

Instruction Manual

Sublimation Type Retransfer Printer CX-330

Printer Driver



Operating Environment

This software runs on the following systems.

- Microsoft® Windows® 8 32bit/64bit
- Microsoft® Windows® 7 (First Release, Service Pack 1) 32bit/64bit
- Microsoft® Windows Vista™ (Service Pack 1/2) 32bit
- Microsoft® Windows® XP (Service Pack 2/3) 32bit
- Microsoft® Windows® 2000 Professional (Service Pack 4) 32bit

Software License Agreement

Users need to accept the terms and conditions of the software license agreement to use this software. Please read through the “Software License Agreement” at the back of the “CX-330 Instruction Manual” (separate booklet) before using this software.

Mar. 2014, 5th Edition

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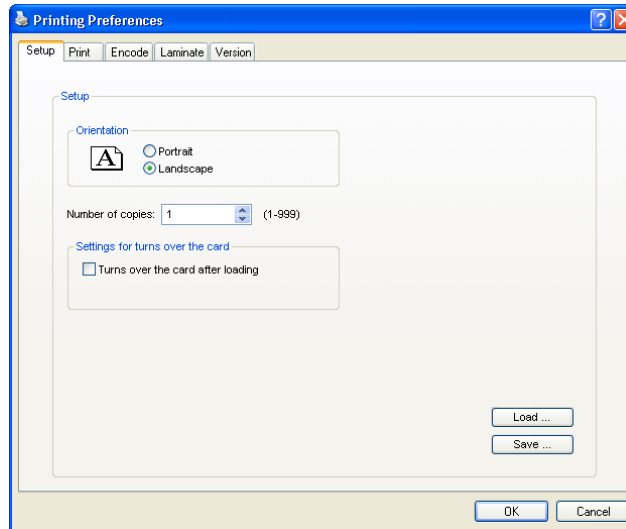
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Notes about this manual

- (1) All rights reserved. Unauthorized reproduction and use of this manual is strictly prohibited.
- (2) Details of this manual or printer specifications and appearance are subject to changes without prior notice.
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Printer Driver Settings

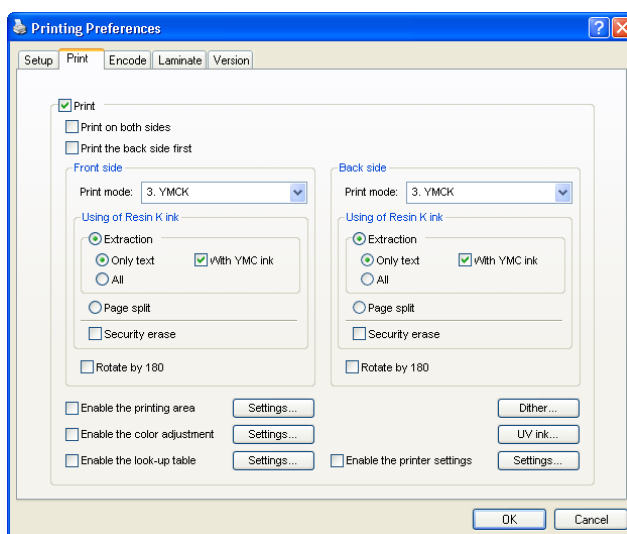
[Setup] Tab Sheet



Item	Description
Orientation	Settings for printing orientation.
Portrait	Print with the shorter edge of the card on top.
Landscape	Print with the longer edge of the card on top.
Number of copies	The number of copies to issue. Enter a number up to 999.
Settings for turns over the card	Settings for turns over the card.
Turns over the card after loading	Turns over the card after loading.
Load ...	Loads setting information from a specified file.
Save ...	Saves setting information to a specified file.

Printer Driver Settings (Cont'd)

[Print] Tab Sheet



Item	Description
Print	Executes printing.
Print on both sides	Prints both sides of the card.
Print the back side first	Prints the image on the back side first when printing on both sides of the card. Memo: The checkbox is enabled during double-sided printing.
Front side	Print settings for the front side of the card.
Print mode	Ink list. Specify the ink to use for printing. Caution: Print error occurs if an ink that is not mounted to the printer is selected.
1. YMC	Prints using the YMC ink.
2. K	Prints using the Resin K ink.
3. YMCK	Prints using the YMC ink and Resin K ink.
5. K+UV	Prints using the Resin K ink. Prints the setting data in the [UV ink] dialog using the UV ink.
6. YMCK+UV	Prints using the YMC ink and Resin K ink. Prints the setting data in the [UV ink] dialog using the UV ink.

(Cont'd)

Caution

On the control specification of the printer, when you print using 5 color ink ribbon (YMCK+UV, YMCKK, etc.), it is necessary to print with Resin K ink.

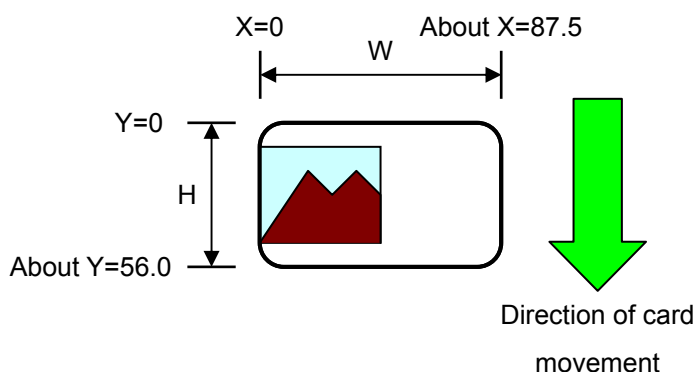
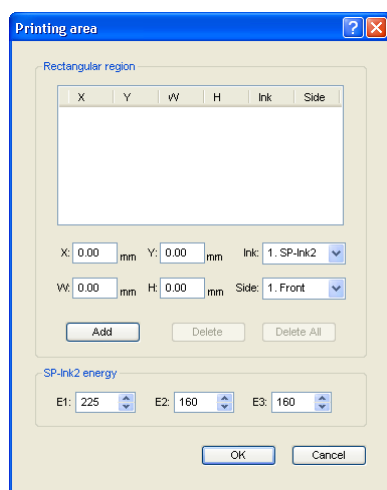
Printer Driver Settings (Cont'd)

[Print] Tab Sheet (Cont'd)

Item	Description
Resin K ink	For specifying the component to print using the Resin K ink.
Extraction	Prints the black color component on each page using the Resin K ink.
Only text	Prints only the black color text using the Resin K ink.
All	Prints all black color components using the Resin K ink.
With YMC ink	Prints the background of the specified black color component using the YMC ink.
Page split	Prints all components on a specific page using the Resin K ink.
Security erase	Enables the Resin K security feature.
Rotate by 180	Prints the page upside down.
Back side	Print settings for the back side of the card. (Refer to settings for the front side.)
Enable the printing area	Enables the printing area of the peel-off ink and the area that is not printed by all (YMCKUV) inks. Set a value in the [Printing Area] dialog.
Settings...	Opens the [Printing Area] dialog.
Enable the color adjustment	Adjusts the color. Set a value in the [Color Adjustment] dialog.
Settings...	Opens the [Color Adjustment] dialog.
Enable the look-up table	Uses the look-up table. Set a value in the [Look-up Table] dialog.
Settings...	Opens the [Look-up Table] dialog.
Dither	For specifying settings related to dithering. Set a value in the [Dither] dialog. Memo: Selecting [2.K], [3.YMCK], [5.K+UV] or [6.YMCK+UV] in [Print mode] enables the [Dither...] button.
UV ink	For specifying settings related to UV ink print data. Set a value in the [UV ink] dialog. Memo: Selecting [5.K+UV] or [6.YMCK+UV] in [Print mode] enables the [UV ink...] button.
Enable the printer settings	For specifying settings of the printer unit. Set a value in the [Printer Settings] dialog.
Settings...	Opens the [Printer Settings] dialog.

Printer Driver Settings (Cont'd)

[Printing Area] Dialog

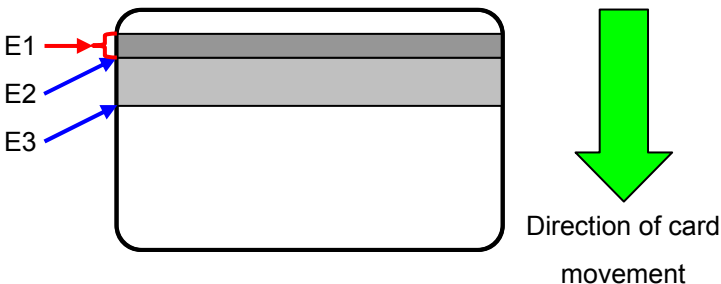


Item	Description
	Settings related to the <u>printing area</u> using Special ink 2 or <u>areas not to be printed</u> using all YMCKUV inks.
Area	Printing area information.
X	Start X-coordinate of the printing area by millimeter.
Y	Start Y-coordinate of the printing area by millimeter.
W	Width of the printing area by millimeter.
H	Height of the printing area by millimeter.
Ink	Ink valid for the printing area. 1. SP-Ink2 : Area to print using the Special ink 2. 2. YMCK : Area not to be printed using all YMCKUV inks.
Side	The side of the card for which the printing area is valid. 1. Front : Front side 2. Back : Back side
Add	Registers the input data. You can enter up to 8 input data.
Delete	Deletes the information selected in the list.
Delete All	Deletes all registered information.

(Cont'd)

Printer Driver Settings (Cont'd)

[Printing Area] Dialog (Cont'd)

Item	Description
SP-Ink2 energy	Print density of the Special ink 2.
E1, E2, E3	<p>Do not change the following values. E1 : 225 , E2 : 160 , E3 : 160</p> <p>Caution: Each of the set values must satisfy the following requirements.</p> $E1 \geq E2 \geq E3$ 

Caution

Special ink 2(SP-Ink2) can be used by a printer with PO (peel off) print function.
Please consult our authorized dealers for details.

The following values are recommendation when you print with PO (peel off) function on the magnetic stripe area of the card.

X	Y	W	H	Ink	Side
0	0	87.46	13.89	1. SP-Ink2	1. Front
0	0	87.46	15.92	2. YMCK	1. Front

Remarks : The input value of the text box may differ from the value of the “Printing area information” portion by an accidental error in calculation.

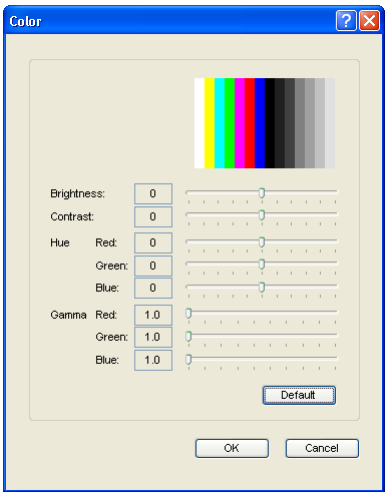
Note

The printing starting position that is set with application software may not match with the above mentioned X=0 and Y=0.

It is not possible to print on the card about 1mm from the edge of the picture.
Please refer to figure in page 42 of this manual for details.

Printer Driver Settings (Cont'd)

[Color Adjustment] Dialog



Item	Description
	Settings related to color adjustment.
Brightness	Brightness level.
Contrast	Contrast level.
Hue	Hue level.
Gamma	Gamma level.
Default	Restores the settings to the default values.

Printer Driver Settings (Cont'd)

[Look-up Table] Dialog

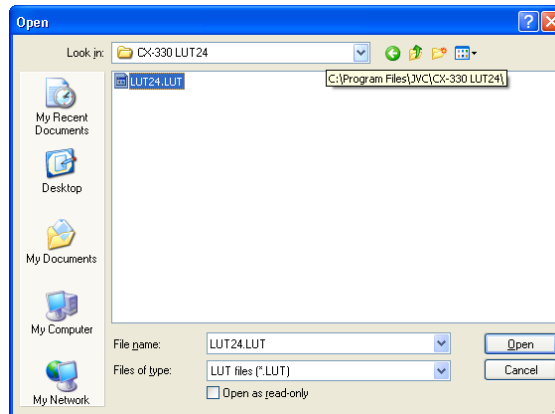


Item	Description
	Settings related to the look-up table. <ul style="list-style-type: none">• Select YMCK conversion table or full color conversion.• By selecting the checkbox at the beginning of a line in the list, the look-up table of that line is enabled.
Name	Registered name of the look-up table file. You can enter a name up to 30 characters.
File	Look-up table file. Click the [Select] button to select a file. Memo 1: For YMCK conversion table, select the look-up table file (*.CSV) in CSV format. Memo 2: For full color conversion, select the look-up table file (*.LUT) of the Color Conversion Data.
Add	Registers the input data. You can enter up to 16 input data.
Delete	Deletes the information selected in the list.
Delete All	Deletes all registered information.

Printer Driver Settings (Cont'd)

■ Registering the look-up table file

1) Click the [Select]. An [Open] screen appears.



2) Select from [Look in] the folder where the look-up table file is saved.

3) Select the file format at [Files of type].

- If [CSV files (*.CSV)] is selected, the look-up table file in CSV format is displayed.
- If [LUT files (*.LUT)] is selected, the look-up table file of the Color Conversion Data is displayed.

4) Specifies the file.

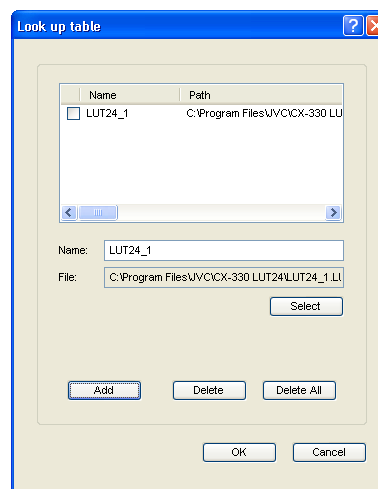
5) Click the [Open].

- The [Open] screen closes.
- The file selected in [File] is displayed.

6) Enter the registered name in [Name].

7) Click [Add].

- The registered name is displayed in the list.



8) Select the checkbox at the beginning of the line in the list.

9) Click [OK].

Printer Driver Settings (Cont'd)

■ File structure of the table conversion of YMCK unit

- Data format of the file is CSV (Comma Separated Values).
- Delimiter character is comma (ASCII character code: 0x2c) or LF (Line Feed = ASCII character code: 0x0A).
- There is a total of 1024 fields. This is comprised of four planes, each containing 256 fields.
- The planes are arranged in the order of yellow, magenta, cyan, and black colors.
- The value of each field ranges between 0 and 255.

■ Full color conversion data

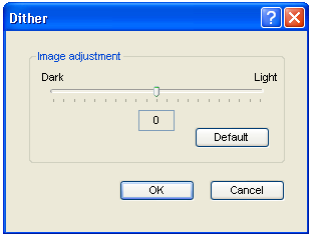
- The full color conversion data file is saved in the folder specified at "Installing the Color Conversion Data".
- It may take longer time to print if full color conversion is used.

Caution

If the look-up table file is incorrect, error will be displayed during printing and the printing will stop.

Printer Driver Settings (Cont'd)

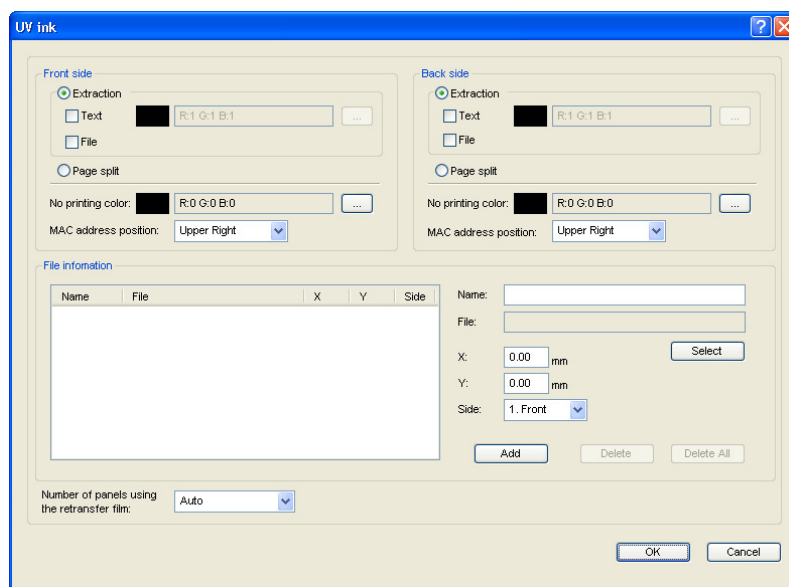
[Dither] Dialog



Item	Description
	Settings related to dithering. Caution: This setting is valid only when the [Mode] item inside the [Print] tab is specified as <u>2.K</u> or <u>5.K+UV</u> , and when <u>Page split</u> is selected for [Resin K ink].
Image adjustment	Image adjustment value.
Dark	Darkens the printed image after dithering.
(0)	Default value.
Light	Brightens the printed image after dithering.
Default	Restores the settings to the default values.

Printer Driver Settings (Cont'd)

[UV ink] Dialog



Item	Description
	<p>Settings related to the data to be printed using the UV ink.</p> <p>Settings of “MAC address position” and “Number of panels using the retransfer film” are in this section.</p> <p>Caution: This setting is valid only when the [Mode] item of the [Print] tab is specified as <u>5.K+UV</u> or <u>6.YMCK+UV</u>.</p>
Front side	Settings for the front side of the card.
Extraction	Prints the following color component on each page using the UV ink. Refer to [Caution *1].
Text	<p>Prints the text of a specified color using the UV ink with maximum density.</p> <p>Note: White and black colors cannot be selected.</p>
File	Prints the picture files registered by list of “File information” using the UV ink.
Page split	<p>Prints all components on a specific page using the UV ink with 256 gradation. Page split is divided in order of YMC ink, Resin K ink and UV ink.</p> <p>Refer to [Caution *2].</p>

(Cont'd)

Printer Driver Settings (Cont'd)

[UV ink] Dialog (Cont'd)

Item	Description
No printing color	<p>Selected color is not printed using the UV ink.</p> <p>Note1: The background of UV ink picture is specified here. Paint over the background of picture by a specific color using graphic software etc. If background color is the same as part of the picture, it will not be printed. So please select background color carefully.</p> <p>Note2: The color selected here does not influence the color specified by [Extraction]-[Text]. Even when the same color is selected, the text of the color is printed.</p>
MAC address position	<p>The network (Ethernet) MAC address of the printer is printed at the following specified position using the UV ink.</p> <p>1. Upper Right : Upper right position 2. Lower Left : Lower left position</p> <p>Refer to [Caution *3].</p>
Back side	<p>Settings for the back side of the card.</p> <p>-----</p> <p>(Refer to settings for the front side.)</p>
	<p>Settings related to the printing picture file using the UV ink.</p> <p>Note: This setting is valid when the [Extraction]-[File] is specified at front side or back side.</p>
Name	Registered name of the picture file. You can enter a name up to 30 characters.
File	<p>Picture file. Click the [Select] button to select a file.</p> <p>Refer to [Caution *4].</p>
X	<p>Start X-coordinate of the printing picture file by millimeter.</p> <p>When [Landscape] at [Orientation] inside [Setup] tab is set, the value is 0.00 to 87.4. When [Portrait] is set, the value is 0.00 to 55.9. The data which is outside of the printing area is not printed.</p>
Y	<p>Start Y-coordinate of the printing picture file by millimeter.</p> <p>When [Landscape] at [Orientation] inside [Setup] tab is set, the value is 0.00 to 55.9. When [Portrait] is set, the value is 0.00 to 87.4. The data which is outside of the printing area is not printed.</p>
Side	<p>The side of the card for which the printing area is valid.</p> <p>1. Front : Front side 2. Back : Back side</p>
Add	Registers the input data. You can enter up to 8 input data.
Delete	Deletes the information selected in the list.
Delete All	Deletes all registered information.

(Cont'd)

Printer Driver Settings (Cont'd)

[UV ink] Dialog (Cont'd)

Item	Description
Number of panels using the retransfer film	<p>Number of panels using the retransfer film.</p> <p>Auto : When the data of other ink does not overlap with the printing point of UV ink, it prints automatically using the retransfer film of 1 panel.</p> <p>1 panel : Always prints using the retransfer film of 1 panel. However, when the data of other ink overlaps with the printing point of UV ink, the data of other ink is adjusted.</p> <p>2 panels : Always prints using the retransfer film of 2 panel.</p> <p>Refer to [Caution *5].</p>

Caution *1 : About the priority of printing data.

- 1) A extracted text has the priority higher than a picture file, and is always printed on the top surface.
- 2) The picture file is processed in order of registration. When the printing range overlaps, the data of the picture file registered later overwrites former data.

Caution *2 : The page number of the printing document and the setup of [Page split] become the following examples.

setup of [Page split]				The page number of the printing document					
Resin K ink		UV ink							
Front	Back	Front	Back	1	2	3	4	5	6
-	-	-	-	YMCK	YMCK				
set	-	-	-	YMC	K	YMCK			
-	-	set	-	YMCK	UV	YMCK			
set	-	set	-	YMC	K	UV	YMCK		
-	set	-	set	YMCK	YMC	K	UV		
set	set	-	-	YMC	K	YMC	K		
-	-	set	set	YMCK	UV	YMCK	UV		
set	set	set	-	YMC	K	UV	YMC	K	
set	set	set	set	YMC	K	UV	YMC	K	UV

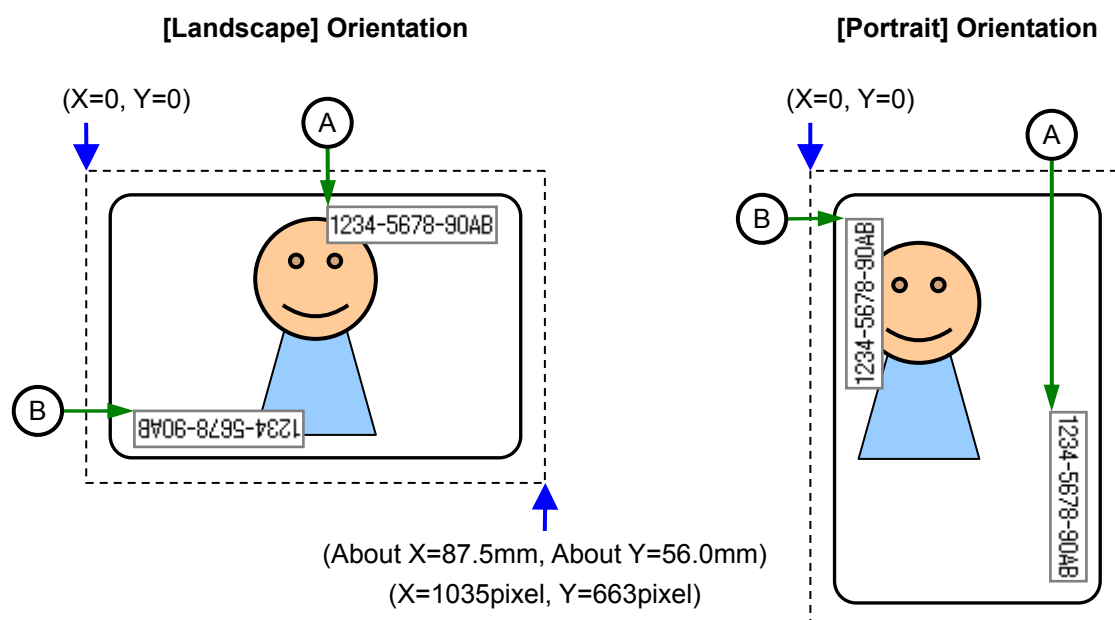
ink This ink is printed on the front side. ink This ink is printed on the back side.

When the [Page split] is not set, extracts the data of UV ink from the data of YMC ink, or uses the picture file for UV ink.

Printer Driver Settings (Cont'd)

Caution *3 : About the MAC address position.

- 1) In the case of UV print, the printer always prints the MAC address.
- 2) The position of MAC address can be set up separately to front-side and back-side by the printer driver.
The following two position can be chosen.



(A) The position of MAC address at [Upper Right].

(B) The position of MAC address at [Lower Left].

[Landscape] at Orientation				The position of MAC address			[Portrait] at Orientation			
X	Y	Width	Height				X	Y	Width	Height
64.69	1.52	19.47	2.88	mm	Upper Right	mm	51.82	64.69	2.88	19.47
764	18	230	34	pixel	(A)	pixel	612	764	34	230
3.56	51.73	19.47	2.88	mm	Lower Left	mm	1.61	3.56	2.88	19.47
42	611	230	34	pixel	(B)	pixel	19	42	34	230

The above setting of MAC address is always effective regardless of the printer unit setting.

Indicated data shows the relative position from the starting point of the picture. So actual printing position on the card will include some difference from the above mentioned indicated data.

Note

The printing starting position that is set with application software may not match with the above mentioned X=0 and Y=0.

It is not possible to print on the card about 1mm from the edge of the picture.

Please refer to figure in page 42 of this manual for details.

Printer Driver Settings (Cont'd)

Caution *4 : The following file type of Windows® Bitmap (*.BMP) are supported.

No.	Type	Bit(s)	Comments
1	Monochrome Black & white	1	Normally, the white color is printed using the UV ink with maximum density. When the white color is selected at the [No printing color], the black color is printed using the UV ink with maximum density.
2	2 Color	1	It applies the color palette, and prints using the UV ink with 256 gradation. When one of the colors in the color palette is selected at the [No printing color], other colors are printed using the UV ink with maximum density.
3	16 Color	4	It applies the color palette, and prints using the UV ink with 256 gradation.
4	256 Color	8	
5	32768 Color	15	Prints using the UV ink with 256 gradation. The supported type is "(MSB)GGGBBBBB-XRRRRRGG(LSB)" only.
6	24-bit	24	Prints using the UV ink with 256 gradation.
7	32-bit	32	

Caution *5 : The number of panels using the retransfer film at the time of printing are as follows.

	Printing data	The setting of [Number of panels using the retransfer film]		
		1 panel	Auto	2 panels
Printing data which Overlaps with the UV ink are outside of MAC address area.	none	Prints by 1 panel		Prints by 2 panels
	YMC ink	Prints by 1 panel (In the overlap point with UV ink, it cannot print using the YMC ink.)	Prints by 2 panel	
	Resin K ink	Prints by 1 panel (In the overlap point with K ink, it cannot print using the UV ink.)		Prints by 2 panels
Printing data are inside of MAC address area.	none	Prints by 1 panel		Prints by 2 panels
	YMC ink	Prints by 1 panel. (It cannot print using the YMCK ink.)	Prints by 2 panels	
	Resin K ink			
	UV ink	Prints the MAC address only.		

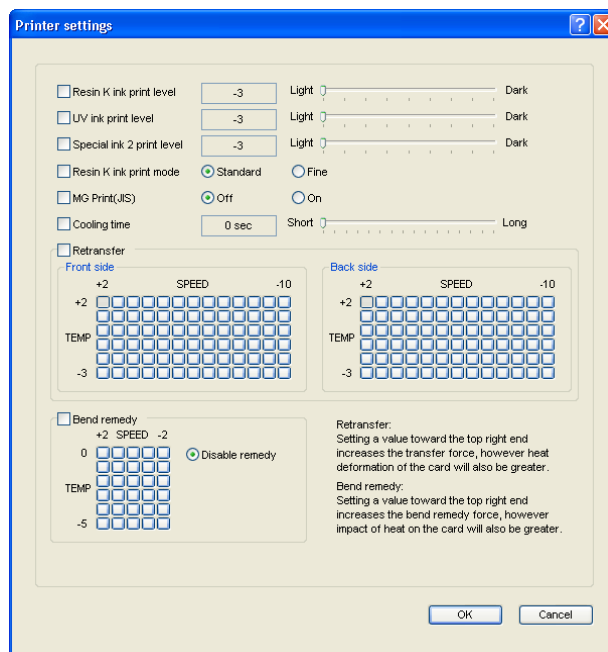
The target printing data are compared per Pixel and judged whether there is any overlap.

The priority of the number of printing panels is given to "Prints by 2 panel".

When you print using the Resin K and UV ink by 1 panel, there is no UV effect in Resin K ink portion of the printing result.

Printer Driver Settings (Cont'd)

[Printer Settings] Dialog



Item	Description
	<p>Settings related to the printer.</p> <p>Tick (<input checked="" type="checkbox"/>) the setting item to enable, followed by specifying a value. Doing so prints the data using the set values.</p> <p>When this is disabled, data is printed using the preset values of the printer unit.</p>
Resin K ink print level	<p>Print density of the Resin K ink.</p> <p>Use the “+” values to increase, and “-” values to decrease the density.</p>
UV ink print level	<p>Print density of the UV ink. (Optional)</p> <p>Use the “+” values to increase, and “-” values to decrease the density.</p>
Special ink 2 print level	<p>Print density of the Special ink 2. (Optional)</p> <p>Use the “+” values to increase, and “-” values to decrease the density.</p>
Resin K ink print mode	<p>Print quality of the Resin K ink.</p> <p>Selecting “Fine” enhances the printing quality, but slows down the printing speed.</p>
MG Print (MG JIS)	<p>For specifying the way to peel the retransfer film of cards that come with a JIS magnetic stripe when the JIS MG unit is mounted.</p>

(Cont'd)

Printer Driver Settings (Cont'd)

[Printer Settings] Dialog (Cont'd)

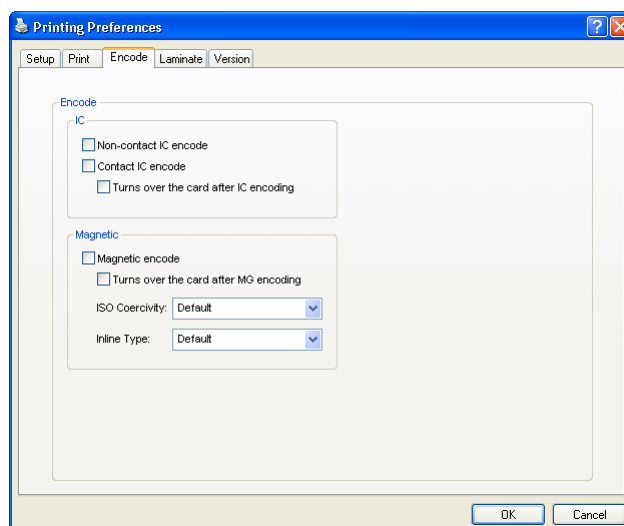
Item	Description
Cooling time	Time interval before peeling the retransfer film after retransfer is complete.
Retransfer	Settings related to retransfer. Click on the corresponding square to change the value. Note: Setting a value toward the top right end increases the transfer force, however heat deformation of the card will also be greater.
TEMP	Temperature of the retransfer roller.
SPEED	Retransfer speed.
Bend remedy	Settings related to bend remedy. Click on the corresponding square to change the value. Note: Setting a value toward the top right end increases the bend remedy force, however impact of heat on the card will also be greater. To disable bend remedy, select the "Disable remedy" button.
TEMP	Temperature of the bend remedy roller.
SPEED	Bend remedy speed.

Caution

- 1) The optimal retransfer and bend remedy settings vary according to the card type as well as environment in which the printer is used. As such, set the values after trying out under the environment where it is to be used.
- 2) If the retransfer or bend remedy settings are different from the preset temperature of the printer, it may take a while before printing starts.
- 3) There is only one standard retransfer temperature. Altering the retransfer temperature on one side changes the temperature on the other side as well.
- 4) Bend remedy is effective when printing on only one side. Setting bend remedy to a high temperature during double-sided printing may cause the card to deform significantly. As such, select the "Disable remedy" button during double-sided printing.
- 5) When bend remedy is disabled using the "Disable remedy" button, the speed is automatically set to the maximum value (+2).
- 6) If the bend remedy force becomes strong, the surface of remedy side will become lusterless.

Printer Driver Settings (Cont'd)

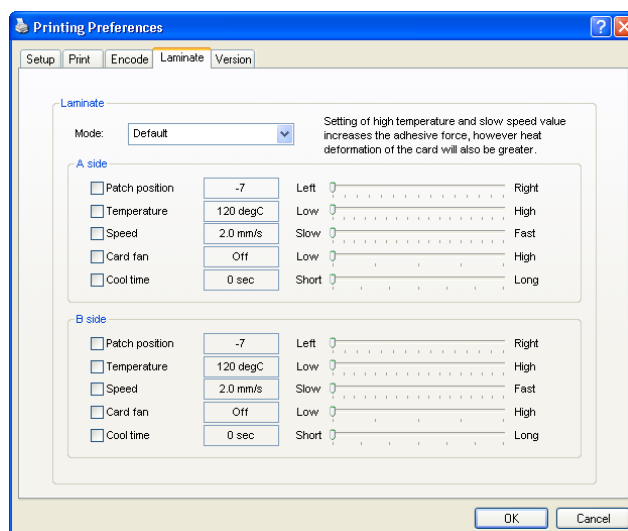
[Encode] Tab Sheet



Item	Description
Non-contact IC encode	Allows writing of data to the non-contact IC.
Contact IC encode	Allows writing of data to the contact IC.
Turns over the card after IC encoding	Turns over the card after writing data to the non-contact/contact IC.
Magnetic encode	Allows writing of data to the magnetic stripe.
Turns over the card after MG encoding	Turns over the card after writing data to the magnetic stripe.
ISO Coercivity	Coercivity with respect to the ISO magnetic stripe card. Lo-Co : Writes data using the Lo-Co coercivity value. Hi-Co : Writes data using the Hi-Co coercivity value. Default : Writes data using the preset coercivity value of the printer.
Inline type	Select the methods of inline encoding. For details, refer to “In-Line Encoding” (page 28 of this manual). None : ISO Magnetic encoding data does not use the inline encoding. Default : This method is the current default encoding. Type B : The method of Type B encoding. Type C : The method of Type C encoding.

Printer Driver Settings (Cont'd)

[Laminate] Tab Sheet



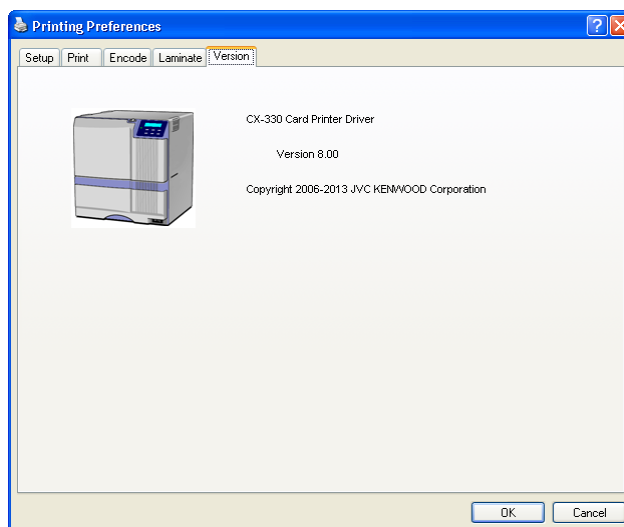
Item	Description
Mode	Information on the card face. Specify the side of the card to laminate.
A side	<p>Settings for side A of the card.</p> <p>Tick (<input checked="" type="checkbox"/>) the setting item to enable, followed by specifying a value. Doing so laminates the card using the set values.</p> <p>When this is disabled, the card is laminated using the preset values of the laminator unit.</p>
Patch position	Value for adjusting the patch position.
Temperature	Transfer temperature.
Speed	Transfer speed.
Card fan	Air volume of the cooling fan.
Cool time	Card cooling time before laminating.
B side	Settings for side B of the card. (Refer to the settings for side A.)

Caution

- 1) The optimal transfer temperature and speed settings vary according to the card type as well as the environment in which the printer and laminator units are used. As such, set the values after trying out under the environment where it is to be used.
- 2) If the transfer temperature is different from the preset temperature of the laminator unit, a longer time may be required during printing.
- 3) Setting of high temperature and slow speed value increases the adhesive force, however heat deformation of the card will also be greater.

Printer Driver Settings (Cont'd)

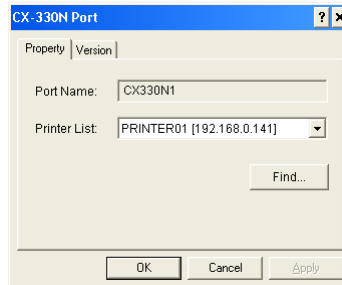
[Version] Tab Sheet



Item	Description
CX-330 Card Printer ...	Version and copyright information.

Port Monitor Settings

[Property] Tab Sheet



Item	Description						
Port Name	Name of the port. You can enter a name of up to 24 characters.						
Printer List	<p>List of connected printers. The selected printer is used for printing the card.</p> <p>Caution: The setting is incorrect if the following message appears.</p> <table><tr><th>Displayed Message</th><th>Description</th></tr><tr><td>No Device</td><td>Printer is not found.</td></tr><tr><td>No selection</td><td>Last used printer is not found. A different printer is currently connected.</td></tr></table>	Displayed Message	Description	No Device	Printer is not found.	No selection	Last used printer is not found. A different printer is currently connected.
Displayed Message	Description						
No Device	Printer is not found.						
No selection	Last used printer is not found. A different printer is currently connected.						
Find...	<p>Searches for printers and displays them in the [Printer List].</p> <p>Caution: This feature is used exclusively for network port monitor.</p>						

Port Monitor Settings (Cont'd)

[Version] Tab Sheet



Item	Description
CX-330 Card Printer ...	Version and copyright information.

Port Monitor Settings (Cont'd)

Error Code List

Below is a list of error codes for the printer unit. For details, refer to the printer unit's instruction manual.

No.	Error Code	Description
1	0x0102D000	No card, or card tray is open.
2	0x0102D100	Printer door is open.
3	0x0102D300 0x0102D400 0x0102D500	Printer is busy.
4	0x0102D600	No ink ribbon cassette or retransfer film cassette.
5	0x0102D700	Cleaning unit is not mounted.
6	0x0102DA00	Preheating.
7	0x0102DB00	Printer initializing.
8	0x0102DC00	Offline test in progress or cleaning in progress.
9	0x0102DD00	The operation panel is currently being used, or the "transport mode" is selected.
10	0x0102FD00	Power-saving mode.
11	0x0102FE00	Password authentication is not complete.
12	0x0102****	Printer is not ready.
13	0x01039000	Failure in loading a card.
14	0x01039100 0x01039200 0x01039300 0x01039400	Card jam.
15	0x01039500	No card in the right paper feeder.
16	0x0103A000	Retransfer film has been cut off.
17	0x0103A100	Retransfer film is not detected.
18	0x0103AD00 0x0103AE00	Writing of magnetic encoding data failed.
19	0x0103B000	Ink ribbon has been cut off.
20	0x0103B100	Ink ribbon is not detected.
21	0x0103BB00	Card jam in the external IC unit.
22	0x0103****	Media error is detected.
23	0x0104****	Hardware error is detected.

(Cont'd)

Port Monitor Settings (Cont'd)

(Cont'd)

No.	Error Code	Description
24	0x01052700	Ink ribbon specification is incorrect.
25	0x01052B00	Incorrect magnetic encoding data.
26	0x01052C00	IC encoder is not mounted.
27	0x01052D00	Magnetic encoder is not mounted.
28	0x0105**** 0x010B****	Command error is detected.
29	0x0142A200	Retransfer film has run out.
30	0x0142B200	Ink ribbon has run out.

Port Monitor Settings (Cont'd)

Below is a list of error codes related to the printer driver.

No.	Error Code	Description
1	0x02*****	Printer is not found.
2	0x03002741 0x0300274C	Printer is not found.
3	0x03*****	Unexpected problems have occurred.
4	0x04000003	Printer has been disconnected.
5	0x04000004	Incorrect operation.
6	0x04000005	Operation did not complete in time.
7	0x04000006	Abnormal data has been received.
8	0x04100001	Printer is busy and unable to accept request.
9	0x04100021	Abnormal data has been received.
10	0x04*****	Unexpected problems have occurred.
11	0x09*****	Command error is detected.
12	0x10000103	Writing of magnetic encoding data failed.
13	0x10000201	Contact IC encoding program is not found.
14	0x10000202	Unable to establish communication with the contact IC encoder.
15	0x10000203	Writing of contact IC encoding data failed.
16	0x10000301	Non-contact IC encoding program is not found.
17	0x10000302	Unable to establish communication with the non-contact IC encoder.
18	0x10000303	Writing of non-contact IC encoding data failed.
19	0x10000401	User program is not found.
20	0x10000403	User function returns an error.
21	0x10001001	Ink ribbon cannot be recognized.
22	0x10001002	Ink ribbon specification is incorrect.
23	0x10001003	IC encoder is not mounted.
24	0x10001004	Magnetic encoder is not mounted.
25	0x10002000	Printer is not found.
26	0x1000200*	Printer is not ready.
27	0x10003000	The specified LUT file is not found.
28	0x10003001 0x10003002	The specified LUT file cannot be opened.
29	0x10003004	The specified UV file is not found.
30	0x10003005 0x10003006	The specified UV file cannot be opened.

In-Line Encoding

In-Line Encoding Format

In-line encoding is possible when all the settings in the [Encode] tab are enabled.

Encoding data can be sent to the card printer through the printer driver using the special character strings (prefixes) described below. This function is called as “in-line encoding”.

Set the methods of inline encoding in the “Inline Encoding” of the [Encode] tab.

This method functions for only ISO Magnetic encoding data. The default encoding is encoded without the ISO Magnetic encoding.

Caution

- Character strings may not be recognized as encoding data if they are processed as graphics, such as screen captures. Processing of character strings is dependent on the application software in use.
- Enter the inline encoding character strings in the first image of each card to be printed.

Default Encoding

Adding a prefix (tilde (~), ?, or numeric characters) at the beginning of a text string enables the string to be recognized as encoding data. Character strings including prefixes are not printed on the card when they are recognized as encoding data.

No.	Prefix character string	Text string following prefix [*1]	Usable character code table [*2]	Max. string length [*3]
1	~?0	String denotes JIS2 magnetic encoding data. [*4]	7 units code	69
2	~?1	String denotes ISO track 1 magnetic encoding data.	6 units code	76
3	~?2	String denotes ISO track 2 magnetic encoding data.	4 units code	37
4	~?3	String denotes ISO track 3 magnetic encoding data.	4 units code	104
5	~?4	Reserved.		
6	~?5	Reserved.		

Remarks

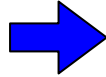
- [*1] Make sure that the string is not broken and uses the same font.
- [*2] Encoding cannot be performed correctly if characters that are not consistent with the usable code table are used.
- [*3] The maximum string length is the number of characters including control codes and excluding prefixes.
- [*4] Half-width katakana characters can be used. For a list of usable characters, refer to the Katakana Character Code List.

In-Line Encoding (Cont'd)

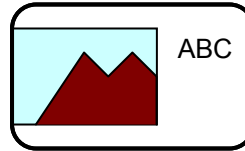
Example

Textbox character strings of application software

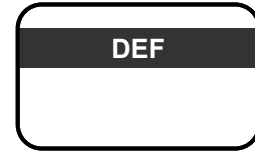
ABC
~?1DEF



Character string to be printed on card



Encoding data to be sent to ISO track 1



Type B Encoding

Adding a prefix (tilde (~), numeric characters, or start sentinel) at the beginning of a text string enables the string to be recognized as encoding data. Character strings including prefixes are not printed on the card when they are recognized as encoding data.

The start sentinel (Refer to the “Character Code Table”) determines the unit code.

The end sentinel (Refer to the “Character Code Table”) is needed at the last of the character string.

No.	Prefix (half width character string)	Text string following prefix [*1]	Usable character code table [*2]	End character
1	~0 Start sentinel	String denotes ISO track 1 magnetic encoding data.	6 units code 7 units code	End sentinel
2	~1 Start sentinel	String denotes ISO track 2 magnetic encoding data.	4 units code	End sentinel
3	~2 Start sentinel	String denotes ISO track 3 magnetic encoding data.	4 units code 6 units code 7 units code	End sentinel

Remarks

[*1] Make sure that the string is not broken and uses the same font.

[*2] Encoding cannot be performed correctly if characters that do not conform with the usable character code table are used.

In-Line Encoding (Cont'd)

Type C Encoding

Adding a prefix (tilde (~), numeric characters or =) at the beginning of a text string enables the string to be recognized as encoding data. Character strings including prefixes are not printed on the card when they are recognized as encoding data.

No.	Prefix (half width character string)	Text string following prefix [*1]	Usable character code table [*2]	Max. string length [*3]
1	~ 1 =	String denotes ISO track 1 magnetic encoding data.	6 units code	76
2	~ 2 =	String denotes ISO track 2 magnetic encoding data.	4 units code	37
3	~ 3 =	String denotes ISO track 3 magnetic encoding data.	4 units code	104

Remarks

- [*1] Make sure that the string is not broken and uses the same font.
- [*2] Encoding cannot be performed correctly if characters that do not conform with the usable character code table are used.
- [*3] The maximum string length is the number of characters including control codes and excluding prefixes.

In-Line Encoding (Cont'd)

Character Code Table

Below is the list of usable ASCII codes. Configure the character string to encode using the usable half-size characters for each of the level codes.

ASCII character code table

					b7	0	0	0	0	1	1	1	1					
					b6	0	0	1	1	0	0	1	1					
					b5	0	1	0	1	0	1	0	1					
					b4	b3	b2	b1		0	1	2	3	4	5	6	7	
0	0	0	0	0									0	@	P	`	p	
0	0	0	1	1									!	1	A	Q	a	q
0	0	1	0	2									“	2	B	R	b	r
0	0	1	1	3									#	3	C	S	c	s
0	1	0	0	4									\$	4	D	T	d	t
0	1	0	1	5									%	5	E	U	e	u
0	1	1	0	6									&	6	F	V	f	v
0	1	1	1	7									‘	7	G	W	g	w
1	0	0	0	8									(	8	H	X	h	x
1	0	0	1	9									)	9	I	Y	i	y
1	0	1	0	A	LF								*	:	J	Z	j	z
1	0	1	1	B									+	;	K	[	k	{
1	1	0	0	C									,	<	L	¥	l	|
1	1	0	1	D									-	=	M	]	m	}
1	1	1	0	E									.	>	N	^	n	~
1	1	1	1	F									/	?	O	_	o	DEL

The range of 4 units code.

The range of 6 units code.

The range of 7 units code for a text string.

Tilde character (Hex-decimal: 7E)

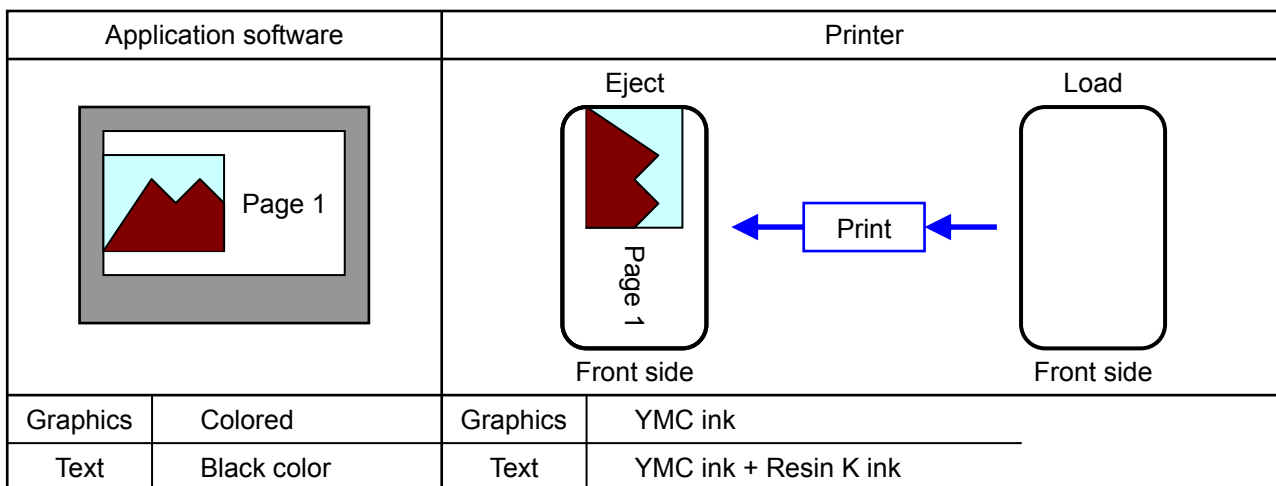
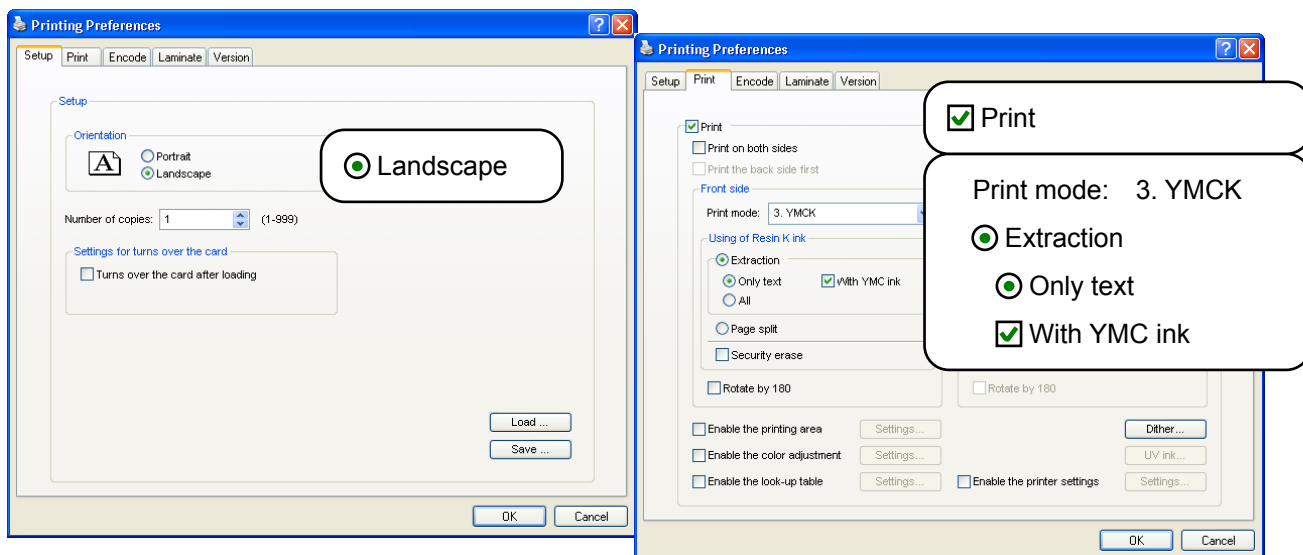
The start sentinel and end sentinel listed below cannot be used in the encoding data.

	Start sentinel (Hexadecimal value)	End sentinel (Hexadecimal value)
4 units code	; (3B)	? (3F)
6 units code	% (25)	? (3F)
7 units code	DEL (7F)	DEL (7F)

Setting Example

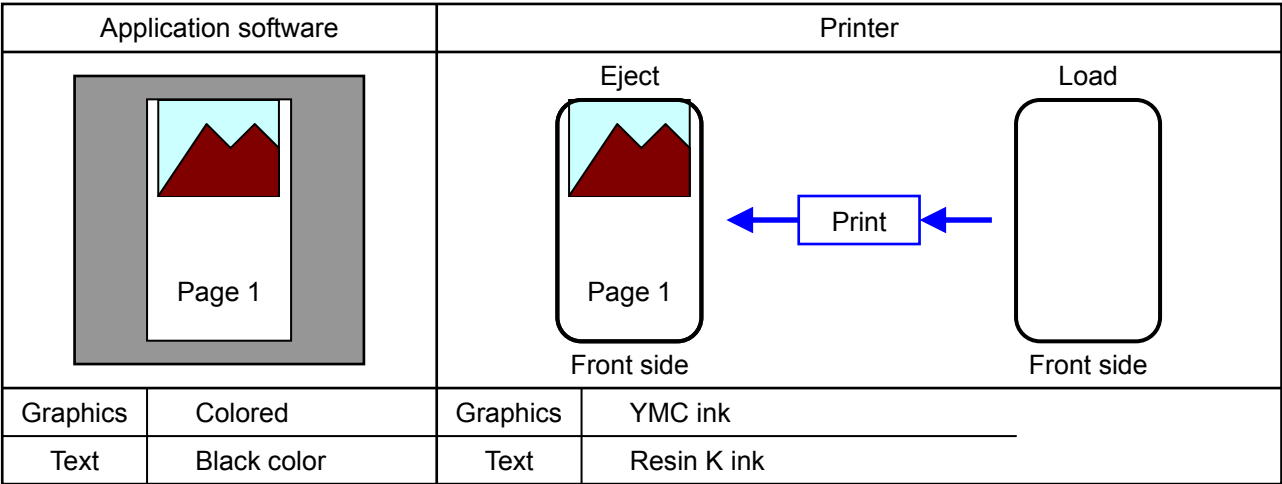
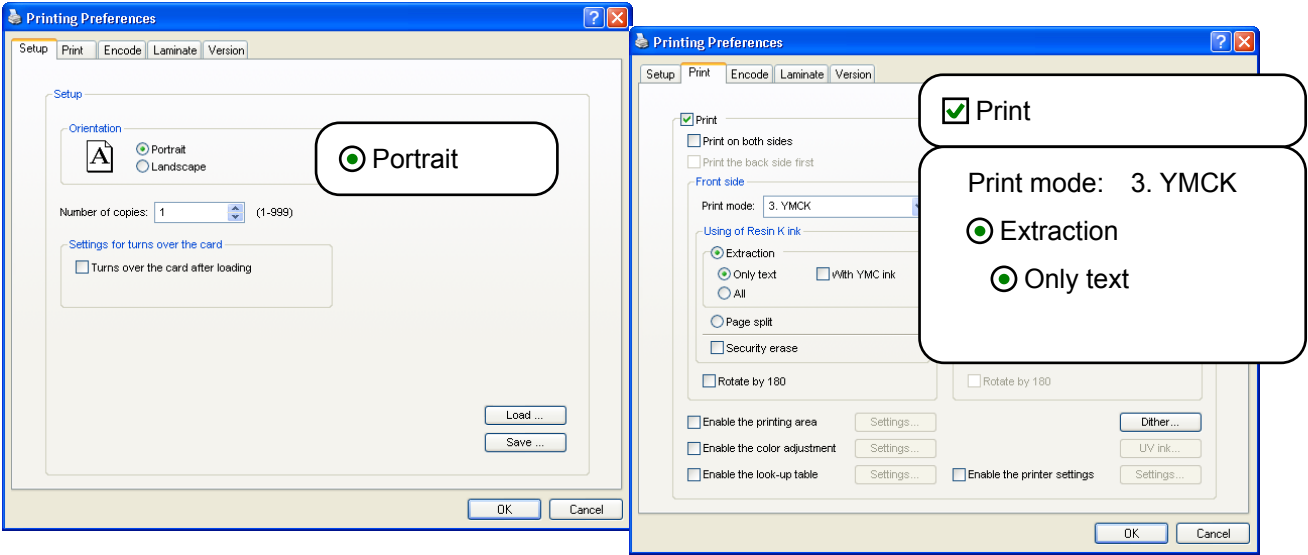
Print Setting Example

Single-Sided Printing (Landscape)



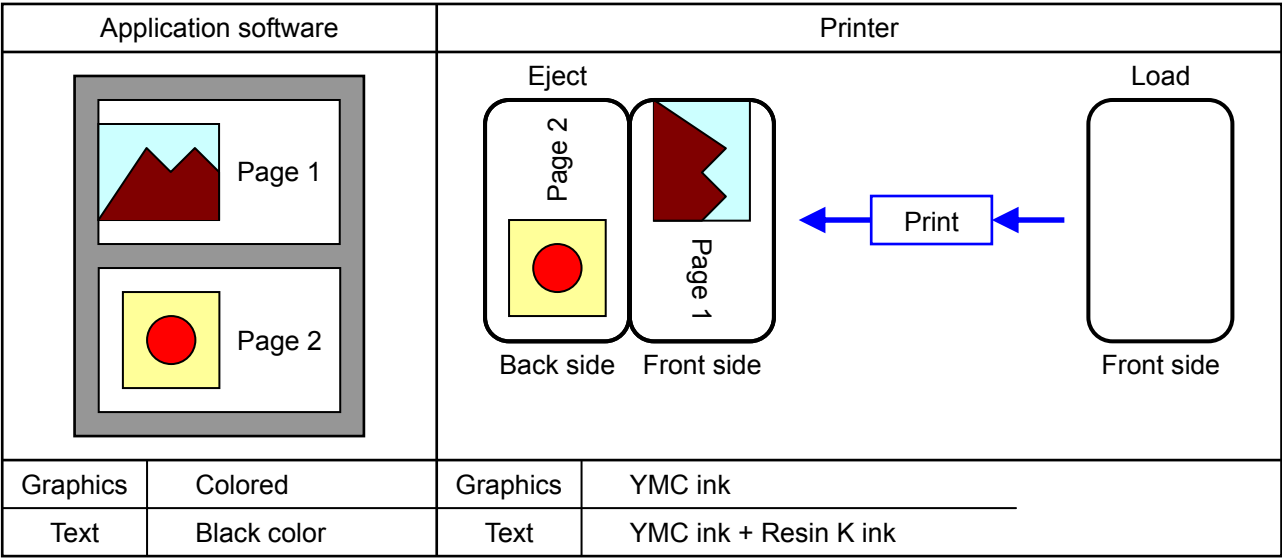
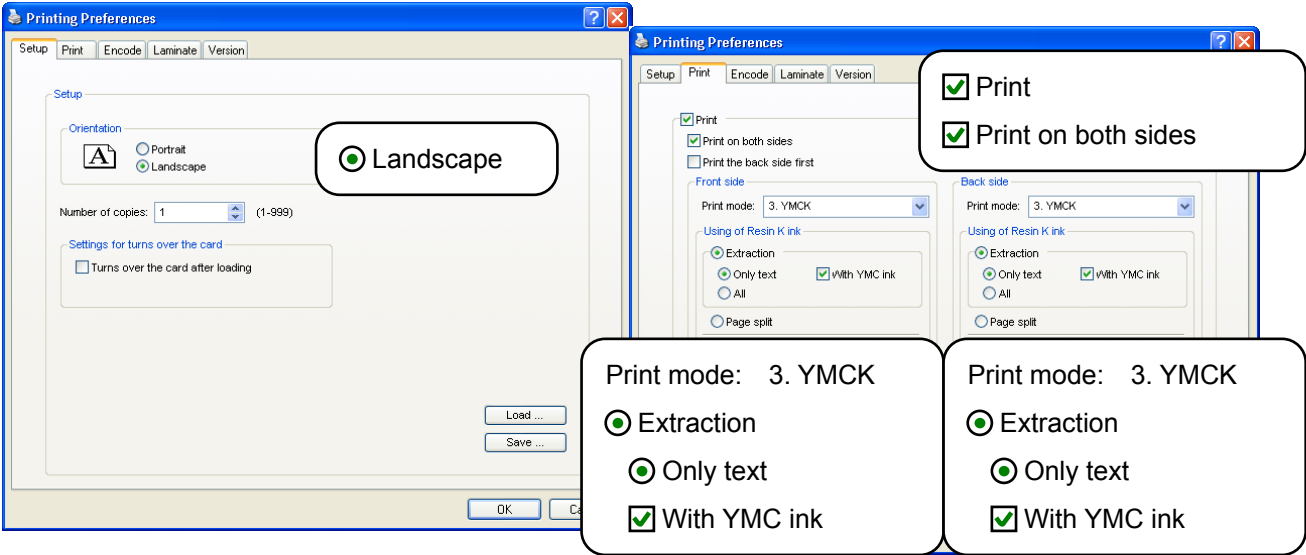
Setting Example (Cont'd)

Single-Sided Printing (Portrait)



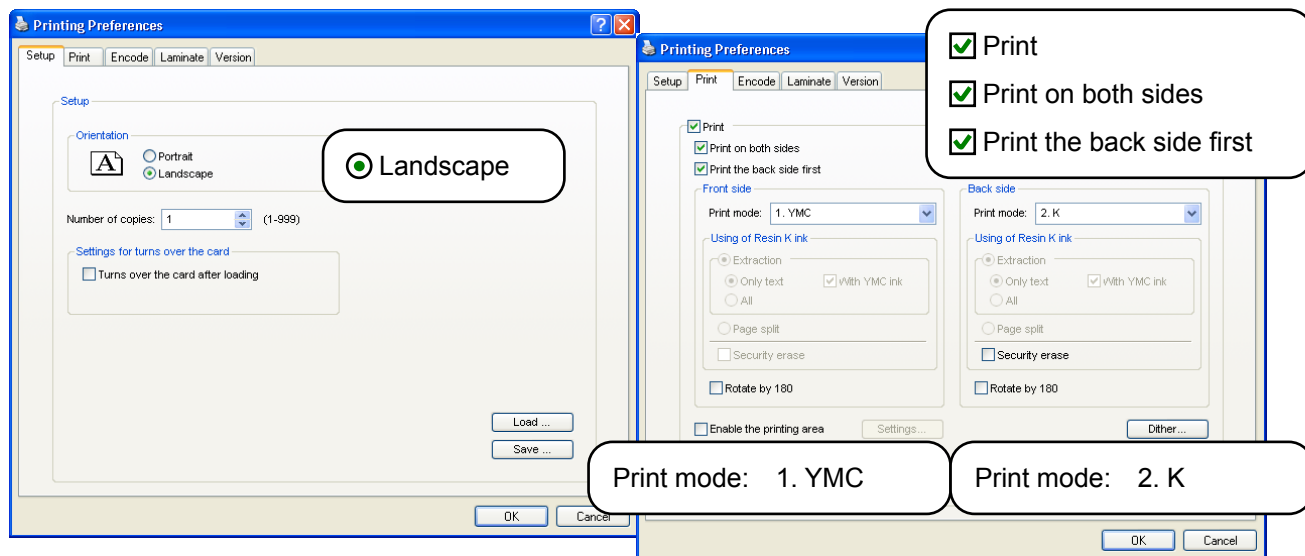
Setting Example (Cont'd)

Double-Sided Printing (Standard)



Setting Example (Cont'd)

Double-Sided Printing (for Lamination)

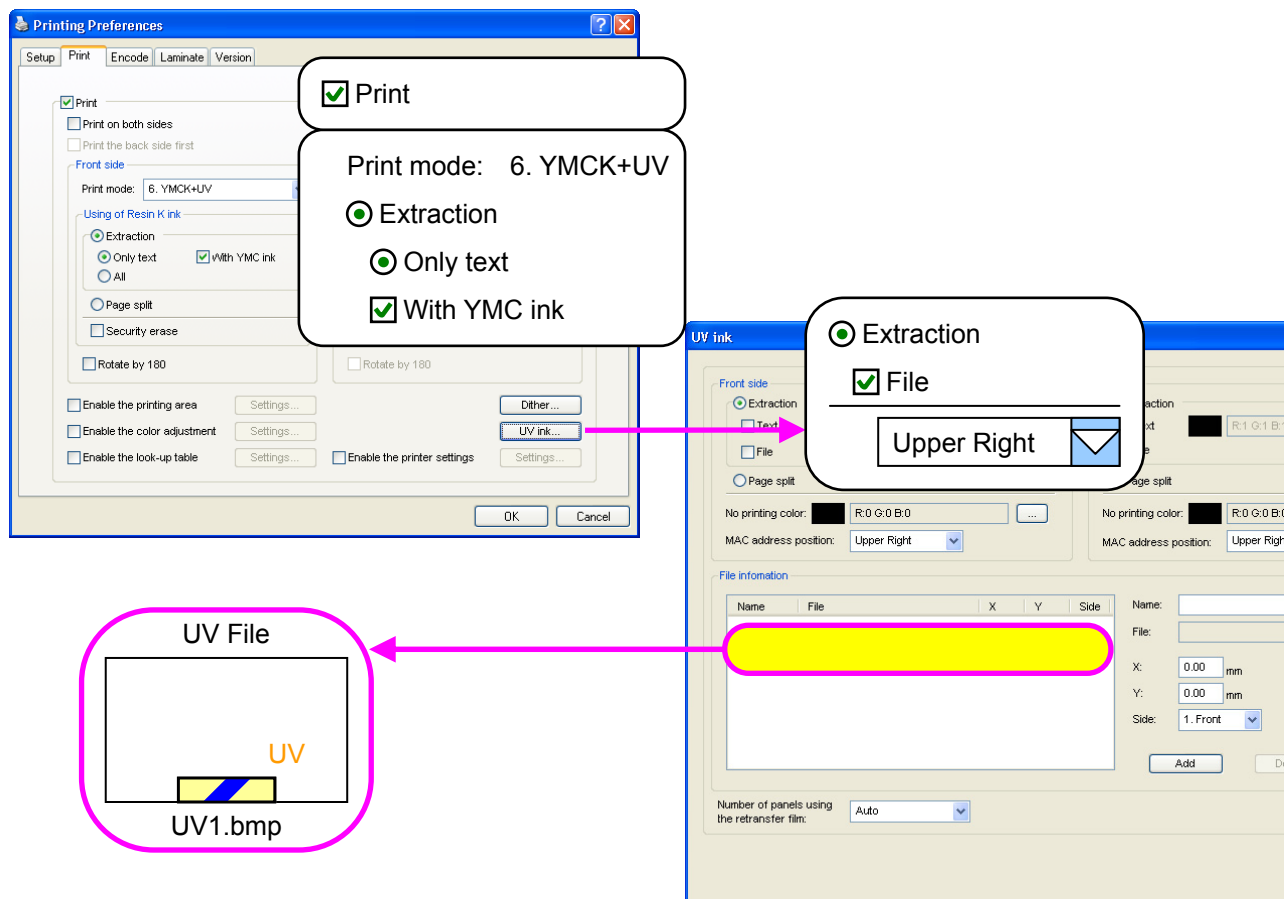


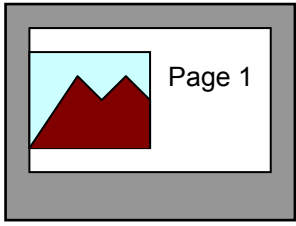
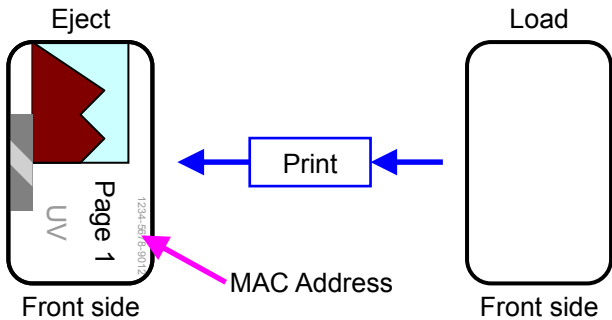
Application software			Printer		
Page 1	Graphics	Colored	Front side	Graphics	YMC ink
	Text	Colored		Text	YMC ink
Page 2	Graphics	Black color	Back side	Graphics	Resin K ink
	Text	Black color		Text	Resin K ink

When page 2 and subsequent pages are colored, dithering is performed and printing is executed using the Resin K ink.

Setting Example (Cont'd)

Single-Sided UV Printing

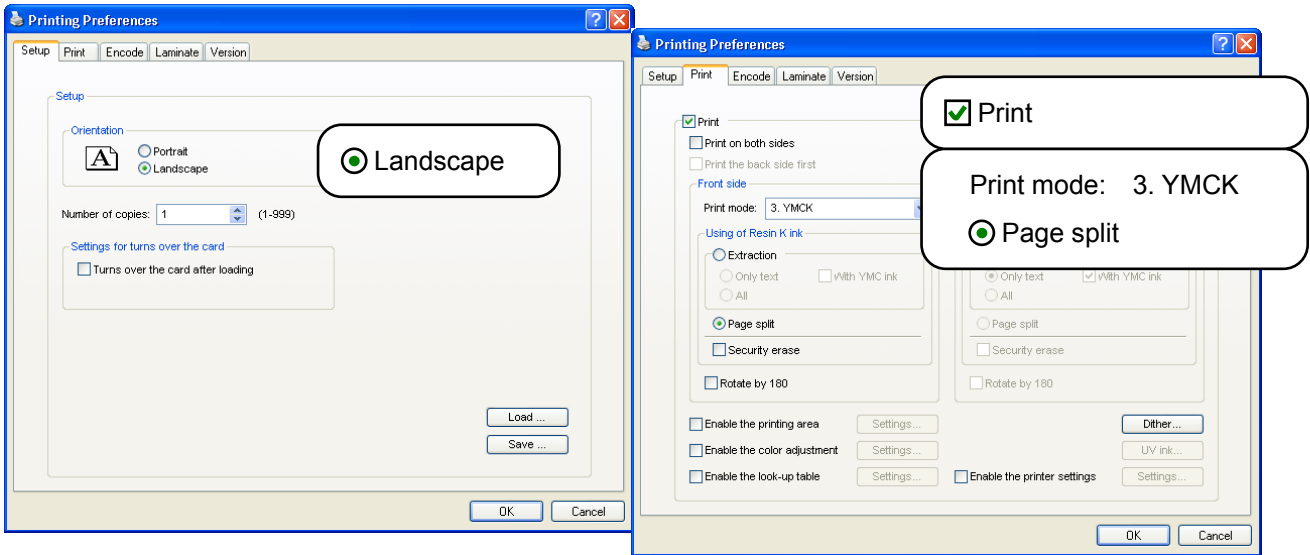


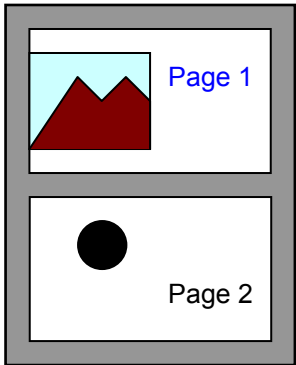
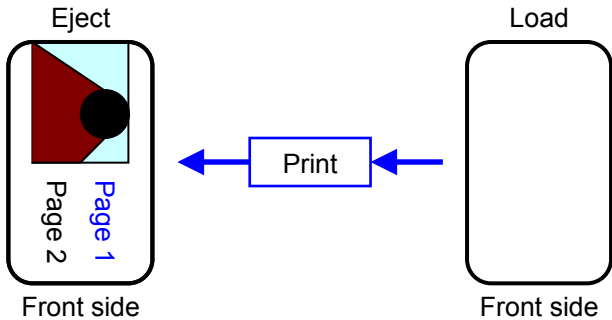
Application software		Printer	
			
Graphics	Colored	Graphics	YMC ink
Text	Black color	Text	YMC ink + Resin K ink
		UV1.bmp	UV ink
		MAC Address	UV ink

The UV file is converted into 256 gradation and printing is executed using the UV ink.

Setting Example (Cont'd)

Page Split

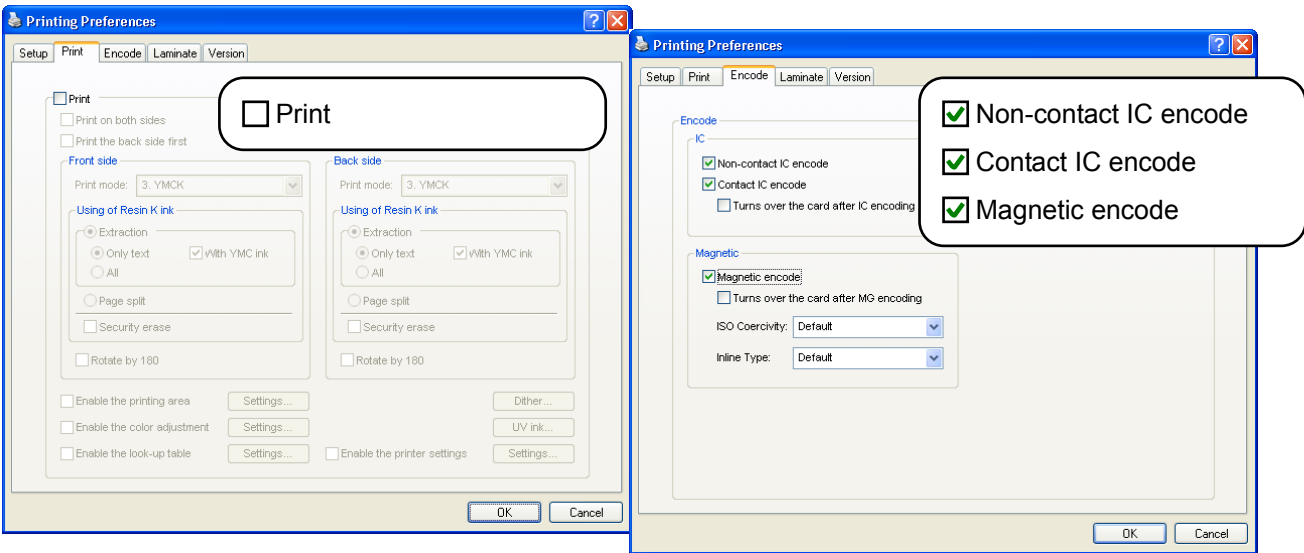


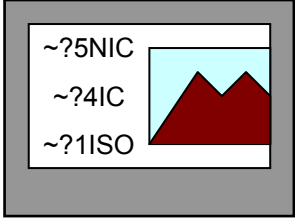
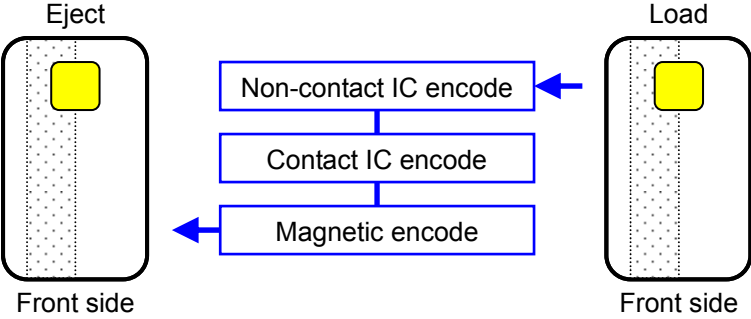
Application software			Printer	
				
Page 1	Graphics	Colored	Graphics	YMC ink + Resin K ink
	Text	Colored	Text	YMC ink + Resin K ink
Page 2	Graphics	Black color		
	Text	Black color		

Setting Example (Cont'd)

Encoding Example

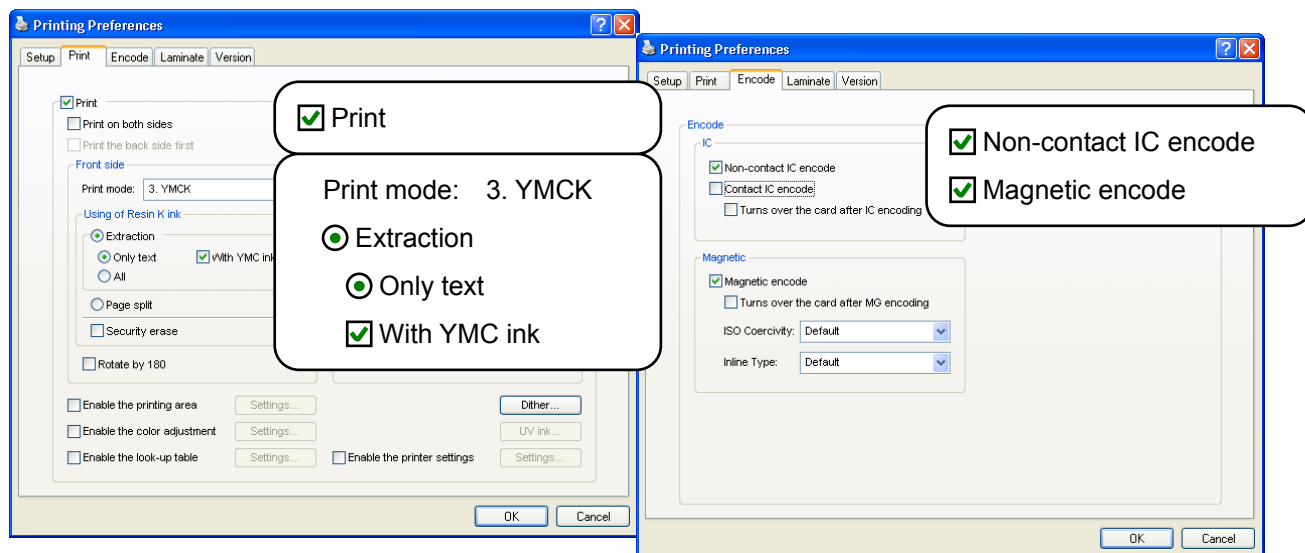
Encoding without Printing

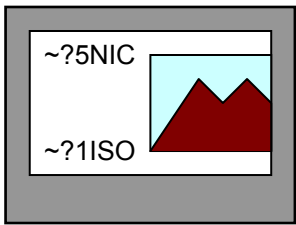
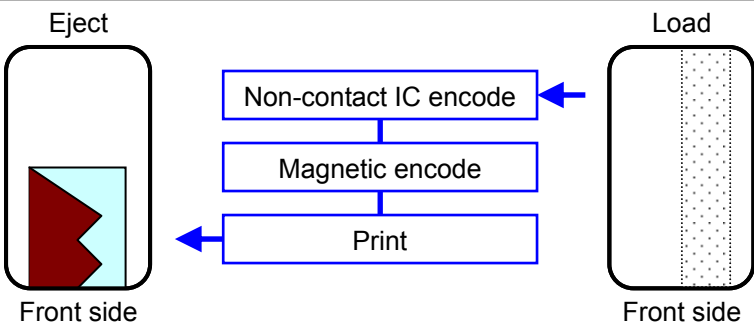


Application software		Printer	
			
Graphics	Colored	Graphics	Nothing
Text	Black color	Text	Nothing
inline Encoding		Non-contact IC encoding data	NIC
		Contact IC encoding data	IC
		"ISO track 1" magnetic encoding data	ISO

Setting Example (Cont'd)

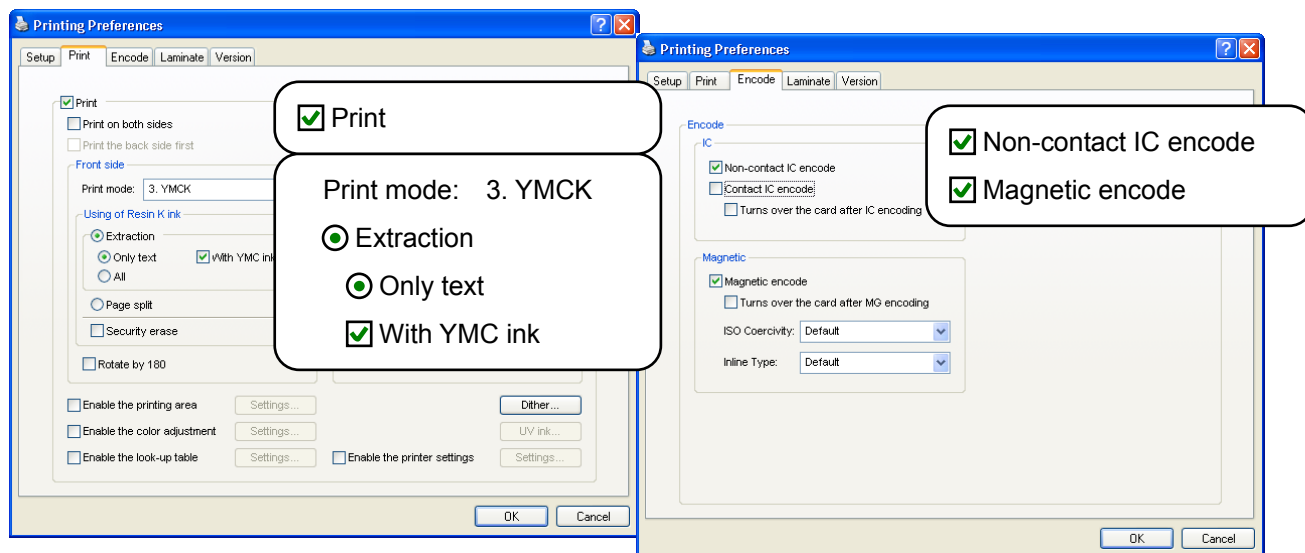
Encoding with Printing (ISO magnetic stripe card)

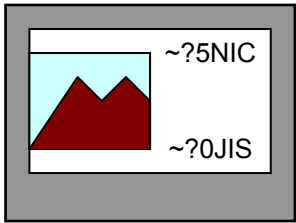
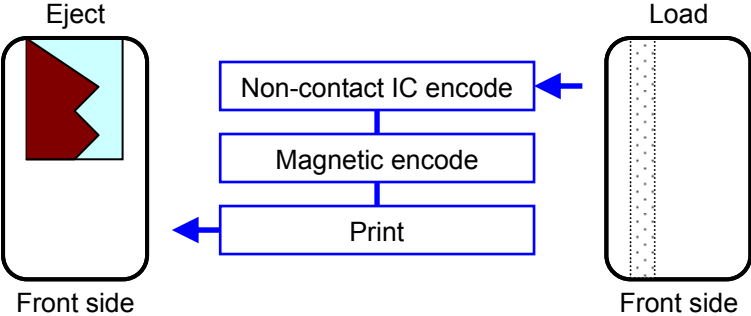


Application software		Printer	
			
Graphics	Colored	Graphics	YMC ink
Text	Black color	Text	YMC ink + Resin K ink
inline Encoding		Non-contact-type IC encoding data	NIC
		"ISO track 1" magnetic encoding data	ISO

Setting Example (Cont'd)

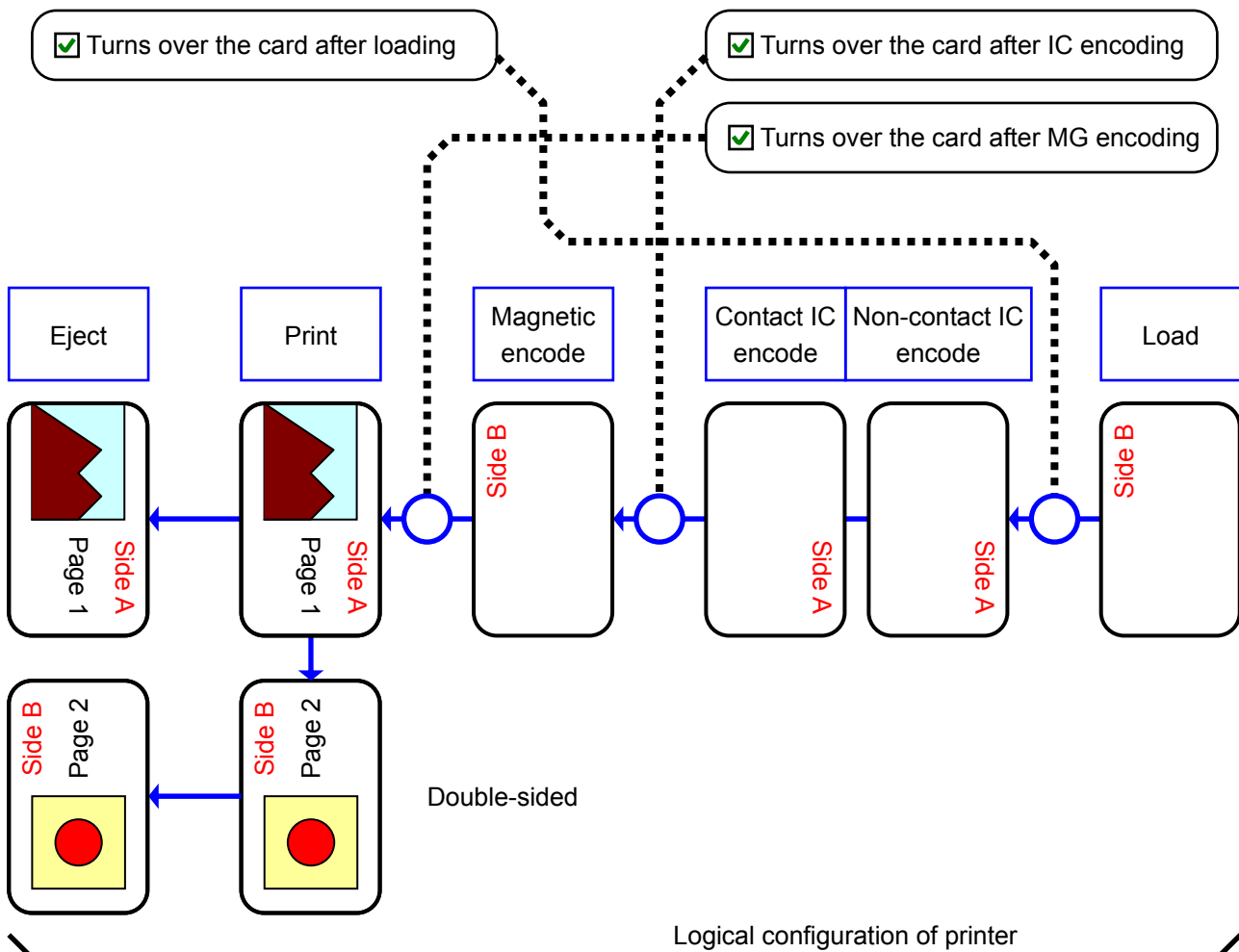
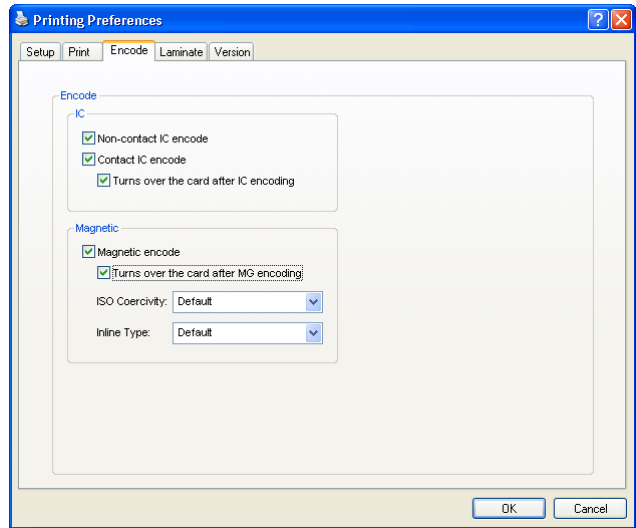
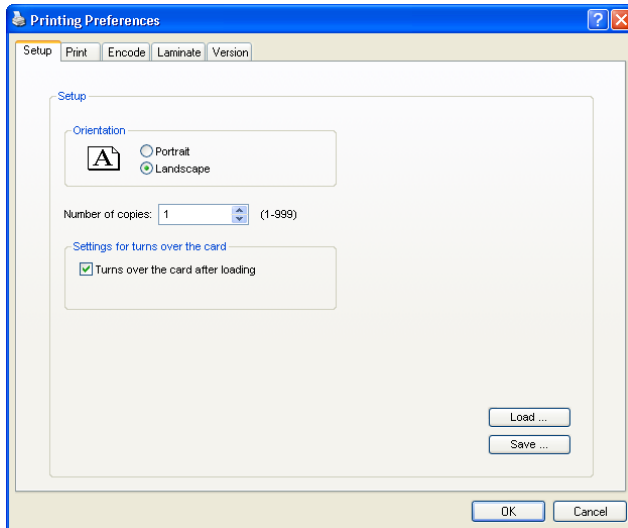
Encoding with Printing (JIS magnetic stripe card)



Application software		Printer	
			
Graphics	Colored	Graphics	YMC ink
Text	Black color	Text	YMC ink + Resin K ink
inline Encoding		Non-contact-type IC encoding data	NIC
		"JIS type 2" magnetic encoding data	JIS

Setting Example (Cont'd)

Diagram on Card Turning



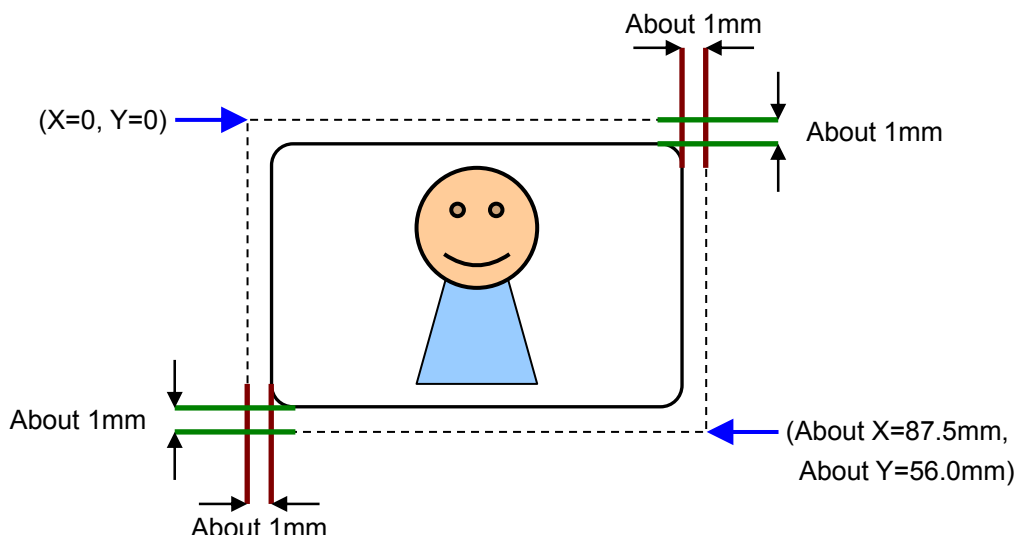
FAQ (Frequently Asked Questions)

About print settings

Q The edge of picture is not printed.

A1 Check the margins of printing in the application software.

A2 About 1mm portion is not printed from the end of a picture to a card. Refer to the following figures.



Q The card is discharged without being printed.

A The [Print] check box of the [Print] tab is not ticked. Tick the [Print] check box. (Refer to page 4 of this manual)

Q How can I print black color using the Resin K ink ?

A Choose the [Mode] item of [Printing] tab except "1.YMC". (Refer to page 4 of this manual)

Q How can I print a card using the "Security erase" ?

A Choose either "2.K" or "3.YMCK" in the [Mode] item of [Printing] tab, and tick the [Security erase] check box. Then, the "Security erase" function to resin K ink will become effective. The "Security erase" function is available only when using the YMCK ink. Please consult our authorized dealers for details about settings.

Q I want to memorize contents of "Printing Preferences".

A When you click the [Save ...] button of [Setup] tab, contents of "Printing Preferences" can be saved at a file. When you click the [Load...] button of [Setup] tab, contents of "Printing Preferences" can load from the saved file. (Refer to page 3 of this manual)

Q How can I print using full color conversion?

A Open the [Look up table] dialog box from the [Print] Tab and register the [look-up table file of the Color Conversion Data]. (Refer to page 10 of this manual)

Setting Example (Cont'd)

About special ink

Q How can I print a card using the UV ink ?

A Choose either "5.K+UV" or "6.YMCK+UV" of the [Mode] item of [Printing] tab, and set the UV function using the [UV ink] button. (Refer to 13 or 36 pages of this manual) If the UV ink is not installed into the printer, the error occurs at the printing.

Q When I print a card using the UV ink, the picture of the upper right position is not printed.

A In the case of UV print, the printer always prints the network (Ethernet) MAC address. When you set the "Number of panels using the retransfer film" to "1 panel" in this case, the printer does not print the picture inside of MAC address area. Please arrange the picture so that printing of the YMCK ink does not overlap in MAC address area. (Refer to 16 or 17 pages of this manual)

When you set the "Number of panels using the retransfer film" to "2 panels", the printer can print the whole picture using the YMCK ink.

Q When I print a card using the UV ink, a part of picture is not printed.

A When you set the "Number of panels using the retransfer film" to "1 panel", the part of overlaps between the YMC ink and UV ink is not printed. Please arrange the picture so that printing of the YMC ink does not overlap with the UV ink. (Refer to 17 page of this manual)

When you set the "Number of panels using the retransfer film" to "2 panels", the printer can print the whole picture using the YMCK ink.

Q How can I print the picture with the UV ink without the background color ?

A Paint over the background of a picture by a specific color using graphic software etc., and set the specific color by [No printing color] of [UV ink] dialog. If background color is the same as part of the picture, it will not be printed. So please select background color carefully. (Refer to 14 page of this manual)

Q Although I chose the picture files in the [UV ink] dialog, the picture is not printed with the UV ink.

A1 The picture files do not meet the supporting types. (Refer to 17 page of this manual)

A2 Other application software may be using the picture files.

Q When I print a card using the UV ink, a picture of UV ink is not printed on the Resin K ink.

A When you set the "Number of panels using the retransfer film" to "1 panel", there is no UV effect on the Resin K ink.

Setting Example (Cont'd)

Q What is Special ink 2 ?

A Special ink 2(SP-Ink2) can be used by a printer with PO (peel off) print function. Please consult our authorized dealers for details.

Others

Q How can I perform magnetic/IC encoding ?

A Exclusive applications are required for methods other than in-line encoding. Please consult our authorized dealers for details.

Q I cannot print a card using a network-shared printer which connected via USB.

A When the access authority of the computer is not proper, the printer may be unable to print, even if installation of the printer driver is completed by the shared network. Please make the access authority properly according to the instructions of the network administrator.

Sublimation Type Retransfer Printer CX-330 Printer Driver Instruction Manual