VariPrint

User Guide

(Version 2011-4)

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VariPrint User Guide

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Chapter 1 Product Profile

1-1 Product Introduction

Haiyaa VariPrint variable data printing (also called personalized printing) software (following abbreviated as VariPrint) enable users to merge high volume data such as text, image, vector, barcode or chart into customized template, and then print at rated speed of the printer.

VariPrint is independent of printers. Besides fast speed digital printers, it also supports any kinds of desktop printers. With VariPrint, you can use your own design and database, such as Excel or Access files, to make personalized documents simply and efficiently. It is particularly suitable for producing commercial documents, personalized cards and marketing materials for the industries such as finance, insurance, automobile, telecom, school, real estate, restaurant, government and nearly every company.

1-2 Product Features

- Adopt user's own design as template. Use industrial standard file format PDF as well as JPG, TIF, BMP, GIF.
- Support widely used Excel and Access as personalized data source. In addition, it can get ODBC data source and realize multi-table database support.
- Printing at rated speed of the printer. VariPrint use its own patent technology, to generate final data on the fly or offline with double-side print support.
- Automatically generate variable barcode. VariPrint built in various kinds of barcode generation. It supports both of one-dimensional barcode and two-dimensional barcode.
- Support serial number generation automatically and many kinds of functions and parameters.
- Multi-paragraph and various kinds of layout support can help user to generate complicated personalized leaflets efficiently.
- Automatically generate dynamic statistical chart to help user to produce visualized bills and statements conveniently.
- Imposition and OMR support embedded can help to realize automatically folding and inserting of account documents.

Note: Above product features will be different subject to different version. Detail features can be found on our website www.haiyaatech.com.

1-3 System requirements

Operation system: Windows XP/2000/7

Hardware: Intel Core 2 Duo E8200 or above, RAM: 2G or above

Software environment: Microsoft .NET Framework 2.0 or above, VariPrint is encryption key protected.

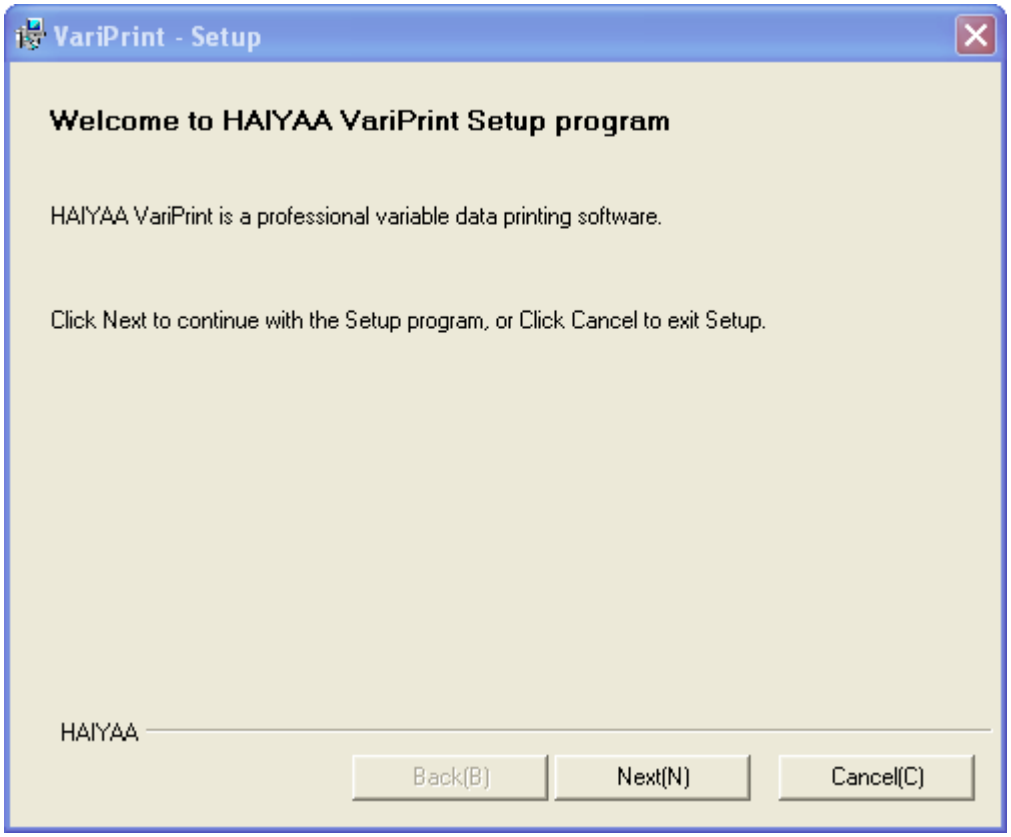
Chapter 2 Install and Uninstall

2-1 Install VariPrint

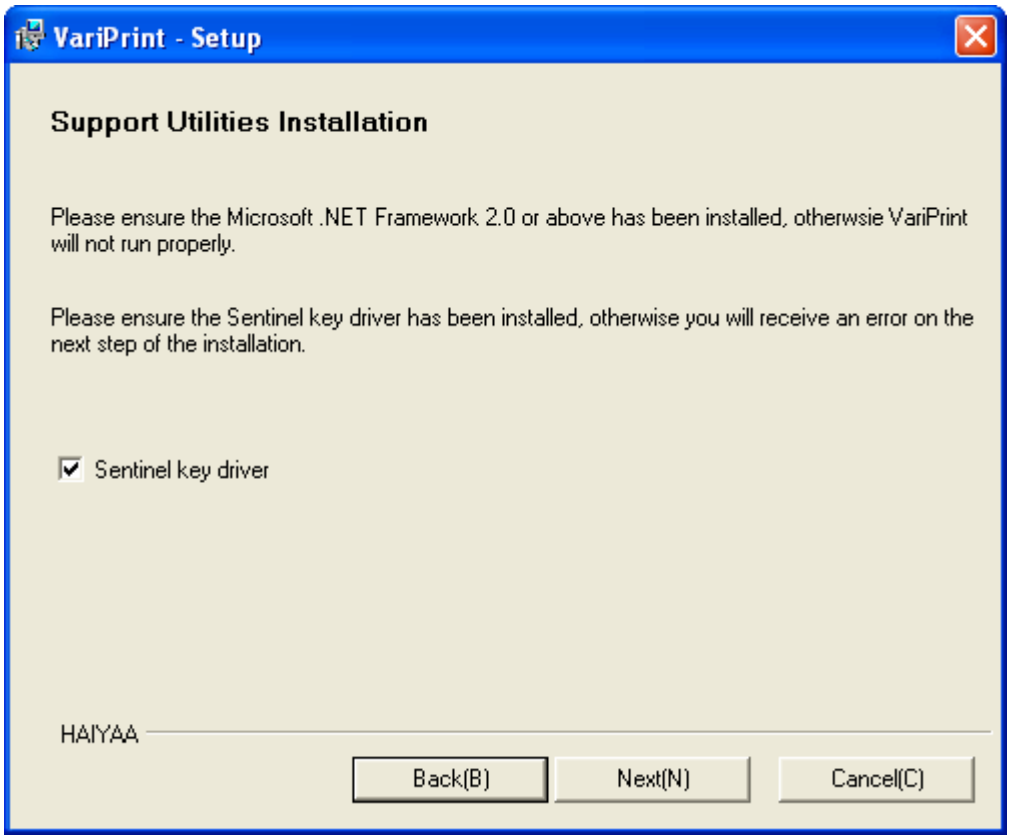
1. Start computer, locate the Install.exe file on the CD-ROM, run setup program automatically, goes to 3 directly.

2. If not run automatically, please click Start on the left foot, click Explore, choose CD-ROM to run Setup.exe, go to setup interface, continue the installation wizard.

3. Go to VariPrint welcome interface

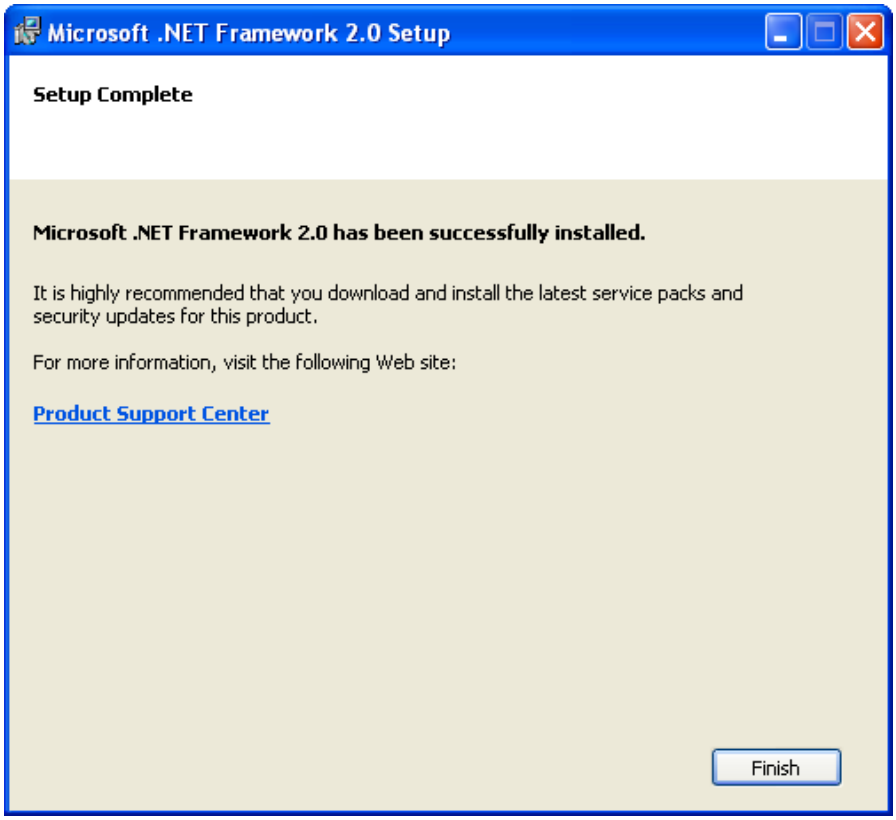


Click Next to see the software environment VariPrint needs.

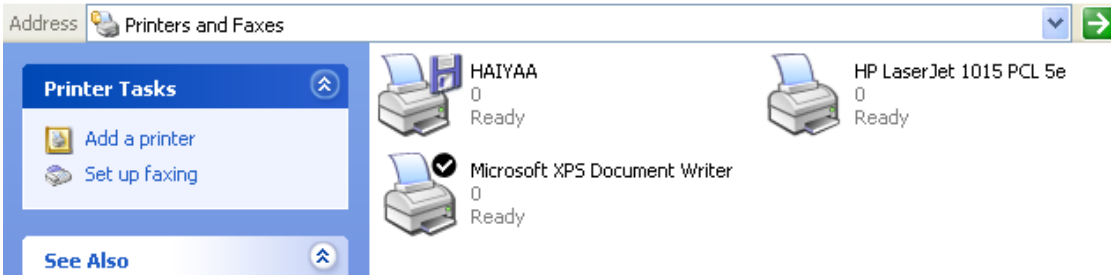


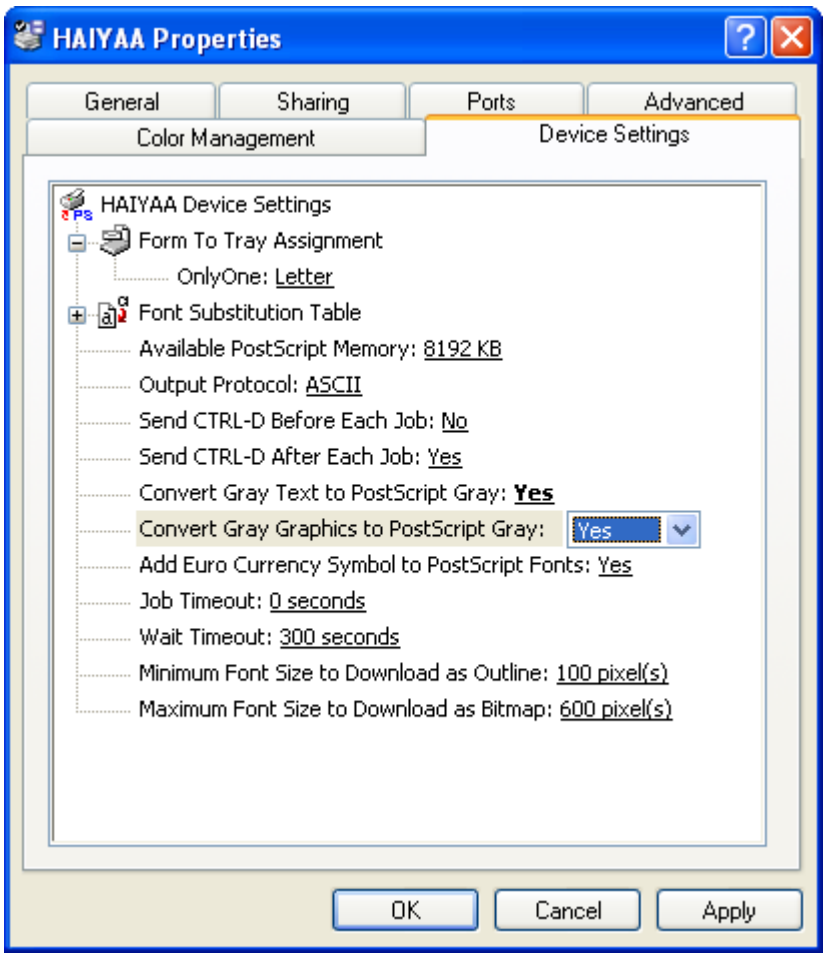
Notes:

1) Please refer to Microsoft's corresponding guide to install Microsoft .NET Framework.



2) After installation, HAIYAA.PPD will be automatically installed in your system. If failed, please go to the Software Download web page in the www.haiyaatech.com to download HAIYAA.PPD if you haven't found it in the Installation CD. Install HAIYAA.PPD by adding a printer in the Control Panel. Be attention,
   a) Select File:(Print to File) as port
   b) Revise two setting after installation: Convert Gray Text to Postscript Gray and Convert Gray Graphics to Postscript Gray should be changed to Yes.



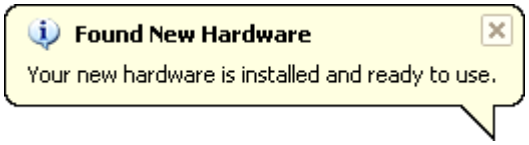


3) If you have already install VariPrint old version and you are sure you haven't deleted key driver, you needn't check Sentinel key driver to install key driver again when install VariPrint new version.

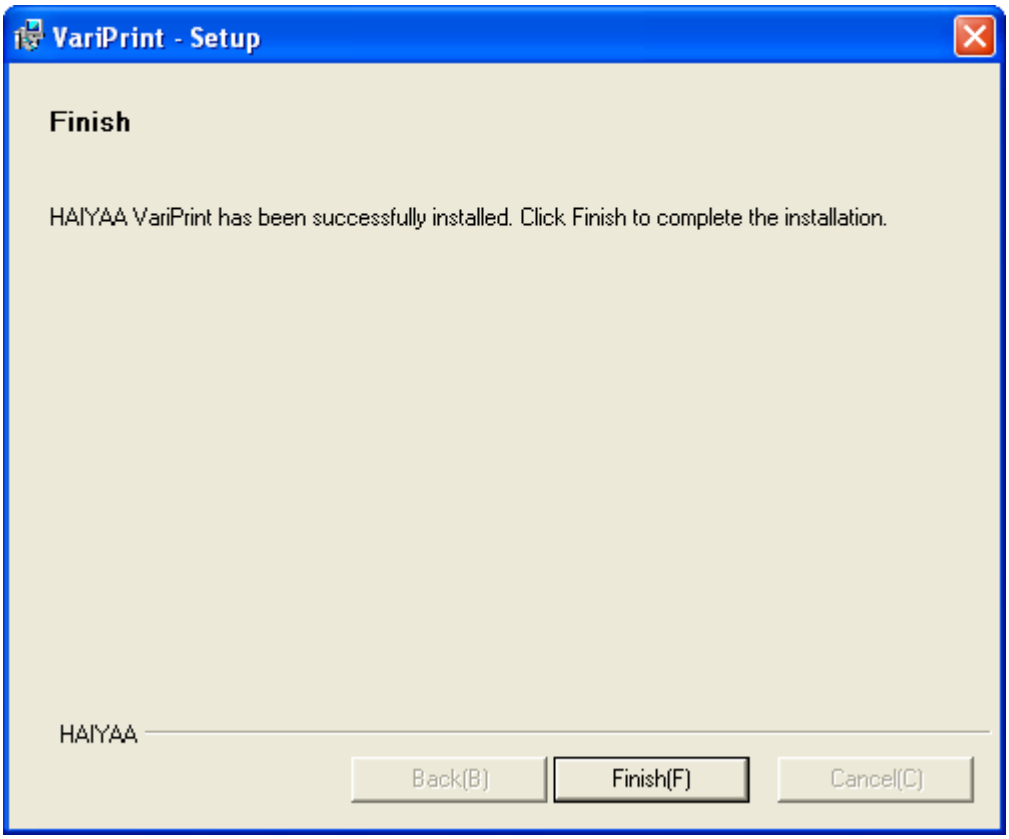
4. Click Next to install encrypt key driver according to corresponding wizard. Note:

please put out the key before. After key driver installation finish, you will be told to restart the computer, ignore it.

If the key driver is installed successfully, the computer will recognize the key when you insert this USB key. Otherwise, the computer can't recognize the key, then you must install the driver again. please go to the Software Download web page in the www.haiyaatech.com to download Sentinel key driver.



5. Click Finish to complete the installation successfully.



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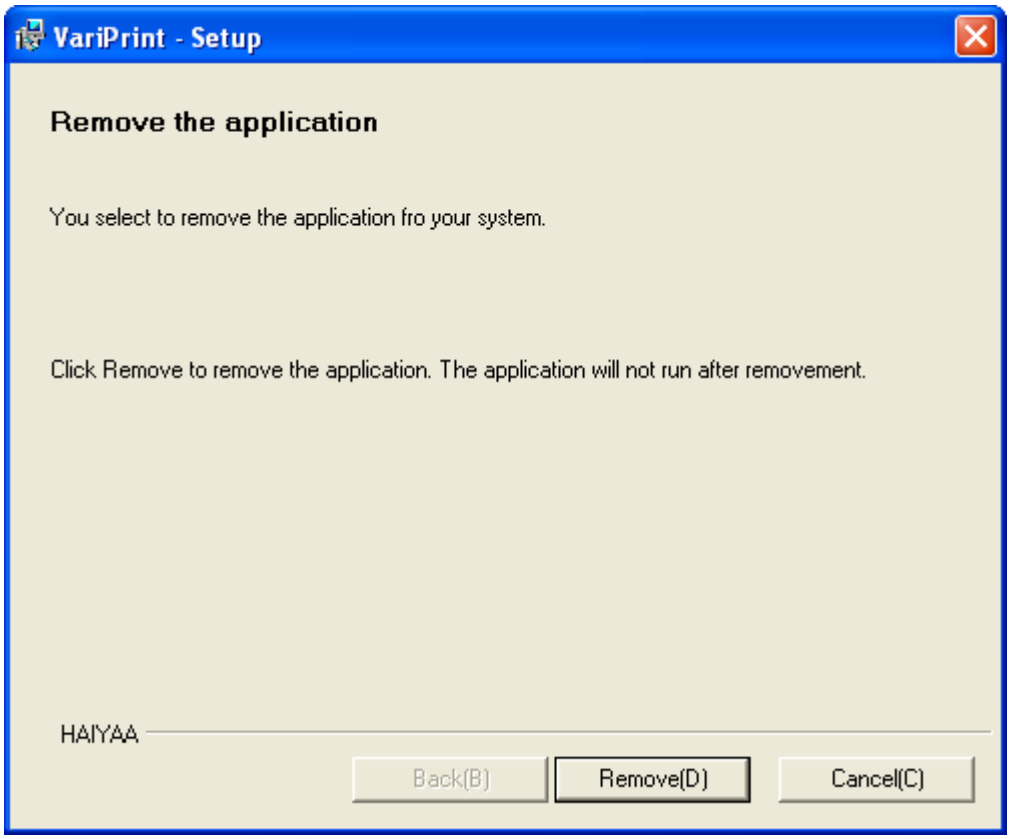
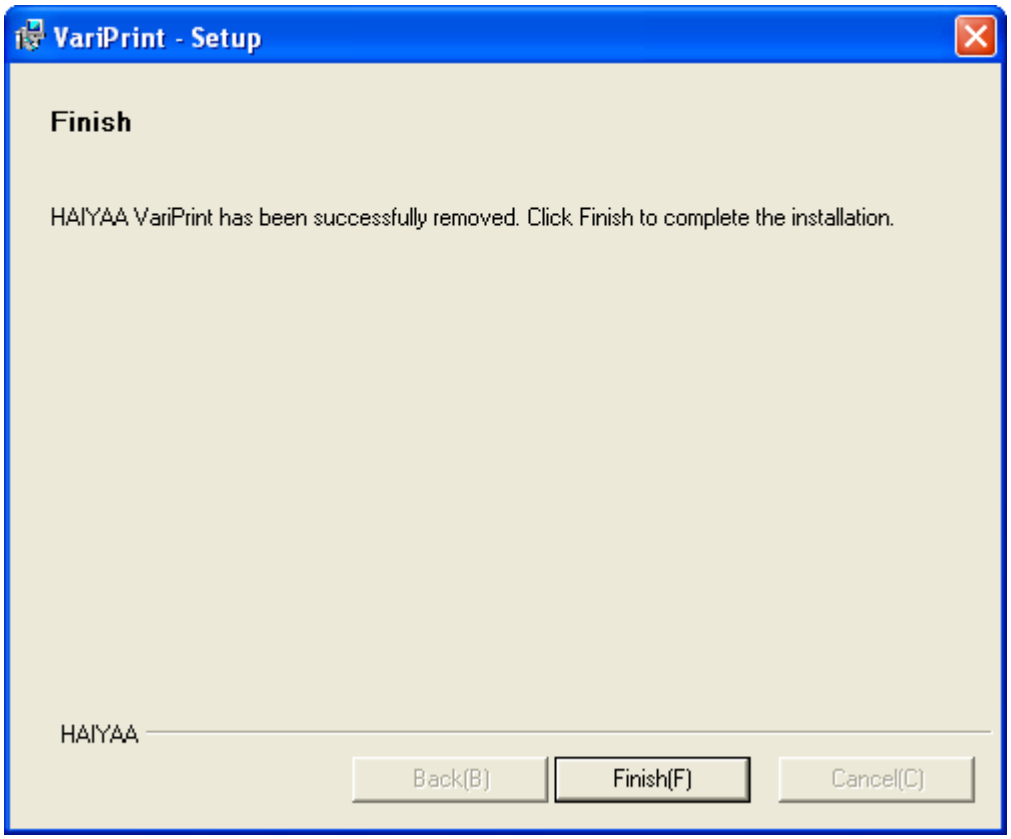
2-2 Uninstall VariPrint

1. Click Start - All Programs - Add or Remove Programs - VariPrint, select Remove.
2. or Click Start – All Programs – VariPrint –Uninstall to remove.
3. Screen will appear Uninstall dialogue box,



Click Remove to start remove program.

4. Click Finish to remove VariPrint successfully.


VariPrint - Setup
Finish
HAIYAA VariPrint has been successfully removed. Click Finish to complete the installation.
HAIYAA
Back(B)
Finish(F)
Cancel(C)

Chapter 3 Preparation

3-1 Making template

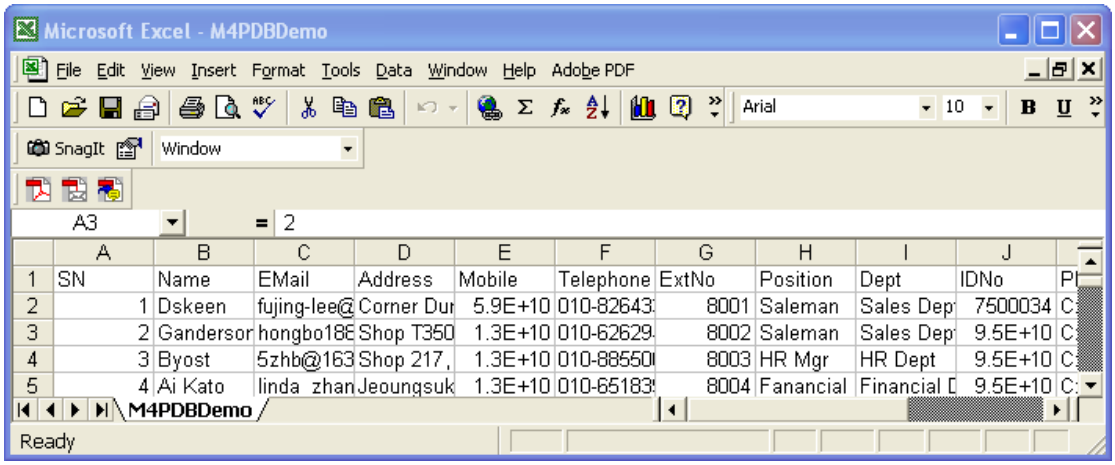
Whatever layout software you use, such as InDesign, PageMaker, Illustrator, QuarkXpress, CorelDraw, Word, Excel, PowerPoint etc. only convert final files to PDF, JPG, TIF, BMP or GIF format. Be attention, please embed font in PDF file.

3-2 Database preparation

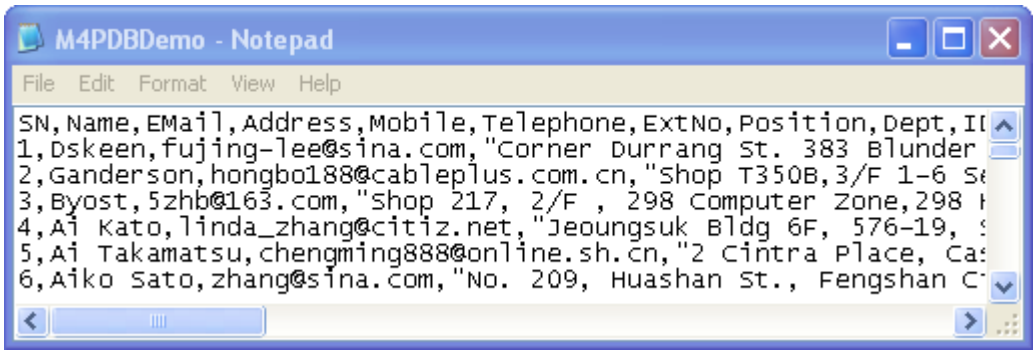
VariPrint supports csv(Comma delimited), text(Tab delimited) and Access mdb database file as well as ODBC data. You can edit csv or text file by Excel in Microsoft Office or by other text editing tool, or save as from database directly.

3-2-1 Edit text database

Edit csv data file by Excel



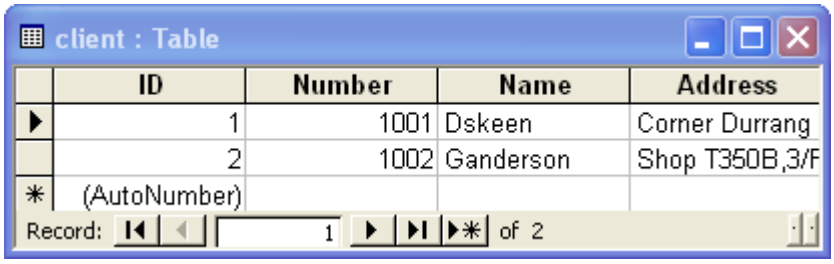
Edit csv data file by Notepad



Edit text data file by Notepad

3-2-2 Edit MDB database

Edit data table by Microsoft Access



3-2-3 Setup ODBC

If your database format is Oracle, SQL, DBF, FoxPro or Excel, use ODBC as a link bridge. How to setup ODBC, please refer to Windows' corresponding guide.

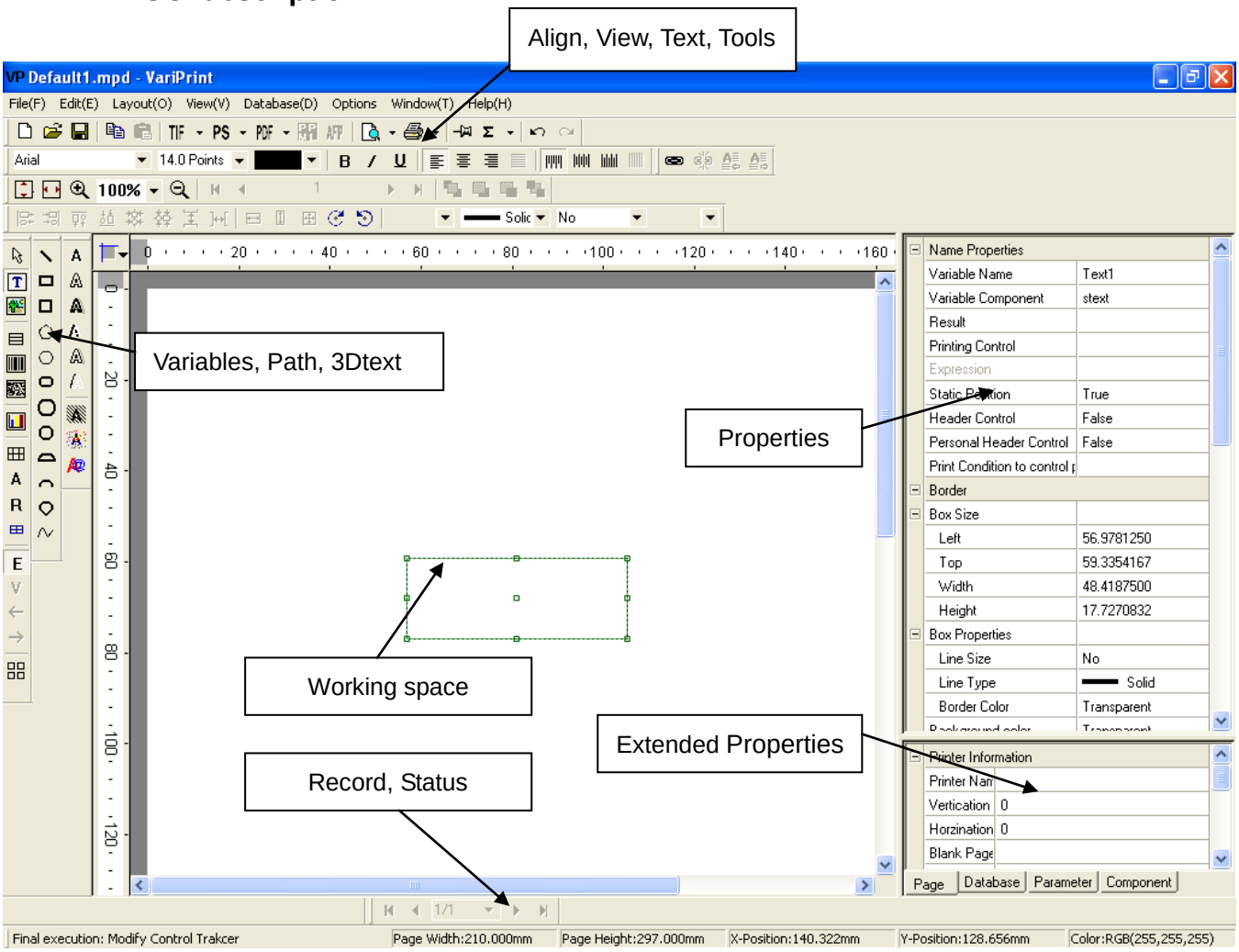
3-3 Process images automatically

Please refer to Action command in Adobe Photoshop.

Note: After batch processing in Photoshop, put all of image files in a folder. The name of image file is better to be titled after the fieldname of database in order to batch import variable image in VariPrint. For example, Dskeen.jpg, Gandson.jpg. or 1.jpg, 2.jpg,…

Chapter 4 Operation

4-1 GUI description

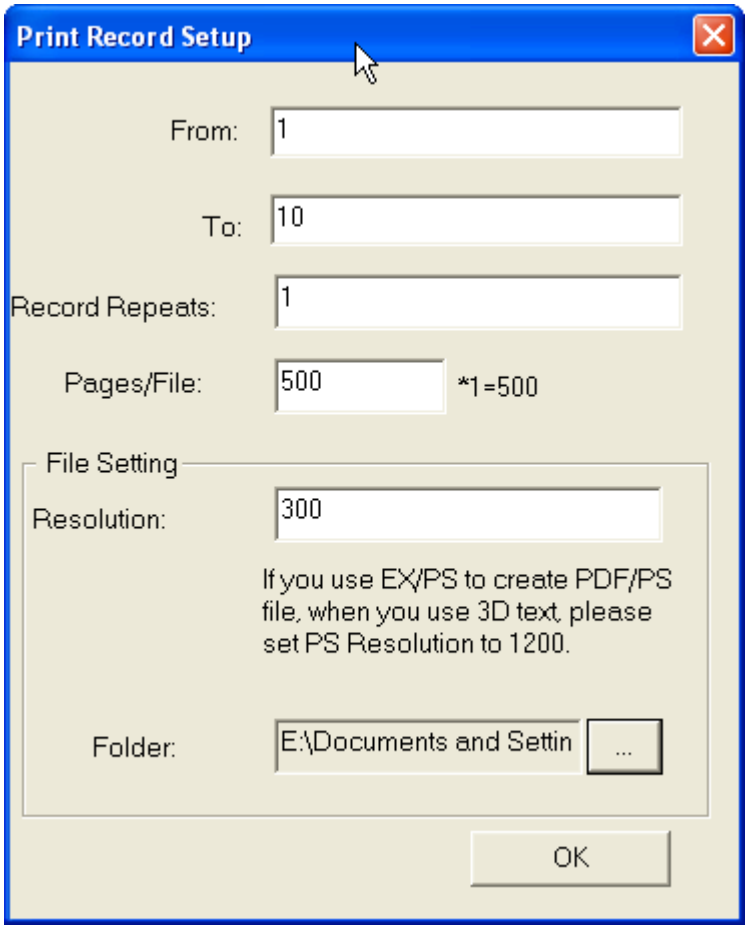


4-2 Toolbar description

4-2-1 Tools bar

1 Create a new project
2 Open the existing project
3 Save a project
4 Copy the selection and put it on the clipboard
5 Paste the clipboard contents
6 Print to TIFF file

7 Print to Postscript file



Page/File When printing, VariPrint allows the user to separate the whole print into many

sets, a set represents a final output file including a number of records or pages. By using this method, the capacity of output file can be reduced to avoid error. Besides, it can improve the printing efficiency by processing and printing simultaneously. Page/File is used to set the number of pages in a set file. If the output file has imposition, the records included are Page/File value multiplying the imposed numbers in the spread. For example, If a spread has 8 pieces of cards imposed, and Page/File is 500, that means a set of final file includes 4000 pieces of card or 4000 records.

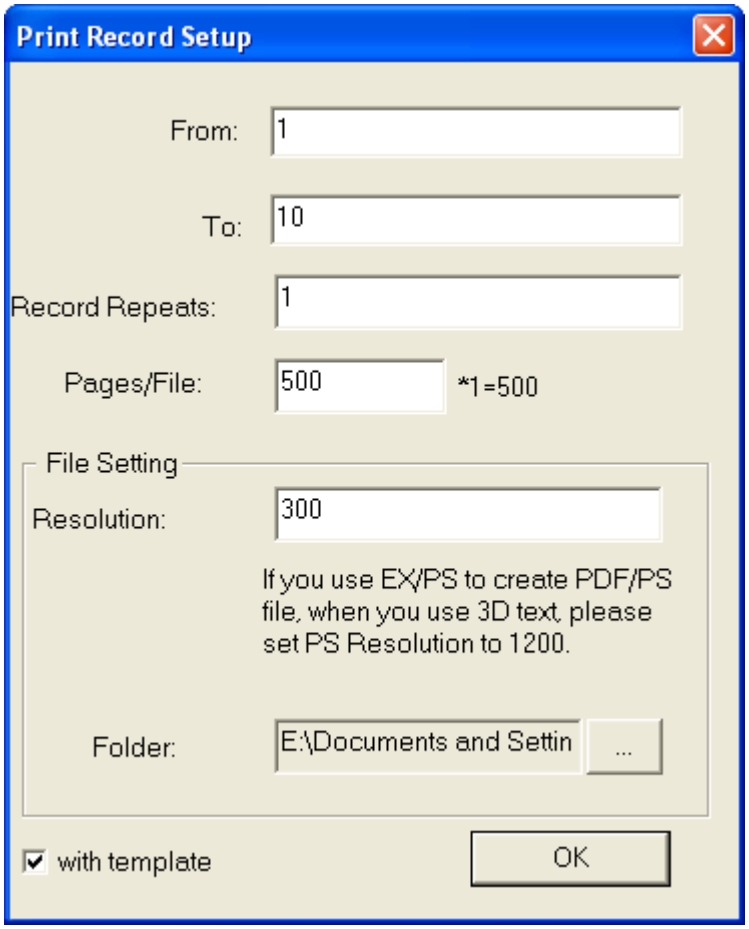
Record Repeats is used to set the number of record repeating in final output file. Sometimes, a record needs to be printed repeatedly, you needn't edit database, just set repeats number here.

PS Resolution is used to set the resolution of output PS file.

PS Folder is used to set the folder where the output PS file place.

8 Print to PDF file

If you want to print an imposed template PDF file, please select **Create PDF Template**. If you want to print a variables PDF or a variables plus template PDF file, please select **Create PDF**



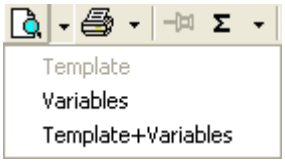
Please check **with template** if you want to print a variables plus template PDF file.

9 Print to PPML file

10 Print to AFP file

11 PDF preview

Besides using V mode to preview document, VariPrint also provide PDF preview. It does preview of templates, variables or template plus variables.



12 Printing

This option allows you to print the job to any format file using virtual printer driver.

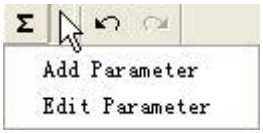
13 Lock/Unlock selected object

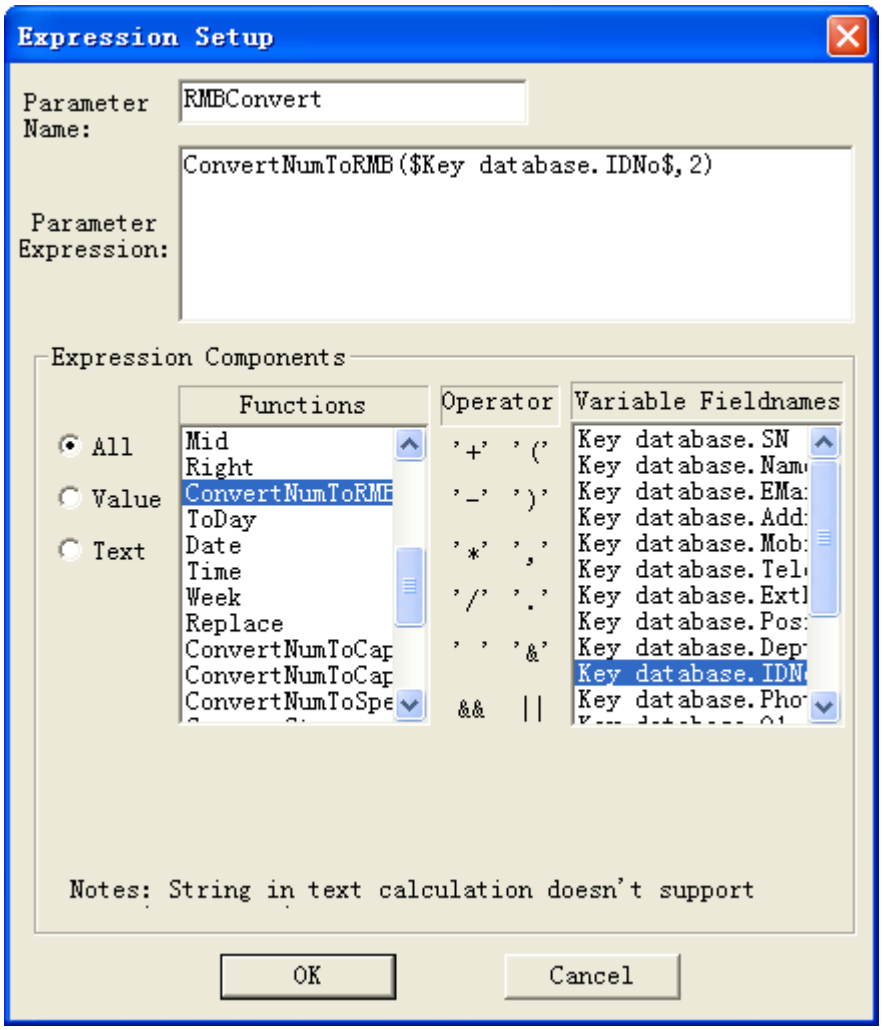
14 Parameter setup

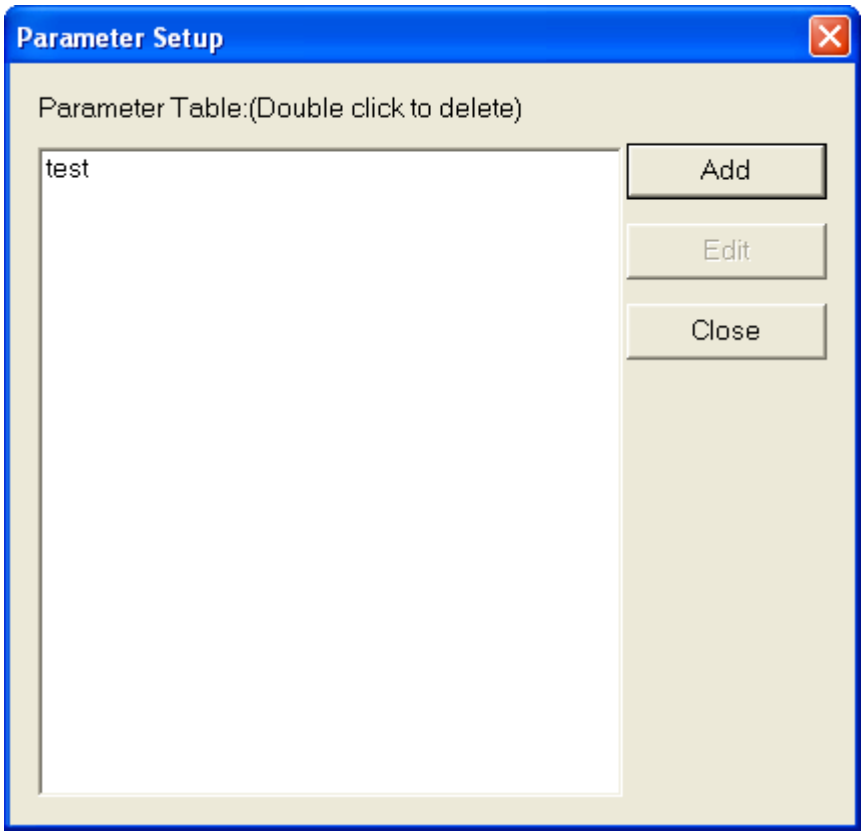
Parameter is a very important in complicated calculation and logic process. There are

more than 60 kinds of parameters built in VariPrint, such as Left, Right, Mid are used to get parts of text; Replace is used to replace parts of text with setting string; ConvertNumToRMB is used to convert Arabic number to RMB capital; If is used to do logic process, NumFormat is used to set thousand ranks and digits, etc.

Before parameter setup, database should be opened. Add parameter in **Expression Setup** frame, Edit parameter in **Parameter Setup** frame. Double click parameter name to delete.







15 Undo
Undoes the last action
16 Redo
Redoes the previous undone action

4-2-1-1 Parameter introduction

Please see **Appendix A**

4-2-2 Text bar

1 Font type
2 Font size
3 Font color
4 Bold
5 Italic
6 Underline
7 Left
8 Centered
9 Right
10 Justify
11 Top
12 Centered

13 Bottom
14 Division

4-2-3 View bar

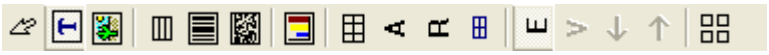
1 Layout height
2 Layout width
3 Zoom in
4 Set proportion
5 Zoom out
6 First record
7 Previous record
8 Go to record
9 Next record
10 Last record
11 Bring the object to front
12 Bring the object forward
13 Bring the object backward
14 Bring the object to back

Note: Item 11-14 includes the layer concept of object; it is valid when multi objects are selected.

4-2-4 Align bar

1 Left
2 Right
3 Top
4 Bottom
5 Vertical center
6 Horizontal center
7 Same vertical gap
8 Same horizontal gap
9 Same width
10 Same height
11 Same size
12 Rotate clockwise
13 Rotate anti-clockwise
14 Background color
15 Line type
16 Line size
17 Border color

4-2-5 Variables bar



1 Object selection
2 Variable text
3 Variable image
4 General table
5 Variable one-dimensional barcode
6 Variable two-dimensional barcode
7 Variable chart
8 Variable table
9 Advanced variable text
10 Variable RTF
11 Mini variable table
12 Edit mode
13 View mode
14 Previous page in dynamic table
15 Next page in dynamic table
16 Flat design

4-2-6 Path bar

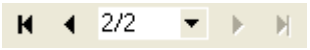
1 Straight line
2 Rectangular
3 Square
4 Pentagon
5 Hexagon
6 Fillet rectangular
7 Ellipse
8 Circular
18 Circular arc string
19 Circular arc
20 Fan-shaped
21 Free style

4-2-7 3D text bar

1 Outline Fill Effect Font
2 Outline Effect Font
3 Solid Shadow Effect Font
4 Solid Cubic Effect Font

5 Outline Shadow Effect Font
6 Outline Cubic Effect Font
7 Haiyaa variable underpainting anti-counterfeiting plug-in (Optional)
8 Haiyaa full random verification code anti-counterfeiting plug-in (Optional)
9 Composite Font

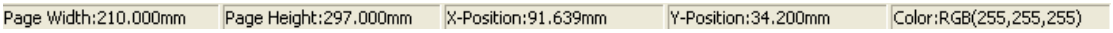
4-2-8 Record bar



1 First page
2 Previous page
3 Go to page
4 Next page
5 Last page

Note: Here page means layout or template.

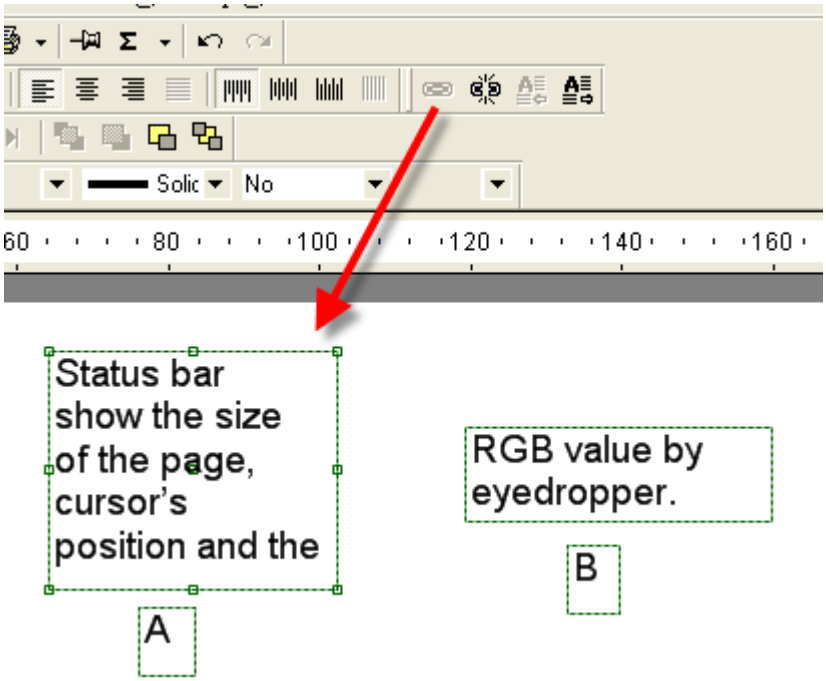
4-2-9 Status bar



Status bar show the size of the page, cursor's position and the RGB value by eyedropper.

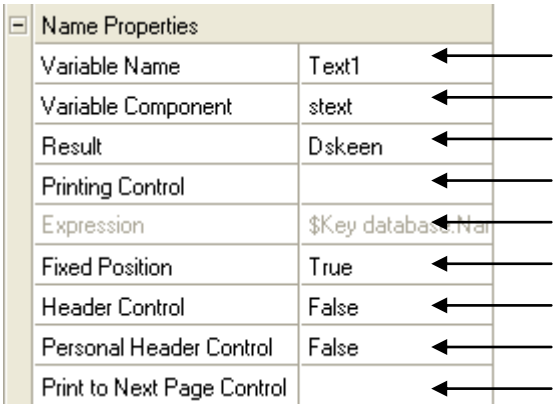
4-2-10 Textflow barr

Textflow bar is used to set text flow between two or more text boxes.
Operation: Click the first box A, select the chain icon, and then click the second box B which you hope the text to flow to. Once set, text will be flow between A and B. Of course, you can set the third or more text box. If you want to disconnect them, just select disconnect chain icon to set.


Solic
No
60
80
100
120
140
160
Status bar show the size of the page, cursor's position and the
A
RGB value by eyedropper.
B

4-3 Project Properties

4-3-1 Name properties



Variable object name, increase number by 1 if same type

Variable component

Result according to expression

Control printing or not, 1=printing; 0=no printing

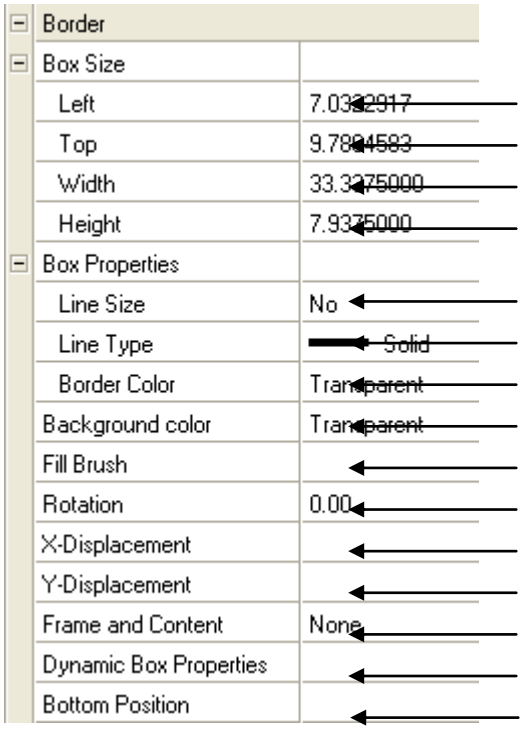
Variable object expression, can be fieldname or fixed text

Control the box position status, True=fixed; False=dynamic

Set the text box as Header or not

Control the box to be repeated or not when envelop grouping

4-3-2 Box properties



Left position

Top position

Box width

Box height

No, 0.1mm… or customized

Solid, Dash, Dash dot, Long dash dot dot, Square dot.

Color setting (RGB, CMYK, Spotcolor), Transparency setting

Color setting (RGB, CMYK, Spotcolor), Transparency setting

Fill brush setting, incl. hatch brush, halftone brush or image brush

Rotation angle setting

X-displacement setting of text

Y-displacement setting of text

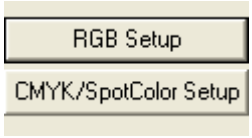
Frame and content setting

Set the properties of box to variable

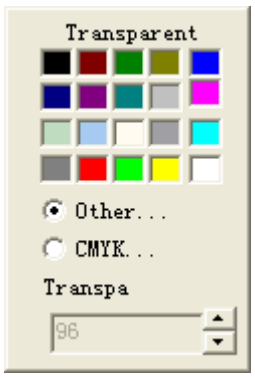
The lowest printing position of the object, go to new page if exceeds

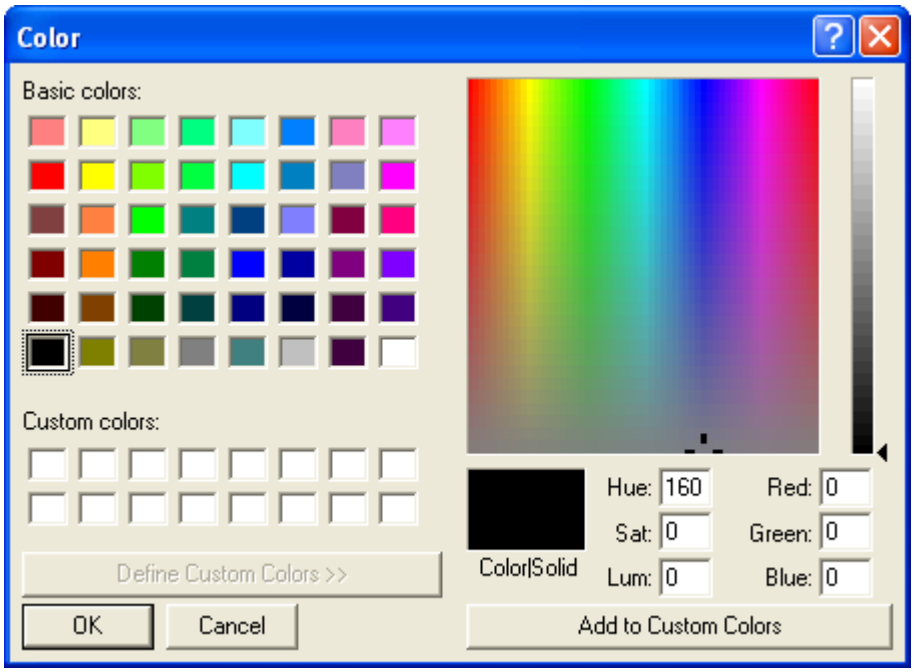
4-3-2-1 RGB/CMYK/Spotcolor setting

VariPrint support RGB, CMYK and Spotcolor color mode.

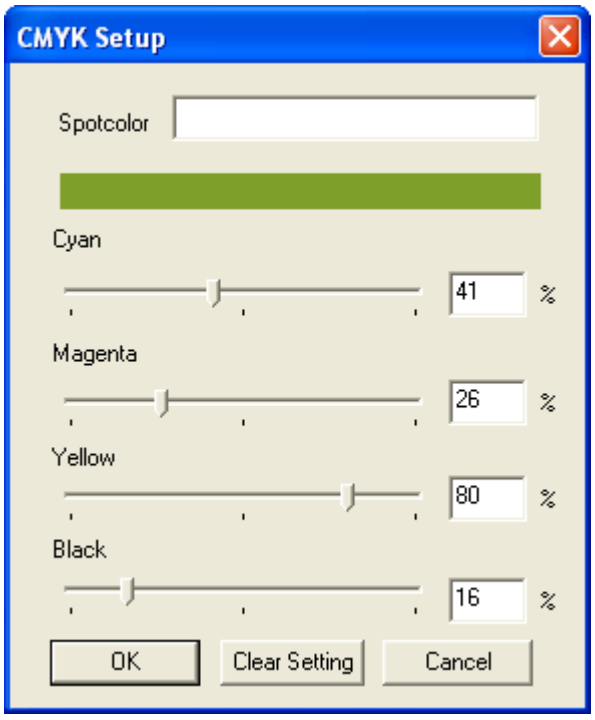


RGB mode:

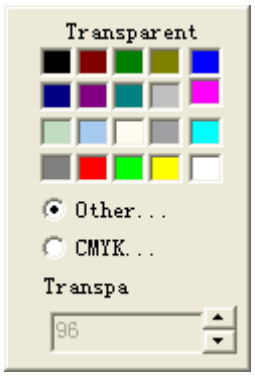

Transparent
Other...
CMYK...
Transpa
96


Color
Basic colors:
Custom colors:
Define Custom Colors >>
OK
Cancel
Color|Solid
Hue: 160
Sat: 0
Lum: 0
Red: 0
Green: 0
Blue: 0
Add to Custom Colors

CMYK mode

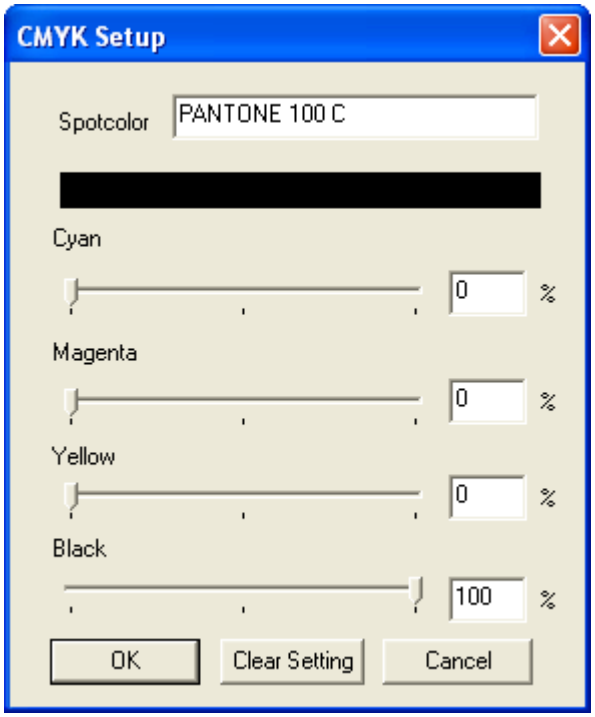

CMYK Setup
Spotcolor
Cyan
41 %
Magenta
26 %
Yellow
80 %
Black
16 %
OK
Clear Setting
Cancel

If you want color to be transparent, just click Transparent.



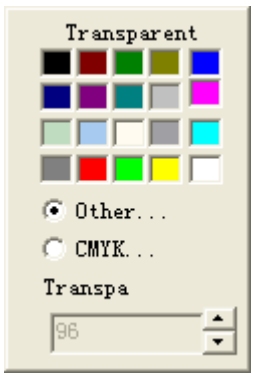
Spotcolor mode

Fill in Spot color by a Spotcolor title or a customized name, and then set Black to100% if this Spotcolor is solid.



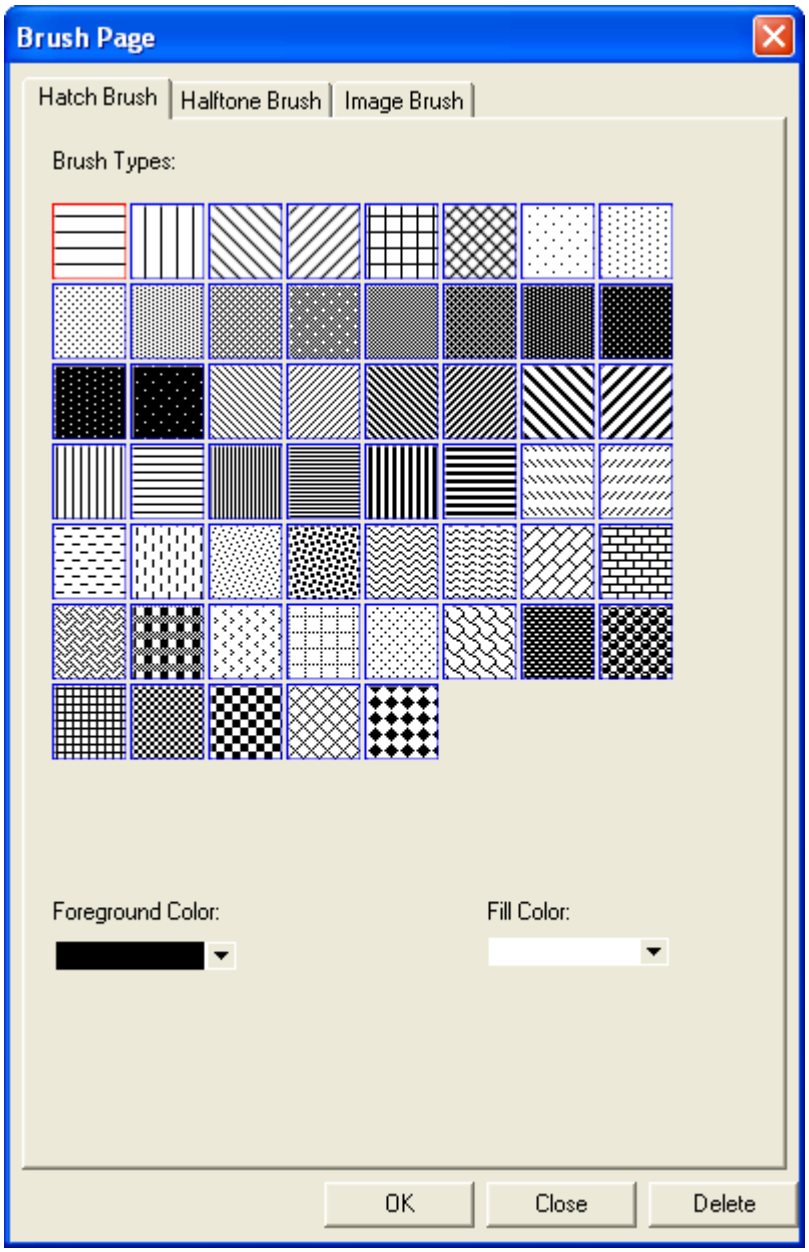
4-3-2-2 Transparency setup

You can specify the transparent level using Transparency. It is valid even if it appears gray.



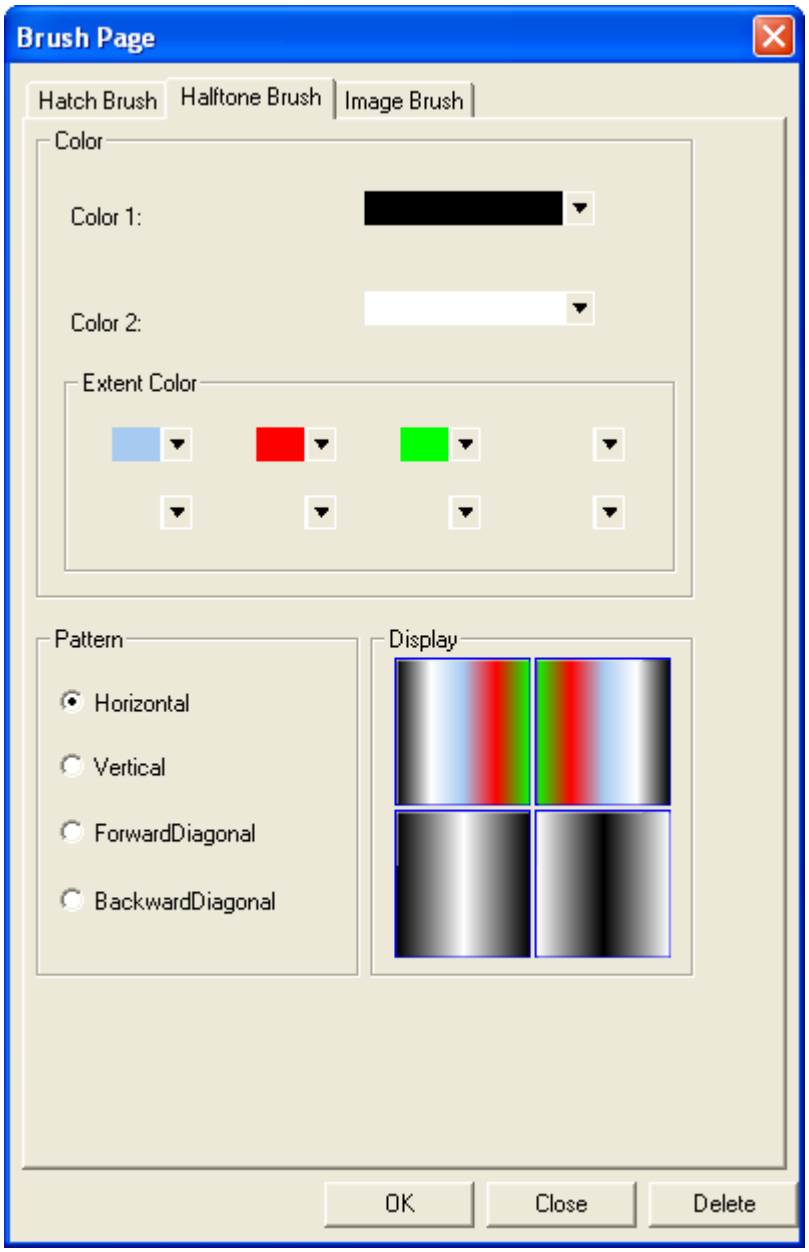
4-3-2-3 Brush

4-3-2-3-1 Hatch brush



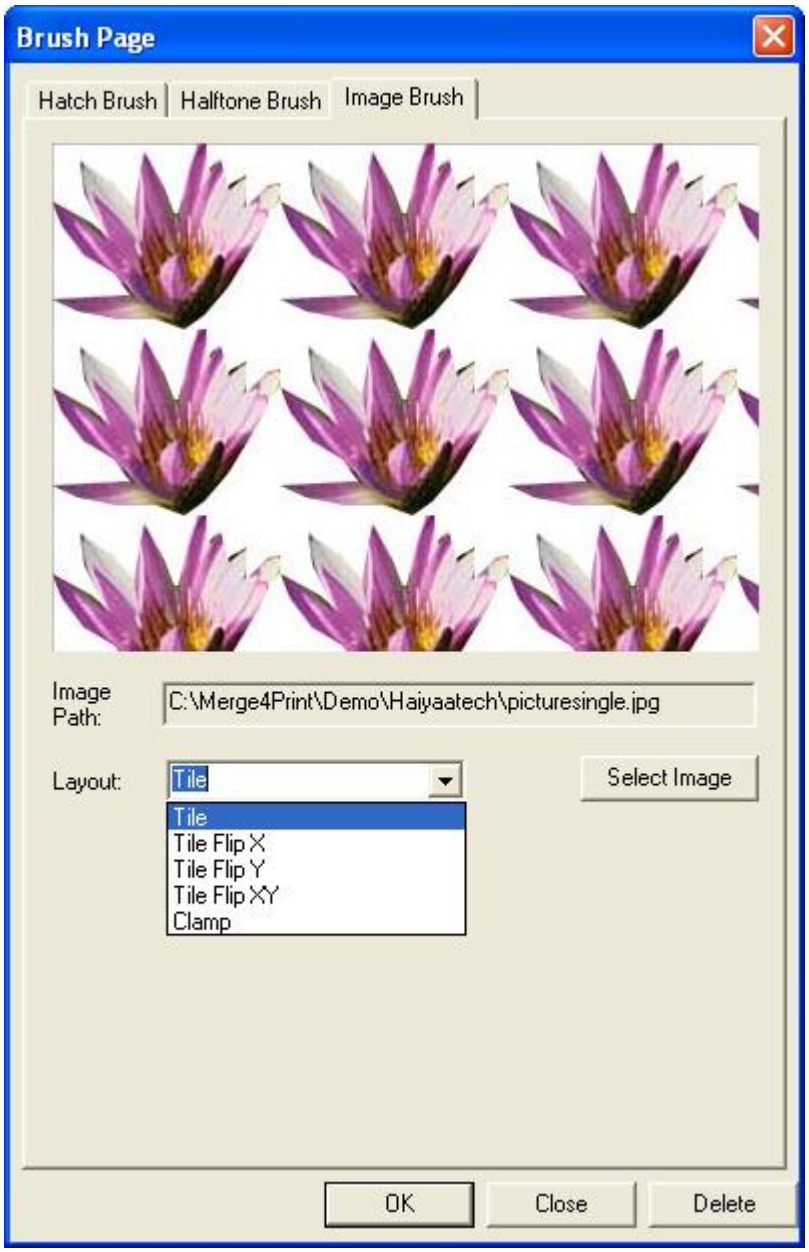
4-3-2-3-2 Halftone brush

Let text to appear halftone special effect.

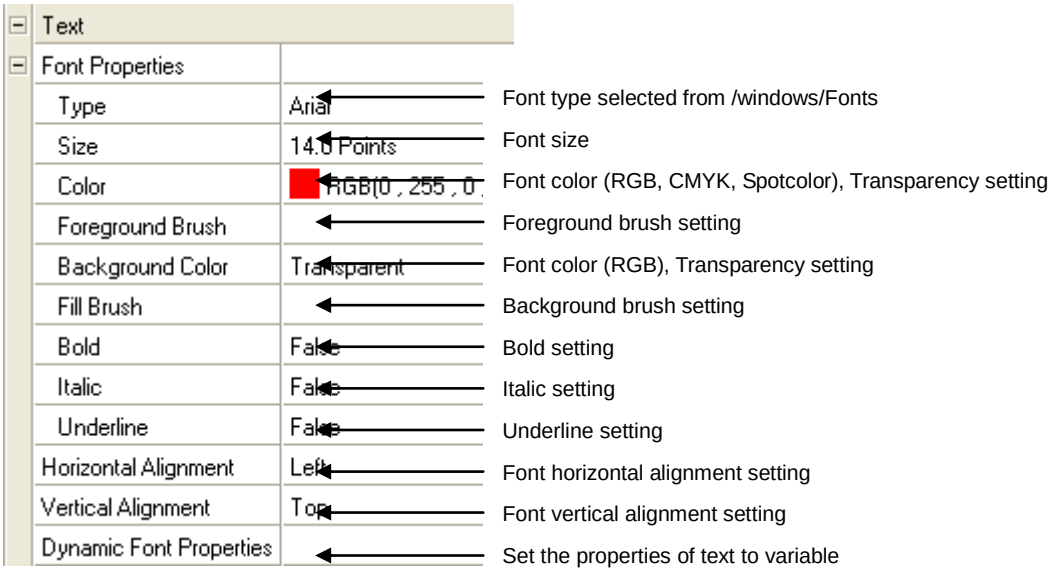


4-3-2-3-3 Image brush

Customize the appearance of text, box or border by image brush setting, which have 5 kinds of layout, these are: Tile, Tile Flip X, Tile Flip Y, Tile Flip XY, Clamp


Brush Page
Hatch Brush
Halftone Brush
Image Brush
Image Path:
C:\Merge4Print\Demo\Haiyaatech\picturesingle.jpg
Layout:
Tile
Tile
Tile Flip X
Tile Flip Y
Tile Flip XY
Clamp
Select Image
OK
Close
Delete

4-3-3 Font properties

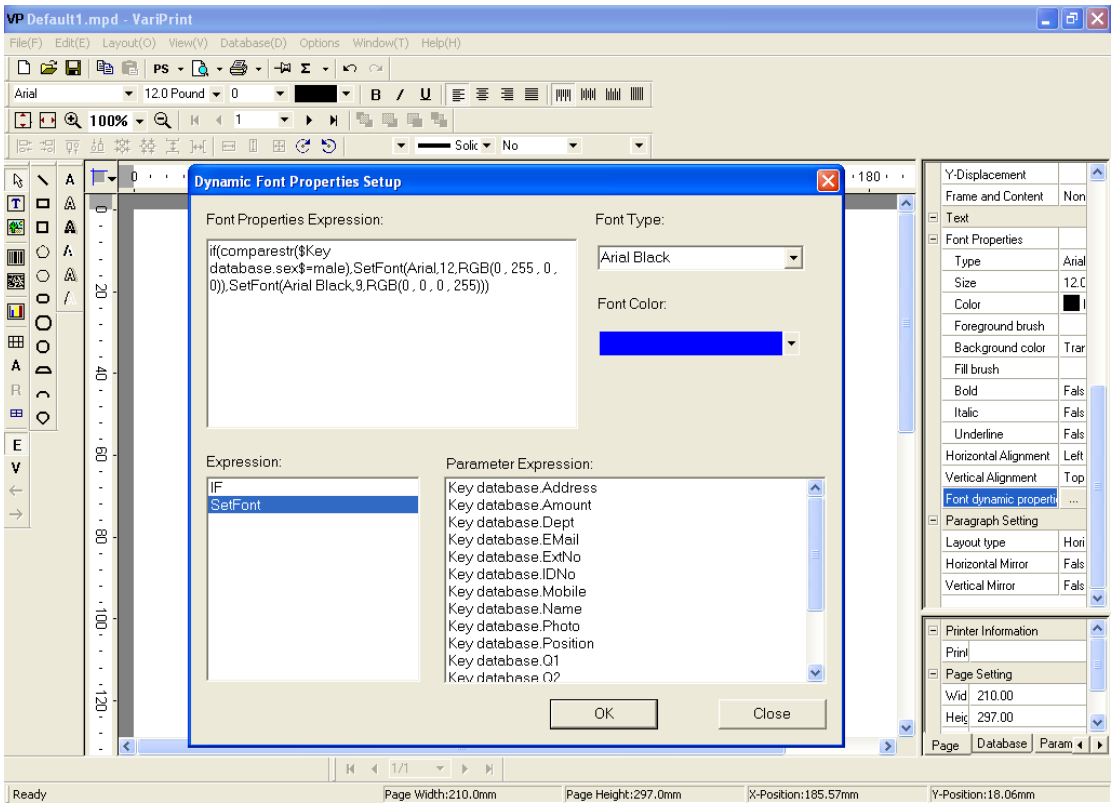


Note: Font dynamic properties setup is used to specify the variable text's display properties according to some preset rule.
For example, if you want to display the variable text according to the rule as follows, setup Font dynamic properties using parameters. Criteria: If sex is male, display the variable text in Arial,12 pounds, red color, if sex is not male, display the variable text in Arial black,9 pounds, blue color
The expression should be: if(comparestr($Key database.sex$=male),SetFont(Arial,12,RGB(0 , 255 , 0 , 0)),SetFont(Arial Black,9,RGB(0 , 0 , 0 , 255)))

Some useful parameters about dynamic text properties are as follows,

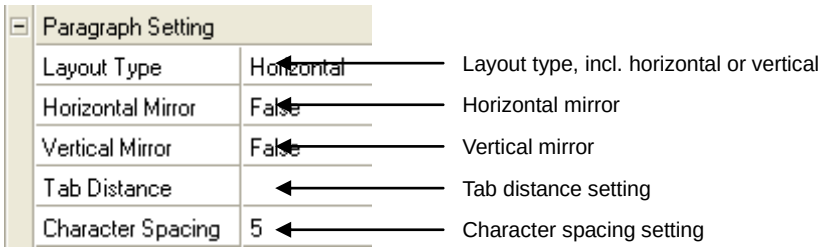
1) SetFont(Font type,Font size,Font color), used to set dynamic font type, font size and font color.
2) SetTextAlign(H-ALIGN,V-ALIGN), used to set dynamic text alignment
3) IsPrintComplete(), used to allow you to set font size or do other logic process based on the variable text can be fully printed or not in a preset size box. 1=can be fully printed, 0=can't be fully printed. It is another method to control the relationship of frame and content.

Notes:
All parameters in the parameter setup window can be imported to set dynamic font properties addition to above parameters and IF function. Switch function is also often used.



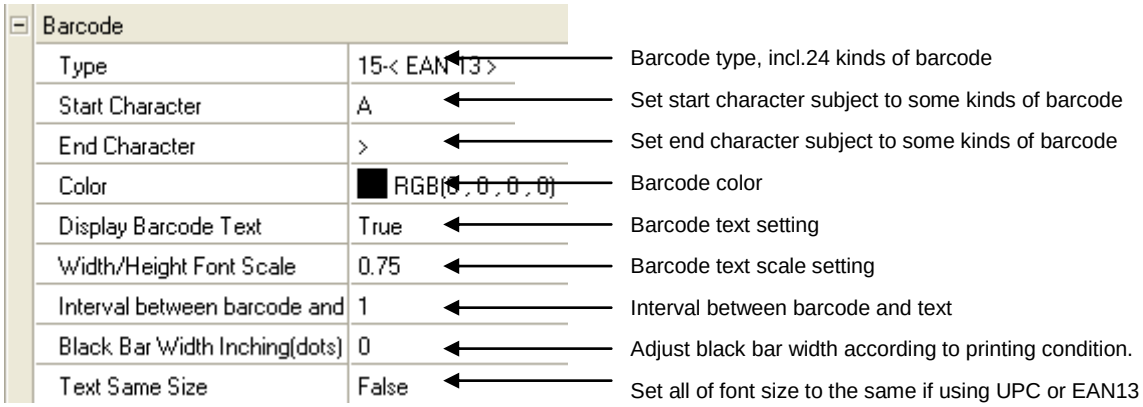
4-3-4 Paragraph properties

Basic setting refers to 4-3-1, 4-3-2, 4-3-3



4-3-5 Barcode properties

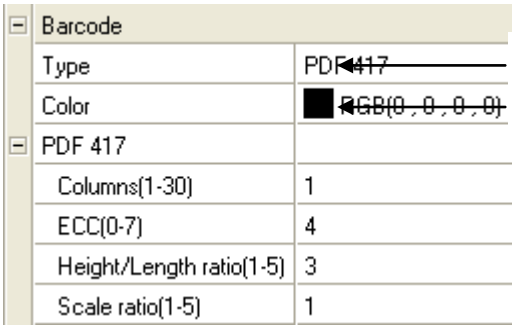
Basic setting refers to 4-3-1, 4-3-2 and 4-3-3



4-3-5-1 Types of one-dimensional barcode

- 2 of 5 Interleaved: Used in warehouse, industrial applications
- 2 of 5 Industrial: Used in airline ticket marking, photofinishing
- Matrix Europe: Support only Arabic number, self-encoding.
- Code 3 of 9: U.S. Government and military use, required for DoD applications.
- Code 3 of 9 EXT: supports all ASCII 128 characters by using double character encoding.
- Code 128A\B\C: Very dense code, used extensively worldwide
- Code 9 of 3: Compressed form of Code 39
- Code 9 of 3 EXT: Identical to Code 3 of 9 EXT except that Code 93 uses its four specialized shift characters ($), (/), (%), and (+) to shift to Full ASCII mode instead of Code 39 which issues the $, /, %, and + characters.
- MSI Plessey: Variation of Plessey code, with similar applications
- US PostNet(Zip,Zip+4,DPBC): Printed by U.S. Post Office on envelopes
- Codebar(A,B,C,D): Used in libraries and blood banks
- EAN 8: Short version of EAN-13, 8 characters
- EAN 13: Used with consumer products internationally, 13 characters
- UPC A: Used with consumer products in U.S., 12 characters.
- UPC E0: Short version of UPC symbol, 6 characters
- UPC E1: Short version of UPC symbol, 6 characters
- UPC/EAN EXT2: Used to indicate magazines and newspaper issue numbers
- UPC/EAN EXT5：Used to mark suggested retail price of books
- EAN 128A\B\C: Used to encode shipping/product information
- ISBN Bookland: Used to mark books with ISBN number

4-3-5-2 Types of two-dimensional barcode



Two-dimensional barcode, incl. PDF417, QR-Code, Data Matrix

Properties setting of two-dimensional barcode

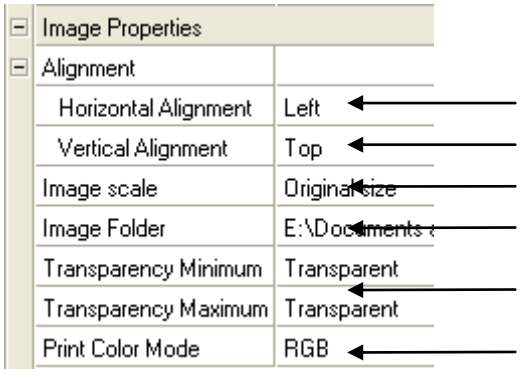
- PDF417 is a stacked barcode symbology capable of encoding over a kilobyte of data in a symbol. PDF417 may include extensive error-correction enabling data to be recovered from a symbol, which has been damaged or corrupted.
- QR Code is a matrix symbology consisting of a square array of modules with a finder pattern located at three corners. A wide range of symbol sizes is supported along with four levels of error correction, and the symbology is noted for its high data density.

- DataMatrix is a two-dimensional matrix symbology, which is made up of square modules arranged within a finder pattern. DataMatrix symbols may be square or rectangular.

4-3-6 Variable image properties

Basic setting refers to 4-3-1, 4-3-2, 4-3-3

The image file formats that VariPrint support are JPG, TIFF, GIF, BMP and PDF vector format



Horizontal alignment, left, centered, right

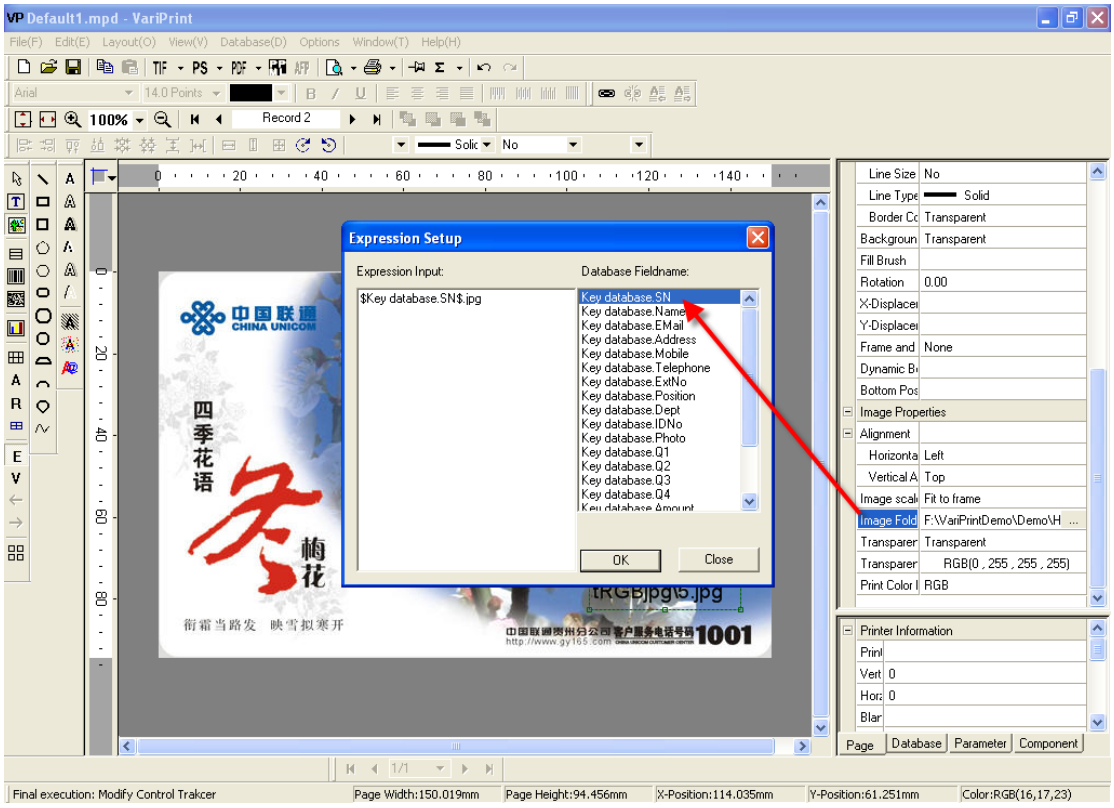
Vertical alignment, top, centered, bottom

Image scale: Original size, fit to frame, crop to frame

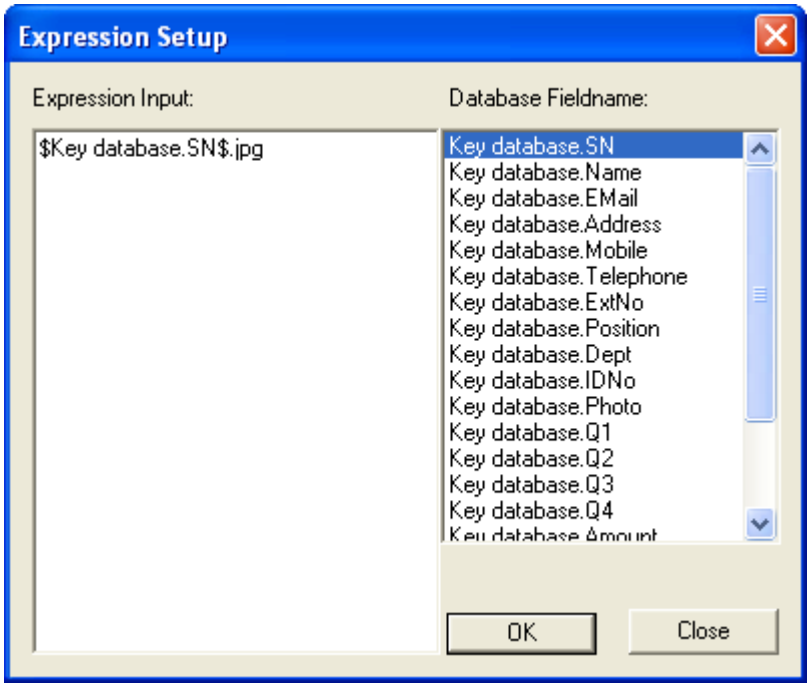
Set the folder path where images place

Set the transparency scope, it is used to set minimum and maximum value to get mask effect.

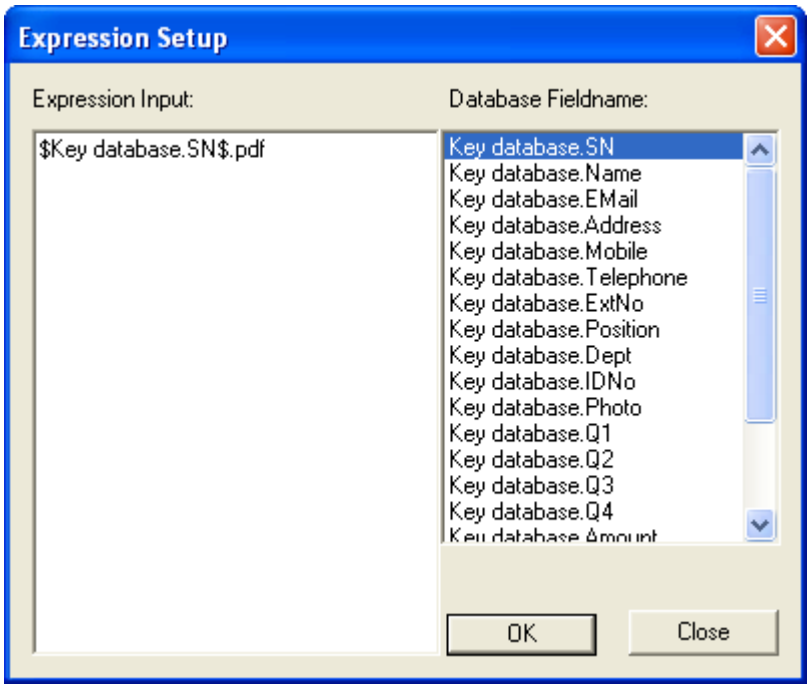
Set printing mode to the image box, RGB or CMYK



At first, go to the image folder placing image files under Image Properties, and then select a fieldname in the image Expression Setup window, which titling image name. At last, don't forget to add a suffix, such as .jpg, .tif, .pdf



If the image is PDF vector image, set up as follows.



Note: Mask effect of variable image

VariPrint supports variable image mask effect through Transparency Minimum and Transparency Maximum setup. Before setup, you should process the images and set background to a certain color, usually to White color.

None mask effect:

Mask effect:

Transparency is set as follows:

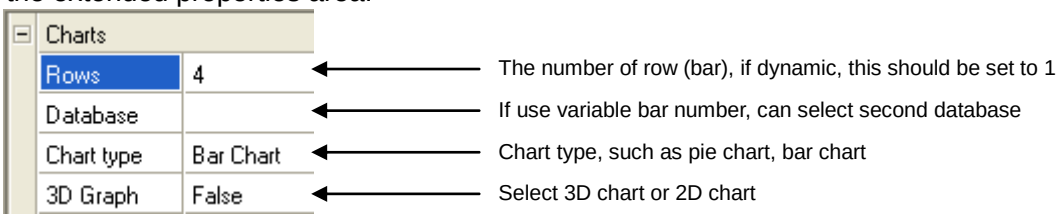
Transparency Minimum	RGB(100 , 255 , 251 , 240)
Transparency Maximum	RGB(100 , 255 , 255 , 255)

Above setting is regarding to white background. If the background is not white, please us eyedropper to get the RGB value at first, get minimum and maximum value of every R, G, B, then input them in the Transparency Minimum and Transparency Maximum. In order to get better result, it is the most important to keep the background of every picture at somewhat same color value, otherwise, if the color range is larger, mask effect will not be good.

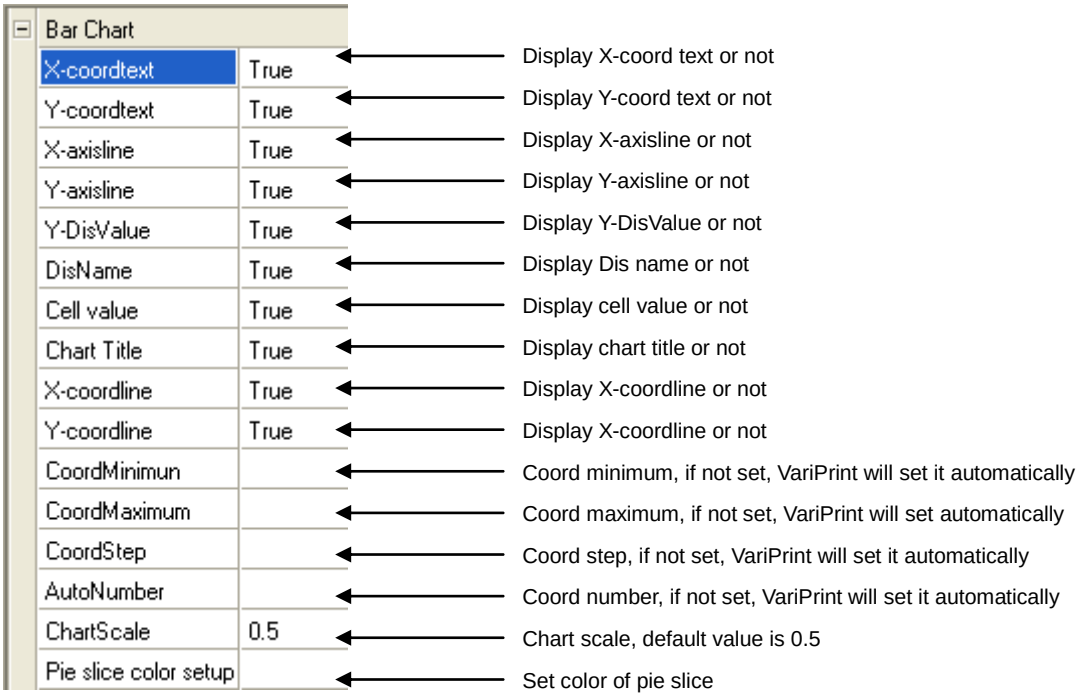
4-3-7 Variable chart properties

Basic setting refers to 4-3-1, 4-3-2, 4-3-3

In the extended properties area:



After row number set, click the object, then set chart properties.

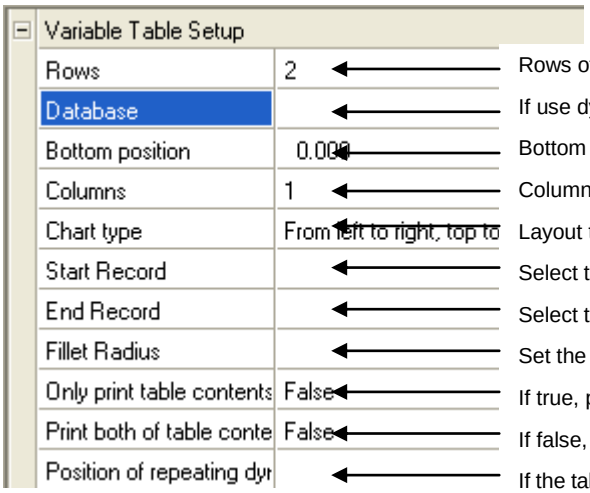


4-3-8 Variable table properties

Basic setting refers to 4-3-1, 4-3-2, 4-3-3

In the extended properties area:

Component:



Rows of table

If use dynamic table, select second database

Bottom position of dynamic table, if contents exceed, go to next page

Columns of table contents, if more than 1, layout according to Layout Type

Layout type

Select the start record for this table

Select the last record for this table

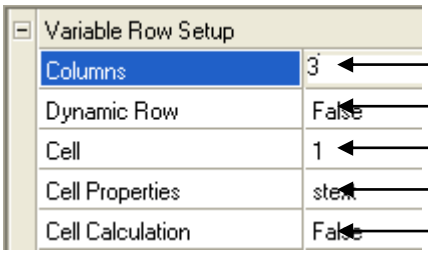
Set the fillet radius value

If true, print table contents only, if false, print both table and other objects

If false, print table contents only, if true, print both table and other objects

If the table will be repeated somewhere on the page, input x, y position value

Parameter:



Columns of table

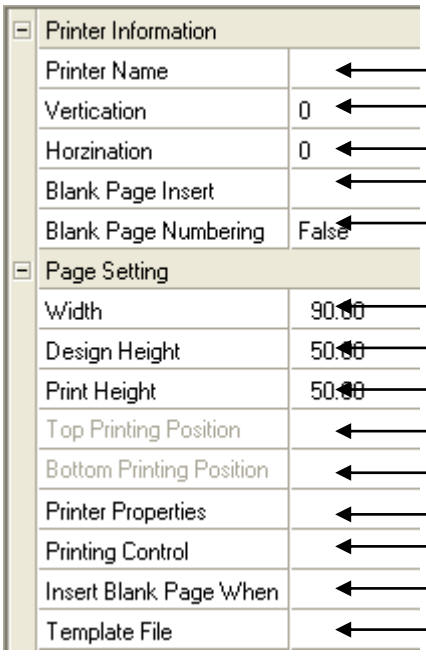
If true, the row is dynamic, if false, the row is static

Cell number

Cell properties, incl. static text, paragraph, image and barcode

Do calculation to the cell content or not

Printer and Page:



Select printer. When select a PS driver, then print to PS file.

Adjust vertical printing offset

Adjust horizontal printing offset

Set blank pages to insert, e.g. 1/100, 2/150

Control the blank pages inserted to be page numbering or not

Display paper size setting

Display paper size setting

Display paper size setting

Top printing position value

Bottom printing position value

Select paper tray and other properties related to different template

Set printing control rule

Insert blank page when odd page, used in insurance document

Insert other template files when printing, used in insurance document

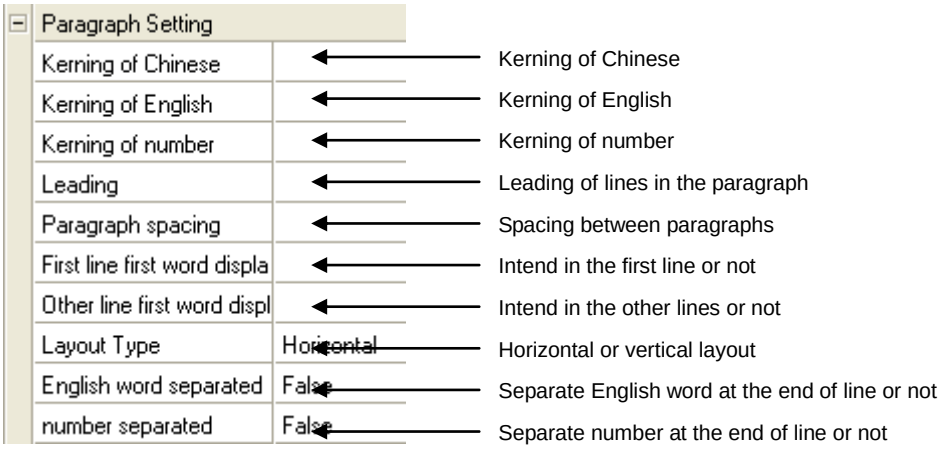
Printer Properties Printer Properties is used to select printing properties regarding to different templates when a printed document which is consisted of different papers and printing mode, such insurance document, 1-side or 2-side printing.

For example, the cover use paper#1 from Tray#1, the contents use paper#2 from Tray #2. At first, you create two pages (or templates) for this job. Template#1 is used to produce the cover, Template#2 is used to produce the contents. After layout, go to template#1 through Record bar, go to Printer Properties to select Tray #1 in the Paper Source, go to template#2 through Record bar, go to Printer Properties to select Tray #2 in the Paper Source. This setup will print the documents on the papers from different paper trays automatically on the fly. The method of selecting 1-side or 2-side printing is the same.

Printing Control Printing Control is used to preset rule which the document is printed.

4-3-9 Variable paragraph properties

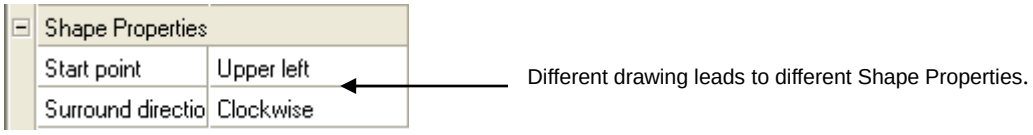
Basic setting refers to 4-3-1, 4-3-2 and 4-3-3. If use Advanced Variable Text tool, paragraph setting have more contents as follows.



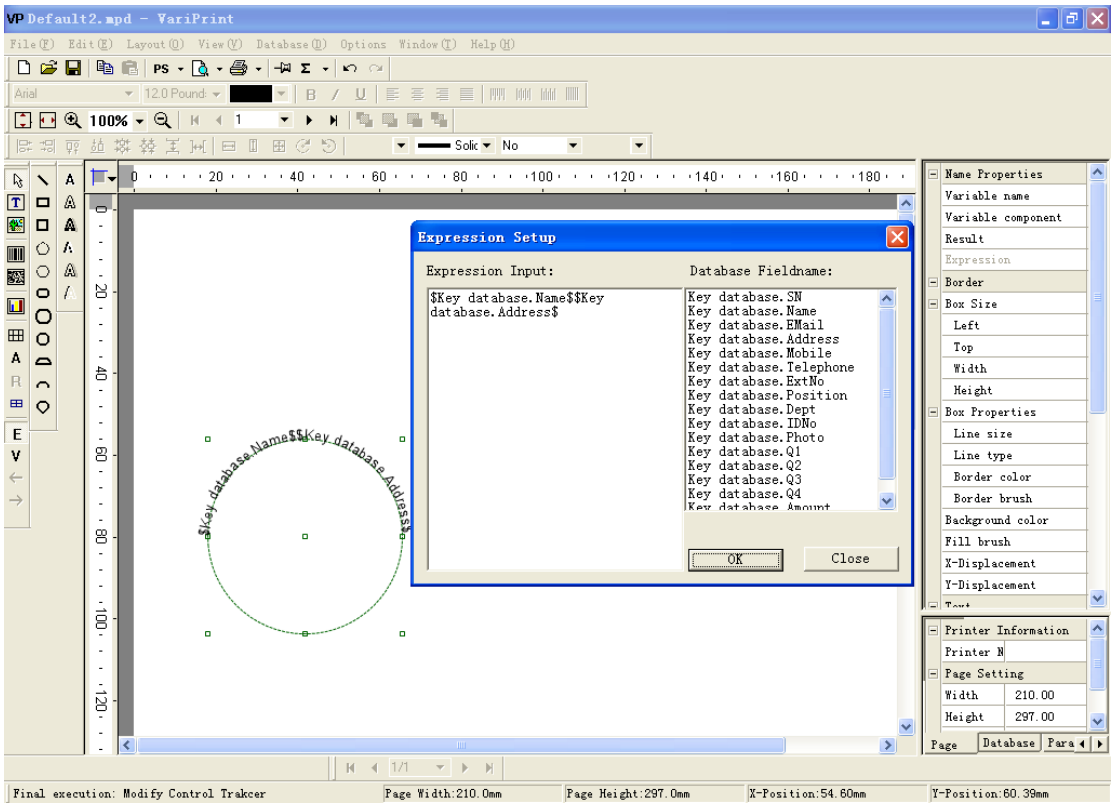
4-3-10 Mini variable table properties

Identical to 4-3-8 Variable table properties, the difference is Mini variable table can set two rows of dynamic row. That means not only table contents but also table title is variable. Instead, Variable table tool just supports one row variable, which means Variable table tool is only used to produce contents variable while title is static.

4-3-11 Path tools properties

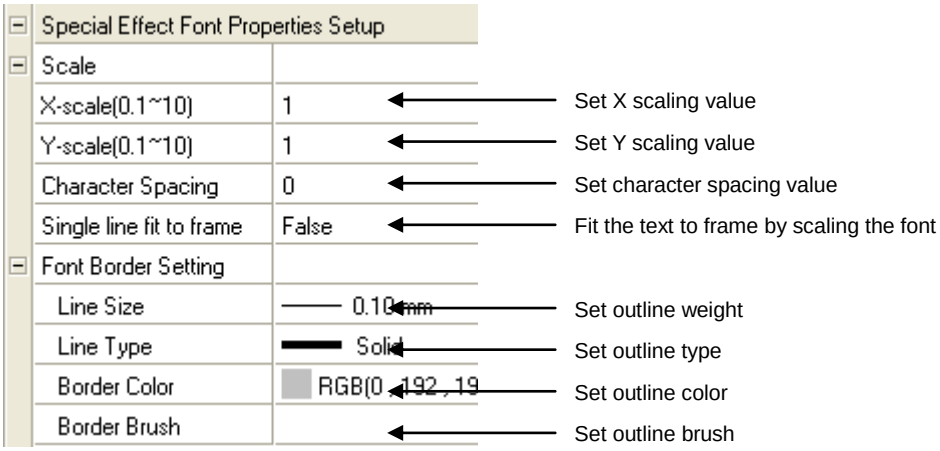


Using path tools and variable text, you can layout variables across the path.



4-3-12 3D text properties

Regarding to different kinds of 3D font, the setting is different. For example, Outline Fill Font setting is as follows, X/Y scale is used to set flat effect of text.

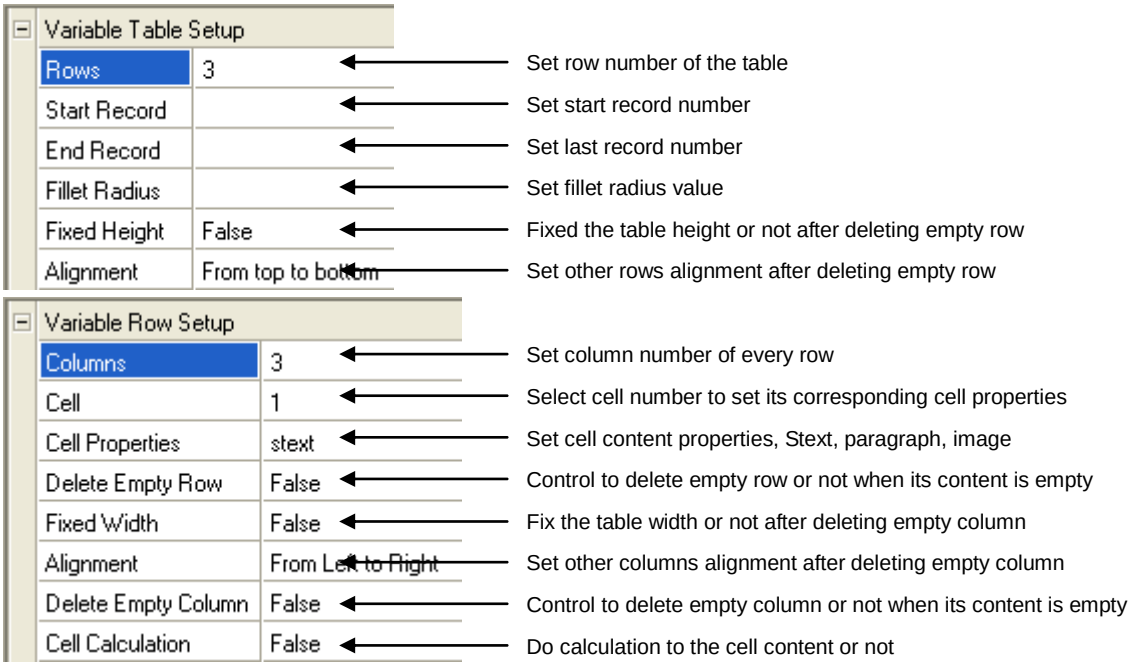


Notes:

Outline Fill Font setting is very important to allow you to match the variable text font style with the one the customer provides. For example, you can change X/Y scale value to scale the font; you can change Line Size by the grade of 0.01mm to add font weight smoothly. If hope popular text instead of 3D text has flat effect, you can also set Line Size to No or set Border Color to the same color as the font, such as pure black.

4-3-13 General Table

General Table allows you to set and layout variables accurately, freely and conveniently through emulating Excel table. It is often used in cloth label production since it has unique blank row or blank column process logic.



4-3-14 Variable RTF

Variable RTF allows you to import RTF file edited by Microsoft Word. You can insert variables, e.g. $Key database.name$, $Parameter.logicname$ into the RTF file in advance. It will make full use of the professional layout capabilities that MS Word provides and let the variable text layout in the VariPrint to be more professional.

Notes: All of text properties use the setting in the MS Word. VariPrint can't change them.

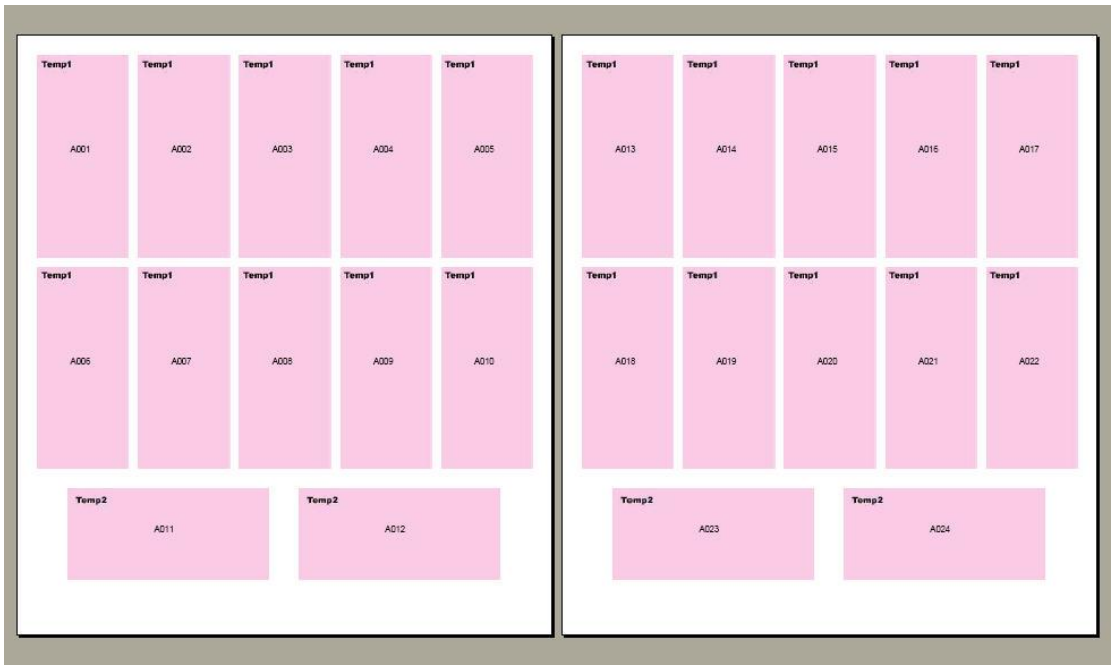
How to import variable RTF file?

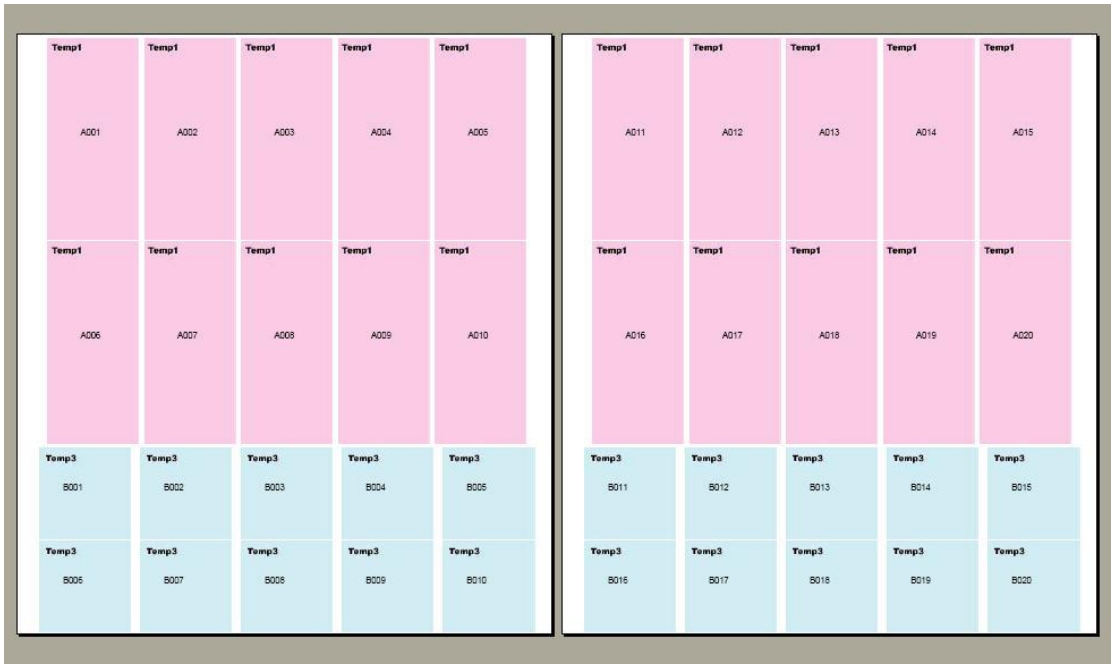
Create a box by Variable RTF, double click to go to the expression window, write the path and filename of the RTF file imported in the left.

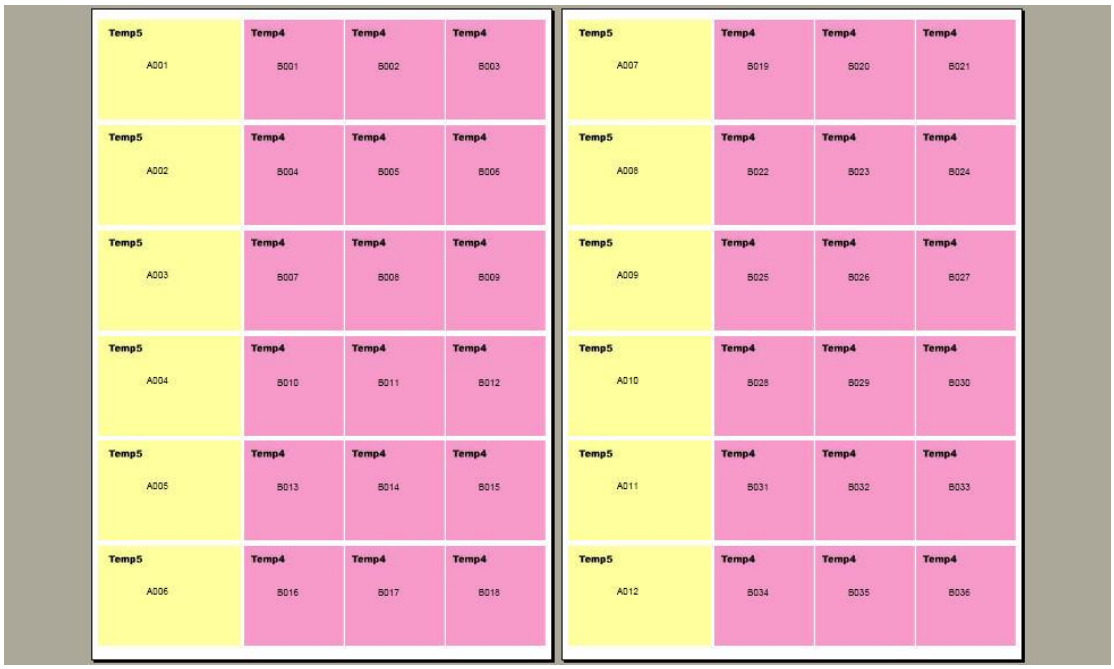
4-3-15 Flat Design

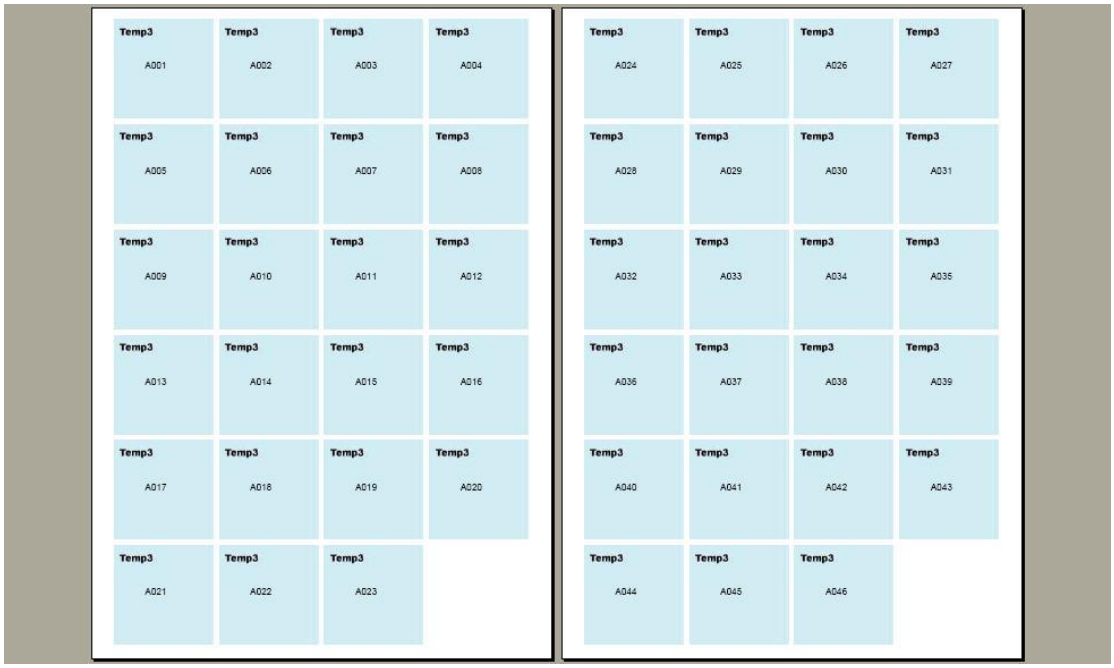
Flat Design allow you to browse the imposition layout and design notes on the imposition page. Furthermore, this function allows you do free style imposition.

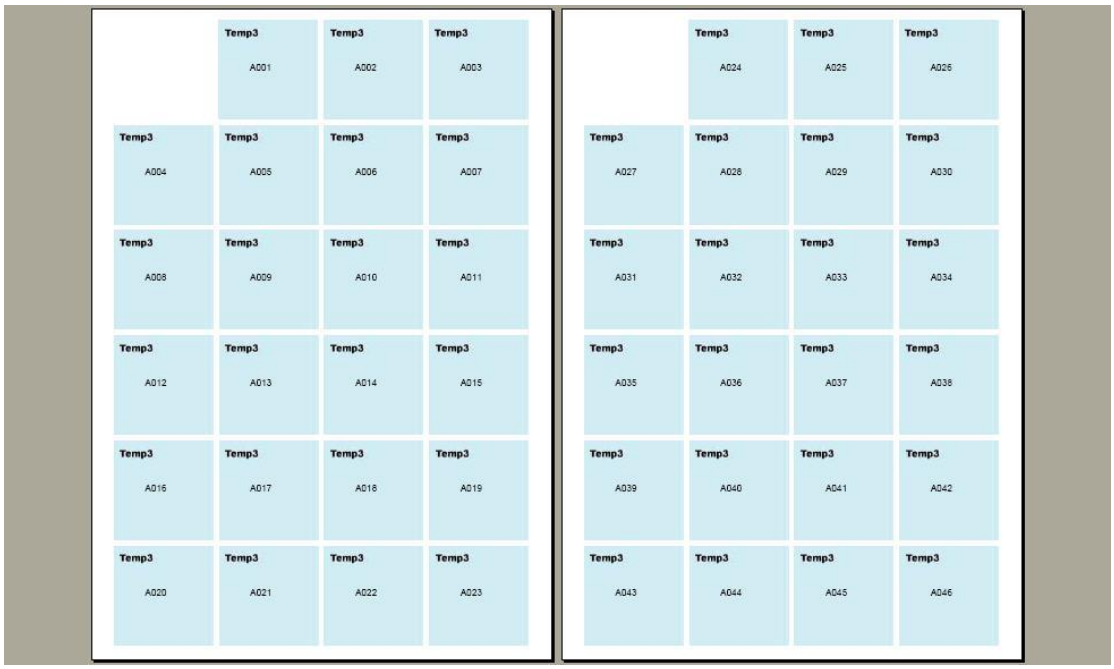
Below are some examples of free style imposition.


Temp1 A001
Temp1 A002
Temp1 A003
Temp1 A004
Temp1 A005
Temp1 A006
Temp1 A007
Temp1 A008
Temp1 A009
Temp1 A010
Temp2 A011
Temp2 A012
Temp1 A013
Temp1 A014
Temp1 A015
Temp1 A016
Temp1 A017
Temp1 A018
Temp1 A019
Temp1 A020
Temp1 A021
Temp1 A022
Temp2 A023
Temp2 A024

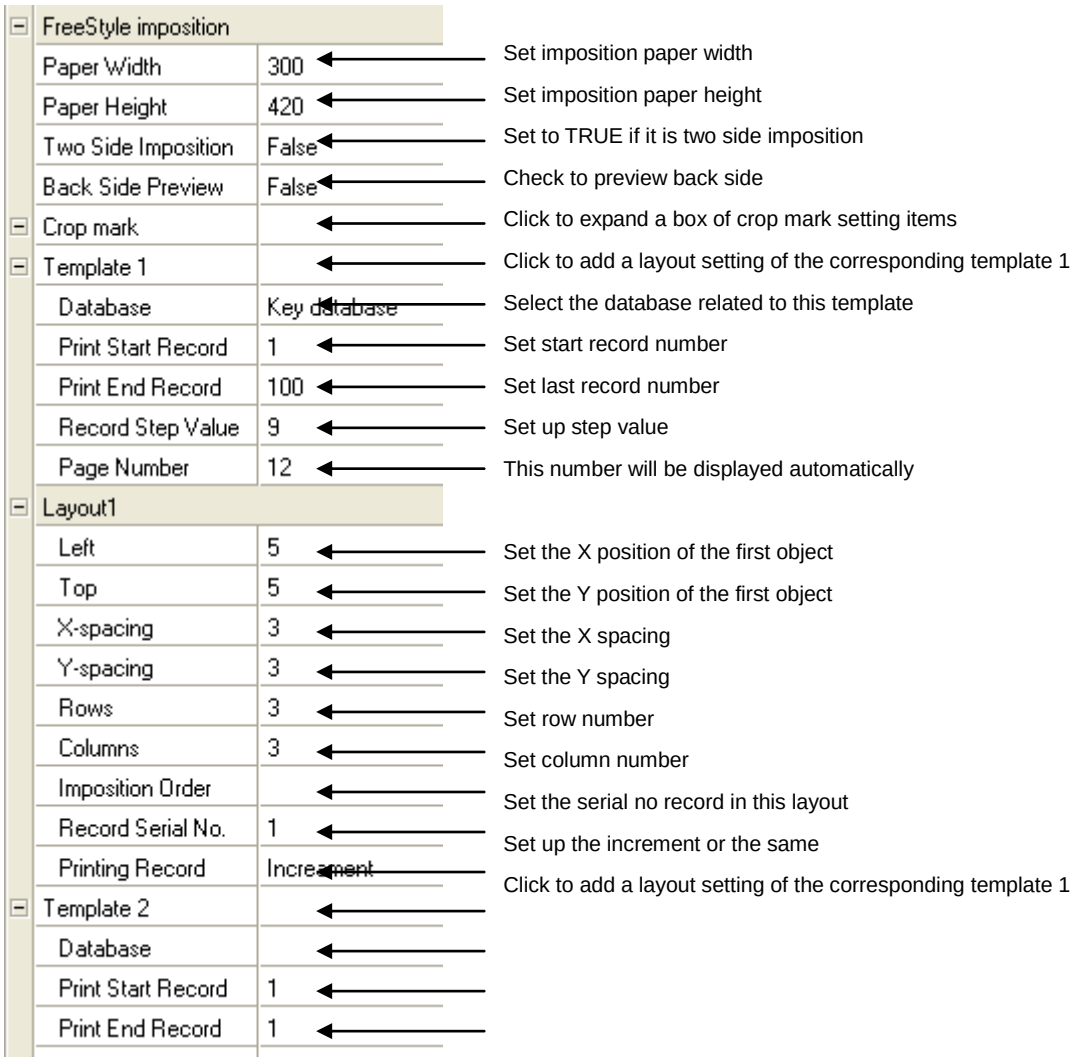

Temp1 A001
Temp1 A002
Temp1 A003
Temp1 A004
Temp1 A005
Temp1 A006
Temp1 A007
Temp1 A008
Temp1 A009
Temp1 A010
Temp3 B001
Temp3 B002
Temp3 B003
Temp3 B004
Temp3 B005
Temp3 B006
Temp3 B007
Temp3 B008
Temp3 B009
Temp3 B010
Temp1 A011
Temp1 A012
Temp1 A013
Temp1 A014
Temp1 A015
Temp1 A016
Temp1 A017
Temp1 A018
Temp1 A019
Temp1 A020
Temp3 B011
Temp3 B012
Temp3 B013
Temp3 B014
Temp3 B015
Temp3 B016
Temp3 B017
Temp3 B018
Temp3 B019
Temp3 B020


Temp5 A001
Temp4 B001
Temp4 B002
Temp4 B003
Temp5 A002
Temp4 B004
Temp4 B005
Temp4 B006
Temp5 A003
Temp4 B007
Temp4 B008
Temp4 B009
Temp5 A004
Temp4 B010
Temp4 B011
Temp4 B012
Temp5 A005
Temp4 B013
Temp4 B014
Temp4 B015
Temp5 A006
Temp4 B016
Temp4 B017
Temp4 B018
Temp5 A007
Temp4 B019
Temp4 B020
Temp4 B021
Temp5 A008
Temp4 B022
Temp4 B023
Temp4 B024
Temp5 A009
Temp4 B025
Temp4 B026
Temp4 B027
Temp5 A010
Temp4 B028
Temp4 B029
Temp4 B030
Temp5 A011
Temp4 B031
Temp4 B032
Temp4 B033
Temp5 A012
Temp4 B034
Temp4 B035
Temp4 B036


Temp3 A001
Temp3 A002
Temp3 A003
Temp3 A004
Temp3 A005
Temp3 A006
Temp3 A007
Temp3 A008
Temp3 A009
Temp3 A010
Temp3 A011
Temp3 A012
Temp3 A013
Temp3 A014
Temp3 A015
Temp3 A016
Temp3 A017
Temp3 A018
Temp3 A019
Temp3 A020
Temp3 A021
Temp3 A022
Temp3 A023
Temp3 A024
Temp3 A025
Temp3 A026
Temp3 A027
Temp3 A028
Temp3 A029
Temp3 A030
Temp3 A031
Temp3 A032
Temp3 A033
Temp3 A034
Temp3 A035
Temp3 A036
Temp3 A037
Temp3 A038
Temp3 A039
Temp3 A040
Temp3 A041
Temp3 A042
Temp3 A043
Temp3 A044
Temp3 A045
Temp3 A046

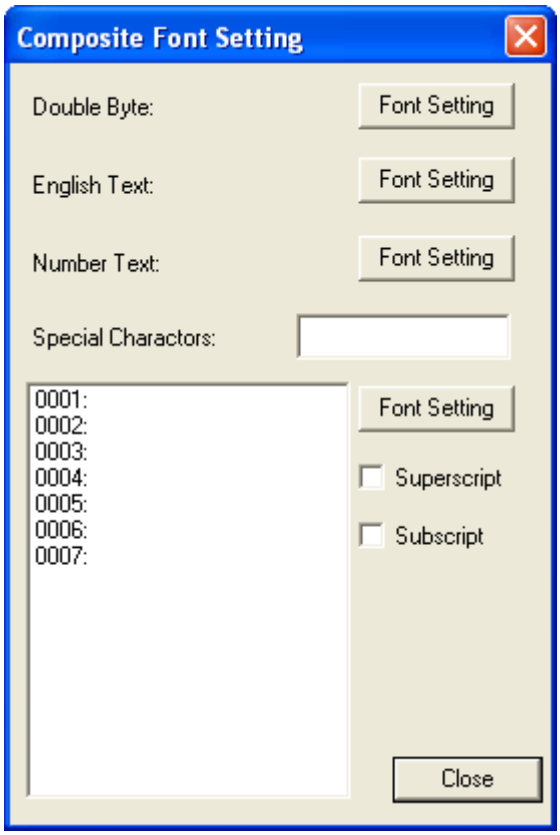

Temp3 A001
Temp3 A002
Temp3 A003
Temp3 A004
Temp3 A005
Temp3 A006
Temp3 A007
Temp3 A008
Temp3 A009
Temp3 A010
Temp3 A011
Temp3 A012
Temp3 A013
Temp3 A014
Temp3 A015
Temp3 A016
Temp3 A017
Temp3 A018
Temp3 A019
Temp3 A020
Temp3 A021
Temp3 A022
Temp3 A023
Temp3 A024
Temp3 A025
Temp3 A026
Temp3 A027
Temp3 A028
Temp3 A029
Temp3 A030
Temp3 A031
Temp3 A032
Temp3 A033
Temp3 A034
Temp3 A035
Temp3 A036
Temp3 A037
Temp3 A038
Temp3 A039
Temp3 A040
Temp3 A041
Temp3 A042
Temp3 A043
Temp3 A044
Temp3 A045
Temp3 A046


Temp3 A001
Temp3 A007
Temp4 B004
Temp3 A002
Temp3 A008
Temp4 B005
Temp3 A003
Temp3 A009
Temp4 B006
Temp3 A004
Temp4 B001
Temp4 B007
Temp3 A005
Temp4 B002
Temp4 B008
Temp3 A006
Temp4 B003
Temp4 B009
Temp3 A010
Temp3 A016
Temp4 B013
Temp3 A011
Temp3 A017
Temp4 B014
Temp3 A012
Temp3 A018
Temp4 B015
Temp3 A013
Temp4 B010
Temp4 B016
Temp3 A014
Temp4 B011
Temp4 B017
Temp3 A015
Temp4 B012
Temp4 B018



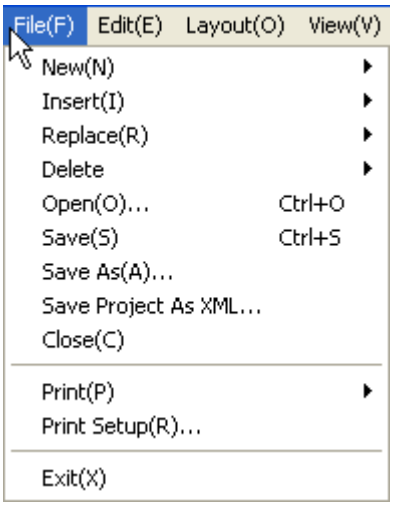
4-3-16 Composite Font

Composite Font allows you to set composite font to the variable text.


Composite Font Setting
Double Byte:
Font Setting
English Text:
Font Setting
Number Text:
Font Setting
Special Charactors:
0001:
0002:
0003:
0004:
0005:
0006:
0007:
Font Setting
Superscript
Subscript
Close

4-4 Menu Description

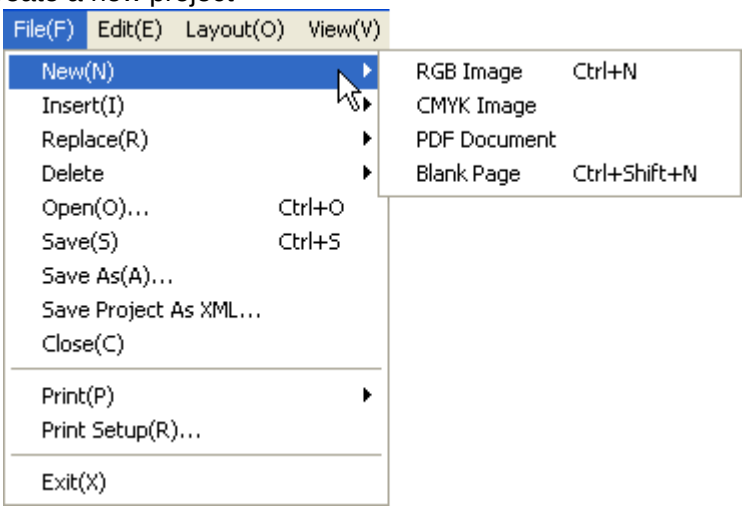
4-4-1 File menu



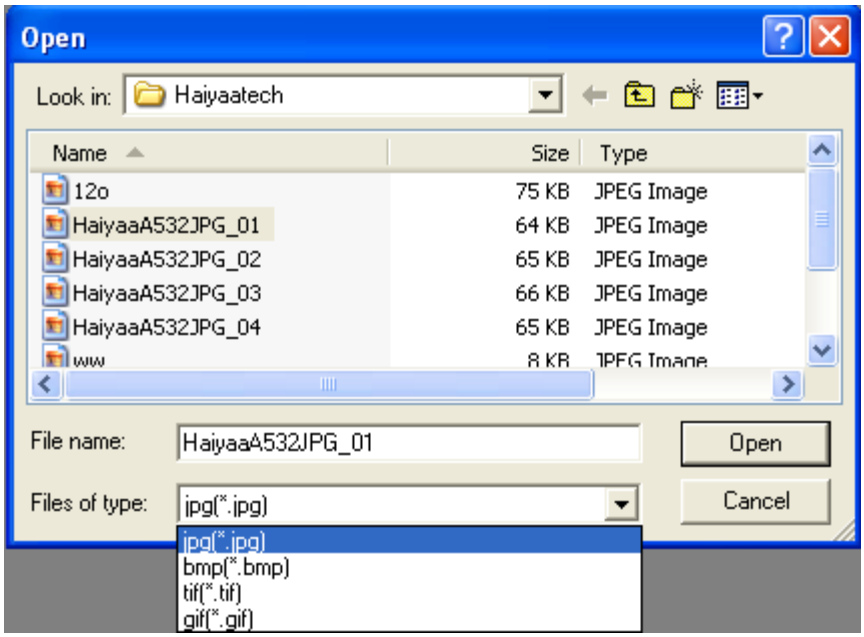
Insert: Insert a new template
Replace: replace the template
Save Project As XML: Output an XML description file along with project itself.

4-4-1-1 New

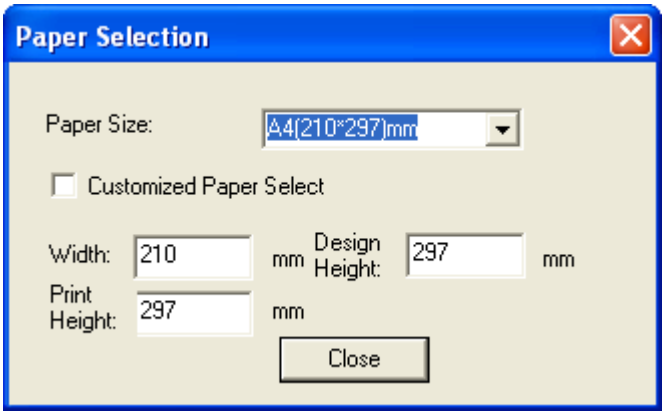
Create a new project



RGB Image: select TIF, JPG, BMP, GIF file at RGB format as template.
CMYK Image: select TIF, JPG, BMP, GIF file at CMYK format as template.
PDF Document: select PDF document as template. The PDF file can be single page or multi pages. If multi pages, that means import multi templates one time.



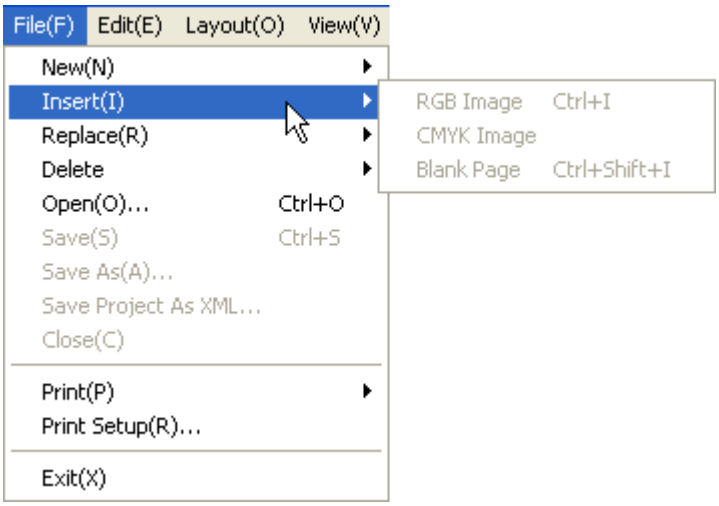
Blank Page: select blank page as template.



Generally there are Width and Print Height. If it is VariPrint Statement version, Design Height will appear. Design Height is always larger than the Print Height.

4-4-1-2 Insert

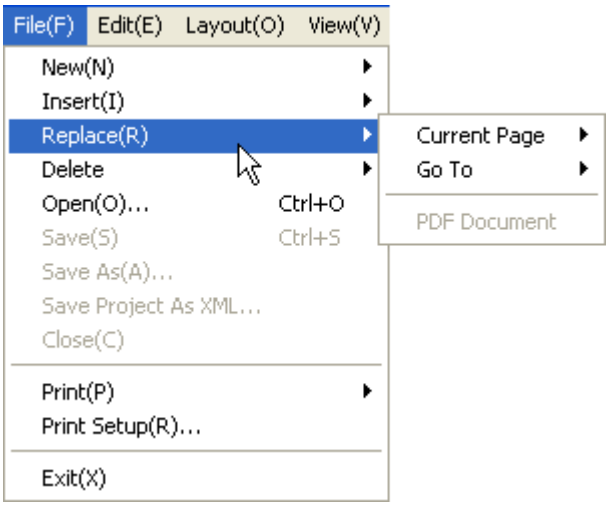
Insert a template into the current project. Don't support PDF document insert. If you want a multi page PDF template, prepare a multi page PDF document and import it when **New** a project.



RGB Image: select TIF, JPG, BMP, GIF file at RGB format as template.
CMYK Image: select TIF, JPG, BMP, GIF file at CMYK format as template.
Blank Page: select blank page as template.

4-4-1-3 Replace

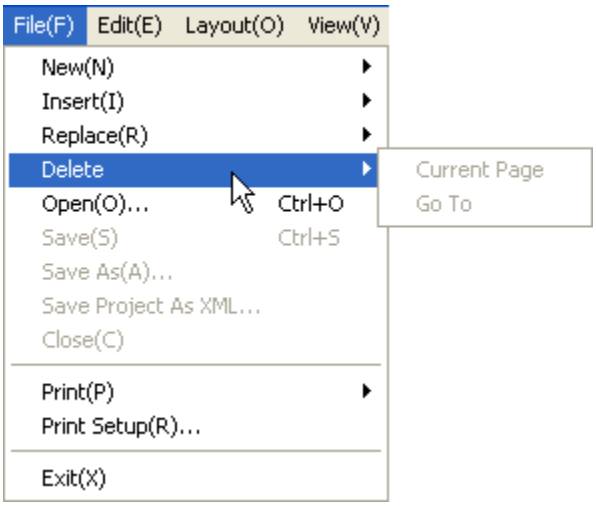
Replace the template in the current project.



If the previous template is PDF file, the replace file must be PDF document.

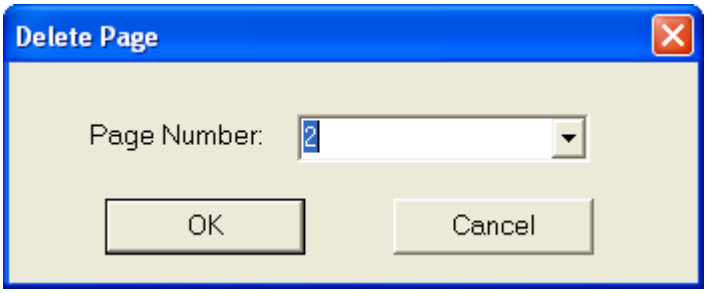
4-3-1-4 Delete

Delete the template in the current project.



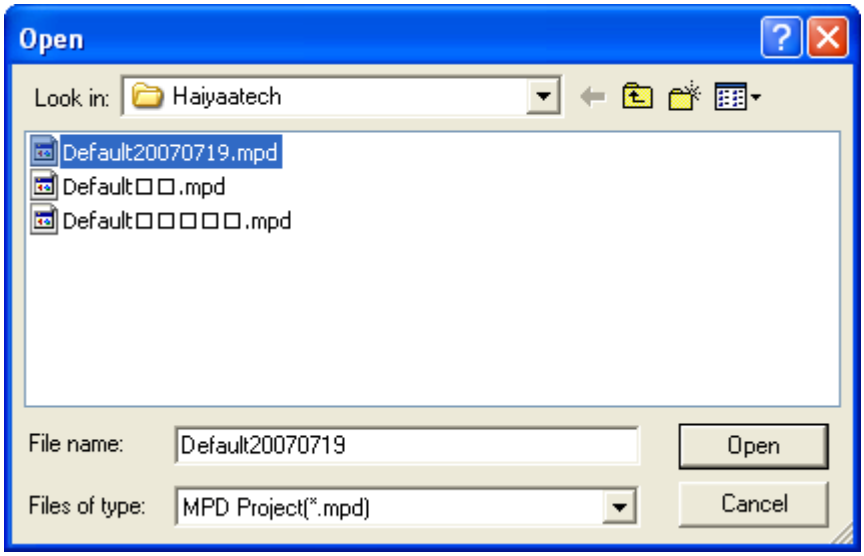
Current Page: Delete current template page.

Go To: Delete the selected template page.



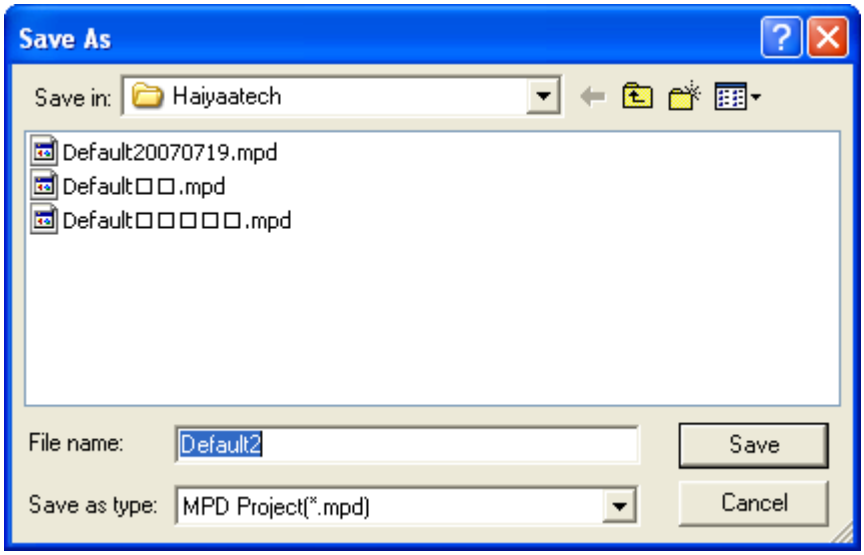
4-4-1-5 Open

Open an existing project



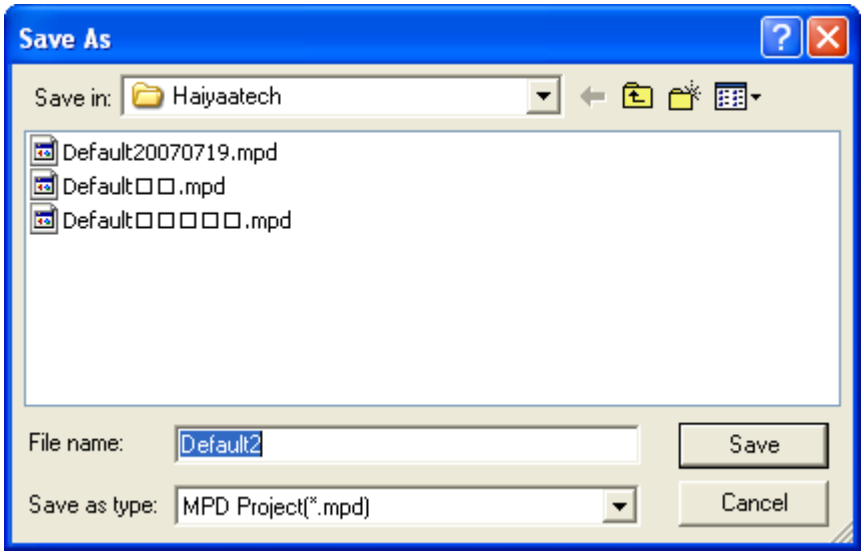
4-4-1-6 Save

Save a project



4-4-1-7 Save as

Save a copy of project



4-4-1-8 Save Project As XML

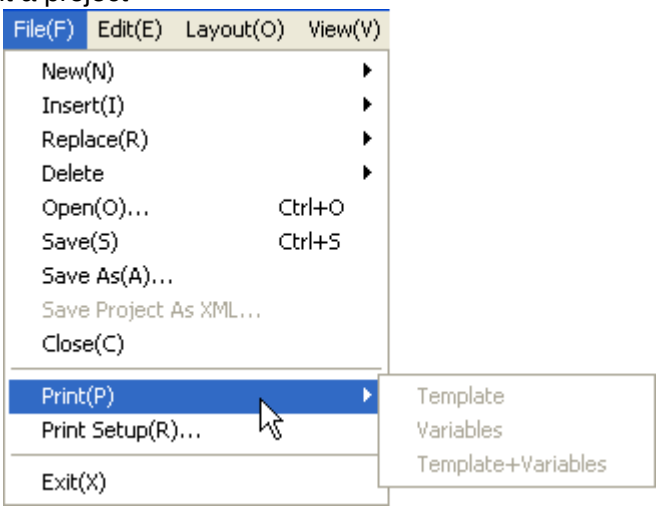
Save a copy of project along with an XML description file. This save function is for work with third party imposition application using XML as a bridge.

4-4-1-9 Close

Close the current project.

4-3-1-10 Print

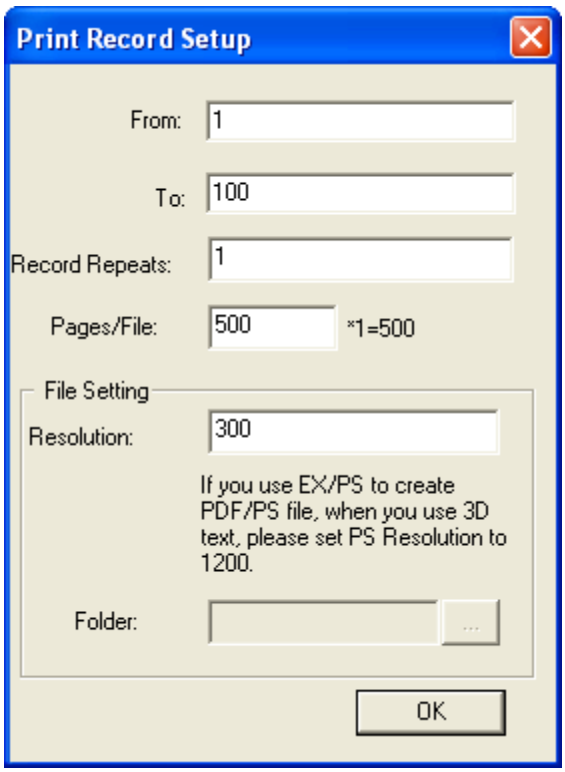
Print a project



Template: print template only
Variables: print variables only
Template+Variables: print template plus variables

Notes:
If the template file is PDF, this Print option here is invalid in printing template plus variables. Please go to above PDF button to do such printing.

Setting in **Print Record Setup** Refers to 4-2-1 Tools bar



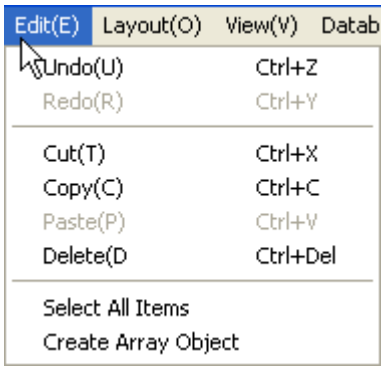
4-4-1-10 Print setup

Setup printer properties.

4-4-1-11 Exit

Quits VariPrint

4-4-2 Edit menu



4-4-2-1 Undo

Undoes the last action

4-4-2-2 Redo

Redoes the previous undone action

4-4-2-3 Cut

Cut the selection and put it on the clip board

4-3-2-4 Copy

Copy the selection and put it on the clipboard

4-4-2-5 Paste

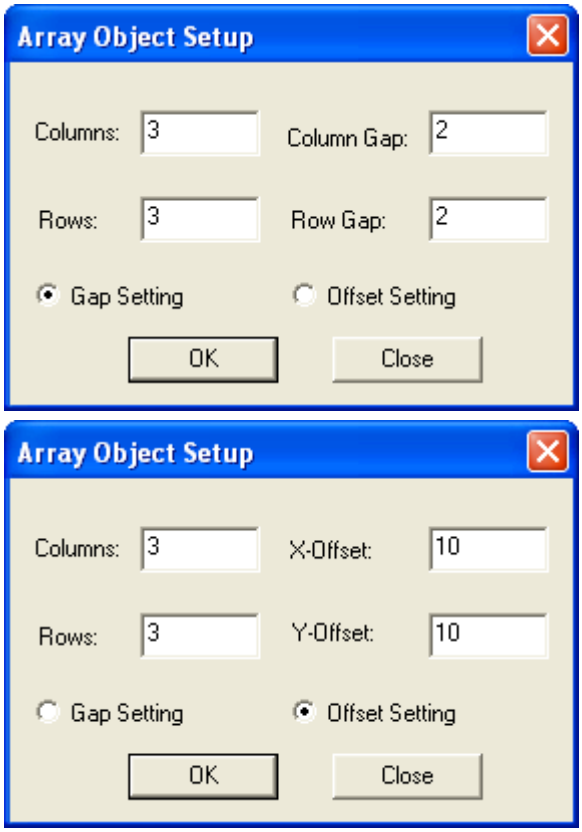
Paste the clipboard contents

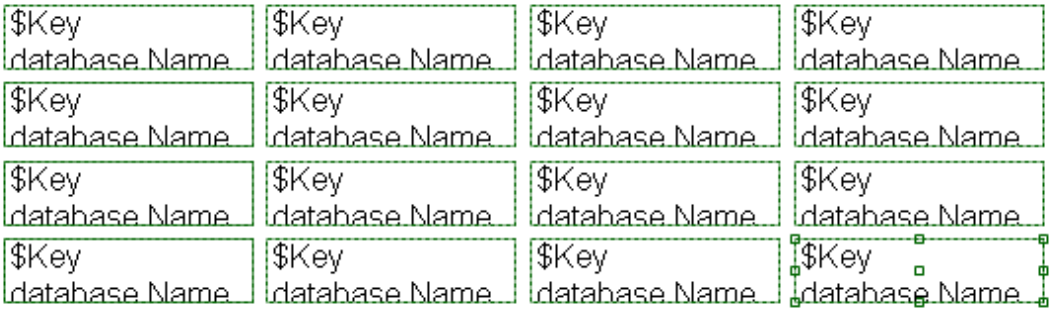
4-4-2-6 Select all items

Select all items

4-4-2-7 Create array object

Layout the selection according to array setting, that can create variable objects in accurate position very fast.





There are two spacing setting options when set array object.
Gap Setting: set the gap spacing between every array object.
Offset Setting: set the offset spacing between every array object.

4-4-3 Layout menu

4-4-3-1 Left

All selected objects align left according the first selected object.

4-4-3-2 Right

All selected objects align right according the first selected object.

4-4-3-3 Top

All selected objects align top according the first selected object.

4-4-3-4 Bottom

All selected objects align bottom according the first selected object.

4-4-3-5 Vertical center

All selected objects align vertical center according the first selected object.

4-4-3-6 Horizontal center

All selected objects align horizontal center according the first selected object.

4-4-3-7 Same height

All selected objects are same height as the first selected object.

4-4-3-8 Same width

All selected objects are same width as the first selected object.

4-4-3-9 Same size

All selected objects are same size as the first selected object.

4-4-3-10 Move left

The selected objects move left.

4-4-3-11 Move right

The selected objects move right.

4-4-3-12 Move up

The selected objects move up.

4-4-3-13 Move down

The selected objects move down.

4-4-3-14 Bring to front

Bring the object to front.

4-4-3-15 Bring Forward

Bring the object forward.

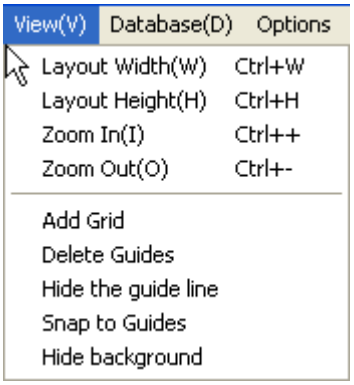
4-4-3-16 Send Backward

Send the object backward.

4-4-3-17 Send to Back

Send the object to back.

4-4-4 View menu



4-4-4-1 Layout width

Layout width

4-4-4-2 Layout height

Layout height

4-4-4-3 Zoom in

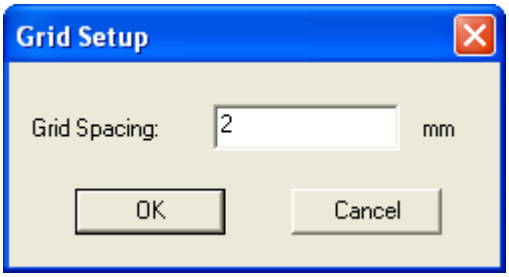
Zoom in

4-4-4-4 Zoom out

Zoom out

4-4-4-5 Add grid

In order to place the object accurately, you can add grid.



4-4-4-6 Delete guides

Delete all guide lines and grid

4-4-4-7 Hide/Show the guide line

Hide/Show the guide line

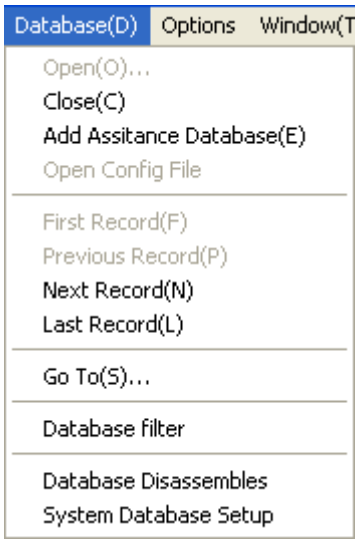
4-4-4-8 Snap to guides

Move the object to close to the guide line automatically.

4-4-4-9 Hide/Show background

Hide/Show background

4-4-5 Database menu

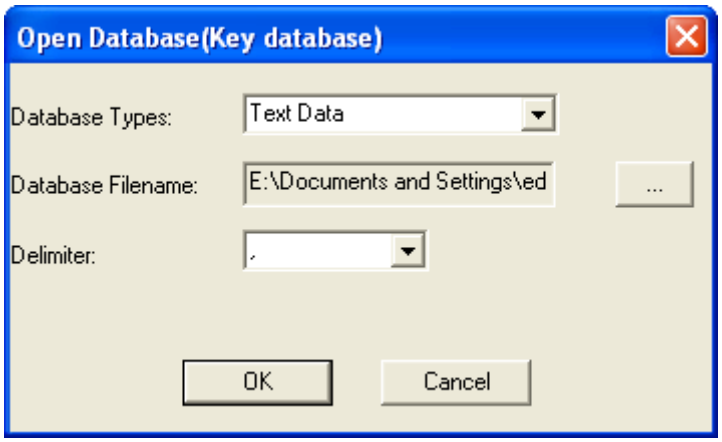


4-4-5-1 Open

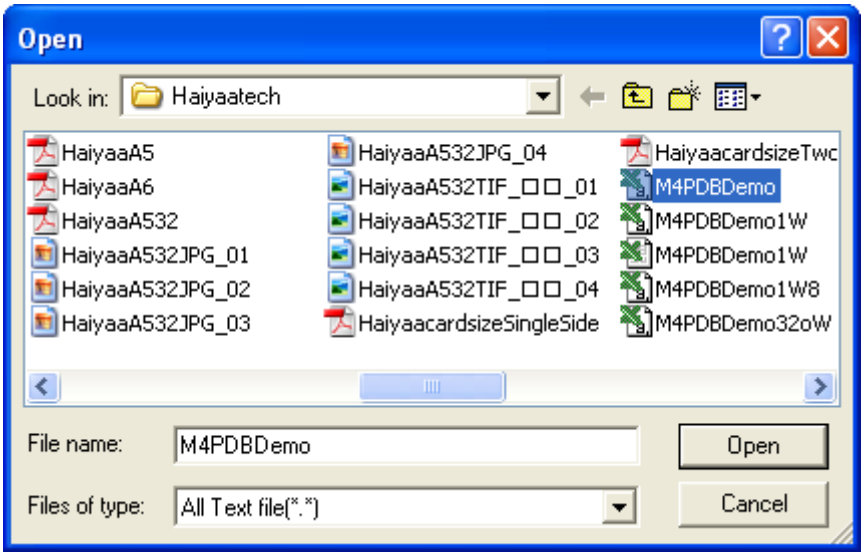
Open a database. VariPrint supports Text data, MDB data, ODBC data, Auto data and V4P Database

4-4-5-1-1 Text data

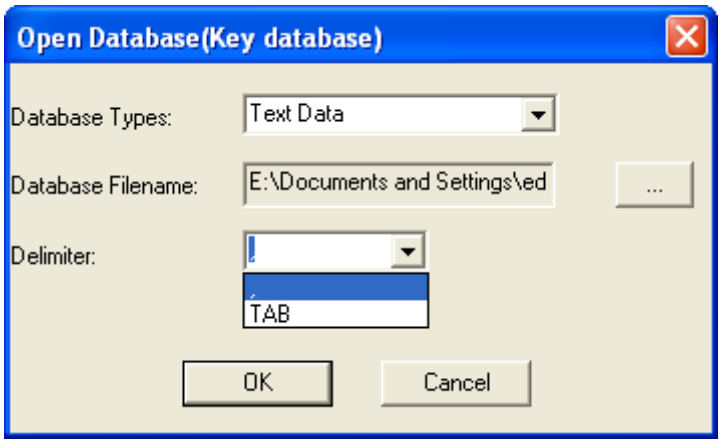
Step 1: Open a database and select Text Data in the **Open Database**.



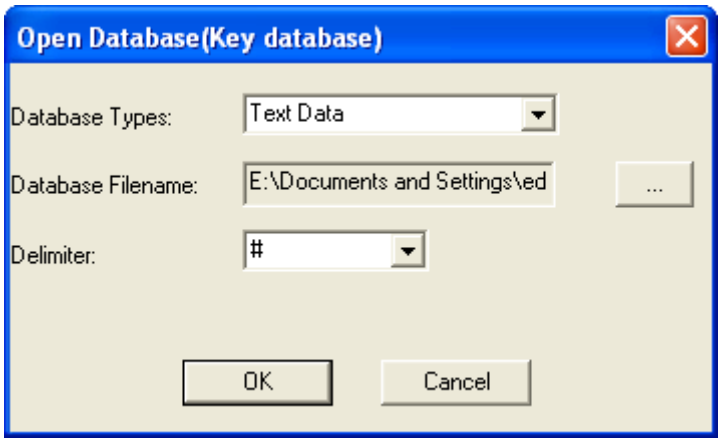
Step 2: Select database file.



Step 3: Set Delimiter

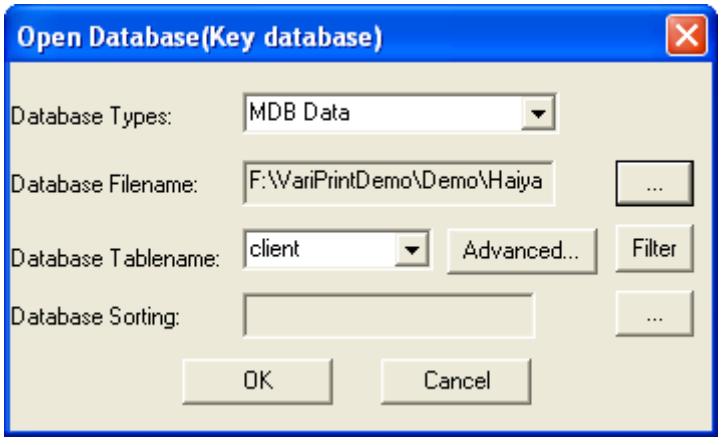


If delimiter is not comma or tab, input character. (Note: Delimiter should be single character)

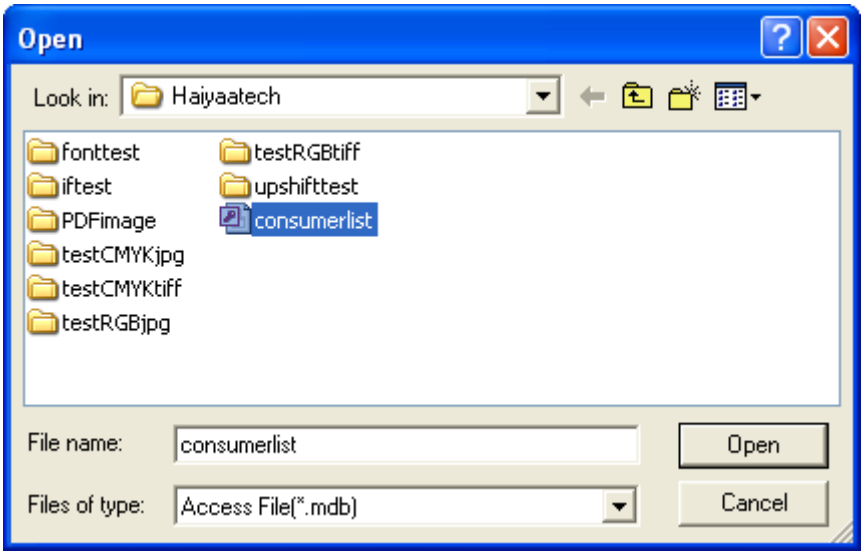


4-4-5-1-2 MDB data

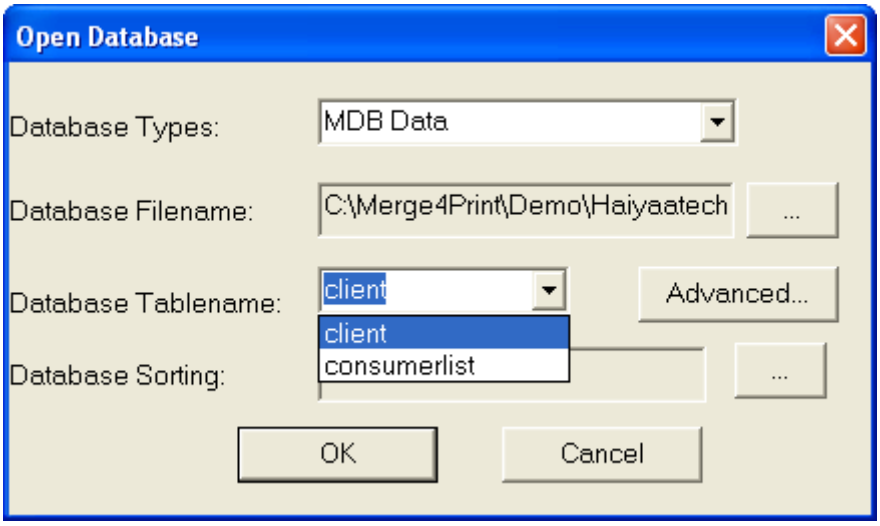
Step 1: Open Database and select MDB Data



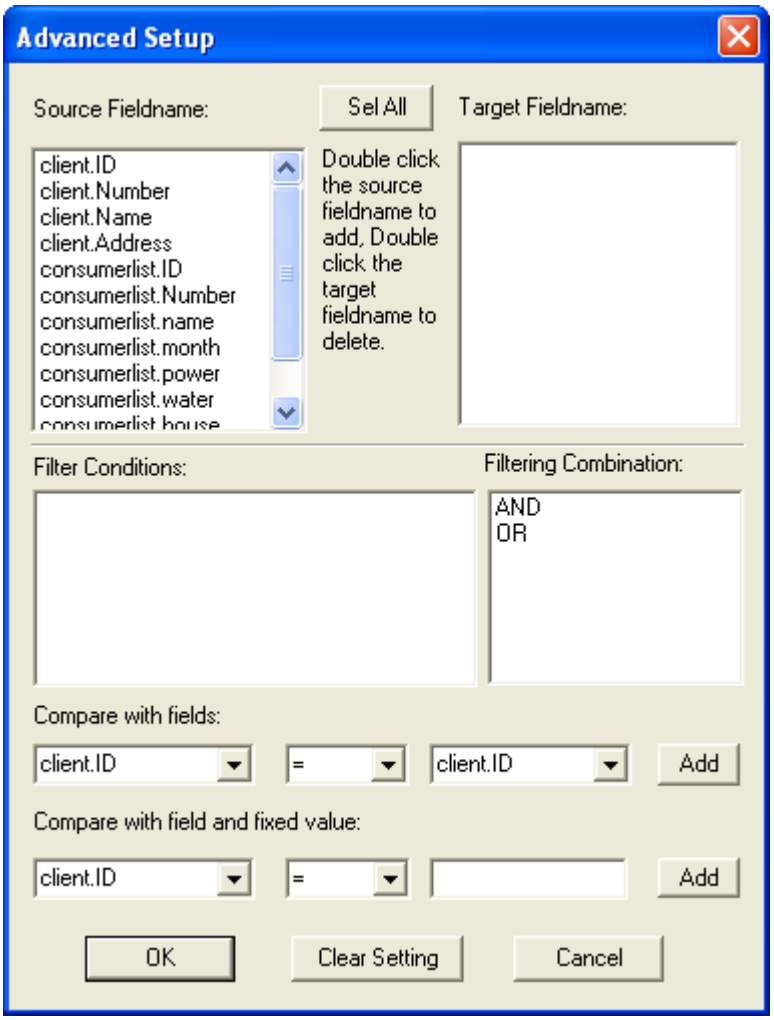
Step 2: Select database file.



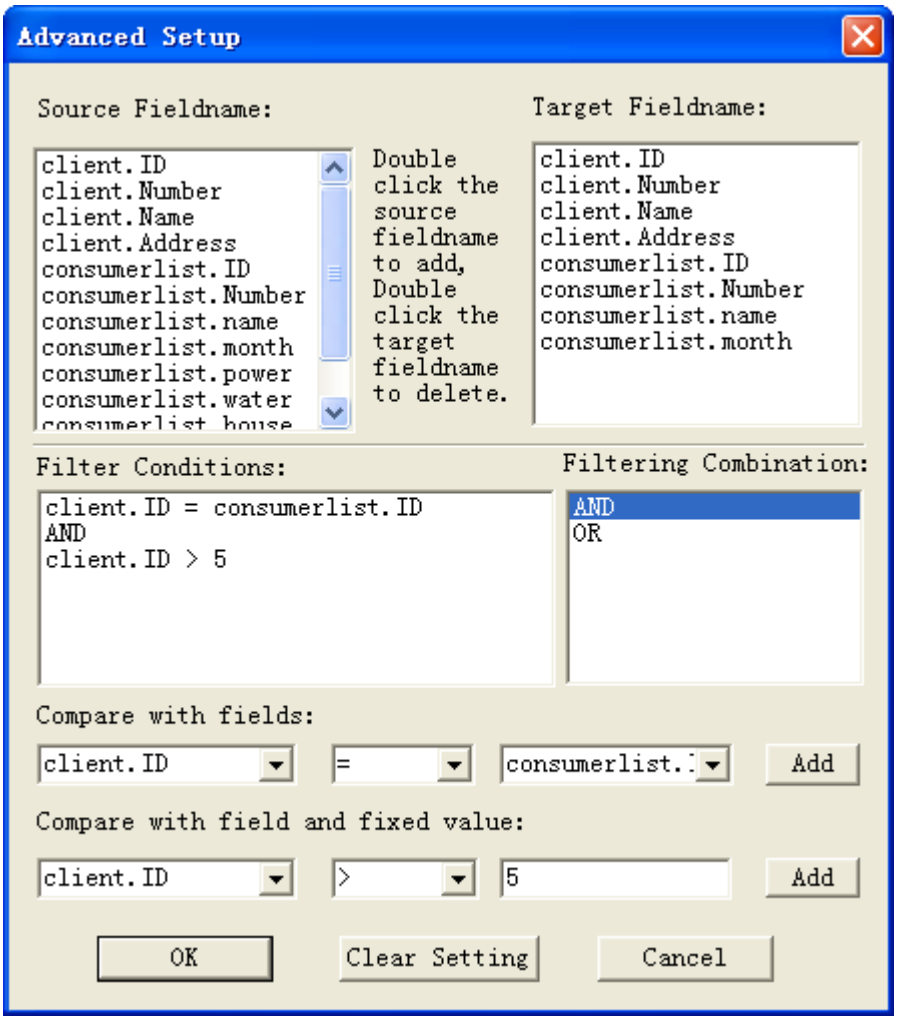
Step 3: Select database table.



Step 4: Click **Advanced** to set database filter condition.



1. Select fields from source fieldname to target fieldname.
2. Comparison with field: compare between fields
3. Comparison with fixed value: compare the field with a fixed value
4. AND/OR: can add logic relationship to filter conditions.

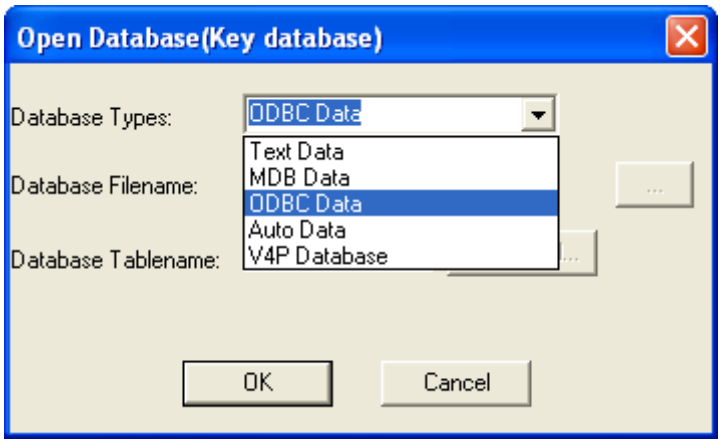


You can customize a personalized data source according some rules.

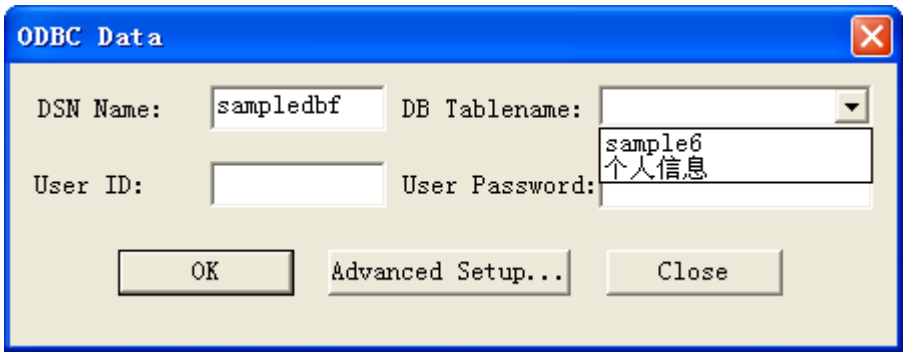
4-4-5-1-3 ODBC Data

If you need to open Oracle, SQL, DBF, FoxPro, Excel data sources, please use ODBC. Before opening OBDC data in VariPrint, You need to do some setting in Control Panel with Microsoft Windows OS, please refer to Windows user manual for corresponding setting.

Step 1: Open Database and select ODBC Data

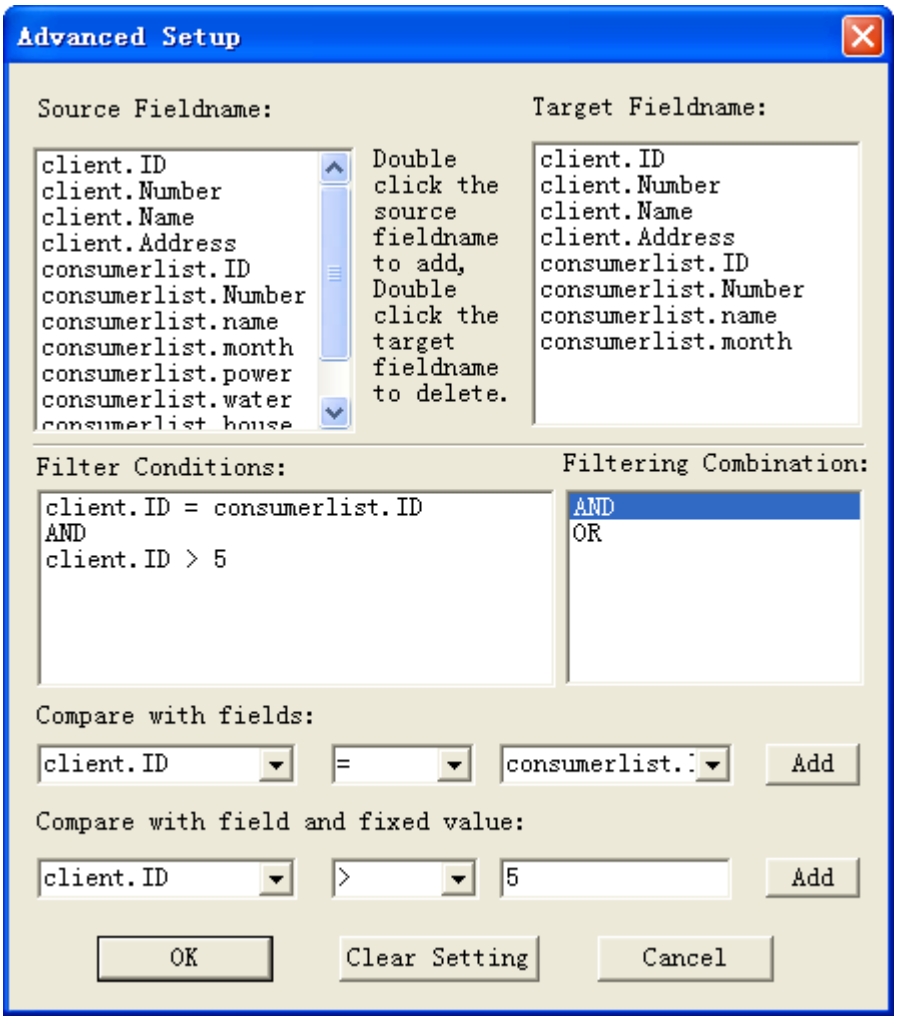


Step 2: Setup ODBC data



Step 3: Click Advanced Setup to set database filter condition.

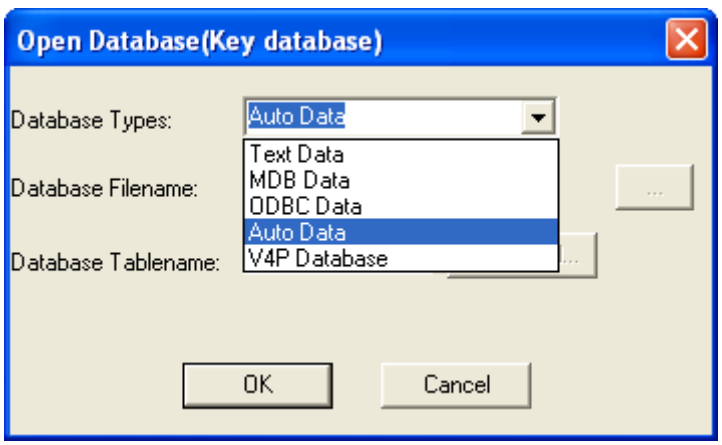
Refer to 4-4-5-1-2 MDB data



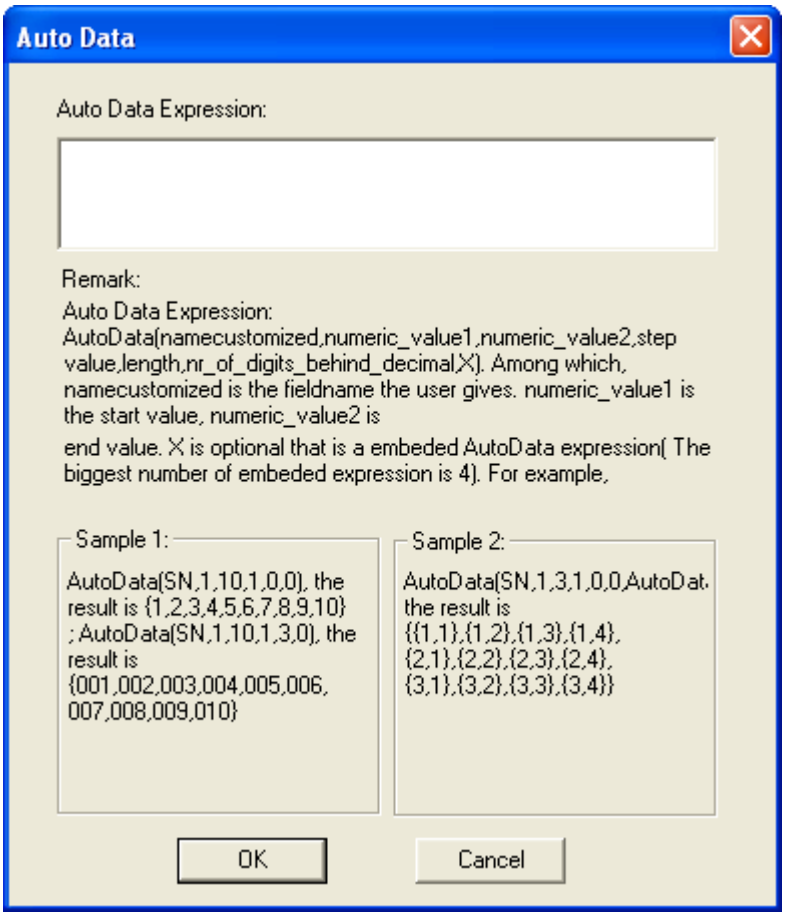
4-4-5-1-4 Auto Data

Auto Data is used to create serial number.

Step 1: Open Database and select Auto Data



Step 2: Setup Auto Data



a. Integer step data

For example: AutoData(sn,1,10,1,0,0)

Start value:1 End value:10 Step value:1 Length:0 Digits:0

Result is: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10

b. Integer step data with format

For example: AutoData(sn,1,10,1,4,0)

Start value:1 End value:10 Step value:1 Length:4 Digits:0

Result is: 0001, 0002, 0003, 0004, 0005, 0006, 0007, 0008, 0009, 0010

c. Decimal step data

For example: AutoData(sn,1,10,2.5,0,1)

Start value: 1 End value:10 Step value:2.5 Length:0 Digits:1

Result is: 1.0, 3.5, 6.0, 8.5

d. Decimal step data with format

For example: AutoData(sn,1,10,2.5,4,2)

Start value: 1 End value: 10 Step value:2.5 Length:4 Digits:2

Result is: 01.00, 03.50, 06.00, 08.50

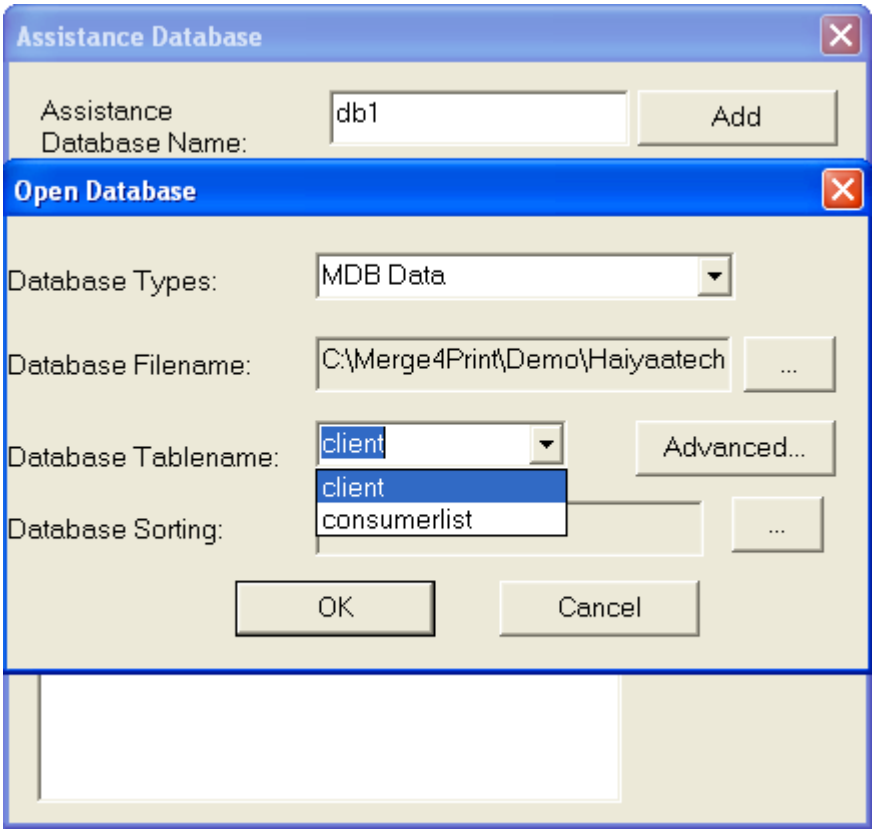
4-4-5-2 Close

Close all opened database.

4-4-5-3 Add assistance database

Assistance database is usually used to process transactional documents, such as bills and statements. For example, when processing bank statements, customer's contacts information is stored in one database or table, and their detail consumption data is stored in another database or table. So at first open customer's contacts database as the key database, then open detail consumption database as assistance database or second database. A key field, such as usually User ID, links the two or more databases.

Note: assistance database can be one or more according to actual situation.



Assistance database setting is identical to key database. Note: VariPrint supports only MDB format as assistance database format.

In order to process transaction document, Haiyaa developed a professional database integration tool, AccountDB, and Haiyaa's own V4P data format. You can use various kinds of transform module built-in to separate plain text with different database structure into main.v4p and other1.v4p. These V4Ps, which have internal key fieldname link, can be import into VariPrint directly. More detail information about AccountDB, please refer to its USER GUIDE.

4-4-5-4 Open Config File

Open Config File is also used to process transaction documents. The difference between Open Config File and Assistant Database are:

1) Assistant Database: You must transform a plain text original transaction data into two or more corresponding key database and assistant database in advance. Once you open the assistant database, it means you import all of data. If the capacity of assistant database data is large, it will take several minutes to read in.
2) Open Config File: You should write a configuration file in advance, which describe whose fieldname in the plain text belong to key variable information, that are key database fieldnames, whose fieldname in the plain text belong to detail information. It just do definition of these filed names according to fixed length or delimiter. It doesn't do real separation of the plain text into key database and assistant database in advance. It is like a bridge between plain text and database fieldname applied in the VariPrint. So the whole real data isn't read into the application. It is read in partly by partly while processing and printing.

4-4-5-5 First record

Move to first record

4-4-5-6 Next record

Move to next record

4-4-5-7 Previous record

Move to previous record

4-4-5-8 Last record

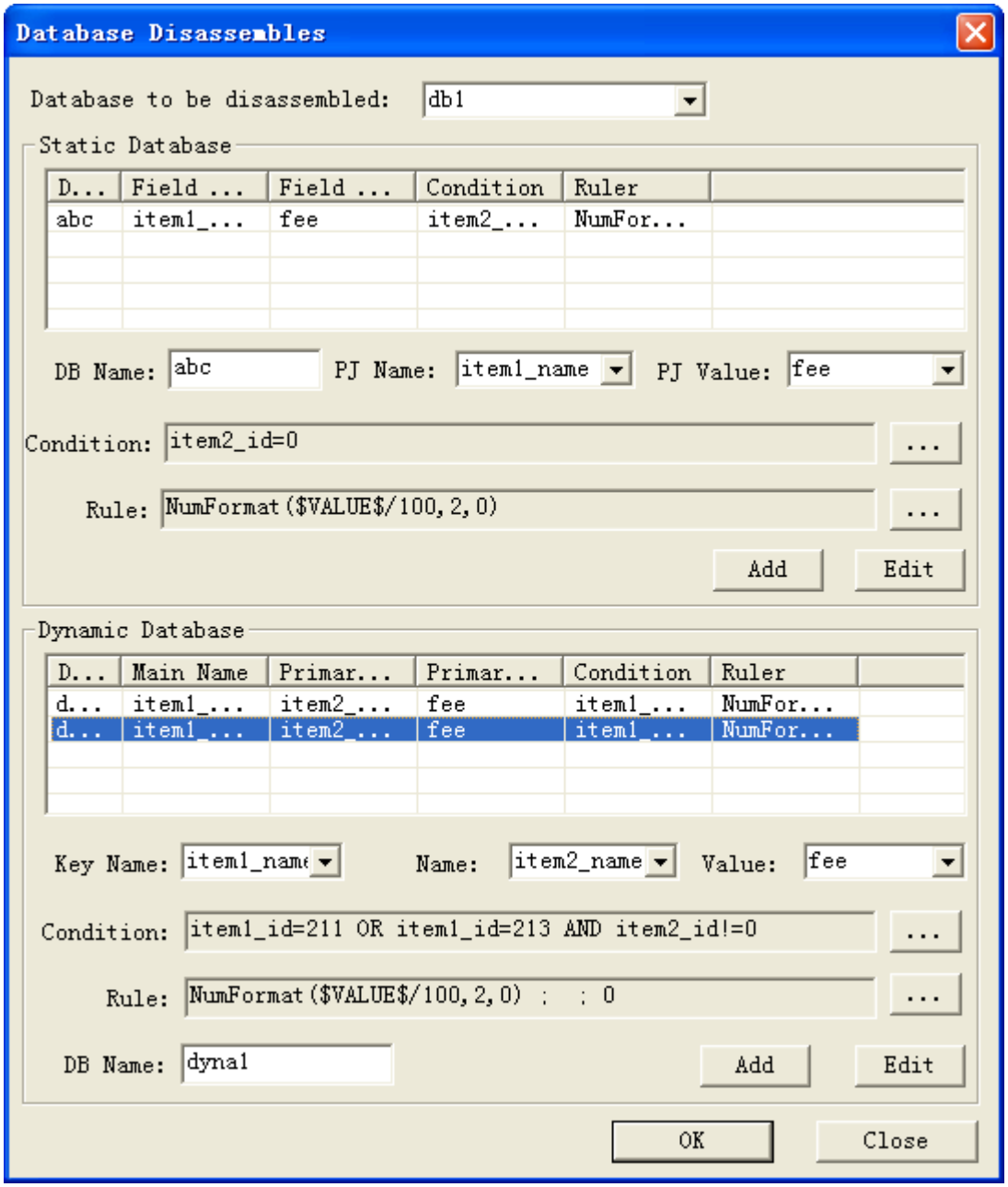
Move to last record

4-4-5-9 Go to Record

Go to selected record

4-4-5-10 Database disassembles

In order to print all classified contents in one document, database Disassembles is used to classify the consumption detail database (eg. the second database) into several parts according to rules and condition.



Static Database is a sub database with some records that has relatively fixed value information in the second database. You can add several static database according as actual need. Operation: input **DB Name** to give a name, then add conditions and rules to it.

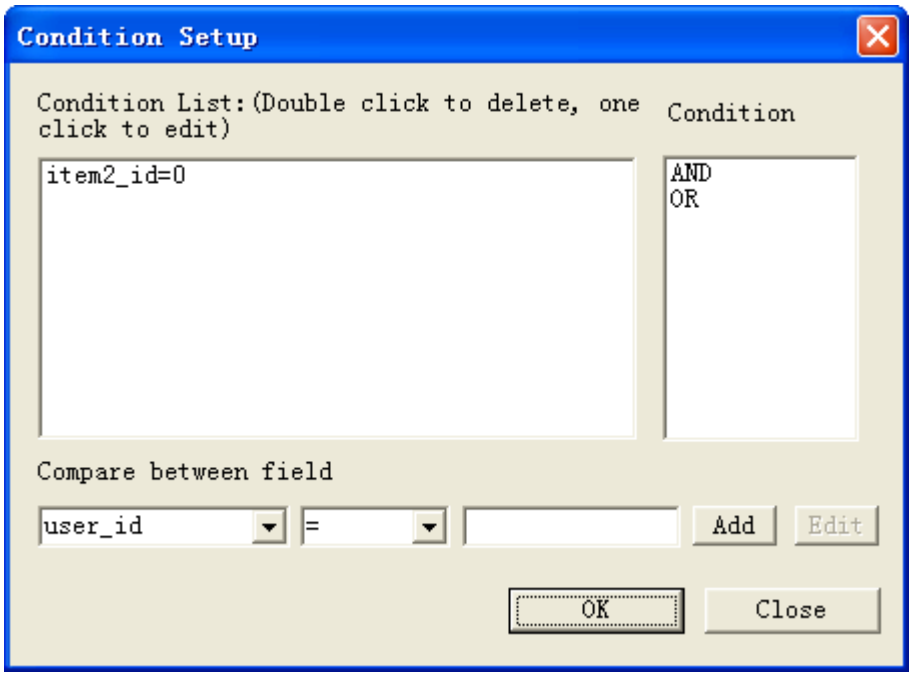
For example,

dtl_bz_guahao: 表

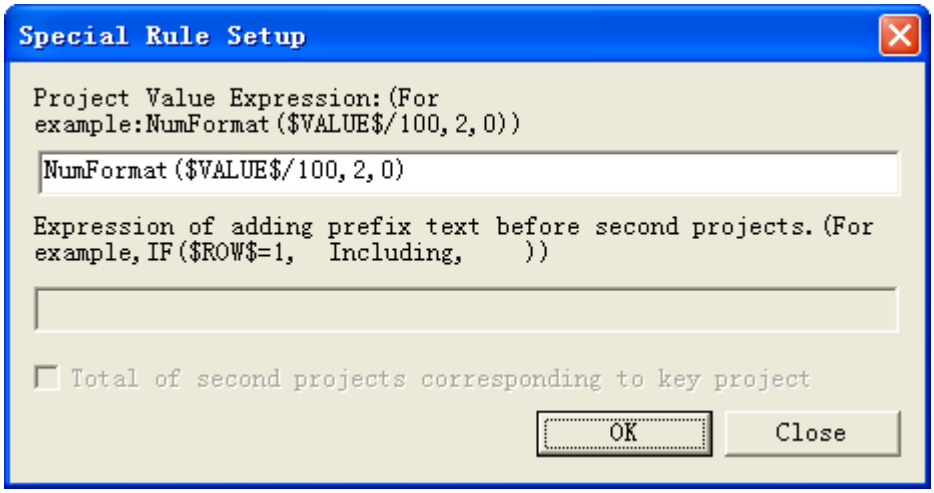
user_id	item1_id	item1_name	item2_id	item2_name	fee
2033309939	407		4070001	20070801	0
2033309939	407		4070002	20070801	8521
2033309939	408		4080001	20070801	3490
2033309939	101	套餐消费	0		5600
2033309939	212	月功能费	0		1100
2033309939	213	通话费	0		28
2033309939	214	新业务费	0		1941
2033309939	216	代收费	0		2680
2033309939	220	无线音乐俱乐部f	0		500
2033309939	401	套餐优惠后消费	0		6800
2033309939	401	套餐优惠后消费	4010001	套餐月费	6800
2033309939	401	套餐优惠后消费	4010002	套餐超出部分费F	0
2033309939	402	套餐外消费	0		5749
2033309939	403	套餐外优惠后消费	0		5249
2033309939	405	本月合计	4050001	消费合计	12549
2033309939	405	本月合计	4050002	优惠合计	500
2033309939	405	本月合计	4050003	需支付	12049
2033309939	405	本月合计	4050004	非本人支付合计	0
2033309939	405	本月合计	4050005	套餐月费补足	1200
2033310422	101	套餐消费	1500011	基本月租费	5000

记录: 32 共有记录数: 101762

If want to extract the data with item2+id=0 from the second database **db1**, you can add a static base **abc**, edit condition in **Condition Setup** as follows.

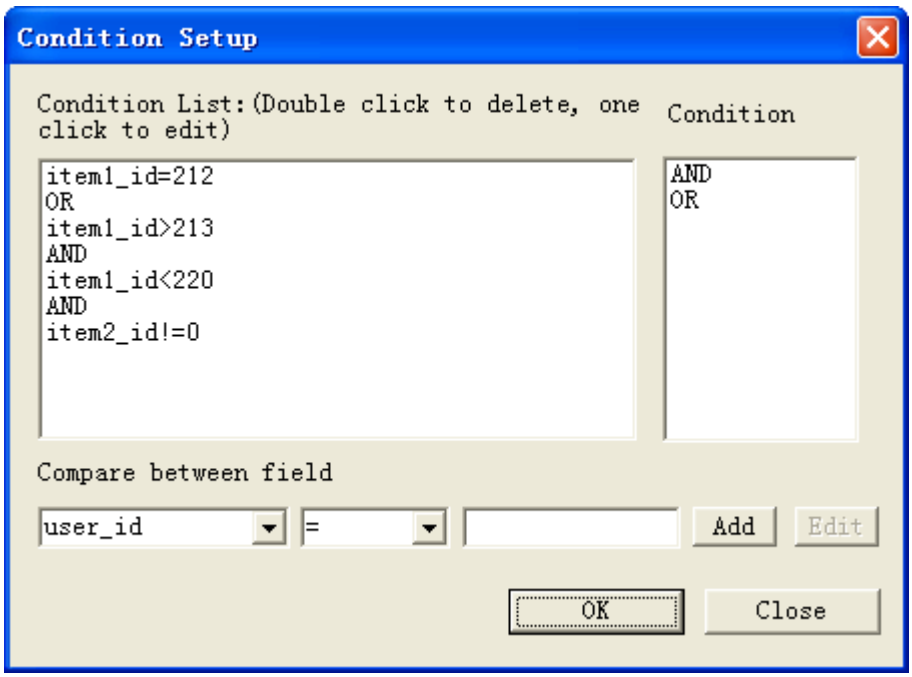


If need to edit rule to number or add string, use **Special Rule Setup**. Here for example, Since final number printed is divided by 100, so set rule as NumFormat($VALUE$/100,2,0)

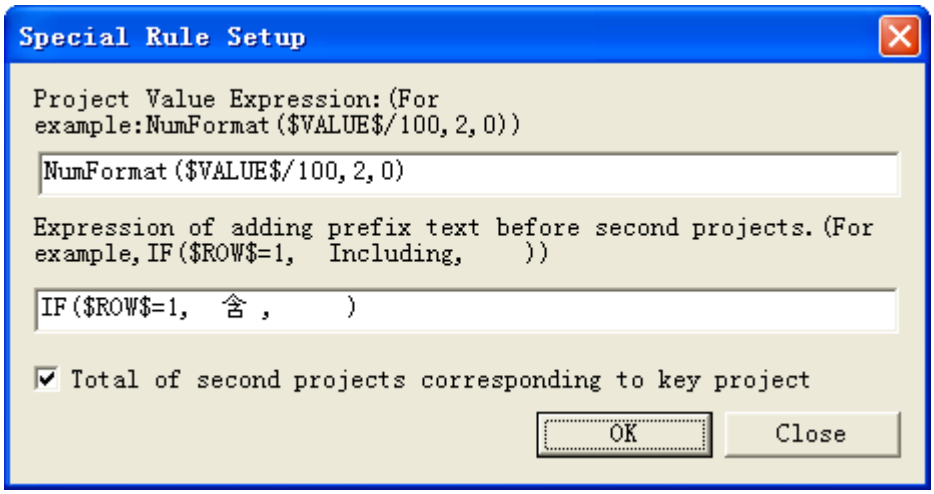


If you want to classify the variables in the second database into several parts, you can add several dynamic databases. Here for example, there are two parts which should be classifed. Dyna1 and Dyna2, edit them by giving their name, conditions and rules.

If you want to extract data whose item1_id=212, item1_id>213, item1_id<220, item1_id!=0(!= means not equal to), set condition in **Condition Setup** as follows.



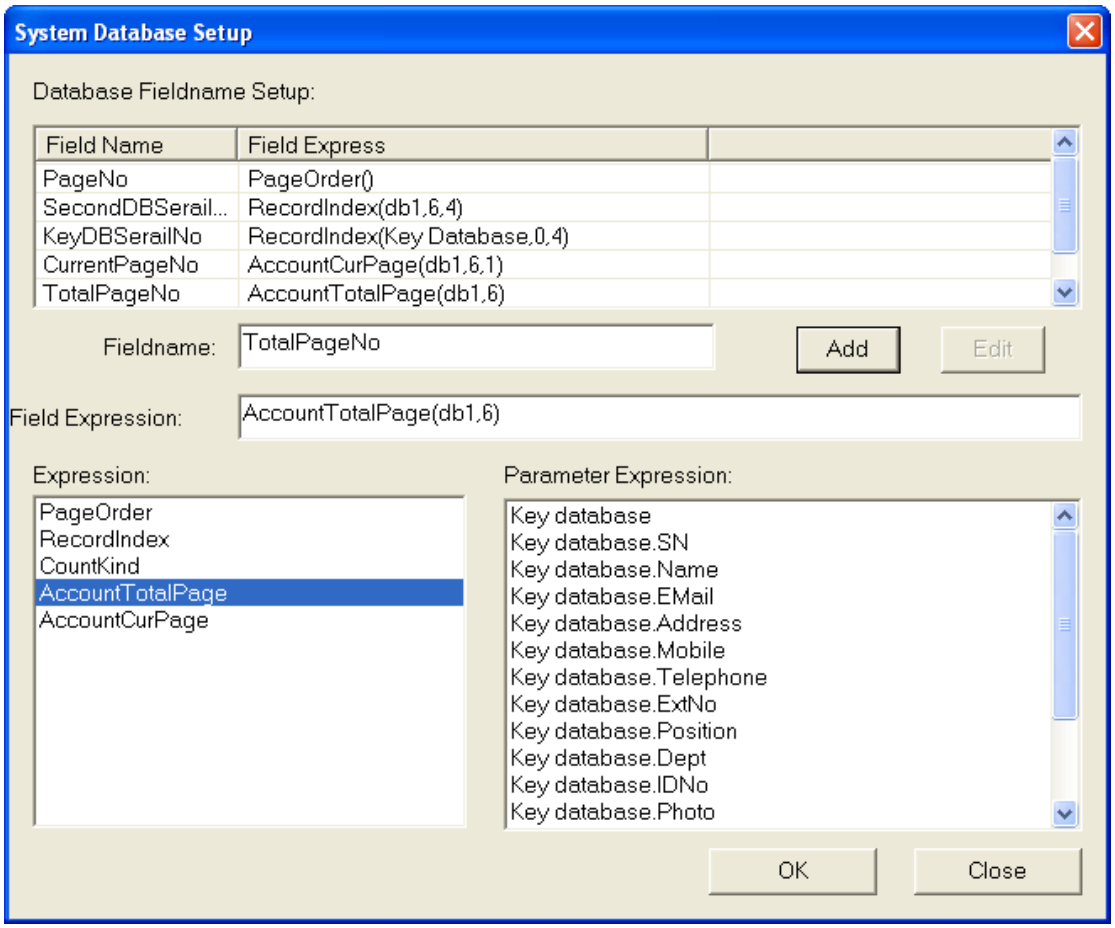
If you will add some string before in the first line, you can use **IF** function to edit it in the **Special Rule Setup**.



4-4-5-11 System database setup

System Database Setup is used to define the properties of data in the key database and second database, in which there are parameters as follows:
PageOrder(): This parameter is used to setup printing serial number, it uses the printing page as the unit.
RecordIndex(database,reset_num,format_len) This parameter is used to define the dynamic serial number of columns in the variable table.
CountKind(column_name) It is used to do statistics of certain field classifications in the second database)

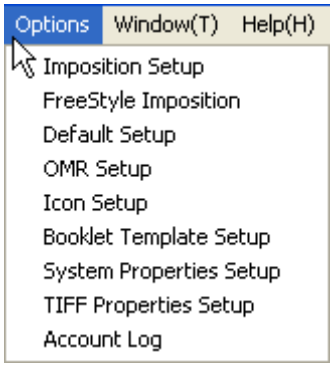
AccountTotalPage(database,pageNum) It is used to define the total page number with the variable table.
AccountCurPage(database,recordpage,pageoffset) It is used to define the page number of the current page with the variable table.



After system database setup, we can get the result as follows,

Print Serial No: 0; Current Page No.: 2; Total Pages: 4

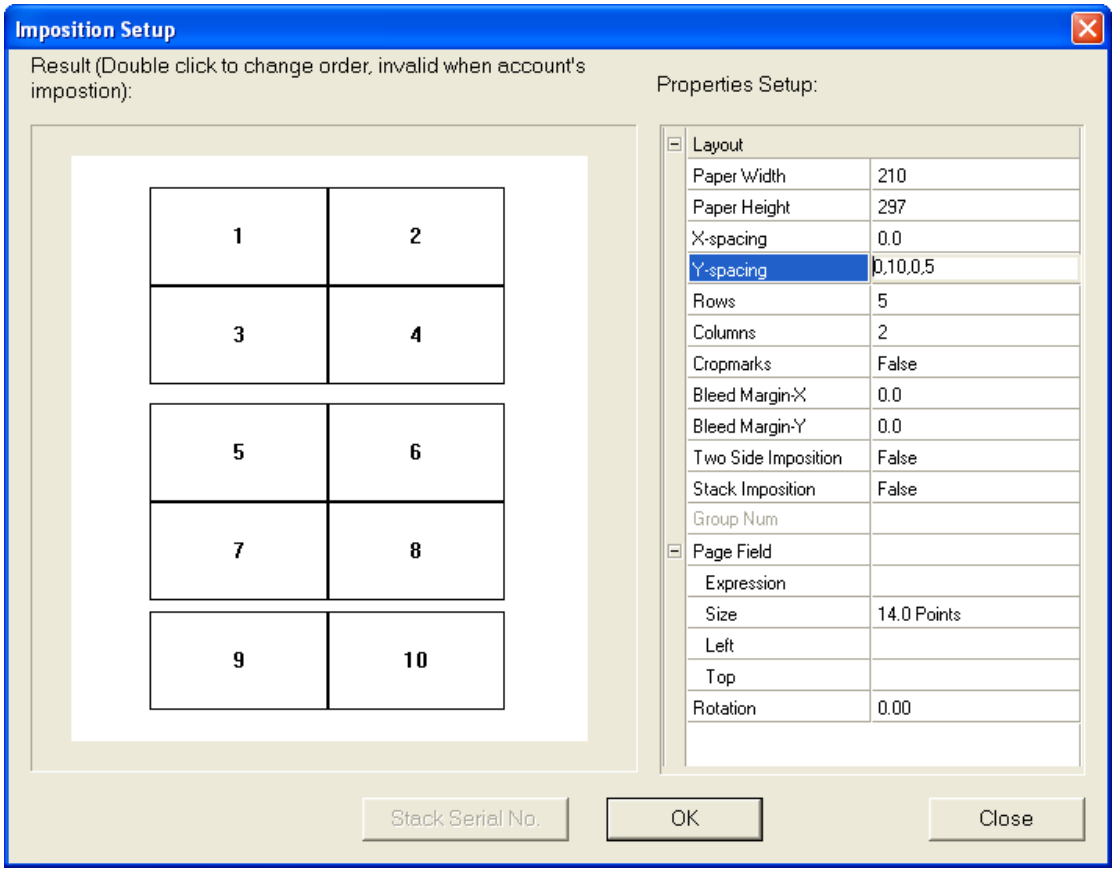
4-4-6 Options menu



4-4-6-1 Imposition setup

Imposition setup includes both of sequence imposition and stack imposition along with single side or two sides.

Sequence imposition:
Sequence imposition means a repetition priority is left to right or top to bottom at first, then front to back.



X-Spacing/Y-Spacing: Specify the horizontal and vertical distance between each layout. Note: You can set different distance value between each row or column, use comma to separate. Accuracy can be 0.01mm.
Rows/Columns: Once you input Page width and Page height, Rows and Columns will be calculated and appeared automatically. The numbers indicate layouts of covering full page, You can correct to reduce the layouts number.
Cropmarks: True indicate you need add cropmark, False indicate you needn't add cropmark.
Bleeding margin-X/Y: A bleed margin is a part of your layout that is printed to the edge of a finished page. Bleeding margin-X/Y specify gap size as the distance between the actual crop mark and the edge of the layout.
Two side imposition: True indicates you have two side layout to be imposed and will have mirror effect.

Stack imposition: Stack imposition means repetition priorities is front to back at first, then left to right or top to bottom. True indicates you want to do stack imposition.

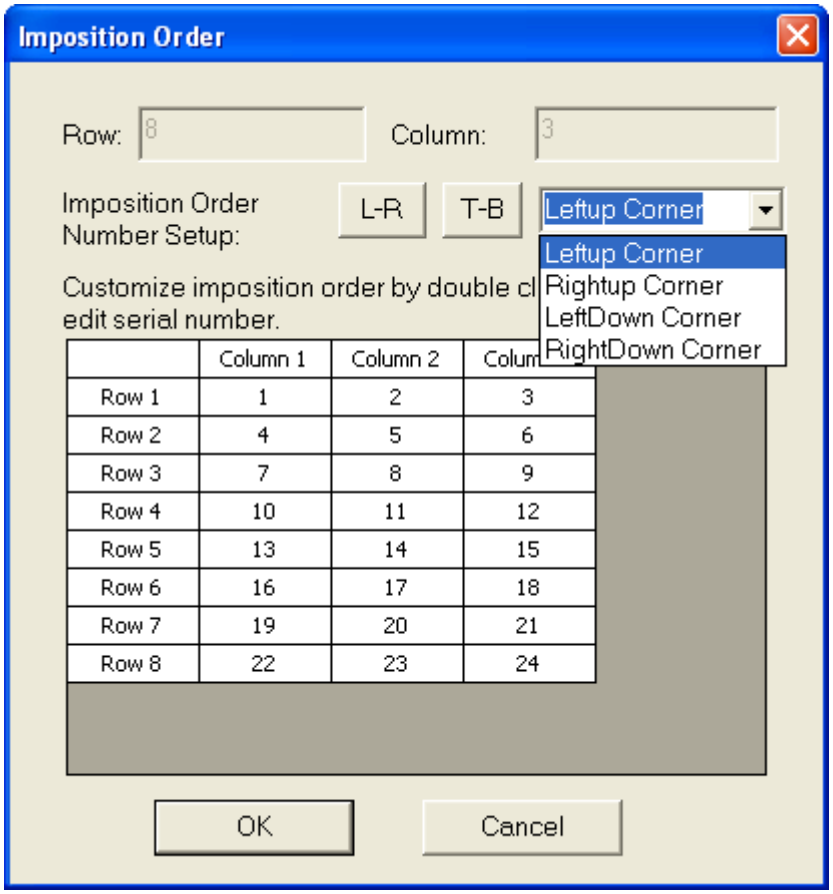
Group Num: If you select stack imposition, group num will be valid. You can input a pages number which indicate that stack imposition is done within these pages.

There are eight order modes of sequence imposition, which are consisted of different start corner and layout type. Click left area of sequence imposition setup windows to set these modes.

L-R: horizontal layout, from Left to Right or Right to Left

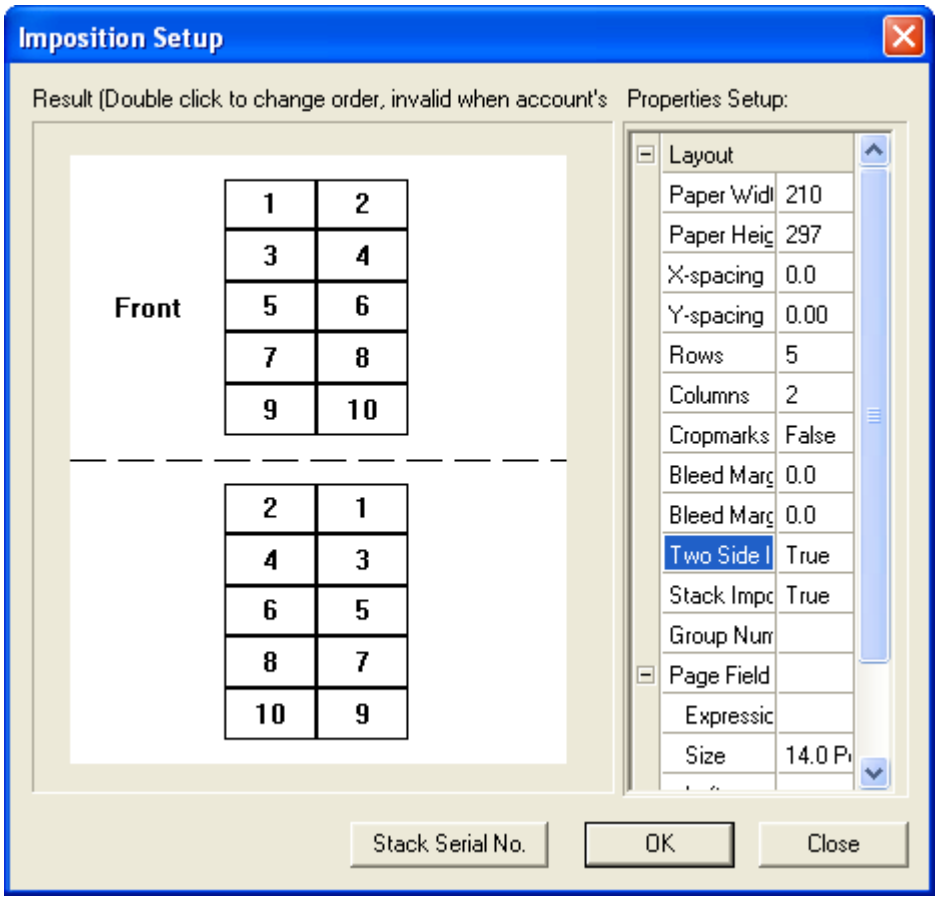
T-B: vertical layout, from Top to Bottom or Bottom to Top

Start corner: Leftup, Rightup, Leftdown, Rightdown

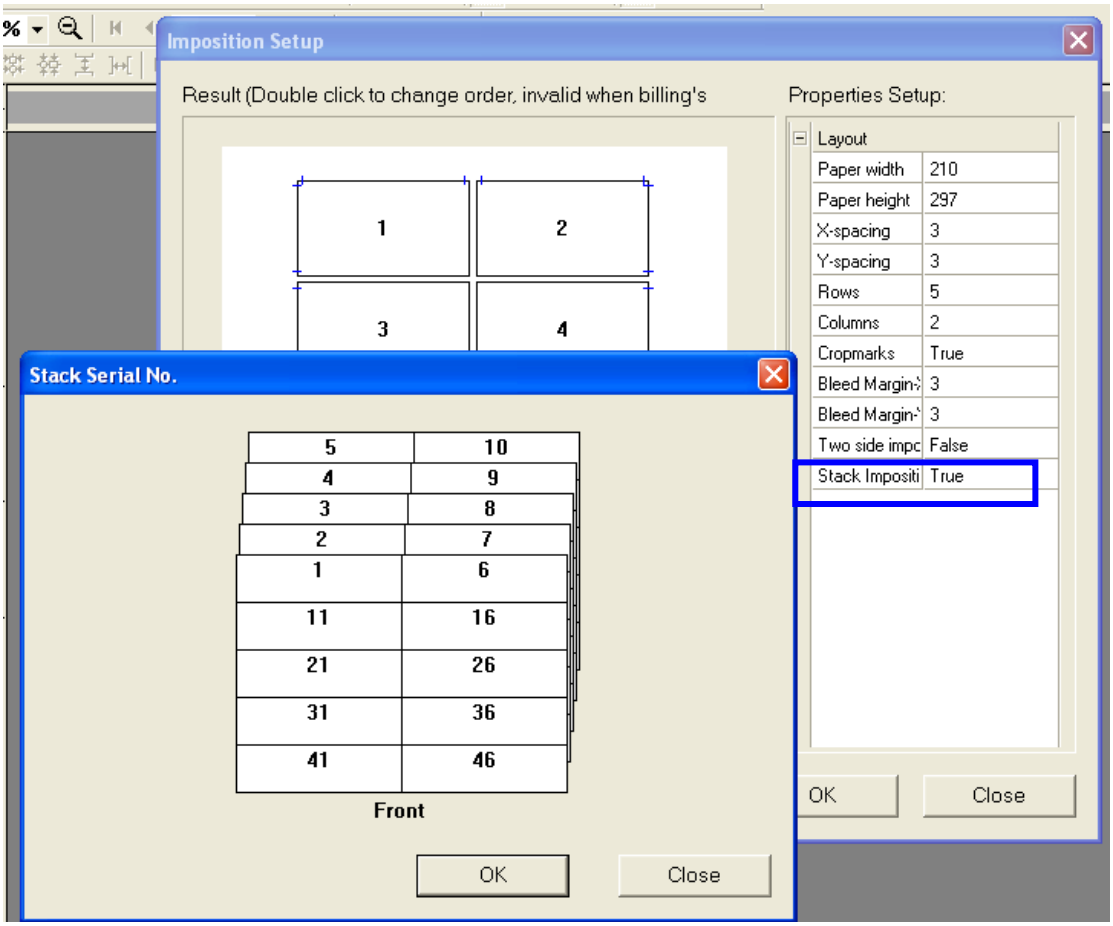


Sequence imposition along with two sides

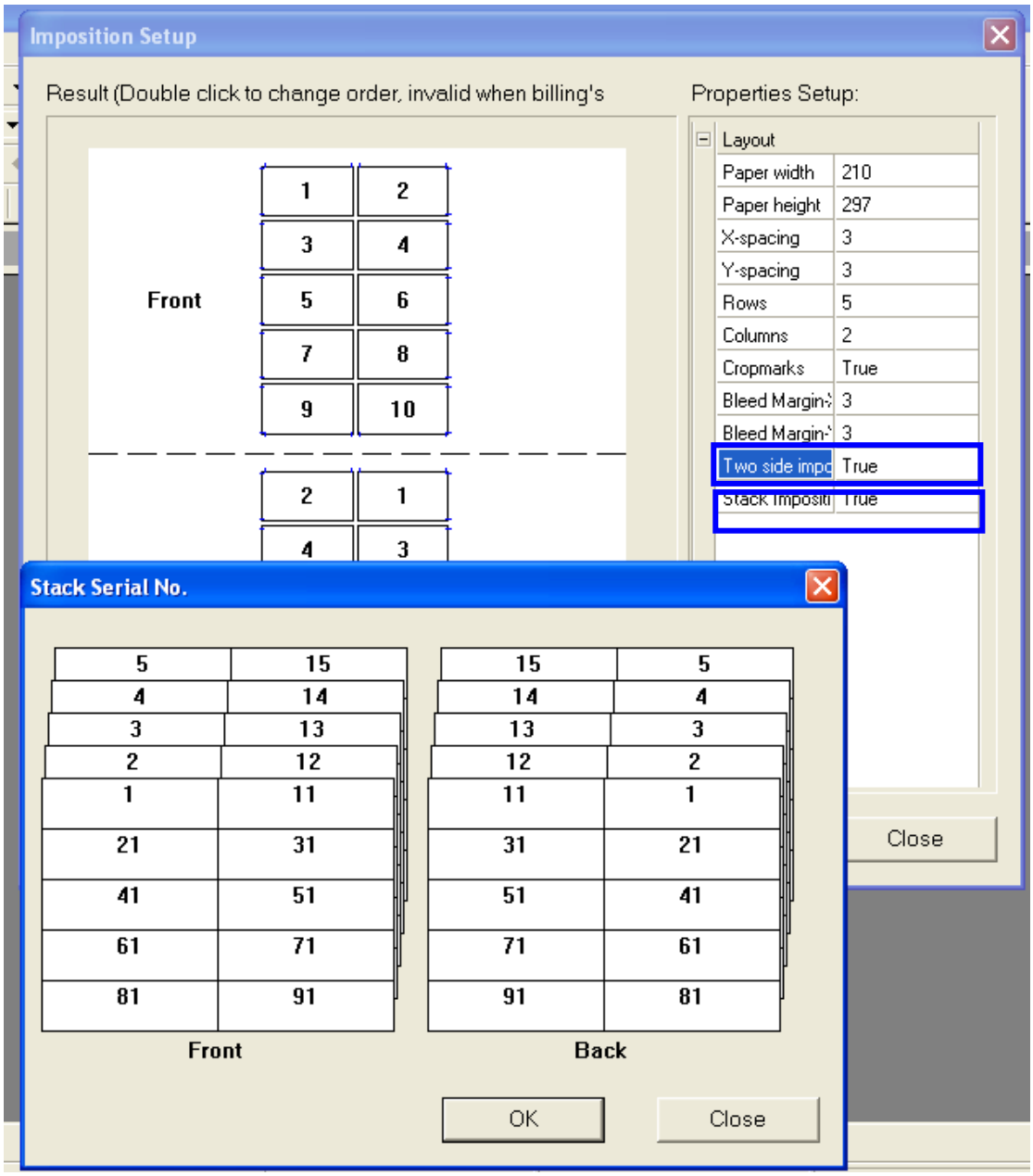
If you set Two Side Imposition to True, it is valid. When select two side imposition, VariPrint support mirror effect. That is the positions of the layouts on the back of each page should match the positions of the layouts on the front of each page. In effect, the layout positions on the back will be mirrored horizontally.



Stack imposition:



Stack imposition along with two sides:

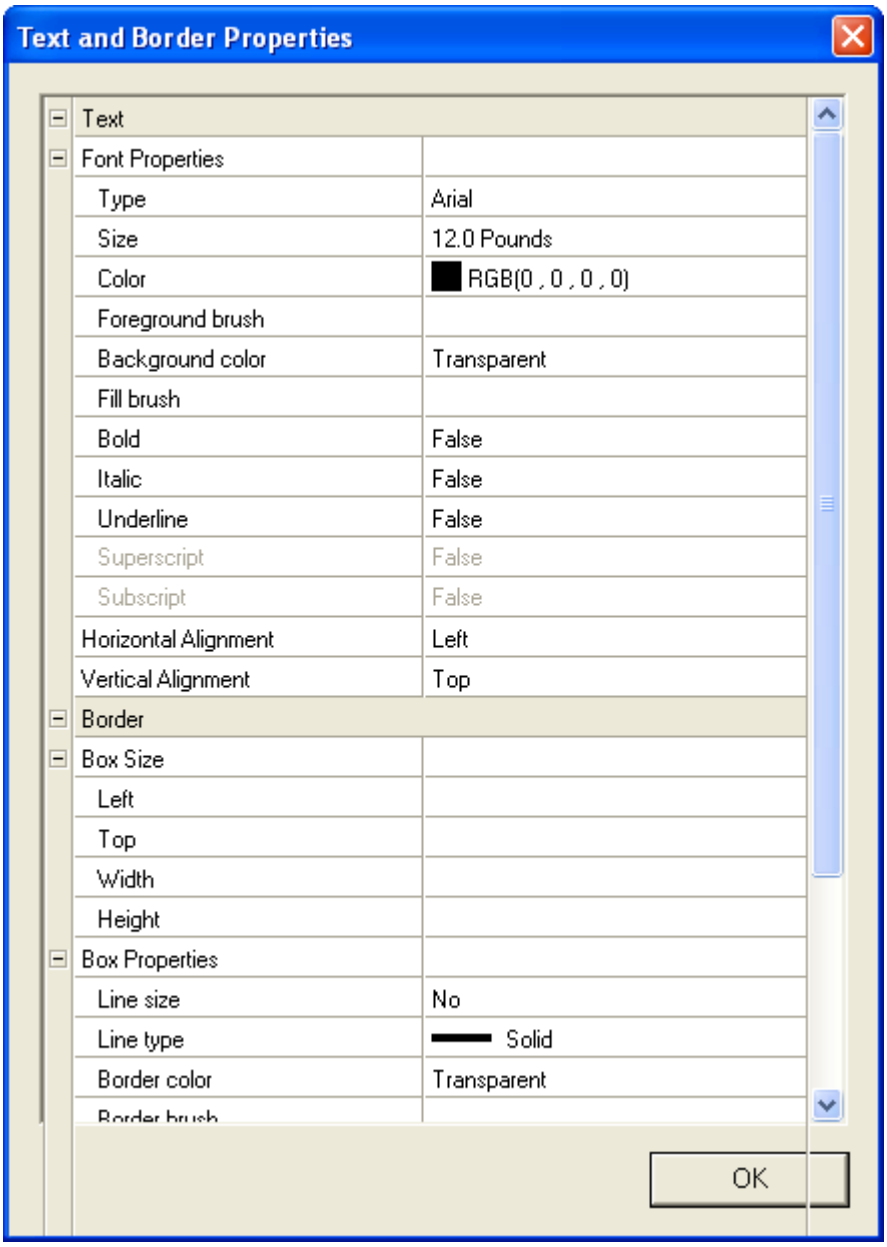


4-4-6-2 FreeStyle imposition

Refer to 4-3-15

4-4-6-3 Default setting

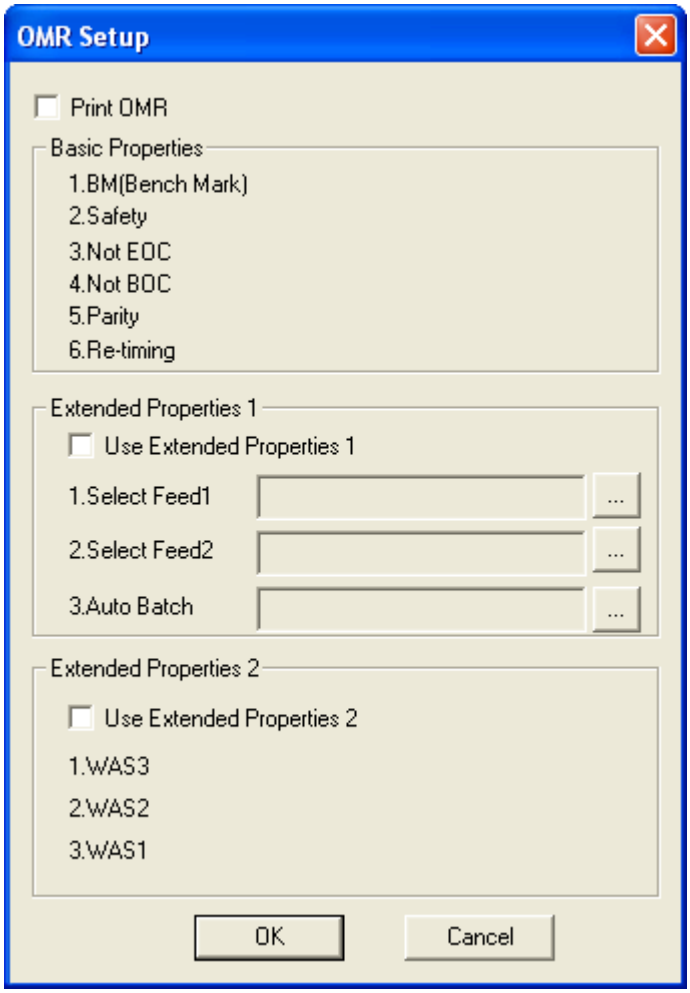
Default setting indicates all default setting of variables properties.



4-4-6-4 OMR setup

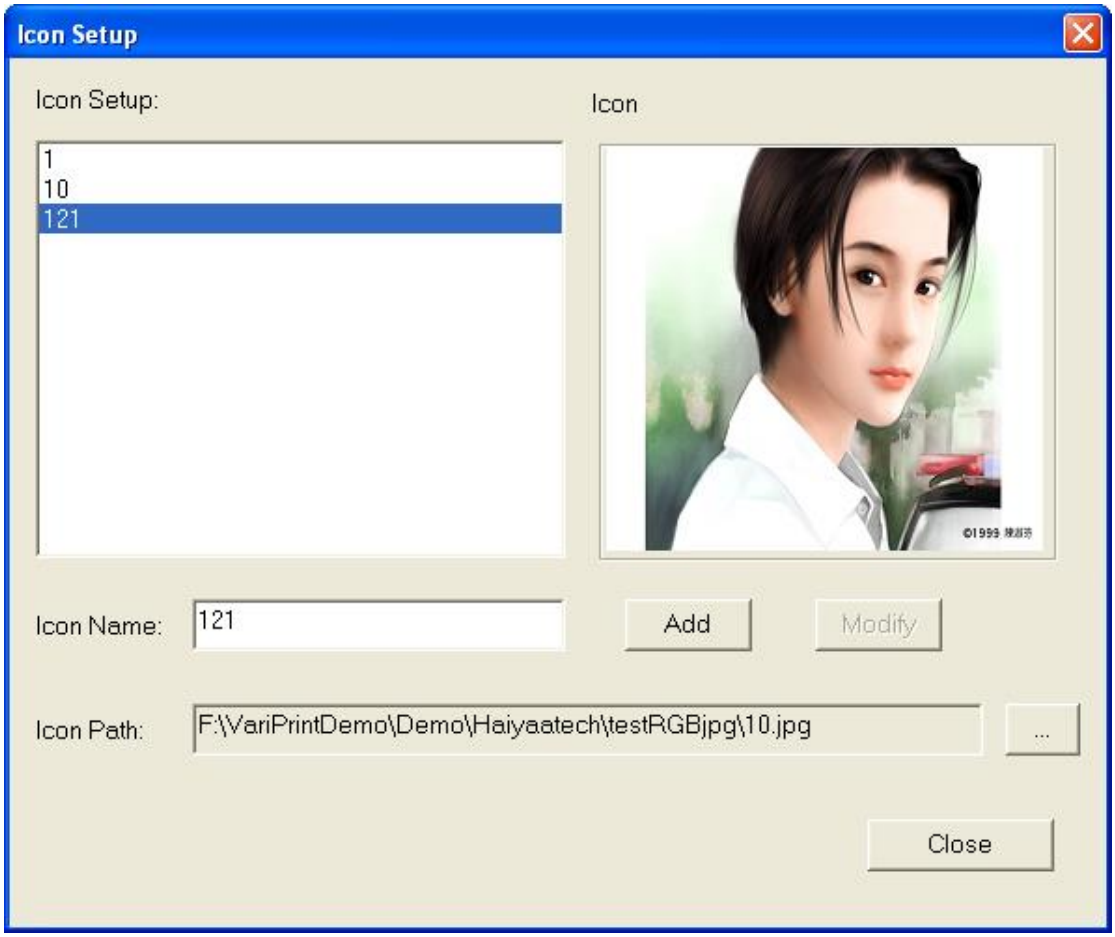
OMR(Optical Mark Recognition) is the process of capturing data by contrasting reflectivity at predetermined positions on a page. This setup is valid when using variable table to create transactional documents, such as bills and statement.

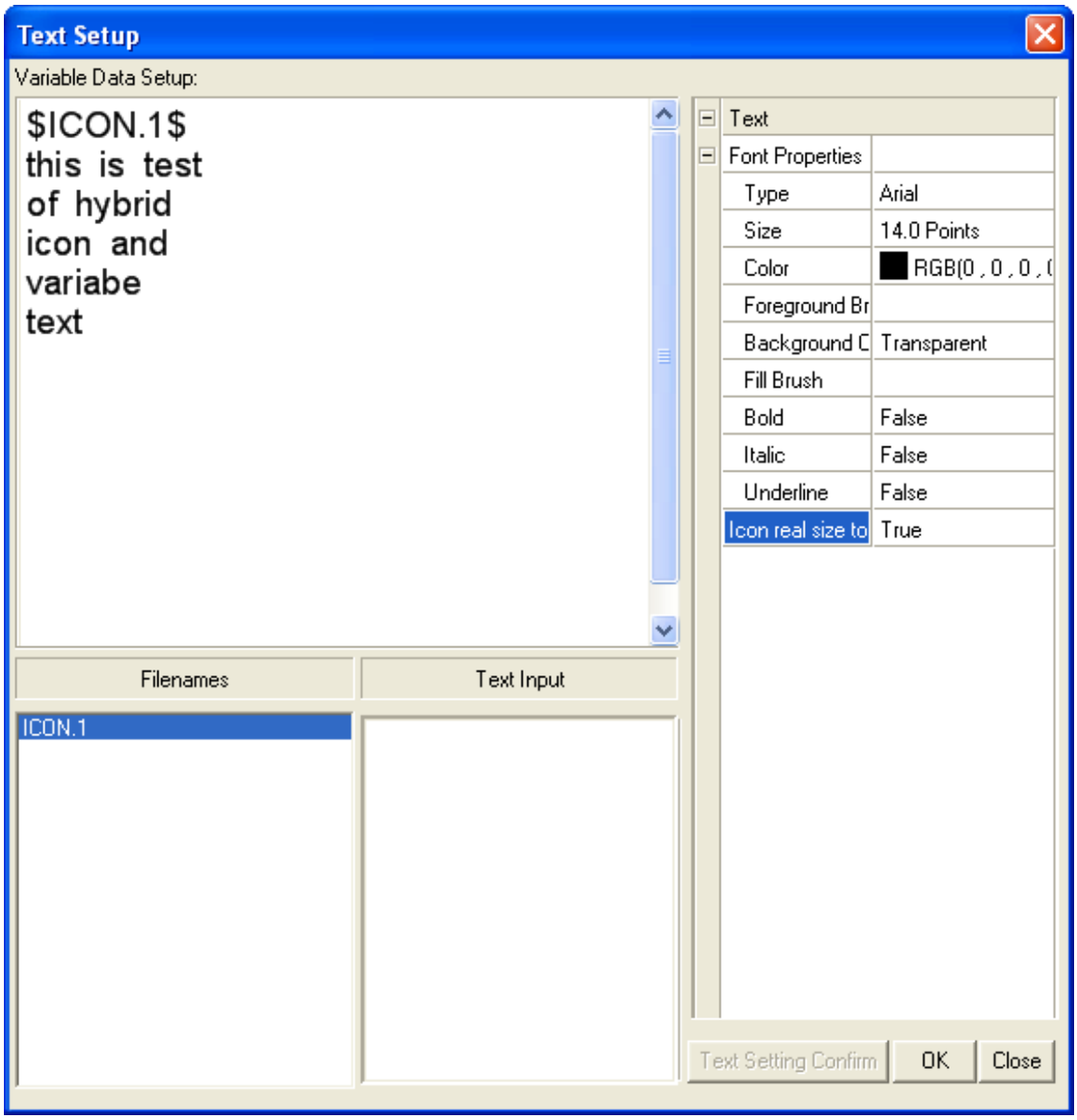
OMR setup is different from inserting or folding machine since each machine has its own specifications. Here VariPrint builds in a sample. Practical setup function will be customized according to each applied machine.



4-4-6-5 Icon Setup

Icon Setup is used to hybrid layout of variable icon and variable text. In this window, you can define a icon fieldname of the variable icon image. Then Using A Advanced variable text to do detail setting of hybrid layout.


Icon Setup
Icon Setup:
1
10
121
Icon
Icon Name:
121
Add
Modify
Icon Path:
F:\VariPrintDemo\Demo\Haiyaatech\testRGBjpg\10.jpg
...
Close



4-4-6-6 Book Template Setup

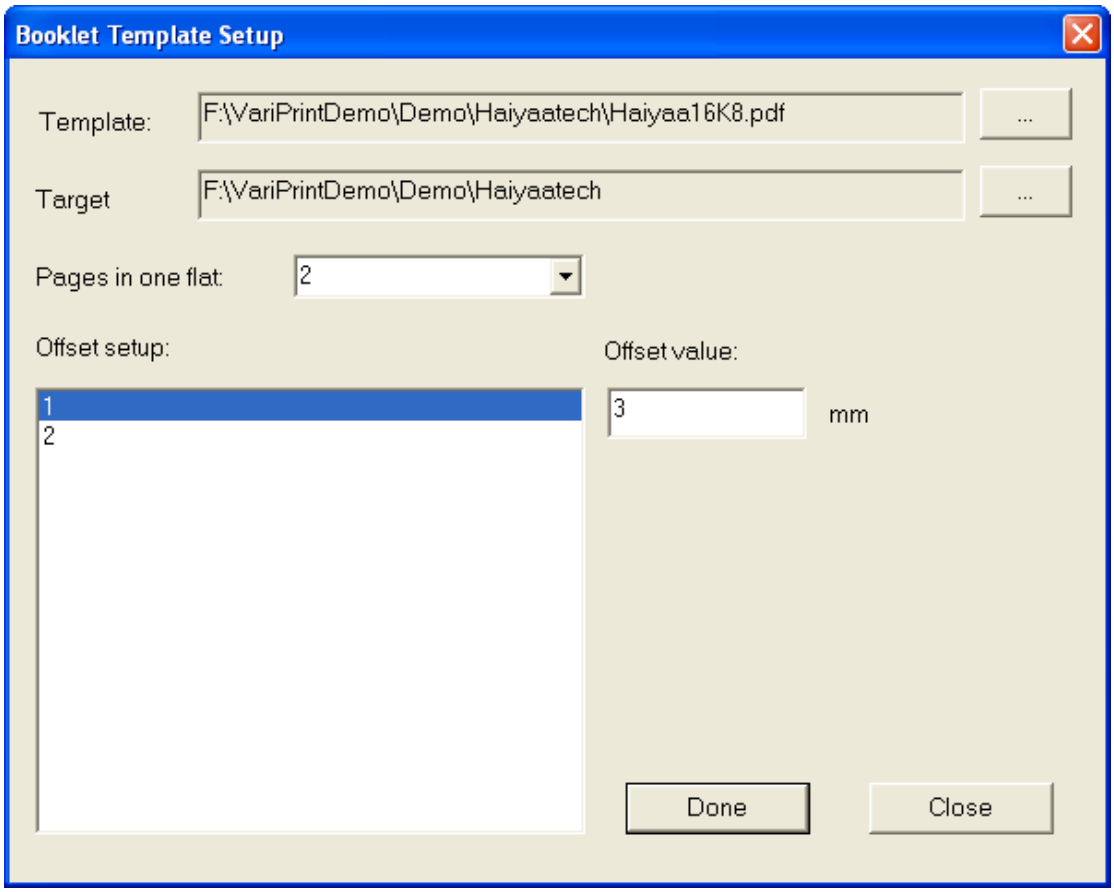
Book Template Setup is used to adjust type page offset of the template PDF file. Accurately say, it is not a variable function, it is an additional tool used to process PDF leaflet before doing variable setting.

Operation of this function:

1) Go to **Template** to select the original PDF leaflet file
2) Go to **Target** to set the output folder
3) Select page numbers in a flat, generally is 2
4) Click 1, set left type page offset value, positive number means offset from left to right, negative number means offset from right to left.
5) Click 2, set right type page offset value, positive number means offset from left to right, negative number means offset from right to left.

Notes:

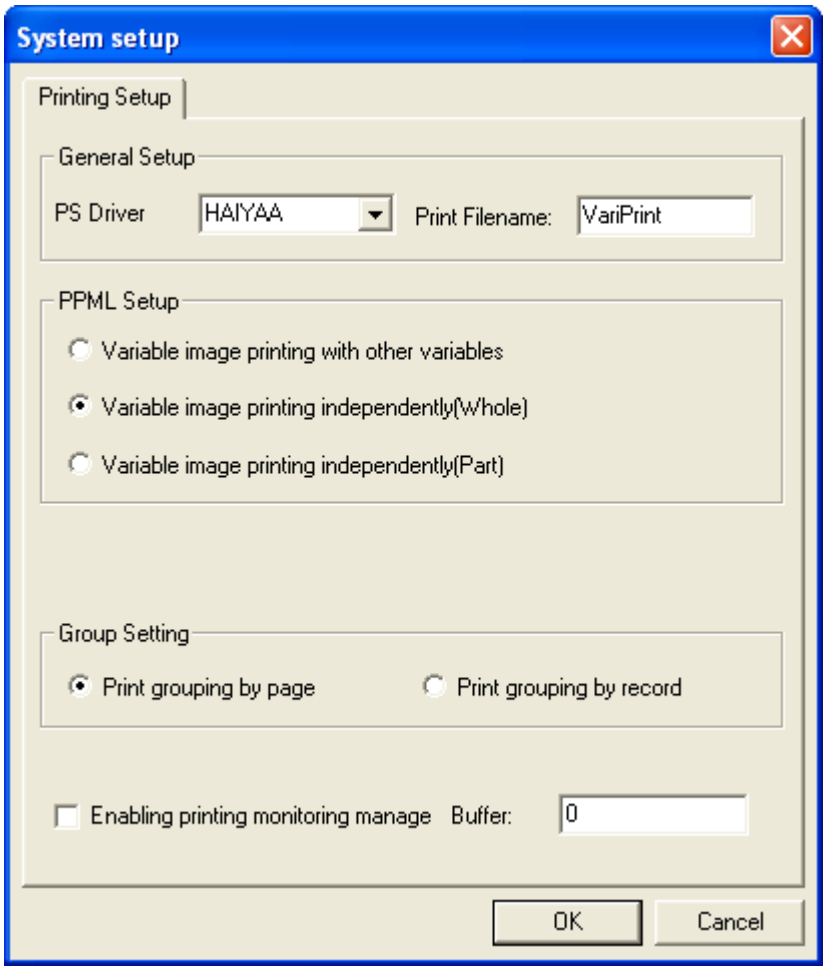
This function should be running under the Adobe Acrobat. If you haven't installed Adobe Acrobat full version, there will error and quit when processing.



4-4-6-7 System Properties Setup

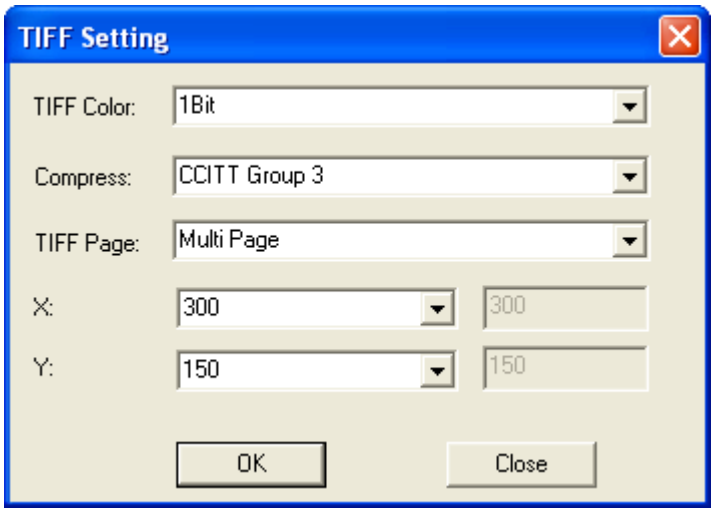
System Properties Setup is used to set up .the items as follows,

1) PS Driver, default PS driver is HAIYAA
2) Print Filename, default is VariPrint, you can change to fieldname or parameter name, such as $key database.name$, $Parameter.logicname$…
3) PPML Setup, default is Variable image printing independently (whole), you can change it to other option according to practice usage.
4) Grouping Setup, default is Printing grouping by page. Printing grouping by record is merely used.
5) Printing monitoring, this item is now closed.



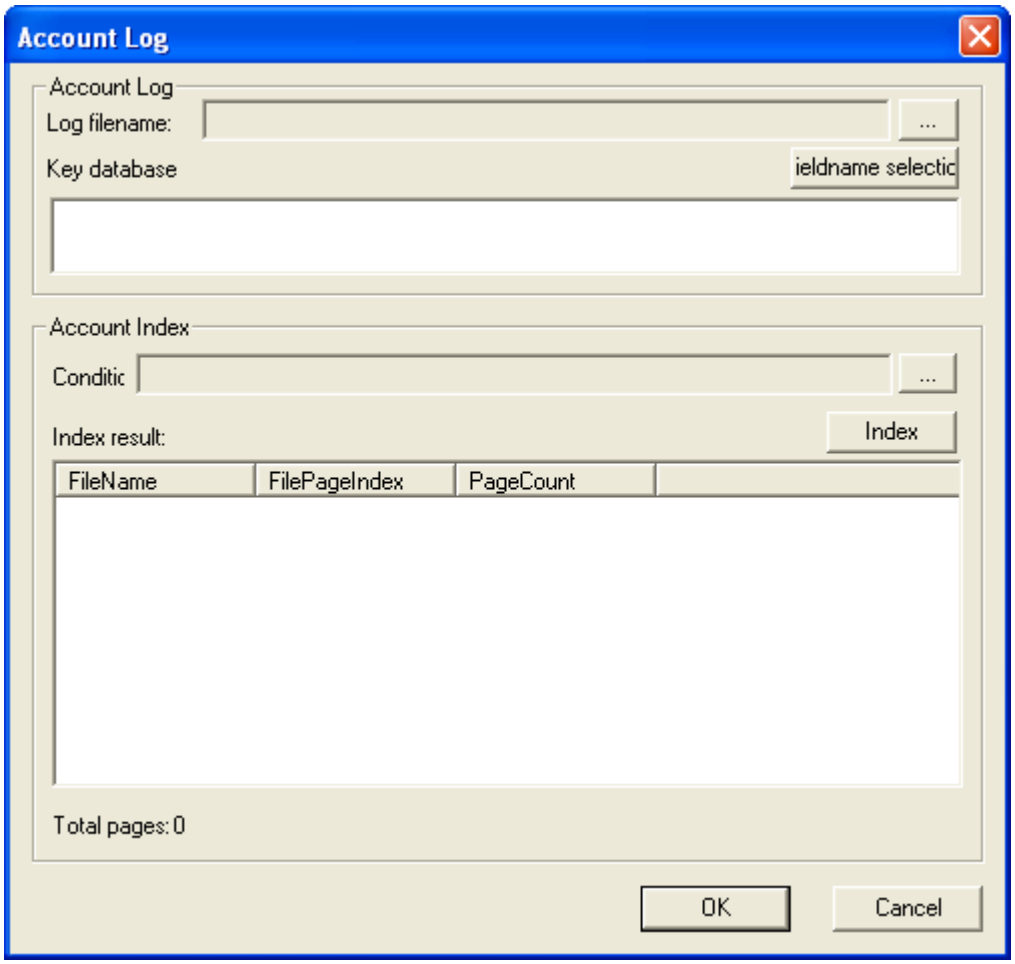
4-4-6-8 TIFF Properties Setup

TIFF Properties Setup is used to set up TIF properties when printing to TIFF file.
TIFF Color: 1 Bit, 4 Bit, Gray, 8 Bit, 24 Bit
Compress: No Compression, RLE, CCITT Group 3, CCITT Group 4, LZW, Jpeg, Packbits
TIFF Page: Single Page, Multi Page
X: X-dpi, can be customized addition the value listed
Y: Y-dpi, can be customized addition the value listed



4-4-6-9 Account Log

Account Log is used to do statistics and indexing to some transaction printing. By using this function, you can get how many pages it is printed by a certain account or a index fieldname.



4-4-7 Window menu

Refer to 4-2

4-4-8 Help menu

4-4-8-1 About VariPrint

It describes the copyright information of VariPrint.

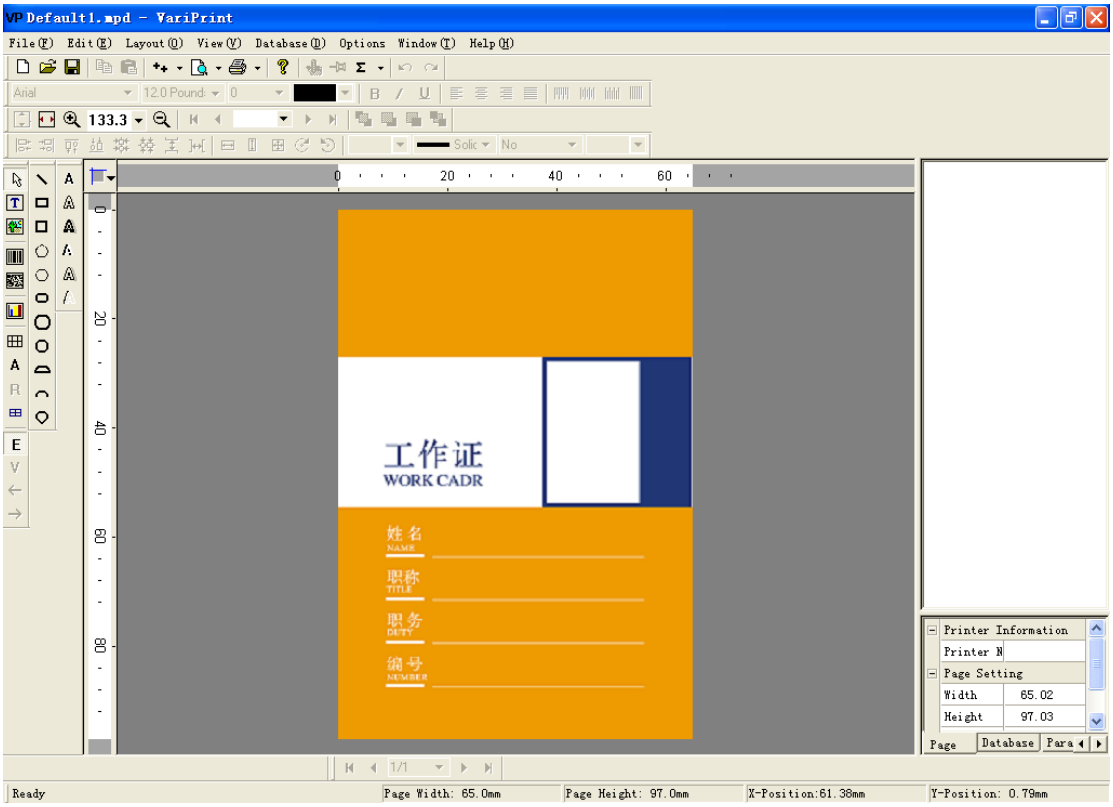
4-4-8-2 User guide

VariPrint's user guide is in PDF format, click to open it.

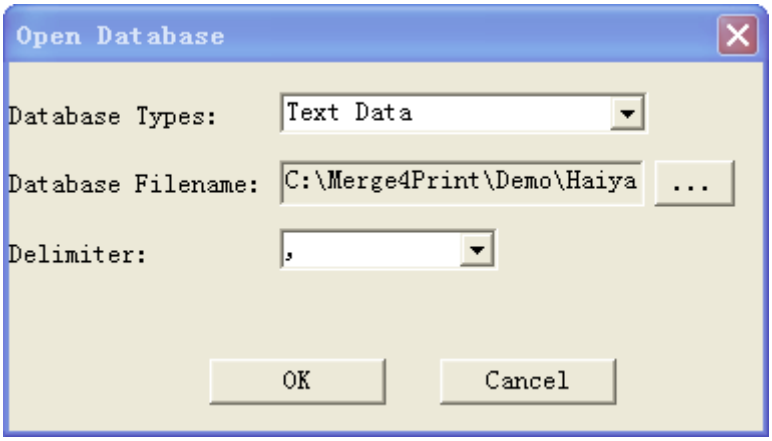
Chapter 5 Sample demonstrations

5-1 The simplest project

1. Create a new project by Click **New** in the **File** menu, select a RGB or CMYK image as a template.

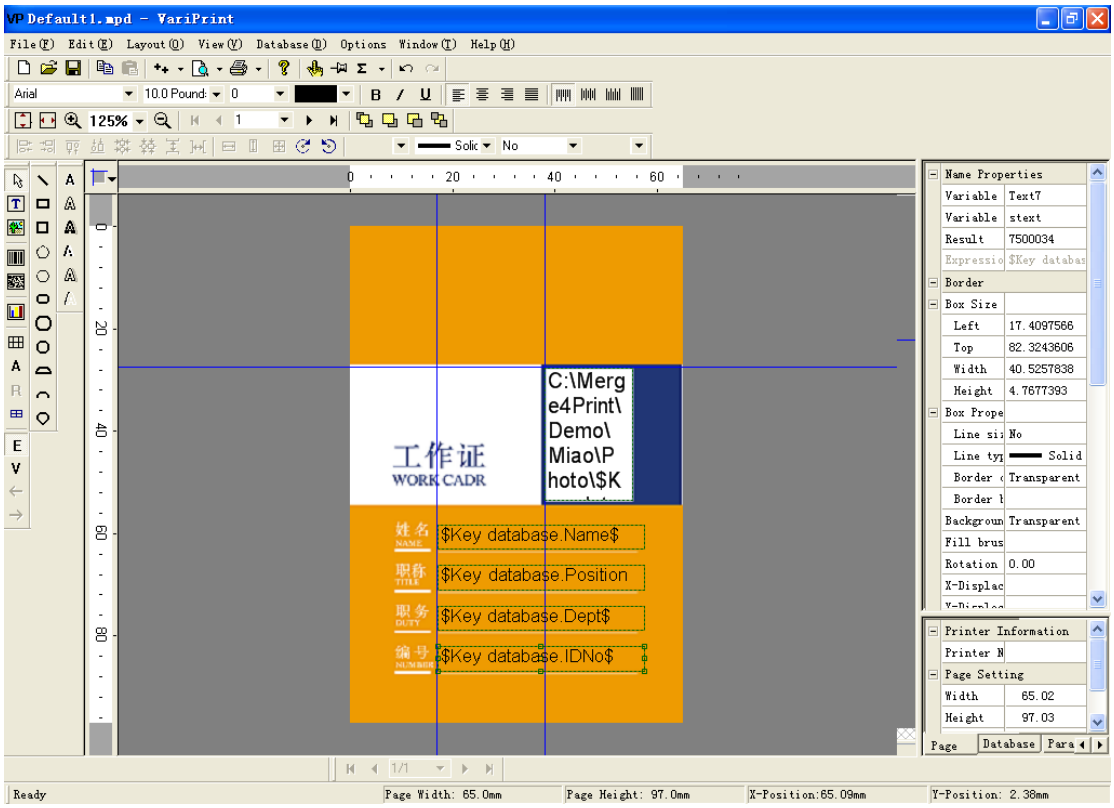


2. Open a database by click **Open** in the **Database** menu. Select a *.csv file as data source.



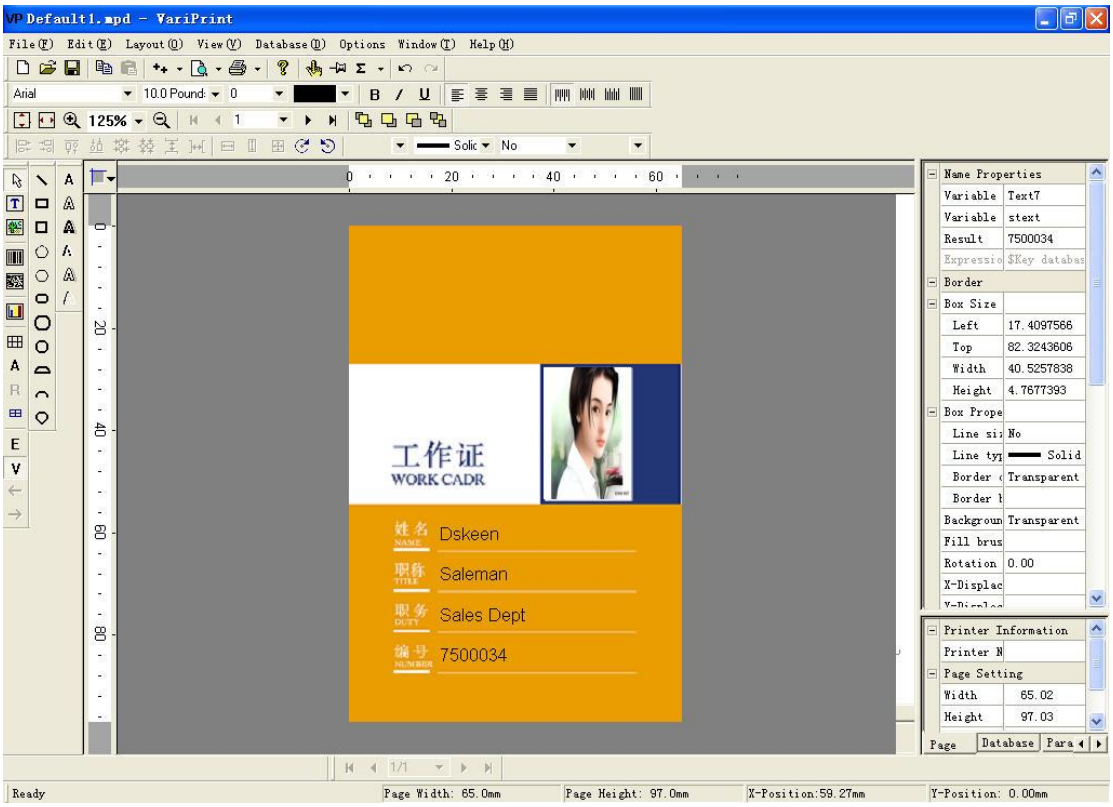
3. Use Variable tool to create a box. Double click the box and double click the fieldname to add fields from Key database fields list. If you create a variable image box by using Variable image tool, address to Folder path under the **Image Properties**, select a folder where variable images place at first. Then double click the box to select a fieldname as a

string defining the filename of image. For example, if the variable image filename is titled by name, such as Dskeen.jpg, Gandson.jpg…etc., and these name is listed as a field in the database. You can double click $key.database.name$ and add .jpg at the end of it. The string presents $key.database.name$.jpg

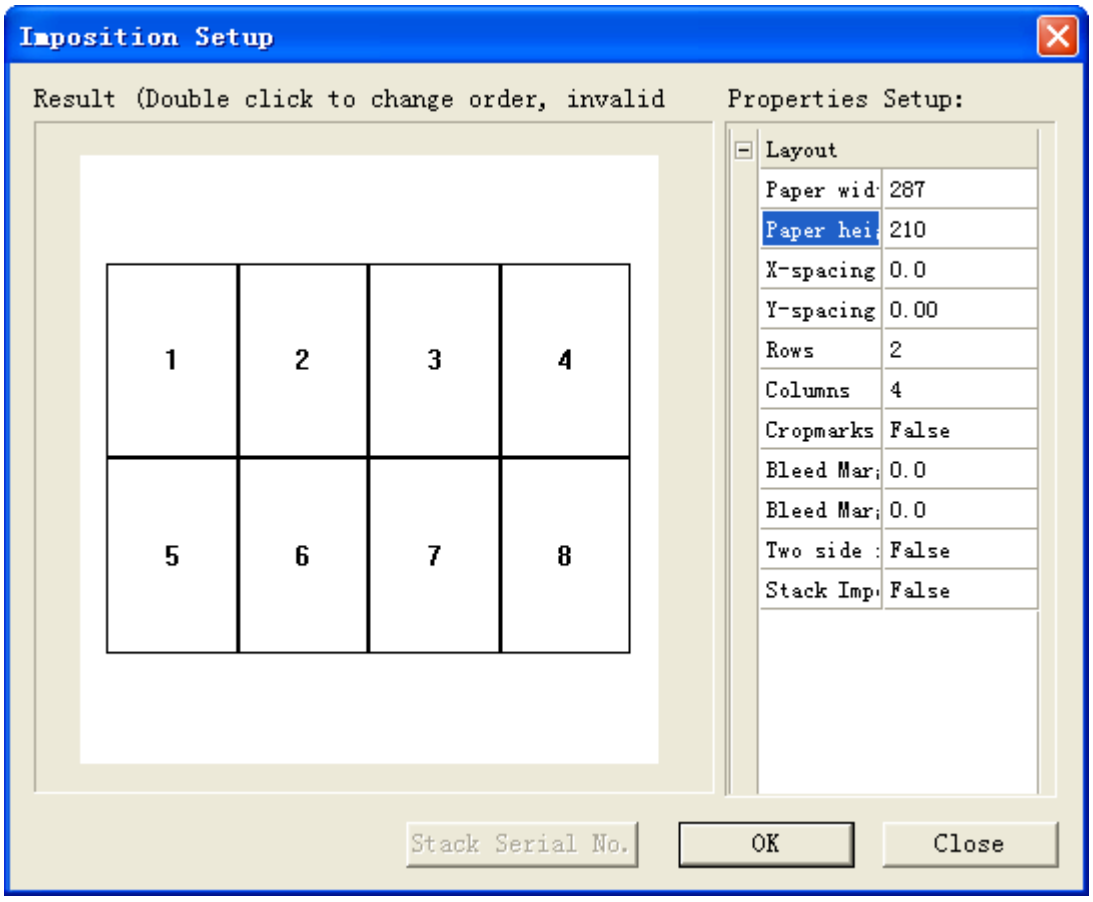


4. Setup variables properties in the properties area.

5. Preview the layout by clicking **V** from Edit mode to View mode.



6. If you want to print in the way of imposition, go to click **Imposition Setup** in the **Options** menu, do setting as follows.



7. Print the document by selecting the **PDF** button, you can select printing variables only or template plus variables.

Print variables only:

Dskeen
Saleman
Sales Dept
7500034

Ganderson
Saleman
Sales Dept
95000000012

Byost
HR Mgr
HR Dept
95000000013

Ai Kato
Fanancial Mgr
Financial Dept
95000000001

Ai Takamatsu
Accounter
Financial Dept
95000000002

Aiko Sato
Product Manager
Marketing Dept
95000000003

Akane Kanazawa
Product Manager
Marketing Dept
95000000004

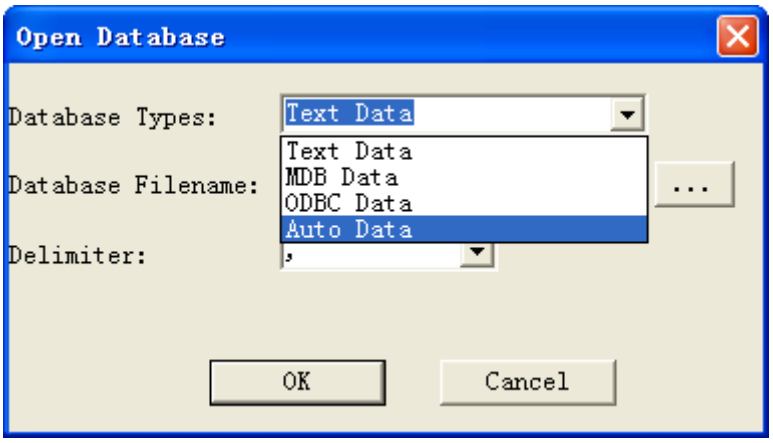
Akane Oda
Marketing Mgr
Marketing Dept
95000000005

Print templates plus variables:

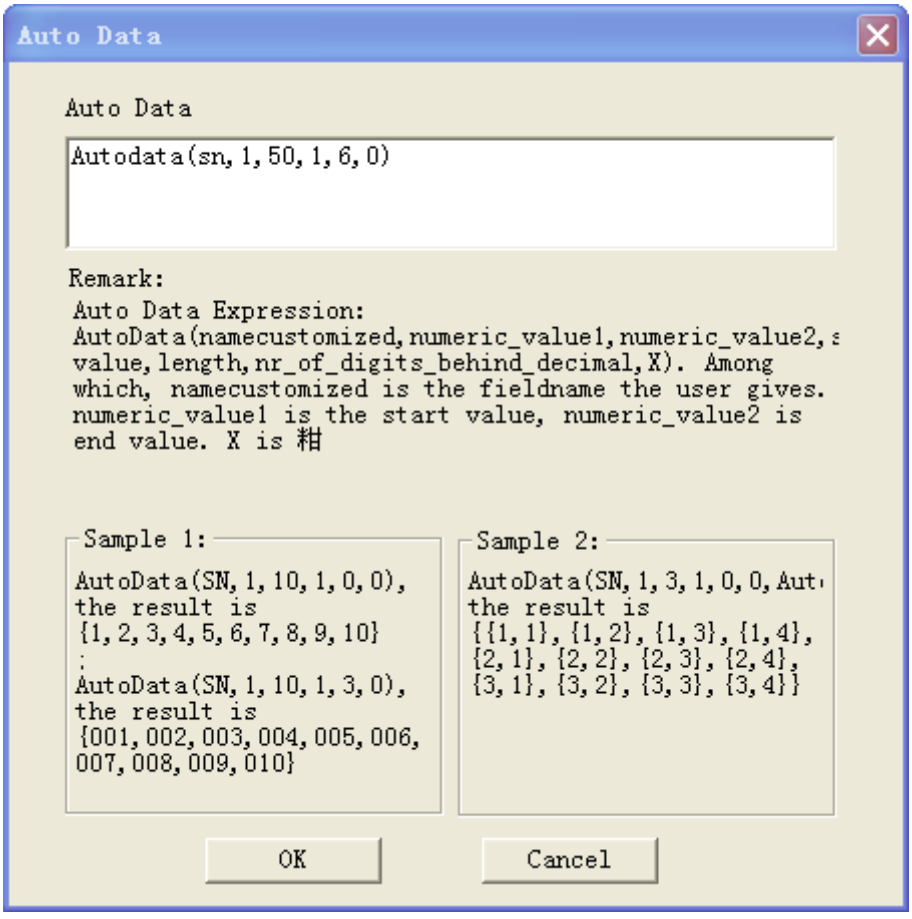
5-2 Create a serial number

This sample describes how to create a serial number and print with stack imposition. Some previous steps refer to 4-4-1 The simplest project.

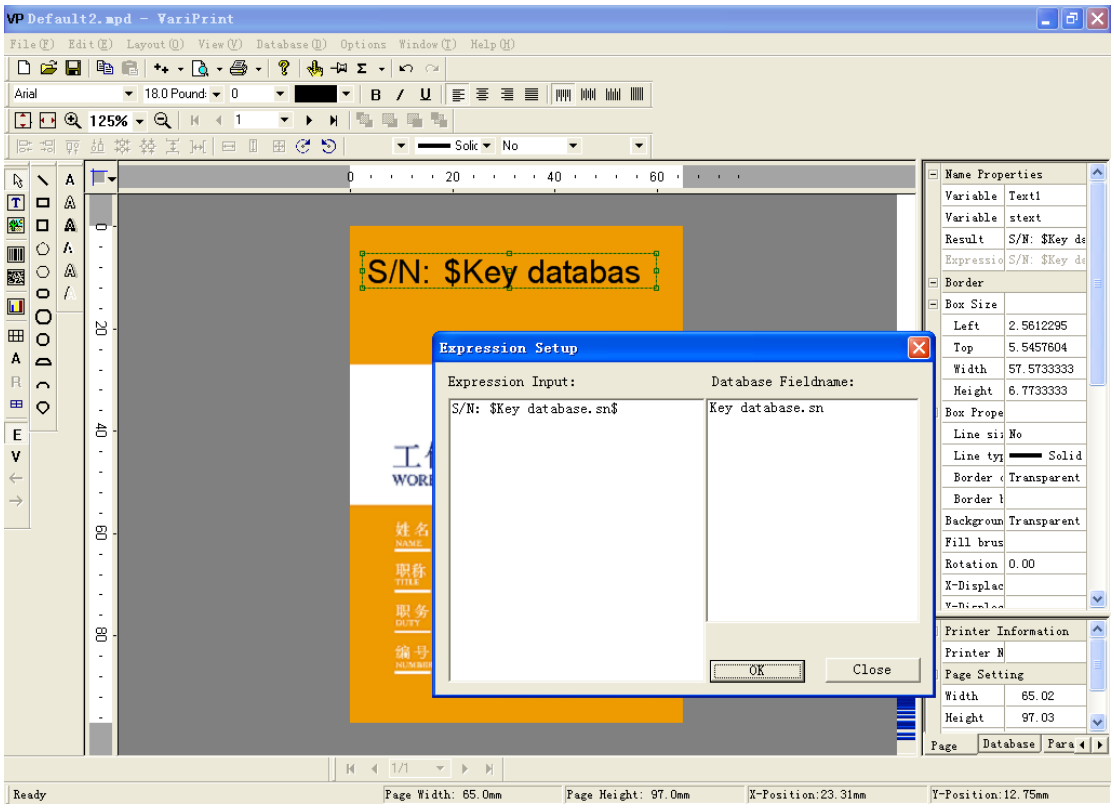
1. Open a database by click **Open** in the **Database** menu. Select **Auto Data** as data source.

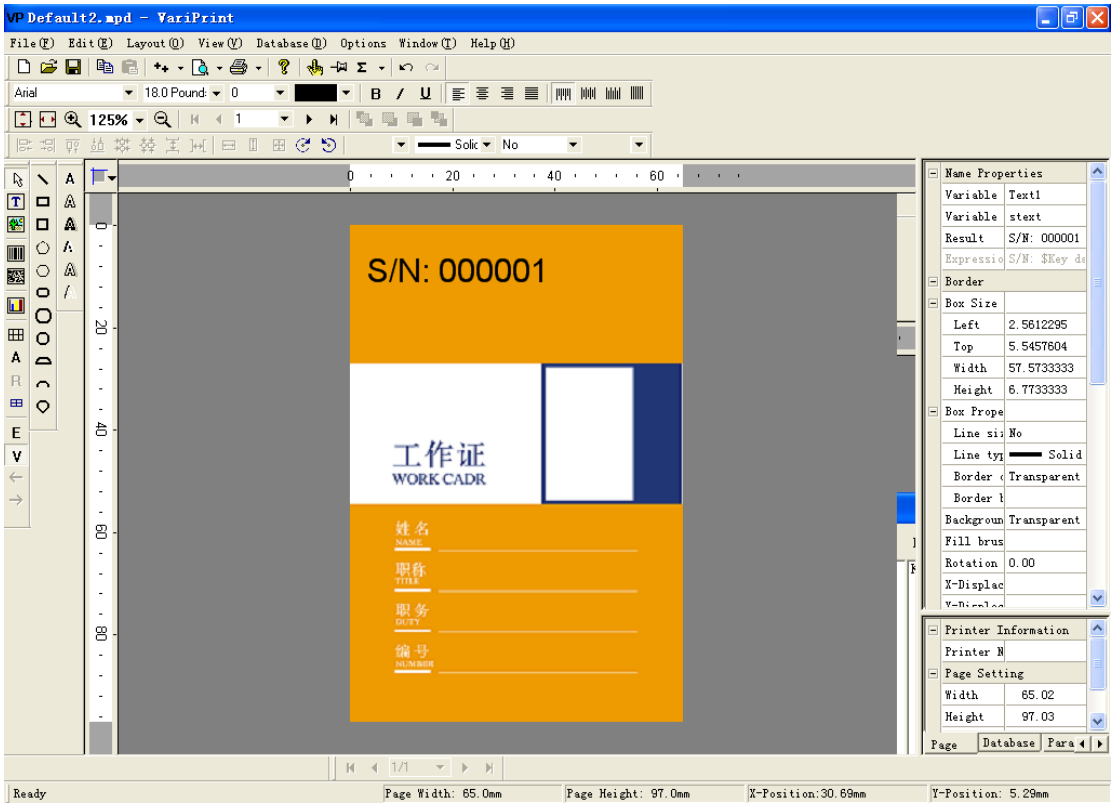


2. If you want to create serial number like 000001, 000002, 000003, … 000050, please define Autodata parameter as follows:

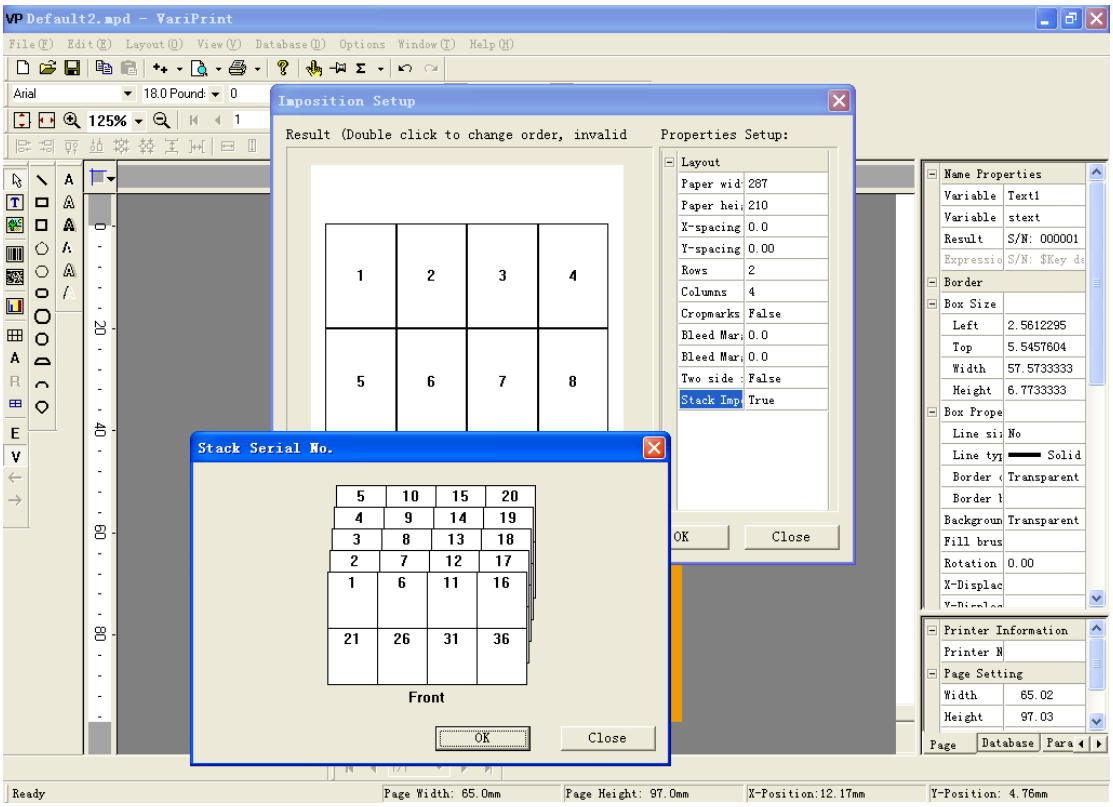


3. After Autodata definition, add $key database.sn$ defined in the Autodata setting in the **Expression Setup**. Now you have created serial number and add it successfully.

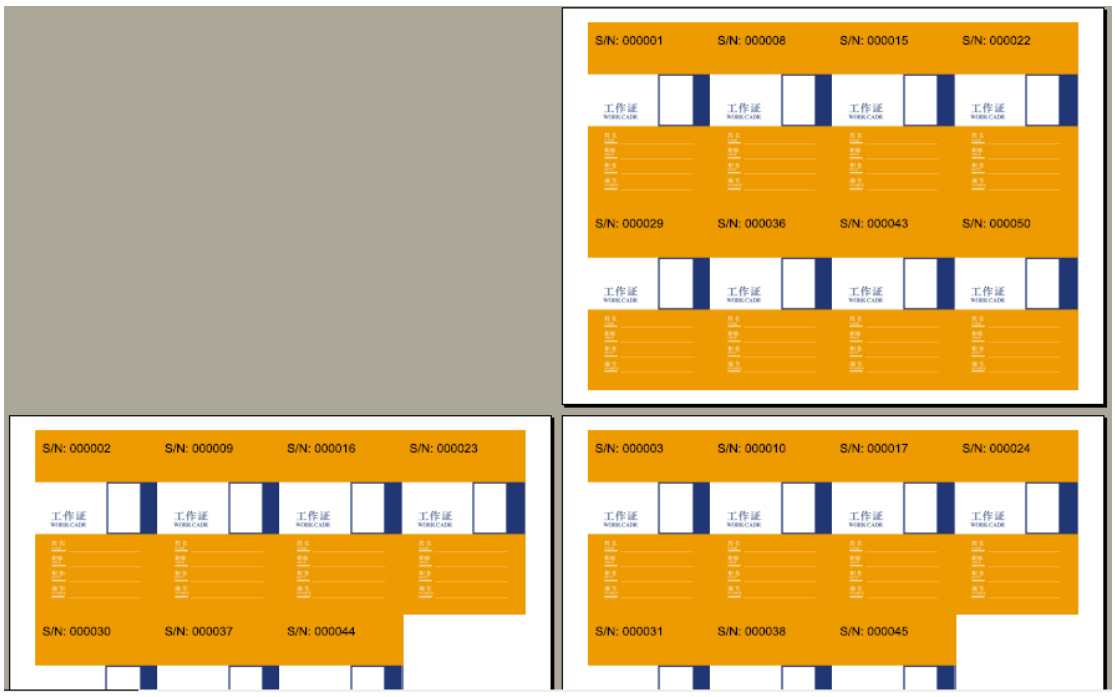




4. If you want to print with stack imposition, go to **Imposition Setup** and select **Stack Imposition** to True.



This is result of print with stack imposition.



Appendix A

Parameter List

abs(value1) Calculate abstractive value, if the original value is less than zero, the result will be its opposite one. If the original value is more than or equal to zero, the result will be the same with original. For instance, abs (-14.5) =14.5; abs (24.5)=24.5.

exp(value1) The result will be e^v for instance exp (2) = e^2=7.389056

floor(value1) The result will be the abstractive largest integer. For instance, floor(4.69) = 4 , floor(-4.69) = -5.

mod(value1,value2) The result will be the remain of value1/value2. For instance, mod(10 , 3) = 1 , mod(-10 , 3) = -1.

ln(value1) The result will be ln(value) For instance, ln(14.5) = 2.674149

log(value1) The result will be log(value1), For instance, log(14.5) = 1.161368

pow(value1,value2) The result will be $v1^{v2,}$ For instance, pow(3.4,4) = 133.6336

sqrt(value1) The result will be $value^{1/2}$, For instance, sqrt(4.5) = 2.12132

round(value1,value2) round value according to the required remain. For instance
round(3.446 , 2) = 3.45 , round(3.446 , 1) = 3.4 , round(3.446,3) = 3.446,
round(-3.446,2) = -3.45, round(-3.446, 1) = -3.4, round(-3.446,3)=-3.446.

trunc(value1,value2) trunc the value or trunc the value according to the required remain.
For instance, trunc(3.456 , 3) = 3.456 , trunc(3.456 , 2) = 3.45 , trunk(3.456 , 1) = 3.4
trunk(3.456 , 0) = 3

Left(string,nLen) To reduce appointed number from the text left. For instance, Left(This is an book , 4) = This
Note: Chinese character is consisting of two bytes, if part number is single, the result appear wrong.

Mid(string,nStart,nEnd) Remain characters from appointed beginning position to terminal position. For instance, Mid(This is an book , 7, 9) =an

Right(string,nLen) to remain appointed byte number from text right. For instance, Right(This is an book , 4) = book

ConvertNumToRMB(value,nDotLen) Convert amount into capital RMB expressions.

ToDay(Format) Output present date according to the appointed format, following is formats: yyy(year),yy(the last two numbers of year), mm(month) dd(days),,ww(week), hh(hour) HH(Chinese hour) hm minute ,ss(second) .You may arrange these above types of date freely. When all elements arranged are Chinese, the last expression of date will be Chinese. Or numbers will express the date. The smallest elements may be divided by other bytes freely. For instance:
ToDay(yyyy-mm-dd) = 2005-1-23 ToDay(yyyy/mm/dd) = 2005/1/23 , ToDay(mm-dd-ww) = 1-23-Sunday.
ToDay(hh-hm-ss)= 8-49-55

Date(yyyy,mm,dd,format) Convert appointed data into appointed format. These formats may be yyyy yy mm dd & YYYY YY MM DD, refer to the use of Today.

Time(hh,hm,ss,Format), Convert appointed time into appointed format. Format will be hh hm ss & HH HM SS. Refer to the use of ToDay.

Week(ww,Format), Convert appointed week into appointed format number of week should be 1 to 7. The format is ww.

Replace(old_text,start,len,new_text), Replace is used to replace parts of text with setting string. For instance, Replace(123456789,3,3,***)=12***6789

ConvertNumToCaptialStr(value1), Convert number to Chinese capital number.

ConvertNumToCaptialNum(value1), Convert number to Chinese capital number.

ConvertNumToSpecial(str1,nStartValue,nProspectiveValue,nByte),

CompareStr(string1,string2), Compare two string. For instance, if two string are totally different, CompareStr(above,below)=1, if two string are same only capital or not, CompareStr(above,Above)=-1, if two string are totally same,
CompareStr(above,Above)=0

CompareNocaseStr(string1,string2), Compare two string. For instance, if two string are totally different, CompareStr(above,below)=1, if two string are same even if capital or not, CompareStr(above,Above)=0, CompareStr(above,above)=0

ConnectStr(str1,str2), Connect two string together. For instance, ConnectStr(abc,def) = abcdef

IF(logical_test,value_if_true,value_if_false), It is used to do logic process. For instance,

IF($score$>80,good,bad) means if score>80, select “good”, if not, select “bad”.
logical_test can be a another parameter. For example,
If(CompareStr(sex,male)=0,male,female) means if sex is male, select “male”, if not, select “female”

NumFormat(str1,nDotLen,nCammarLen), Define the string format. nDotLen means number of decimal, if nCammarLen=1 means add comma, if nCammarLen=0 means don’t add comma. Fotr instance, NumFormat(123456789,2,1)=123,456,789.00

IsEmpty(str1), Check if the string is empty or not. For instance, if $name$="", then IsEmpty($name$)=1, if $name$="abc", then IsEmpty($name$)=0

Len(str1), Get the string's length. For instance, Len(abcdef)=6

Fill(str1,totalLen,fillChar,flag). Use a character to fill in the rest of string extended, totalLen means the length of string to be extended, fillChar means character, if flag=0, add character in the front of string, if flag=1, add character and the end of string. For instance, Fill(1234,6,0,0)=001234; Fill(1234,6,0,1)=123400; Fill(1234,6,A,0)=AA1234; Fill(1234,6,A,1)=1234AA