

BIXOLON

Software Manual

Windows Driver

Mobile Receipt Printer

Ver. 1.02

<http://www.bixolon.com>

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BIXOLON Co., Ltd. maintains ongoing efforts to enhance and upgrade the functions and quality of all our products.

In the following, product specifications and/or user manual content may be changed without prior notice.

Caution

Some semiconductor devices are easily damaged by static electricity. You should turn the printer "OFF", before you connect or remove the cables on the rear side, in order to guard the printer against the static electricity. If the printer is damaged by the static electricity, you should turn the printer "OFF".

Introduction

This Windows Driver Manual provides information on installation, detailed specifications, and usage of the printer's Windows Driver according to PC operating system (OS).

It is advisable to read the contents of this manual carefully before using the Windows Driver for the first time.

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1. Operating System (OS) Environment

The following operating systems are supported for usage.

Microsoft Windows 7 (32bit/64bit)
Microsoft Windows 8 (32bit/64bit)
Microsoft Windows 8.1 (32bit/64bit)
Microsoft Windows 10 (32bit/64bit)
Microsoft Windows Server 2008 (32bit/64bit)
Microsoft Windows Server 2008R2 (64bit)
Microsoft Windows Server 2012/2012R2 (64bit)
Microsoft Windows Server 2016 (64bit)
Microsoft Windows Server 2019 (64bit)



- Serial printer port do not work on Windows 10 version 1511 (OS Build 105860.104) specific. We recommend you to install the latest Windows 10 update through Windows Update before installing Windows Driver.
- You can download and install the Windows Update in the Update & security tab of the Settings menu.
( > Settings > Update & security > Windows Update).

2. Supported Printers

This manual provides information for the following printer drivers.

Models	Resolution
SPP-R200II SPP-R200III SPP-R210 SPP-R220 SPP-R300 SPP-R310 SPP-R400 SPP-R410 SPP-C200 SPP-C300	203 DPI

3. Windows Driver Preparation

The Windows Driver the latest file version can be downloaded from BIXOLON website.
(www.bixolon.com)

4. Windows Driver Installation

4-1 Installation

- 1) Double-click "Software_[Model name]_Windows_Driver_Vx.x.x.exe".
- 2) The Network Auto Installation function allows you to install drivers for the same network printer. Before using the function, the IP address of the printer must be set, so download the Net Configuration Tool from our website and set the IP address first.



- Administrator privilege may be required to run the installation file.
- In case of the printer's IP address is invalid or the printer is communicating with another application, etc., the printer cannot be searched through the Network Auto Installation function.

- 3) Follow the instructions on the screen to complete the installation process.

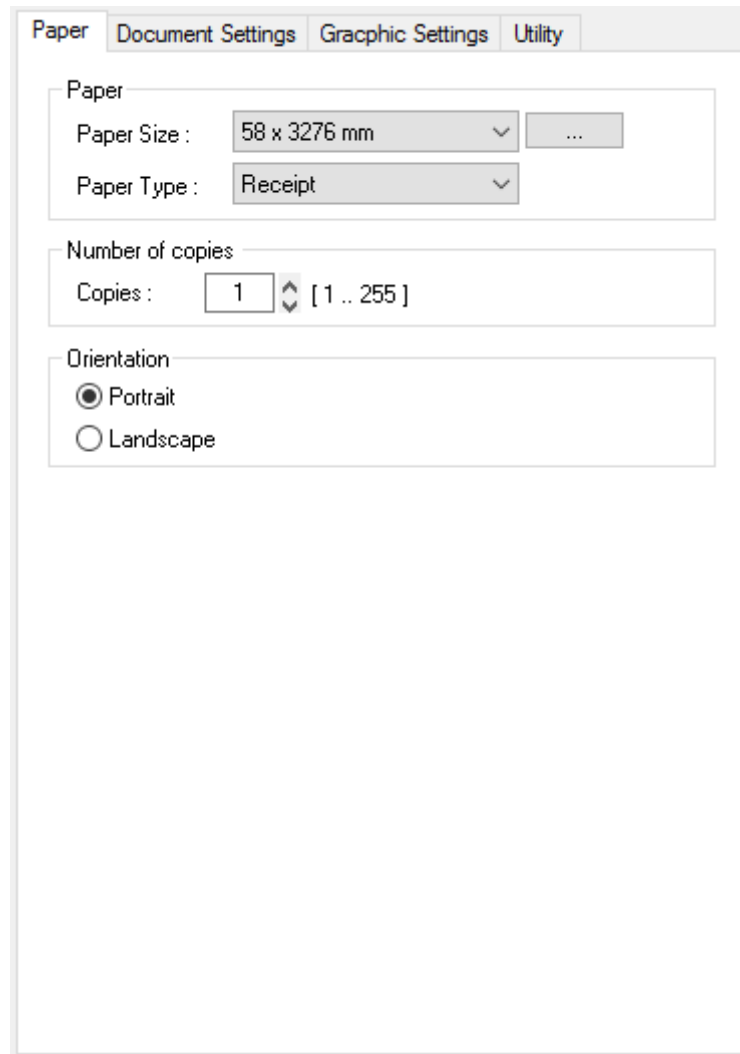
4-2 Uninstallation

- 1) Open "Add or Remove Programs" or "Remove Programs" in the Control Panel.
 - * XP or Server 2003: Control Panel – Add or Remove Programs
 - * Vista or higher OS: Control Panel – Remove Programs
- 2) Double-click "BIXOLON [Model name] Windows Driver" to uninstall the installed windows drivers.

5. Windows Driver Settings

The following functions can be configured after installing the Windows driver.

5-1 Paper



The screenshot shows the 'Paper' tab of a settings window. It has four tabs: 'Paper', 'Document Settings', 'Graphic Settings', and 'Utility'. The 'Paper' tab is active. It contains three sections: 'Paper' with 'Paper Size' set to '58 x 3276 mm' and 'Paper Type' set to 'Receipt'; 'Number of copies' with 'Copies' set to '1' and a range of '[1 .. 255]'; and 'Orientation' with 'Portrait' selected and 'Landscape' unselected.

1) Open the **Printer Properties** window and then click **Printing Preferences** in the **General** tab.



***Windows Server 2008 / 7 / 8 / Server 2012 / 10**

(Control Panel) – (Hardware and Sound) or (All Control Panel Items) – (Devices and Printers) – (Right-click the icon of the printer) – (Click **Printer Properties**)

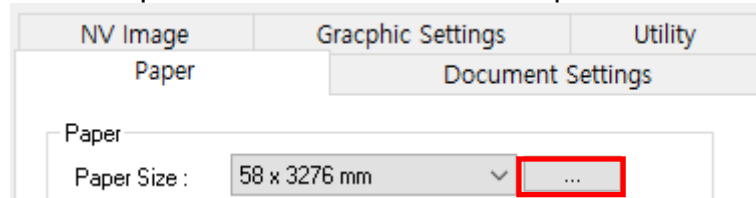
2) Click the **Layout** tab.

5-1-1 Paper Size

Paper size of the following sizes can be selected.

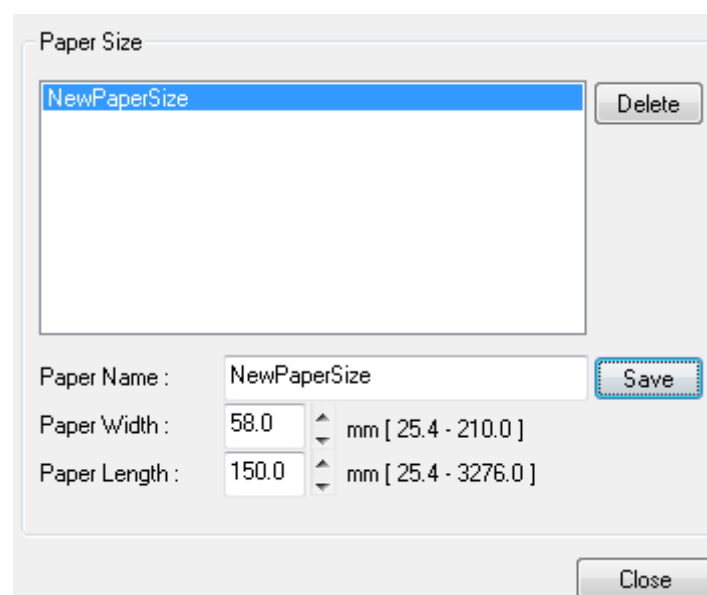
Models	Paper sizes can be selected		
SPP-R200II SPP-R200III SPP-R210 SPP-R220	58 × 297 mm	58 × 3276 mm	A4 210 × 297 mm
SPP-R300 SPP-R310	80 × 297 mm	80 × 3276 mm	A4 210 × 297 mm
SPP-R400 SPP-R410	112 × 297 mm	112 × 3276 mm	A4 210 × 297 mm

If a custom paper size is required, click “...” to add or update a custom paper size.

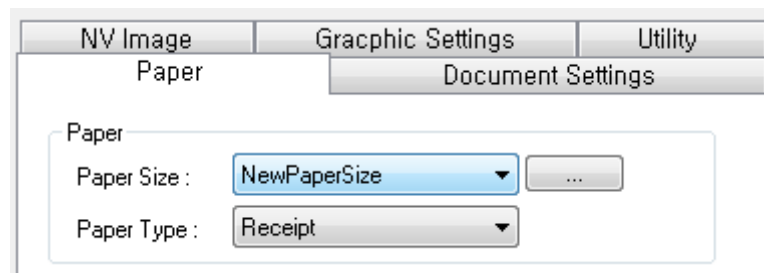


Click **Save** after specifying the paper width/length and a paper name. If the specified paper name already exists on the system, you can update the paper width/length.

Paper Width : 25.4 mm (Min) ~ 210.0 mm (Max)
Paper Length : 25.4 mm (Min) ~ 3276.0 mm (Max)



You can choose the new paper size on the **Paper Size** combo-box after adding a paper size.



Delete button : Deletes the paper size selected in the list.

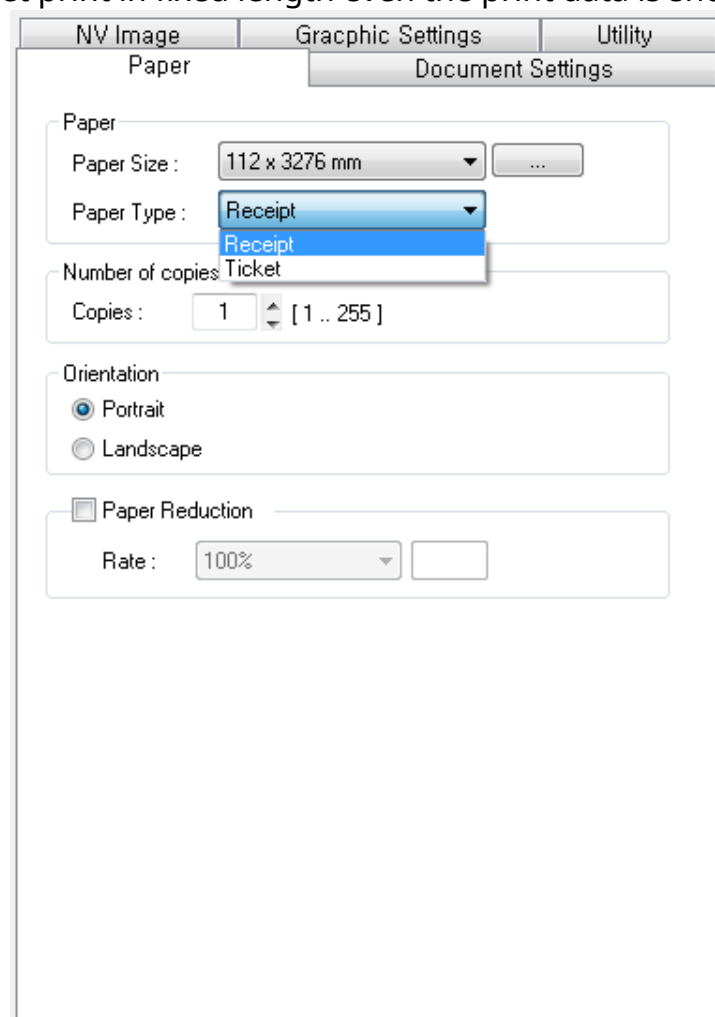
Save button : Adds a new paper size or update the paper size selected in the list if the paper name already exists on the system.

5-1-2 Paper Type

You can choose **Receipt** or **Ticket** as paper types.

Receipt : Receipt allows flexible paper length according to the data length.

Ticket : Ticket print in fixed length even the print data is short.



5-1-3 Copies

Copies are printed by specifying the copy count. The copy count is set to 1 by default. Set this value bigger than 1 to set the number of copies to print. The value should be within the range of 1 to 255.

5-1-4 Orientation

Printing orientation can be set to Portrait (which is the default) or Landscape. It is not possible to use printer fonts (device fonts) and barcode fonts in landscape.

Portrait : Printing in the vertical direction.

Landscape : Printing in the horizontal direction.

5-1-5 Paper Reduction

Reduction function reduces the size of the print image to save print paper. If this function is enabled and print-job data includes text data created by using a printer font (device font), printer fonts are converted to Windows fonts (True Type fonts) to make them smaller. The barcode size also can be reduced by selecting "**Enable reducing barcode**".



32bit applications running on 64bit Windows cannot work for this feature.

5-2 Document Settings

The screenshot shows the 'Document Settings' dialog box with the following sections:

- Send Command**: Fields for Start Doc, Start Page, End Page, and End Doc. Example: <1B4A00>
- Feed**: Line-feeds after printing (0) and Form-feeds after printing (0).
- Tear Off Position**: ☒ Feed to Tear Off Position
- Buzzer**: ☐ Buzzer sound before printing, ☐ Buzzer sound after printing

1) Open the **Printer Properties** window and then click **Printing Preferences** in the **General** tab.



Please refer to below paths of Printer Properties window.

***Windows Server 2008 / 7 / 8 / Server 2012 / 10**

(Control Panel) – (Hardware and Sound) or (All Control Panel Items) – (Devices and Printers) – (Right-click the icon of the printer) – (Click **Printer Properties**)

2) Click the **Document Settings** tab.

5-2-1 Send Command

The Windows driver serves to receive the content for print from an application and send it to the printer. The “Send Commands” function allows for the addition of desired commands at the start or end of the print content.

- Start Doc : Addition of command at the beginning of the document.
- Start Page : Addition of command at the beginning of the page.
- End Page : Addition of command at the end of the page.
- End Doc : Addition of command at the end of the document.



For more information about the hexadecimals, refer to the Commands Manual.

5-2-2 Paper Feed

Enter a number between 0 and 99 for adding line feed commands (0x0A) or form feed commands (0x0C) at the end of printing.

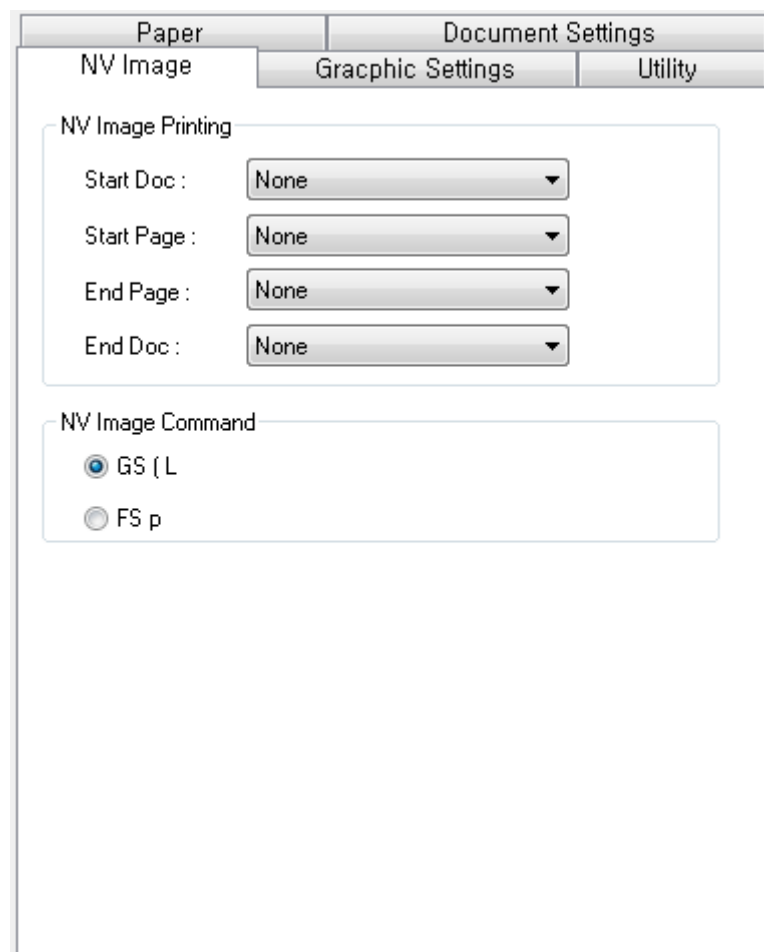
5-2-3 Tear-Off Position

When this option is ticked, paper moves to tear off position (manual cutter position) after printing each page in a document. It probably needs to de-select this option if printing labels.

5-2-4 Buzzer Sound

Tick “Buzzer sound before printing” or “Buzzer sound after printing” to generate the printer buzzer sound at the start time or the end time of printing.

5-3 NV Image



1) Open the **Printer Properties** window and then click **Printing Preferences** in the **General** tab.



Please refer to below paths of Printer Properties window.

***Windows Server 2008 / 7 / 8 / Server 2012 / 10**

(Control Panel) – (Hardware and Sound) or (All Control Panel Items) – (Devices and Printers) – (Right-click the icon of the printer) – (Click **Printer Properties**)

2) Click the **NV Image** tab.

The position to print NV image stored in the printer can be set at the beginning and/or end of the document and beginning and end of each page.

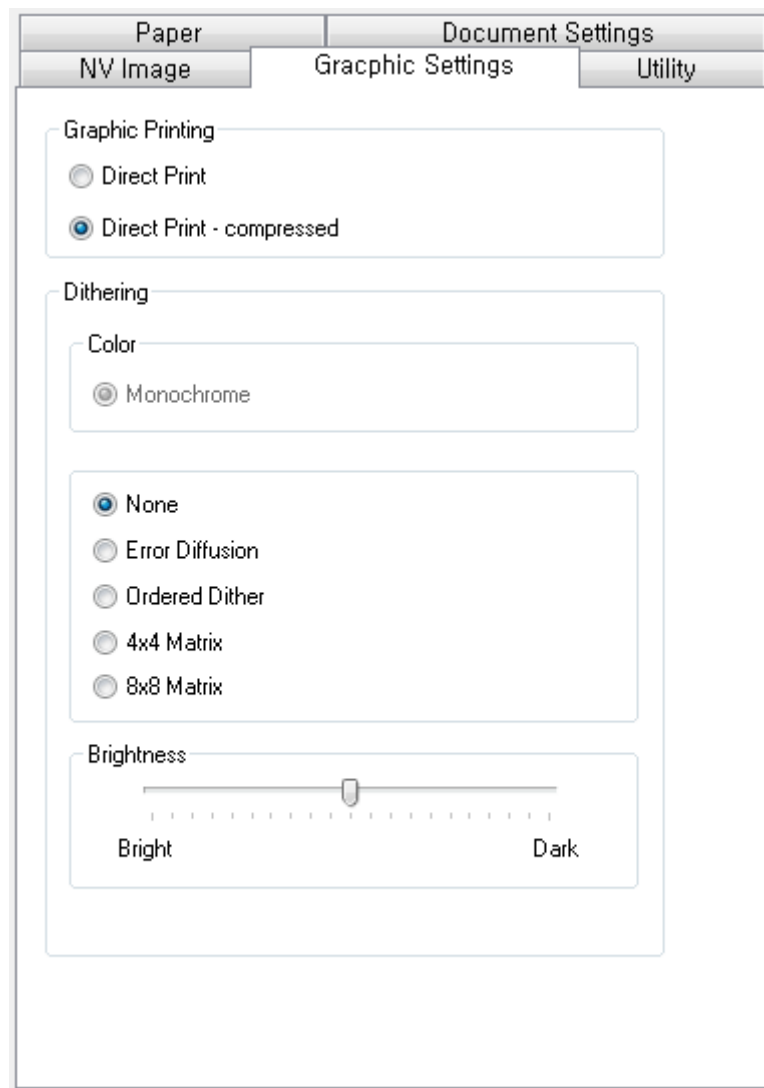


There are two commands for NV Image printing. Take care of selecting one of the two commands because NV images cannot be printed depending on the selected command.

NV bit image	:	FS p
NV graphics	:	GS (L

Start Doc	:	Insert NV image at the top of the document.
Start Page	:	Insert NV image at the top of the page.
End Page	:	Insert NV image at the end of the page.
End Doc	:	Insert NV image at the end of the document.

5-4 Graphic Settings



1) Open the **Printer Properties** window and then click **Printing Preferences** in the **General** tab.

Please refer to below paths of Printer Properties window.

***Windows XP / Server 2003**

(Control Panel) – (Printers and Faxes) – (Right-click the icon of the printer) – (Click **Properties**)

***Windows Vista**

(Control Panel) – (Hardware and Sound) – (Printers) – (Right-click the icon of the printer) – (Click **Properties**)

***Server 2008 / 7 / 8 / Server 2012 / 10**

(Control Panel) – (Hardware and Sound) or (All Control Panel Items) – (Devices and Printers) – (Right-click the icon of the printer) – (Click **Printer Properties**)



2) Click the **Graphic Settings** tab.

5-4-1 Graphic Printing

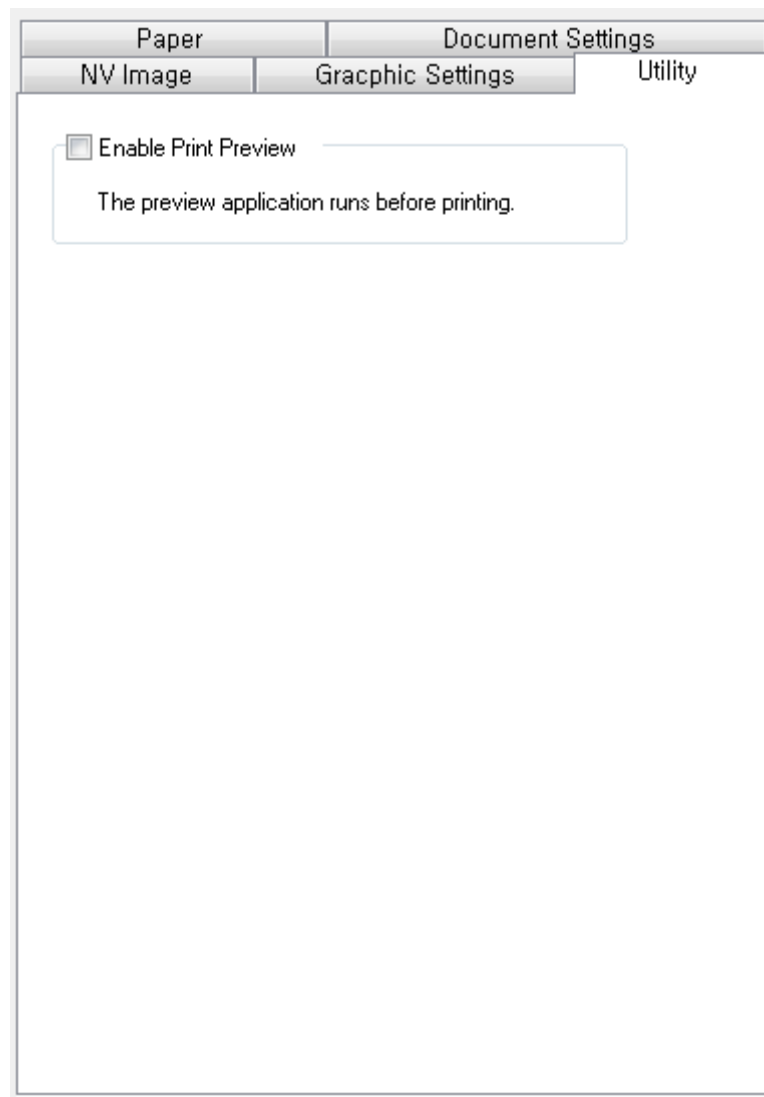
Depending on graphic printing option, printer driver sends raw image data or compressed image data using RLE (Run-length encoding) to the printer. Select “**Direct Print - compressed**” if you want to print faster.

5-4-2 Dithering

This printer model is a black and white printing device including dithering function and brightness level adjustment function to produce a sharper or softer image. The following dithering algorithms can be selected.

None	4x4 Matrix
Error Diffusion	8x8 Matrix
Ordered Dither	

5-5 Utility



1) Open the **Printer Properties** window and then click **Printing Preferences** in the **General** tab.



Please refer to below paths of Printer Properties window.

***Windows Server 2008 / 7 / 8 / Server 2012 / 10**

(Control Panel) – (Hardware and Sound) or (All Control Panel Items) – (Devices and Printers) – (Right-click the icon of the printer) – (Click **Printer Properties**)

2) Click the **Utility** tab.

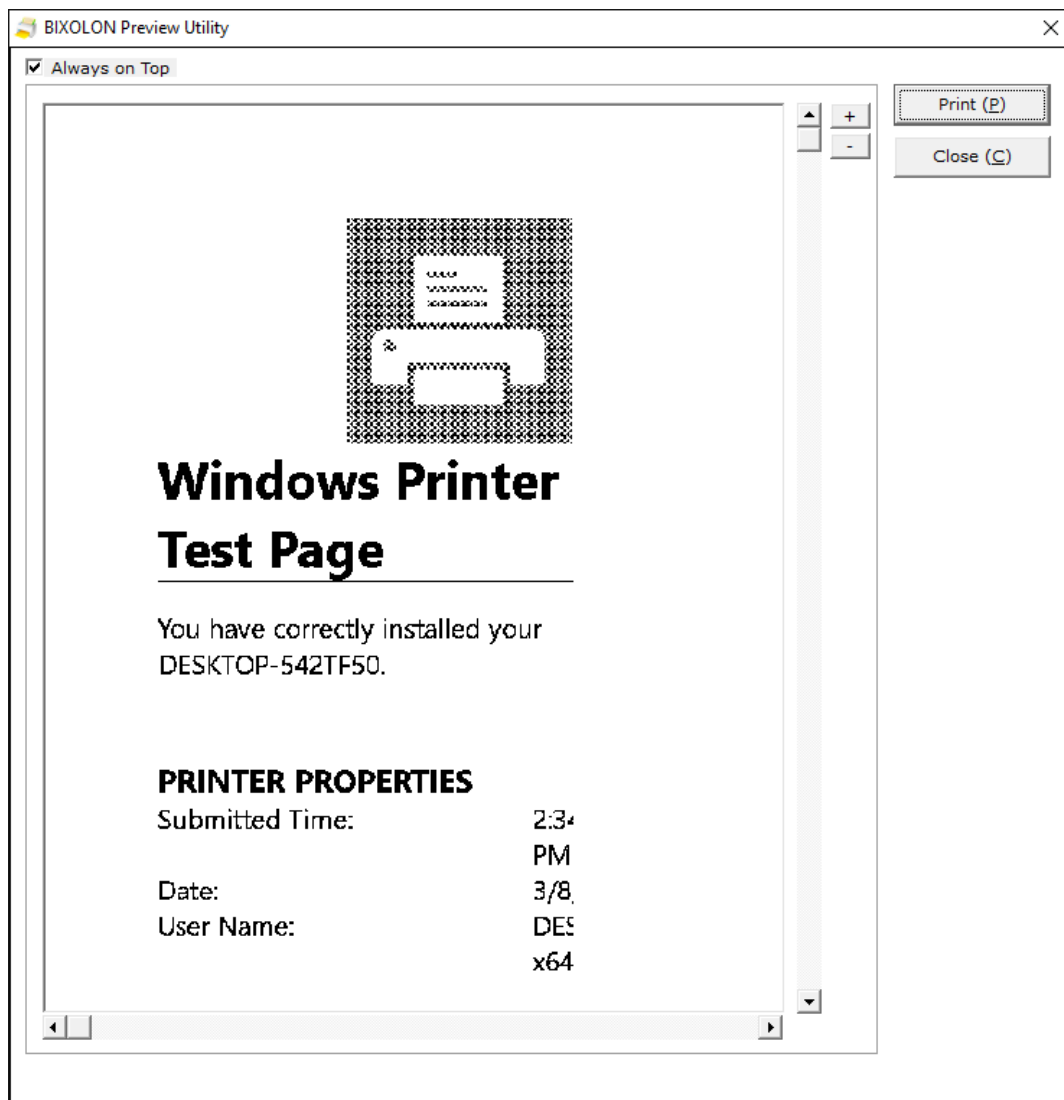
5-5-1 Print Preview

This application with a preview of a print-job runs, and windows driver does not directly send print-job data to the printer when enabled by clicking “**Enable Print Preview**”. Print-job data can only be sent to the printer in the application.



The actual output of preview image processed by the application might look a little different.

1) Tick **Enable Print Preview** to make Windows Driver ready for running the application.



2) When print-job data are created via Windows Driver, the application runs, and then loads the data to draw the expected output on screen.

3) Click **Print** if you want to print, or click **Close** to exit the application.

6. Windows Driver Specification

6-1 Printer Fonts

- This Windows driver supports various printer fonts (device fonts) in the following table. Printing using these fonts is faster than using Windows fonts provided by the operating system.

Printer Font Name			Size (Dot)	Size (Point)
				203 dpi
FontA1x1	FontA1x1[Ext.]	FontA1x1[255]	12x24	8.5
FontA1x2	FontA1x2[Ext.]	FontA1x2[255]	12x48	17
FontA2x1	FontA2x1[Ext.]	FontA2x1[255]	24x24	8.5
FontA2x2	FontA2x2[Ext.]	FontA2x2[255]	24x48	17
FontA2x4	FontA2x4[Ext.]	FontA2x4[255]	24x96	34
FontA4x2	FontA4x2[Ext.]	FontA4x2[255]	48x48	17
FontA4x4	FontA4x4[Ext.]	FontA4x4[255]	48x96	34
FontA4x8	FontA4x8[Ext.]	FontA4x8[255]	48x192	68
FontA8x4	FontA8x4[Ext.]	FontA8x4[255]	96x96	34
FontA8x8	FontA8x8[Ext.]	FontA8x8[255]	96x192	68
FontB1x1	FontB1x1[Ext.]	FontB1x1[255]	9x17	6
FontB1x2	FontB1x2[Ext.]	FontB1x2[255]	9x34	12
FontB2x1	FontB2x1[Ext.]	FontB2x1[255]	18x17	6
FontB2x2	FontB2x2[Ext.]	FontB2x2[255]	18x34	12
FontB2x4	FontB2x4[Ext.]	FontB2x4[255]	18x68	24
FontB4x2	FontB4x2[Ext.]	FontB4x2[255]	36x34	12
FontB4x4	FontB4x4[Ext.]	FontB4x4[255]	36x68	24
FontB4x8	FontB4x8[Ext.]	FontB4x8[255]	36x136	48.5
FontB8x4	FontB8x4[Ext.]	FontB8x4[255]	72x68	24
FontB8x8	FontB8x8[Ext.]	FontB8x8[255]	72x136	48.5
FontC1x1	FontC1x1[Ext.]	FontC1x1[255]	9x24	8.5
FontC1x2	FontC1x2[Ext.]	FontC1x2[255]	9x48	17
FontC2x1	FontC2x1[Ext.]	FontC2x1[255]	18x24	8.5
FontC2x2	FontC2x2[Ext.]	FontC2x2[255]	18x48	17
FontC2x4	FontC2x4[Ext.]	FontC2x4[255]	18x96	34
FontC4x2	FontC4x2[Ext.]	FontC4x2[255]	36x48	17
FontC4x4	FontC4x4[Ext.]	FontC4x4[255]	36x96	34
FontC4x8	FontC4x8[Ext.]	FontC4x8[255]	36x192	68
FontC8x4	FontC8x4[Ext.]	FontC8x4[255]	72x96	34
FontC8x8	FontC8x8[Ext.]	FontC8x8[255]	72x192	68

•Printer Fonts are defined as follows.

1) FontA1x2 (Double height)

- ANSI Character code support (Code Page 1252)
- Font size (Dot): 12 x 48
- Font size (Point): 17

2) FontA1x2[Ext.] (Double height)

- IBM expansion Character code support (Code Page 437)
- Font size (Dot): 12 x 48
- Font size (Point): 17

3) FontA1x2[255] (Double height)

- Buyer exclusive code support (User Code page)
- Font size (Dot): 12 x 48
- Font size (Point): 17

6-2 Special functions

- This Windows driver supports the special functions as shown in the following table. Select **FontControl** font first and use the characters in the table to use the special functions.



Take care as this function is not for printing general texts.

Character	Special Function
5	Prints HT (0 x 09)
6	Prints LF (0 x 0A)
7	Prints CR (0 x 0D)
i	Prints the NV Image(FS p) saved in the 00 address (double-size)
j	Prints the NV Image(FS p) saved in the 01 address (double-size)
k	Prints the NV Image(FS p) saved in the 02 address (double-size)
l	Prints the NV Image(FS p) saved in the 03 address (double-size)
m	Prints the NV Image(FS p) saved in the 04 address (double-size)
p	Does not add HRI characters to the barcode
q	Adds HRI characters in Font A above the barcode
r	Adds HRI characters in Font A below the barcode
s	Adds HRI characters in Font B above the barcode
t	Adds HRI characters in Font B below the barcode
u	Turns white/black reverse printing mode on
v	Turns white/black reverse printing mode off
w	Aligns text to the left
x	Aligns text to the center
y	Aligns text to the right
G	Prints the NV bitmap(GS (L) saved in the 00 address
H	Prints the NV bitmap(GS (L) saved in the 01 address
I	Prints the NV bitmap(GS (L) saved in the 02 address
J	Prints the NV bitmap(GS (L) saved in the 03 address
K	Prints the NV bitmap(GS (L) saved in the 04 address
R	Prints the NV Image(FS p) saved in the 00 address
S	Prints the NV Image(FS p) saved in the 01 address
T	Prints the NV Image(FS p) saved in the 02 address
U	Prints the NV Image(FS p) saved in the 03 address
V	Prints the NV Image(FS p) saved in the 04 address

1) Example

Select **FontControl** font and send 6 for “LF” (Line Feed) operation (instead of printing character “6”).

2) FontControl font functions.

Font Name	Special Functions	Size (Point/Dot)
		203 dpi
FontControl	Alignment (Left/Center/Right), Output HT, Output LF, Output CR, Printing NV bitmap/Image	8.5 / 12x24

6-3 Barcodes

Windows driver supports one-dimensional barcode fonts as shown in the following table. Barcodes can be printed on the printer by using following font names. In addition, the FontControl font can be used to add HRI characters.

Font Name	Size	Supported Characters
Codabar	18 / 35.5 / 53 / 71	Numeric : 0~9 Symbols : \$,+,-,.,/,,: Letters : A~D
Code39	18 / 35.5 / 53 / 71	Numeric : 0~9 Symbols : \$,+,-,.,/,,: Letters : A~D
JAN13 (EAN)	18 / 35.5 / 53 / 71	Numeric : 0~9
JAN8 (EAN)	18 / 35.5 / 53 / 71	Numeric : 0~9
ITF	18 / 35.5 / 53 / 71	Numeric : 0~9
UPC-A	18 / 35.5 / 53 / 71	Numeric : 0~9
UPC-E	18 / 35.5 / 53 / 71	Numeric : 0~9
Code93	18 / 35.5 / 53 / 71	ASCII CODE : 0x00~0x7F
Code128	18 / 35.5 / 53 / 71	ASCII CODE : 0x00~0x7F

1) Sample Use

Select Code39 and Size 18, and then enter "1234". The barcode corresponding to "1234" is printed.

2) When Using Code128

Select Code128 and Size 18, and then enter "{B1234". The barcode corresponding to "1234" is printed. When using Code128, characters, such as "{A", "{B", "{C", should be included before the input data.

6-4 Two-Dimensional Barcodes

The Windows Driver supports the following two-dimensional barcodes.

PDF417	GS1 Databar Omnidirect	GS1 Databar UPC-E
QR Code	GS1 Databar Truncated	GS1 Databar EAN-13
DATAMATRIX Code	GS1 Databar Stacked	GS1 Databar EAN-8
Aztec	GS1 Databar Stacked	GS1 Databar UCC/EAN-128&CC-A/B
	Omnidirect	
MAXI Code[Mode4]	GS1 Databar Omnidirect	
GS1 Databar	GS1 Databar UPC-A	

Usage is identical to that for barcodes.

7. Use of Windows Driver

Sample codes are installed "C:\BIXOLON\Printer Driver\[Model name]\Sample", when the driver install.



If Windows was installed at "D" drive, the sample codes are installed "D" drive.

7-1 Use of Visual Basic

- This section contains example codes to control the printer using Windows driver with Visual Basic.

7-1-1 Windows Driver Selection

When you select the printer driver, please designate a device name by the printer name. The following example code explains how to select "BIXOLON SPP-R410" Windows driver.

```
For Each prnPrinter In Printers  
  
    If prnPrinter.DeviceName = "BIXOLON SPP-R410" Then  
  
        Set Printer = prnPrinter  
  
        Exit For  
  
    End If  
  
Next
```

7-1-2 Text Printing

The following example code explains how to print texts using Windows fonts and printer fonts (device fonts).

```
'Print in Windows font
Printer.FontSize = 9
Printer.FontName = "Arial"
Printer.Print "Arial Test"

'Print in printer font
Printer.FontSize = 8.5
Printer.FontName = "FontA1x1"
Printer.Print "FontA1x1 Font"

Printer.EndDoc
```

7-1-3 Barcode Printing

The following example code explains how to print the barcode (JAN8 (EAN)).

```
'Print Bar Code.  
Printer.FontSize = 18  
  
Printer.FontName = "JAN8 (EAN)"  
Printer.Print "1234567"  
  
Printer.EndDoc
```

The following example code explains how to print the 2D barcode (PDF417).

```
'Print Two-dimensional Codes.  
Printer.FontSize = 8.5  
  
Printer.FontName = "PDF417"  
Printer.Print "Print Test PDF417"  
  
Printer.EndDoc
```

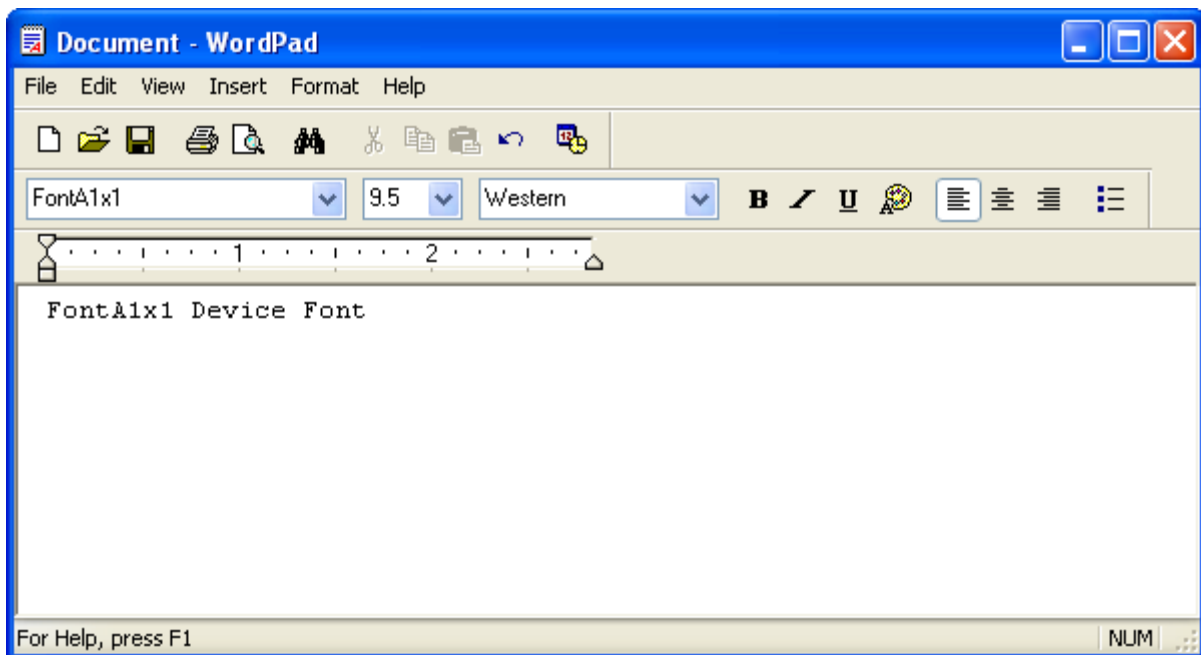
7-2 Use of WordPad

7-2-1 WordPad Environment Settings

Launch WordPad, set the printing related options as follows, and test the printer with WordPad.

- Select printer
Select "Print" from the "File" menu, and select the BIXOLON printer.
- Set paper size, orientation, margin, etc.
Select the "Page Setting" from "File" menu, and set paper size, orientation, and margin.

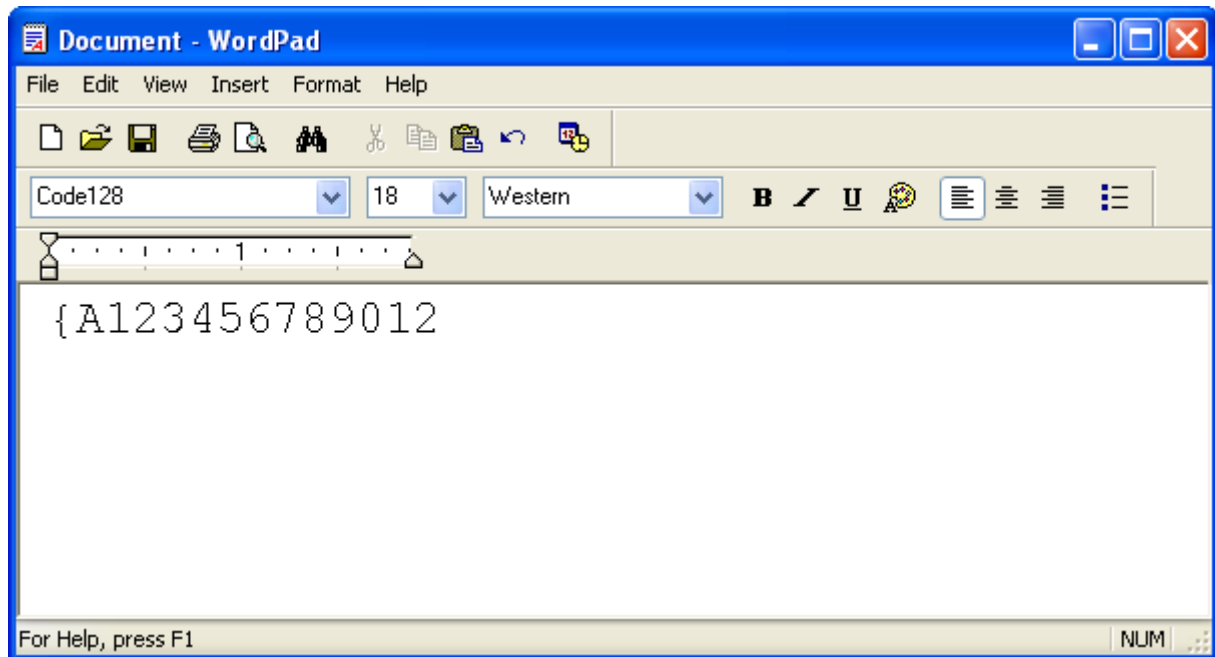
7-2-2 Text Printing



- 1) Select the font from the font selection box (FontA1x1).
- 2) Select the point size from the point selection box (8.5).
- 3) Enter the text to print.
- 4) Click the Print icon in the toolbar to print the text.

7-2-3 Barcode Printing

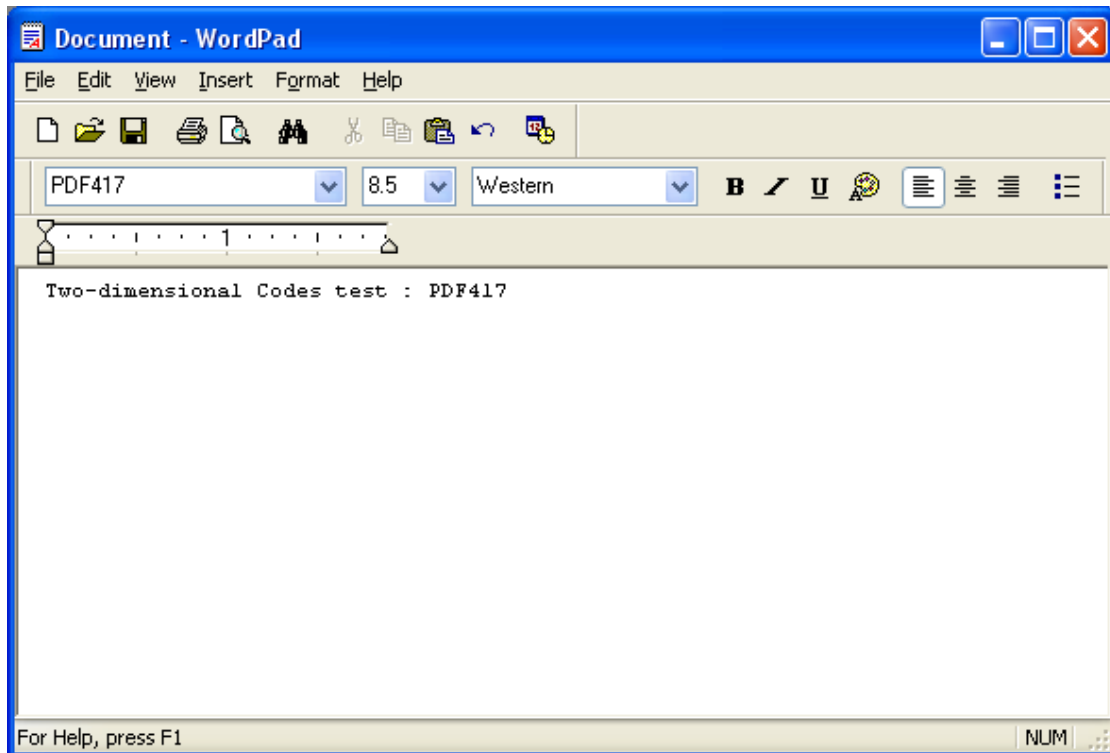
Use the Windows Driver of the printer to print the barcode.



- 1) Select the desired barcode from the Font menu (Code128).
- 2) Select the desired font size (18).
- 3) Enter "{A123456789012" in WordPad.
- 4) Click the Print button in the toolbar to print.

7-2-4 Two-Dimensional Barcode Printing

Use the Windows Driver of the printer to print the two-dimensional barcode.



- 1) Select the desired two-dimensional barcode from the Font menu (PDF417).
- 2) Select the desired font size (8.5).
- 3) Enter "Two-dimensional Codes Test: PDF417" in WordPad.
- 4) Click the Print button in the toolbar to print.

Revision history

[illegible]