BIXOLON®

Windows Driver Manual
STP-103II

Thermal Printer
Rev. 1.01

http://www.bixolon.com
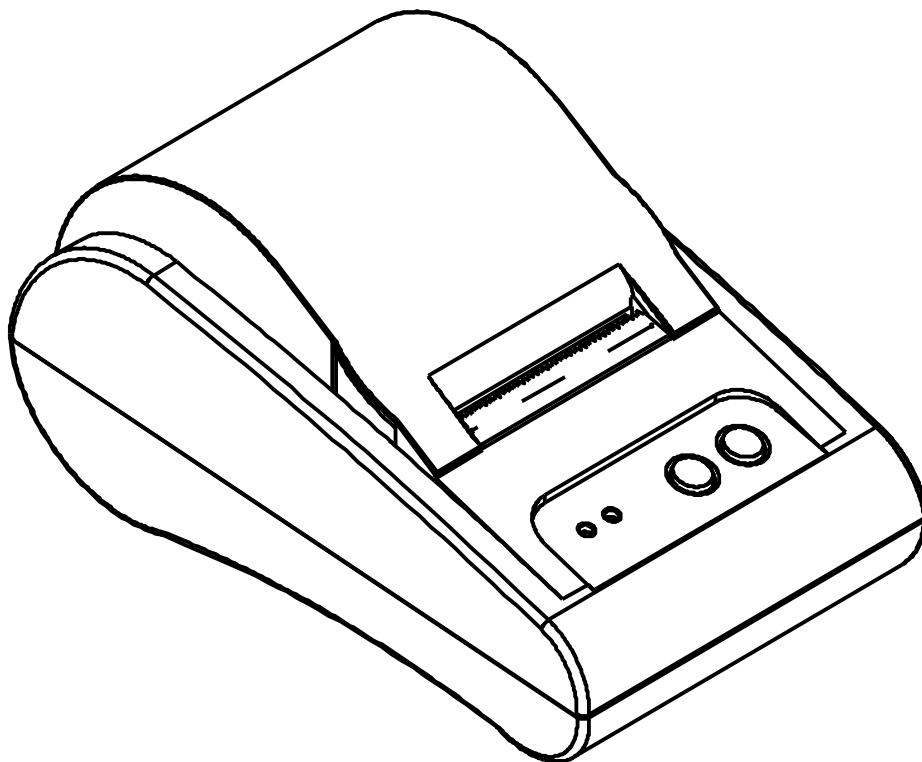
■ Table of Contents

1. Manual Information

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

We at BIXOLON maintain ongoing efforts to enhance and upgrade the functions and quality of all our products.   In following, product specifications and/or user manual content may be changed without prior notice.

2. Operating System (OS) Environment

The following operating systems are supported for usage.

Microsoft Windows XP (32bit/64bit)
Microsoft Windows Server 2003 (32bit/64bit)
Microsoft Windows VISTA (32bit/64bit)
Microsoft Windows Server 2008 (32bit/64bit)
Microsoft Windows Server 2008R2 (64bit)
Microsoft Windows 7 (32bit/64bit)
Microsoft Windows 8 (32bit/64bit)
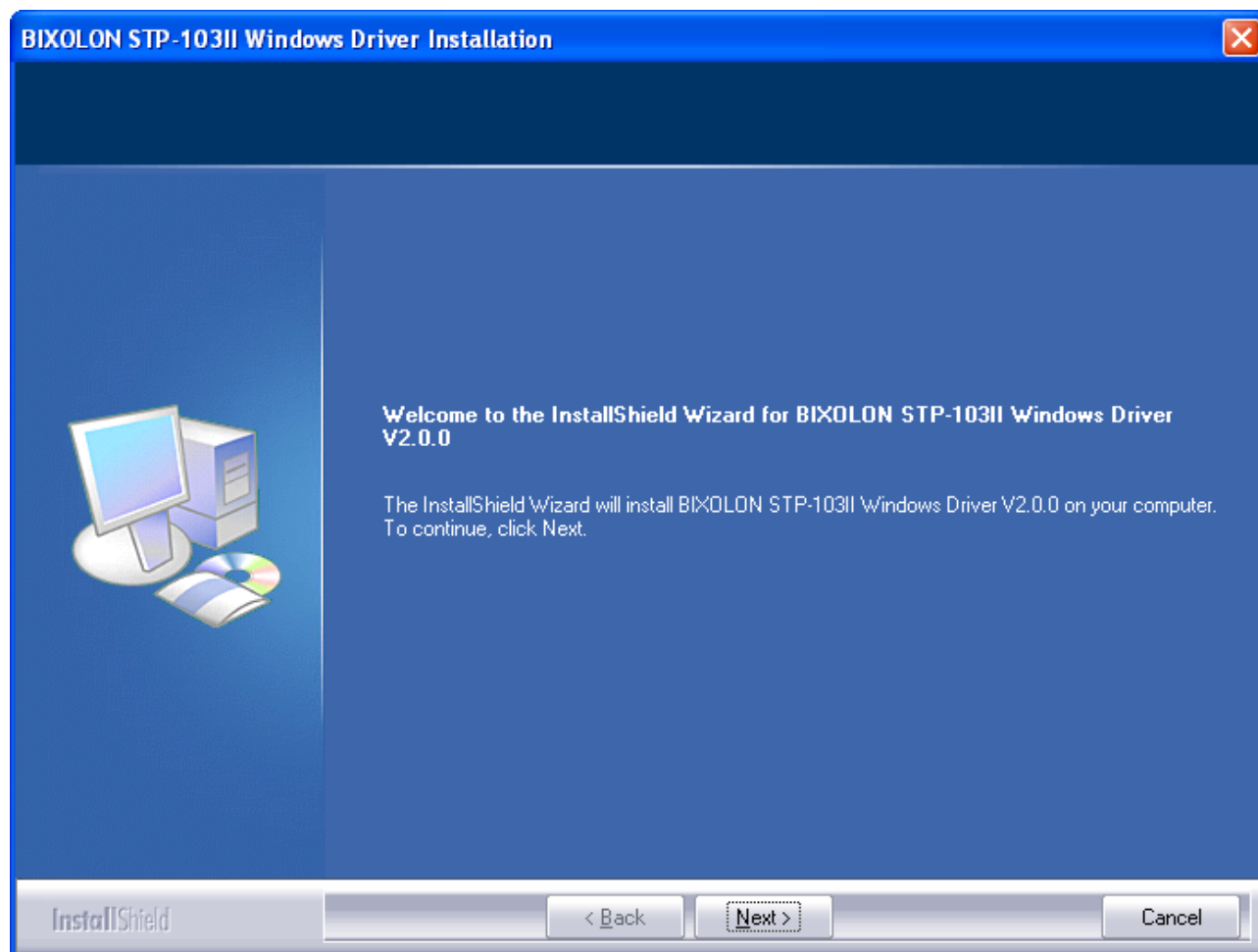
3. Windows Driver Preparation

The Windows Driver is included in the enclosed CD, and Latest file versions can be downloaded from the Bixolon website. (**www.bixolon.com**)
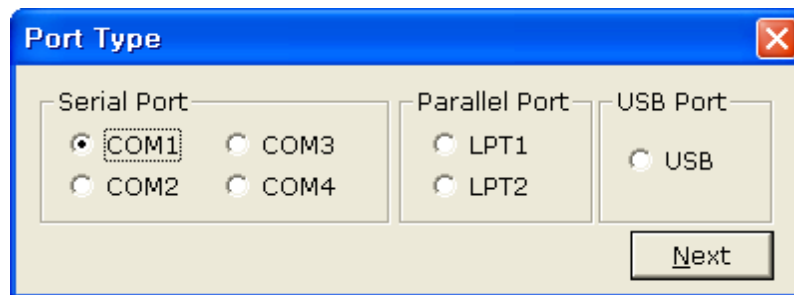
4. Windows Driver Installation

4-1 Installing on Windows XP / Server 2003

4-1-1 Via Serial Port or Parallel Port

1) Double-click the Windows Driver installation file.

2) Click the "Next" button.

3) Select the COM or LPT (Which one you want to use) port to be used and click the "Next" button.

Port Type

Serial Port
- ⊙ COM1
- ○ COM2
- ○ COM3
- ○ COM4

Parallel Port
- ○ LPT1
- ○ LPT2

USB Port
- ○ USB

[Next]

4) When the following message box appears, click the "Continue Anyway" button.

Software Installation

⚠ The software you are installing has not passed Windows Logo testing to verify its compatibility with Windows XP. (Tell me why this testing is important.)

Continuing your installation of this software may impair or destabilize the correct operation of your system either immediately or in the future. Microsoft strongly recommends that you stop this installation now and contact the software vendor for software that has passed Windows Logo testing.

[Continue Anyway] [STOP Installation]

5) Clicking the "Yes" button will reboot the PC.

Restarting your computer can take effect.
Please restart your computer.

[Yes] I want to restart my computer now.
[No] I will restart my computer later.

Yes   No

6) Open the printer properties window in the Windows OS.

7) Click the "Port Settings" button in the "Ports" tab.

8) Match the communication settings to those of the printer.
   (The communication settings of the printer can be performed by conducting a self-test.)

COM1 Properties

Port Settings

Bits per second: 115200

Data bits: 8

Parity: None

Stop bits: 1

Flow control: Hardware

Restore Defaults

OK   Cancel   Apply

9) Click the "Print Test Page" button and check printing status.

10) Proper installation of the driver is indicated if the test page is printed normally.

4-1-2 Via USB Port

1) Double-click the Windows Driver installation file.
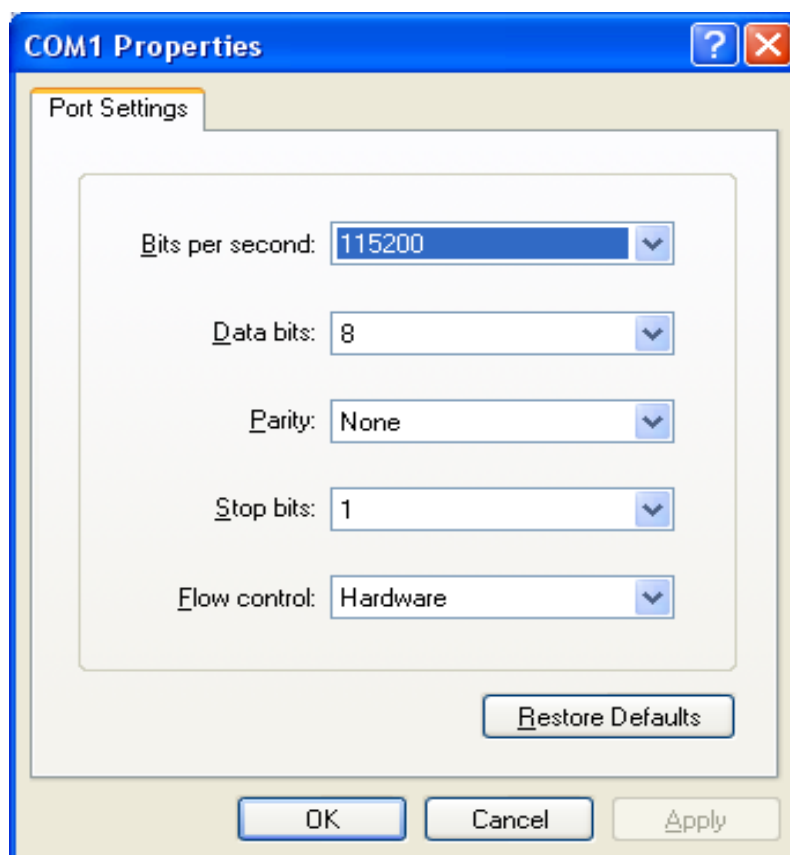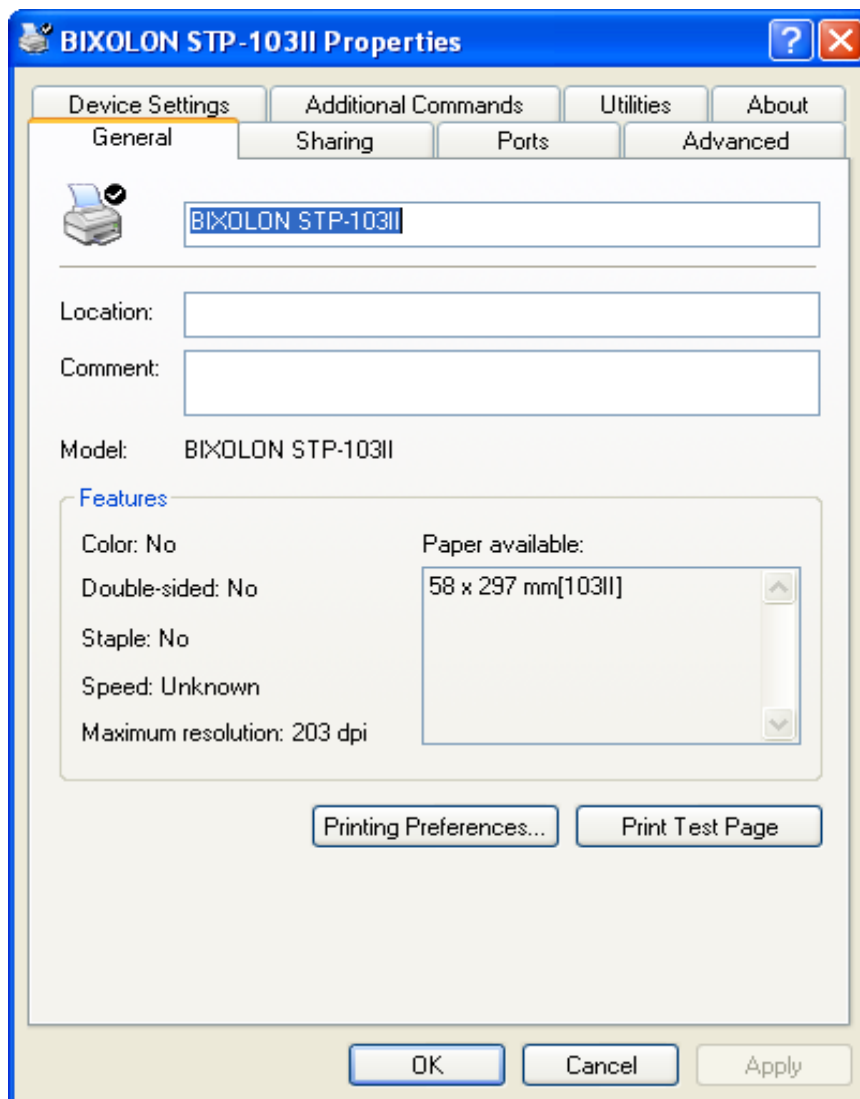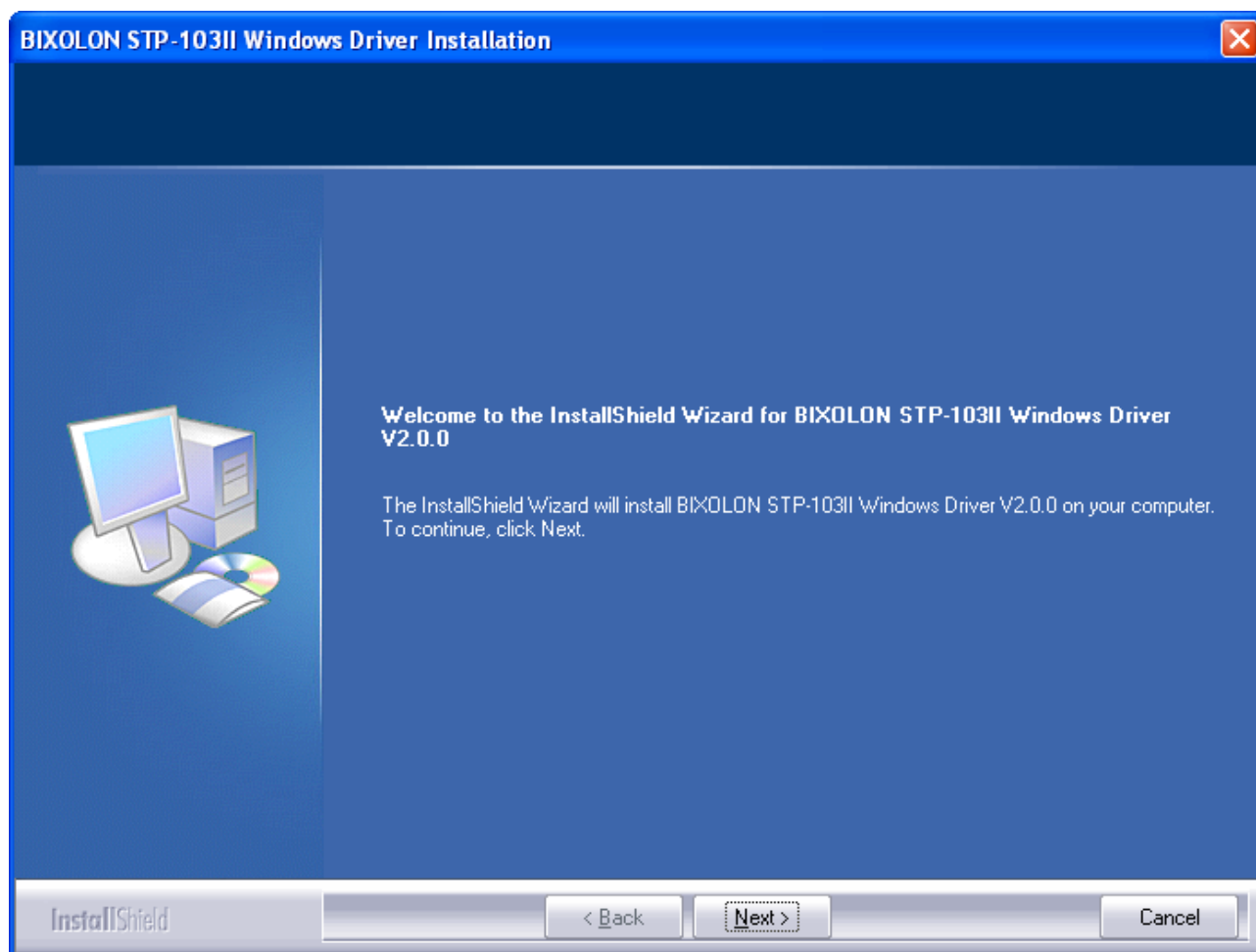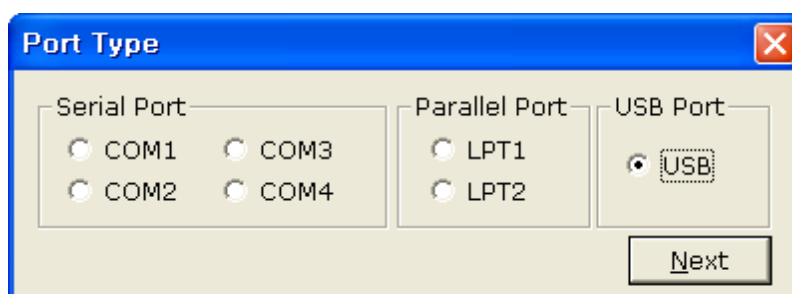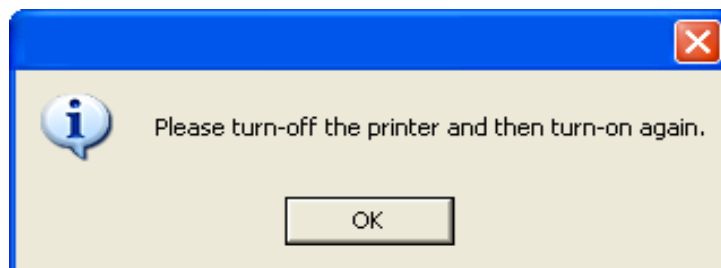
2) Click the "Next" button.

3) Select USB and click the "Next" button.

4) When the following message box appears, click the "Continue Anyway" button.

5) Click the "OK" button.

6) Turn off the printer and then turn on again.

7) When the New Hardware Wizard appears for the installation of the Windows Driver, select the option as shown below and click the "Next" button.

8) Click the "Next" button.

Found New Hardware Wizard

This wizard helps you install software for:

BIXOLON STP-103II

If your hardware came with an installation CD or floppy disk, insert it now.

What do you want the wizard to do?

⊙ Install the software automatically (Recommended)
○ Install from a list or specific location (Advanced)

Click Next to continue.

[< Back] [Next >] [Cancel]

9) When the following message box appears, click the "Continue Anyway" button.

Software Installation

⚠ The software you are installing has not passed Windows Logo testing to verify its compatibility with Windows XP. (Tell me why this testing is important.)

Continuing your installation of this software may impair or destabilize the correct operation of your system either immediately or in the future. Microsoft strongly recommends that you stop this installation now and contact the software vendor for software that has passed Windows Logo testing.

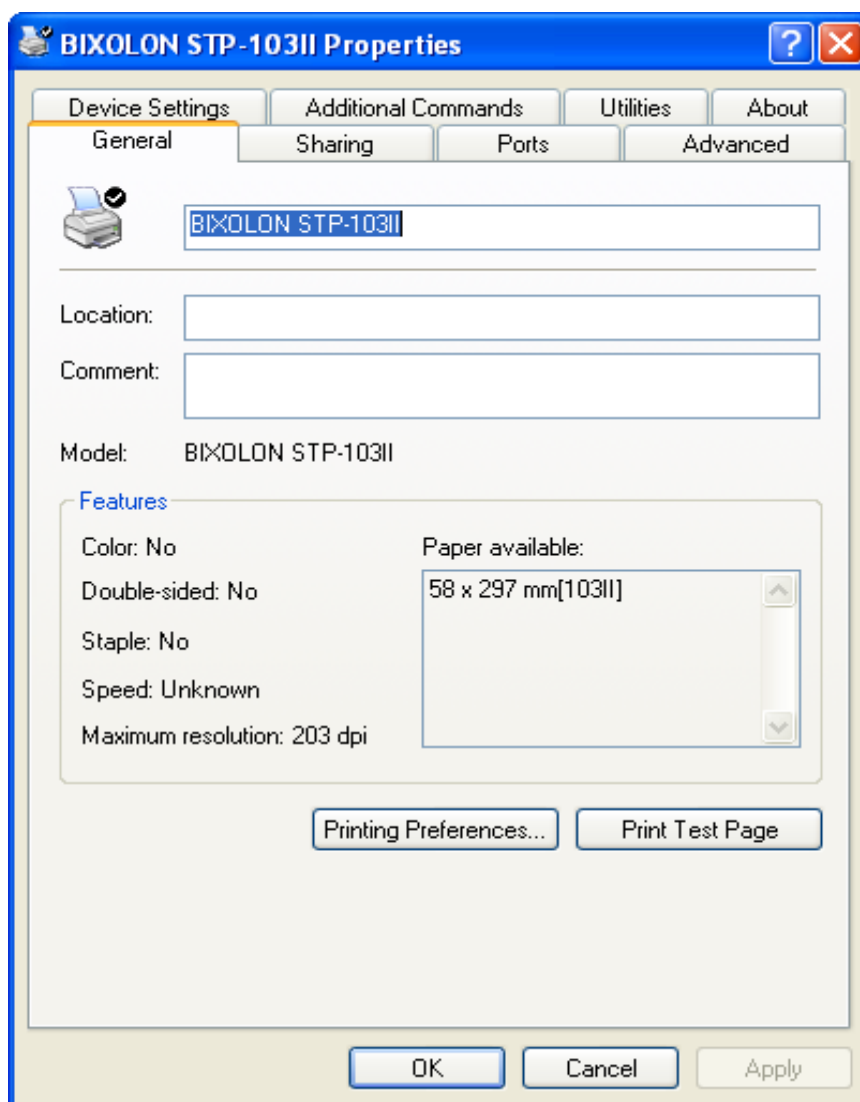[Continue Anyway] [STOP Installation]

10) Click the "Finish" button.

11) The USB Port setting can be confirmed in the Windows Driver properties.
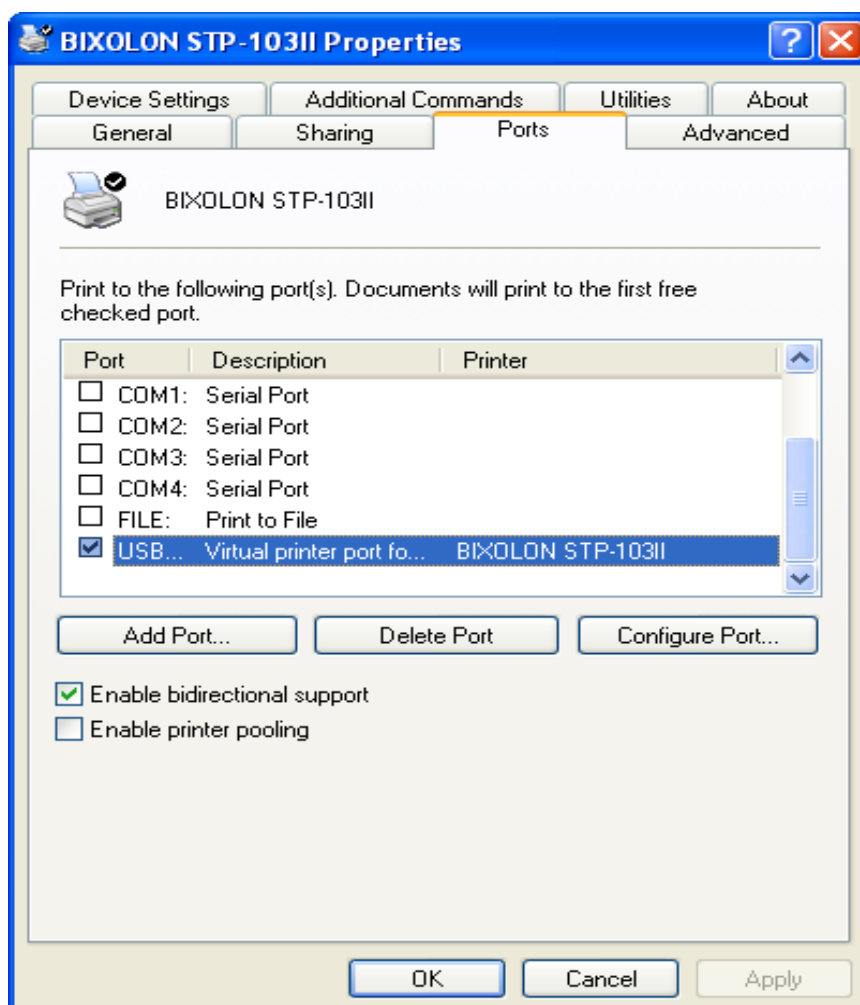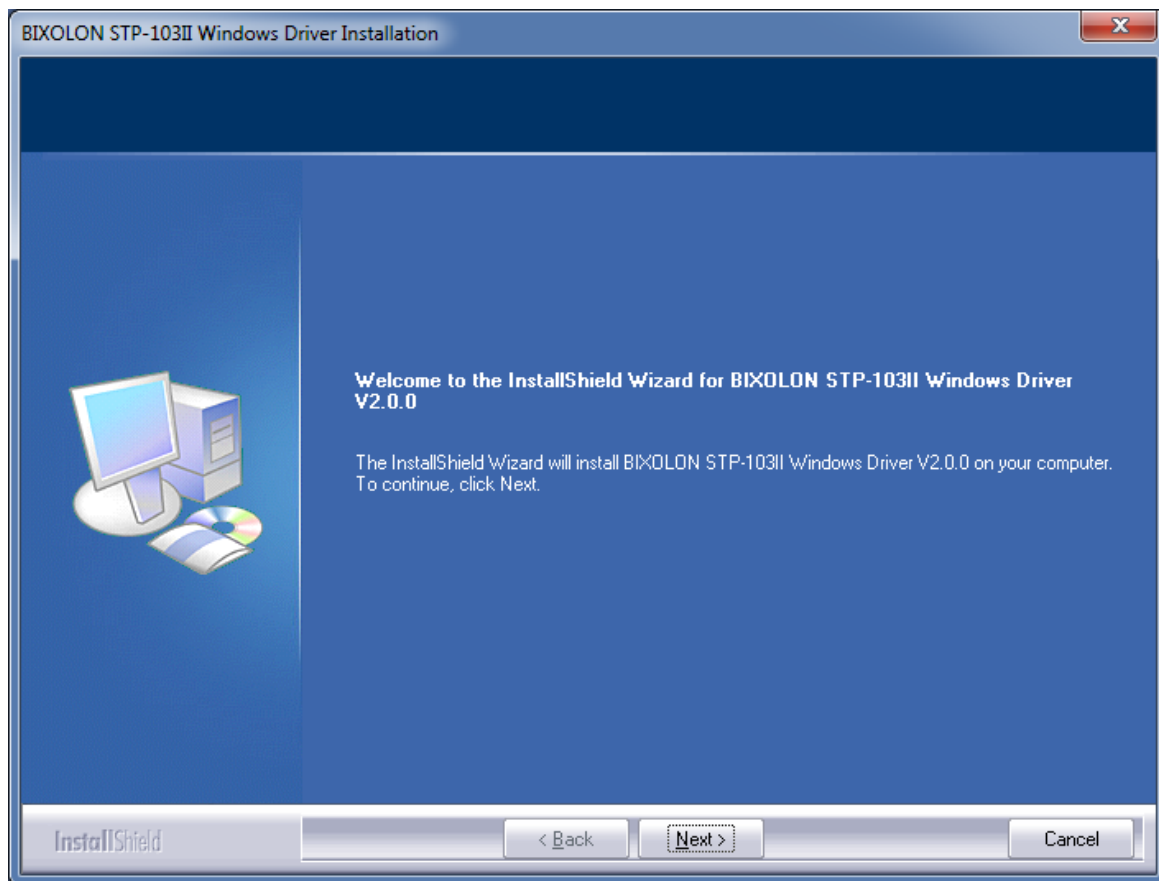
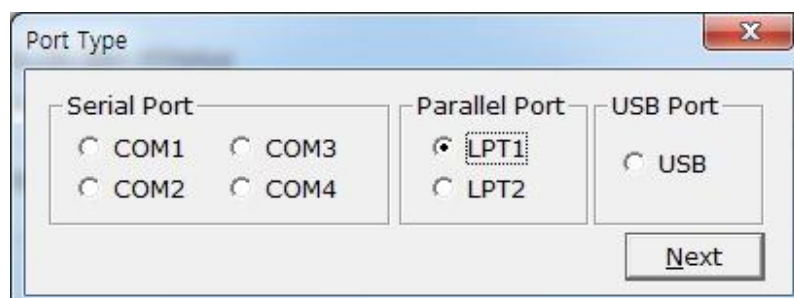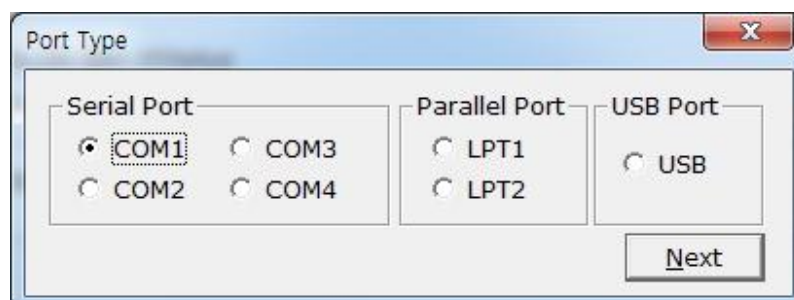12) Click the "Print Test Page" button and check printing status.

13) Proper installation of the driver is indicated if the test page is printed normally.

4-2 Installing on Windows VISTA / Server 2008 / 7 / 8

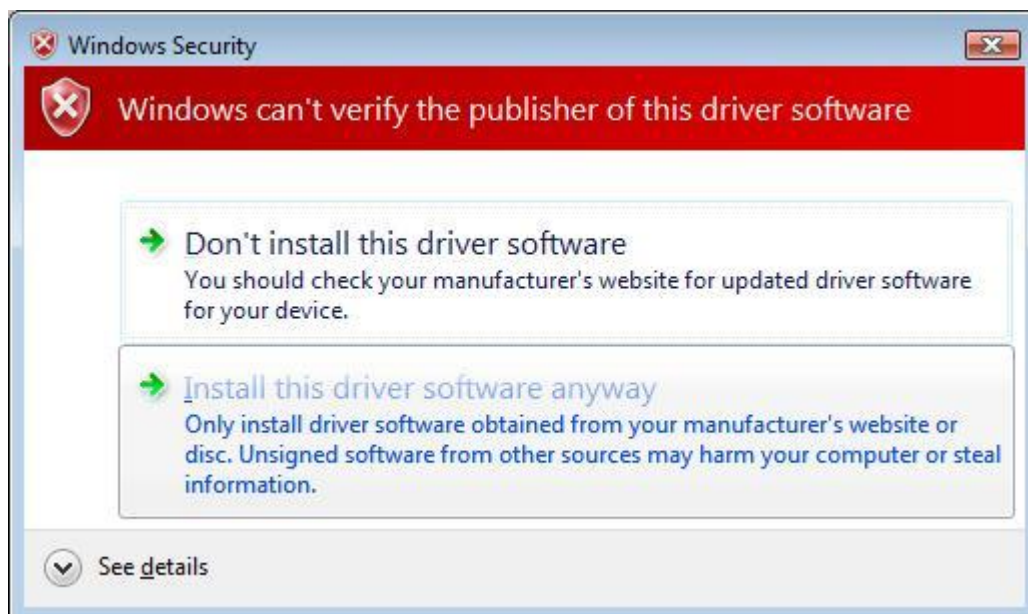4-2-1 Via Serial Port or Parallel Port
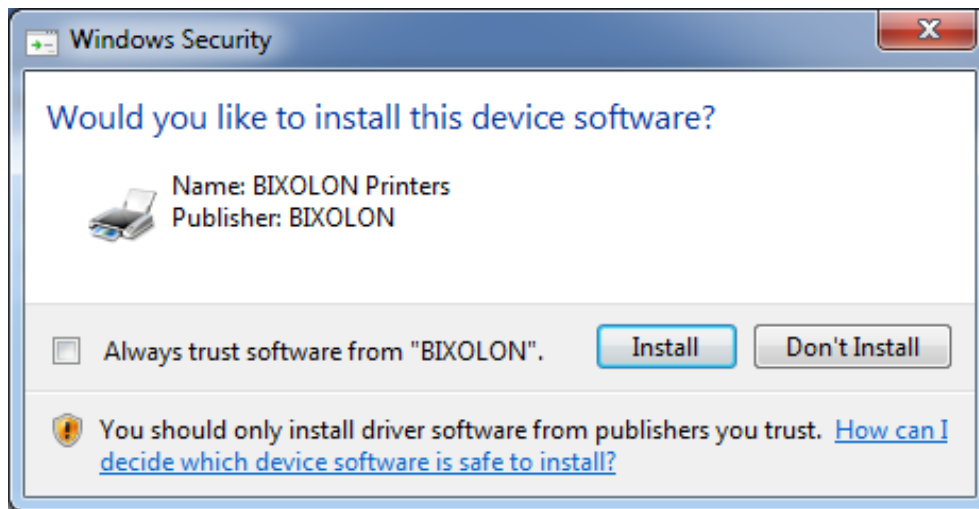
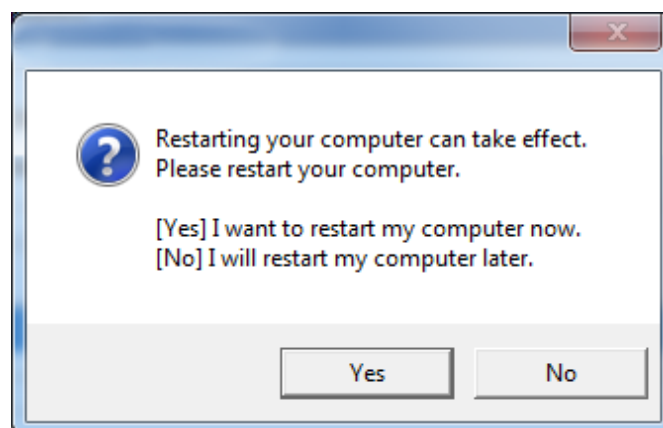1) Double-click the Windows Driver installation file.

2) Click the "Next" button.

3) Select the COM or LPT (Which one you want to use) port to be used and click
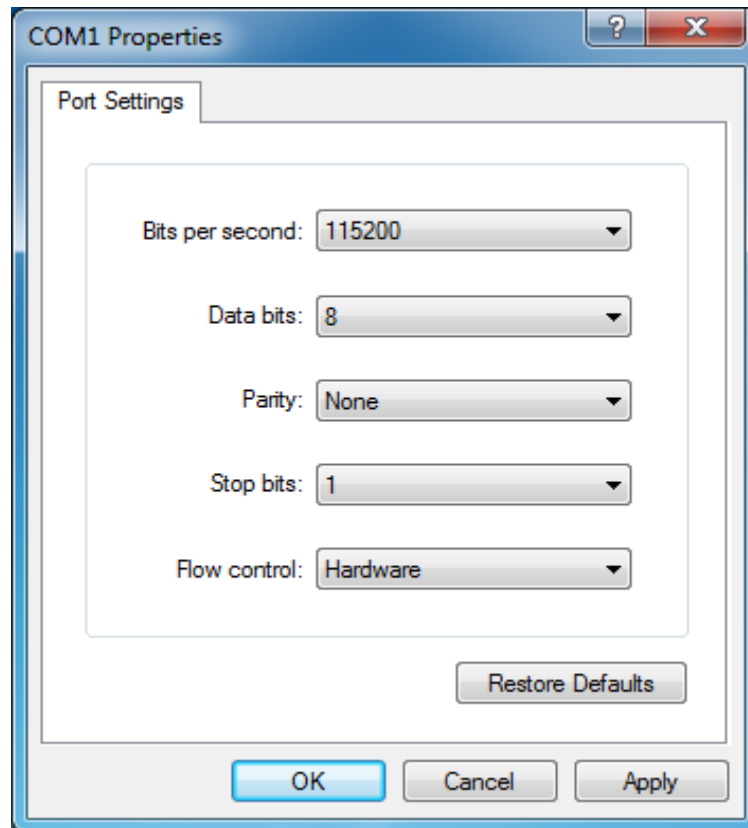the "Next" button.

4) If the following message boxes appear, click the "Install" button or click the "Install this driver software anyway" button.

5) Clicking the "Yes" button will reboot the PC.

6) Open the printer properties window in the Windows OS.

7) Click the "Configure Port…" button in the "Ports" tab.

8) Match the communication settings to those of the printer.
   (The communication settings of the printer can be performed by conducting a self-test.)

COM1 Properties	? ✕
Port Settings	

Bits per second:	115200 ▼
Data bits:	8 ▼
Parity:	None ▼
Stop bits:	1 ▼
Flow control:	Hardware ▼

Restore Defaults

OK   Cancel   Apply

9) Click the "Print Test Page" button and check printing status.

10) Proper installation of the driver is indicated if the test page is printed normally.

4-2-2 Via USB Port

1) Double-click the Windows Driver installation file.

2) Click the "Next" button.

3) Select USB and click the "Next" button.
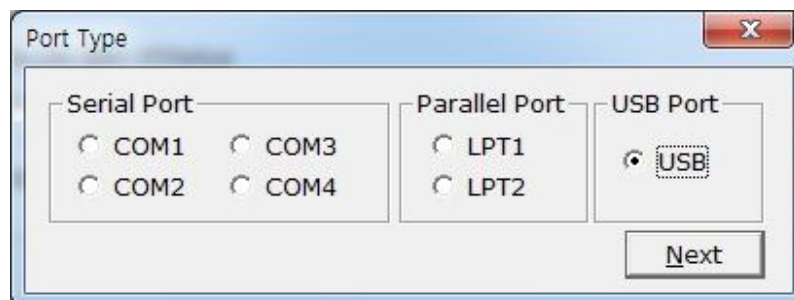
4) If the following message boxes appear, click the "Install" button or click the "Install this driver software anyway" button.
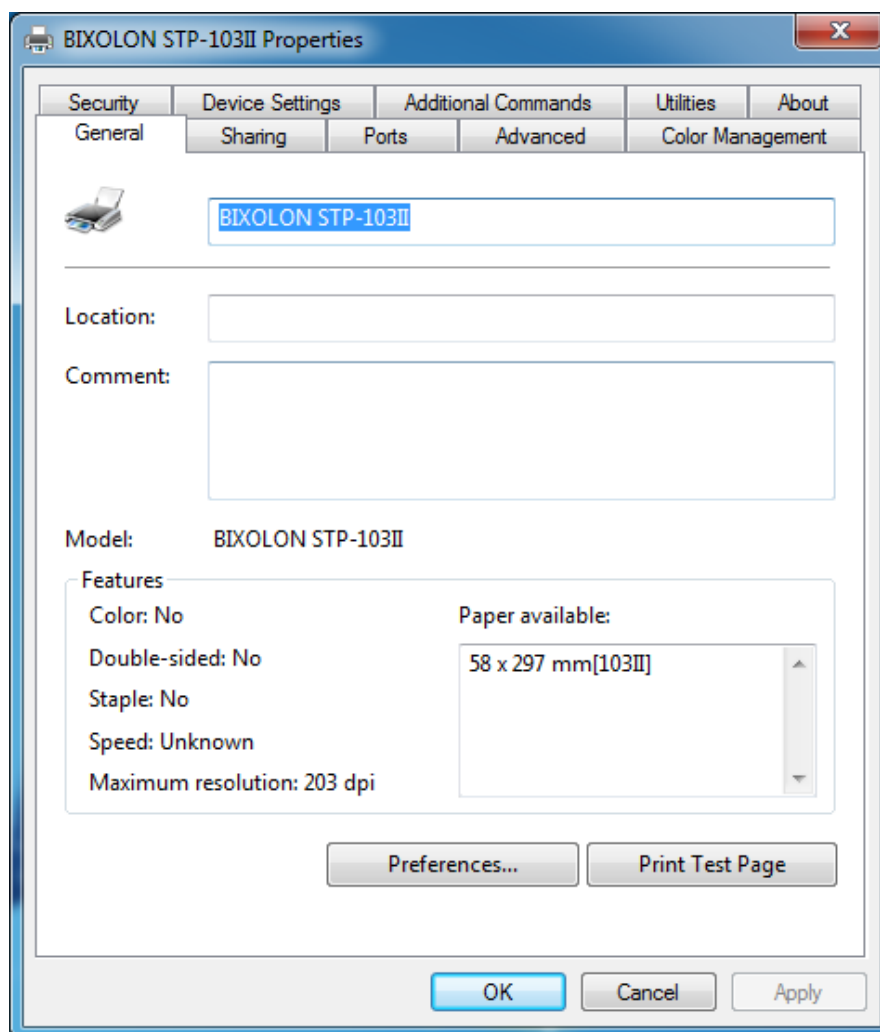
5) Click the "OK" button.
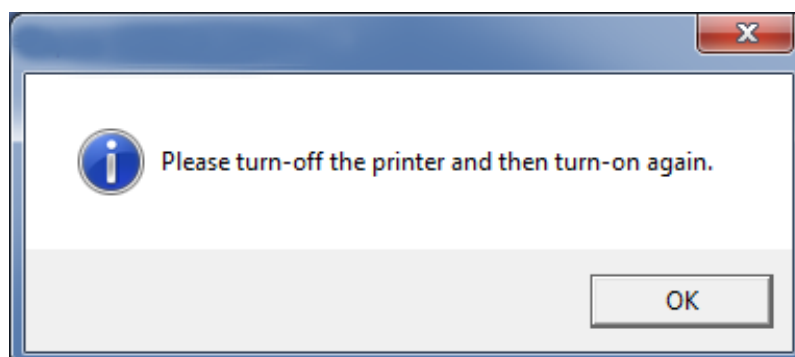
6) Turn off the printer and then turn on again.
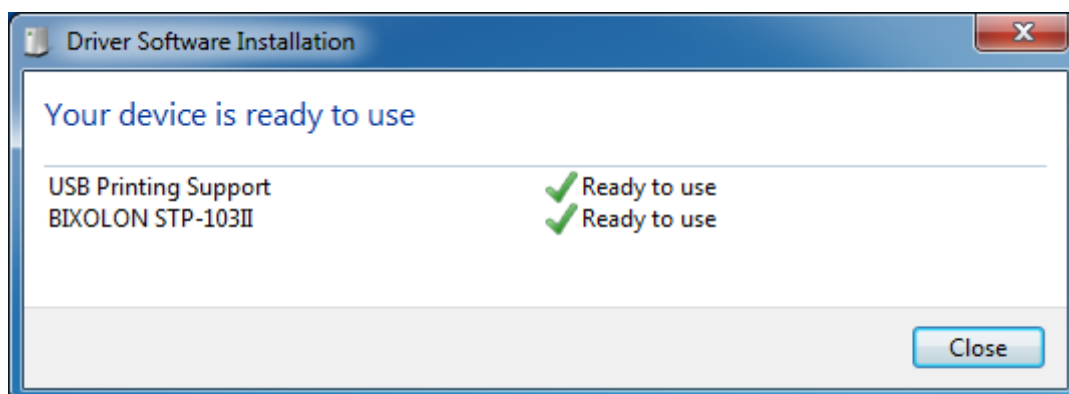
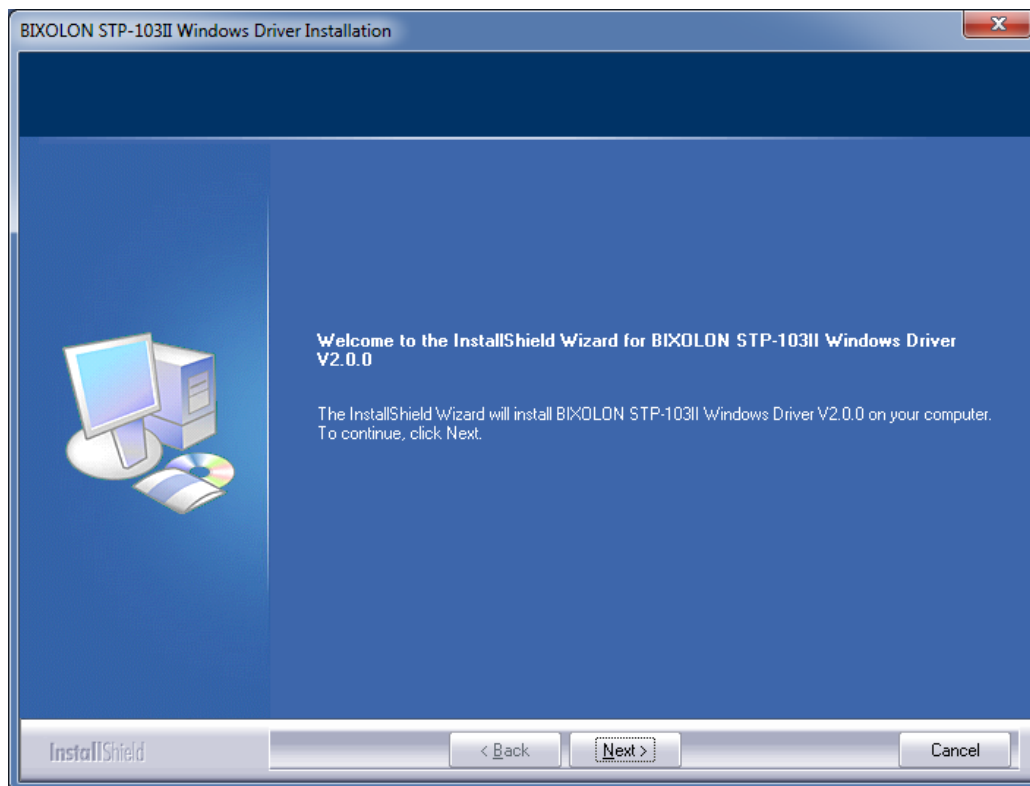7) The USB Port setting can be confirmed in the Windows Driver properties.
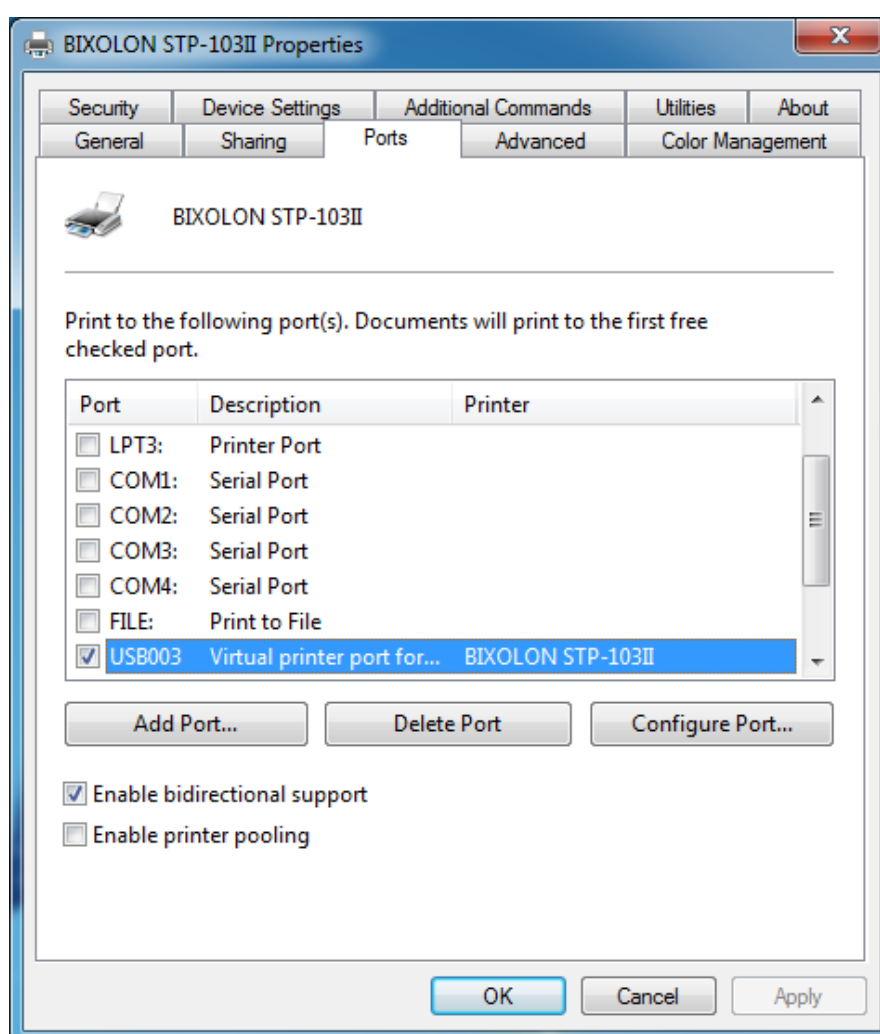
8) Click the "Print Test Page" button and check printing status.
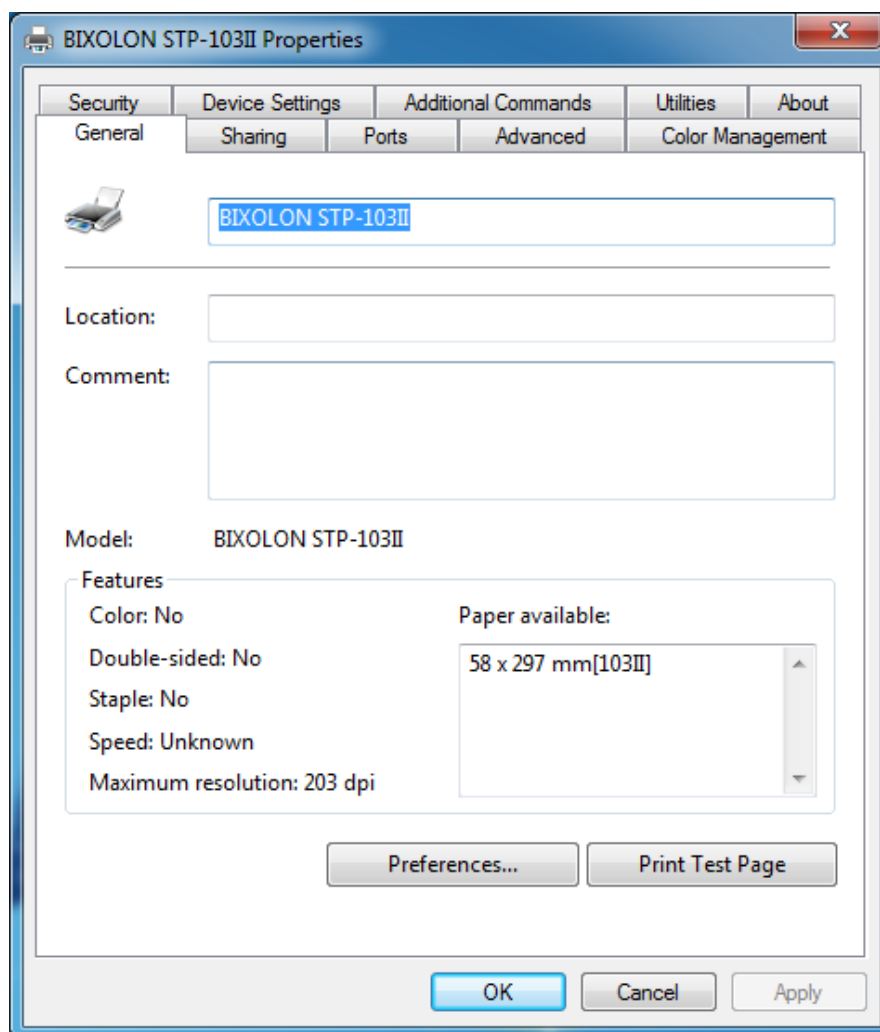
9) Proper installation of the driver is indicated if the test page is printed normally.

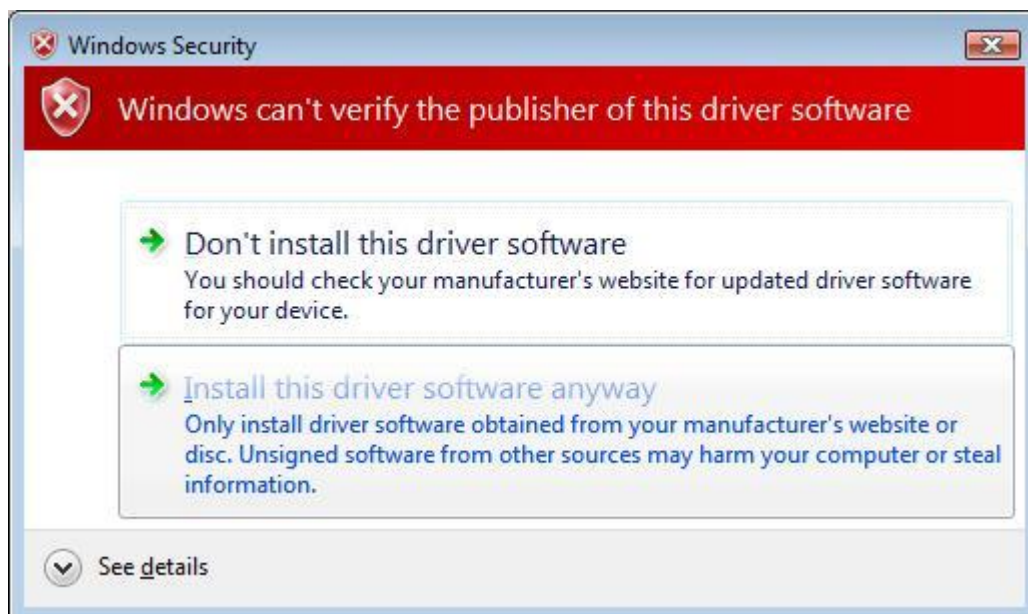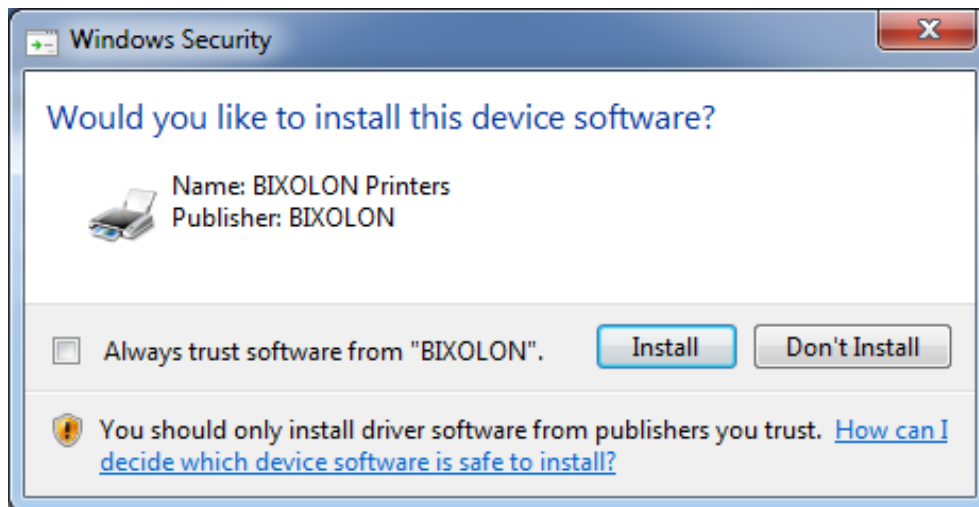# 5. Detailed Windows Driver Settings

The following functions can be set in detail after the Windows Driver installation is complete.

5-1 Paper Supply Method

The printer structure is such that the print head, which carries out printing, and the cutter, which cuts the printing paper, are separated. After printing, the location of the end section can be adjusted as follows.

Automatically Select   : Select the "Receipt" automatically.
Receipt   : Printed text is transferred up to the cutter (manual cutter).
Receipt [No feed]   : Printed text is transferred up to the next line only.
(minimum transfer: 0x0A).
Form   : For long print jobs, printed text is transferred according to the Receipt option per selected paper size

Detailed setting can be done as follows.

1) Open the printer properties window in the Windows OS.

```
BIXOLON STP-103II Properties                                    x

  Security    Device Settings    Additional Commands    Utilities    About
    General        Sharing        Ports        Advanced    Color Management

            BIXOLON STP-103II

  Location:

  Comment:

  Model:      BIXOLON STP-103II
  Features
   Color: No                         Paper available:
   Double-sided: No                  58 x 297 mm[103II]
   Staple: No
   Speed: Unknown
   Maximum resolution: 203 dpi

                              Preferences...    Print Test Page

                          OK        Cancel        Apply
```
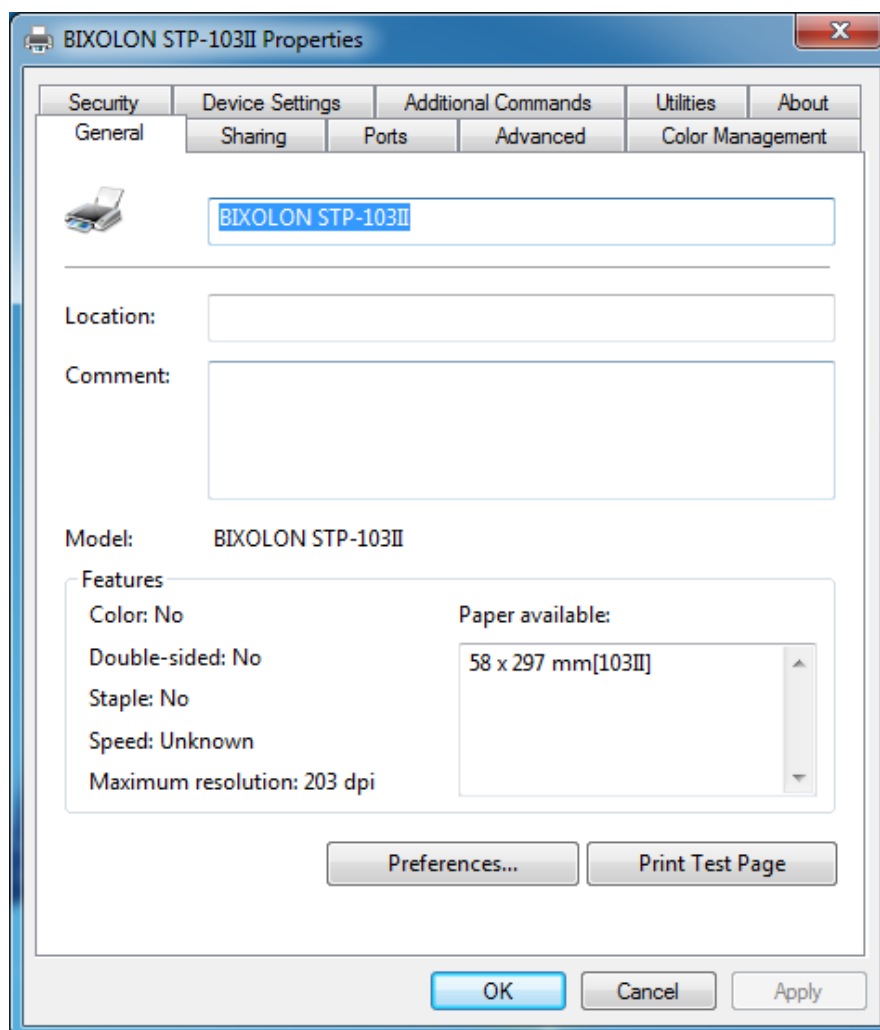
2) Click the "Printing Preferences" button in the "General" tab.

3) Select the desired setting in the "Paper/Quality" tab. (Resolution is fixed at 203 × 203.)

5-2 Paper Size

The paper sizes available in the Windows Driver are as follows.

58 × 40 mm[103II]   58 × 297 mm[103II]
58 × 80 mm[103II]   58 × 3276 mm[103II]
58 × 120 mm[103II]
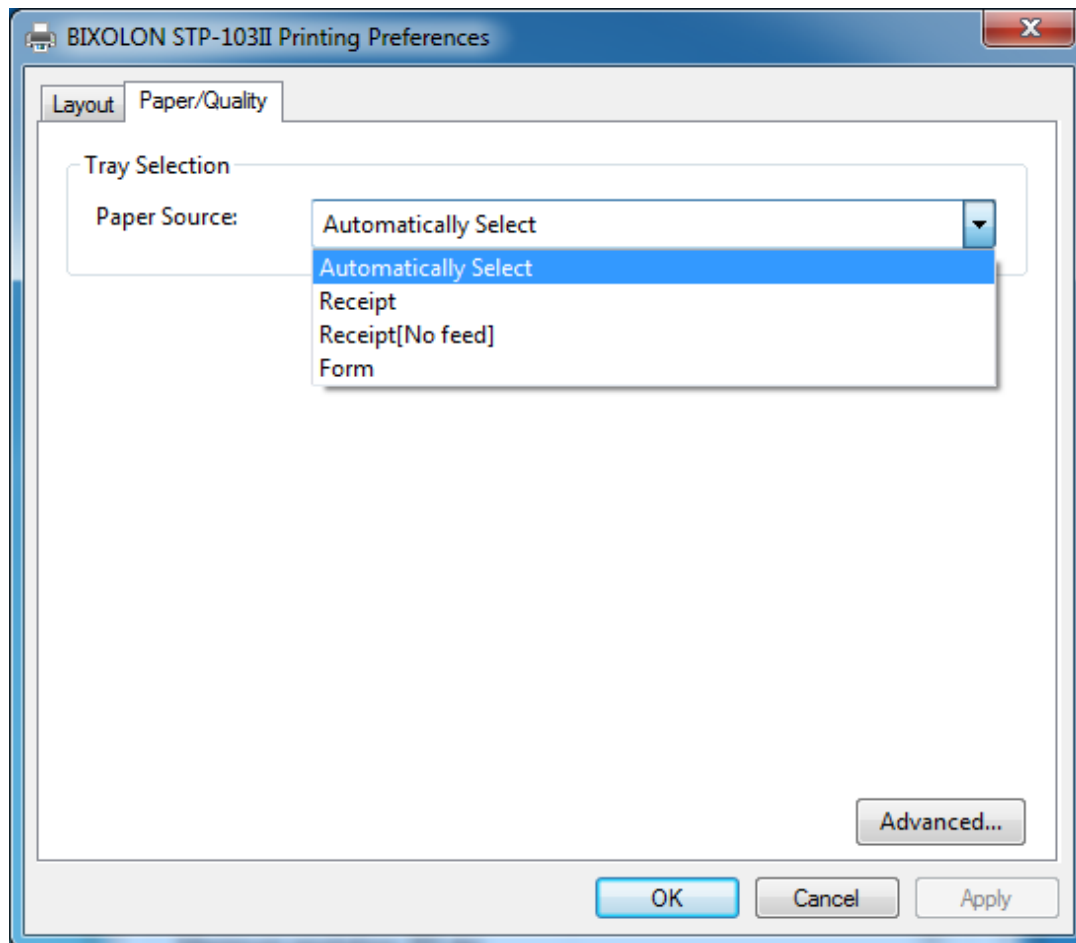58 × 160 mm[103II]
58 × 200 mm[103II]

Detailed setting can be done as follows.

1) Open the printer properties window in the Windows OS.

2) Click the "Printing Preferences" button in the "General" tab.

3) Select the "Paper/Quality" tab, and click the "Advanced" button.
   Select the desired setting.
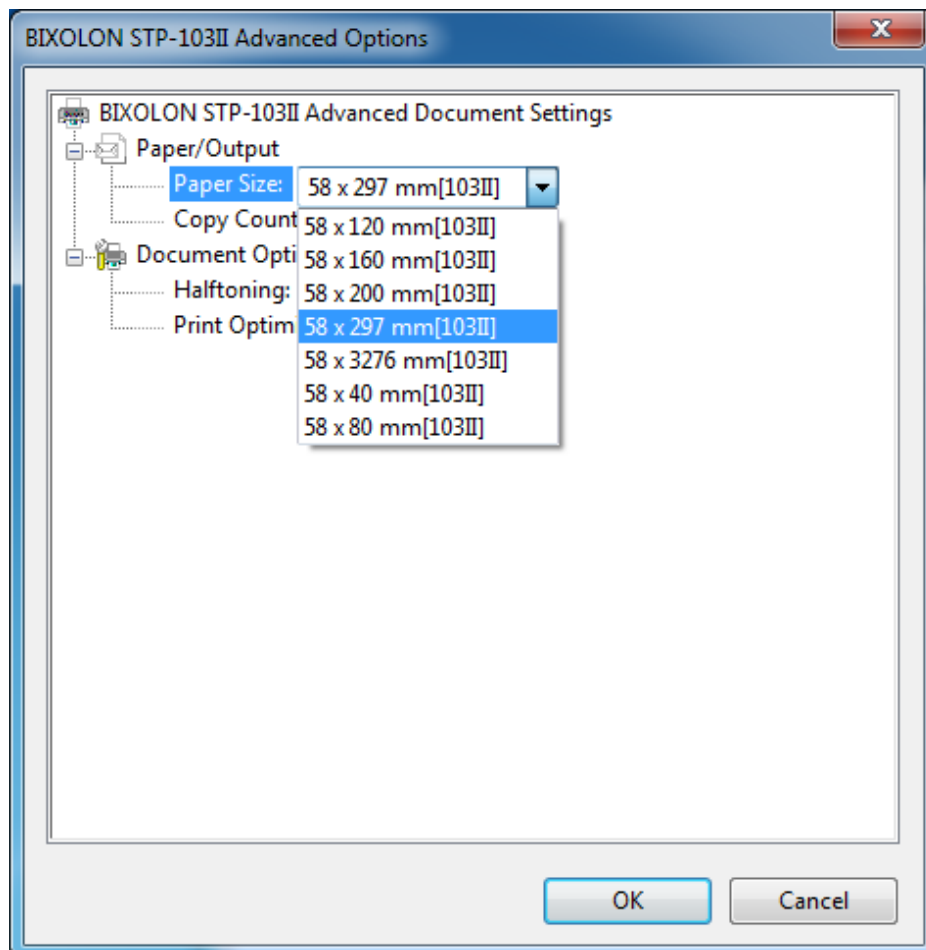
5-3 Additional Commands

The Windows Driver serves to receive the content for print from an application and send it to the printer. The NV Image function allows for the addition of NV image and desired commands at the beginning or end of the print content sent to the printer.

The command functions available are as follows.

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 Doc1   :   Addition of command at the end of the document.
End Doc2   :   Addition of line feeding at the end of the document.

Detailed setting can be done as follows.

1) Open the printer properties window in the Windows OS.

2) Click the "Additional Commands" tab.
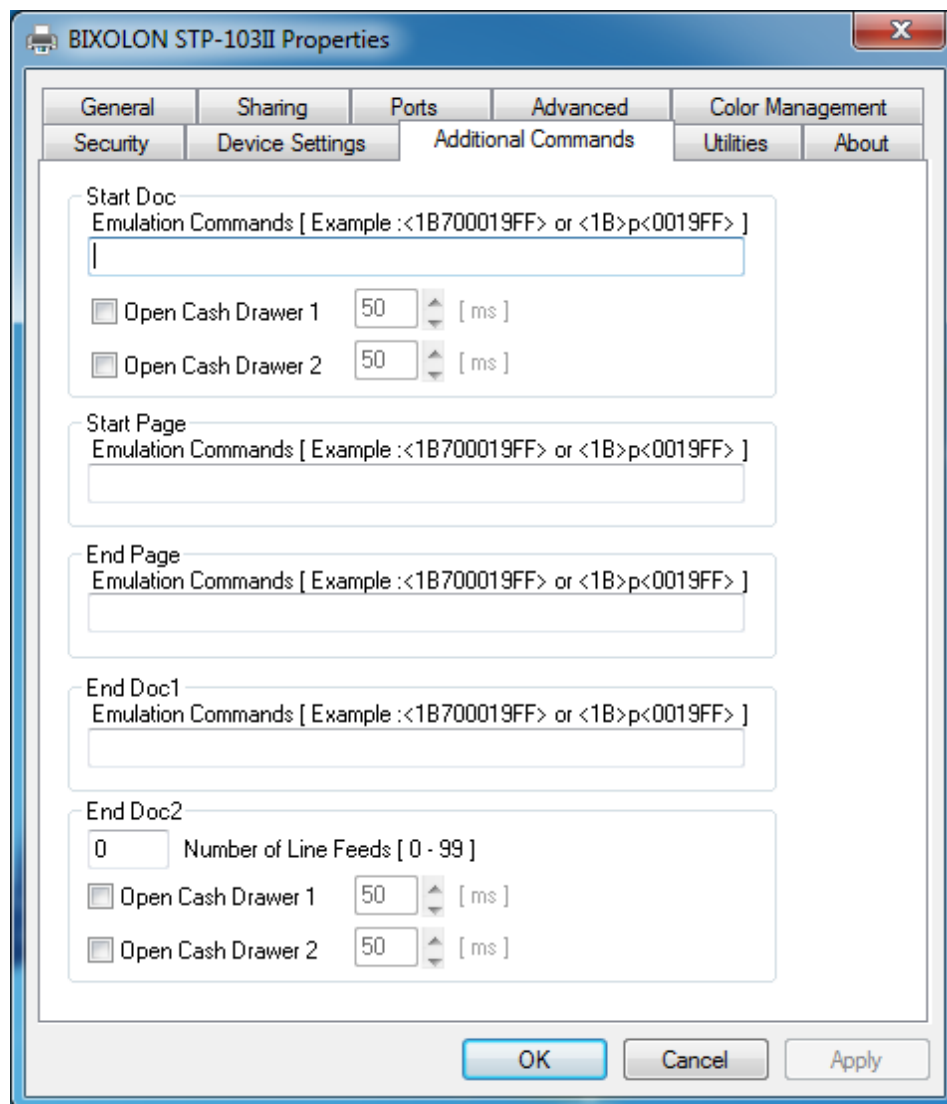
3) If the user wants to open a cash-drawer prior to printing, tick the button named as "Open Cash Drawer1" or "Open Cash Drawer2" in the "Start Doc" and then click the "OK" button.

4) If the user wants to open a cash-drawer at the end of printing, tick the button named as "Open Cash Drawer1" or "Open Cash Drawer2" in the "End Doc2" and then click the "OK" button.

5) If the user wants to feed three lines at the end of printing, enter "3" in the "EndDoc2" and click the "OK" button.

For more information on the hexadecimals that can be entered in "Start Doc", "Start Page", "End Page" and "End Doc1", refer to the Control Commands Manual.

5-4 Customer Paper size

1) Click "New Paper Size" Button in Utilities Tab.
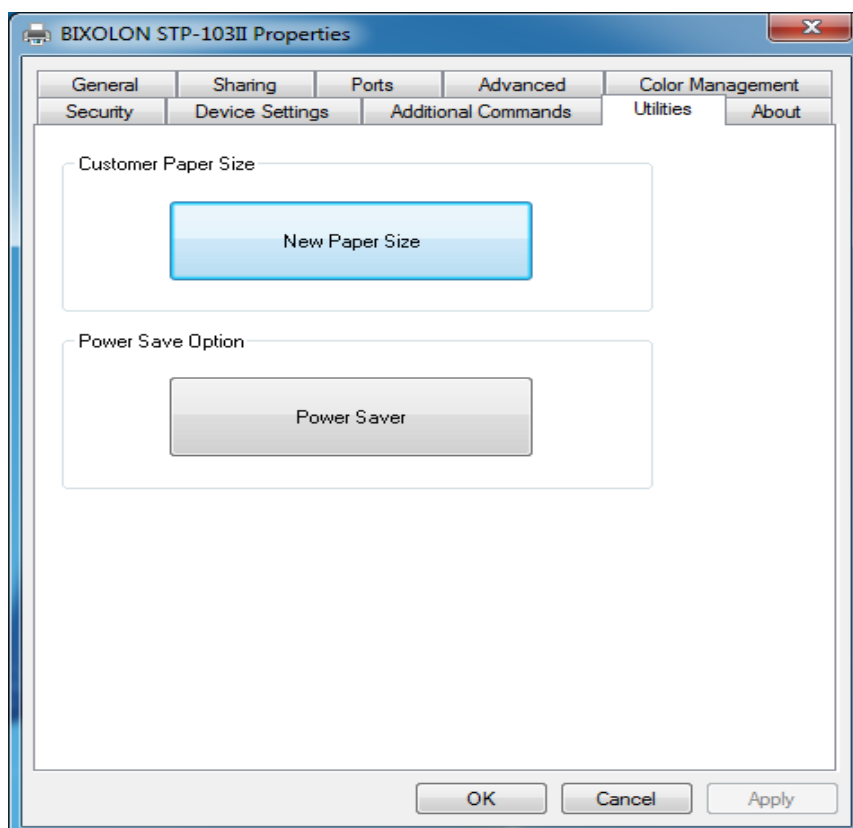
2) Upon initiation of the program, the following main window will be appeared.
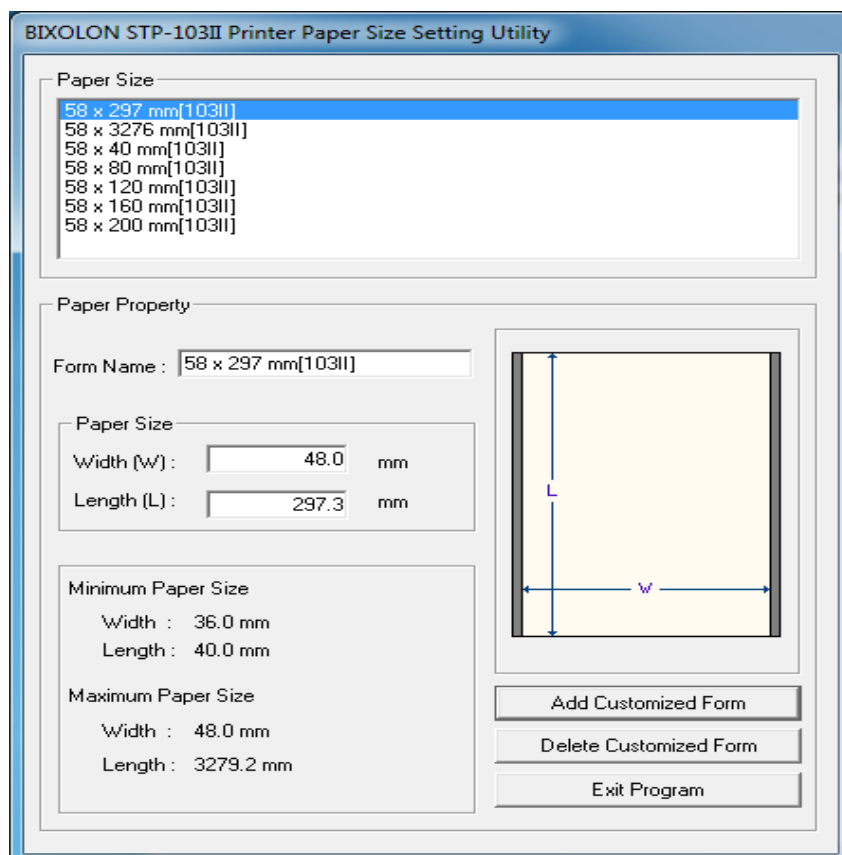
3) In order to add a Customized Form, enter the desired values into the fields of "Form Name", "Width", and "Length", and click the "Add Customized Form" button.

4) You can check the added form in the driver properties as shown below.
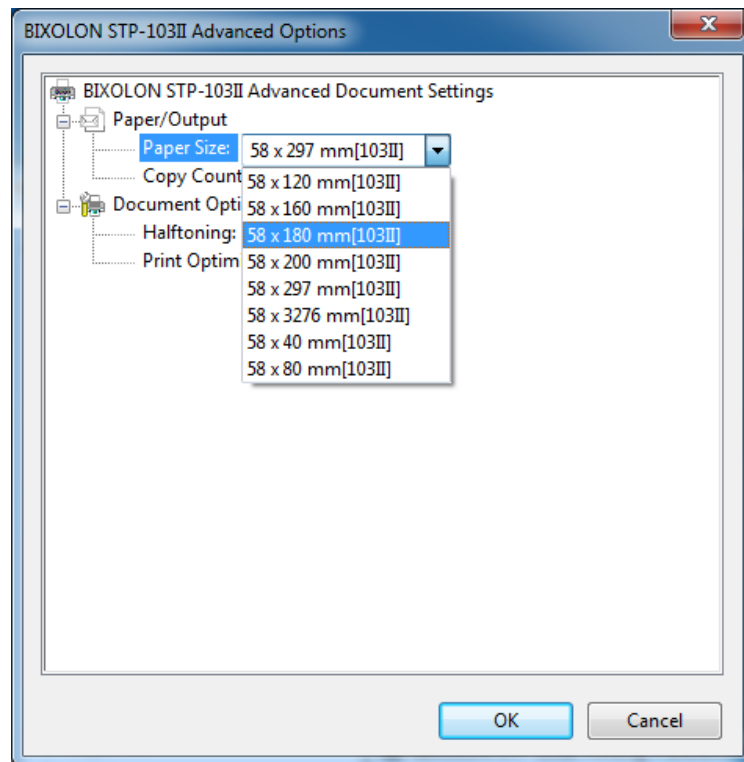
5) In order to delete the added form, select the form from the list in "Paper Size", and click the "Delete Customized Form" button.

5-5 Power Save Option

The annual power consumption expense is calculated, and the cost, saved cost, and saving ratio will be shown depending on the configuration option.

1) Click the "PowerSaver" button in Utilities Tab.
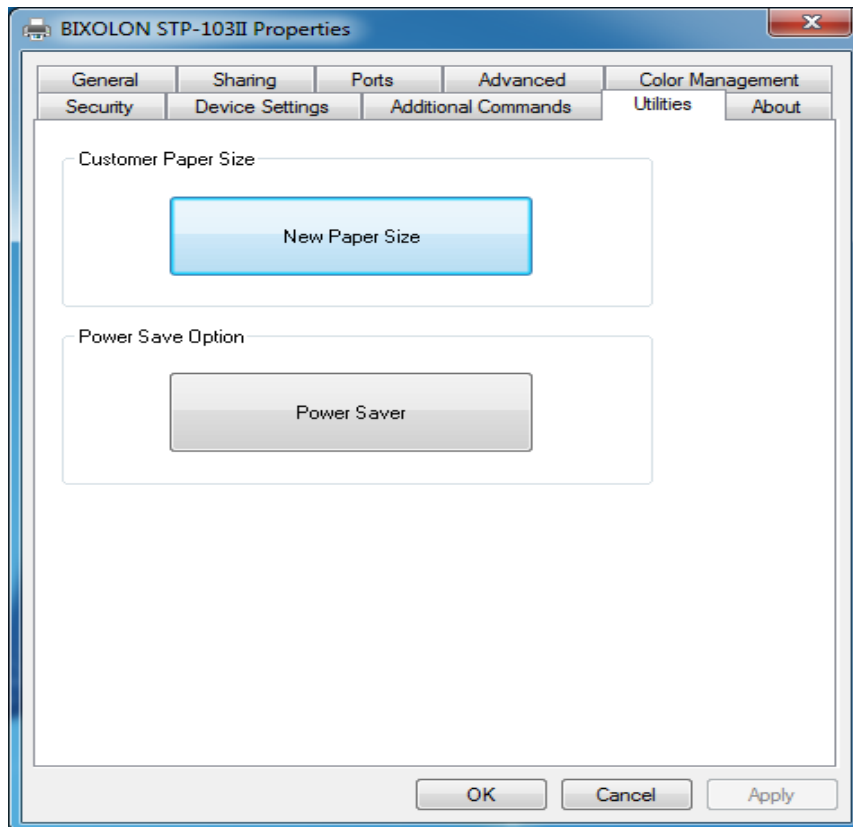
2) Upon initiation of the program, the following pop-up window will appear.

3) In order to save the configuration options to the printer, click the "Save" button.
   In this case, only the options in "Power control options" will be saved to the printer.

6. Windows Driver Specifications

6-1 Fonts

The Windows Driver of the printer supports the fonts listed below.
Printing is done at faster speed when using the fonts below as opposed to the Windows fonts of the OS.

Printer Fonts			Character Size (dot)	Sizes (point)
FontA1x1	FontA1x1[Ext.]	FontA1x1[255]	FontA1x1(12x24)	8.5
FontA1x2	FontA1x2[Ext.]	FontA1x2[255]	FontA1x2(12x48)	17
FontA2x1	FontA2x1[Ext.]	FontA2x1[255]	FontA2x1(24x24)	8.5
FontA2x2	FontA2x2[Ext.]	FontA2x2[255]	FontA2x2(24x48)	17
FontA1x1c24	FontA1x1c24 [Ext.]	FontA1x1c24 [255]	FontA1x1c24(16x24)	8.5
FontA1x2c24	FontA1x2c24 [Ext.]	FontA1x2c24 [255]	FontA1x2c24 (16x48)	17
FontA2x1c24	FontA2x1c24 [Ext.]	FontA2x1c24 [255]	FontA2x1c24 (32x24)	8.5
FontA2x2c24	FontA2x2c24 [Ext.]	FontA2x2c24 [255]	FontA2x2c24 (32x48)	17
FontB1x1	FontB1x1[Ext.]	FontB1x1[255]	FontB1x1(9x17)	6
FontB1x2	FontB1x2[Ext.]	FontB1x2[255]	FontB1x2(9x34)	12
FontB2x1	FontB2x1[Ext.]	FontB2x1[255]	FontB2x1(18x17)	6
FontB2x2	FontB2x2[Ext.]	FontB2x2[255]	FontB2x2(18x34)	12
FontC1x1	FontC1x1[Ext.]	FontC1x1[255]	FontC1x1(9x24)	8.5
FontC1x2	FontC1x2[Ext.]	FontC1x2[255]	FontC1x2(9x48)	17
FontC2x1	FontC2x1[Ext.]	FontC2x1[255]	FontC2x1(18x24)	8.5
FontC2x2	FontC2x2[Ext.]	FontC2x2[255]	FontC2x2(18x48)	17

Printer Fonts are defined as follows.

1) FontA1x2
   - ANSI Character code support (Code Page 2)
   - Character size (dot): 12 x 48 (double height)
   - Sizes (point): 17

2) FontA1x2[Ext]
   - IBM expansion Character code support (Code Page 0: 437)
   - Character size (dot): 12 x 48 (double height)
   - Sizes (point): 17

3) FontA1x2[255]
   - Buyer exclusive code support (Code Page 255)
   - Character size (dot): 12 x 48 (double height)
   - Sizes (point): 17

6-2 Special Functions

The Windows Driver supports the special functions indicated below.
These special functions are available when using the characters after the "FontControl"
font is selected.
This function is not an ordinary character printing function. Take special care.

Character	Special Function
5	HT is output
6	LF is output
7	CR is output
a	Open Drawer 2 (50ms drive pulse width)
b	Open Drawer 2 (100ms drive pulse width)
c	Open Drawer 2 (150ms drive pulse width)
d	Open Drawer 2 (200ms drive pulse width)
e	Open Drawer 2 (250ms drive pulse width)
f	Open Drawer 2 (50ms drive pulse width) without feeding
p	HRI characters are not added to the bar code
q	HRI characters are added at the top of the bar code using Font A
r	HRI characters are added at the bottom of the bar code using Font A
s	HRI characters are added at the top of the bar code using Font B
t	HRI characters are added at the bottom of the bar code using Font B
w	Text is aligned left
x	Text is centered
y	Text is aligned right
A	Open Drawer 1 (50ms drive pulse width)
B	Open Drawer 1 (100ms drive pulse width)
C	Open Drawer 1 (150ms drive pulse width)
D	Open Drawer 1 (200ms drive pulse width)
E	Open Drawer 1 (250ms drive pulse width)
F	Open Drawer 1 (50ms drive pulse width) without feeding
G	NV bit image No 1 is printed in the Normal mode
H	NV bit image No 2 is printed in the Normal mode
I	NV bit image No 3 is printed in the Normal mode
J	NV bit image No 4 is printed in the Normal mode
K	NV bit image No 5 is printed in the Normal mode
[	NV bit image No 1 is printed in the Double Height Double Width mode
]	NV bit image No 2 is printed in the Double Height Double Width mode
^	NV bit image No 3 is printed in the Double Height Double Width mode
_	NV bit image No 4 is printed in the Double Height Double Width mode
`	NV bit image No 5 is printed in the Double Height Double Width mode

1) Sample Use

If the "FontControl" font is selected and 6 is entered, the "LF" (Line Feeding) operation is activated.
(does not entail the printing of the character "6)

2) "FontControl" Font Function

Printer Font for Special Function	Function	Size (point/dot)
FontControl	Open Drawer 1/2 Cut receipt Cut receipt(without paper feeding) Justification (Left/Center/Right) Output HT, Output LF, Output CR Barcode Printing Print NV Graphic Data	(8.5 / 12x24)

6-3 Barcodes

The Windows Driver supports the barcodes indicated below.
This function is available when entering barcode data after selecting "Printer Font Name".
In addition, the "FontControl" font can be used to add HRI characters.

Printer Font Name	Size	Supported Characters
Codabar	18/35.5/53/71	Numberic: 0~9 Symbols: $, +, -, ., /, : Letters: A~D
Code39	18/35.5/53/71	Numberic: 0~9 Symbols: $, +, -, ., / Letters: A~Z
JAN13(EAN)	18/35.5/53/71	Numberic: 0~9
JAN8(EAN)	18/35.5/53/71	Numberic: 0~9
ITF	18/35.5/53/71	Numberic: 0~9
UPC-A	18/35.5/53/71	Numberic: 0~9
UPC-E	18/35.5/53/71	Numberic: 0~9
Code93	18/35.5/53/71	ASCII CODE: 0~127
Code128	18/35.5/53/71	ASCII CODE: 0~127

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", must be included before the input data.

6-4 Two-Dimensional Barcodes

The Windows Driver supports the following two-dimensional barcodes.

   - PDF417
   - QR Code

Usage is identical to that for barcodes.

7. Use of Windows Driver

7-1 Use of Visual Basic

This section explains the use of the Windows Driver with Visual Basic to control the printer (STP-103II).

7-1-1 Windows Driver Selection

The following code is an example of the selection of the "BIXOLON STP-103II" Windows Driver.

```
For Each prnPrinter In Printers

If prnPrinter.DeviceName = "BIXOLON STP-103II" Then

Set Printer = prnPrinter

Exit For

End If

Next
```

7-1-2 Test Printing

The following code is an example of the printing of Arial Test via the Windows font, and FontA1x1Test via the printer font.

```
'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 "FontA1x1Test"

Printer.EndDoc
```

7-1-3 Barcode Printing

The following code is an example of the printing of the JAN8 (EAN) barcode.

```
'Print Bar Code.
Printer.FontSize = 20

Printer.FontName = "JAN8 (EAN)"
Printer.Print "1234567"

Printer.EndDoc
```

7-2 Use of WordPad

7-2-1 WordPad Environment Settings

After running Wordpad and setting the following conditions, conduct a test.

- Select Printer
  After selecting "Print" from the "File" menu, select the printer (BIXOLON STP-103II).

- Select Paper Size, Orientation, and Margins
  After selecting "Page Setup" from the "File" menu, select the paper size, orientation, and margins.
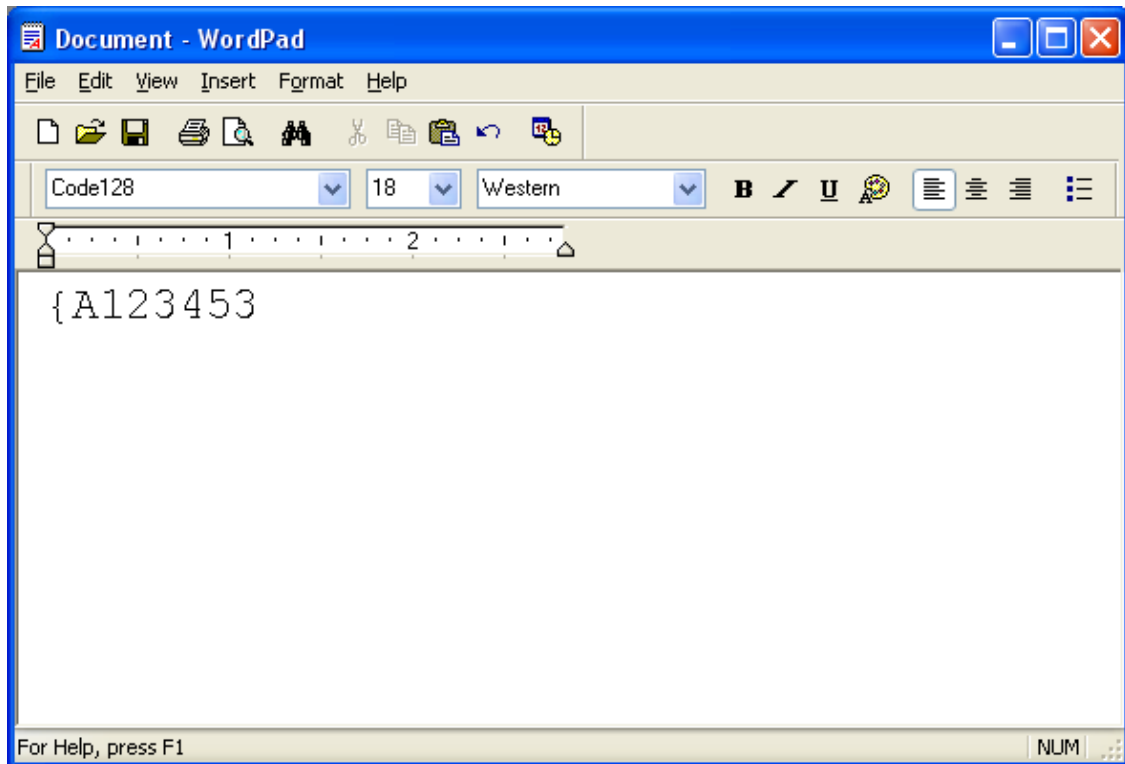
7-2-2 Text Printing

Use the Windows Driver of the printer to run a test.
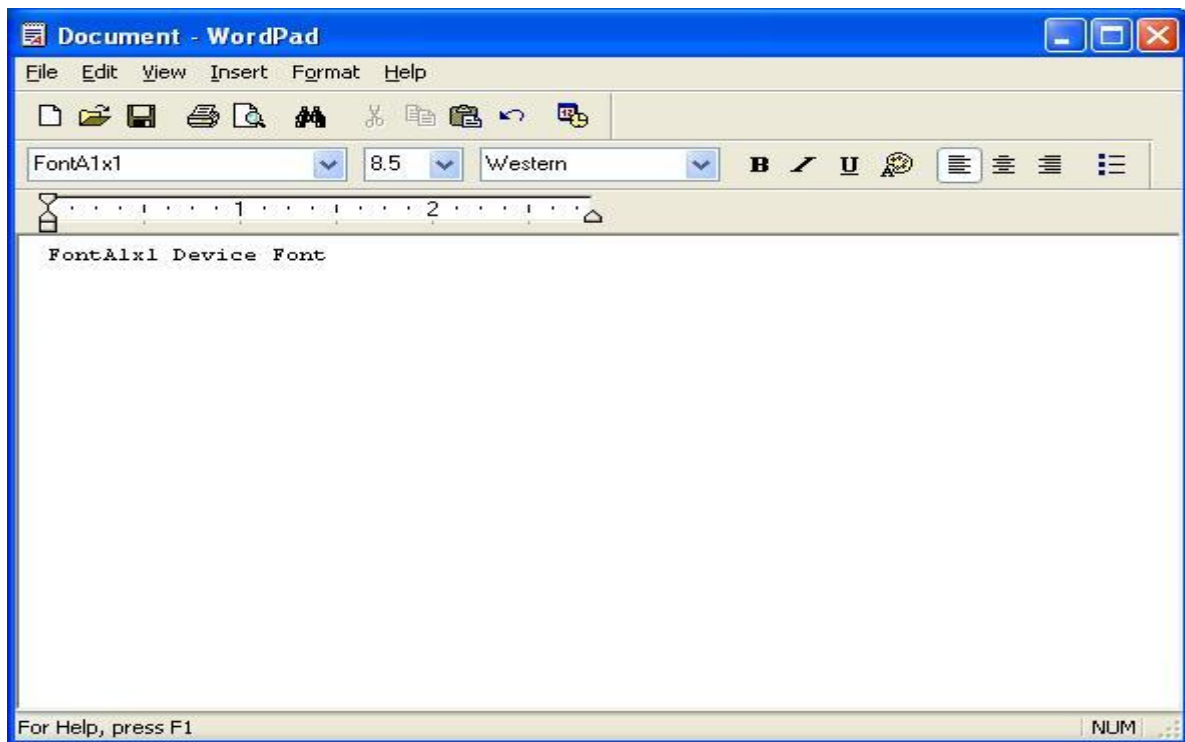
1) Select the desired font from the Font menu (FontA 1x1).

2) Select the desired font size (9.5).

3) Enter the text to be printed in Wordpad.

4) Click the Print button in the toolbar to print.

7-2-3 Barcode Printing
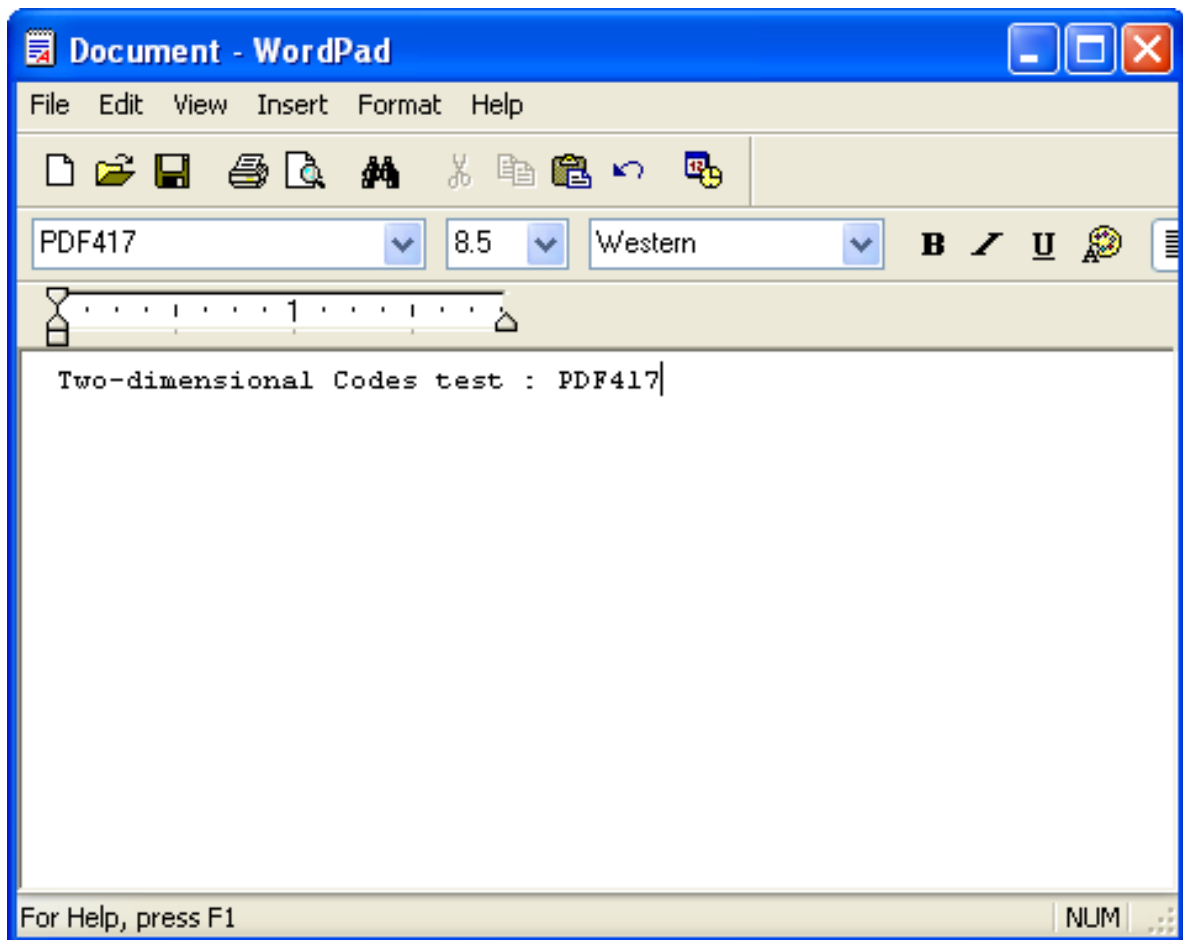
Use the Windows Driver of the printer to print the barcode.

1) Select the desired barcode from the Font menu (Code128).

2) Select the desired font size (20).

3) Enter "{A123453" 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.

```
Document - WordPad
File  Edit  View  Insert  Format  Help

PDF417                    8.5      Western          B  /  U

    1

  Two-dimensional Codes test : PDF417

For Help, press F1                                          NUM
```

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.