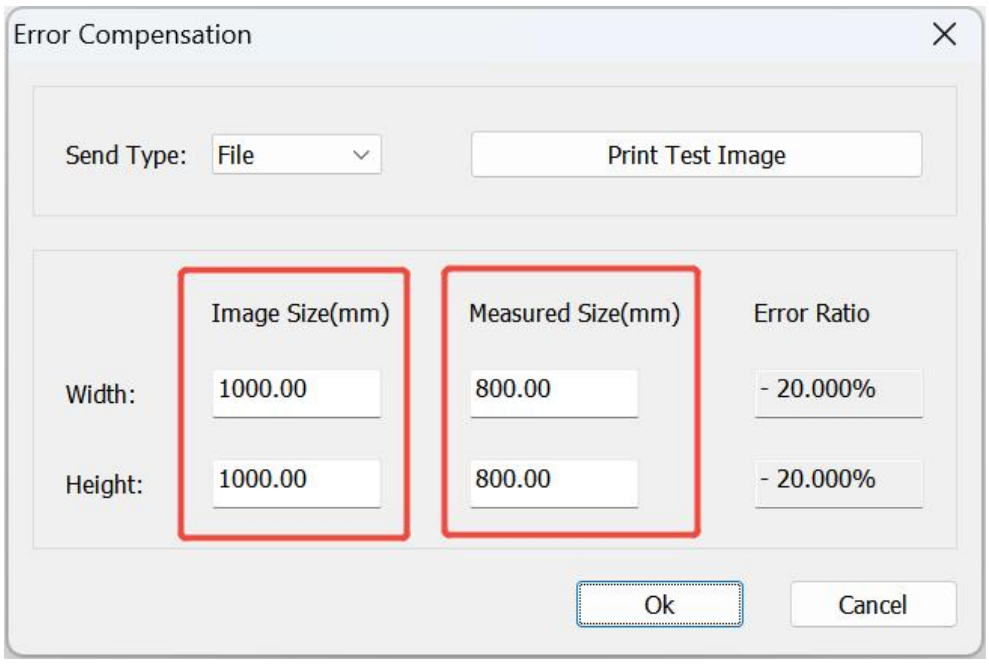
2）Independently selecting a test image

Import a suitable test image into the canvas. This image needs to have a clear border to facilitate the measurement of the actual size.

Set the size of the test image: After selecting the image, right-click the mouse and set the output size of the image.



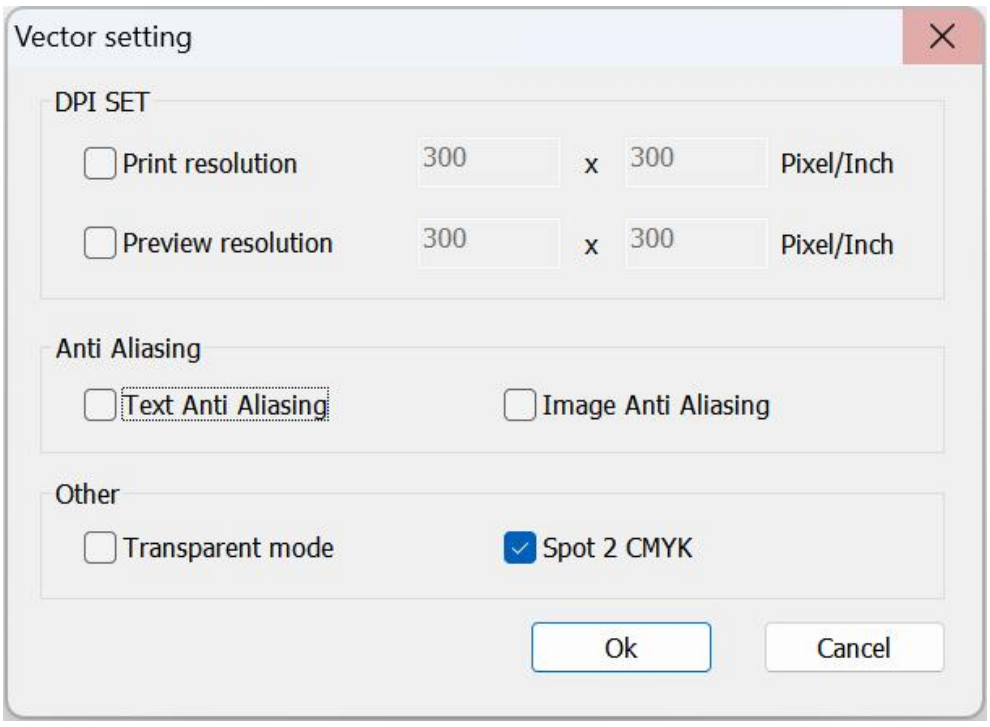
Measure the actual printed image size, enter it into the position shown by the printed measurement size, and click OK to complete the setting.



After completing the above operations, use the software normally.

04 Vector Setting

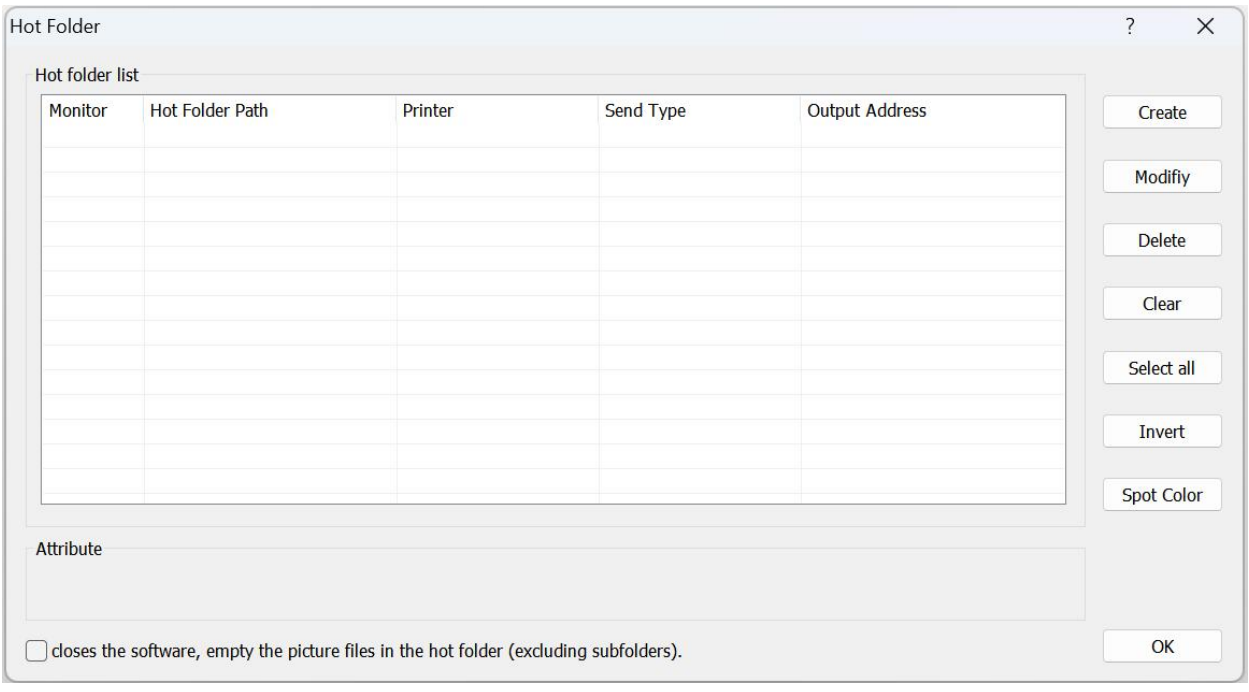
Click the **[Vector Settings]** in the **[Tools]** of the menu bar, and the following interface will appear:



- This function can set the rendering parameters of vector files (such as PDF\EPS, etc.), and supports settings for printing resolution, preview resolution, anti-aliasing, and other parameters. If the printing resolution is not set, the resolution for parsing vector files during printing will use the horizontal and vertical resolutions in the curve scheme.
- After checking the **[Text Anti Aliasing]** option, when parsing vector files, the aliasing of the text in the vector files will be eliminated;
- After checking the **[Image Anti Aliasing]** option, when parsing vector files, the aliasing of the images in the vector files will be eliminated; conversely, if not checked, it will not be eliminated.
- The **[Transparent mode]** option is mainly for parsing transparent data included in some vector files.

05 Hot Folder

Hot folder printing means setting an input file path. When you put pictures into this folder, the software can automatically recognize and detect the pictures in the folder, acquire them, and import and print them according to the set curve, saving you time on printing steps such as importing pictures and selecting curves. You can select **[Hot Folder]** in the **[Tools]** of the menu bar to use it.

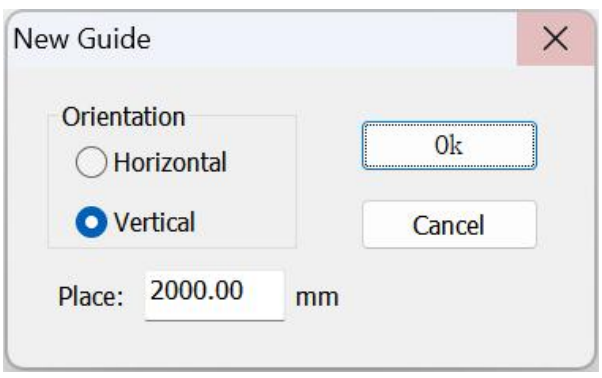


If you have any questions, you can click the question mark in the upper right corner of the interface to view the usage method of the hot folder.

06 Guide Line Settings

1. New Guide

If you have detailed requirements for the position of the guide line, you can set the parameters of the guide line, including the orientation and position of the guide line.



2. Clean Guide

If you no longer need to use the guide lines, you can click to clear the guide lines.

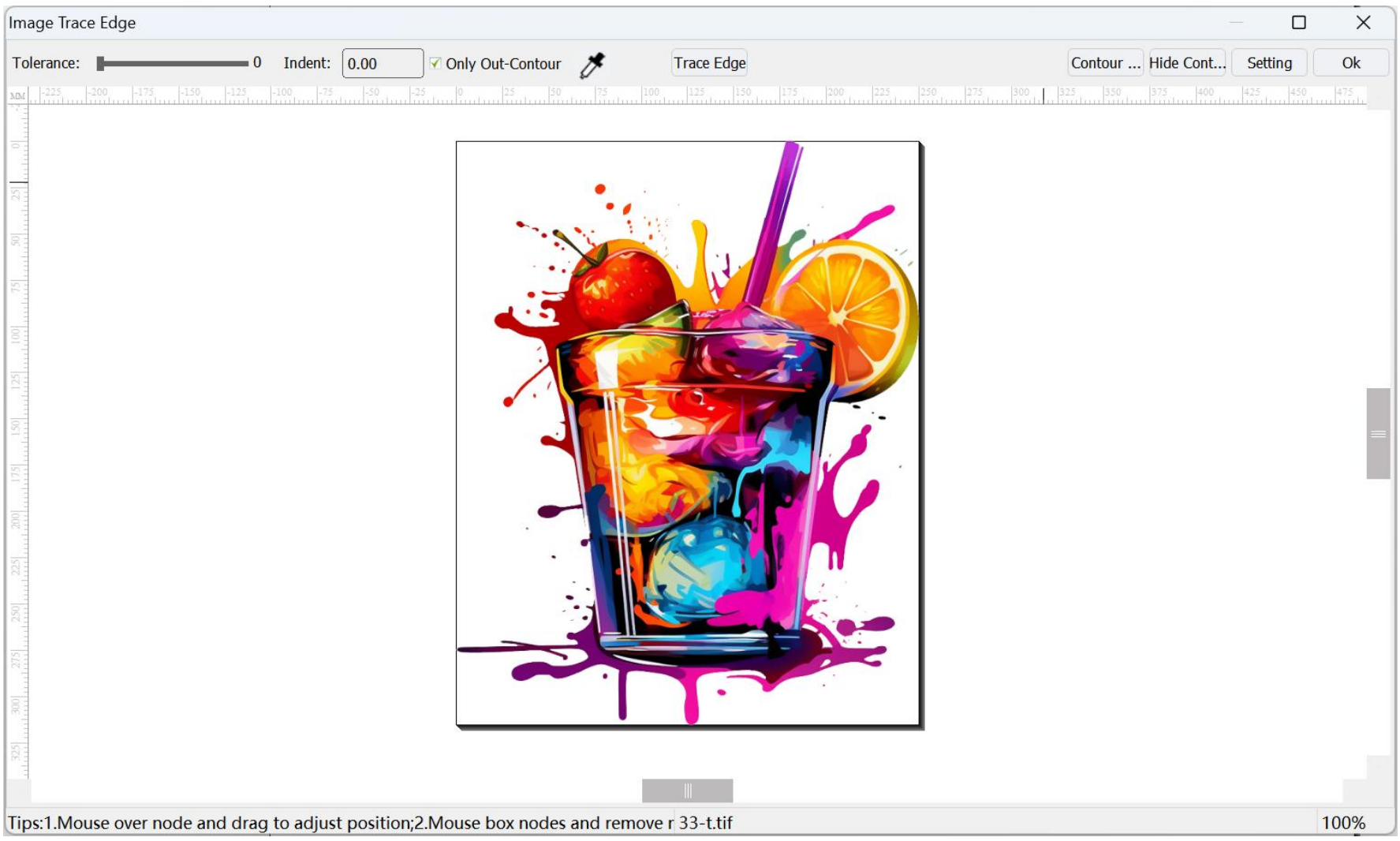
Advanced Functions

Advanced functions are features that are not available in the standard version. If you need certain advanced functions, you can contact the RIIN staff for version upgrade.

01 Cutting Tools

1. Image Trace Edge

The image edge tracing function is used as an auxiliary function in cutting and trimming. After tracing the edges of a selected image, a thin edge line will be drawn on the edge of the image, and by exporting the PLT, you can obtain the overall cutting contour of the image. You can select **[Image Trace Edge]** in the **[Tools]** of the menu bar to use this function.



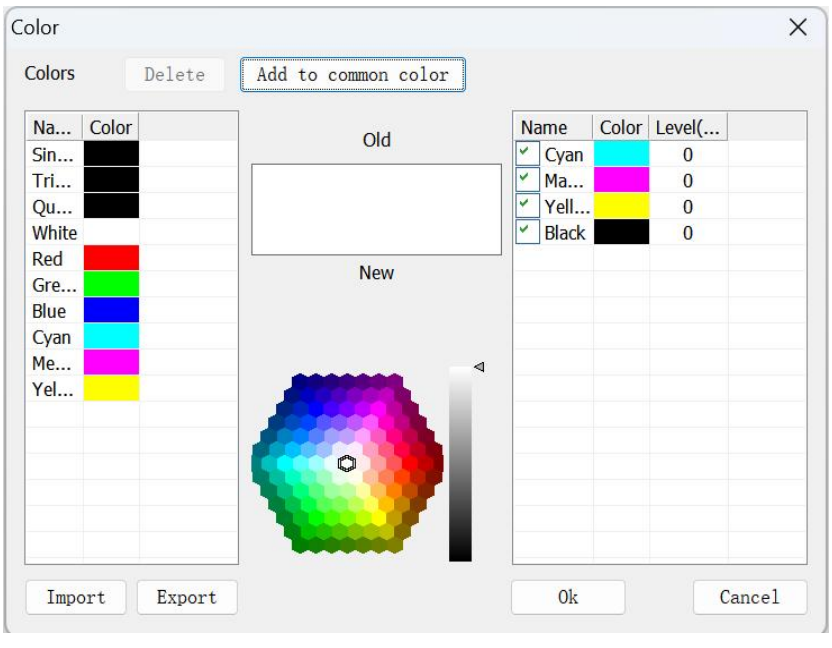
1） You can first use the color picker to select the background color, and the software will draw a thin edge line at the positions that have a difference from the selected color. You can fine-tune it by adjusting the **[Tolerance]**. The smaller the tolerance, the more accurate the edge tracing will be, and the default value is 0.

2）If you have requirements for the distance between the contour line and the image, you can input the **[Indent]** value you need.

3） After setting the color of the color picker, you can first click **[Trace Edge]** to view the result of automatic edge tracing, and then make manual modifications according to your needs.

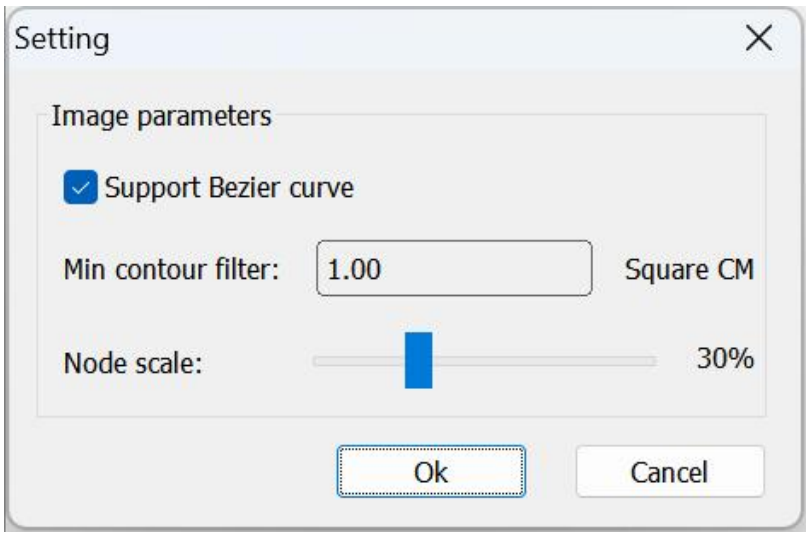
4） If you do not need to trace internal details, you can check **[Only Out-Contour]**, and the software will not trace the internal details.

5） You can set the contour color of the edge tracing. Click **[Contour Color]**. The following color table will appear for you to choose from:



6）If you need to hide the edge tracing contour, you can click the **[Hide Contour]** button at the upper right of the interface. The contour will only be hidden on the current page, and you can still see the image contour in the canvas.

7）Click **[Setting]**, and the pop-up window is as follows:



- The default selection supports Bezier curves, making the edge tracing contour smoother.
- The minimum contour filtering is default to 1.00 square centimeters, which means that areas smaller than 100 square centimeters will not have contours drawn. You can set it according to your needs.
- The scale of generated nodes is default to 30%. The larger the scale of generated nodes, the more nodes there will be, and the more detailed the stroking will be. However, the cost is resource consumption, which may cause the software to lag, so it is not necessarily the larger the better. You can choose according to your own needs.

8）Click **[Trace Edge]**. After generating the edge tracing contour, you can use the mouse to drag the edge nodes to adjust the edge contour. After confirming that the edge contour meets your requirements, click OK. Click **[Save PLT File]** in the RIIN menu bar to obtain the overall cutting contour of the image.

2. Locator

After the typesetting file is printed, a path file can be exported along with it for use by the cutting machine.

1）Click the button  or  place the mouse on the canvas and drag the mouse to draw a locator. Double-clicking the locator will display the following interface, where you can set the filling color of the locator.

You can adjust the size of the locator by stretching the small black rectangular frames around it with the mouse.

2）After setting the locator standards, click the RIIN icon in the upper left corner to save a PLT format file. After selecting the storage path and saving, it can be imported for use by the cutting machine.

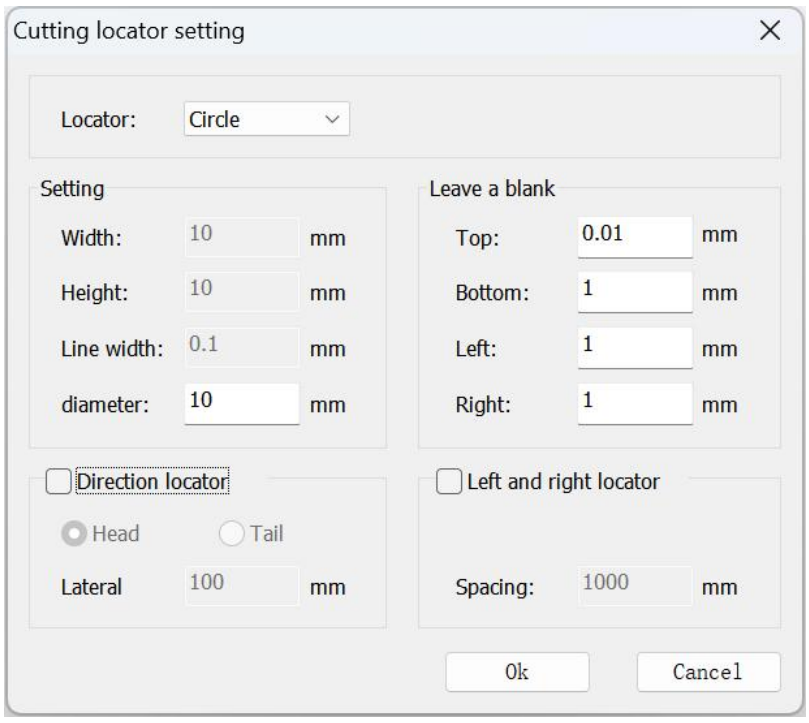
Precautions:

For saving the cutting path of irregularly shaped images, the image path must be saved as the cutting path for RIIN to recognize it.

3. Locator Settings

Set locator in the canvas. The function of locator is to serve as symbols for the cutting machine to easily identify the cutting, and the positioning information is saved in the PLT file. You can adjust the relevant parameters of the locator through **[Locator**

Settings] in the **[Tools]** of the menu bar.



1）The Locator types are divided into: crosshair, solid circle.

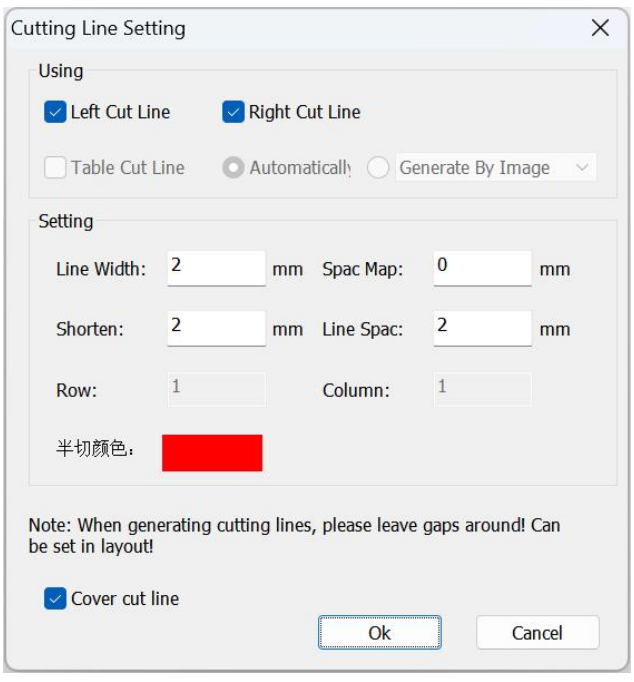
2）The Setting is for the height/width setting of the locator's lines.

3）The Leave a blank is the value of the empty space left by the positioning symbol from the canvas.

4）The Direction Locator can be set to be recognized at the beginning or the end of the canvas.

5）The spacing of the Left and Right Locator is arranged downward until the end of the canvas.

4. Cutting Line Setting



You can also use **[Table Cut Line]**, which generates a rectangular table around the image based on the image's width and height, and you can set the distance of the lines from the image by yourself.

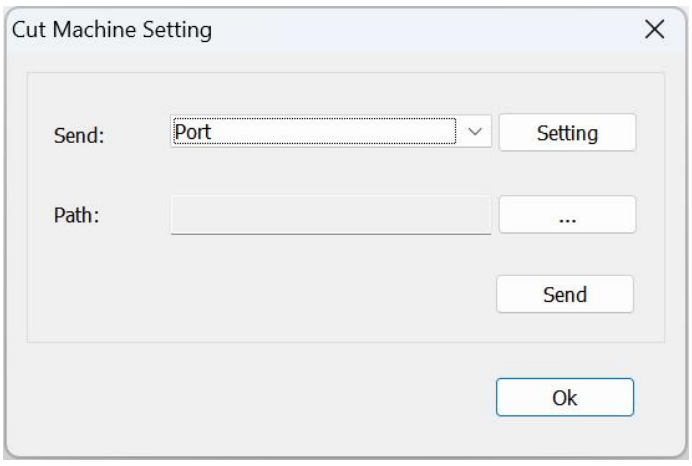
If you don't need the cut lines later, you can click to enter the cut line settings, check **[Clear Cut Line]**, and click OK to clear them immediately.

5. Cutter Settings

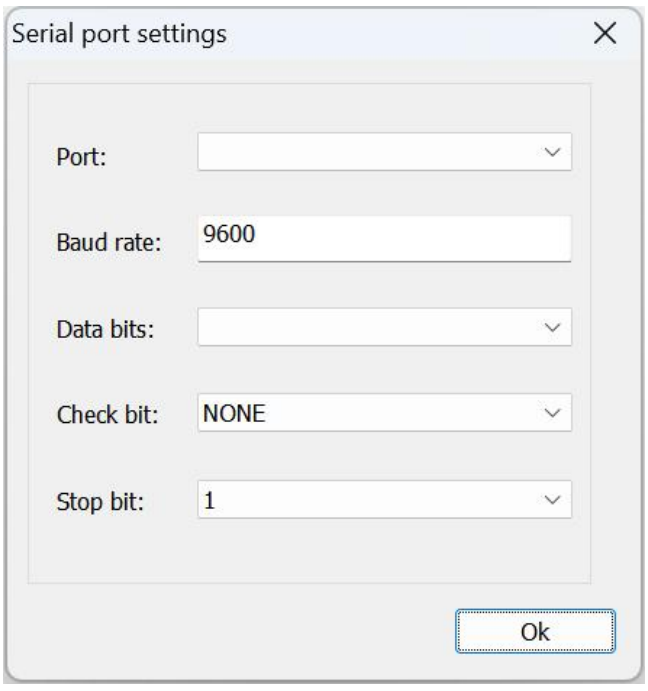
After the typesetting file is printed, you can send the exported PLT file directly to the cutter through cutter settings.

1）Setting Cutter Communication Parameters

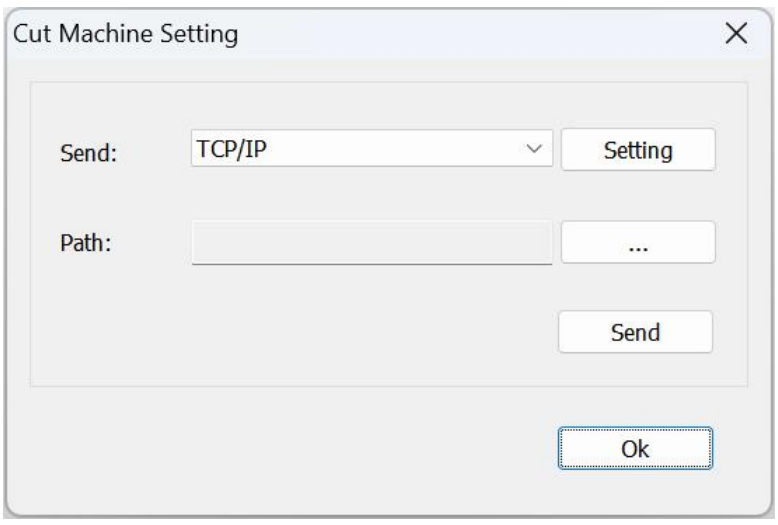
You can choose two methods, **[Port]** or **[TCP/IP]**, to send to the cutter, and click [Setting] to set the corresponding parameters.



- Send to the cutter through the **[Port]**.



- Send to the cutter through the **[TCP/IP]**.



2）Select the PLT file you want to send.

3）Click the **[Send]** button to send the file.

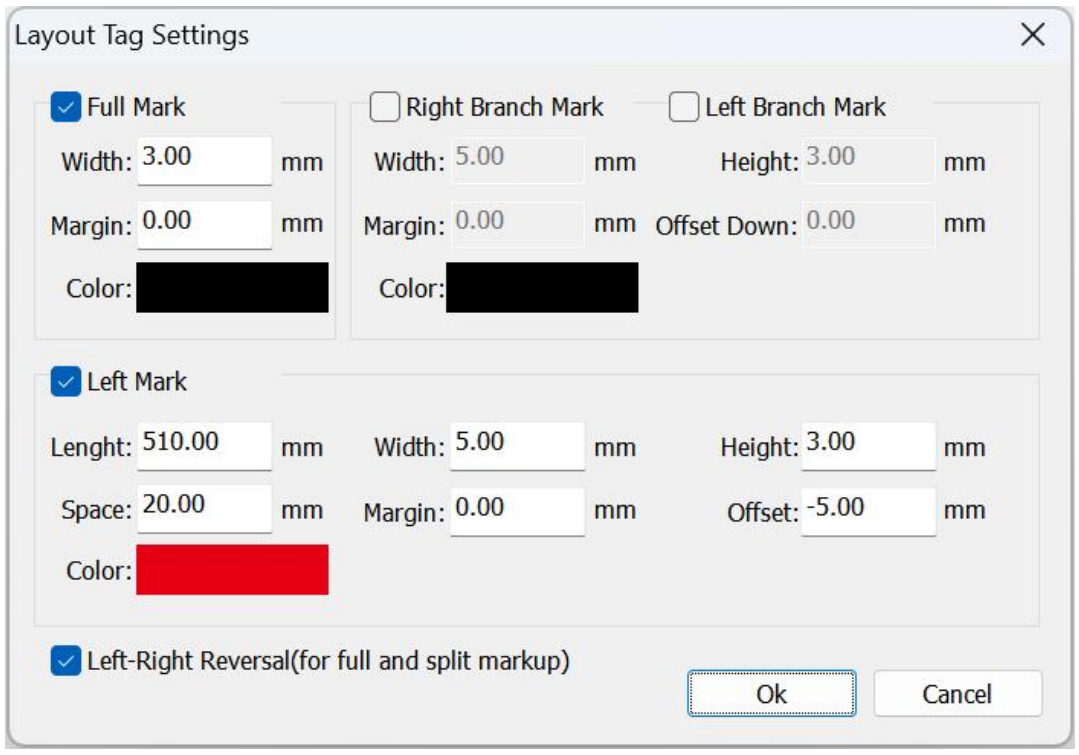
6. Layout Markers Setting

1）Full Mark: This is used so that the cutting machine can detect whether the plate or paper movement has deviated, enabling correct cutting.

2）Branch Mark: When printed materials are arranged in rectangles and need to be cut by portion, the row mark is recognized for cutting. Support for checking on both left and right sides is provided, and the customer can choose the left side, the right side, or both sides.

3）Left Mark: When printed materials are typeset by plate, the cutting machine recognizes the plate division mark for cutting.

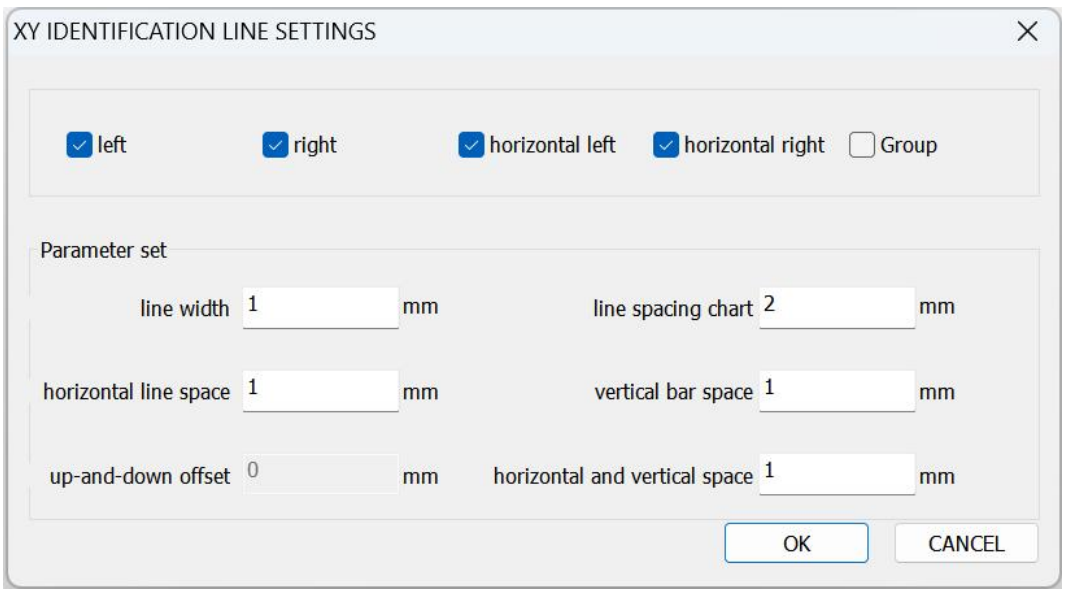
The data range of the offset parameter in the plate division mark is from negative "length" to positive "length".



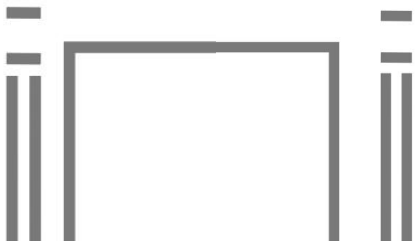
7. XY Identification Line Settings

For the XY cutting machine, it supports the setting of XY identification lines.

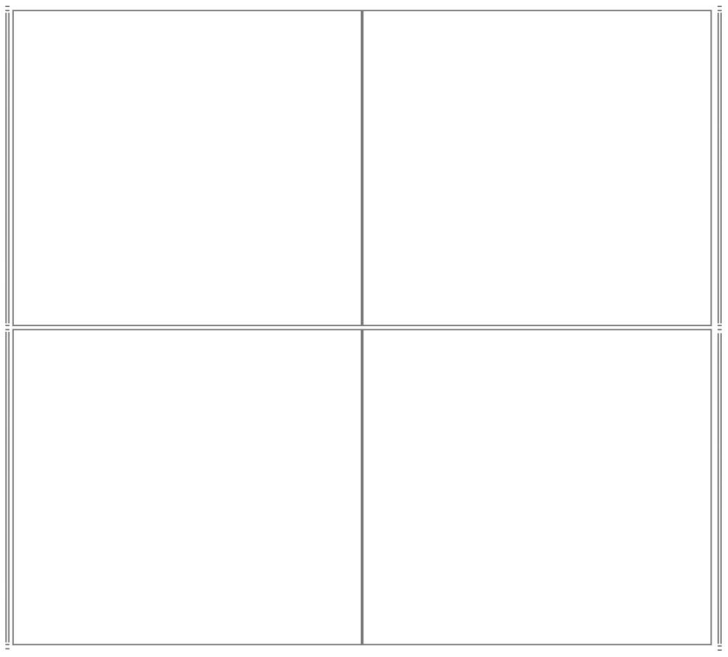
"Left" and "Right" refer to the areas where vertical lines are generated, and "Horizontal Left" and "Horizontal Right" refer to the areas where horizontal lines are generated. After checking the "Group" option and entering the up - down offset value, the overall up - down offset of all cutting lines can be achieved.



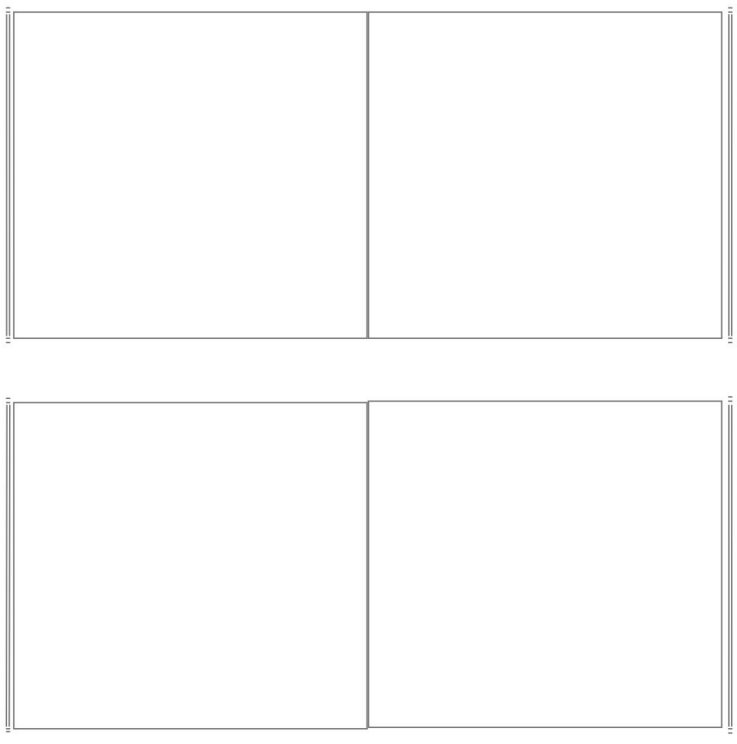
By setting the line width, horizontal line spacing, vertical line spacing, line - to - pattern distance, up - down offset, and the vertical spacing between horizontal and vertical marks, the XY identification lines as shown in the following figure can be formed.



The overall XY identification lines are shown in the figure below:



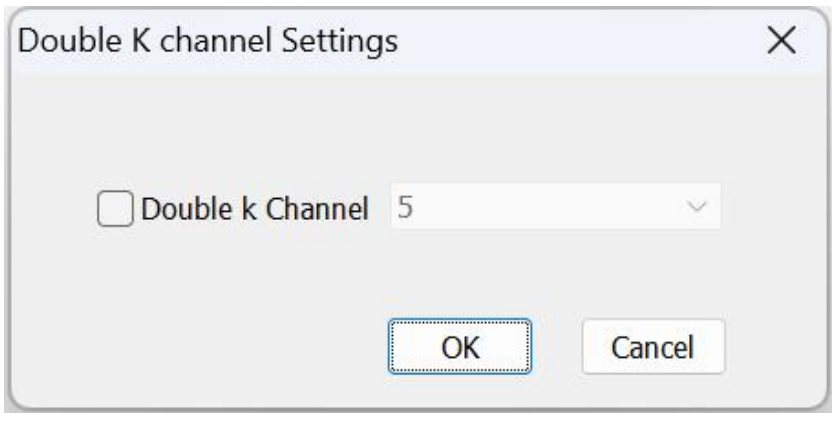
If the vertical spacing between the two upper - lower groups of patterns is set to exceed the horizontal line spacing plus twice the line width, the cutting lines between the two groups of patterns will automatically be divided into two groups, as shown in the following figure:



If the vertical spacing between the two upper - lower groups of patterns is less than the horizontal line spacing, the software will automatically adjust the vertical spacing of the images to the horizontal line spacing for subsequent cutting.

02 Double K Output

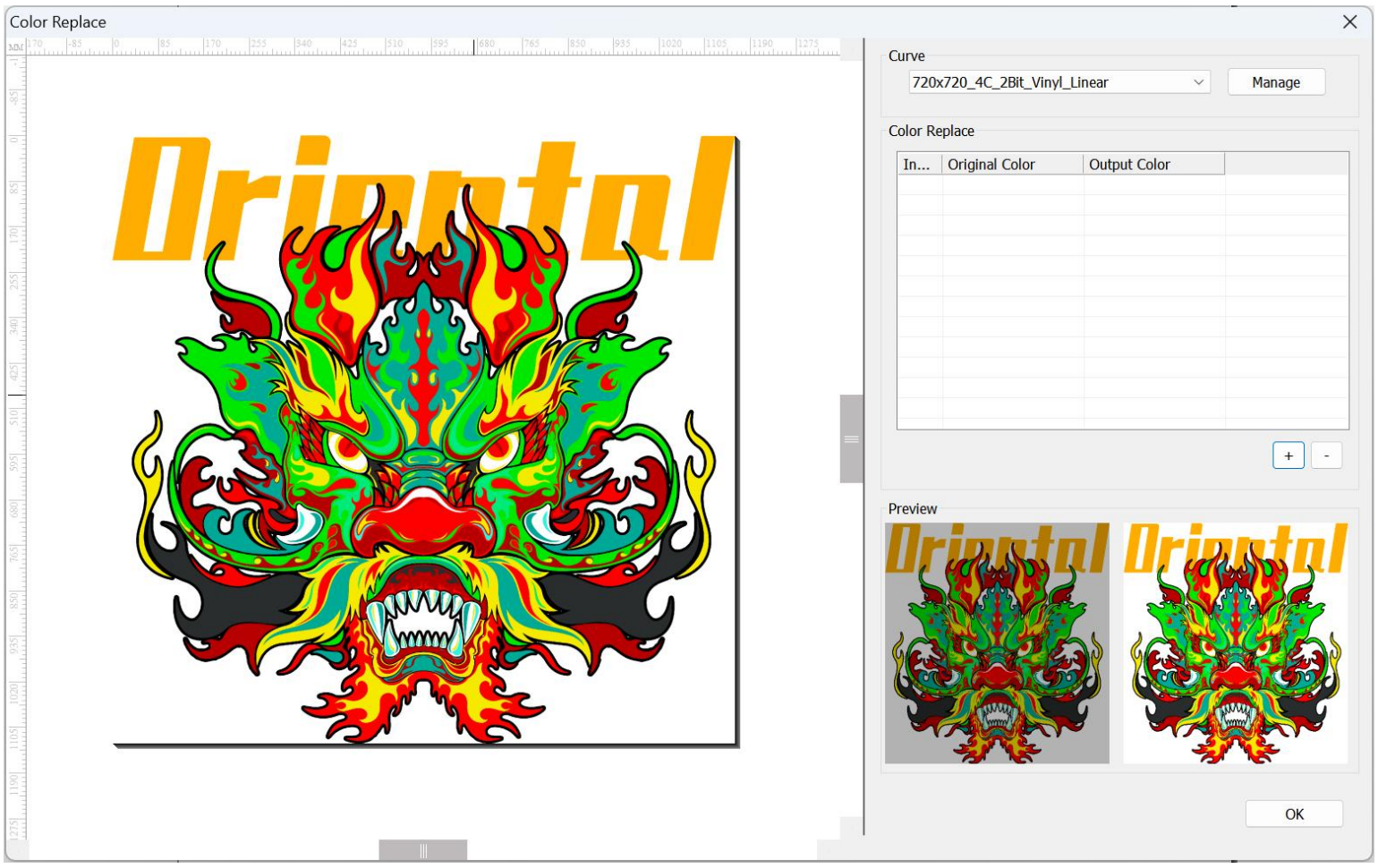
If you feel that the black color of the current ink is not black enough, you can select **[Double K Output]** in the **[Tools]** of the menu bar to open this interface.



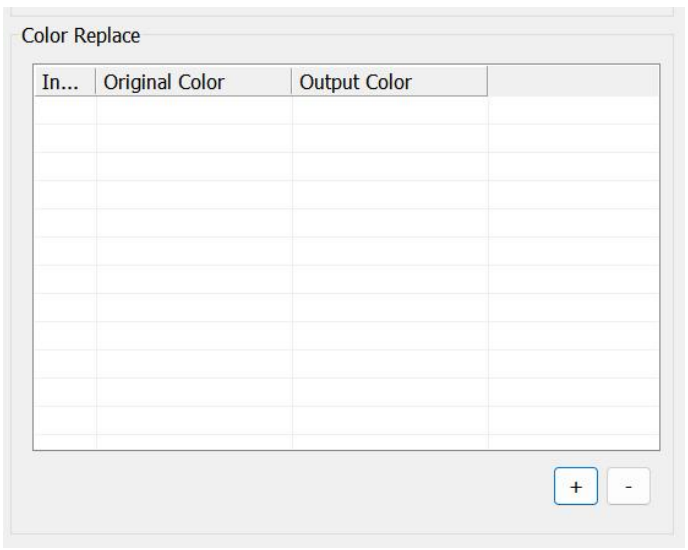
This function enables the printing output of two identical K channels, and you can set the data of the second K channel in a certain channel sequence.

03 Color Replace

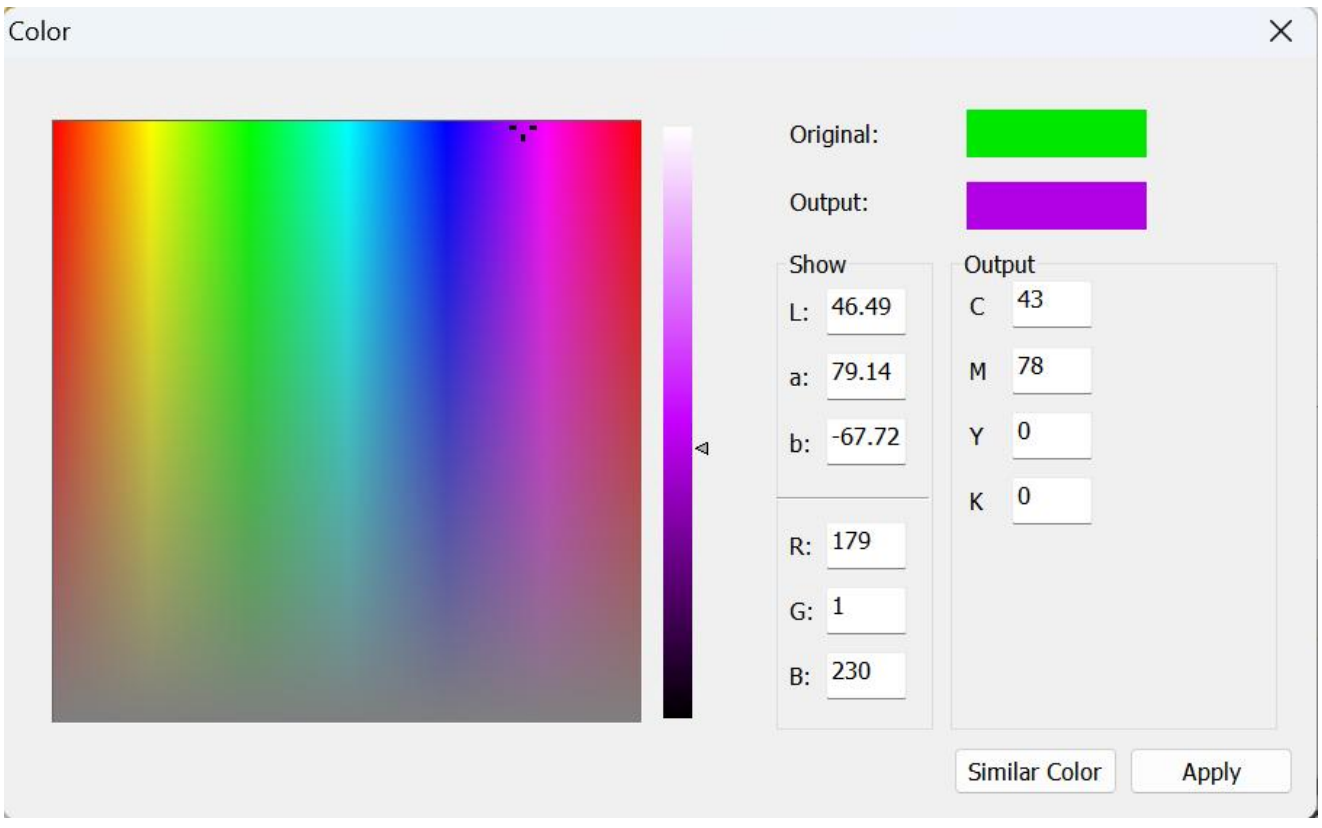
If you need to replace certain colors in a picture, you can select **[Color Replace]** in the **[Tools]** of the menu bar.



1）You can click the + sign at the bottom right of the color replacement, and the mouse will turn into a color picker. Move the mouse to the color you want to change and click.

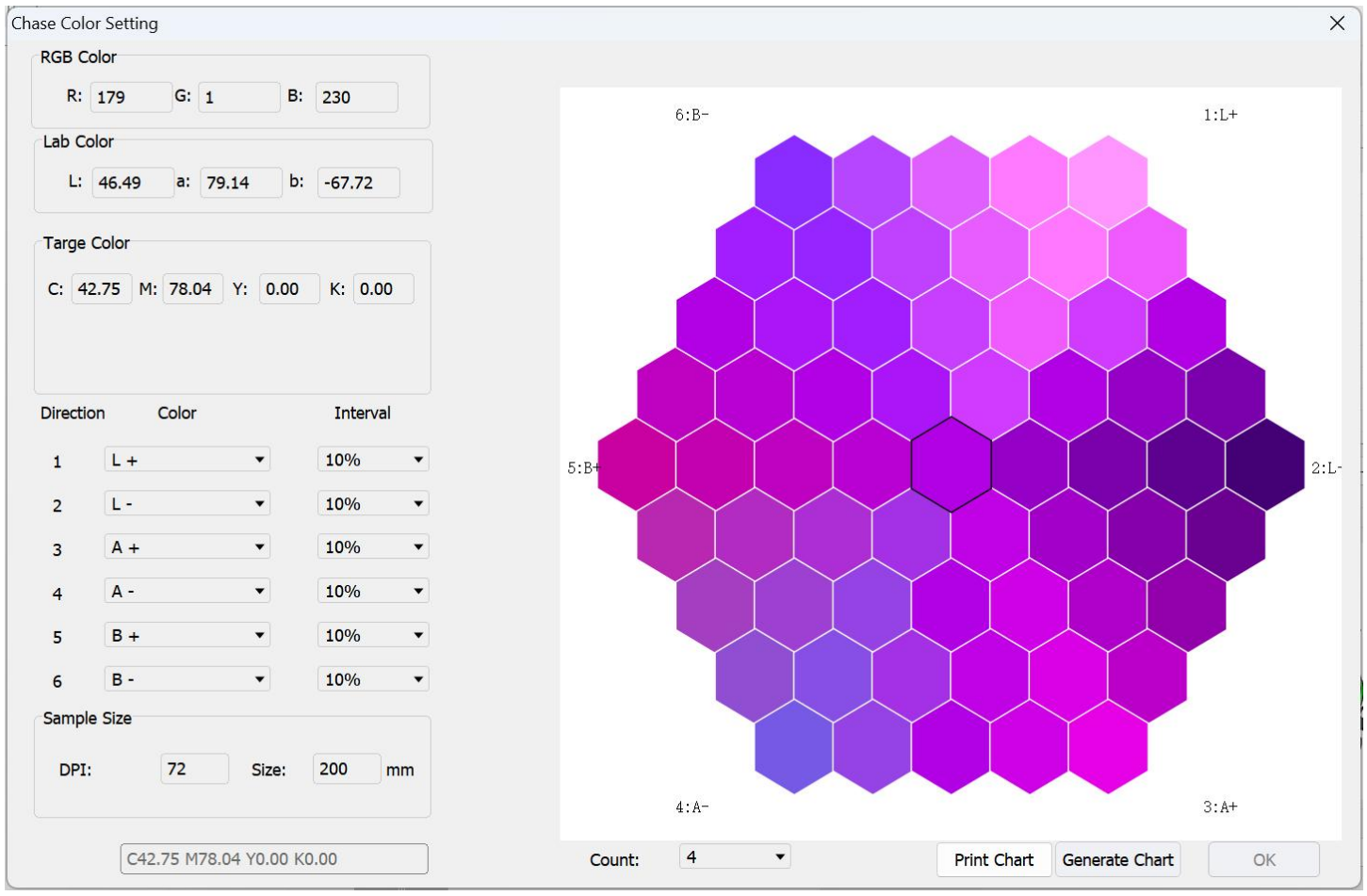


2）The following interface will appear, and you can select the output color you want on the color palette.



3）You can click **[Similar Color]** to pop up the following interface for printing color patches among similar colors to assist in

confirmation of the replacement color value.



4）After the settings are completed, click **[Apply]**, and you can view the thumbnail of the color-replaced image in the preview interface.

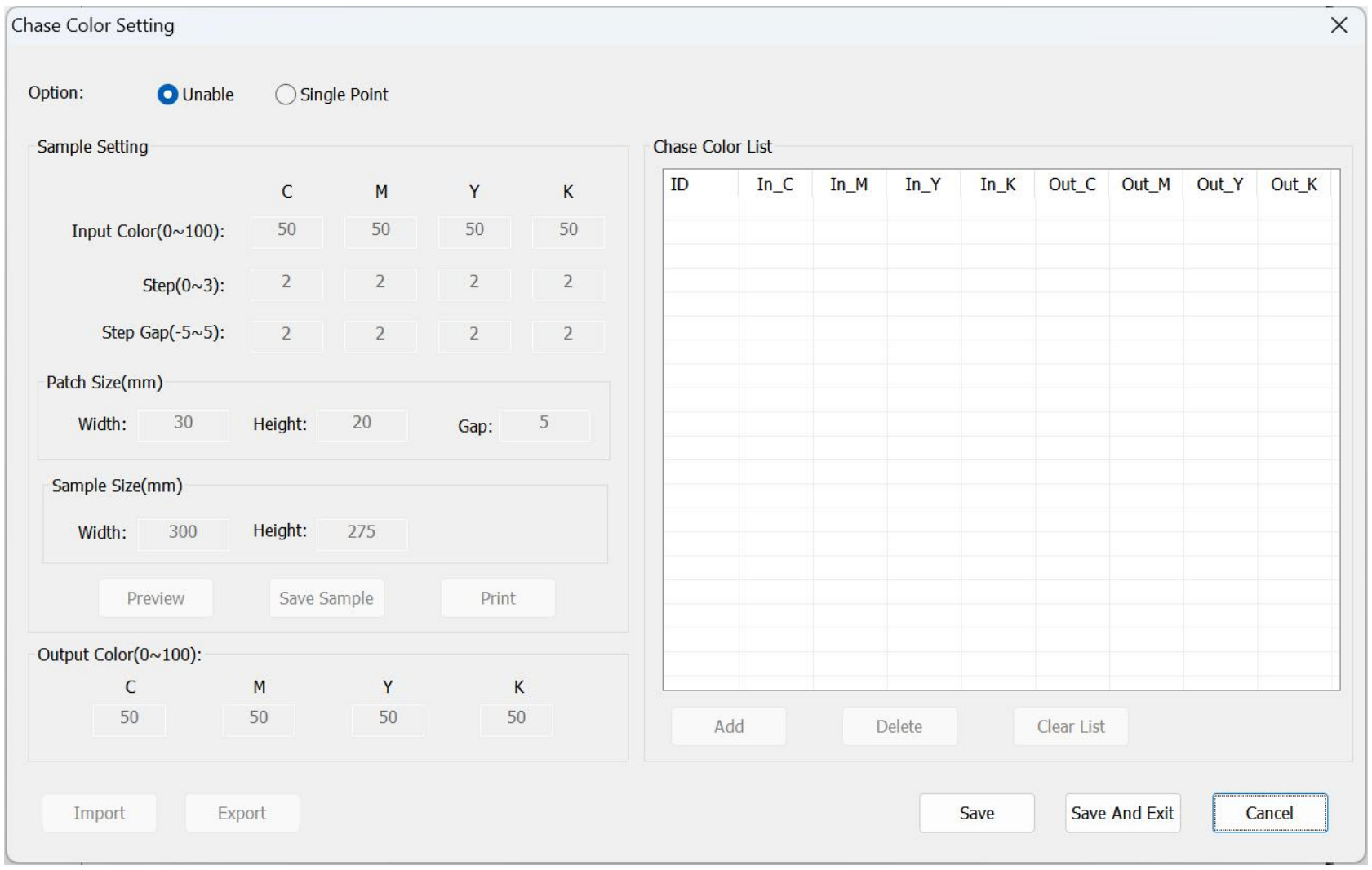
5）After it meets your requirements, click **[OK]**, and the image on the canvas will be the color-replaced image.

Precautions:

The color replace only takes effect when bound to specific printing with ICC curves.

04 Chase Color Setting

Click the **[Chase Color Setting]** in the **[Tools]** of the menu bar, and the following interface will appear:



1. Function Introduction

1）Color Matching Options:

When we need to use the color matching function, first select the [Single Point Color Matching] option in the color matching setting options.

2）Sample Setting:

- Input Color:The default value of this option is C:50 M:50 Y:50 K:50, and it can be adjusted within the range of 0 to 100 as needed, supporting decimal input.
- Step（0~5）: This option determines how many color patches are generated for color matching comparison. It can be adjusted within the range of 0 to 100 as needed, and only integer input is supported.
- Step Gap（-5~5）: This option determines that the difference value of the generated color patches can be added or subtracted according to the value specified in (-5~5). It can be adjusted within the range of -5 to 5 as needed, and only integer input is supported.
- Patch Size： Set the length, width, and interval of the generated color patch image in this option. The interval is the horizontal interval between two color patches, and the vertical interval is a fixed value. The default value of the color patch size is width (30 mm), height (20 mm), and interval (5 mm). The width and height can be adjusted within the range of 1 to 100 as needed, supporting decimal input. The interval can be adjusted within the range of 0 to 20 as needed, supporting decimal input.
- Sample Size：This option sets the overall size of the generated sample image, and only the width can be adjusted. The height will be automatically calculated and adjusted during the preview of the sample image, and the sample image height cannot

be manually adjusted.

- Output Color：It can be adjusted within the range of 0 to 100 as needed, supporting decimal input.

3）After changing the interface parameters, you need to click the Save Parameters or Save and Exit button on the interface.

4）Preview：The preview effect of the actual output of the sample image generated according to the sample image setting parameters as shown in the above figure

5）Save Sample：The generated sample image is the same as the previewed sample image, and the sample image is in tif file format.

6）Print：Select the corresponding curve and whether to enable ICC to print the sample image by printing while processing or file printing.

7）Export：After saving the data of the color matching setting interface, click the "Export" button, and the interface data will be successfully exported.

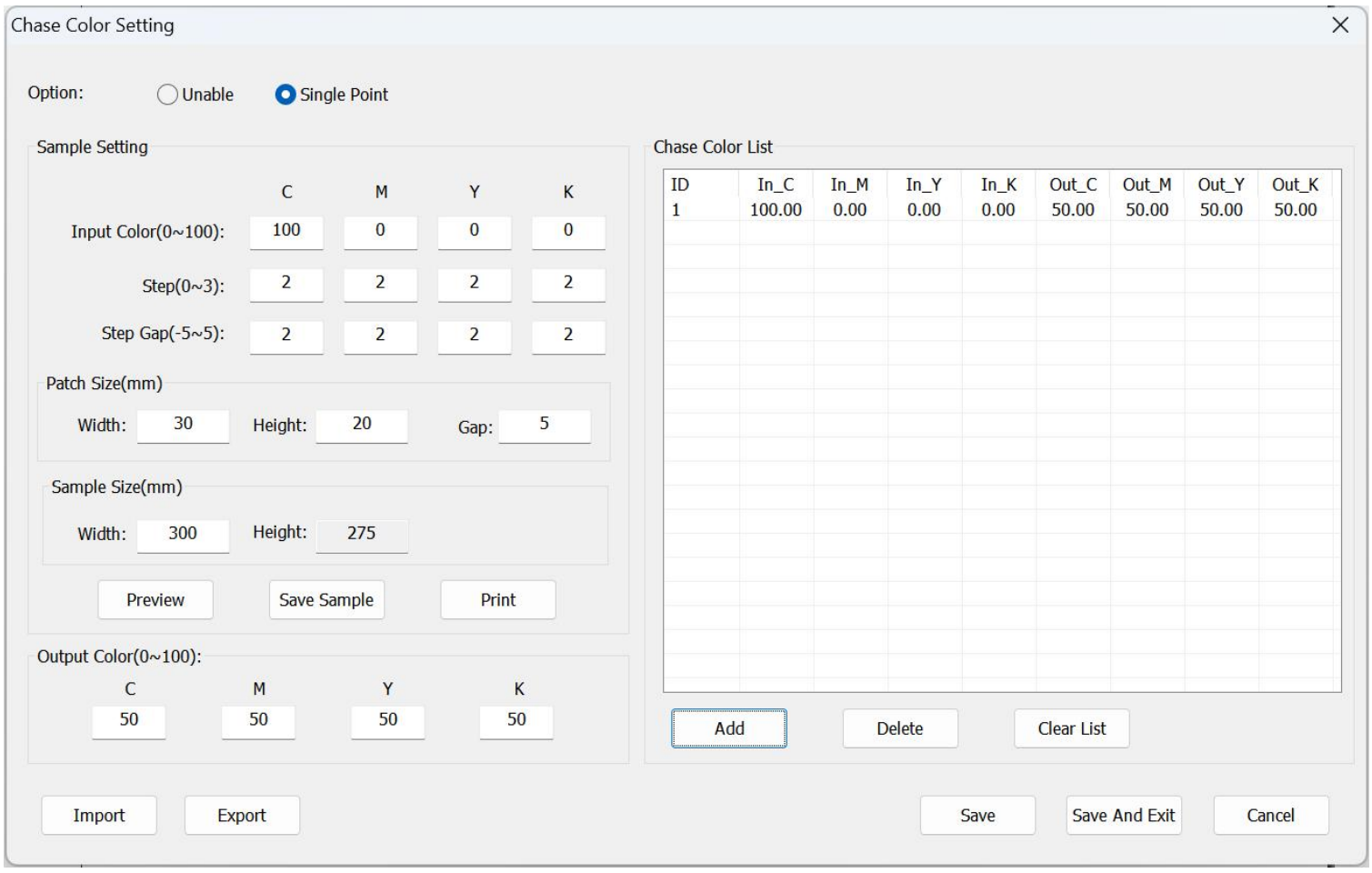
8）Import：Import the exported color matching data into the software.

9）Save：Click to save the parameter settings this time, and the default will be the previously saved parameters when the color matching function is reopened next time.

10）Save And Exit：Click to save the parameter settings this time, and the default will be the previously saved parameters when the color matching function is reopened next time, and exit the interface.

2. Example Illustration

Print out the sample image according to the previous settings, select the color patch image that is closest to the target, observe the CMYK values below the image, fill in the corresponding values in the output box above, and click the add button on the right after setting. This value will replace the original value to achieve the color matching purpose.



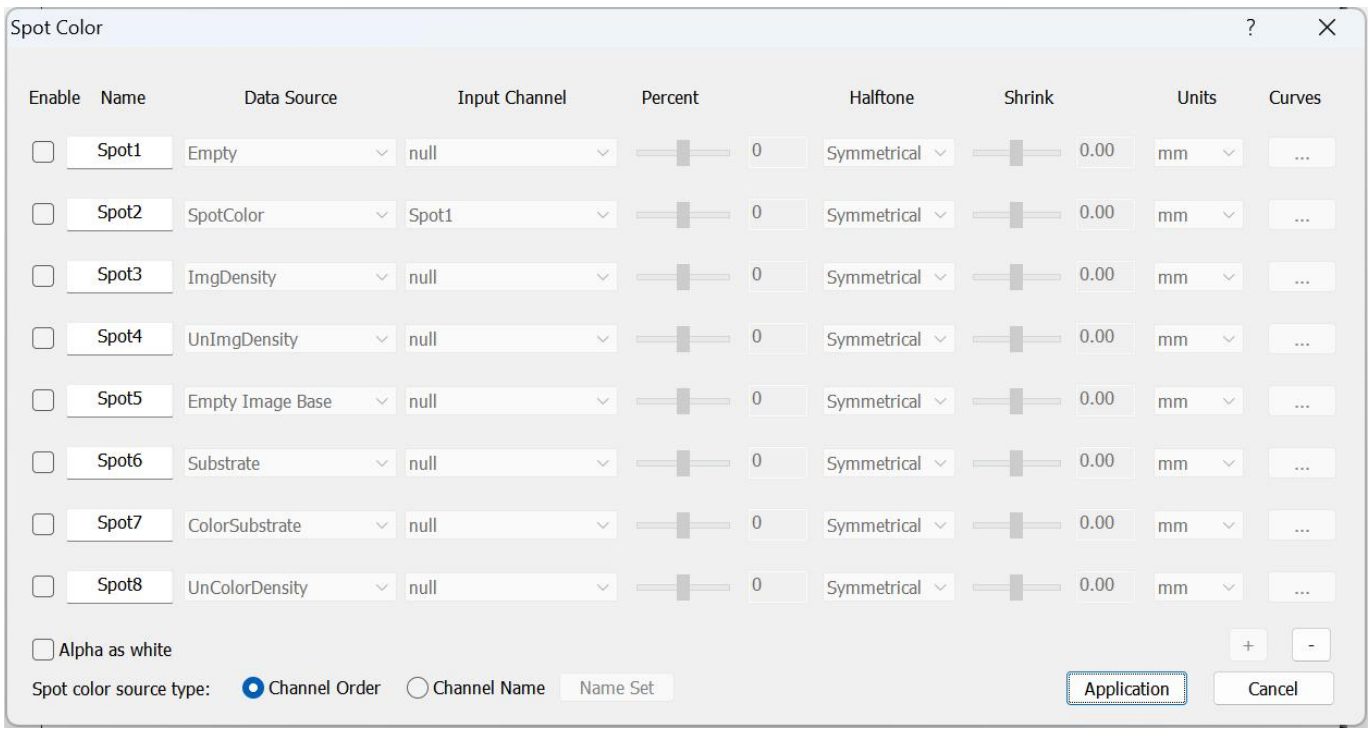
Precautions:

1）This color matching setting is only for single-point color matching. For multi-point color matching, repeat the above operations.

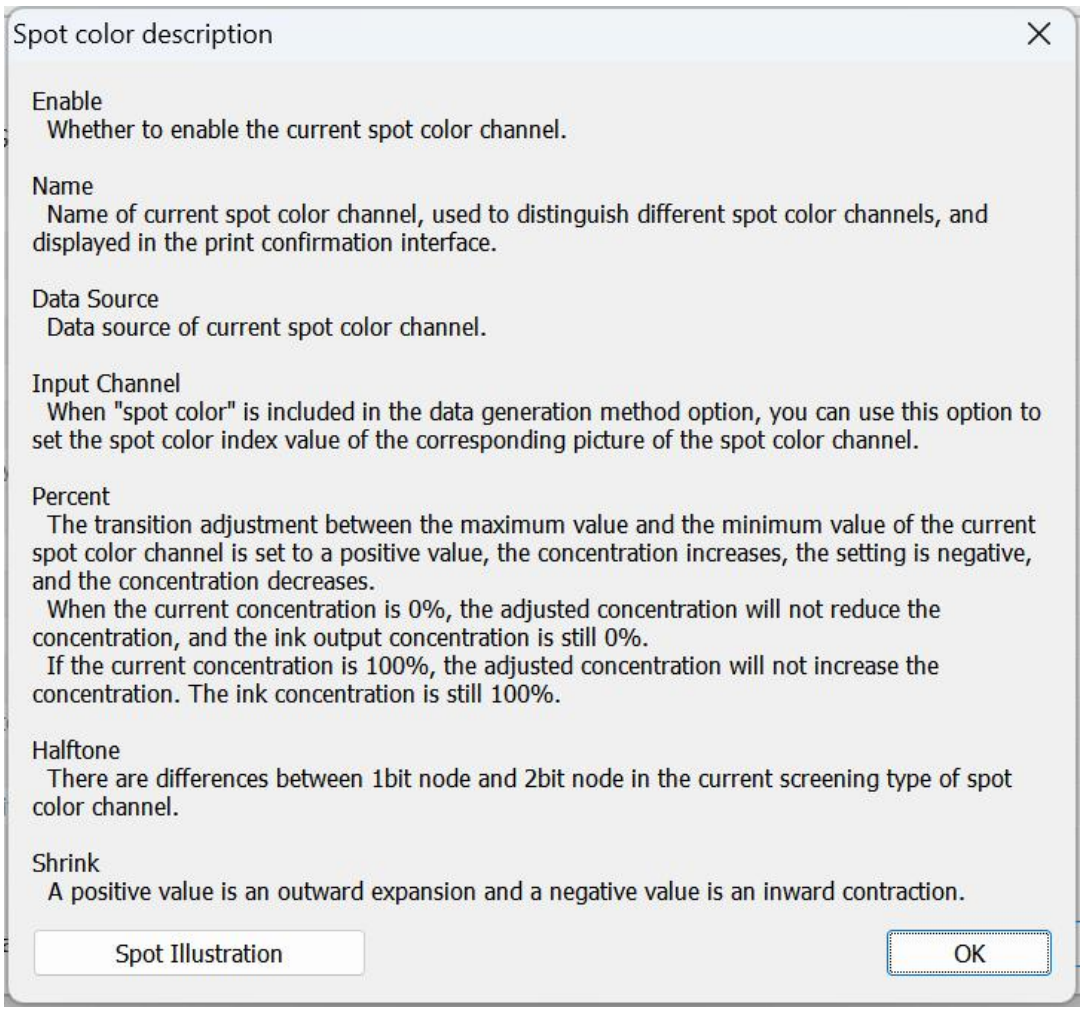
2）This color matching setting will take effect regardless of the selected curve when it is turned on. When selecting, turn it on according to actual needs, and when not in use, please select the "No Color Matching" option to turn off the color matching setting option.

05 Spot Color/Fluorescent Color Settings

If you need to use the spot color function, the spot color setting interface is shown in the following figure.

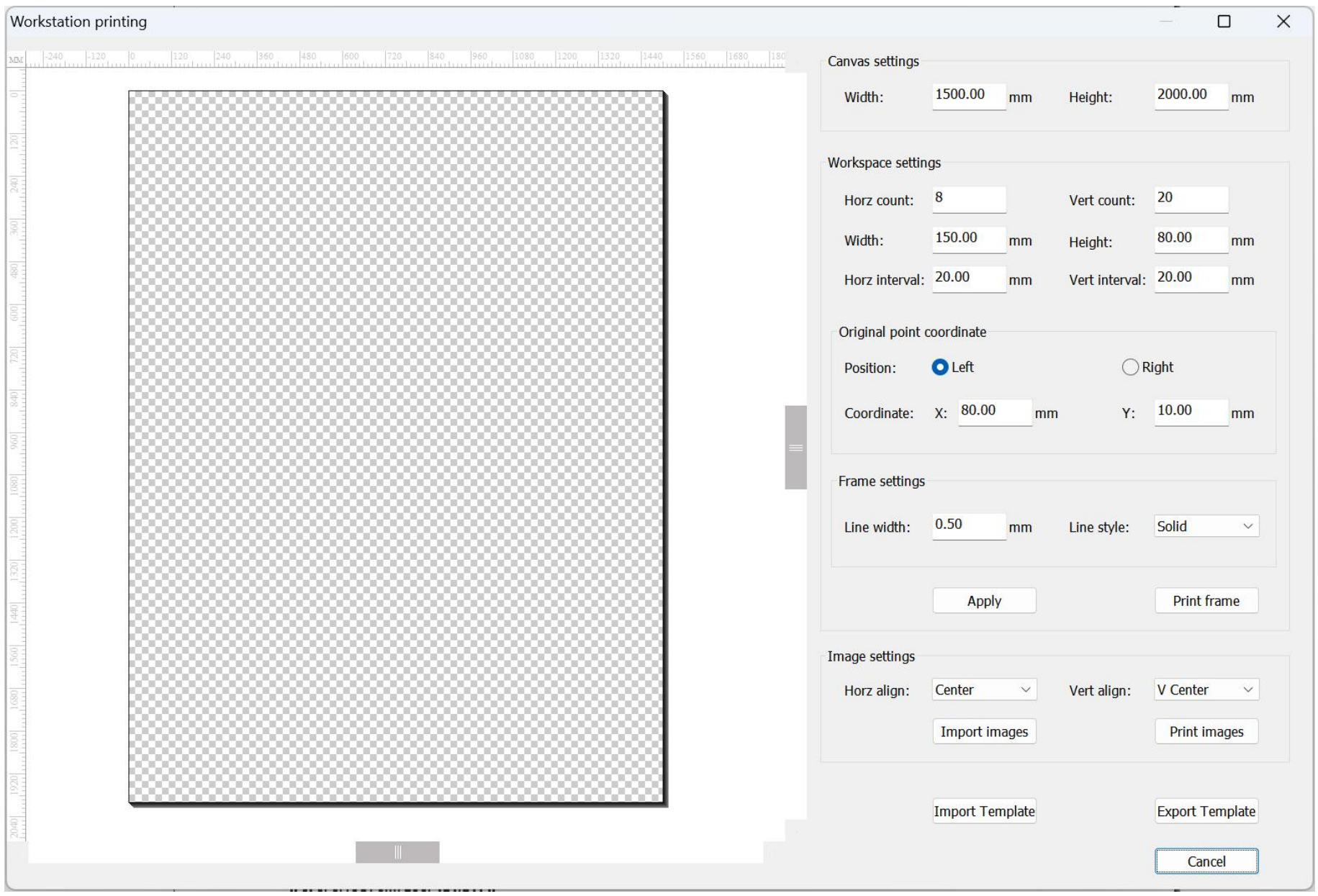


For a detailed function introduction, you can click the **[?]** in the upper right corner of the interface to view it.



06 Workspace Print

If you need to perform multi-station printing, Ruiyin supports customizing the number and size of stations and allows for quick image import.



1. Canvas Settings

   You can input numbers to set the width and height of the canvas, and the unit is millimeters.

2. Workspace Settings

You can set the number of horizontal and vertical workstations, the width and height of a single workstation, and the horizontal and vertical spacing between workstations.

3. Original point coordinate

   You can set the position of the origin coordinate at the bottom left or bottom right of the canvas, and the coordinate is the distance from the canvas in terms of width and height.

4. Frame Settings

   You can select the line width and style of the border of a single workstation, and printing the workstation base plate is supported.

5. Image Settings

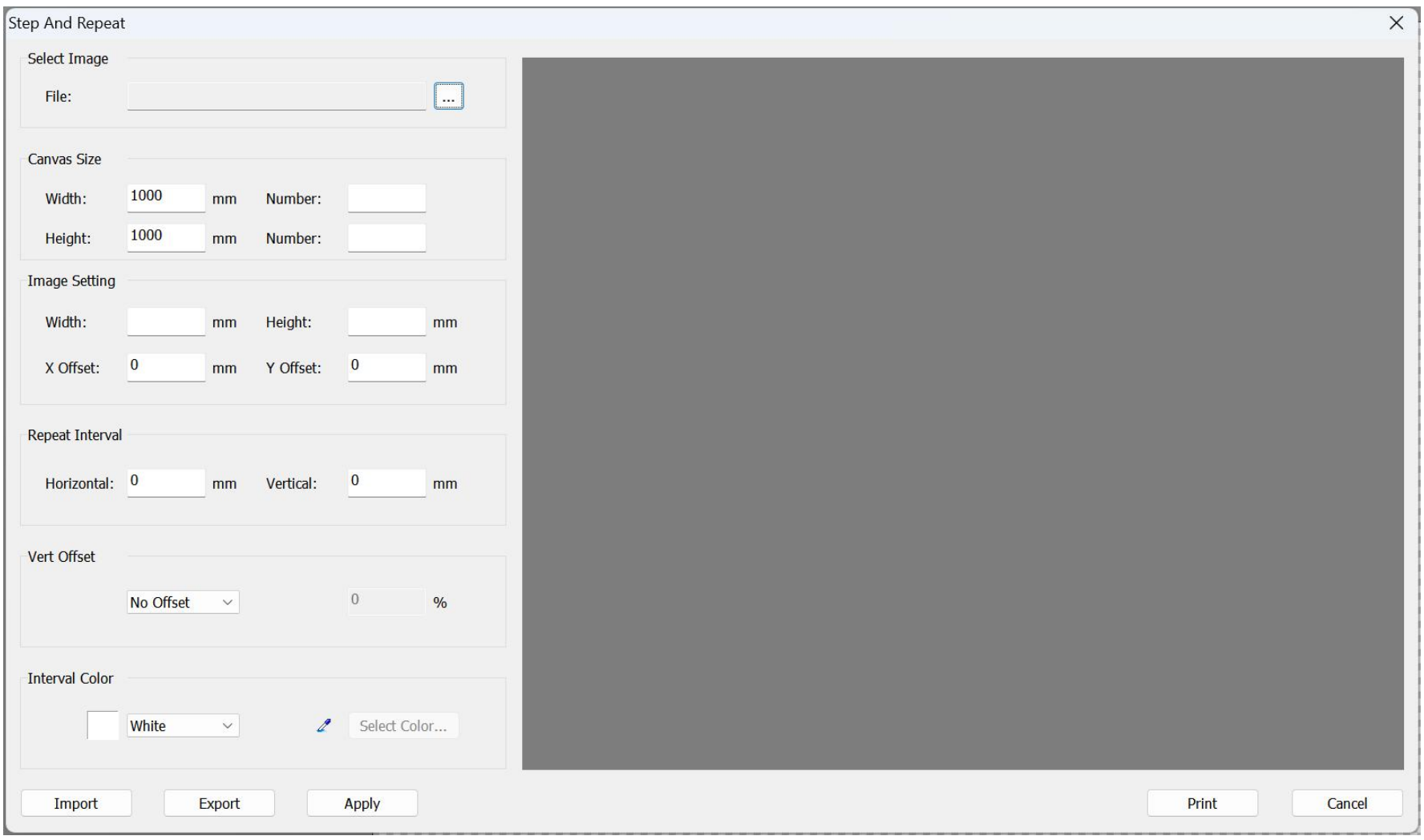
   It supports setting the position of the image in the workstation, and you can choose the horizontal and vertical alignment methods.

6. Import/Export Template

   If you need to reuse the workstation template set this time, you are supported to export it. When you need to use the template next time, click Import Template, and you do not need to set the corresponding parameters again.

07 Step And Repeat（RIIN Beidou Edition Only）

If you need to perform step - and - repeat layout, you can click on "Step - and - Repeat Layout" in the menu bar to enter the following interface:



1）Select Image

2）Canvas size：Set the size of the canvas according to your needs.

3）Image Setting

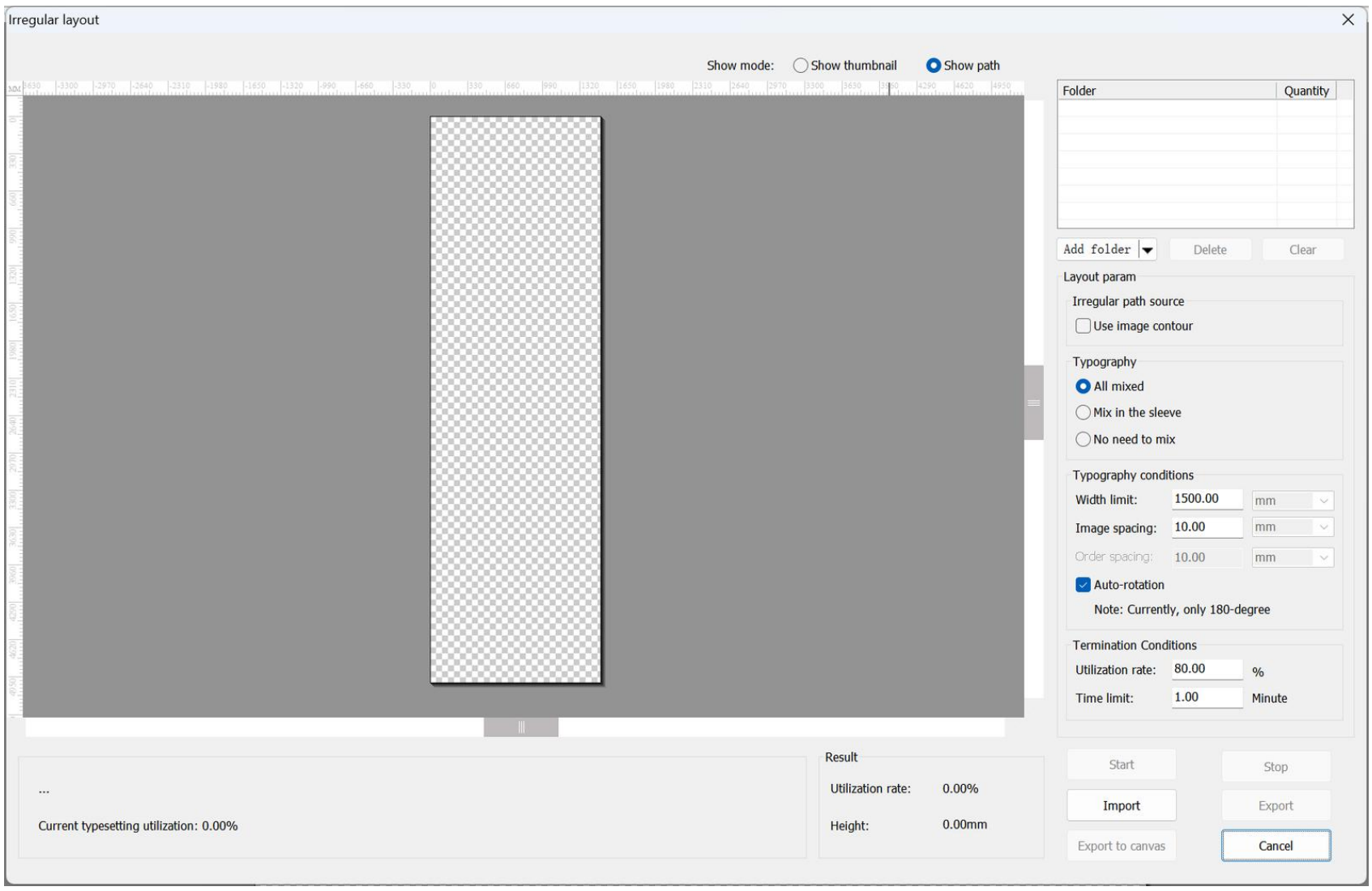
4）Reapeat Interval

5）Vert Offset

6）Interval Color:You are supported to customize the interval color.

08 Irregular Layout（For Beidou UV Edition only）

RIIN supports material-saving typesetting for irregularly shaped images. You can choose to display thumbnails or borders, and the interface is shown in the following figure:

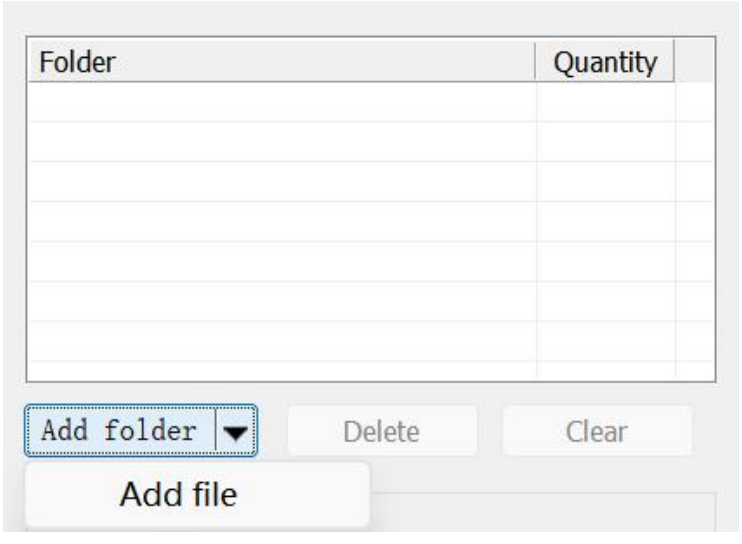


1. Import

1）File Import

Clicking **[Add Folder]** supports the import of the entire folder.

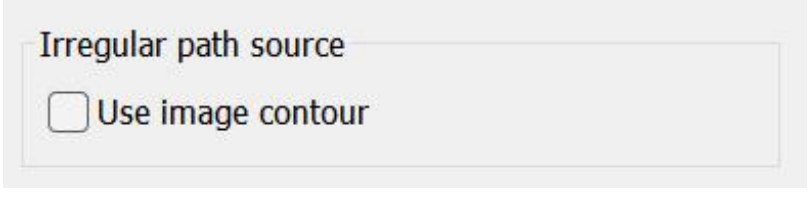
Clicking the **[Inverted Triangle]** will show **[Add File],**which supports the import of a single file.



2. Layout Param

1）Irregular path source

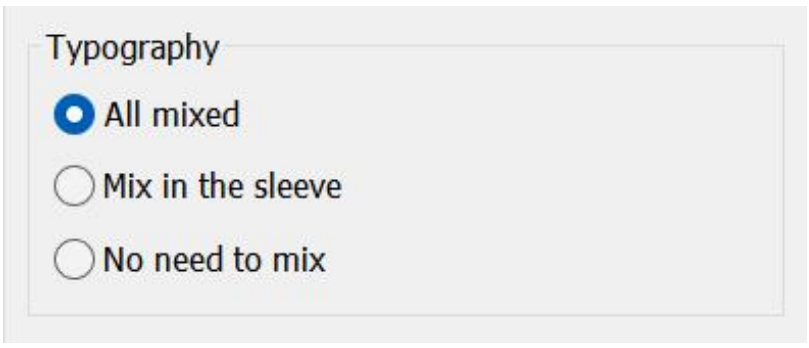
You can choose whether to automatically extract the image contour. If not checked, typesetting will be done according to the rectangular frame of the image; if checked, the irregular contour in the image will be automatically extracted.



2）Typography

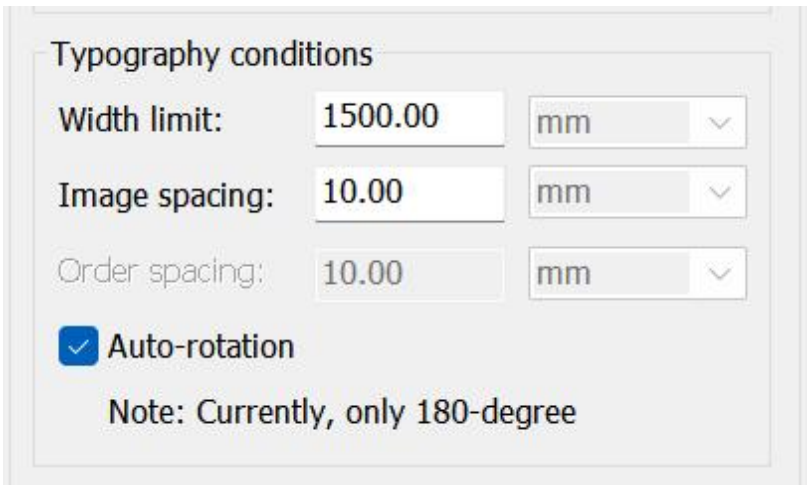
You can choose three different typesetting methods:

- All mixed： Whether it is the images in the folder or the separately imported image files, all are mixed together for typesetting.
- Mix in the sleeve： Images within the same folder are mixed and typeset, and different folders are typeset in an orderly manner.
- No need to mix：Images in the folder and separately imported images are arranged in rows one by one.



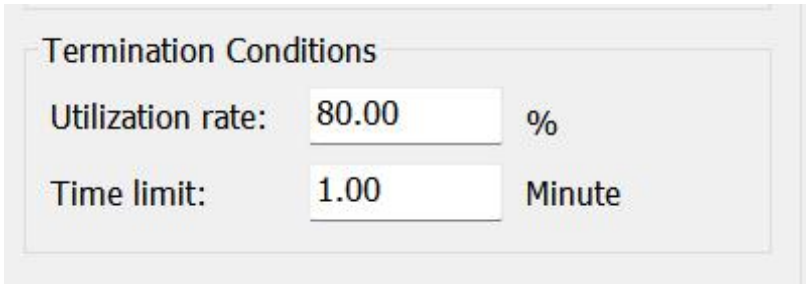
3）Typography conditions

You can limit the width of the typesetting canvas and input the image spacing and sleeve spacing.



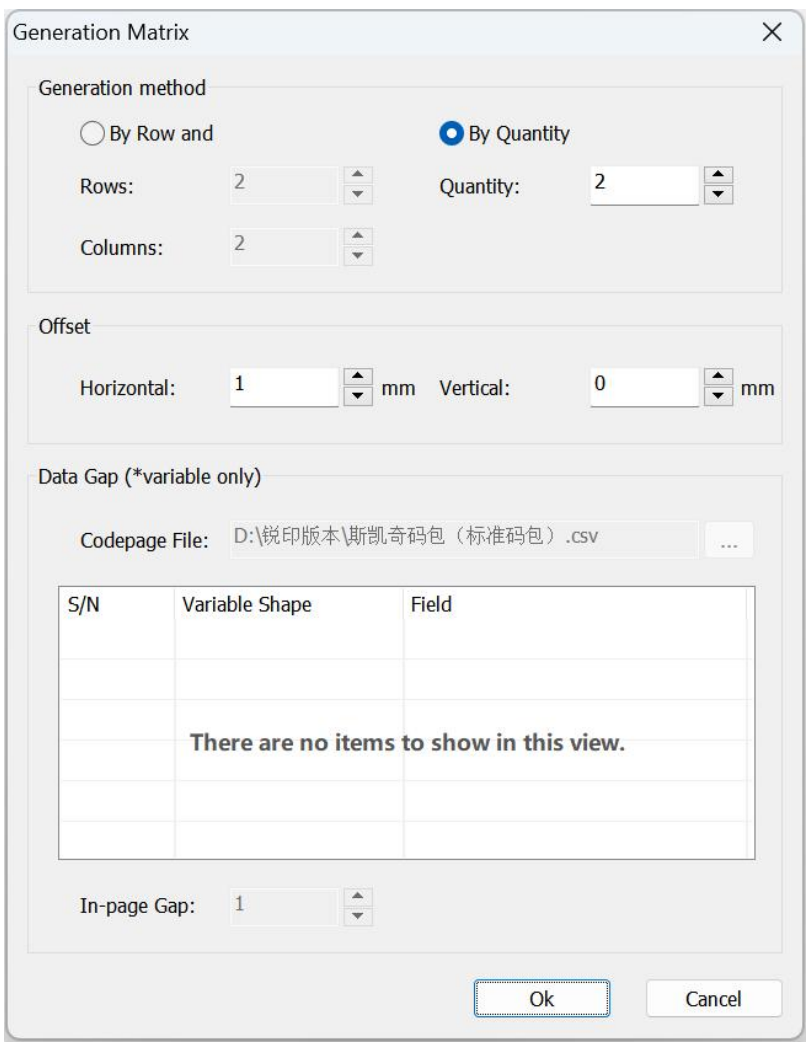
4）Termination Conditions

You confirm the termination conditions of typesetting by setting the utilization rate or time consumption of the irregular material-saving typesetting.



09 Matrix Copy（For Beidou UV Edition only）

If you need to copy an image multiple times in a matrix, you can click the **[Matrix Copy]** function in the menu bar, and the interface is shown in the following figure:



1）Generation Matrix

You can choose to generate the image matrix by rows and columns or by quantity.

2）Offset

You can select the horizontal and vertical spacing of the image offset.

3）Data Gap

Select the code package file that you need to perform matrix copying on, select the fields within it, and set the number of in-page intervals.

Click **[OK]** to complete the matrix copying, and you can view the result in the canvas.

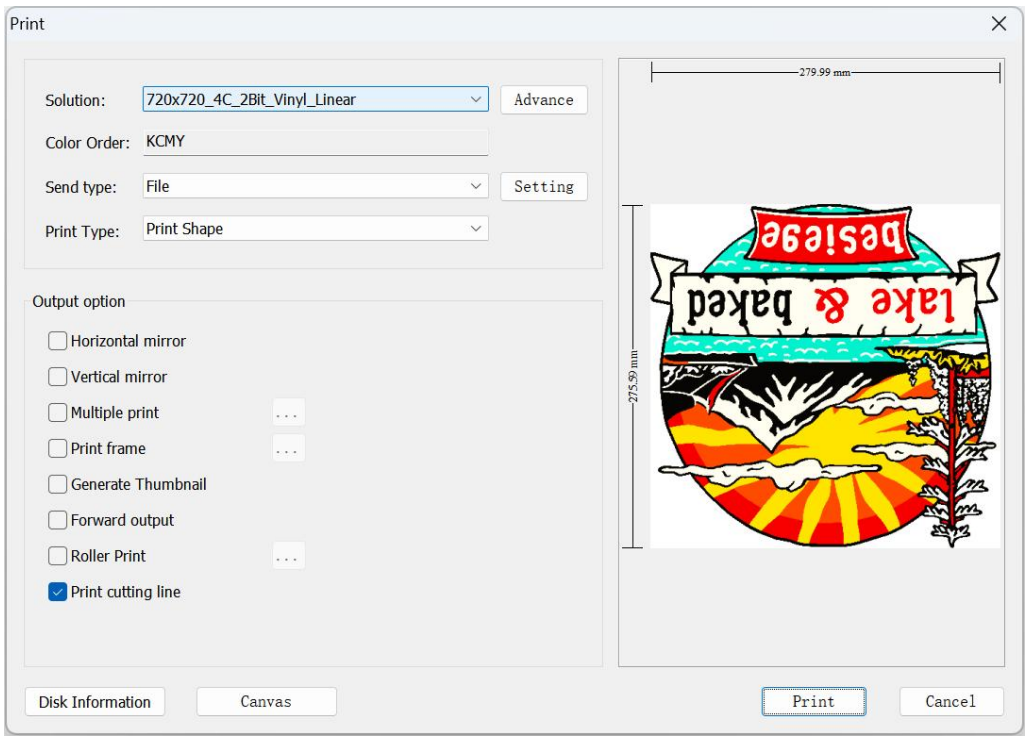
Printing Advanced Settings

Advanced settings are supplementary to the basic printing settings, and the following functions and settings are frequently used in actual use.

01 Output option

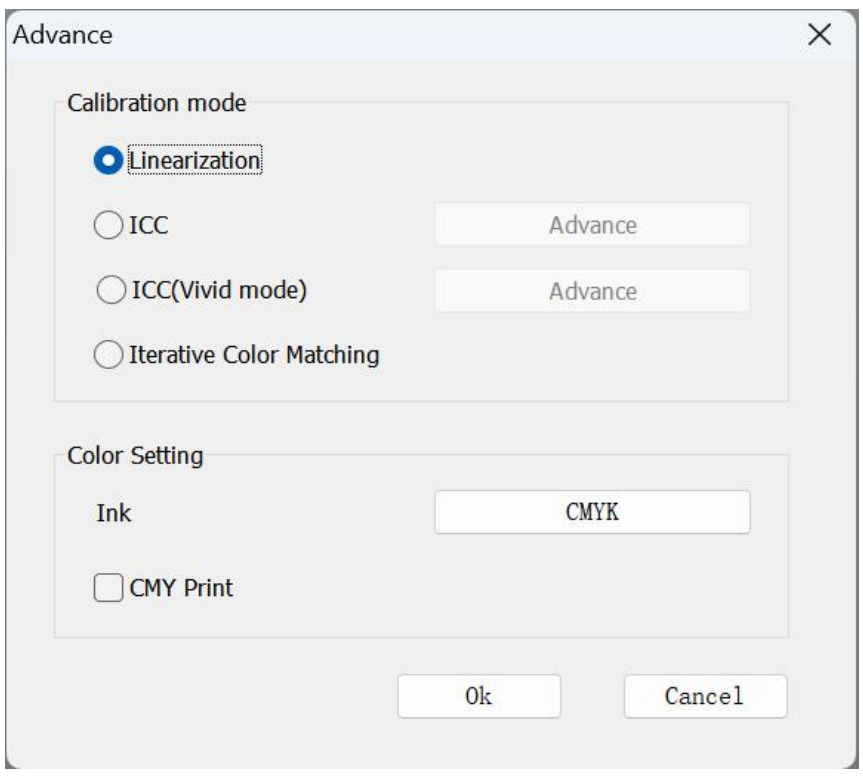
1. Print Cutting Line

The prerequisite for checking Print Cutting Line is that the cutting line has already been set in the **[Tools]** menu bar.



02 Advanced Printing Scheme Settings

Click the **[Advance]** button on the print confirmation interface, and the following dialog box pops up:

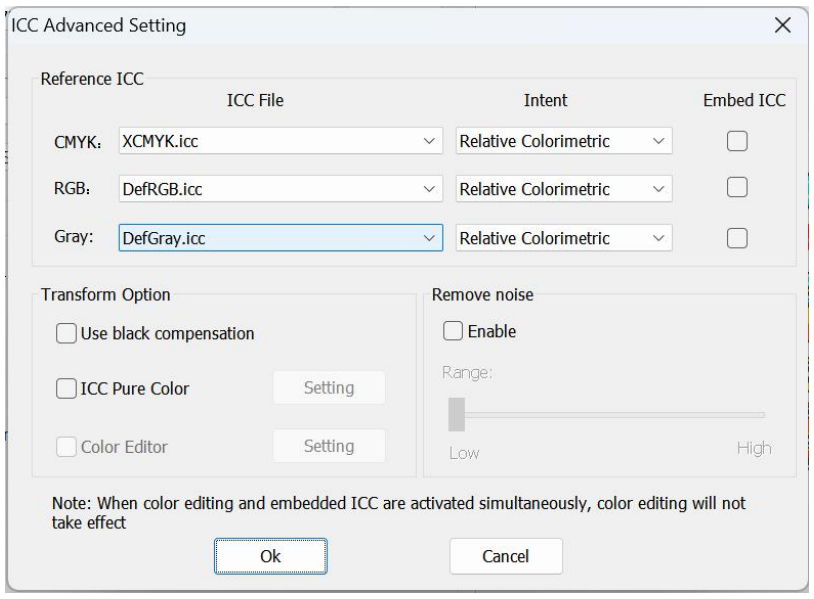


1）Linearization

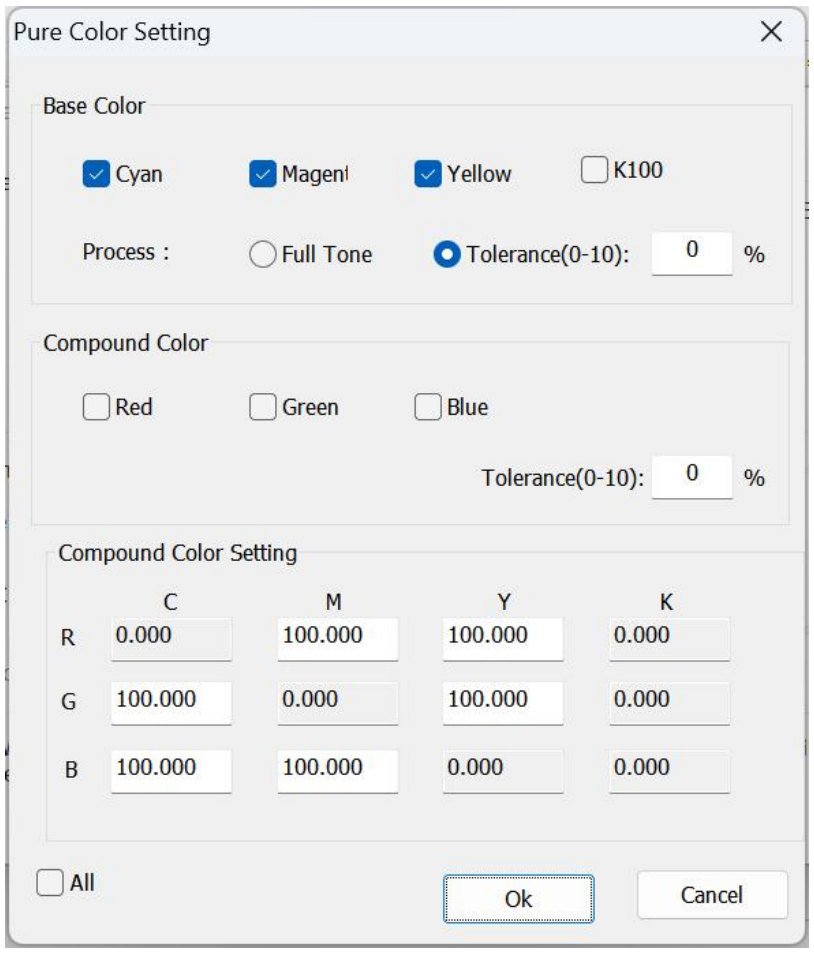
If you want to use the linearized output printing effect, you can check Linearization.

2）ICC

If the curve of your printing scheme contains ICC information and you need to print images with ICC enabled, you need to check to enable ICC here, and there are corresponding ICC reference sources to choose from in the ICC advanced setting interface.

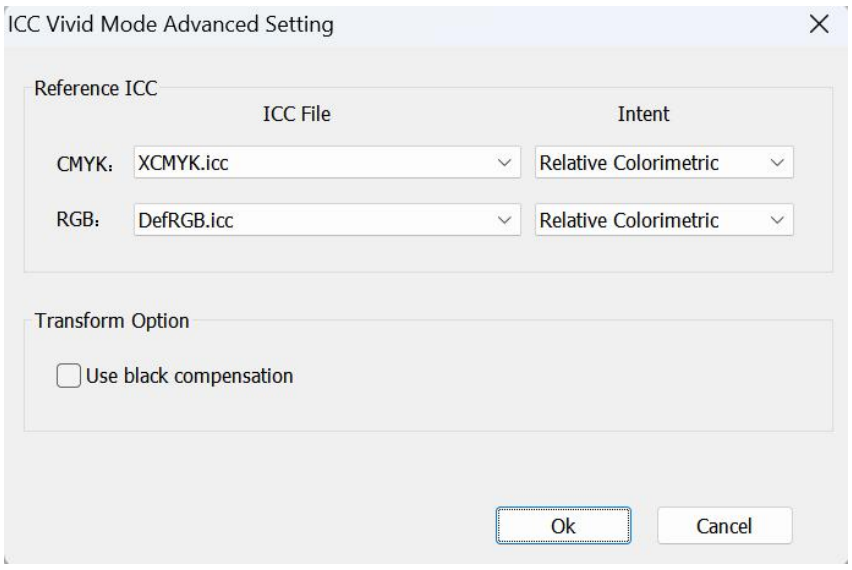


- ICC Pure Color:Using the ICC pure color function, solid color patches will not be mixed with other colors processed by ICC.



- Use black compensation:Using the black compensation function to optimize the detail levels of the dark parts of the image.
- Remove noise:After enabling ICC printing, there may be noise in the light color parts of the color patches after color conversion, and the noise removal function can be enabled in the ICC advanced settings to solve this problem.
- Embed ICC:When we need to use the ICC that comes with the image for color conversion printing, we can choose to enable embedding ICC in the ICC advanced settings, and the conversion target space will use the conversion intention standard in the image at this time.

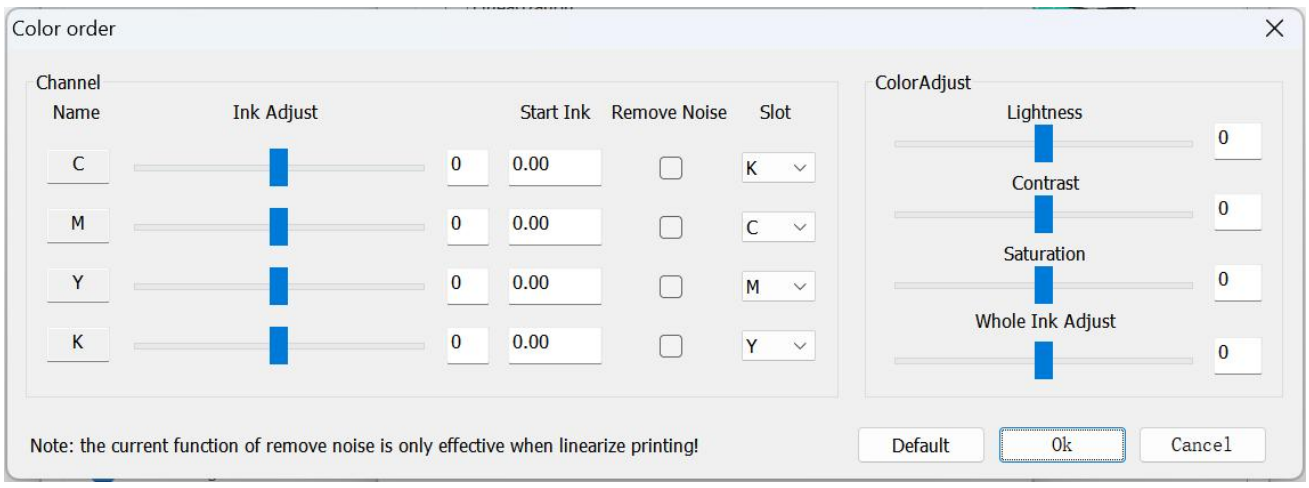
3）ICC（Vivid mode）:



4）Iterative Color Matching：Used when the color matching target has an icc.

5）Color Setting

- In the Color order interface, you can change the color order of Slot. This means that you may not be able to change the color order of the printer nozzle, but the software provides another solution, that is, you can change the slot color order of this printing scheme here to ensure that you print a satisfactory pattern.
- You can decide whether to set the corresponding channels for thickening processing according to the ink you use. You can also adjust the lightness, contrast, and saturation of image printing here to ensure that you can print a satisfactory image.
- Checking the linearization noise removal function can remove other color values of 1 to 2 points in the solid color of the image in the linearization printing mode.



After the above settings are completed and saved, click **[Print]**, and the image you want to print will be printed according to your settings.

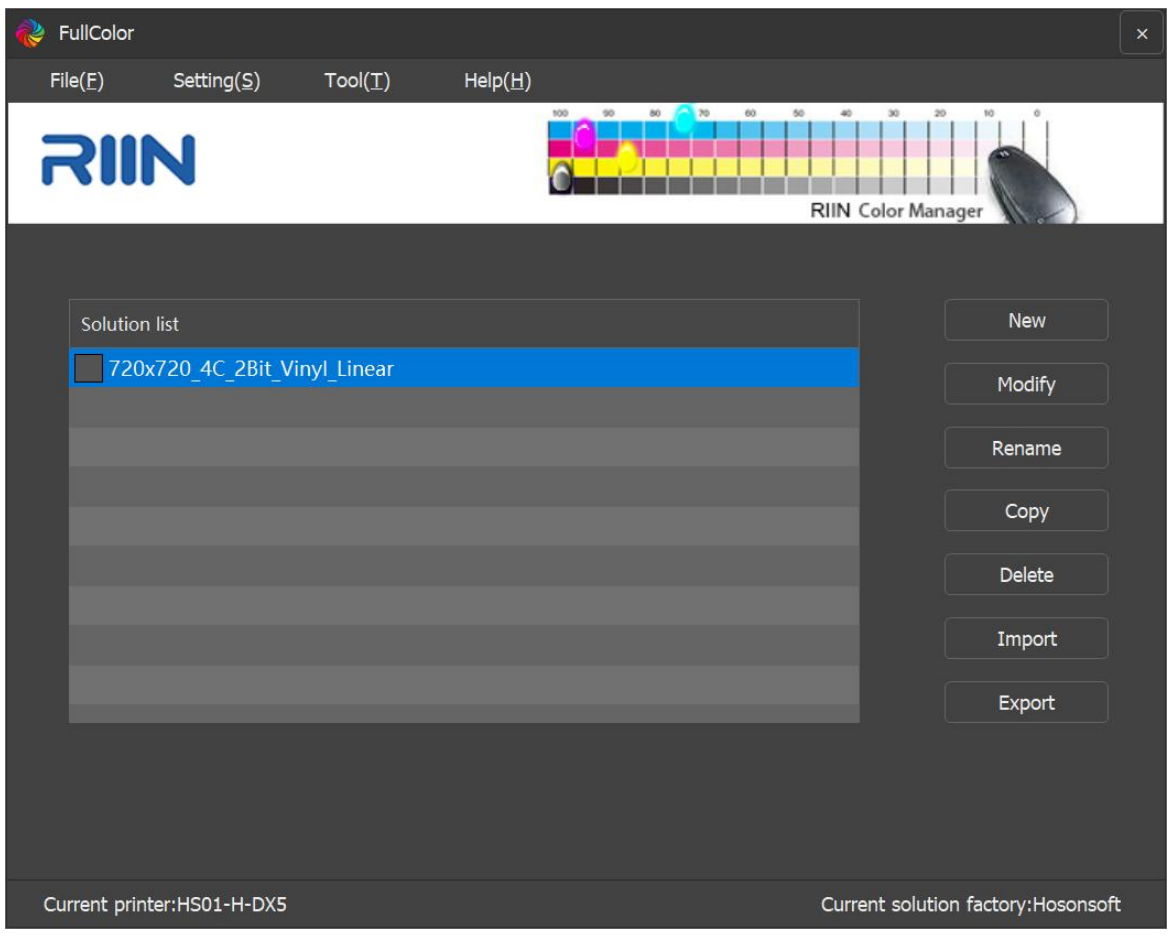
Precautions:

Setting the slot color order during one printing process does not mean that the same slot color order will be used in another printing scheme. When you create a new printing scheme, you still need to set the color order again. To avoid errors, it is recommended that you enter the advanced settings during printing to reconfirm whether the slot color order is the one you have already set.

Color Manager

01 Entering Color Management

Select the **[Color Manager]** option in the **[RIIN Menu Bar]** to enter the color management interface:



1.File

You can perform operations on curves such as creating new ones, modifying, renaming, copying, deleting, importing, and exporting curves.

2.Setting

1）Print Setting：It supports controlling the output method of test charts that need to be printed during the curve-making process, including file printing (the chart is saved as PRN data and the machine calls for printing) and network printing (the chart file is sent directly to the print queue for printing without PRN data).

2）Driver Setting：You can separately add the printing precision of the printer and adjust the default color order of the printer to match the precision and color order of the printer you are using.

3）Language：You can switch between Chinese and English on the interface when making curves.

3.Tool

1）Gamut Viewer：You need to activate the license for your computer first to use it normally (contact the RIIN team for activation). The gamut viewer can import measured txt color table data or generated ICC files to view the printer's gamut. You can also compare the gamut differences between two printers simultaneously.

2）Measure：It supports generating test charts to collect the printer's gamut (TIFF color table files and TXT files will be generated in the save path). After importing the TXT file generated when generating the test chart into the corresponding instrument, normal measurement can be performed.

3）InkSaver：Re-process the ICC file, replacing the CMY channel data with K channel data to reduce the overall ink volume.

4）ICC：For this function, you first need to select a linearized curve and then regenerate an ICC curve under this curve, print a test chart, and then measure the chart (it is recommended to use the software's default parameters to generate the ICC file). After completion, the ICC creation is done. You can also import ICC files generated by other software under this curve for direct use (note that the ICC file attribute needs to be.ICC, and if it is.ICM, the software does not support it).

5）Average：Average multiple measurement data to reduce measurement errors.

4.Help

Description of the FullColor version number. In the dongle activation license, if your dongle is the Beidou version color correction dongle, you need to reactivate the dongle with this tool after the color matching usage times are exhausted (contact the RIIN team). For software license activation, you need to use this tool to activate the computer first when using the closed-loop color matching function (contact the RIIN team).

Precautions:

Before entering color manager, please confirm that the correct dongle has been inserted into your computer or that the software has been activated.

02 Linearization

Select the parameter settings of the print curve on the interface, as shown in the following figure:

1.Parameter Settings

1）DPI

Select the actual precision of the curve printing. If the precision you need is not available, you can select [Driver Settings] in the [Settings] item of the color management interface to add the precision you want.

2）Color Group

The default setting is 4-color CMYK. In case of other multi-spot color situations, you need to add and modify according to the actual color order.

3）Halftoning Type

Select halftone dots according to different application scenarios, commonly used are 2BIT_LMPCS and 2BIT_KMPCS_UV.

- 2BIT_LMPCS： The dots are finer, but it is more sensitive to ink, and the transition is difficult to adjust (the transition problem can be optimized by setting to turn off the midpoint).
- 2BIT_KMPCS_UV： The color patches are uniform, the printed color is rich, and the transition is smooth (often used in 8-color light black schemes).

4）Setting

- **[Dot Dilution]** is used to dilute or deepen the overall color concentration, and it is used when the overall ink volume is too thick or too light. The default value of the slider is 2.5 (default dilution value). The larger the dot dilution value is than 2.5, the more dilution is indicated, and vice versa.
- [Advanced Settings] is only used for variable dot nozzles and generally does not need to be adjusted. It is recommended to use the default parameters and is used when obvious step changes cannot be corrected.
- When the transition of LMPCS and MMH dots is not good, you can uncheck Dot2 (the mode of turning off the midpoint) in the advanced settings to adjust the transition problem.
- In the mode interface, for multi-head Hosonsoft board models (more than three heads), for precision optimization, the MMH series dots need to select the corresponding nozzle combination mode of the machine (ECO indicates a photo machine, and SUB indicates a paper printer). You can [Print Reference Image] to confirm whether the adjusted dot parameters are reasonable.
- Click "Confirm" to exit the parameter setting after the parameters are set.

5）Calibration Mode

- Linearization： Prints ink colors and does not participate in other colors.
- ICC： Prints to restore screen colors.
- ICC （Vivid mode）： When printing RGB format images, if you need to ensure the vividness after enabling ICC, you can select the curve of ICC (Vivid mode) on the print confirmation interface for printing.
- Iterative Color Matching： Used when the color matching target has an icc.
- Express Color Matching： Used when the color matching target is linearized.

2. Ink Limit

After completing the parameter settings of the curve, click Next to enter the monochrome ink cutoff interface, as shown in the following figure:

Operate according to the prompts of steps 1, 2, and 3 on the interface.

1）Click the **[Print chart]** button to print the ink volume detection chart.

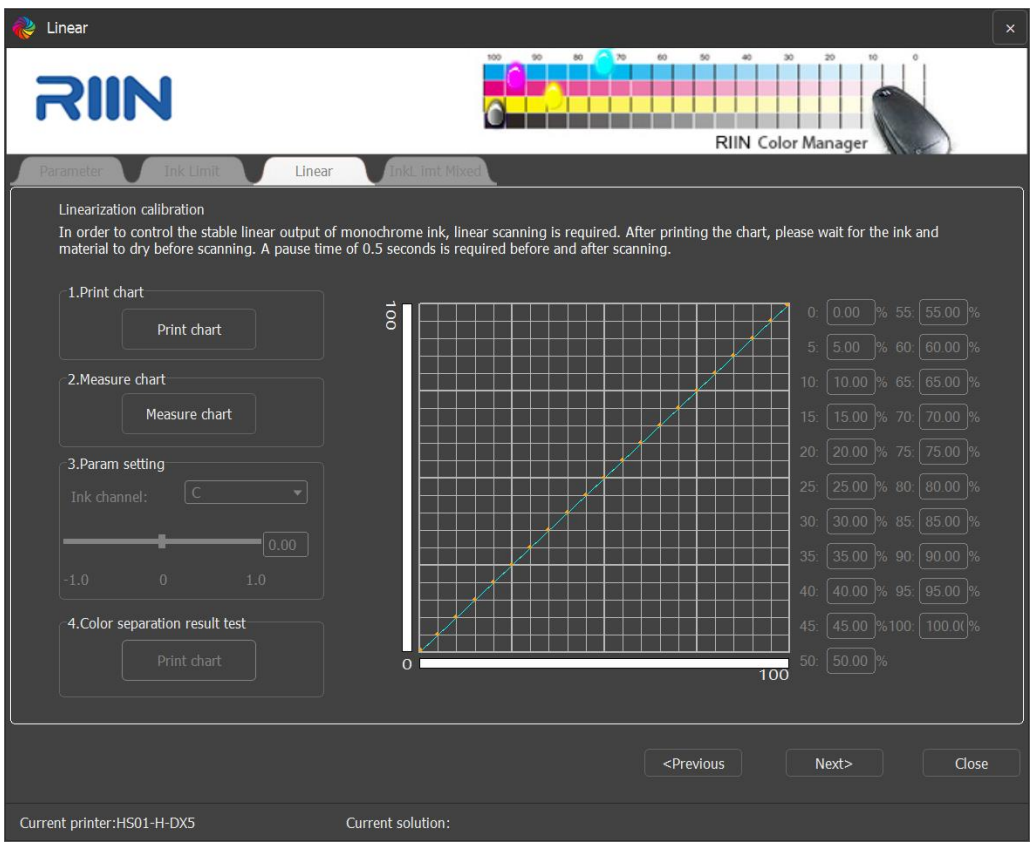
2）Adjust the ink volume percentage of each channel according to the actual ink volume of each channel in the detection chart.

If the ink volume of a certain channel is too thick, ink cutoff needs to be performed on that channel, and the specific ink cutoff value is set according to the concentration of each color block in the ink volume detection chart of that channel.

3)After setting, you can choose to reprint the chart for observation.

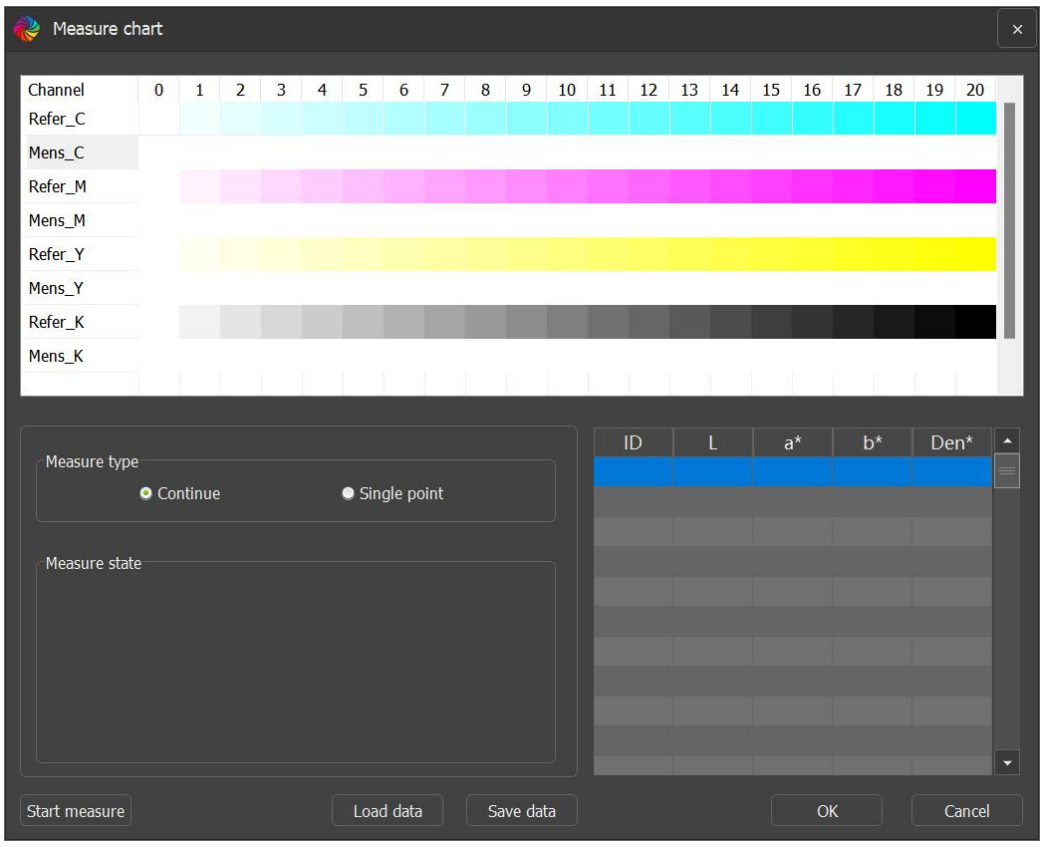
3. Linear

After completing the monochrome ink cutoff, click Next to enter the linearization interface, as shown in the following figure.



You can operate according to the prompts of the interface steps:

1）Click **[Print Chart]** to print the calibration chart on the machine. Cut it down after the chart is slightly dry. After the picture is completely dry, start **[Measuring the Chart]**.



2）Connect the eye-one before this. Click to start, and the instrument will automatically calibrate. You will be prompted when the calibration is completed.

3）Scan the color blocks on the wizard, and the scanning order is cyan, magenta, yellow, and black, from light to dark. The program will record the corresponding results.

4）After scanning the four color blocks, click to view the curve. If the "actual curve" is relatively smooth, proceed to the next step. If it is not smooth, rescan the non-smooth color blocks or manually adjust it in the curve fine-tuning to make it smooth.

5）Try to scan the more uniform parts of the color blocks as much as possible when scanning. The wrongly scanned color block strips can be reselected and rescanned. For example, if the cyan is scanned wrong, you can select the cyan strip and rescan it.

6）Click to switch the CMYK channels to view the curve. If the "actual curve" is relatively smooth, click [Next].

4. Ink Limit Mixed

Print the chart to observe the ink volume distribution, and perform total ink volume limitation under the premise of ensuring that the edges of blank numbers in the color blocks are not smeared with ink.

Ink Cutoff Explanation:

1）Generally, two-color channels do not need to be cut off.

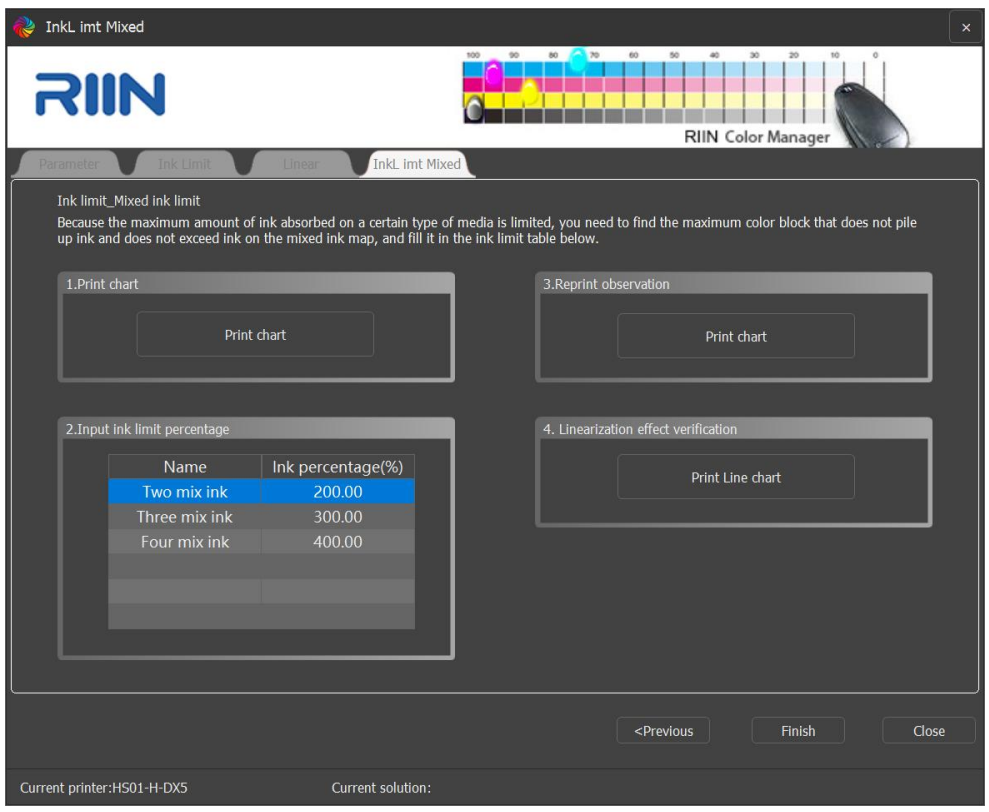
2）Three-color channels are cut off based on four-color channels. To ensure richer color expression, they should be cut off as little as possible, but there should also be a certain color transition from three-color channels to four-color channels. It is recommended to subtract 40 from the four-color value to obtain the three-color channel value.

3）Four-color channels are the key to controlling ink smearing. To ensure richer color expression, they should be cut off as little as possible under the condition of ensuring no ink smearing.

4）The monochrome ink volume can be adjusted as needed. The two-color ink volume is generally not cut off, the three-color ink volume is generally cut off less, and the four-color ink volume is cut off as needed, as long as there is no ink piling and no ink

smearing.

5）Mainly observe the color deviation of the monochrome and four-color ink volumes and the three-color mixed ink volume.



After completing the multi-fold ink volume control cutoff, you can click [Print Line chart] to view the linearization result and adjust it according to your needs.

Finally, click **[Finish]**, and the production of the linearization curve is completed.

03 Create ICC

In the new curve interface, select the calibration method as the ICC curve. The linearization steps refer to the linearization curve production process. After the multicolor ink volume step, the ICC creation step will be entered.

1. Measure Data

Click **[Print Chart]**, and after the chart is completely dry, measure the **[Chart].**

2. Generate ICC

ICC color separation black structure settings (it is recommended to use the default parameters)

- Black Start Position: Indicates the start of black K in the light color area. The area after the black start position can improve

the fineness to a certain extent.

- Maximum Black: The maximum black value determines the maximum amount of black used in color separation.
- Black Width: Increasing the black width control slider will increase the amount of black used.
- Black Curve:Indicates the proportion of K in the four colors when generating K.
- File Size: Setting the size of the generated ICC file.

After the measurement chart is completed, click to create the ICC. After success, the curve production is completed.

04 Six-Color Curve Production

Select CMYKLcLm in the color mode in the new curve, and then proceed to the light and dark color ratio interface.

1.Light and Dark Color Ratio Settings

When setting the light and dark color parameters, selecting C adjusts the light and dark colors of Lc ink and C ink, and the same applies to selecting M.

1）Dark Color Start Position: The position where the dark color part starts to print ink. The later the position, the more delicate the printing effect, but transition problems may occur, that is, the gray balance will appear like a rainbow stripe. Generally, the value is set between 25-35, and problems may occur above 35. (Remember to modify C and M at the same time).

2）Light Color End: The end position of the light color, which generally does not need to be modified and is defaulted to 100.

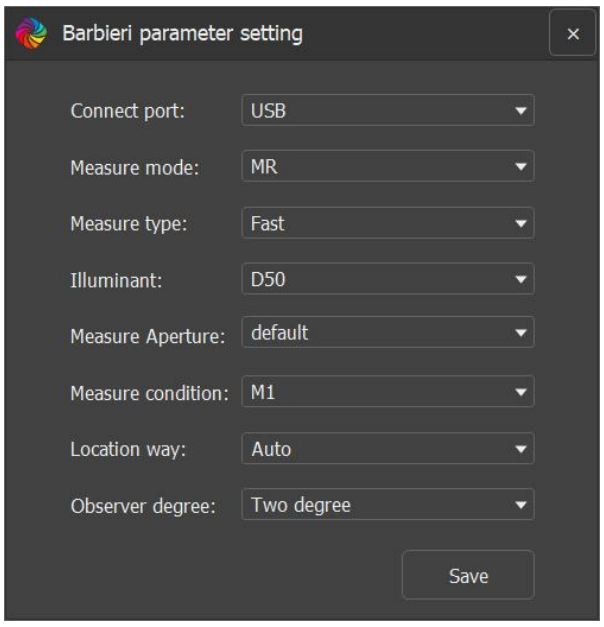
3）Calibration:

- Print the chart:click to measure the data, and then calibrate the equipment, and scan the corresponding printed transition chart according to the prompt.
- Measuring the Chart: The nozzle is in good condition without ink breakage or ink splashing. When the ink carrier is a car sticker or photo paper, use alcohol and a dust-free cloth to wipe off the dust and fingerprint marks on it, and print the calibration chart in a one-way, large feathering manner to avoid adverse effects on the scanning result.

The ICC curve production process refers to the previous description.

05 Backlight Curve Production

Select Barberi in the new curve measuring device, and the measurement mode in the attribute interface needs to be selected as MT (MR represents front light, and MT represents backlight). The subsequent curve production process refers to the ICC curve production method.



Conclusion

The manual of RIIN ends here. If you have more questions regarding color management, you can contact our Ruiyin technical service team for assistance. We hope you have a pleasant experience using it!