SII

RP-E10 Series
Printer Driver
User's Guide

Seiko Instruments Inc.

RP-E10 Series Printer Driver User's Guide

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Introduction

This document describes the printer driver for the RP-E10 series (hereinafter referred to as "printer driver") provided by Seiko Instruments Inc.

This document is basically written on the basis of the following conditions:

- Screenshots and display layouts of Windows 7
- Operating instructions with a mouse and a keyboard

Symbols

This section describes symbols used in this document.

Caution

◆ Notes and limitations are described.

Reference

- Supplemental information and related matters are described.

Target Printers

This section lists the printers (products) supported by the printer driver.

- RP-E10-K3FJ1, RP-E10-K3FJ2
- RP-E10-W3FJ1, RP-E10-W3FJ2
- RP-E11-K3FJ1, RP-E11-K3FJ2
- RP-E11-W3FJ1, RP-E11-W3FJ2

Operating System Abbreviations

This section lists the operating system abbreviations used in this document.
When an individual description is necessary, the description is written in parentheses behind the abbreviation.

- General Microsoft® Windows®   → Windows
- Microsoft® Windows® 10   → Windows 10
- Microsoft® Windows Server® 2019   → Windows 10 (Windows Server 2019)
- Microsoft® Windows Server® 2016   → Windows 10 (Windows Server 2016)
- Microsoft® Windows® 8.1   → Windows 8.1
- Microsoft® Windows Server® 2012   → Windows Server 2012
- Microsoft® Windows® 7   → Windows 7
- Microsoft® Windows® Embedded POSReady 7 → Windows 7 (Windows POSReady 7)

Terms

This section describes terms used in this document.

Definition	Description
Tool	Various tools which can be started by the printer driver.
Printer name	Friendly name which is displayed in the Printer folder and can be changed by users.
Driver name	Unique model name for identifying the printer driver.
Communication library	Dynamic link library (DLL) for application development provided with the printer driver, designed to directly communicate with a printer to control it.
Technical reference	Technical reference for the printer product.
Printer command	Instruction to control the printer, described in the Technical reference.
Test Print command	Instruction to execute the test print in the printer driver. Various commands which are entered in the [Command List] of [Test Print] in the tool panel.
Memory switch	Feature for the [Function Setting] described in the Technical reference.
NV image	Image data that is registered in the NV memory (non-volatile memory) in the printer.
IPD[1] font	Generic name of the following fonts specific to the printer driver. ・ Device font ・ Barcode font ・ 2D-Barcode font ・ Control font ・ ControlA font
Special font	Generic name of the following fonts in the IPD font, which are used to output the Printer command. ・ Barcode font ・ 2D-Barcode font ・ Control font ・ ControlA font
Head drive	Setting for the thermal head to be divided into several blocks for printing.
Maintenance counter	Maintenance counter value which can be retrieved by the Printer command.
Printer status	Response retrieved by the Printer command "Automatic Status Back Enable/Disable". For details of response, see "5.2.3 List of Status".

[1]: Integrated Printer Driver (hereinafter called IPD)

Notations

In this document, the following OS-dependent contents are defined as common names.

Printer folder

The "Printer folder" described in this document means the folder displayed by one of the following operations.

- **For Windows 10, Windows 8.1 and Windows Server 2012**

[Devices and Printers] folder displayed by selecting [Control Panel] => [Hardware and Sound]

- **For Windows 7**

[Devices and Printers] folder displayed by selecting [Start] => [Devices and Printers]

Print Server Properties

The "Print Server Properties" described in this document means the properties displayed by one of the following operations.

[Print Server Properties] displayed by clicking any printer icon in the Printer folder and selecting [Print Server Properties] displayed on the toolbar at the top of the Printer folder.

Root folder

The "Root folder" described in this document means one of the following folders.

<Drive on which Windows is installed>:\Users\<User name>\Documents\<Printer name (SII RP-E10 etc.)>\

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Chapter 1 Overview

1.1 Introduction

This chapter describes the overview of the printer driver.

1.2 Operating Environment

This section describes the operating environment of the printer driver.

1.2.1 Operating Systems

The printer driver supports the following operating systems.
Supported architectures are described in parentheses.

- Windows 10 (32 bits and 64 bits)
- Windows Server 2019 (64 bits)
- Windows Server 2016 (64 bits)
- Windows 8.1 (32 bits and 64 bits)
- Windows Server 2012 (64 bits)
- Windows POSReady 7 (32 bits and 64 bits)

Caution

◆ Modern UI is not supported.

1.2.2 Computers

The printer driver supports the following computers.

- PC/AT compatible machines

1.2.3 Interfaces

The printer driver supports the following interfaces.

- Serial (Standard: RS-232C)
- USB (Standard: Full-Speed)
- TCP/IP (Protocol: Raw)
- Bluetooth (Profile: SPP)

═ Caution ═

◆ For Bluetooth connection:

➢ The operating conditions are as follows.

・The target printer is not connected with another computer via Bluetooth.

・Microsoft standard system driver is used.

・Communication is available through a virtual serial port generated when installing via Bluetooth connection.

・For Windows 7, "Wireless iAP" service of the added Bluetooth device has been disabled. ("Wireless iAP" check box in the properties has been off.)

➢ For Bluetooth connection, when printer driver or Communication library is not used, the status information of printer information structure (PRINTER_INFO) is not reflected.

➢ Bluetooth connection is not supported by Windows Server 2019, 2016 or 2012.

◆ For TCP/IP connection:

➢ Only Raw protocol is supported (LPR specification is ignored). (Except when the bidirectional support is disabled.)

➢ The socket ports of 9100 and 26100 are used. When install a firewall, allow the connection with these ports.

◆ For serial connection:

➢ Use the 8 bits length in the serial communication settings.

➢ The communication settings of the port should match those of the printer. For the setting method, see "4.4 Ports".

Reference

- Contact us for the operation test verified Bluetooth environment.

1.3 Use Conditions of Memory Switch

Set the Memory switch as shown in the following settings.

The Memory switch can be changed by the tool. For details, see "5.3 Memory Switch".

MS	Item	Settings
MS1–3	Mark Mode Selection (Mark Mode)	0: Disable / 1: Enable[*1]
MS5–1	Automatic Status Response Selection (Auto Status Back)	0: Enable / 1: Disable[*2]
MS5–2	Initialized Response Selection (Init Response)	0: Enable[*2*3]
MS40–5	Flow Control Selection (Flow Control)	1: Hardware Control[*4]
MS40–6	Printer Busy Control Selection (Printer Busy)	1: RTS Control[*4]
MS40–7	Host Busy Control Selection (Host Busy)	0: CTS and DSR control
MS40–8	Break Signal Selection (Break)	1: RxD[*4]

[*1]: Set this setting to "Enable" when executing marked paper form feed.
    Otherwise, set this setting to "Disable".
[*2]: Use this setting with "Enable" usually. However, when you do not select the [Enable bidirectional support] check box described in "4.4 Ports", set this setting to "Disable".
[*3]: Required only to get [Initialization Response] in the Communication library.
[*4]: Use this Setting when using serial connection or Bluetooth connection.

Caution

◆ When the above Settings are used, it may prevent the printer driver from working properly.

1.4 Limitation

The printer driver has the following limitations.

- Abnormal printing sleep mode, or hibernation mode, which is a part of the Windows standard function, is not guaranteed including garbled characters.

- When the setting of dedicated print processor (SII Print Processor) including FILE output is disabled, all reduction function is disabled.

- When the printer is disabled in the Printer command "Peripheral Equipment Selection", all the functions in the printer driver cannot be used.

- When the same IP address is specified with more than one computer for installing the printer driver when using TCP/IP connection, the tool and the Communication library are not available with more than one computer at one time.
  Also, when the printing is canceled, it may not work properly.

- When printer is in unconnected status at print suspension or in data unaccepting status, the printer resetting may not be correctly completed and garble character may occur.

Chapter 2 Installation

2.1 Overview

This chapter describes the installation of the printer driver.

There are the following installation methods.

- Installation from [Add Printer] in the [Printer folder]
- Installation from the dedicated installer

This chapter only describes the installation from the dedicated installer.

Caution

◆ This installation requires logon to the computer with administrator privileges.

◆ The [Windows Logo Test] warning may be displayed during installation, but proceed with the installation.

◆ When using Communication library in WOW64 environment or using .NET API in Communication library, install them from the dedicated installer.

Reference

- When the printer driver is no longer needed, select [SII RP-E10 Printer Driver] from [Programs and Features] in the Control Panel, and then uninstall it.

2.2 New Installation Method

This section describes the new installation method.

Caution

◆ Do not install more than one driver for the same communication port.

2.2.1 Common Installation Procedure

This section describes the procedure of starting installation used for every connection.

1. When the [Install Start] window is displayed, click the [Next>] button.
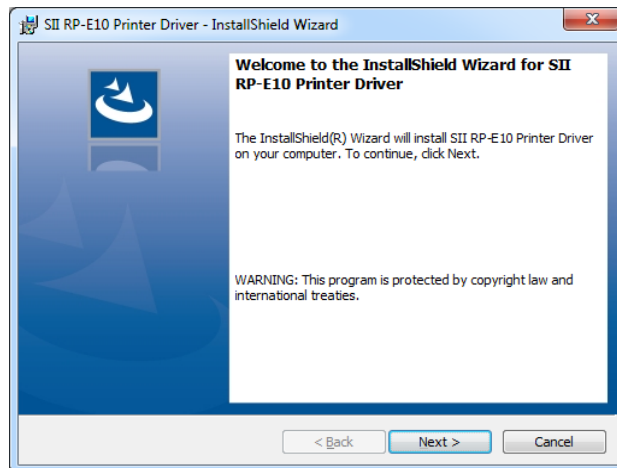
Figure 2-1   [Install Start] window

2. When the [SOFTWARE LICENSE AGREEMENT] is displayed, read it carefully, select "I accept the terms in the license agreement", and then click the [Next>] button.

3. When the [Installation confirmation] window is displayed, click [Install] button.
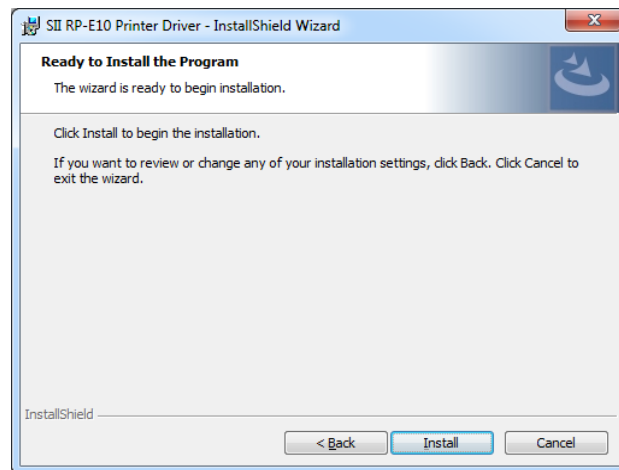
Figure 2-2   [Installation confirmation] window

The subsequent procedure varies depending on the connection method with the printer. For the USB connection, proceed to "2.2.2 Installation with USB Connection". For the serial connection or Bluetooth connection, proceed to "2.2.3 Installation with Serial Connection or Bluetooth Connection". For TCP/IP connection, proceed to "2.2.4 Installation with TCP/IP Connection". For using shared printer, proceed to "2.2.5 Installation of the Shared Printer".

2.2.2 Installation with USB Connection

This section describes the installation procedure of the USB connection.

Caution

◆ For the USB connection, keep the printer power off until you are instructed to do so in this manual.

4. When the [Installation format selection] window is displayed, select "Plug and play install (Uses USB port)", and then click the [Install] button.
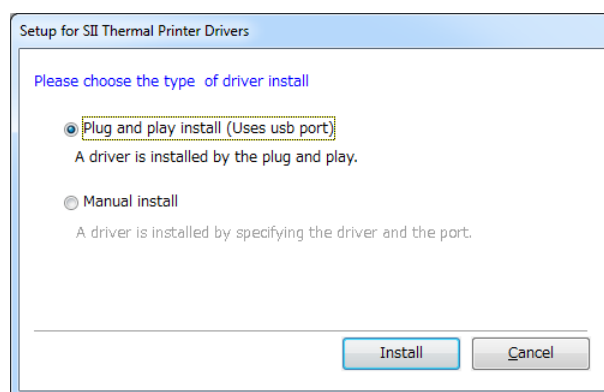
Figure 2-3   [Installation format selection] window (USB connection)

5. When the [Completion] window is displayed, use the USB cable to connect the printer with the computer, and then turn on the printer power.
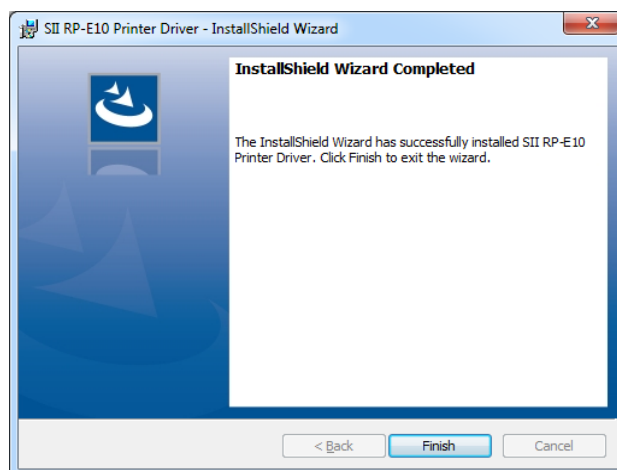
Figure 2-4   [Completion] window (USB connection)

6. After the printer is recognized by the computer, the printer driver is automatically installed by the plug and play.
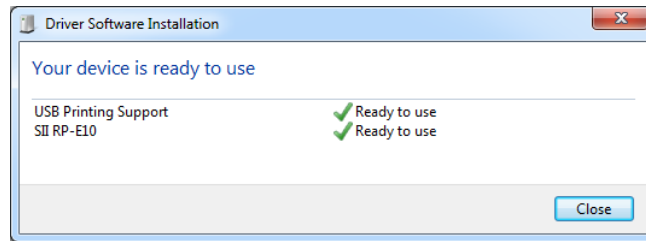
Figure 2-5　[Driver software installation] window

7. Select "Install the software automatically (Recommended)", and then click the [Next>] button to install the printer driver.

Caution

◆ When you remove the USB cable after the printer driver was successfully installed, connect it to the same USB port that you used to install the driver when you want to reconnect it. When the printer is connected to a different USB port on the computer, the host recognizes it as another printer, and again prompts for printer driver

2.2.3 Installation with Serial Connection or Bluetooth Connection

Caution

◆ When using Bluetooth connection, execute pairing beforehand and assign to generated virtual serial port.

◆ When using Bluetooth connection, more than one host cannot be used simultaneously.

This section describes the installation procedure of the serial connection or Bluetooth connection.

4. When the [Installation format selection] window is displayed, select "Manual install". Select the driver to install and the connection port, and then click the [Install] button to start installation.

Figure 2-6   [Installation format selection] window (serial connection or Bluetooth connection)

5. When the installation is completed, the [Completion] window is displayed.
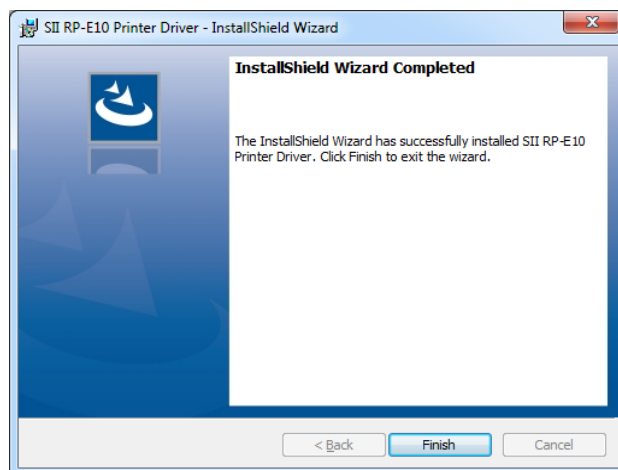
Figure 2-7   [Completion] window (serial connection or Bluetooth connection)

2.2.4 Installation with TCP/IP Connection

This section describes the installation procedure of the TCP/IP connection.

4. When the [Installation format selection] window is displayed, select "Manual install" and "Add New Port...".
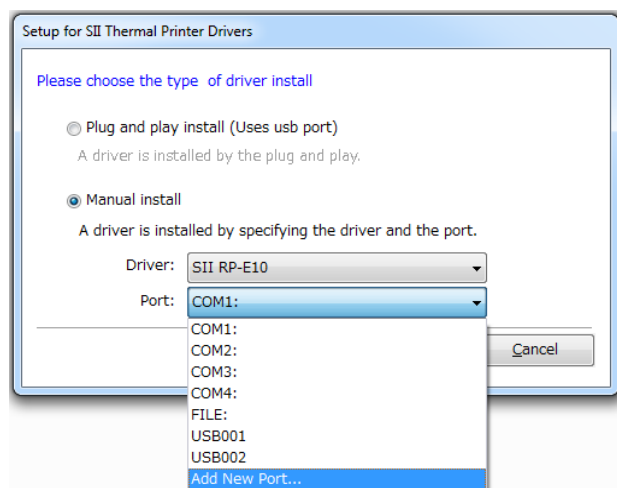
Figure 2-8   [Installation format selection] window (TCP/IP connection)

5. When the [New port creation] window is displayed, select "Standard TCP/IP Port" and specify [IP], [Port name], and [Port], and then click the [OK] button. The port is added to the port list on the [Installation format selection] window.
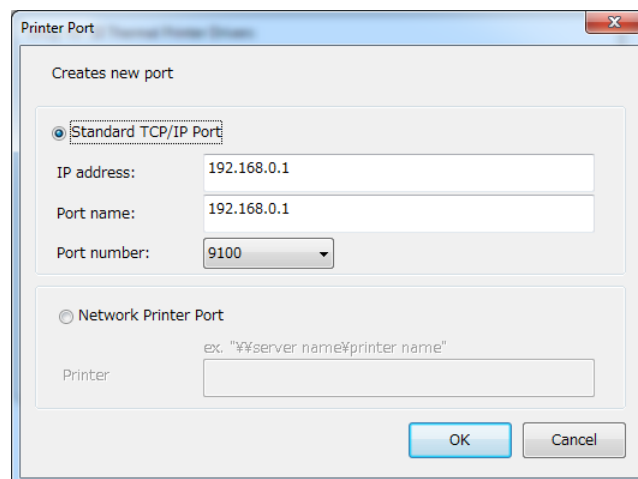
Figure 2-9   [New port creation] window (TCP/IP connection)

6. When the [Installation format selection] window is displayed again, select the driver to install and the connection port, and then click the [Install] button to start installation.

7. When the installation is completed, the [Completion] window is displayed.
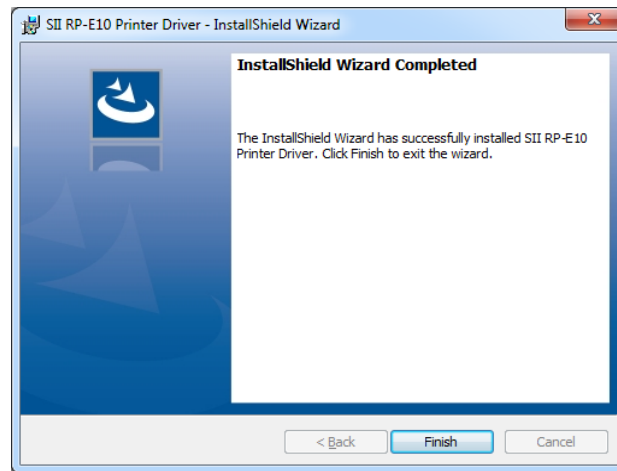
Figure 2-10   [Completion] window (TCP/IP connection)

2.2.5 Installation of the Shared Printer

This section describes the installation procedure of the shared printer.

4. When the [Installation format selection] window is displayed, select "Manual install" and "Add New Port...".
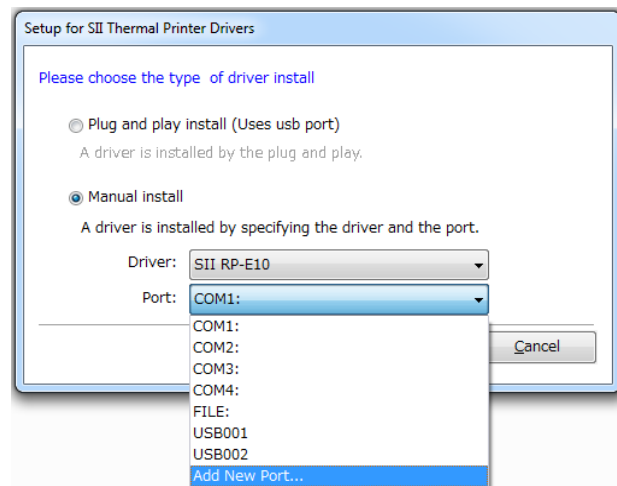
Figure 2-11   [Installation format selection] window (shared printer)

5. When the [Printer Port] window is displayed, select "Network Printer Port" and specify [Printer], and then click the [OK] button to add the port to the port list on the [Installation format selection] window.
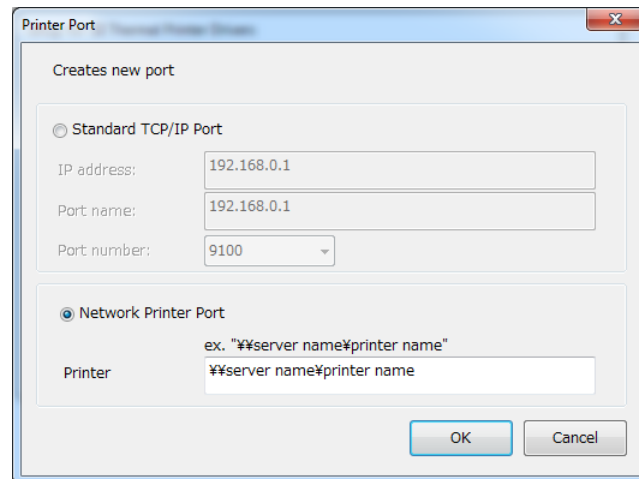
Figure 2-12   [Printer Port] window

6. When the [Installation format selection] window is displayed again, select the driver to install and the connection port, and then click the [Install] button to start installation.
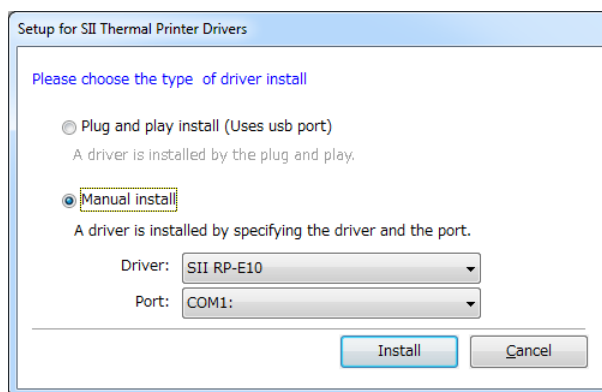
7. When the installation is completed, the [Completion] window is displayed.
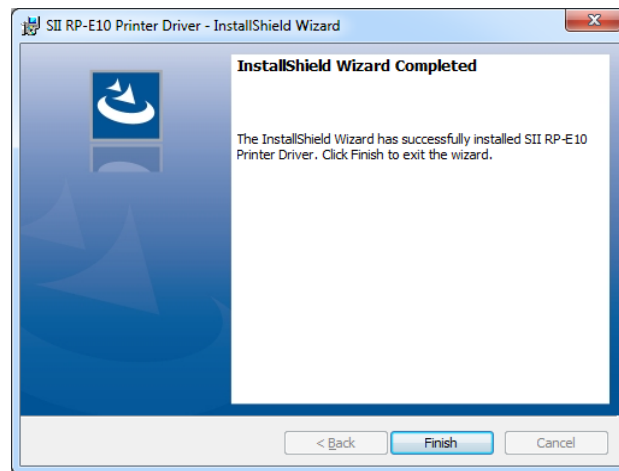
Figure 2-13   [Completion] window (shared printer)

Chapter 3 Printing Preferences

3.1 Overview

This chapter describes the printing preferences.

Various printing preferences can be displayed, reviewed, and changed in the [Printing Preferences] dialog.

The following setting windows are displayed in the [Printing Preferences] dialog.
- ・ Layout : Sets the print direction, page order, and page format.
- ・ Paper/Quality : Sets the print mode.
- ・ Document Settings : Sets the print format.
- ・ Font : Sets the IPD font.
- ・ Watermark : Sets an overlapping image on the printed content.

To display the setting windows in the [Printing Preferences] dialog, follow the steps below.

1. Right-click a printer icon in the Printer folder to display the sub-menu.
2. Click [Printing Preferences] from the sub-menu.

Details of the windows are described in subsequent sections.

Caution

◆ When printing from Windows Store Apps in Windows Server 2012 or later, only a part of configurable items is displayed in [Printing Preferences] window.

3.2 Layout

Sets the print direction, page order, and page format.

3.2.1 Setting of Layout

Select the [Layout] tab to display the window below.
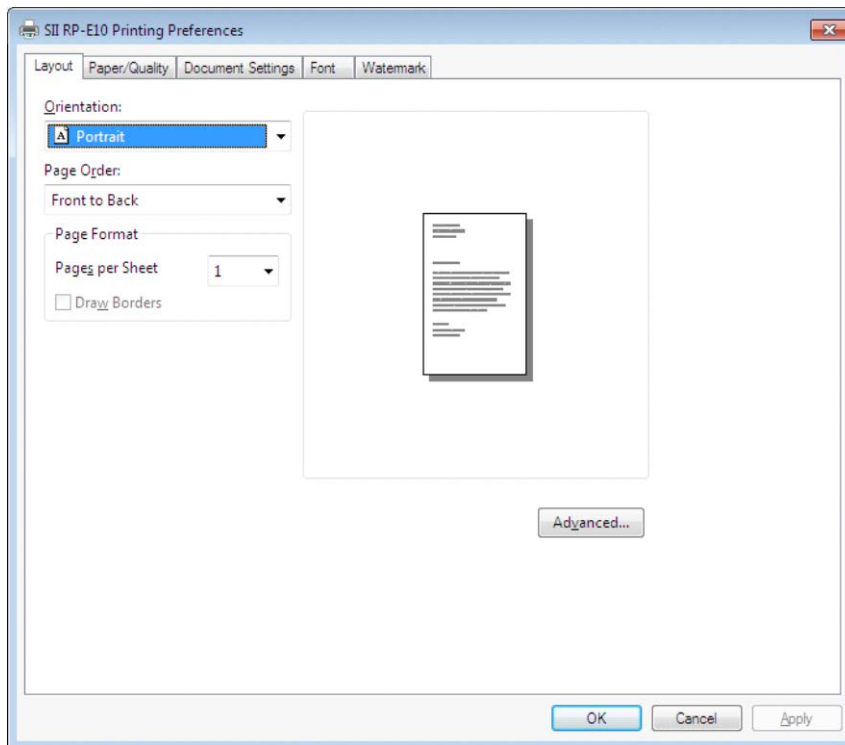
Figure 3-1   [Layout] window

Item		Description ("____": Initial Value)
Orientation		Selects the print direction.[1] ・ Portrait ・ Landscape
Page Order		Selects the order of pages to print. ・ Front to Back ・ Back to Front
Page Format		Sets the number of pages per sheet.
	Pages per Sheet	Selects the number of pages to print per sheet. ・ 1 ・ 2 ・ 4 ・ 6 ・ 9 ・ 16
Advanced...		Displays the advanced option dialog. For details, see "3.7 Advanced Options".

[1]:   When you select "Landscape", the IPD font cannot be used.

3.3 Paper/Quality

Sets the print mode.

3.3.1 Setting of Paper/Quality

Select the [Paper/Quality] tab to display the window below.
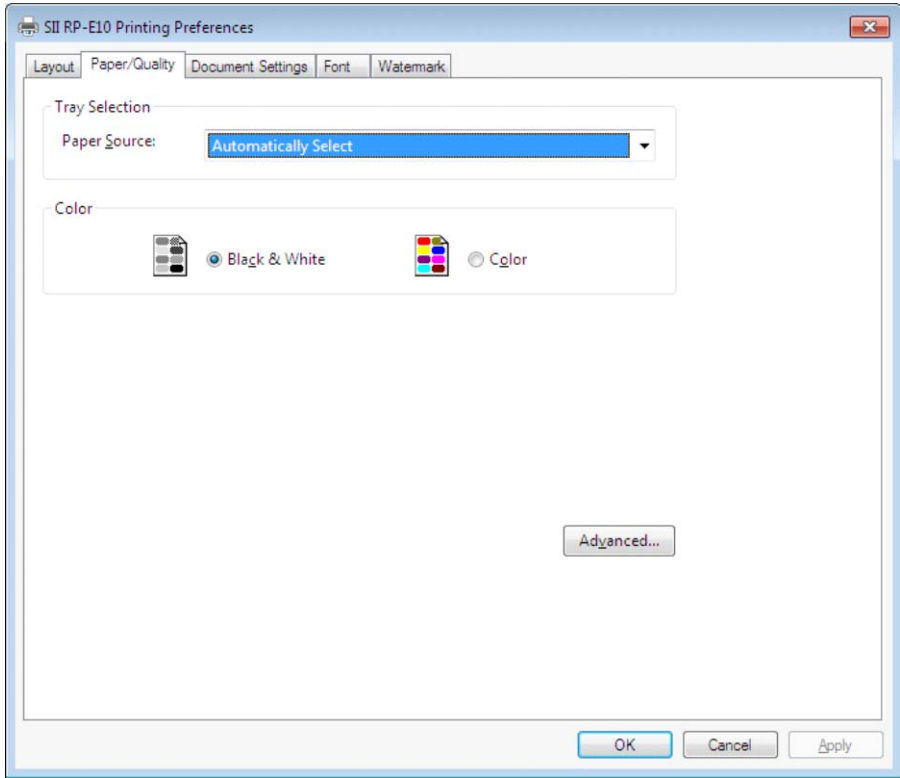
Figure 3-2   [Paper/Quality] window

Item	Description ("____": Initial Value)
Tray Selection	Sets the paper source.
Paper Source	Fixed to "Automatically Select". ・ <u>Automatically Select</u>
Color	Selects the print mode.[1],[2] ・ <u>Black & White</u>　　　　(Uses the halftone of the system standard.) ・ Color　　　　　　　　(Uses the halftone of the printer driver.)
Advanced...	Displays the advanced option dialog. For details, see "3.7 Advanced Options".

[1]: When you select "Color", you can only select "Auto Select" in [Halftoning] described in "3.7 Advanced Options".
[2]: This setting works in conjunction with [Color Printing Mode] in "3.7 Advanced Options".

3.4 Document Settings

Sets the print format.

3.4.1 Setting of Document

Select the [Document Settings] tab to display the window below.
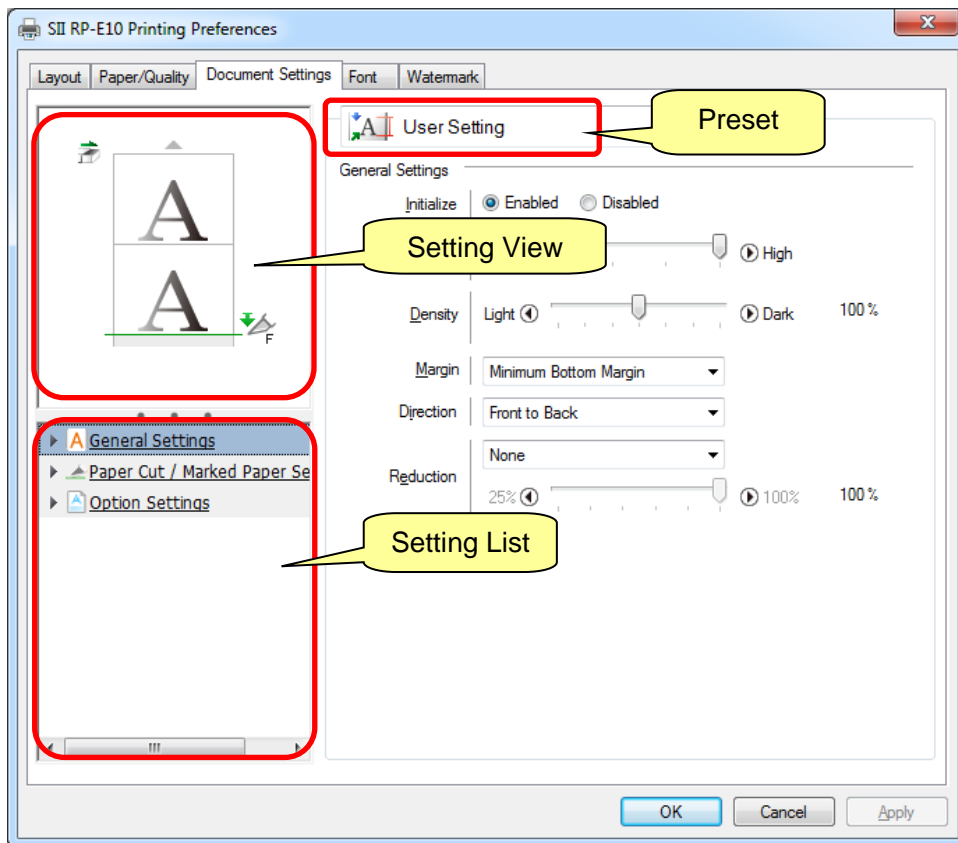
Figure 3-3   [Document Settings] window
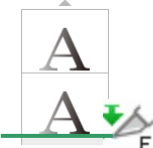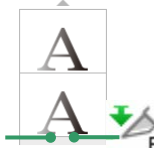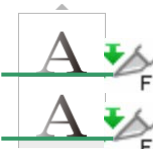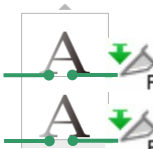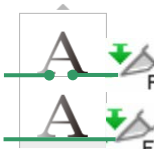
Item	Description ("____": Initial Value)
Setting View	Shows the setting state of main functions with marks. For details of marks, see "3.4.2 Mark List of [Setting View]".
Setting List	Displays all the document setting functions by category. When you select a category name, the corresponding setting window is displayed. For details of the displayed categories, see "3.4.3 Categories of [Setting List]". Click ▶ at the left of a category to display the items in the category. An item whose setting is changed is displayed in red until the change is confirmed.

Item	Description ("____": Initial Value)
Preset	Sets previously registered settings at a time for a specific usage. ・ 80mm Receipt Setting ・ 58mm Receipt Setting ・ 80mm Marked Paper Setting ・ 58mm Marked Paper Setting ・ A4->80mm Reduction Setting ・ A4->58mm Reduction Setting ・ <u>User Setting</u> For details of the settings of each preset, see "3.4.4 Use of Preset".

3.4.2 Mark List of [Setting View]

The following table describes the marks displayed in the [Setting View] in the [Document Settings] window.

Item	Mark			
Orientation	Portrait[*1]		Landscape[*1]	
Density	Light		Dark	
Margin	Minimum Margin	Minimum Top Margin	Minimum Bottom Margin	Maximum Margin
Direction	Front to Back[*2]		Back to Front[*2]	

Item	Mark		
Paper Cut	None	Full Cut (Each job)	Partial Cut (Each job)
	Full Cut (Each page)	Partial Cut (Each page)	Partial Cut (Between pages)
Feed to Cut Position	Enabled		Disabled
Drawer	*3		

*1: Mark displayed when [Direction] is selected to "Front to Back".
*2: Mark displayed when [Orientation] is selected to "Portrait".
*3: The mark is displayed at the upper left when [Print Start] is set for the drawer and at the lower right when [Print End] is set in "3.4.7 Setting of Option".

3.4.3 Categories of [Setting List]

The following table describes the functional categories displayed in the [Setting List].

Category	Description
General Settings	Sets basic items such as initialization and print speed.
Paper Cut/Marked Paper Settings	Sets parameters about the paper cut and the black mark detection when using marked paper.
Option Settings	Sets the operations at specific print timings.

Setting items for each category are described in subsequent sections.

3.4.4 Use of Preset

Preset enables you to set predefined parameters at a time for a specific usage.
When you change any setting item in a preset, it is released from the Preset at the time and then becomes a user setting.
When you switch presets, all the setting items except for the document setting are also switched according to the newly specified preset. Note that a message about the changed settings is not displayed.

The following table describes the available preset types and their settings.

Preset Type	Item			Description
80mm Receipt Setting 58mm Receipt Setting	Advanced Options			
		Paper Size		80 mm 58 mm
	Document Settings			
		General Settings		
			Reduction	None
		Paper Cut/Marked Paper Settings		
			Paper Cut	Full Cut (Each job)
			Feed to Cut Position	Enabled
			Marked Paper Form Feed	Disabled
			Form Feed Position Correct	0 dots
		Option Settings		
			Print Start	
				Drawer	Drawer 1
				ON Time	50 ms
				OFF Time	200 ms
80mm Marked Paper Setting 58mm Marked Paper Setting	Advanced Options			
		Paper Size		80 mm 58 mm
	Document Settings			
		General Settings		
			Reduction	None
		Paper Cut/Marked Paper Settings		
			Paper Cut	Full Cut (Each page)
			Feed to Cut Position	Disabled
			Marked Paper Form Feed	Each Page
			Form Feed Position Correct	0 dots
		Option Settings		
			Print Start	
				Drawer	Disabled
				ON Time	50 ms
				OFF Time	200 ms

Preset Type	Item			Description
A4->80mm Reduction Setting A4->58mm Reduction Setting	Advanced Options			
		Paper Size		A4
	Document Settings			
		General Settings		
			Reduction	Fit 80 mm Width Fit 58 mm Width
		Paper Cut/Marked Paper Settings		
			Paper Cut	Full Cut (Each page)
			Feed to Cut Position	Enabled
			Marked Paper Form Feed	Disabled
			Form Feed Position Correct	0 dots
		Option Settings		
			Print Start	
				Drawer	Disabled
				ON Time	50 ms
				OFF Time	200 ms

The following table describes the common preset settings.

Type	Item			Description
Common Settings	Layout			
		Orientation		Portrait
	Document Settings			
		General Settings		
			Initialize	Enabled
			Speed	High
			Density	100 %
			Margin	Minimum Bottom Margin
			Direction	Front to Back
	Option Settings			
		(Common to all timings)		
			Enable/disable logo	Disabled
			Feed	0 dots
			Buzzer	OFF
			Send Command	(Blank)
		Print End		
			Drawer type	Disabled
			ON Time	50 ms
			OFF Time	200 ms
	Watermark			
		Watermark Settings		
			Image	None

3.4.5 General Settings

Select [General Settings] in the [Setting List] to display the window below.
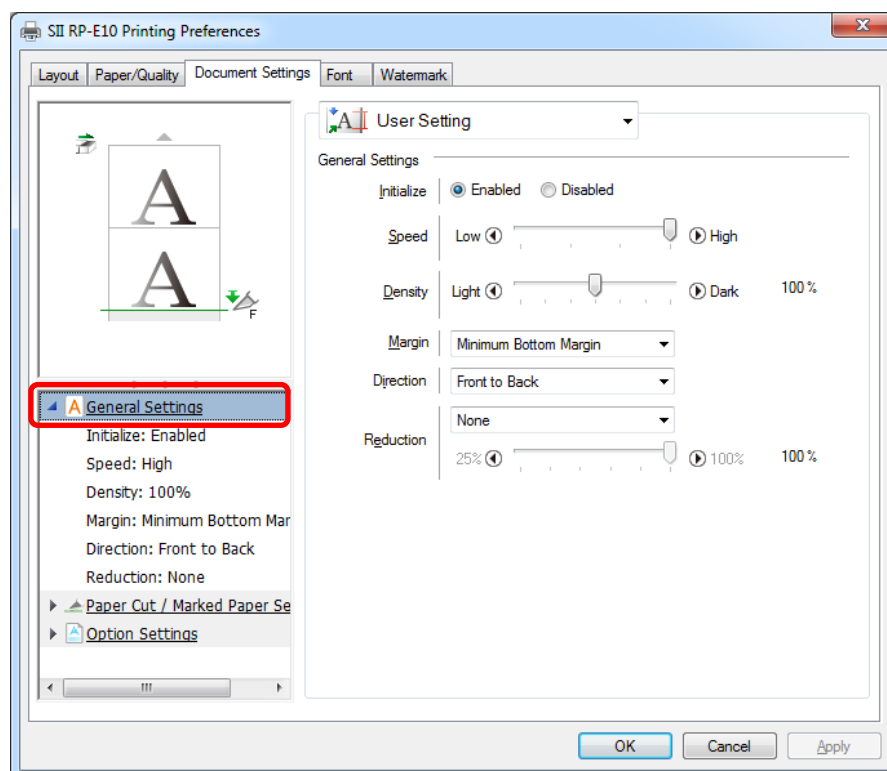
Figure 3-4   [General Settings] window

Item	Description ("____": Initial Value)
General Settings	Sets basic items such as initialization and print speed.
Initialize	Selects whether or not to initialize the printer before printing. ・ Enabled ・ Disabled
Speed	Selects the print speed (Low or High).[*1] ・ Low ・ Middle (Quality) ・ Middle (Silent) ・ High
Density	Sets the print density (Unit:%). ・ 70 to 130 (100)
Margin	Selects the margin.[*2] ・ Minimum Margin ・ Minimum Top Margin ・ Minimum Bottom Margin ・ Maximum Margin
Direction	Selects the paper feed direction.[*2] ・ Front to Back ・ Back to Front

Item	Description ("____": Initial Value)
Reduction	Sets the reduction print.[*3] ・ <u>None</u> ・ Fit 80 mm Width ・ Fit 58 mm Width ・ Scale [25 to 100] (Unit: %)

[*1]: When you are using the F/W version 1.02 or earlier, select the "Speed" except "Middle (Silent)".
[*2]: When the print size is less than 3 cm, paper is fed to 3 cm.
[*3]: When you select "Back to Front", the IPD font cannot be used.
[*4]: When you select other than "None", the IPD font cannot be used.

Reference

● Direction

You can set [Direction] to "Back to Front" to rotate the print data by 180°.

When the printer prints out results from the front of the body, you can print them in an easier-to-see direction by setting "Back to Front".

● Saving margins

You can save paper by setting [Margin] to shorten the margin length.

	To save the margin from the print start to the first print data	To save the margin from the last print data to the paper cut
Minimum Margin	✓	✓
Minimum Top Margin	✓	-
Minimum Bottom Margin	-	✓
Maximum Margin	-	-

For more information on margin, refer to "6.3 Margin".

3.4.6 Setting of Paper Cut/Marked Paper

Select [Paper Cut/Marked Paper Settings] in the [Setting List] to display the window below.
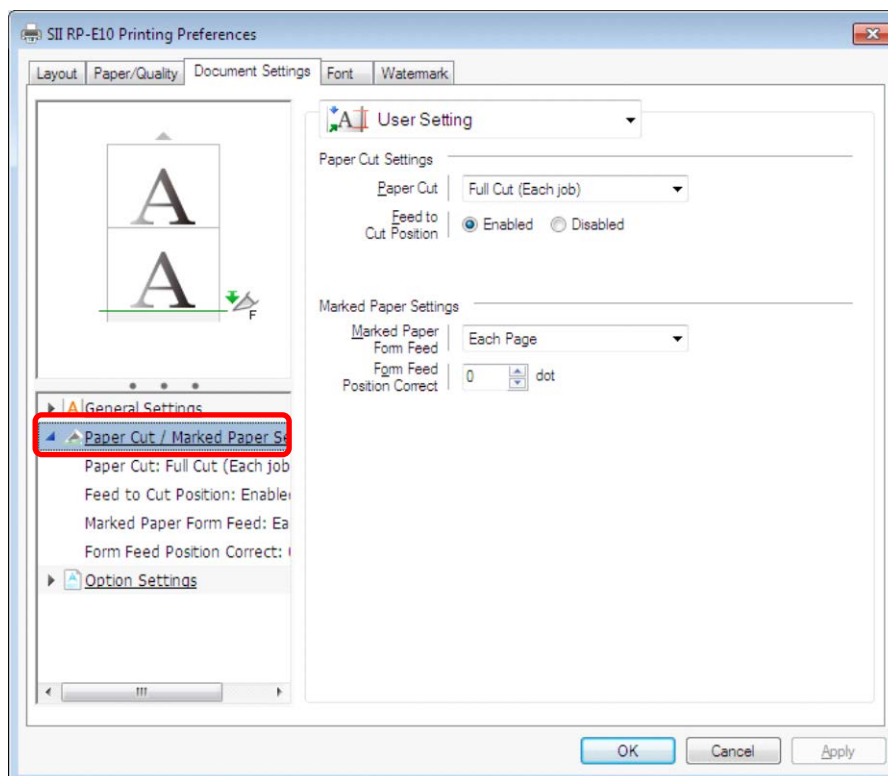
Figure 3-5   [Paper Cut/Marked Paper Settings] window

Item	Description ("____": Initial Value)
Paper Cut Settings	Sets parameters about the paper cut.
Paper Cut	Selects the paper cut method. ・ None ・ <u>Full Cut (Each job)</u> ・ Partial Cut (Each job) ・ Full Cut (Each page) ・ Partial Cut (Each page) ・ Partial Cut (Between pages)[*1]
Feed to Cut Position	Selects whether or not to feed to the cut position. ・ <u>Enabled</u> ・ Disabled
Marked Paper Settings	Sets parameters about the black mark detection when using marked paper.
Marked Paper Form Feed	Sets the detection of the black mark. ・ <u>Disabled</u> ・ Each Page ・ Each Job
Form Feed Position Correct	Sets the form feed position correction (Unit: dot). ・ -74 to 255 (<u>0</u>)[*2]

*1:   Full cut is used for the last page.
*2:   When you are using the F/W version 1.02 or earlier, do not enter less than -69 to
        [Form Feed Position Correct]. When you enter it, [Form Feed Position Correct] is disabled.

3.4.7 Setting of Option

Select [Option Settings] in the [Setting List] to display the window below.
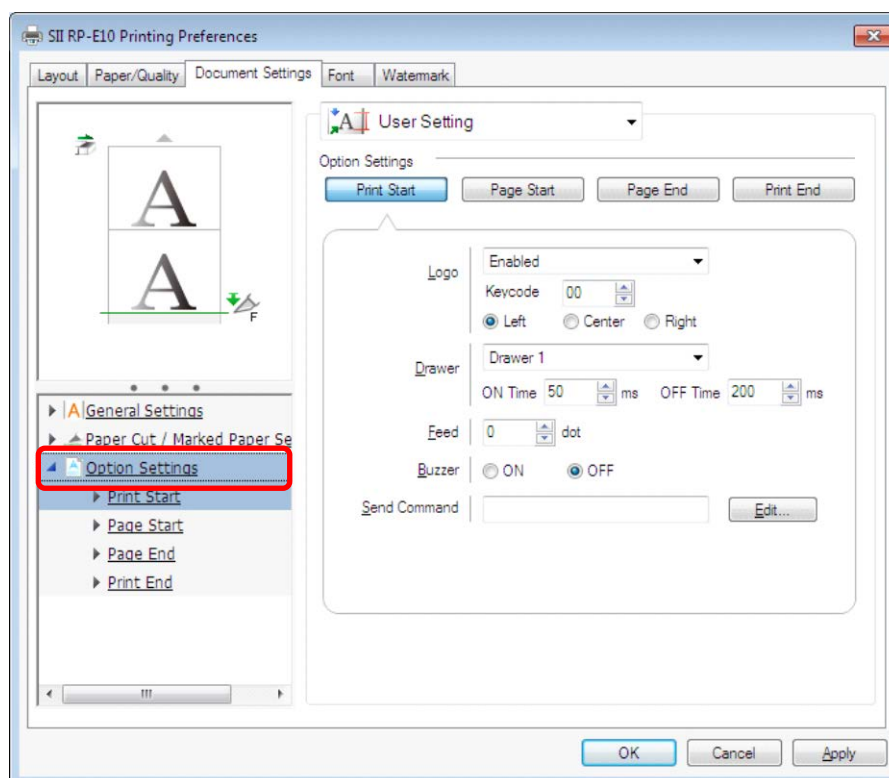
Figure 3-6   [Option Settings] window

Item	Description ("____": Initial Value)
Option Settings	Sets parameters about the Logo, Drawer, Feed, Buzzer, and Send command.
Print Start Page Start Page End Print End	Sets the operations at specific timings.
Logo	Sets parameters about the logo.
Enable/disable logo	Selects whether or not to show the logo. ・ Disabled ・ Enabled
Keycode	Sets the keycode of the logo. ・ 00 to 99
Logo Position	Selects the position to print the logo. ・ Left ・ Center ・ Right

Item	Description ("____": Initial Value)
Drawer	Sets parameters about the drawer.[*1]
Drawer Selection	Selects the drawer to use. ・ <u>Disabled</u>[*2] ・ <u>Drawer 1</u>[*3] ・ Drawer 2
ON Time	Enters the ON time of the drawer in even number (Unit: ms).[*4] ・ 2 to 510 (<u>50</u>)
OFF Time	Enters the OFF time of the drawer in even number (Unit: ms).[*4,*5] ・ 2 to 510 (<u>200</u>)
Feed	Sets the feed (Unit: dot). ・ -74 to 255 (<u>0</u>)
Buzzer	Sets the buzzer. ・ ON ・ <u>OFF</u>
Send Command	Sets the Printer command to send.
Command data	Displays the Printer command to send.[*6] To enter data, use the binary editor which is displayed by clicking the [Edit...] button.
Edit...	Enters the Printer command by the binary editor. The Printer command entered is displayed in [Command data]. Up to 128 bytes can be specified. For details of the binary editor, see "3.4.8 How to Use Binary Editor".

*1: You can specify only one of [Print Start] or [Print End].
*2: The initial value of [Print End].
*3: The initial value of [Print Start].
*4: When you enter an odd number, it is internally rounded to a value within the range.
*5: It should be equal to or greater than four times of the ON time to protect circuits.
*6: You cannot enter data directly.

Reference

• Logo

Function to print a predefined image as logo. An NV image is used as the logo image.

For details of the NV image, see "5.6 NV Image".

3.4.8 How to Use Binary Editor

For a control in which you need to enter the Printer command or arbitrary data, the binary editor is used.

Use the binary editor in the following situation.

- [Send Command] of [Option Settings] in the [Document Settings]
- [ControlA Font Settings]
- To set [Custom Cmd.] of [Test Print] in the [Tool]

Click the [Edit…] button for above settings to display the window below.

Enter hexadecimal and click the [OK] button to confirm the value.
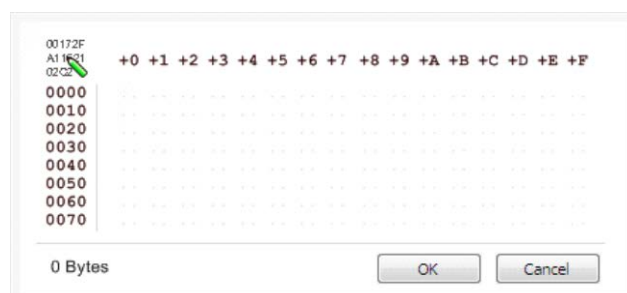
Figure 3-7   [Binary editor] window

3.5 Font

Sets the IPD font.

Caution

◆ The IPD font settings are not available with any of the following settings.

- ・ [Orientation] in "3.2.1 Setting of Layout" :"Landscape"
- ・ [Direction] in "3.4.5 General Settings"   :"Back to Front"
- ・ [Reduction] in "3.4.5 General Settings"   :Other than "None"
- ・ [Image] in "3.6.4 Setting of Watermark"   :"NV Image"

Reference

- For details of the IPD font, see "Chapter 7 Font".

3.5.1 Setting of Font

Select the [Font] tab to display the window below.
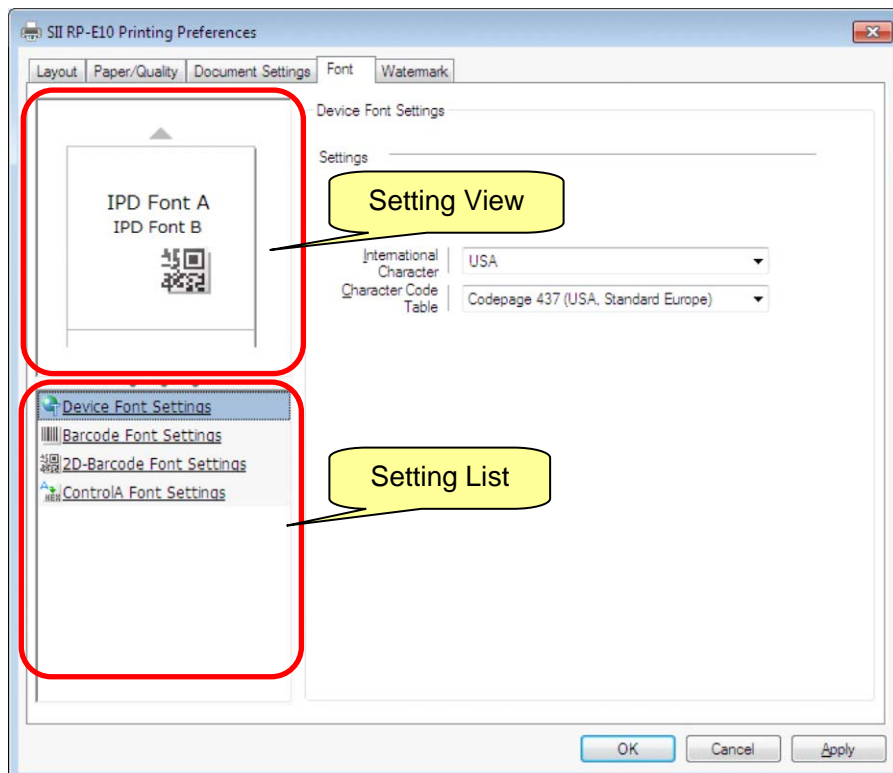
Figure 3-8   [Font] window

Item	Description
Setting View	Shows whether the IPD font can be used or not in the current settings with marks. For details of marks, see "3.5.2 Mark List of [Setting View]".
Setting List	Displays the font category names. When you select a category name, the corresponding setting window is displayed.

3.5.2 Mark List of [Setting View]

The following marks are displayed in the [Setting View] in the [Font] window.

Condition	Mark
IPD font available	IPD Font A IPD Font B
IPD font not available	IPD Font A IPD Font B

3.5.3 Categories of [Setting List]

The following categories are displayed in the [Setting List] in the [Font] window.

Category	Description
Device Font Settings	Sets the International Character and Character Code Table for the device font.
Barcode Font Settings	Sets the type, barcode size, and others for the Barcode font.
2D-Barcode Font Settings	Sets the type, barcode size, and others for the 2D-Barcode font.
ControlA Font Settings	Sets parameters about the Printer command assigned to the ControlA font.

Setting items for each category are described in subsequent sections.

3.5.4 Setting of Device Font

Select [Device Font Settings] in the [Setting List] to display the window below.
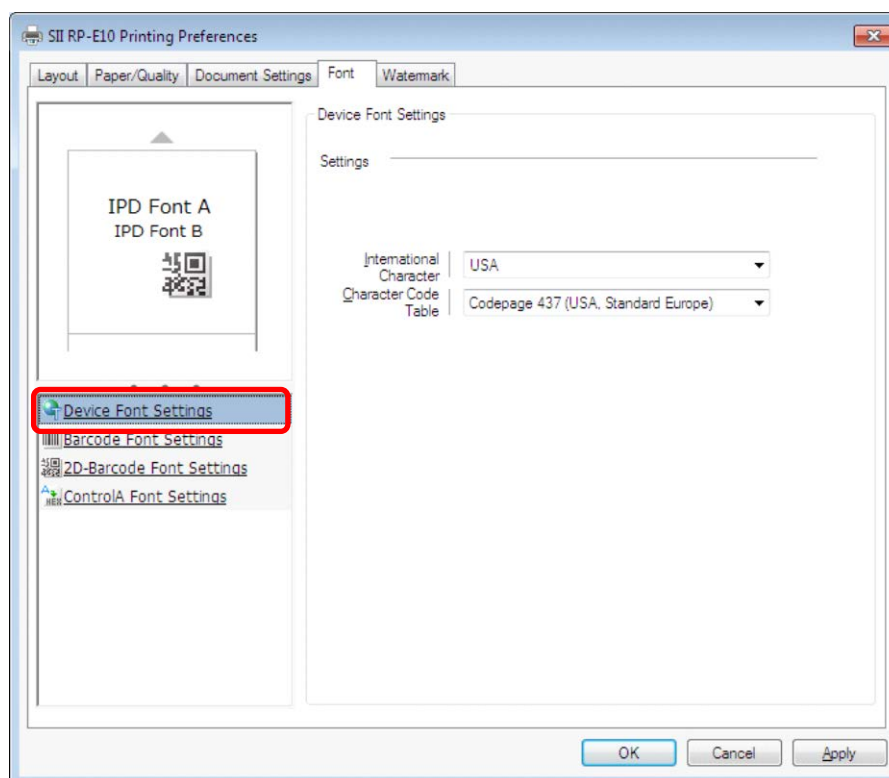
Figure 3-9   [Device Font Settings] window

Item	Description ("____": Initial Value)
Settings	Sets parameters about the device font.
International Character	Selects the international character. ・ USA ・ France ・ Germany ・ United Kingdom ・ Denmark I ・ Sweden ・ Italy ・ Spain I ・ Japan ・ Norway ・ Denmark II ・ Spain II ・ Latin America ・ Arabia

Item	Description ("____": Initial Value)
Character Code Table	Selects the character code table. ・ <u>Codepage 437 (USA, Standard Europe)</u> ・ Katakana character set ・ Codepage 850 (Multilingual) ・ Codepage 860 (Portuguese) ・ Codepage 863 (Canadian-French) ・ Codepage 865 (Nordic) ・ Codepage 1252 (Latin) ・ Codepage 852 (Eastern Europe) ・ Codepage 858 (Euro) ・ Codepage 864 (Arabic) ・ Codepage 1250 (Central European) ・ Codepage 1251 (Cyrillic) ・ Codepage 1253 (Greek) ・ Codepage 1254 (Turkish) ・ User page

3.5.5 Setting of Barcode Font

Select [Barcode Font Settings] in the [Setting List] to display the window below.
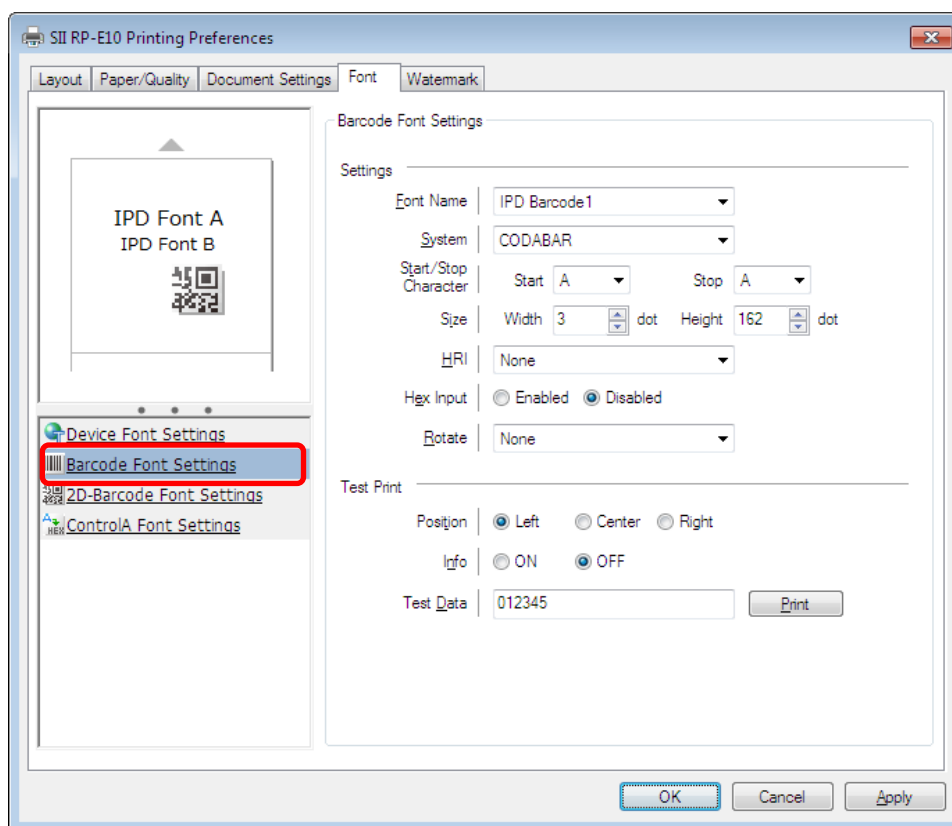
Figure 3-10 [Barcode Font Settings] window

Item	Description ("____": Initial Value)
Settings	Sets parameters about the barcode font.
Font Name	Selects the Font Name. ・ IPD Barcode1 ・ IPD Barcode2 ・ IPD Barcode3 ・ IPD Barcode4 ・ IPD Barcode5 ・ IPD Barcode6 ・ IPD Barcode7 ・ IPD Barcode8 ・ IPD Barcode9 ・ IPD Barcode10

Item			Description ("＿＿": Initial Value)
System			Selects the system of the barcode. ・ <u>UPC-A</u> ・ UPC-E ・ JAN13(EAN) ・ JAN8(EAN) ・ Code39 ・ ITF ・ CODABAR ・ CODE128 ・ CODE93 ・ JAN13 add-on2 ・ JAN13 add-on5
Start/Stop Character			Sets the start character and stop character.[*1]
	Start		Selects the start character of "CODABAR". ・ <u>A</u> ・ B ・ C ・ D
	Stop		Selects the stop character of "CODABAR". ・ <u>A</u> ・ B ・ C ・ D
Size			Sets the barcode size.
	Width		Sets the thin element width. (Unit: dot) ・ 2 to 6 (<u>3</u>)
	Height		Sets the height of the barcode in dots. (Unit: dot) ・ 1 to 255 (<u>162</u>)
HRI			Selects the position and font of the HRI characters added to the barcode. ・ <u>None</u> ・ Over barcode (Font A) ・ Under barcode (Font A) ・ Over and under barcode (Font A) ・ Over barcode (Font B) ・ Under barcode (Font B) ・ Over and under barcode (Font B)
Hex Input			Selects [Enabled] when the barcode font data or [Test Data] is entered in hexadecimal.[*2] ・ Enabled ・ <u>Disabled</u>
Rotate			Selects whether or not to rotate the barcode at printing and angle when rotating. ・ <u>None</u> ・ 90 degrees to right ・ 180 degrees ・ 90 degrees to left

Item	Description ("____": Initial Value)
Test Print	Sets parameters about the test print.
Position	Selects the position of the barcode. ・ <u>Left</u> ・ Center ・ Right
Info	Selects whether or not to append the information in the [Settings] to the test print. ・ ON ・ <u>OFF</u>
Test Data	Enters the data for test print. Up to 64 characters can be entered, and only 1-byte character is available.*2
Print	Prints the barcode with the entered settings and [Test Data].*3

*1: Displayed only when "CODABAR" is selected in [System].
*2: Input formats for barcode font data are as follows.
    Input Example: barcode font data (012345)
    When [Hex Input] is "Disabled": 012345
    When [Hex Input] is "Enabled": 303132333435
*3: Not available when the [Test Data] is blank.

3.5.6 Setting of 2D-Barcode Font

Select [2D-Barcode Font Settings] in the [Setting List] to display the window below.
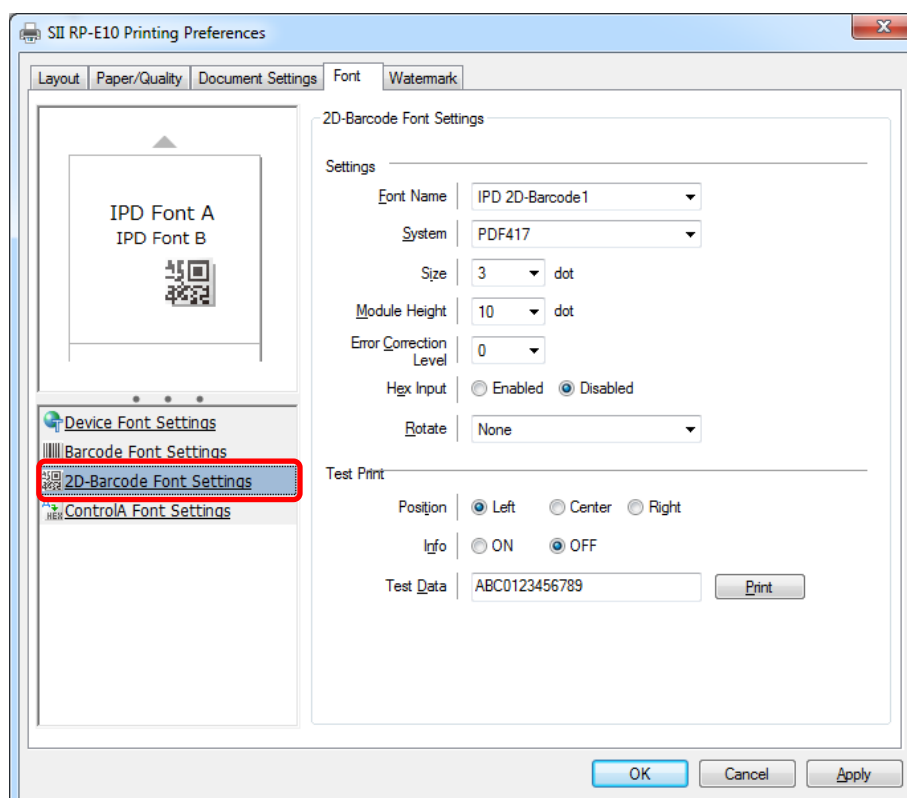
Figure 3-11 [2D-Barcode Font Settings] window

Item		Description ("___": Initial Value)
Settings		Sets parameters about the 2D-Barcode font.
	Font Name	Selects the Font Name. ・ IPD 2D-Barcode1 ・ IPD 2D-Barcode2 ・ IPD 2D-Barcode3 ・ IPD 2D-Barcode4 ・ IPD 2D-Barcode5
	System	Selects the system of the 2D-Barcode. ・ QR Code Model-2 ・ PDF417
	Size	Sets one module size (Unit: dot). When [System] is "QR Code Model-2": ・ 2 to 11 (6) When [System] is "PDF417": ・ 2 to 4 (3)
	Module Height	Sets the module height. (Unit: dot).[*1] ・ 2 to 127 (10)
	Error Correction Level	Selects the error correction level. When [System] is "QR Code Model-2": ・ L ・ M ・ Q ・ H When [System] is "PDF417": ・ 0 to 8
	Hex Input	Selects [Enabled] when the barcode font data or [Test Data] is entered in hexadecimal.[*2] ・ Enabled ・ Disabled
	Rotate	Selects whether or not to rotate the 2D-Barcode at printing and angle when rotating. ・ None ・ 90 degrees to right ・ 180 degrees ・ 90 degrees to left
Test Print		Sets parameters about the test print.
	Position	Selects the position of the 2D-Barcode. ・ Left ・ Center ・ Right
	Info	Selects whether or not to append the information in the [Settings] to the test print. ・ ON ・ OFF
	Test Data	Enters the data for test print. Up to 64 characters are available, and both 1-byte character and 2-byte character are valid.[*2]
	Print	Prints the 2D-Barcode with the entered settings and [Test Data].[*3]

*1: Displayed only when "PDF417" is selected in [System].
*2: Input formats for barcode font data are as follows.
    Input Example: barcode font data (012345)
    When [Hex Input] is "Disabled": 012345
    When [Hex Input] is "Enabled": 303132333435
*3: Not available when the [Test Data] is blank.

3.5.7 Setting of ControlA Font

Select [ControlA Font Settings] in the [Setting List] to display the window below.
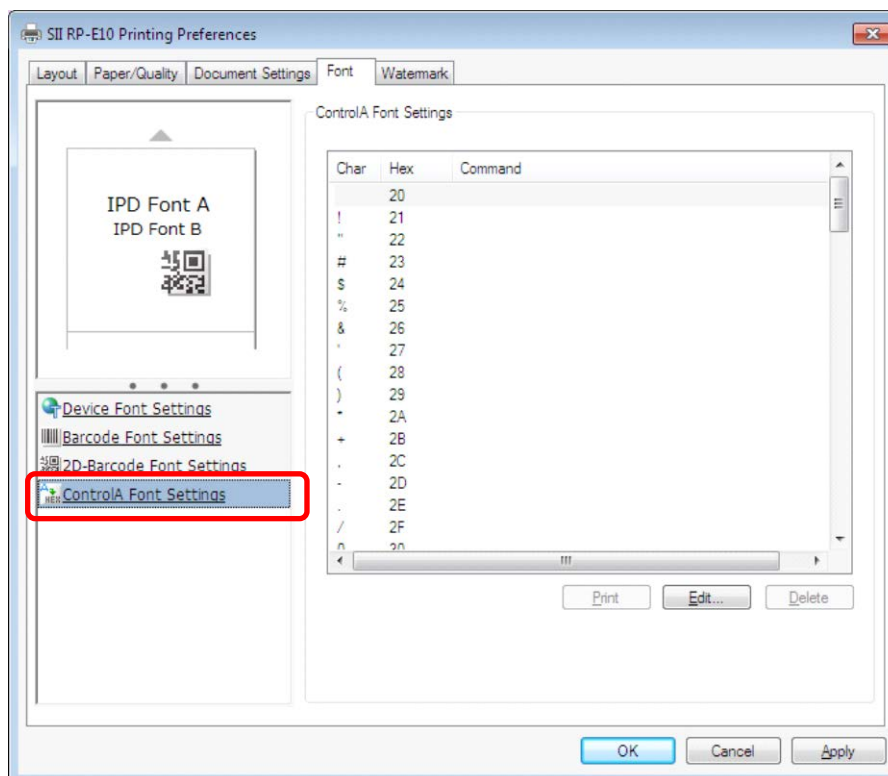
Figure 3-12 [ControlA Font Settings] window

Item	Description
Char	Displays characters to assign the Printer command.
Hex	Displays [Char] in hexadecimal.
Command	Displays the Printer command set. To enter the Printer command, use the binary editor which is displayed by clicking the [Edit...] button.
Print	Executes the Printer command selected in the list.[*1]
Edit...	Enters the Printer command by the binary editor.[*2] The Printer command entered is displayed in [Command] column. Up to 256 bytes can be specified. For details of the binary editor, see "3.4.8 How to Use Binary Editor".
Delete	Clears the [Command] field selected in the list.[*1,*2]

*1: Not available when a blank [Command] field is selected in the list.
*2: Not available from the [Printing Preferences] window that was started when printing from an application.
  To use these options, start the [Printing Preferences] window from the Printer folder.

3.6 Watermark

Sets an overlapping image on the printed content.

An NV image, which has been registered by a user to the printer in advance, is used as the overlapping image.

To use the watermark, you should register the NV image. For details of registering NV image, see "5.6 NV Image".

> ## Caution
>
> ◆ When the size of the NV image to be used as the watermark is greater than the print
>
> area, the watermark will not be printed.

3.6.1 Watermark

Select the [Watermark] tab to display the window below.
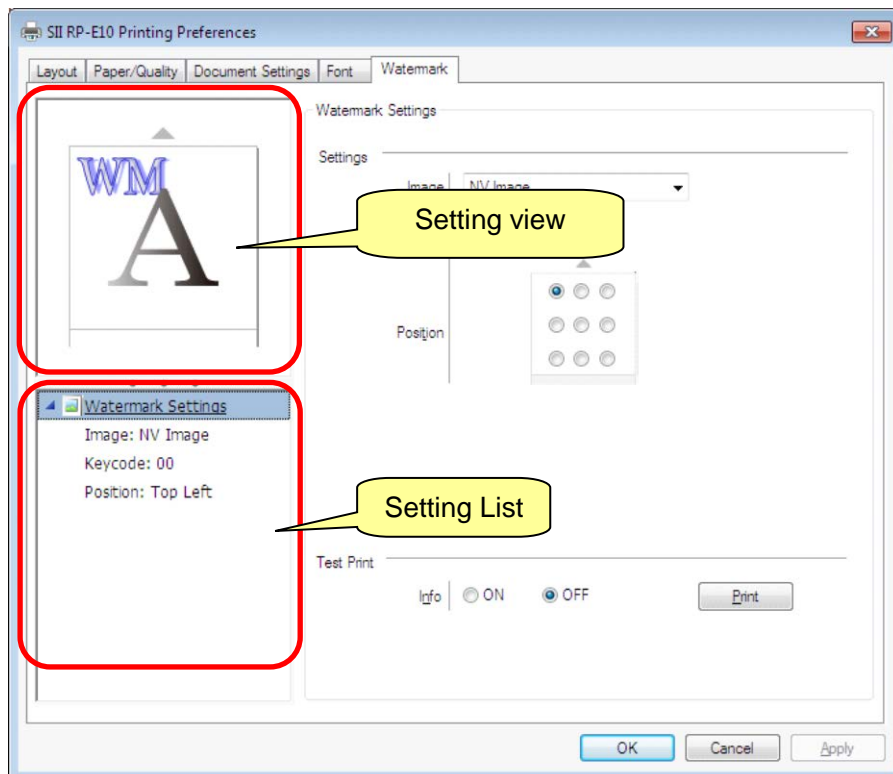
Figure 3-13   [Watermark] window

Item	Description
Setting View	Displays the position of the watermark with marks. For details, see "3.6.2 Mark List of [Setting View]".
Setting List	Displays the watermark settings by category. When you select a category name, the corresponding setting window is displayed. For details of the displayed categories, see "3.6.3 Categories of [Setting List]". Click ▶ at the left of a category to display the items in the category. An item whose setting is changed is displayed in red until the change is confirmed.

3.6.2 Mark List of [Setting View]

The following marks are displayed in the [Setting View] in the [Watermark] window.

Item	Mark		
Position	Top Left	Top Center	Top Right
	Left	Center	Right
	Bottom Left	Bottom Center	Bottom Right

3.6.3 Categories of [Setting List]

The following settings are displayed in the [Setting List] in the [Watermark] window.

Category	Description
Watermark Settings	Sets parameters about the watermark.

The watermark settings are described in subsequent sections.

3.6.4 Setting of Watermark

Select the [Watermark] tab to display the window below.
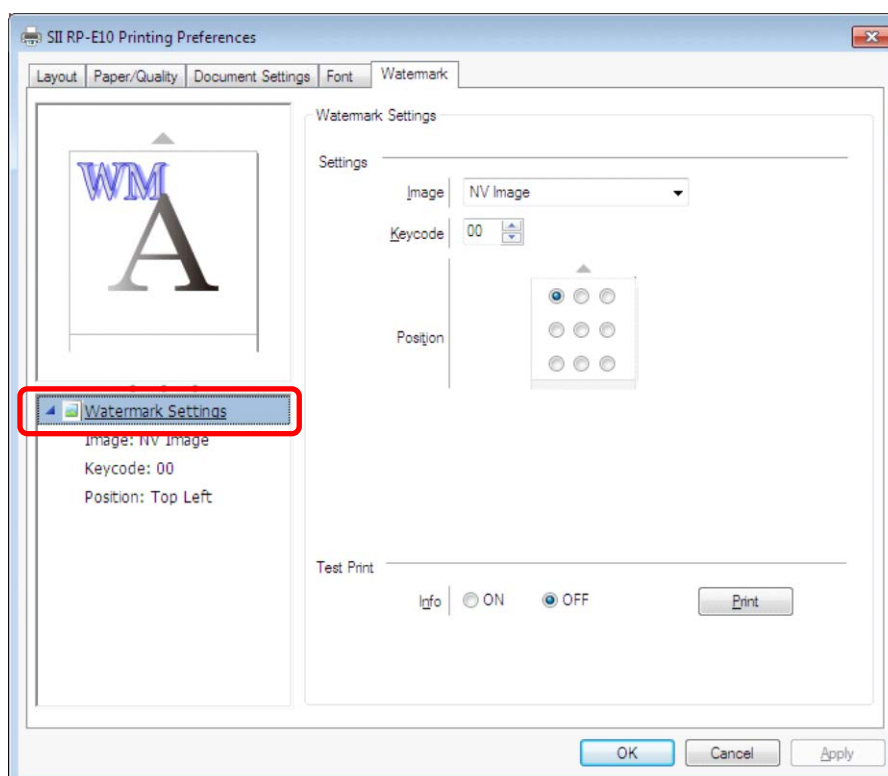
Figure 3-14   [Watermark Settings] window

Item	Description ("____": Initial Value)
Settings	Sets parameters about the watermark.
Image	Sets the type of the image used as the watermark.[*1] ・ <u>None</u> ・ NV Image
Keycode	Enters the keycode of the image used as the watermark.[*2] ・ <u>00</u> to 99
Position	Selects the position of the watermark.[*2] ・ <u>Top Left</u> ・ Top Center ・ Top Right ・ Left ・ Center ・ Right ・ Bottom Left ・ Bottom Center ・ Bottom Right
Test Print	Sets parameters about the test print.[*2]
Info	Selects whether or not to append the information in the [Settings] to the test print. ・ ON ・ <u>OFF</u>
Print	Prints the watermark with the entered settings and data.

*1: When you select other than "None", the IPD font cannot be used.
*2: Not displayed when [Image] is selected to "None".

3.6.5 Use of Watermark

This section describes the procedure to use the watermark.

1. Register an image used for the watermark in "5.6 NV Image".
2. Select "NV Image" for [Image] in the [Watermark Settings] window of [Printing Preferences].
3. Enter the keycode of the image used as the watermark in [Keycode].
4. Select the position of the watermark in [Position].
5. Click the [Apply] button.

3.7 Advanced Options

3.7.1 Setting of Advanced Options

Click the [Advanced...] button at the lower right of the [Layout] or [Paper/Quality] window to display the window below.
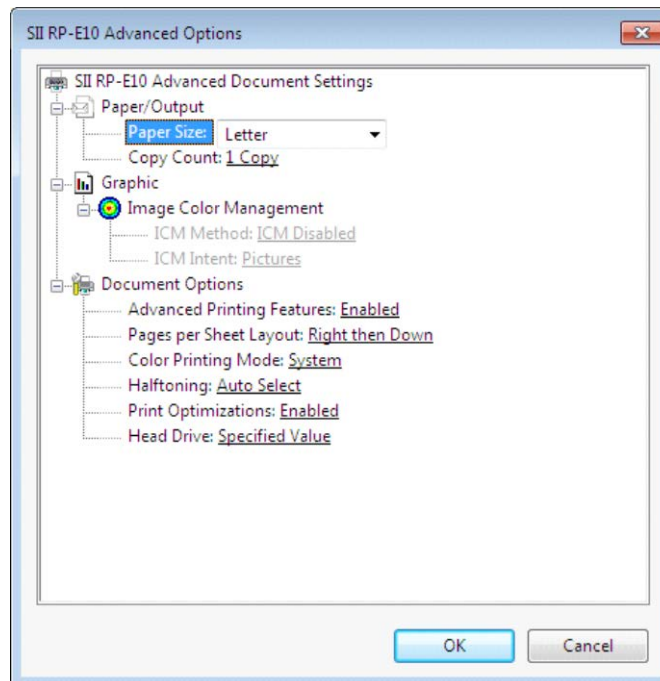
Figure 3-15   [Advanced Options] window

Item	Description ("____": Initial Value)
Paper/Output	Sets the paper size and the number of copies.
Paper Size	Selects the paper size to use.[*1] ・ 58 mm ・ 80 mm ・ A4[*2] ・ Letter[*3]
Copy Count	Enters the number of copies to print (Unit: Copy). ・ 1 to 9999
Graphic	Sets the ICM method and intent.[*4]
ICM Method	Selects the ICM method. ・ ICM Disabled ・ ICM Handled by Host System ・ ICM Handled by Printer
ICM Intent	Selects the ICM intent. ・ Graphics ・ Pictures ・ Proof ・ Match

Item	Description ("____": Initial Value)
Document Options	Sets the document options.
Advanced Printing Features	Selects the advanced printing features. ・ Enabled ・ Disabled
Pages per Sheet Layout	Selects the page layout in a sheet. ・ Right then Down ・ Down then Right ・ Left then Down ・ Down then Left
Color Printing Mode	Selects the color print mode. ・ System ・ Driver This selection works in conjunction with the [Color] setting in "3.3 Paper/Quality".[5]
Halftoning	Selects the halftoning.[6] ・ Auto Select ・ Super Cell ・ Dither 2x2 ・ Dither 4x4 ・ Dither 6x6 ・ Dither 8x8
Print Optimizations	Selects the print optimizations. ・ Enabled ・ Disabled
Head Drive	Selects the head division type. ・ Specified Value[7] ・ Fixed 2div. ・ Fixed 4div. ・ Dynamic 64dots ・ Dynamic 144dots ・ Dynamic 288dots

[1]: You can also register and set a new paper size. For details how to register a paper size, see "6.4 How to Add a New Paper Size".
[2]: The initial value of Japanese environment.
[3]: The initial value of the environment other than Japanese.
[4]: Available only when you select "Color" for [Color] described in "3.3 Paper/Quality".
[5]: When you select [System], [Color] in the [Paper/Quality] window is changed to "Black & White", or when you select [Driver], [Color] in the [Paper/Quality] window is changed to "Color". For details, refer to "3.3 Paper/Quality".
[6]: When you select "Color" for [Color] described in "3.3 Paper/Quality", you can only select "Auto Select".
[7]: Depending on the printer settings.

Chapter 4 Property

4.1 Overview

This chapter describes the property settings.

Various property settings can be displayed, reviewed, and changed in the [Properties] dialog.

The following setting windows are displayed in the [Properties] dialog.
- ・ General : Executes the general management of the printer driver and prints the test page.
- ・ Sharing : Sets shared printers.
- ・ Ports : Sets output ports.
- ・ Tool : Displays the version information of the printer driver and the start buttons for various tools.

To display the setting windows in the [Properties] dialog, follow the steps below.

1. Right-click a printer icon in the Printer folder to display the sub-menu.
2. Click [Printer Properties] from the sub-menu.

Details are described in subsequent sections.

Caution

◆ For the setting windows other than the above that are displayed in the [Properties] window, keep the default settings at installation.

4.2 General

Executes the general management of the printer driver and prints the test page.

4.2.1 Setting of General

Select the [General] tab to display the window below.
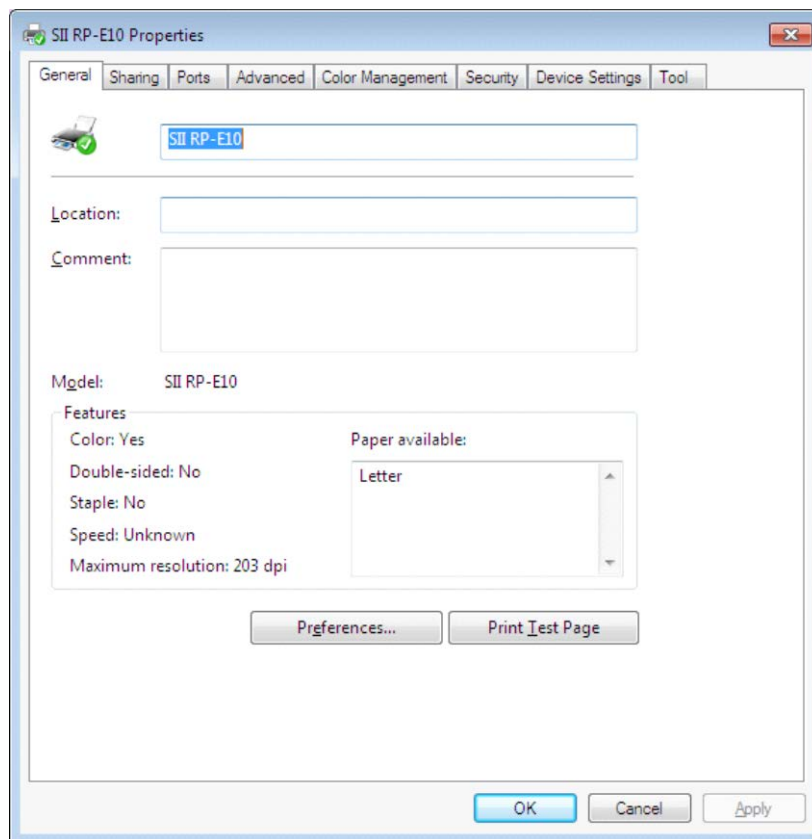
Figure 4-1 [General] window

Item	Description
Printer name	Reviews or changes the Printer name.
Location	Enters the location of the printer.
Comment	Enters a comment.
Model	Displays the printer Driver name.
Preferences...	Displays the [Printing Preferences] window.
Print Test Page	Executes the Windows test print.[*1]

*1: The test printing by [Print Test Page] will not produce a whole-page printout on the paper whose width is for compact printers. So it is not a defect.

4.3 Sharing

Sets shared printers.

4.3.1 Setting of Sharing

Select the [Sharing] tab to display the window below.
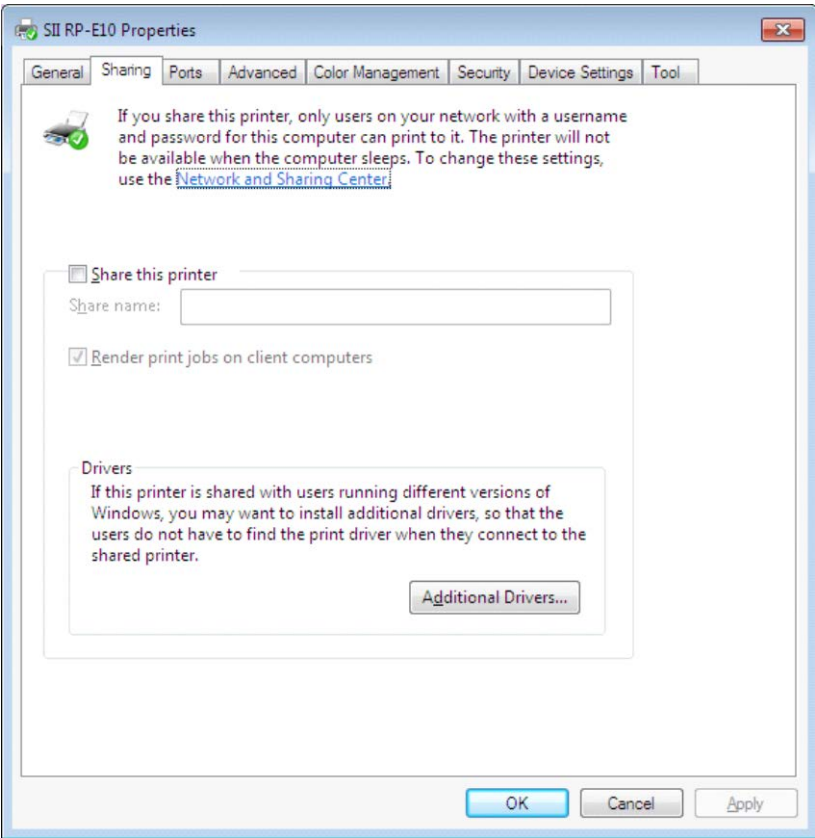
Figure 4-2 [Sharing] window

Item	Description
Share this printer	When you select this check box and enter an arbitrary share name in [Share name], then the printer driver can be used by any computer on the network.
Share name	Enters the share name of the printer.
Additional Drivers...	This function is not supported.

Caution

◆ A shared printer may not work properly depending on the network usage.

4.4 Ports

Sets output ports.

4.4.1 Setting of Ports

Select the [Ports] tab to display the window below.
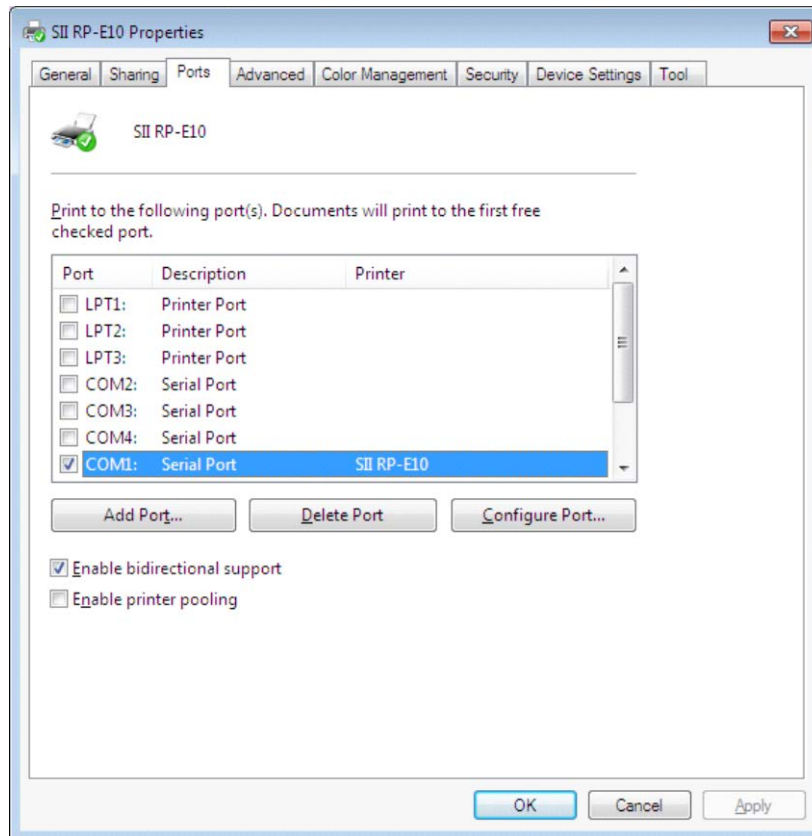
Figure 4-3   [Ports] window

Item	Description
Add Port...	Allows you to add ports.
Delete Port	Allows you to delete the ports you added.
Configure Port...	Sets parameters about the serial connection.[1,2,3,4,5]
Enable bidirectional support	Selects this check box to retrieve the information from the printer.[6]
Enable printer pooling	When enabled, you can select check boxes of multiple ports, so that you can print the same content on the printers that are connected to those ports.[7]

*1: This setting requires logon to the computer with administrator privileges.
*2: Select [COM X: Serial Port] and click the [Configure Port] button. When the [COM properties] window is displayed, configure the same communication settings as those of the printer.
*3: When using the Communication library, select "Hardware" for [Flow Control].
*4: Select "8" for [Data bit].

*5: For Windows Server 2019, 2016 or 2012, the communication settings cannot be set with the [Configure Port] button. Set the communication settings from [Ports (COM & LPT)] in the [Device Manager] on the computer.
*6: When cleared, the tools and the Communication library become unavailable.
*7: When using the Communication library, clear the selection.

4.5 Tool

Displays the version information of the printer driver and the start buttons for various tools.
For details of the tools, see "Chapter 5 Tool".

Chapter 5 Tool

5.1 Overview

This chapter describes various tools which can be started from the printer driver.

These tools can be started from the [Tool] window of the [Properties] dialog. It is also possible to go to another tool from the tool panel at the top of the window displayed after starting a tool.

The following types of tool are provided:
- ・ Information   :   Displays the information of the printer.
- ・ Memory Switch :   Sets the Memory switch.
- ・ Log   :   Sets the log output of the printer driver.
- ・ Test Print   :   Performs the test print with arbitrary content
- ・ NV Image   :   Edits and registers the image to be used as the logo or watermark, or manages the registered NV images.
- ・ Codepage   :   Edits and registers the font data that the user can register, or manages the registered codepages.
- ・ Other   :   Exports the printer driver setting to a file, or imports an exported file.

═ Caution ═

◆ To use following functions, logon to the computer with administrator privileges is required.

  ・Register to printer (Memory switch)
  ・Log output (Log)
  ・Register to printer (NV image)
  ・Deletion of NV image
  ・Register to printer (Codepage)
  ・Deletion of Codepage

◆ When [Enable bidirectional support] is not selected in "4.4 Ports", these tools cannot be started.

◆ No operation is available in the [Properties] dialog while any tool is running.

5.1.1 Display of [Tool]

Select the [Tool] tab to display the window below.

The version information and the buttons for starting the tools are displayed in the [Tool] window.
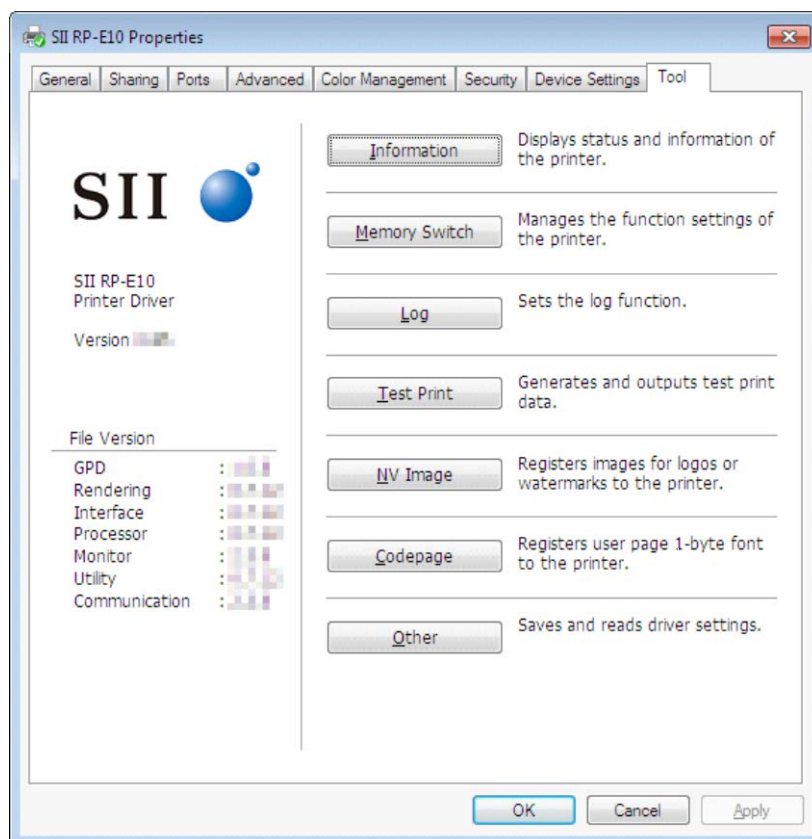
Figure 5-1   [Tool] window

Item	Description
Version information	Displays the file information of the printer driver.
Tool start buttons	Clicks a button to start the corresponding tool.

5.2 Information

Displays the information of the printer.

5.2.1 Display of Information

Select [Information] in the tool panel to display the window below.
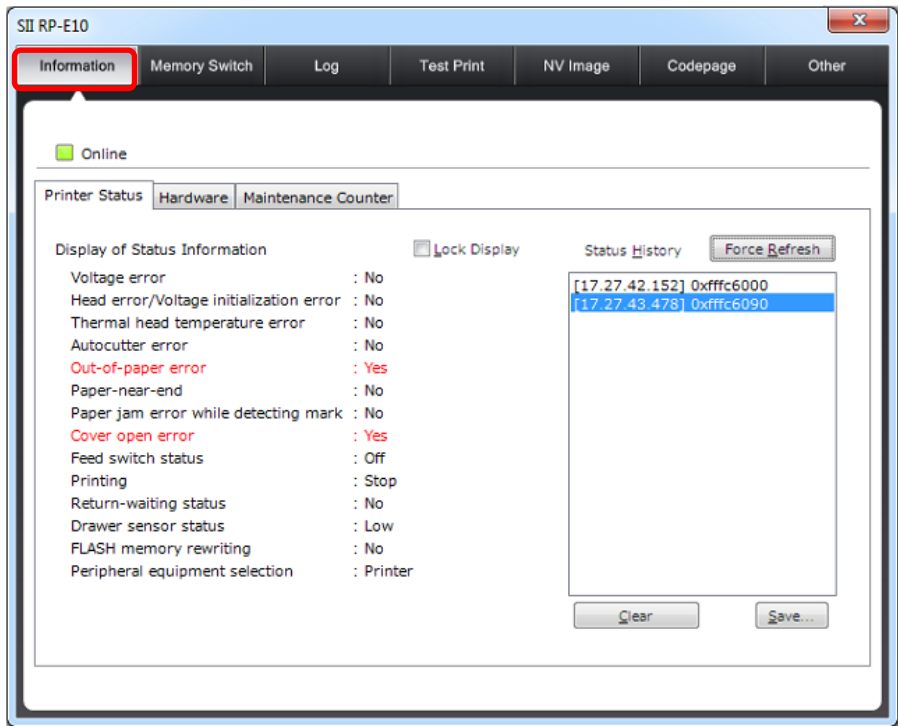
Figure 5-2　[Information] window

Item	Description
Connection state	Displays the connection state with the printer. ・ Online (Indicator: green) ・ Offline (Indicator: gray)

5.2.2 Display of Printer Status

Select the [Printer Status] tab in the [Information] window to display the window below.
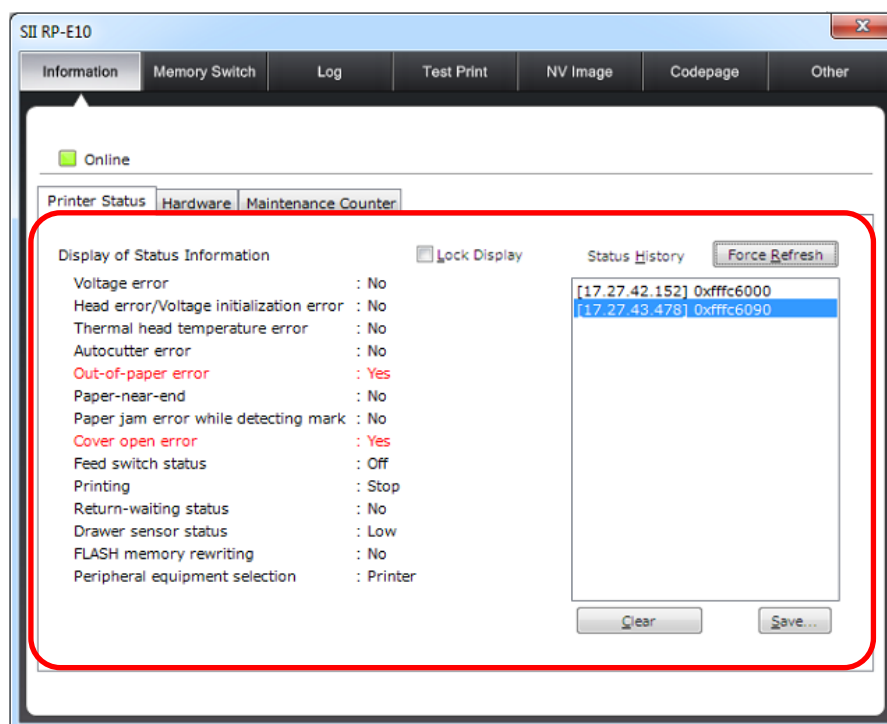
Figure 5-3   [Printer Status] window

Item	Description
Display of Status Information	Displays the Printer status information.[*1] When [Lock Display] is selected, the status information selected in [Status History] is displayed here.
Lock Display	Locks the selected [Status History].[*2] When cleared, the latest Printer status is always selected in [Status History]. Every time the Printer status changes, the latest data is selected, and [Status History] automatically scrolls. When selected, even when the selected Printer status in [Status History] changes, the information is not updated and [Status History] does not scroll automatically. When the selected row is deleted while the display is locked, the row beneath is selected every time the selected row is deleted, and displayed in [Display of Status Information].
Status History	The response history of the Printer status is listed here. ・ Response time:[hh.mm.ss.sss] (hour: 00 to 23, minute: 00 to 59, second: 00.000 to 59.999) ・ Response: Indicates the Printer status as a hexadecimal number (32 bits)[*3, *4]
Clear	Clears the information displayed in [Status History] to initialize the history.[*2]
Force Refresh	Issues the Printer command for retrieving the Printer status to forcibly retrieve the Printer status from the printer.[*5]

Item	Description
Save...	Specifies the location and file name in the [Save As] dialog to save the data of [Status History] as a text file (*.csv). The default location is the Root folder.[*2,*6]

*1: When the information cannot be retrieved from the printer, "-" is displayed instead of the state.
*2: Not available when [Status History] is blank.
*3: For details, see "5.2.3 List of Status".
*4: Up to 100 history entries can be displayed in [Status History]. When the limit is exceeded, oldest ones are removed.
*5: When newly retrieved Printer status is the same as the last one, the display is not updated.
*6: When you click the [Save...] button, the data contained in [Status History] at that time will be saved. Later Printer status responses will not be included in the saved file.

5.2.3 List of Status

The following corresponding bits are displayed as a hexadecimal (32 bits) format in [Status History]:

Status	Corresponding Bit	Description
Voltage error	0x00000000	No
	0x00000001	Yes
Head error/Voltage initialization error	0x00000000	No
	0x00000002	Yes
Thermal head temperature error	0x00000000	No
	0x00000004	Yes
Autocutter error	0x00000000	No
	0x00000008	Yes
Out-of-paper error	0x00000000	No
	0x00000010	Yes
Paper-near-end	0x00000000	Yes
	0x00000020	No
Paper jam error while detecting mark	0x00000000	No
	0x00000040	Yes
Cover open error	0x00000000	No
	0x00000080	Yes
Feed switch status	0x00000000	Off
	0x00000100	On

Status	Corresponding Bit	Description
Printing	0x00000000	Stop
	0x00000400	Printing
Return-waiting status	0x00000000	No
	0x00000800	Yes
Drawer sensor status	0x00000000	Low
	0x00008000	High
FLASH memory rewriting	0x00000000	No
	0x00010000	Yes
Peripheral equipment selection	0x00000000	Printer
	0x00020000	Other

An acquirable response value can be found by adding the above value. However, all bits turn 0 for disconnection or communication error.

Caution

◆ The values not described above are reserved.

◆ When a disconnection or communication error occurs, other status data is ignored.

5.2.4 Save of Status History

This section describes the procedure to save the status history as a text file.

1. Click the [Save...] button in the [Printer Status] window.
2. Specify the location and file name to save the file in the [Save As] dialog.
3. Click the [Save] button in the [Save As] dialog.

5.2.5 Display of Hardware

Select the [Hardware] tab in the [Information] window to display the window below.
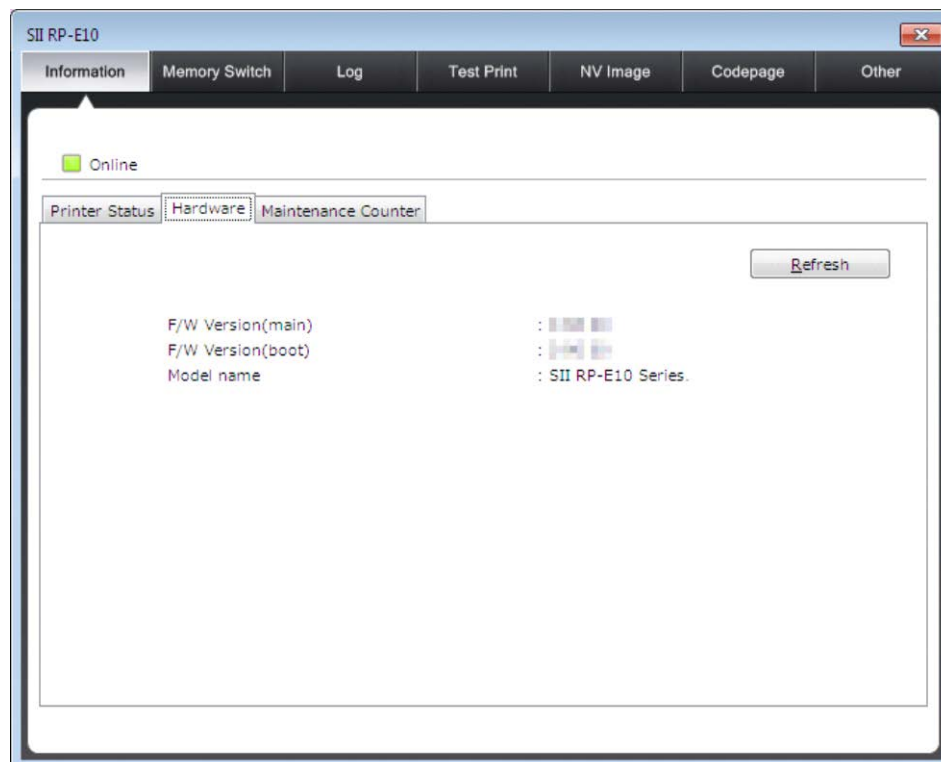
Figure 5-4   [Hardware] window

Item	Description
Hardware	Displays the following hardware information retrieved from the printer product. ・ F/W Version(main) ・ F/W Version(boot) ・ Model name
Refresh	Retrieves the hardware information from the printer again.

5.2.6 Display of Maintenance Counter

Select the [Maintenance Counter] tab in the [Information] window to display the window below.
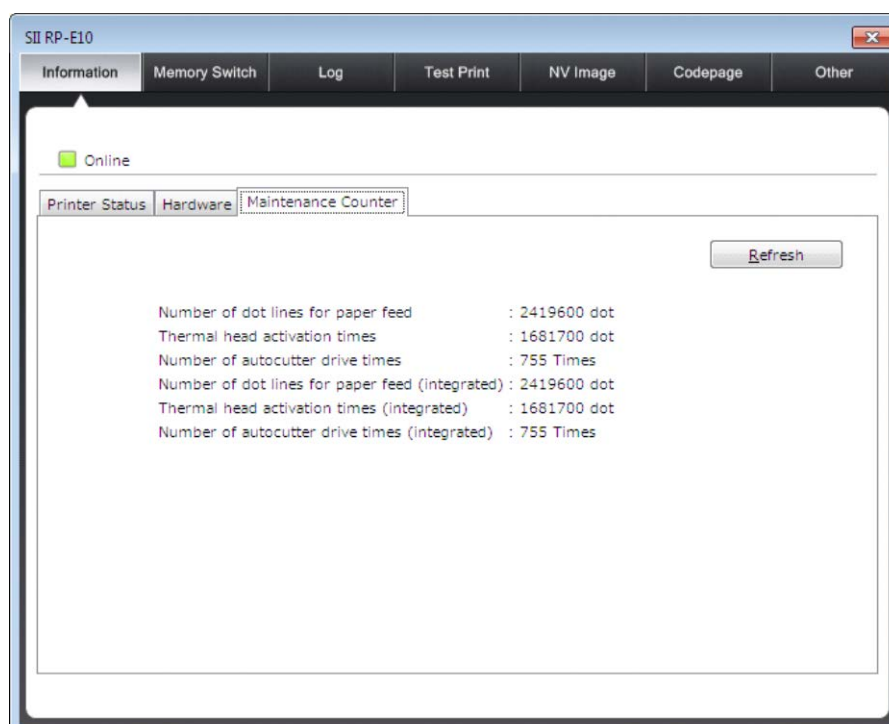
Figure 5-5　[Maintenance Counter] window

Item	Description
Maintenance Counter	Displays the following Maintenance counter values: ・ Number of dot lines for paper feed (Unit: dot) ・ Thermal head activation times (Unit: dot) ・ Autocutter drive times (Unit: Times) ・ Number of dot lines for paper feed (integrated) (Unit: dot) ・ Thermal head activation times (integrated) (Unit: dot) ・ Autocutter drive times (integrated) (Unit: Times)
Refresh	Retrieves the Maintenance counter values from the printer again.

5.3 Memory Switch

Sets the Memory switch.

5.3.1 Setting of Memory Switch

Select [Memory Switch] in the tool panel to display the window below.
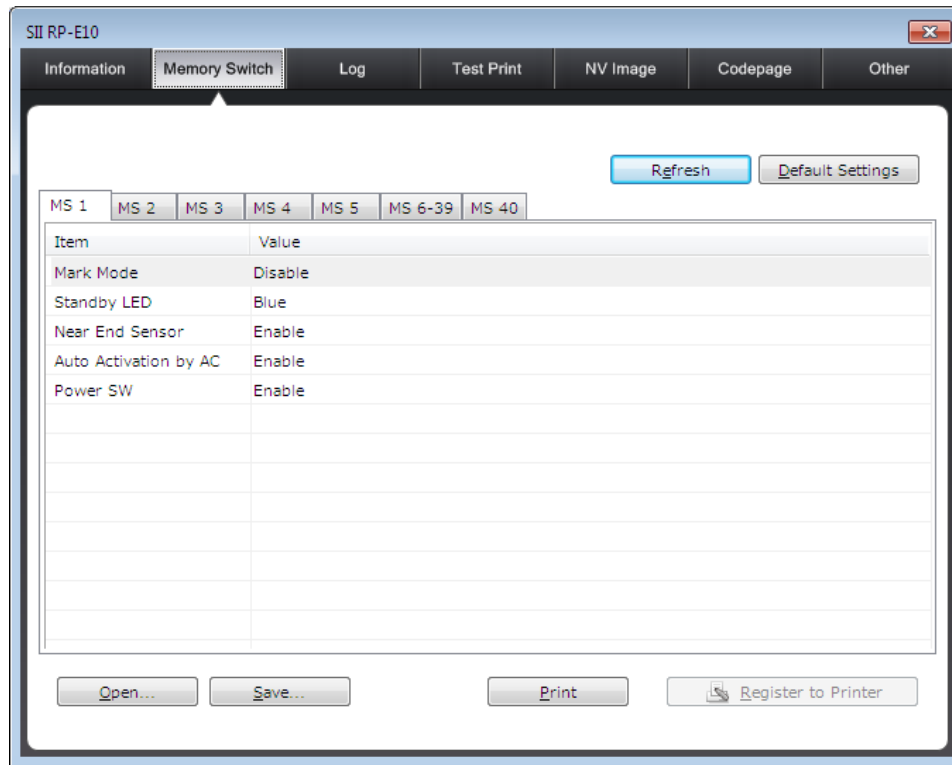
Figure 5-6   [Memory Switch] window

Item	Description
Default Settings	Restores the factory default settings. The settings currently being edited will be lost.[1],[2]
[MS] tabs	Changes the display items of the Memory switch.
Item	Displays item names of the Memory switch function.
Value	Displays values of the Memory switch retrieved from the printer or Memory switch file. You can double click any value to enter the edit mode and change the value by selecting a value from the drop-down list or entering a new value in the edit box.[2],[3] When you change a retrieved value, that value is displayed in red. When the information cannot be retrieved from the printer when starting the Memory switch, "---" is displayed and you cannot edit values.
Open...	Loads a saved Memory switch file (*.sms) and displays the settings.[1]

Item	Description
Save...	Allows you to specify the location and file name in the [Save As] dialog to save the settings displayed in the current window as a Memory switch file (*.sms).[*1] The default location is the Root folder.
Refresh	Loads the current settings of the printer and displays them. The settings currently being edited will be lost.
Print	Prints the current settings of the printer.[*1]
Register to Printer	Sends the currently displayed settings to the printer to change the printer settings.[*1,*4]

*1: Not available when the values are not retrieved from the printer.
*2: The settings are not applied until you click [Register to Printer].
*3: A value that is out of the range is automatically rounded to a value within the range.
*4: Not available when there is no change from the values retrieved from the printer.

5.3.2 Registration of Memory Switch Settings to Printer

This section describes procedures to register the Memory switch settings to the printer.

Registration Procedure When Changing Settings

1. Switch [MS] tabs to display the target Memory switch items.
2. Select or enter values for the target Memory switch items.
3. Click the [Register to Printer] button.

Registration Procedure When Loading from Memory Switch File

1. Click the [Open...] button in the [Memory Switch] window.
2. Specify a Memory switch file storing the settings in the [Open] dialog.
3. Click the [Open] button in the [Open] dialog.
4. Click the [Register to Printer] button.

Registration Procedure When Restoring to Default Settings

1. Click the [Default Settings] button.
2. When the confirmation window is displayed, click the [Yes] button.
3. Click the [Register to Printer] button.

5.3.3 Save of Memory Switch Settings

This section describes the procedure to save the Memory switch settings as a Memory switch file.

1. Click the [Save...] button in the [Memory Switch] window.
2. Specify the location and file name to save the Memory switch file in the [Save As] dialog.
3. Click the [Save] button in the [Save As] dialog.

5.4 Log

Sets the log output of the printer driver.

Caution

◆ When log output is enabled, it can slow the printer driver performance. Please avoid unnecessary log output.

◆ Log is not guaranteed when a log file is open.

5.4.1 Setting of Log Output

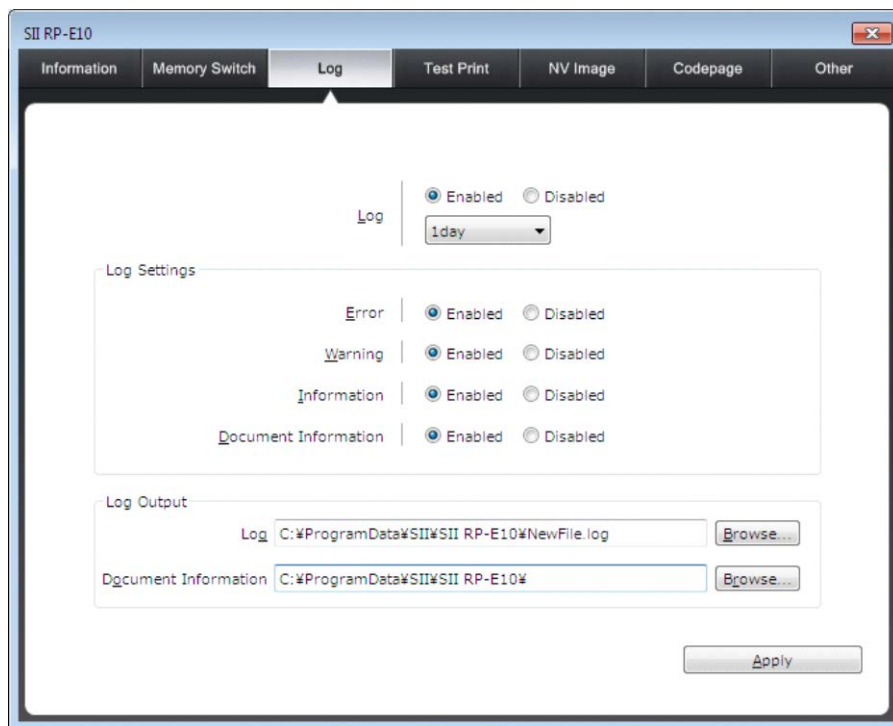Select [Log] in the tool panel to display the window below.

Figure 5-7　[Log] window

Item	Description ("____": Initial Value)
Log	Selects the log output. ・ Enabled ・ <u>Disabled</u> When you select "Enabled", then select the retention period. ・ <u>1day</u> ・ 3days ・ 10days ・ 30days ・ 90days A log file whose retention period has passed is cleared when outputting log.[*1] The maximum size of a log file (excluding the document information) is 32MB.[*2]
Log Settings	Sets the content of the log output.
Error	Selects whether or not to output errors to the log.[*3] ・ <u>Enabled</u> ・ Disabled
Warning	Selects whether or not to output warnings to the log.[*3] ・ <u>Enabled</u> ・ Disabled
Information	Selects whether or not to output information to the log.[*3] ・ <u>Enabled</u> ・ Disabled
Document Information	Selects whether or not to output the document information.[*3,*4] ・ Enabled ・ <u>Disabled</u> When you select "Enabled", the data sent to the printer when printing is saved to a file for each job.
Log Output	Sets the log output destination.[*3,*5]
Log	To save the log as a log file (*.log), enter the log file name or the output destination here, or use the [Browse...] button next to the [Log] field to specify the output destination and file name in the [Save As] dialog.[*6]
Browse...	Allows you to specify the location and file name to output the log.[*6,*7,*8] The destination you specified is displayed in the [Log] field.
Document Information	Enters the location to create the folder for saving the document information, or use the [Browse...] button next to the [Document Information] field to specify the output destination in the [Browse Folder] dialog.[*9] The document information is saved as a document information file (*.prn) per job. The file name indicates the time "hhmm_ss(sss)" when the file is created (the second has five digits including three decimal places). The saved document information is stored in a folder per date (folder name "yyyymmdd").
Browse...	Allows you to specify the location of the folder for saving the document information. The destination you specified is displayed in the [Document Information] field.[*7,*8,*9]
Apply	Confirms the log settings and output destination, and starts the log output.

*1: Actual retention period may be prolonged by 1 day at a maximum.
*2: When the log file exceeds 32 MB, a new log file is generated, and the original one is kept for the retention period with the same file name with a number (*_001) appended to the end.
*3: Not available when [Log] is set to "Disabled".
*4: When this function is used in a printer sharing environment, it cannot be set from the client side.
*5: Privileges to specified folder or file are required to write log.
*6: Not available when [Log] is "Disabled", or when you select "Disabled" for all of [Error], [Warning], and [Information].
*7: When the log is used by several users, specify a folder that can be accessed by all users.
*8: Available path length is up to 260 characters.
*9: Not available when [Log] is "Disabled", or when you select "Disabled" for [Document Information].

5.4.2 Change of Log Output Settings

This section describes the procedure to change the log output settings.

1. Select "Enabled" for [Log], and then select the retention period.
2. Select each item in [Log Settings].
3. Enter the destinations of the logs in [Log] and [Document Information].
4. Click the [Apply] button.

5.4.3 Content of Log File

This section describes the contents output to the log file.

yyyy/mm/dd hh:mm:sss <00000000>, [xxx] xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx [xxxxxx][*1]

| Output
date/time | Output
module ID | Log type | Log content |
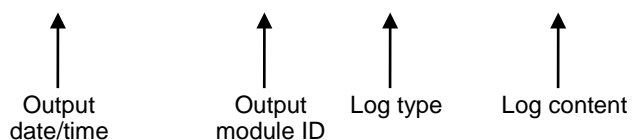
*10: The parenthetic information in the log content is the internal data for analysis.

The following table lists the log output modules.

Output Module ID	Module
01xxxxxx 02xxxxxx	Modules related to the tool
03xxxxxx 04xxxxxx	Modules related to the printer driver
05xxxxxx 06xxxxxx	Modules related to bidirectional communication

The following table lists the log types.

Log Type	Level	Description	Remarks
INF	Information	Successful operation log	Example: input-output data
WAR	Warning	Log which is not related to information and error.	-
ERR	Error	Unexpected failure detection log	Example: communication error

5.5 Test Print

Executes the test print with arbitrary content.

5.5.1 Setting of Test Print

Select [Test Print] in the tool panel to display the window below.
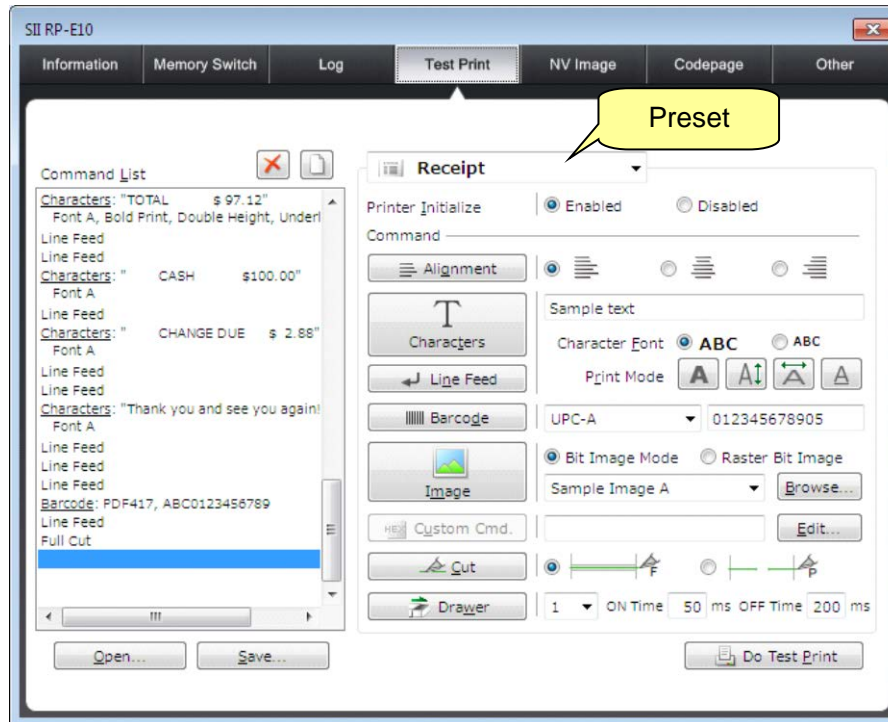
Figure 5-8　[Test Print] window

Item	Description ("＿＿": Initial Value)
Command List	Displays the contents which are set in Preset or the contents of test print file as a list. Up to 128 commands can be added to [Command List]. Test Print commands which are added to [Command List] are sent to the printer when executing [Do Test Print].[*1]
✖ Delete	Deletes the Test Print command selected in [Command List] from the list.[*2] When the empty row at the bottom is selected in [Command List], the Test Print command in the row just above is deleted.
New	Clears all the Test Print commands in [Command List].[*2]
Open...	Opens a saved test print file (*.stp) that you specify to display its content in [Command List].
Save...	Saves the Test Print command in [Command List] as a test print file (*.stp). The default location is the Root folder.

Item	Description ("____": Initial Value)
Preset	Displays the preset test print content in [Command List].[*3] ・ <u>Receipt</u> ・ Pattern ・ Barcode ・ Custom
Printer Initialize	Selects whether or not to initialize the printer by the Printer command "Printer Initialize" when starting the test print.[*4] ・ <u>Enabled</u> ・ Disabled
Command	Sets parameters about the test print content.
Alignment	Adds the position to print characters, barcodes, and images to [Command List]. An alignment setting remains valid until next Test Print command of alignment is inserted. ・ <u>Align Left</u> ・ Centered ・ Align Right
Characters	Adds the characters entered in [Character Data] along with the settings of [Character Font] and [Print Mode] to [Command List].[*5,*6]
Character Data	Enters the string for test print. Up to 64 characters can be entered.
Character Font	Selects the font size. ・ ABC <u>Font A(24x12)</u> ・ ABC Font B(16x8)
Print Mode	Sets the print mode. Each button is turned "on" or "off" each time you click it. When turned "off", its setting is not displayed in [Command List] when adding the Test Print command. ・ A Bold Print ・ A↕ Double Height ・ A↔ Double Width ・ A Underline
Line Feed	Add Test Print command of [Line Feed] to [Command List]. When characters are entered to [Character Data], the Test Print command of [Line Feed] is added after the Test Print command of [Character Data], [Character Font], and [Print Mode].

Item		Description ("＿＿": Initial Value)
	Barcode	Adds the barcode type and the data entered in [Barcode Data] to [Command List] together.[*7]
	Barcode Type	Selects the type of barcode for test print. ・ <u>UPC-A</u> ・ UPC-E ・ JAN13(EAN) ・ JAN8(EAN) ・ CODE39 ・ ITF ・ CODABAR ・ CODE128 ・ CODE93 ・ JAN13 add-on2 ・ JAN13 add-on5 ・ QR Code Model-2 ・ PDF417
	Barcode Data	Enters the data for barcode printing.[*8] Up to 64 characters can be entered.[*9]
	Image	Adds the settings of the print method and image selection to [Command List] together.
	Print method	Selects the type of the Printer command to use for image print.[*10] ・ <u>Bit Image Mode</u> ・ Raster Bit Image
	Image selection	Selects the image data to use for image print. ・ <u>Sample Image A</u> ・ Sample Image B ・ User Specified Image When you select [User Specified Image] from the combo box, the [Open] dialog is automatically opened, where you can specify the image to use.
	Browse...	Allows you to specify a user specified image in the [Open] dialog to use for image print. You can select an image file (*.jpg, *.jpeg, *.bmp).[*11]
	Custom Cmd.	Adds the Printer command entered in [Custom Command Data] to [Command List].[*12]
	Custom Command Data	Displays a custom command. To enter data, use the binary editor which is displayed by clicking the [Edit] button.
	Edit...	Enter the Printer command by the binary editor in hexadecimal. The Printer command entered is displayed in [Custom Command Data]. Up to 64 bytes can be specified. For details of the binary editor, see "3.4.8 How to Use Binary Editor".
	Cut	Adds the setting of the cut type to [Command List].
	Cut type	Selects the cut method. ・ <u>Full Cut</u> ・ Partial Cut

Item	Description ("____": Initial Value)
Drawer	Adds the Test Print command of drawer to [Command List].
Drawer driven	Selects the drawer driven. ・ 1 (Drawer 1 is driven) ・ 2 (Drawer 2 is driven)
ON Time OFF Time	Enters the ON and OFF time of the pulse in even number (Unit: ms).[*13] ・ 2 to 510 (ON Time: 50, OFF Time: 200)
Do Test Print	Sends all the Test Print commands in [Command List] to the printer.

*1: When you select a Test Print command of string, barcode, or custom command in [Command List] by double clicking or using the spacebar, the selected string or data is entered in the corresponding edit box.
*2: Not available when [Command List] is blank.
3: When you add or delete a Test Print command in [Command List], and load a saved test print file (.stp) when "Receipt", "Pattern", or "Barcode" is selected, [Preset] becomes "Custom".
*4: Even when "Enabled" is selected, this command is not displayed in [Command List]. These settings are applied to the print data or the content saved to the test print file according to the selection in [Printer Initialize] when you click the [Do Test Print] or [Save...] button
*5: Not available when the [Character Data] is blank.
*6: When the standard mode is selected (normal operation), the printing is executed when a line buffer is filled with character data (one line full printing) or when the printing condition is satisfied, for example, with the Printer command "Line Feed". Unless the above condition is satisfied, data sent to the printer is not printed.
*7: Not available when the [Barcode Data] is blank.
*8: For entered data, see the Printer command "Barcode Print" and "QR Code Print" in the Technical reference.
*9: Data that does not comply with the printer specifications may not be printed properly. Be sure to enter appropriate data. For the printer specifications, refer to the Technical reference. The data input method of [Barcode Data] differs from the one for barcode font.
*10: [Print method] is ignored when you select "Sample Image B" for the image selection.
*11: When you click [Browse...] button and select an image file, the image selection is changed to "User Specified Image".
*12: Not available when the [Custom Command Data] is blank.
*13: When you enter an odd number, it is rounded to an even number within the range when execution. OFF time should be equal to or greater than four times of the ON time to protect circuits.

5.5.2 Execution of Test Print

This section describes the execution procedure of the test print.

Printing Procedure When Using [Preset]

1. Select the content of test print from [Preset].
2. Click the [Do Test Print] button.

Printing Procedure When Specifying Test Print Commands (Printing Characters)

1. Click the ⬜ [New] button.
2. Select whether or not to initialize the printer in [Printer Initialize].
3. Select one of the print positions from left, center, or right alignment by the radio button, and click the [Alignment] button.
4. Enter characters to print in [Character Data].
5. Select [Character Font] and [Print Mode], and click the [Line Feed] button.
6. Add Test Print commands such as [Barcode] or [Custom Cmd.] to [Command List], when necessary.
7. When you want to delete a Test Print command (Test Print command name and setting values), select the target Test Print command row in [Command List] and click the ❌ [Delete] button.
8. Click the [Do Test Print] button.

Printing Procedure When Using Test Print File

1. Click the [Open...] button in the [Test Print] window.
2. Specify a test print file where the Test Print command is saved from the [Open] dialog.
3. Click the [Open] button in the [Open] dialog.
4. Click the [Do Test Print] button.

5.5.3 Save of Test Print File

This section describes the procedure to save the test print information as a test print file.

1. Click the [Save...] button in the [Test Print] window.
2. Specify the location and file name to save the test print file in the [Save As] dialog.
3. Click the [Save] button in the [Save As] dialog.

5.6 NV Image

Edits and registers the image to be used as the logo or watermark, or manages the registered NV images.

Reference

- The NV image is an image data that is registered in the NV memory (non-volatile memory) in the printer. When you turn off the power of the printer, this data is retained.

5.6.1 Setting of NV Image

Select [NV Image] in the tool panel to display the window below.
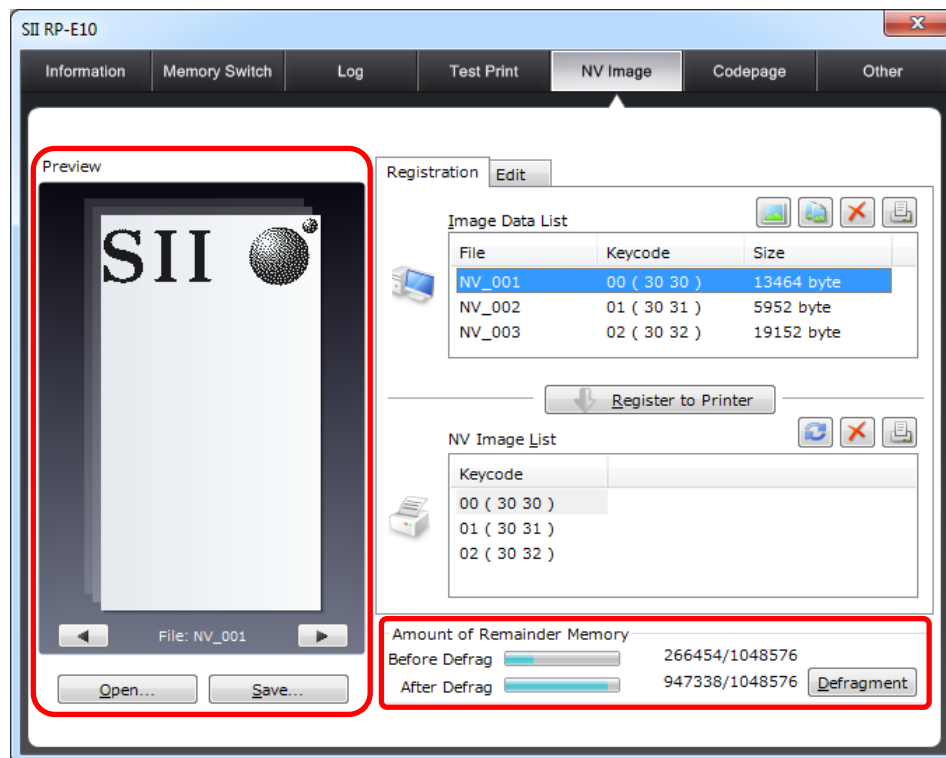
Figure 5-9 [NV Image] window

Item	Description
Preview	Displays the image data selected in [Image Data List].
◀ Back	Changes the image data displayed in [Preview] to the previous image.[*1]
▶ Next	Changes the image data displayed in [Preview] to the next image.[*1]
File	Displays the file name of the image data displayed in [Preview].
Open...	Loads the setting and image from a saved image data file (*.snv) to display the image data.
Save...	Saves the settings and images of the image data added to [Image Data List] as an image data file (*.snv).[*2] The default location is the Root folder.
Amount of Remainder Memory	Displays the free memory. You can execute the memory defragmentation.
Before Defrag	Displays the free memory before defragmentation.
After Defrag	Displays the free memory after defragmentation.
Defragment	Reallocates the user area of the printer memory to reserve a free memory area.

*1: Available only when [Image Data List] contains two or more image data.
*2: Not available when [Image Data List] contains no image data.

5.6.2　Setting of Registration

Select the [Registration] tab in the [NV Image] window to display the window below.

Figure 5-10　[Registration] window

Item	Description ("____": Initial Value)
Image Data List	Displays the list of the added image data. Up to 20 image data can be added to [Image Data List]. Next time you start [NV Image], the list at the time when you exit the tool last time is restored.
File	The name for managing the image data to be registered to the printer.[*1] This name is automatically assigned when the image data is added to [Image Data List].
Keycode	The image data number used when registering the image data to the printer. A keycode that is not yet registered in the printer is assigned automatically. To change the assigned keycode, select the image data in [Image Data List] and enter a new keycode in figures in the edit box. ・　00 to 99 (automatically assigned keycode)[*2]
Size	Displays the data size of the image data.[*1]
Open the image data...	Adds a specified image data file to [Image Data List]. You can select an image file (*.jpg, *.jpeg, *.bmp).[*3]

Item	Description ("___": Initial Value)
Copy of image data	Duplicates all the image data selected in [Image Data List] with different file names, and adds them to [Image Data List].[*4]
Deletion of image data	Deletes all the image data selected in [Image Data List].[*4]
Print of image data	Prints all the image data selected in [Image Data List].[*4]
Register to Printer	Registers all the image data selected in [Image Data List] to the printer. After registration of the image data, [Amount of Remainder Memory] is updated. When the keycode of an image data to be registered is already registered, a message appears confirming the overwrite.[*4]
NV Image List	Displays the list of the NV images already registered in the printer.[*5]
Keycode	Displays the keycodes of the NV images already registered in the printer.
Refresh	Retrieves the NV images registered in the printer and the free memory again.
Delete	Deletes all the NV images selected in [NV Image List] from the printer.[*6] After deletion of the images, [Amount of Remainder Memory] is updated.
Test Print	Prints all the NV images selected in [NV Image List].[*6]

*1: Not editable.
*2: When you delete an image data, its keycode becomes a missing number and is not automatically assigned again. However, when the numbers up to 99 are used for keycode, then missing numbers are assigned from the smallest one.
*3: The specified image data is resized so as to fit 80mm paper (72mm print width) when being loaded. When a color image is specified, it is converted to the monochrome image when being loaded.
*4: Not available when [Image Data List] contains no image data.
*5: When the NV image information cannot be retrieved from the printer, "-" is displayed for the first row of the list.
*6: Not available when [NV Image List] contains no NV image.

5.6.3 Setting of Edit

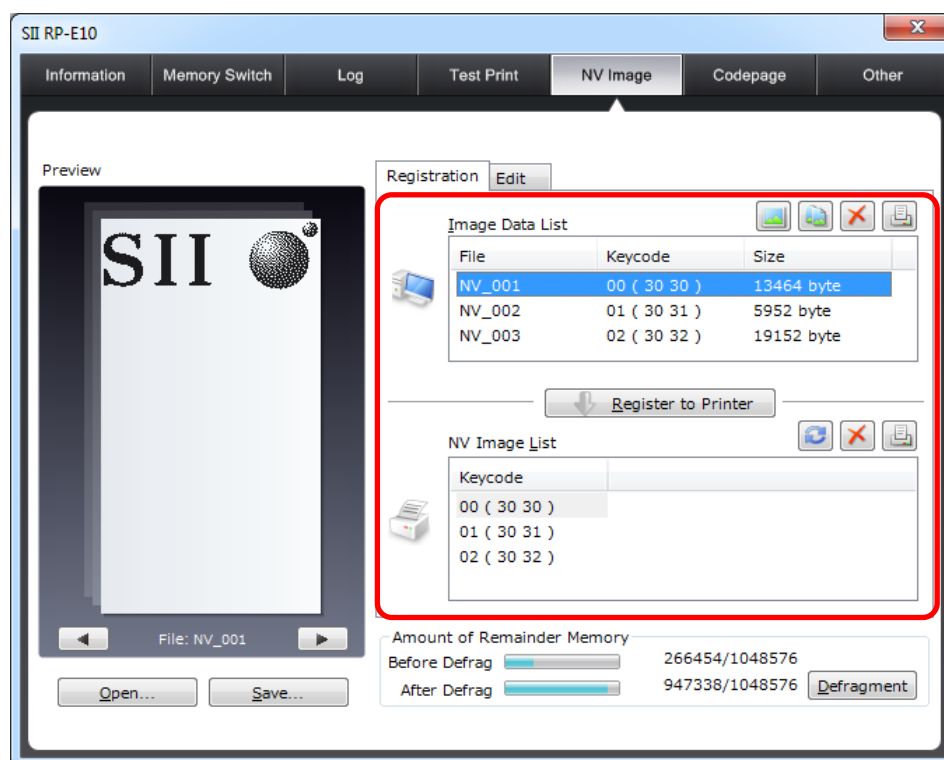Select the [Edit] tab in the [NV Image] window to display the window below.
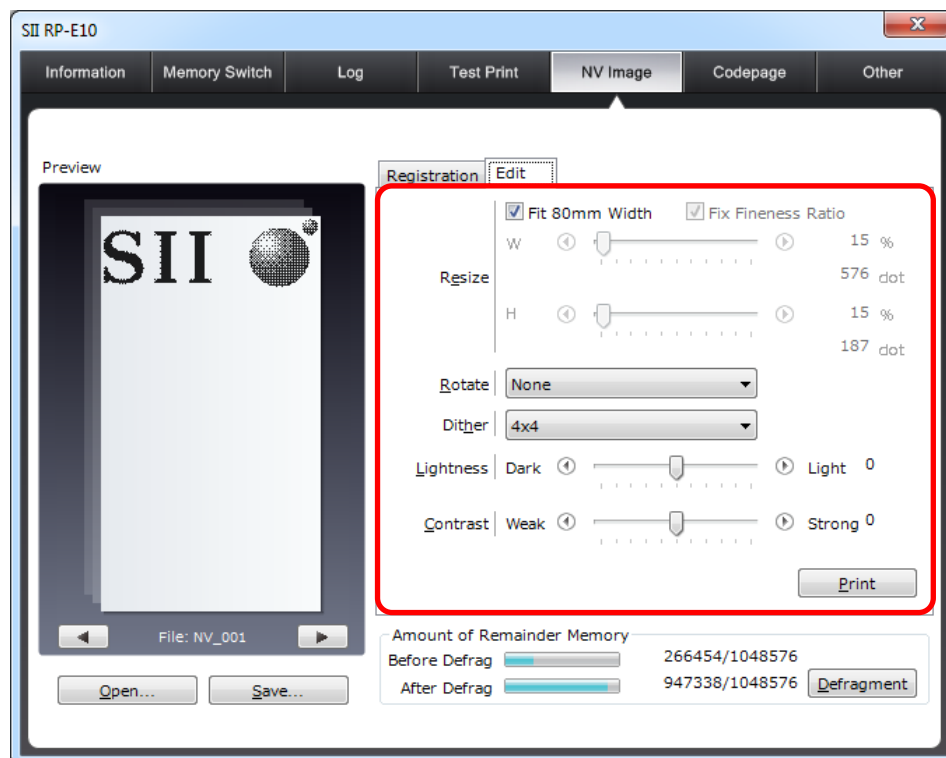
Figure 5-11 [Edit] window

Item		Description ("____": Initial Value)
Resize		Expands or reduces the selected image data.[*1]
	Fit 80mm Width	Resizes the size of the image data automatically to fit 80mm paper width (72mm printing width).
	Fix Fineness Ratio	Fixes the aspect ratio when resizing the image data.

	W
	H
		Resizes the image data using the slider control.[*2,*3]
		・ 10 to 300 % of the original image
		  (the range of dots differs depending on the original image size.
		  You can specify up to 8 inches (1624 dots) for the height (H).)

	% dot	Displays reduction ratio (%) and dots equivalent of the image data selected.
Rotate		Rotates the image data to the specified direction by the specified angle.[*1] ・ <u>None</u> ・ Rotate 90 degrees to right ・ Rotate 180 degrees ・ Rotate 90 degrees to left When you rotate the image by 90 degrees from the current angle when [Fit 80mm Width] is selected, then [Fit 80mm Width] is cleared.
Dither		Selects the dithering pattern.[*1] ・ 2x2 ・ <u>4x4</u> ・ 6x6 ・ 8x8 ・ Error Diffusion
Lightness		Sets the lightness of the image data.[*1,*3] ・ -100 to 100 (<u>0</u>)
Contrast		Sets the contrast of the image data.[*1,*3] ・ -100 to 100 (<u>0</u>) Setting -100 makes the whole image flat.
Print		Prints the edited image data.[*1]

[*1]: Not available when [Image Data List] contains no image data.
[*2]: The [H] slider is not available when [Fix Fineness Ratio] is selected.
[*3]: When you use the mouse to operate the slider, the setting is applied to [Preview] when you release the left mouse button. When you use the keyboard to operate the slider or use the left/right arrow buttons, the setting is applied to [Preview] each time you press a key or click a button.

5.6.4 Registration of NV Image

This section describes the procedures to register an NV image.

Registration Procedure When Specifying Image Data File

1. Click the [Open the image data...] button in the [Registration] window.
2. Specify an image data file to register in the [Open] dialog.
3. Click the [Open] button in the [Open] dialog.
4. Select an added image in [Image Data List].
5. Click the [Register to Printer] button in the [Registration] window.

Registration Procedure When Duplicating Image Data

1. Select an image to duplicate in [Image Data List], and click the [Copy of image data] button in the [Registration] window.
2. Select duplicated image data in [Image Data List].
3. Click the [Register to Printer] button in the [Registration] window.

Registration Procedure When Loading Settings and Images from Image Data File

1. Click the [Open...] button in the [NV Image] window.
2. Specify a saved image data file where the settings and images are saved from the [Open] dialog.
3. Click the [Open] button in the [Open] dialog.
4. Select loaded image data in [Image Data List].
5. Click the [Register to Printer] button in the [Registration] window.

5.6.5 Edit of Image Data

This section describes the procedure to edit image data.

1. Select an image data to edit from [Image Data List] in the [Registration] window.
2. Select the [Edit] tab.
3. Change settings such as size, image data rotation, and lightness, in the [Edit] tab.

5.6.6 Setting of Image Data and Save of Image

This section describes the procedure to save the setting and image of an image data as an image data file.

1. Click the [Save...] button in the [NV Image] window.
2. Specify the location and file name to save the image data file in the [Save As] dialog.
3. Click the [Save] button in the [Save As] dialog.

5.7 Codepage

Edits and registers the font data that the user can register, or manages the registered codepages.

Reference

- Codepage

  A codepage is a set of characters that are collected by language and used as a device font.

  This tool allows the user to create a new codepage and edit the existing one.

5.7.1 Setting of Codepage

Select [Codepage] in the tool panel to display the window below.
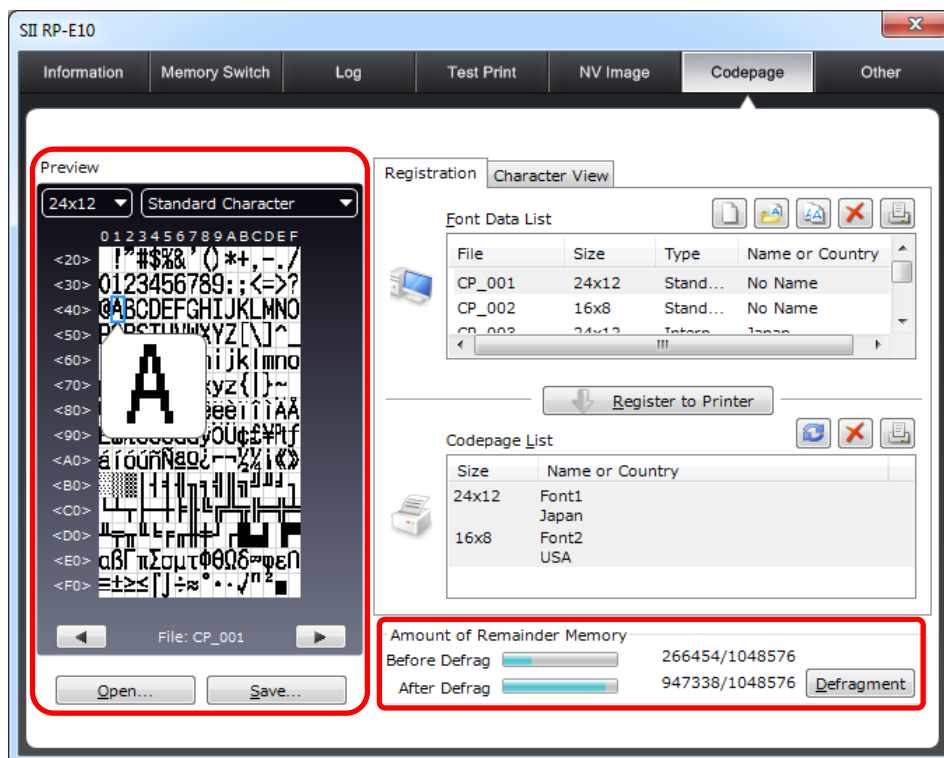
Figure 5-12 [Codepage] window

Item	Description ("____": Initial Value)
Preview	Displays the font data selected in [Font Data List]. When you place the mouse, expanded image of the font is displayed in a frame. The content of [Preview] varies depending on [Size] and [Type] of the selected image.
Size	Reviews and selects the size of the font data selected in [Font Data List]. ・ <u>24x12</u> ・ 16x8 When you change the setting, it is applied to [Preview], [Character View], and [Font Data List].
Type	Reviews and selects the type of the font data selected in [Font Data List]. ・ <u>Standard Character</u> ・ International Character When you change the setting, it is applied to [Preview] and [Font Data List].
◀ Back	Changes the font data displayed in [Preview] to the previous page.[1]
▶ Next	Changes the font data displayed in [Preview] to the next page.[1]
File	Displays the file name of the font data displayed in [Preview].
Open...	Loads and displays the saved font data file (*.scp).
Save...	Saves the settings and images of the font data added to [Font Data List] as a font data file (*.scp).[2] The default location is the Root folder.
Amount of Remainder Memory	Displays the free memory. You can execute the memory defragmentation.
Before Defrag	Displays the free memory before defragmentation.
After Defrag	Displays the free memory after defragmentation.
Defragment	Reallocates the printer memory to reserve a free memory area.

*1: Available only when [Font Data List] contains more than one font data.
*2: Not available when [Font Data List] contains no font data.

5.7.2 Setting of Codepage Registration

Select the [Registration] tab in the [Codepage] window to display the window below.
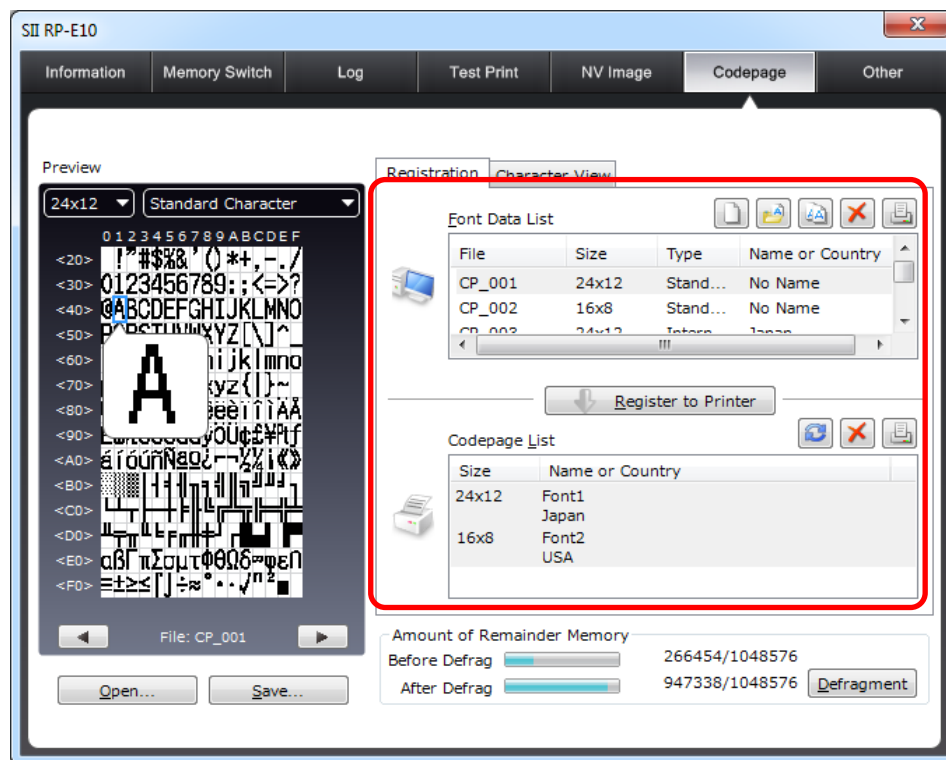
Figure 5-13   [Registration] window

Item	Description ("____": Initial Value)
Font Data List	Displays the list of the font data added to the project. Up to 60 font data can be added to [Font Data List]. Next time you start Codepage tool, the list at the time when you exit the tool last time is restored. You cannot select more than one font data in [Font Data List].
File	The name for managing the font data to be registered to the printer.[1] This name is automatically assigned when the font data is added to [Font Data List].
Size	Selects the size of the font data. ・ 24x12 ・ 16x8 When you change the setting, it is applied to [Preview] and [Character View].
Type	Selects the type of the codepage. ・ Standard Character ・ International Character When you change the setting, it is applied to [Preview].

Item	Description ("____": Initial Value)
Name or Country	When [Type] is "Standard Character", enter the font name in 1-byte alphanumeric and symbol. Up to 64 characters can be entered. When [Type] is "International Character", select a country name. ・ <u>USA</u> ・ France ・ Germany ・ United Kingdom ・ Denmark I ・ Sweden ・ Italy ・ Spain I ・ Japan ・ Norway ・ Denmark II ・ Spain II ・ Latin America ・ Arabia
Make new font data	Creates new font data. The display of [Preview] is cleared to be blank, and font data with a new file name is added to [Font Data List].
Open the font data...	Adds a specified font data file to [Font Data List]. You can select *.bmp and *.bin of width 16 x height 14 characters.[2]
Copy of font data	Duplicates the font data selected in [Font Data List] with a different file name, and adds it to [Font Data List].[3] The size, type, and font name/country name are also duplicated.
Deletion of font data	Deletes the font data selected in [Font Data List].[3]
Print of font data	Prints the font data selected in [Font Data List].[3]
Register to Printer	Registers the codepage selected in [Font Data List] to the printer.[4] When a codepage to be registered is already registered, a message appears confirming the overwrite. After the registration of the codepage, [Amount of Remainder Memory] is also updated.
Codepage List	Displays the codepages registered in the printer. The size and font name are displayed for "Standard Character", and the size and country name are displayed for "International Character".
Size	Displays the size of a codepage registered in the printer.

Item	Description ("___": Initial Value)
Name or Country	Displays the font name or country name of a codepage registered in the printer.
Refresh	Retrieves the codepages registered in the printer and the free memory again.
Delete	Deletes the codepage selected in [Codepage List] from the printer.[*5] After the deletion of the codepage, [Amount of Remainder Memory] is also updated.
Test Print	Prints the codepage selected in [Codepage List].[*5]

*1: Not editable.
*2: When a font data file to be loaded is in binary format, the size and type are determined to be displayed in [Font Data List].
When a font data file to be loaded is a BMP file containing color or gray scale image, it is binarized to black and white when being loaded.
When a font data to be loaded is *.bin format and the font data size is different, the shortage is loaded as null data and displayed as blank, and the part over the size is discarded and not displayed.
*3: Not available when [Font Data List] contains no font data.
*4: When registering an international character, register a standard character of the same size in advance.
*5: Not available when [Codepage List] contains no codepage.

5.7.3 Edit of Font Data by [Character View]

Select the [Character View] tab in the [Codepage] window to display the window below.
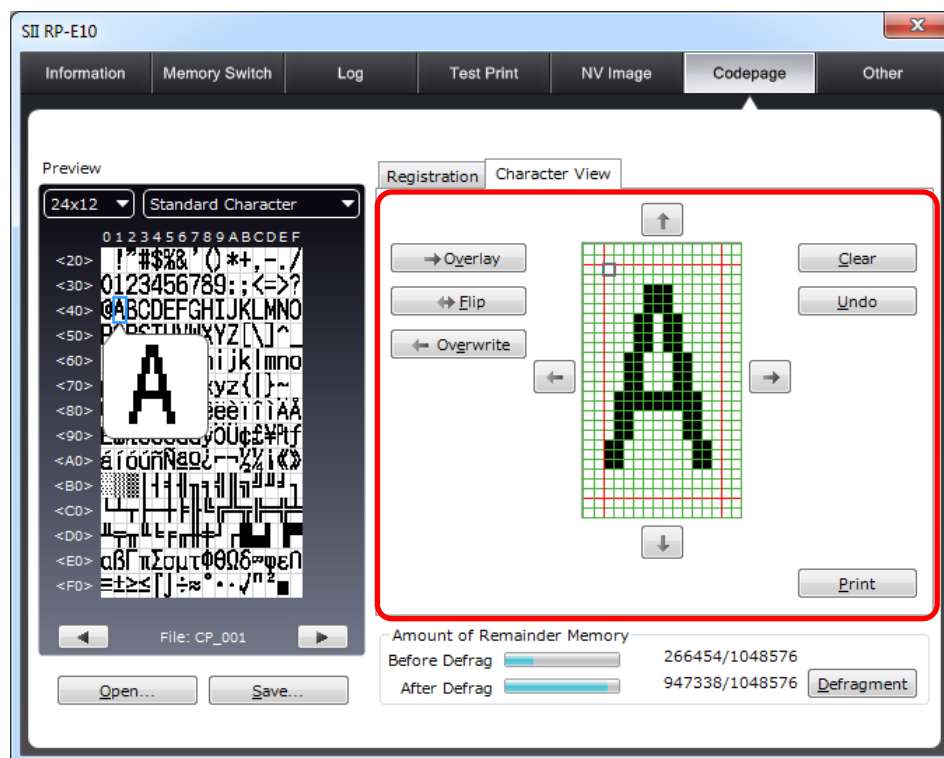
Figure 5-14   [Character View] window

Item	Description
Character View	You can edit each character of the font data displayed in [Preview]. When you click the mouse (left click) or press the spacebar on a white block, it changes to black, and when you drag the mouse while holding the left mouse button down, you can draw a line. When you right click or press the "Delete" key on a black block, it changes to white, and when you drag the mouse while holding the right mouse button down, you can change black blocks to white continuously.
Overlay	Overlays the character selected in [Preview] on [Character View].[1] Any image already contained in [Character View] is not cleared by the overlay.
Flip	Swaps the character displayed in [Character View] and the character selected in [Preview].[1,2]
Overwrite	Overwrites the character selected in [Preview] with the character displayed in [Character View].[1,2] Clicking this button clears the image in [Character View].
↑ ↓ ← →	Shifts the character displayed in [Character View] by one dot each time you click one of these buttons, to the corresponding direction. Any data that goes outside [Character View] is not retained.
Clear	Clears all drawing in [Character View] to be blank.[3]

Item	Description
Undo	Reverts the state in [Character View] to its previous state. It can be enabled for only once.
Print	Prints the content of [Character View].[*3]

*1: Not available when [Font Data List] of the [Registration] window contains no font data or when a noneditable part of the international characters is selected.
*2: Areas outside the red frame in [Character View] are not reflected on [Preview].
*3: Not available when nothing is drawn in [Character View].

5.7.4 Registration of Codepage

This section describes the procedures to register the codepage.

Registration Procedure When Creating New Codepage

1. Click the [Make new font data] button on the [Registration] window.
2. Enter [Size], [Type], and [Name or Country] of the new file added to [Font Data List].
3. Select the [Character View] tab and edit the character of each address.
4. Select the [Registration] tab, and then select the file whose characters you edited from [Font Data List].
5. Click the [Register to Printer] button on the [Registration] window.

Registration Procedure When Specifying Font Data File

1. Click the [Open the font data...] button.
2. Specify a font data file to register in the [Open] dialog.
3. Click the [Open] button in the [Open] dialog.
4. Enter [Size], [Type], and [Name or Country] of the file added to [Font Data List]. (When the font data file is binary data, the size and type are automatically determined from the data size.)
5. Select the added file from [Font Data List] in the [Registration] window.
6. Click the [Register to Printer] button on the [Registration] window.

Registration Procedure When Loading Settings and Images from Font Data File

1. Click the [Open...] button in the [Codepage] window.
2. Specify a saved font data file in the [Open] dialog.
3. Click the [Open] button in the [Open] dialog.
4. Select the loaded file from [Font Data List] in the [Registration] window.
5. Click the [Register to Printer] button on the [Registration] window.

5.7.5 Edit of Font Data

This section describes the procedure to edit font data.

1. Select the font data to edit from [Font Data List] in the [Registration] window.
2. Select the [Character View] tab.
3. Select a character to edit from [Preview].
4. Click the [Overlay] button.
5. Edit the selected character in [Character View].
6. Set the position to register the edited character in [Preview].
7. Click the [Overwrite] button.

5.7.6 Setting of Font Data and Save of Image

This section describes the procedure to save the setting and image of a codepage as a font data file.

1. Click the [Save...] button in the [Codepage] window.
2. Specify the location and file name to save the font data file in the [Save As] dialog.
3. Click the [Save] button in the [Save As] dialog.

5.8 Other

Exports the printer driver setting to a file, or imports an exported file.

The setting to be imported or exported is the printer driver setting information (including the ControlA font setting information).

5.8.1 Setting of Other

Select the [Other] in the tool panel to display the window below.
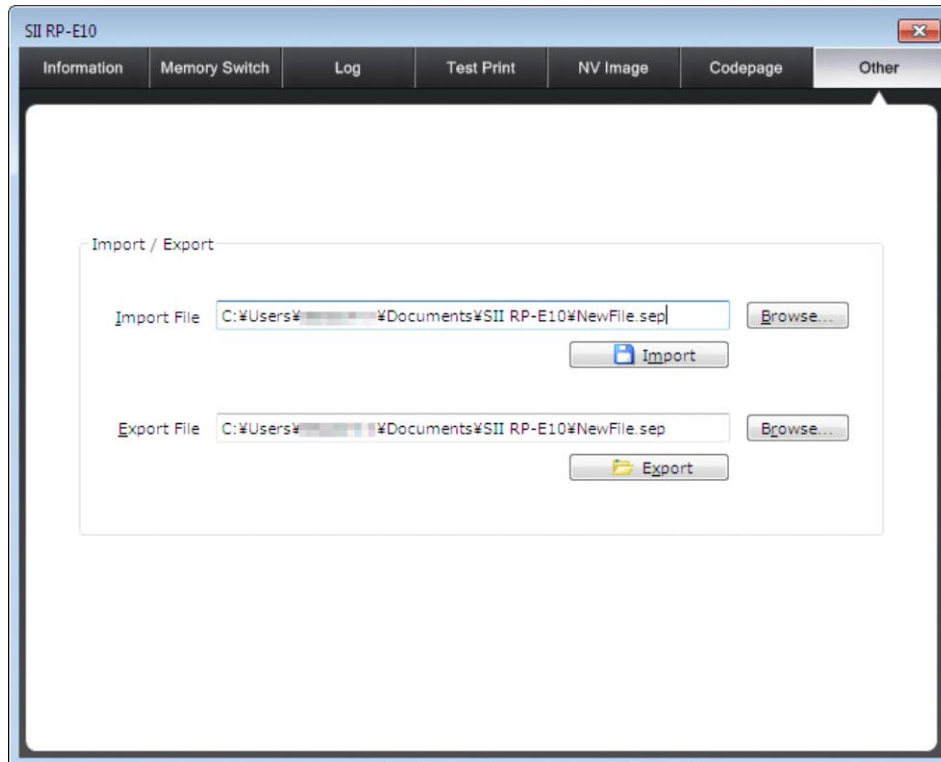
Figure 5-15   [Other] window

Item	Description
Import File	Enters the file name of a saved export file (*.sep). Alternatively, click the [Browse...] button next to the [Import File] field and specify the location and file name of a file to import in the [Open] dialog.
Browse...	Allows you to specify the export file to import in the [Open] dialog. The specification is displayed in the [Import File] field.
Import	Imports the printer driver setting information (including the ControlA font setting information) from the file specified in the [Import File] field.[*1]
Export File	Enters the export file name. Alternatively, click the [Browse...] button next to the [Export File] field and specify the location and file name in the [Save As] dialog.
Browse...	Allows you to specify the location and file name to save the export file in the [Save As] dialog. The specification is displayed in the [Export File] field.
Export	Exports the printer driver setting information (including the ControlA font setting information) to the file specified in the [Export File] field.

*1: You cannot import an export file exported in different language environment. In addition, when the paper size for an import file is the user defined paper, the setting may not possibly be reflected.

5.8.2 Import of Setting

This section describes the procedure to import the setting.

1. Click the [Browse...] button next to the [Import File] field.
2. Select the file to import in the [Open] dialog.
3. Click the [Open] button in the [Open] dialog.
4. Click the [Import] button.

5.8.3 Export of Setting

This section describes the procedure to export the setting.

1. Click the [Browse...] button next to the [Export File] field.
2. Specify the location and file name to save the export file in the [Save As] dialog.
3. Click the [Save] button in the [Save As] dialog.
4. Click the [Export] button.

Chapter 6 Page Setup

6.1 Overview

This chapter describes the paper settings.

This section describes terms used in this chapter.

Definition	Description
Height	Vertical size when the paper feed direction is "portrait"
Width	Horizontal size when the paper feed direction is "portrait"
Output paper size	Paper (roll paper) size which is actually used for printing
Paper size	Printable area size specified on the printer driver
Standard paper	Paper sizes that are automatically registered on installation
User defined paper	Custom sizes that can be newly registered by users

=== **Caution** ===

◆ When you want to specify user defined paper, use the paper size (printable area size) instead of the output paper size.

◆ Standard paper other than A4 and Letter is named after the "width of the output paper", which does not match the paper size.

The following figure illustrates a print image.
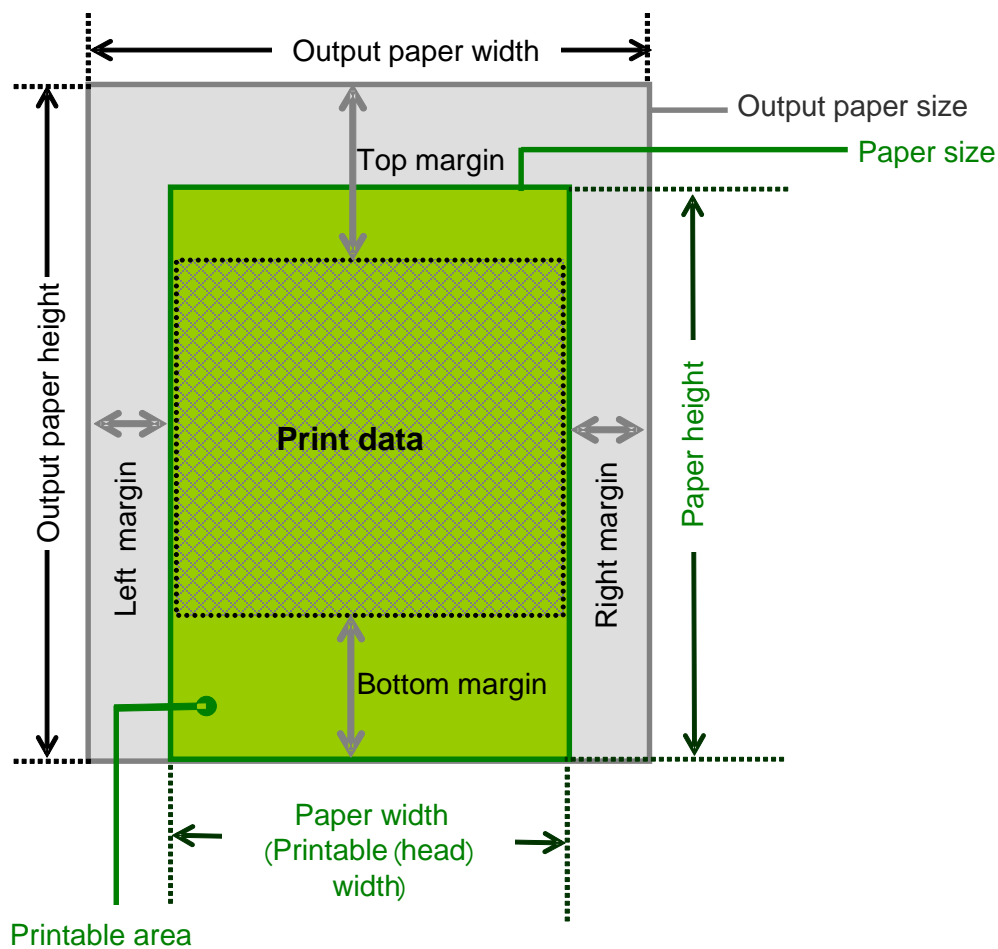
- The above figure is just a print image. The cut position varies depending on the setting in [Feed to Cut Position] described in "3.4.6 Setting of Paper Cut/Marked Paper".

6.2 Paper Size

The following table describes paper sizes available for each output paper width.

Output Paper Width	Paper Type	Paper Name	Paper Size (Range)	
			Width	Height
58 mm	Standard paper	58 mm	54 mm	3276 mm
		A4	210 mm	297 mm
		Letter	215.9 mm	279.4 mm
	User defined paper	-	25.6 mm to 54 mm	30 mm to 3276 mm
80 mm	Standard paper	58 mm	54 mm	3276 mm
		80 mm	72 mm	3276 mm
		A4	210 mm	297 mm
		Letter	215.9 mm	279.4 mm
	User defined paper	-	25.6 mm to 72mm	30 mm to 3276 mm

Specify paper sizes as follows.

- Paper width = Output paper width - Left margin - Right margin
- Paper height = Output paper height - Paper feed between head and cutter

For details of the margin and the paper feed between head and cutter, see "6.3 Margin".

6.3 Margin

This section describes the margin sizes.

The following descriptions assume that [Orientation] described in "3.2.1 Setting of Layout" is set to [Portrait] and [Direction] described in "3.4.5 General Settings" is set to [Front to Back].

There are the following margins in the paper width direction.

Left Margin

The following left margin appears.

Output Paper Width	Left Margin
58 mm	2 mm
80 mm	4 mm

Right Margin

The following right margin appears.

Right margin = Output paper width – Paper width – Left margin

Top Margin

The top margin is an area above the print data within the paper size, which does not contain the print data, plus the length of the paper feed between head and cutter.

The length of the paper feed between head and cutter depends on the combination of [Margin] in "3.4.5 General Settings", and [Paper Cut] and [Feed to Cut Position] in "3.4.6 Setting of Paper Cut/Marked Paper".

The following table shows the combinations of the margins, the paper cut, and the feed to cut position.

Paper Cut	Feed to Cut Position	Paper feed between head and cutter			
		Minimum Margin	Minimum Top Margin	Minimum Bottom Margin	Maximum Margin
Full Cut	Enabled	3 mm[*1]	3 mm[*1]	12 mm	12 mm
	Disabled	0 mm[*2]	0 mm[*3]	0 mm[*2]	0 mm[*3]
Partial Cut	Enabled	12 mm	12 mm	12 mm	12 mm
	Disabled	0 mm[*2]	0 mm[*3]	0 mm[*2]	0 mm[*3]
None	-	0 mm	0 mm	0 mm	0 mm

[*1]: Some errors may occur depending on terms and conditions.
[*2]: The bottom of print may be truncated.
[*3]: When you print with a full length of output paper, the bottom of print may be truncated.

Bottom Margin

The bottom margin is an area below the print data within the paper size, which does not contain the print data.

When, however, [Margin] in "3.4.5 General Settings" is set to "Minimum Bottom Margin", the bottom margin may not exist within the printable area.

▬ **Caution** ▬

◆ When [Paper Cut] described in "3.4.6 Setting of Paper Cut/Marked Paper" is set to
  other than "None" and [Feed to Cut Position] is set to "Disabled", the paper will be cut
  inside the printable area by the length from head to cutter.

◆ When the paper width setting on the printer and the width of the paper size on the
  printer driver do not match, the printed layout may corrupt.

◆ Due to the printer mechanism, the actual output paper height may be slightly different
  from the specified paper size.

◆ When using marked paper, available paper height is as follows.
  * Paper height < [Distance between marks] - 12 mm

◆ When using the marked paper, the maximum margin sizes on the printer side differ
  from the top and bottom margin sizes in "6.3 Margin".

◆ Print using logo, feed, feed to cut position, or custom command is not performed
  within the paper size and may run off the specified paper size.

▬ Reference ▬

● For details how to register a new paper size, see "6.4 How to Add a New Paper Size".

6.4 How to Add a New Paper Size

This section shows an example of the procedure to add a user defined paper size.

1. Select the [Forms] tab in the [Print Server Properties] window.
2. Select the [Create a new form] check box.
3. Enter the paper name in the [Form name] field.
4. Select "Metric" for [Units:].
5. Type the width for the new paper size in the [Width] field in [Paper size].
6. Type the height for the new paper size in the [Height] field in [Paper size].
7. Click the [Save Form] button to save the form.
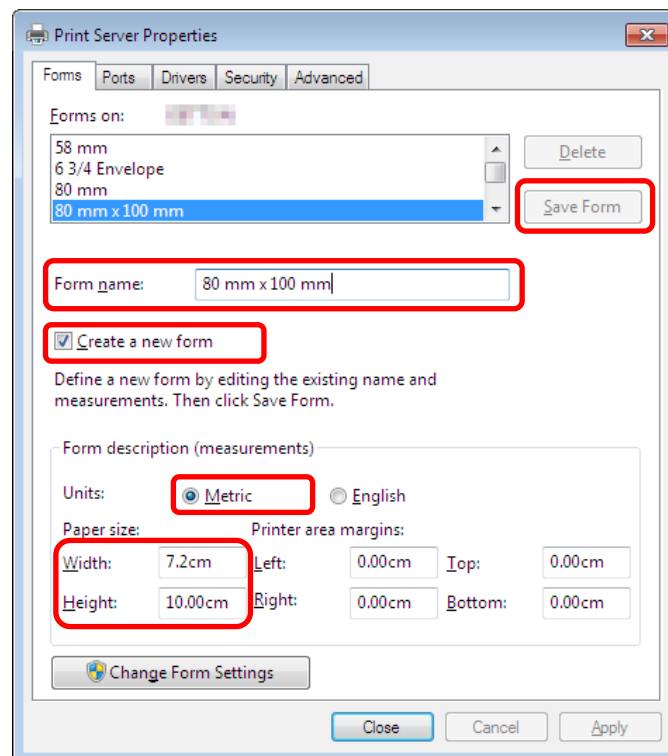
Figure 6-1   [Print Server Properties] window

Caution

◆ Adding a user defined paper size requires logon to the computer with administrator privileges.

◆ When adding a user defined paper size, review [Paper Size (Range)] in "6.2 Paper Size". Among the paper sizes listed in the [Forms on:], only those within the size range specified in [Paper Size (Range)] in "6.2 Paper Size" are available for the printer driver.

Chapter 7 Font

7.1 Overview

This chapter describes the font printing function.

The following types of font can be handled by the printer driver.
- ・ TrueType Font :Font installed in Windows.
- ・ Device Font :Font installed in a printer.
- ・ Barcode Font :Special font to print the barcode using the printer.
- ・ 2D-Barcode Font :Special font to print the 2D-Barcode using the printer.
- ・ Control Font :Special font to use the Printer command registered in advance.
- ・ ControlA Font :Special font to use the Printer command registered by users.

Reference

● TrueType Font

The TrueType font allows you to change character decorations such as italic type and the font size flexibly. It also enables almost WYSIWYG print.

The TrueType font is printed as image data. When a large amount of data is printed via the serial connection, the print may be delayed because the communication with the printer may take a long time.

Caution

◆ When you use the IPD font, set the following settings:
- ・ [Orientation] in "3.2.1 Setting of Layout" :"Portrait"
- ・ [Direction] in "3.4.5 General Settings" :"Front to Back"
- ・ [Reduction] in "3.4.5 General Settings" :"None"
- ・ [Image] in "3.6.4 Setting of Watermark" :"None"

◆ Special fonts are not displayed as images in the preview and edit windows.

◆ When you use special fonts, print results may exceed the specified paper size.

◆ A device font, barcode font, and 2D-Barcode font cannot be printed together in a line.

◆ A TrueType font and IPD font cannot be printed together in a line.

◆ An images and IPD font cannot be printed together in a line.

7.2 Device Font

A device font is a font set that is built into the printer. It can provide a print quality with full print performance of the printer. When you use the serial connection, the device font can be printed faster than TrueType.

> **Caution**
>
> ◆ When you specify italic for characters, it cannot be reflected to the print.
>
> ◆ When you specify underline for characters, position or line type of the underline is fixed because it is printed by the underline of the device font.

7.2.1 Selection of Type of Device Font

There are the following types of device font.

Font Name	Font Size	Character Set	Description	
IPD Font A[*1]	8.5 points	Western	24x12	Standard font
	17 points		24x12	Double height
IPD Font A Wide[*1]	8.5 points		24x12	Double width
	17 points		24x12	Double height, Double width
IPD Font B[*1]	5.5 points		16x8	Standard font
	11.5 points		16x8	Double height
IPD Font B Wide[*1]	5.5 points		16x8	Double width
	11.5 points		16x8	Double height, Double width
IPD Font A Japanese[*2]	8.5 points	Japanese	24x12	Standard font
	17 points		24x12	Double height
IPD Font A Wide Japanese[*2]	8.5 points		24x12	Double width
	17 points		24x12	Double height, Double width
IPD Font B Japanese[*2]	5.5 points		16x8	Standard font
	11.5 points		16x8	Double height
IPD Font B Wide Japanese[*2]	5.5 points		16x8	Double width
	11.5 points		16x8	Double height, Double width

*1: Not displayed in Japanese environment.
*2: Displayed in Japanese environment only.

7.2.2 Print of Device Font

The device font can be printed by programming.

7.3 Barcode Font

A barcode font is a Special font that allows you to print barcodes by only specifying the font without generating barcodes on the application side.

You should register the type and size of the barcode in [Printing Preferences] before using a barcode font. You can register up to 10 types of barcode font (IPD Barcode1 to 10) in the printer driver. For the registration method, see "3.5.5 Setting of Barcode Font".

Caution

◆ When you specify the rotation of the barcode, set the print speed to low. When the print speed is high, the print quality of the barcode may be degraded. For details of the print speed setting, see "3.4.5 General Settings".

◆ When a barcode becomes wider than the print width due to the barcode setting or data setting, it cannot be printed correctly.

7.3.1 Selection of Type of Barcode Font

Font Names of the Barcode Font are as follows.

Font Name	Font Size	Character Set
IPD Barcode1	8.5 points	Western
IPD Barcode2		
IPD Barcode3		
IPD Barcode4		
IPD Barcode5		
IPD Barcode6		
IPD Barcode7		
IPD Barcode8		
IPD Barcode9		
IPD Barcode10		

7.3.2 Print of Barcode Font

The barcode font can be printed by programming.

The following table describes the input conditions of barcode font data.

Type	Characters	Available Data		Remarks
UPC-A	11 to 12 characters	'0' to '9'	(0x30 to 0x39)	
UPC-E	11 to 12 characters	'0' to '9'	(0x30 to 0x39)	
JAN13 (EAN)	12 to 13 characters	'0' to '9'	(0x30 to 0x39)	
JAN8 (EAN)	7 to 8 characters	'0' to '9'	(0x30 to 0x39)	
Code39	One or more characters	'0' to '9'	(0x30 to 0x39)	The start and stop codes ('*') are automatically added.
		'A' to 'Z'	(0x41 to 0x54)	
		' '	(0x20)	
		'$'	(0x24)	
		'%'	(0x25)	
		'+'	(0x2B)	
		'-'	(0x2D)	
		'.'	(0x2E)	
		'/'	(0x2F)	
ITF	Two or more characters (even number of characters)	'0' to '9'	(0x30 to 0x39)	When you specify an odd number of characters, the last one is truncated.
CODABAR	One or more characters	'0' to '9'	(0x30 to 0x39)	For details of setting start and stop codes ('A' to 'D'), see "3.5.5 Setting of Barcode Font".
		'$'	(0x24)	
		'+'	(0x2B)	
		'-'	(0x2D)	
		'.'	(0x2E)	
		'/'	(0x2F)	
		':'	(0x3A)	
CODE128	Two or more characters	(0x00 to 0x7F) [1],[2],[3]		

Type	Characters	Available Data	Remarks
CODE93	One or more characters	(0x00 to 0x7F) *2,*3	
JAN13 add-on2	12 to 13 + 2 characters	'0' to '9' (0x30 to 0x39)	
JAN13 add-on5	12 to 13 + 5 characters	'0' to '9' (0x30 to 0x39)	

*1:   Available data depends on the CODE selection.
•CODE A: ASCII characters 0x00 to 0x5F
•CODE B: ASCII characters 0x20 to 0x7F
•CODE C: Two-digit number 00 to 99 (0x00 to 0x63)

To select CODE, FNC, or SHIFT, use the following special characters.

Code	CODE A	CODE B	CODE C
{S	SHIFT	SHIFT	SHIFT
{A	-	CODE A	CODE A
{B	CODE B	-	CODE B
{C	CODE C	CODE C	-
{1	FNC 1	FNC 1	FNC 1
{2	FNC 2	FNC 2	FNC 2
{3	FNC 3	FNC 3	FNC 3
{4	FNC 4	FNC 4	FNC 4
{{	'{'	'{'	-

*2:   To use 0x00 to 0x1F and 0x7F, set [Hex Input] in "3.5.5 Setting of Barcode Font" to "Enabled" to enter codes.
*3:   0x20 is only available when [Hex Input] is enabled in "3.5.5 Setting of Barcode Font".

7.4 2D-Barcode Font

A 2D-Barcode font is a Special font that allows you to print 2D-Barcodes by only specifying the font without generating 2D-Barcode images on the application side.

You should register the type and size of the 2D-Barcode in [Printing Preferences] before using a 2D-Barcode font. You can register up to five types of barcode font (IPD 2D-Barcode1 to IPD 2D-Barcode5) in the printer driver. For the registration method, see "3.5.6 Setting of 2D-Barcode Font".

═ Caution ═

◆ When you specify the rotation of the 2D-Barcode, set the print speed to low. When the print speed is high, the print quality of the 2D-Barcode may be degraded. For details of the print speed setting, see "3.4.5 General Settings".

◆ When a 2D-Barcode becomes wider than the print width due to the 2D-Barcode setting or data setting, it cannot be printed correctly.

7.4.1 Selection of Type of 2D-Barcode Font

Font Names of the 2D-Barcode Font are as follows.

Font Name	Font Size	Character Set
IPD 2D-Barcode1		
IPD 2D-Barcode2		
IPD 2D-Barcode3	8.5 points	Western/Japanese[1]
IPD 2D-Barcode4		
IPD 2D-Barcode5		

[1]: In environment other than Japanese, set the [Character Set] (Font Script) to "Western".
In Japanese environment, set the [Character Set] (Font Script) to "Japanese".

7.4.2 Print of 2D-Barcode Font

The 2D-Barcode font can be printed by programming.

For details of valid input data, see Technical Reference.

7.5 Control Font

A control font is a Special font that allows you to execute the Printer command assigned to fixed characters from a document.

7.5.1 Selection of Type of Control Font

There is the following type of control font.

Font Name	Font Size	Character Set
IPD Control	8.5 points	Western

7.5.2 Use of Control Font

The control font can be used by programming.
The following table lists the characters assigned for the control font and their actions.

Assigned Character	Action	Assigned Character	Action
5	HT	u	Character 90° right rotate specify
6	LF	v	Character 90° right rotate cancel
7	CR	w	Alignment left
a	Open drawer 2 50ms	x	Alignment center
b	Open drawer 2 100ms	y	Alignment right
c	Open drawer 2 150ms	A	Open drawer 1 50ms
d	Open drawer 2 200ms	B	Open drawer 1 100ms
e	Open drawer 2 250ms	C	Open drawer 1 150ms
f	Non-feed + Full cut	D	Open drawer 1 200ms
g	Non-feed + Partial cut	E	Open drawer 1 250ms
h	NV image 00 (30,30) print	G	NV image 00 (30,30) Normal print
i	NV image 01 (30,31) print	H	NV image 01 (30,31) Normal print
j	NV image 02 (30,32) print	I	NV image 02 (30,32) Normal print
k	NV image 03 (30,33) print	J	NV image 03 (30,33) Normal print
l	NV image 04 (30,34) print	K	NV image 04 (30,34) Normal print
m	Inversion (flip) printing specify	P	Feed + Partial cut
n	Inversion (flip) printing cancel	Q	Feed + Full cut
o	Reverse print specify	[	NV image 00 (30,30) Quad print
p	Reverse print cancel	]	NV image 01 (30,31) Quad print

Assigned Character	Action	Assigned Character	Action
q	Underline settings	^	NV image 02 (30,32) Quad print
r	Underline cancel	_	NV image 03 (30,33) Quad print
s	Bold print specify	`	NV image 04 (30,34) Quad print
t	Bold print cancel		

・Keycodes of NV image enclosed in parenthesis are described in hexadecimal.

Caution

◆ Underline is not applied at 90-degree rotation.

7.6 ControlA Font

ControlA font is a Special font that allows you to execute the Printer command assigned to characters in advance from a document. For the Printer command, refer to the Technical reference.

You should register the Printer command to execute in [Printing Preferences] before using the ControlA font. You can arbitrarily register the Printer command to characters from 0x20 to 0x7f in the printer driver. For the registration method, see "3.5.7 Setting of ControlA Font".

7.6.1 Selection of Type of ControlA Font

There is the following type of ControlA font.

Font Name	Font Size	Font Script
IPD ControlA	8.5 points	Western

7.6.2 Use of ControlA Font

The ControlA font can be used by programming.

(Specifications are subject to change without notice.)