BIXOLON®

Windows Driver Manual
STP-103

Thermal Printer
Rev. 2.05

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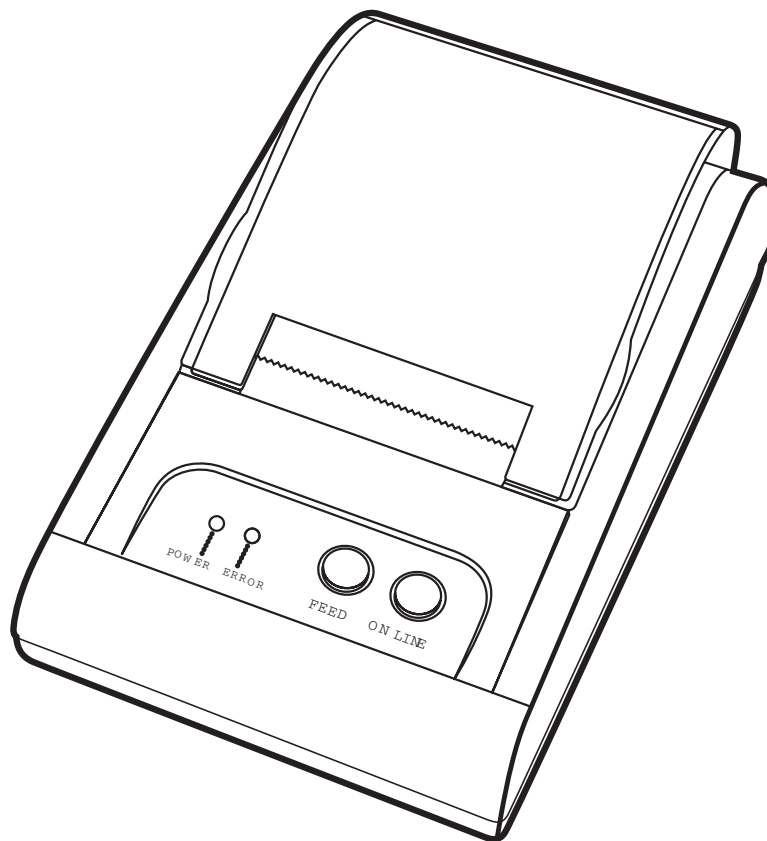
■ Table of Contents

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).

2. Operating System (OS) Environment

The following operating systems are supported for usage.

Microsoft Windows 98 Gold
Microsoft Windows 98 Second Edition
Microsoft Windows Millennium Edition
Microsoft Windows 2000
Microsoft Windows XP
Microsoft Windows 2003 Server
Microsoft Windows Embedded For Point Of Service
Microsoft Windows VISTA 32-bit

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**)

If downloading from the BIXOLON website, first download the STP-103_Vx.x.xx.zip file, then unzip the file, and run the STP-103_Vx.x.xx.exe file.

If using the enclosed CD, click the "Windows Driver" button to find and run the Windows Driver installation file (STP-103_Vx.x.xx.exe).

4. Windows Driver Installation

4-1 Installing on Windows 98/ME

4-1-1 Via Serial Port or Parallel Port

1) Double-click the Windows Driver installation file (STP-103_Vx.x.xx.exe).

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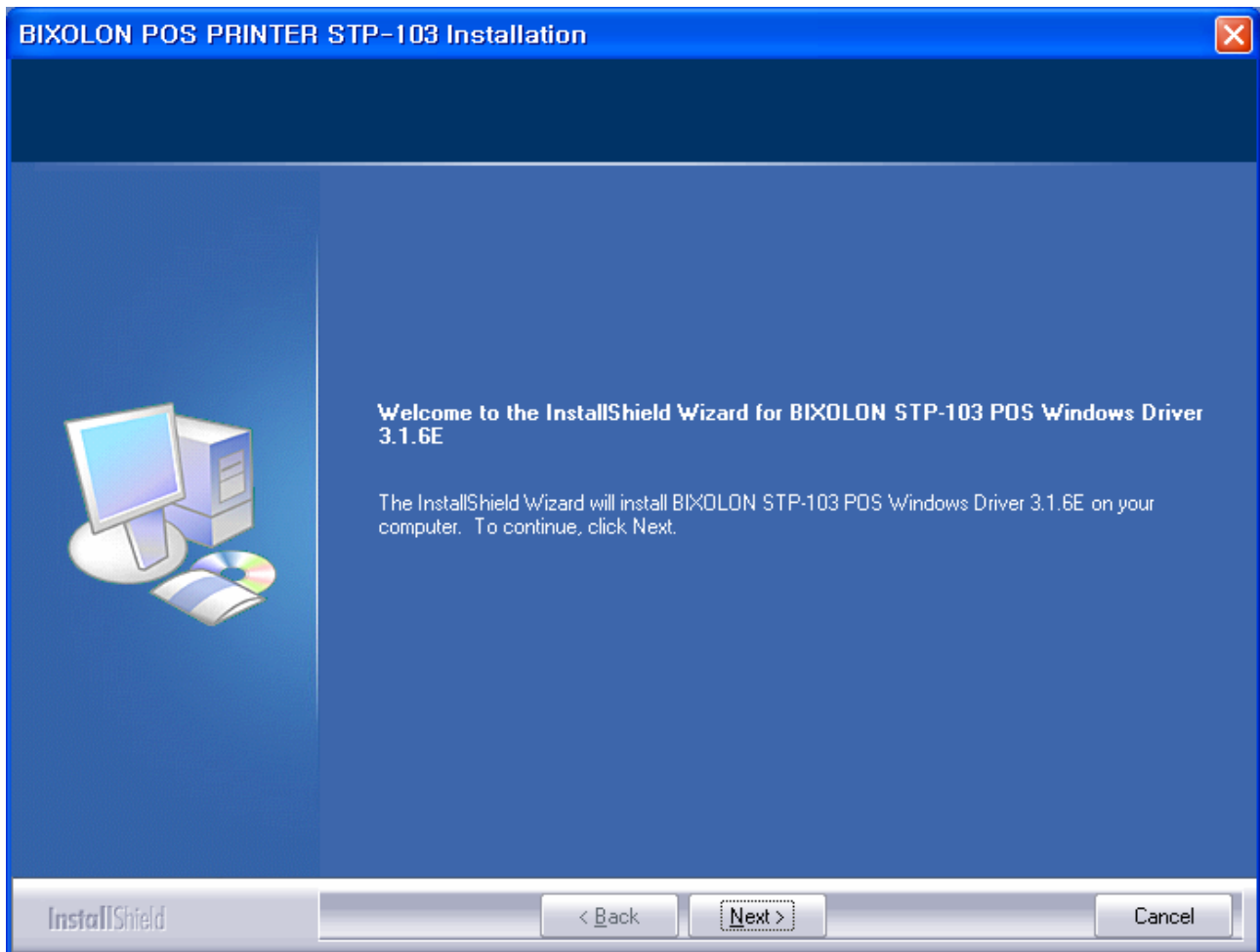
3) Select the COM or LPT (Which one you want to use) port to be used and click the "Next" button.

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

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

6) Click the "Port Settings…" button in the "Details" tab.

7) 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

Advanced...   Restore Defaults

OK   Cancel   Apply

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

BIXOLON STP-103 Properties

General | Details | Paper | Graphics | Additional Commands | About

BIXOLON STP-103

Comment:

Separator page: (none)   Browse...

Print Test Page

OK   Cancel   Apply

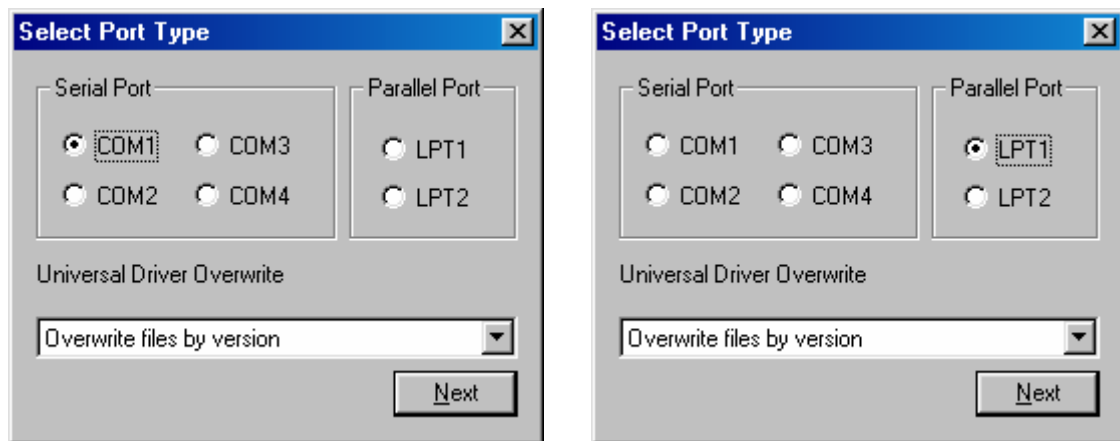9) Proper installation of the driver is indicated if the test page is printed normally.

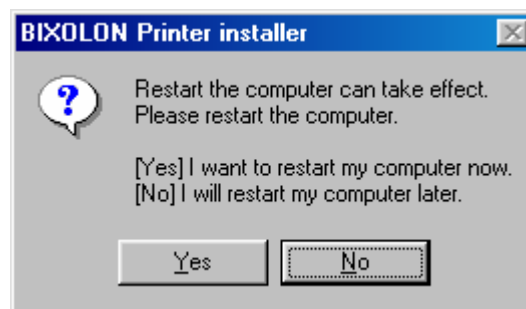**4-2 Installing on Windows 2000**

4-2-1 Via Serial Port or Parallel Port

1) Double-click the Windows Driver installation file (STP-103_Vx.x.xx.exe).

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.

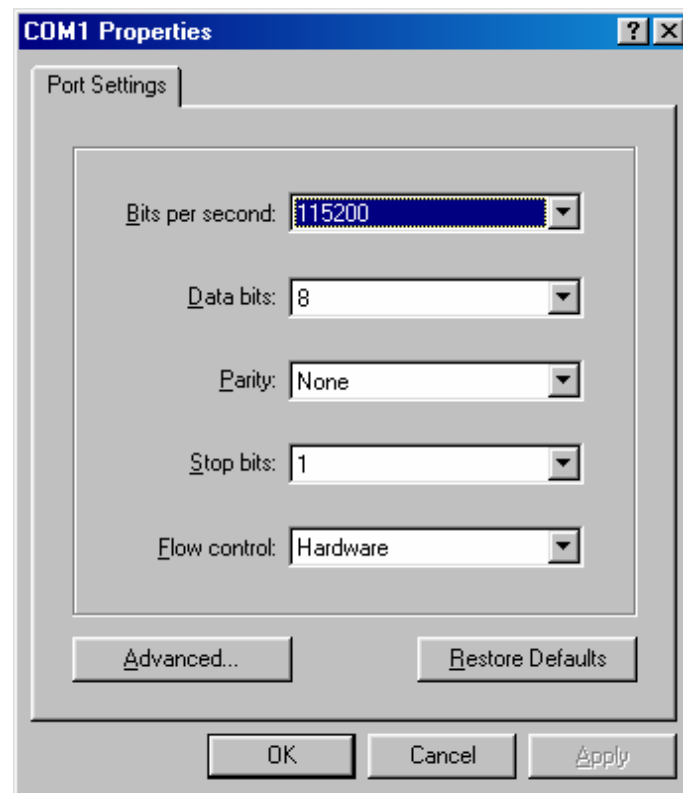4) When the following message box appears, click the "Yes" button.
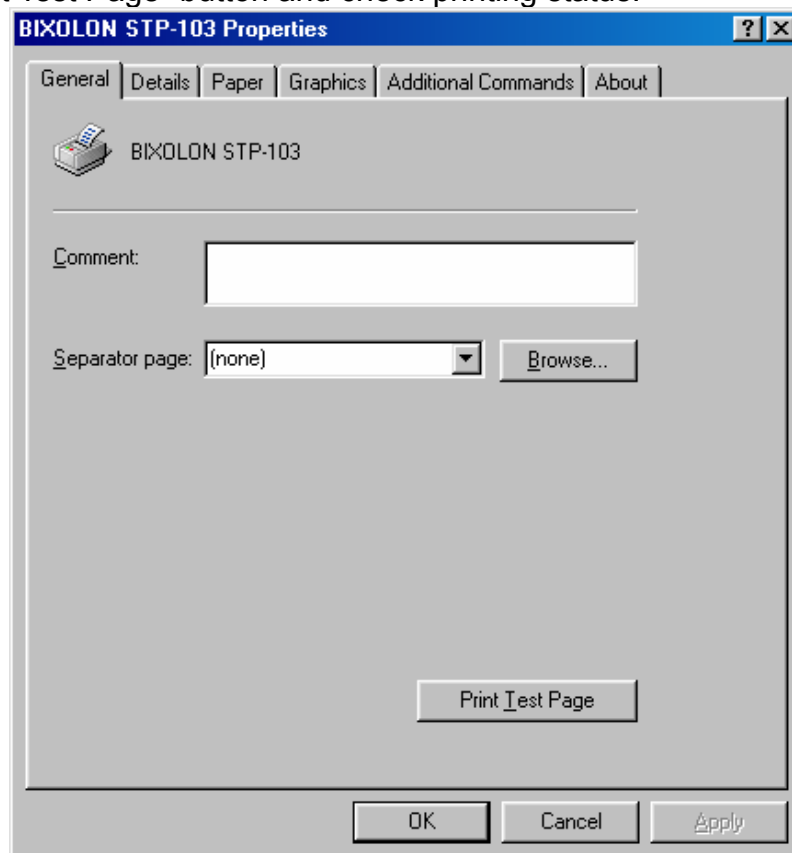

5) Clicking the "Yes" button will reboot the PC.

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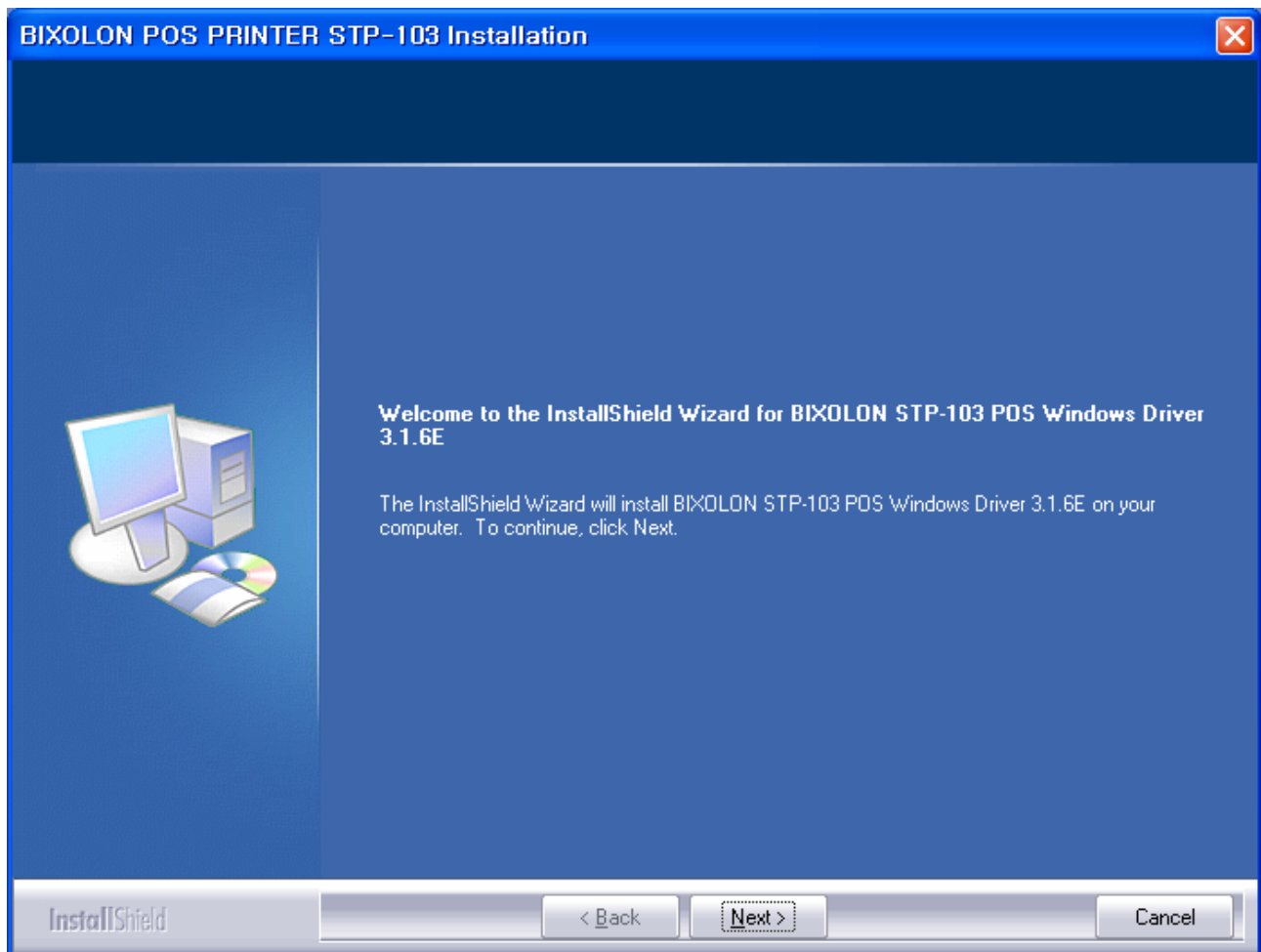   (The communication settings of the printer can be performed by conducting a self-test.)

COM1 Properties	? X

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.

BIXOLON STP-103 Properties	? X

| Device Settings | Additional Commands | About |
| General | Sharing | Ports | Advanced | Security |

BIXOLON STP-103

Location:

Comment:

Model: BIXOLON STP-103

Features
Color: No   Paper available:
Double-sided: No
Staple: Unknown
Speed: Unknown
Maximum resolution: 203 dpi

Printing Preferences...   Print Test Page
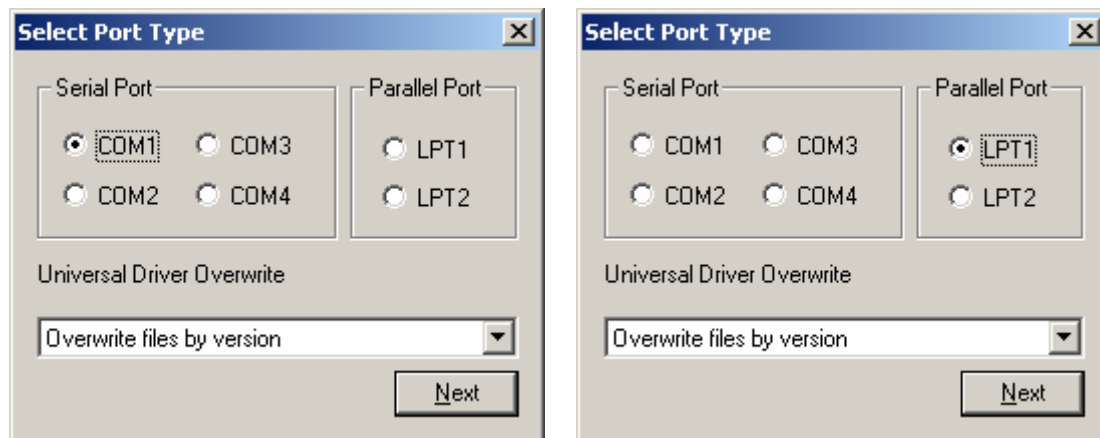
OK   Cancel   Apply

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

4-3 Installing on Windows XP/2003 Server

4-3-1 Via Serial Port or Parallel Port

1) Double-click the Windows Driver installation file (STP-103_Vx.x.xx.exe).

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.

Select Port Type

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

Parallel Port
- ○ LPT1
- ○ LPT2

Universal Driver Overwrite

| Overwrite files by version | ▼ |

Next

Select Port Type

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

Parallel Port
- ⦿ LPT1
- ○ LPT2

Universal Driver Overwrite

| Overwrite files by version | ▼ |

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.

BIXOLON STP-103 installer

❓ Restart the computer can take effect. Please restart the computer.

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

Yes   No
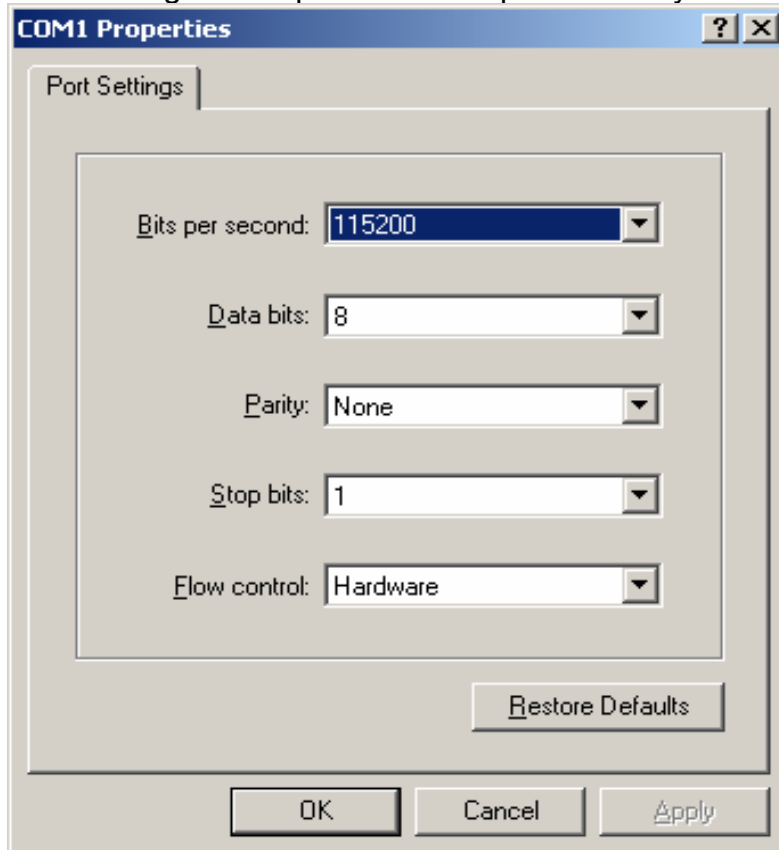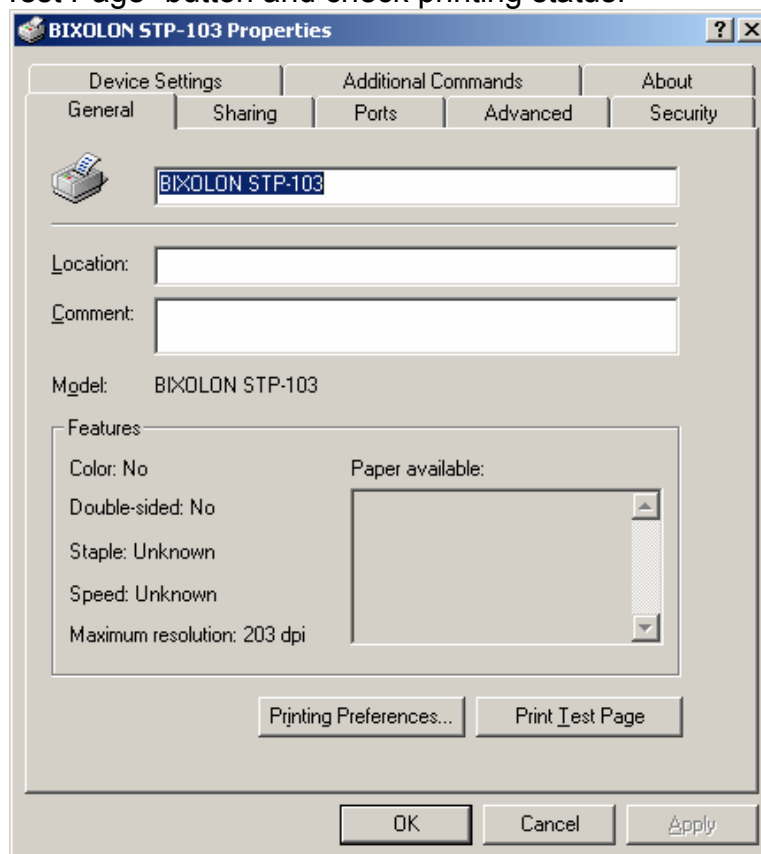
6) Open the printer properties window in the Windows OS.

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

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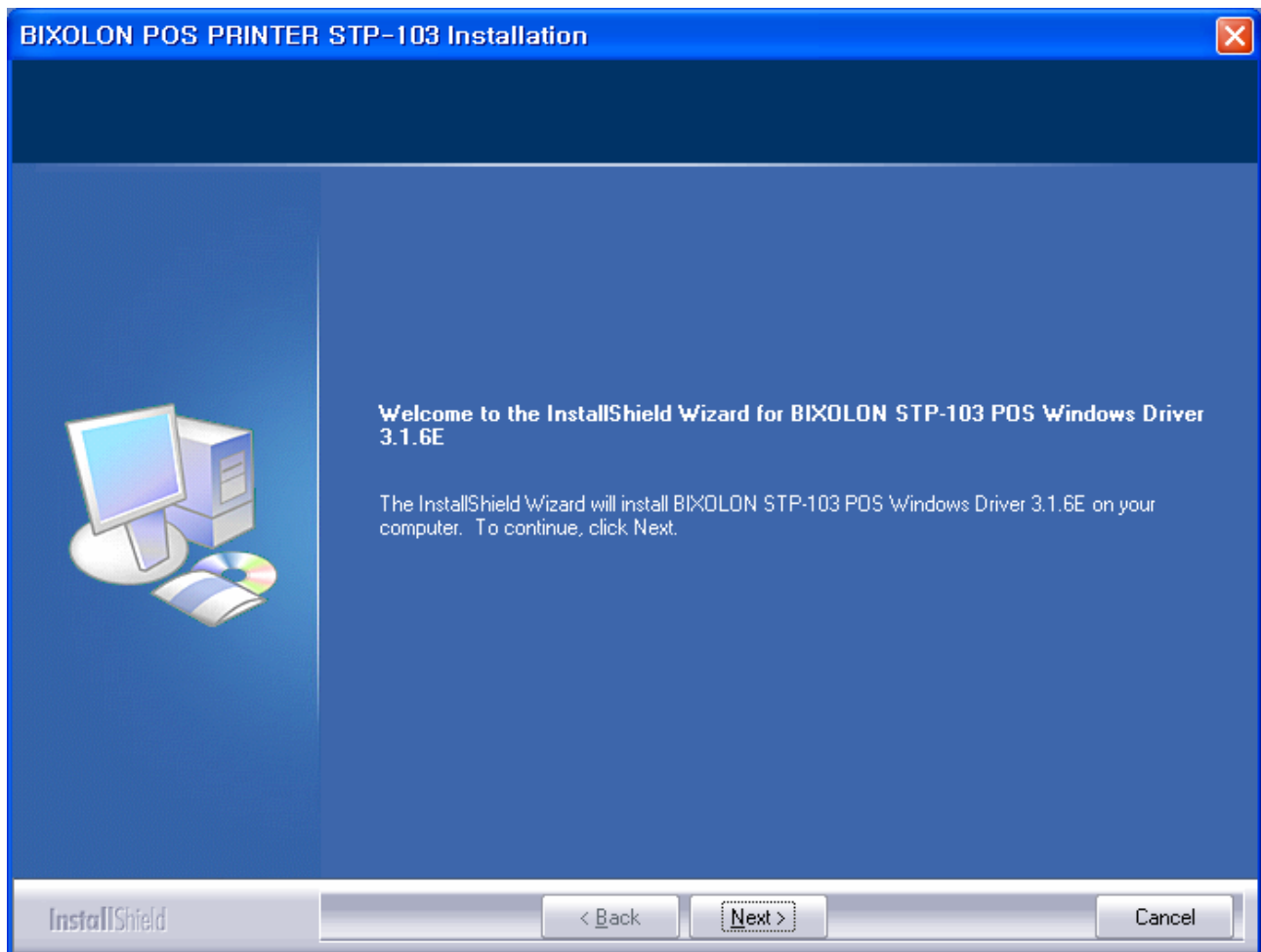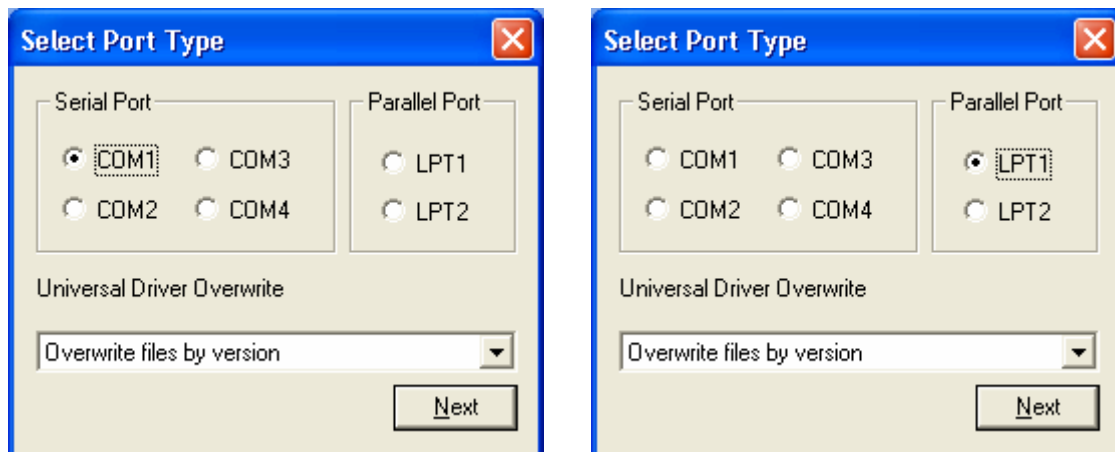(The communication settings of the printer can be performed by conducting a self-test.)

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.

4-4 Installing on Windows VISTA

4-4-1 Via Serial Port or Parallel Port

1) Double-click the Windows Driver installation file (STP-103_Vx.x.xx.exe).

2) Click the "Next" button.

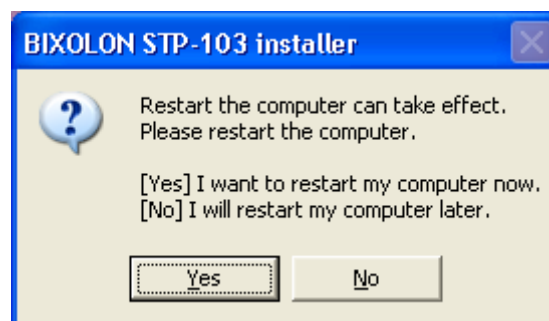3) Select the COM or LPT (Which one you want to use) port to be used and click the "Next" button.

Select Port Type

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

Parallel Port
- ○ LPT1
- ○ LPT2

Universal Driver Overwrite

[Overwrite files by version ▼]

[Next]

Select Port Type

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

Parallel Port
- ⦿ LPT1
- ○ LPT2

Universal Driver Overwrite

[Overwrite files by version ▼]

[Next]

4) When the following message box appears, click the "Install this driver software anyway" button.
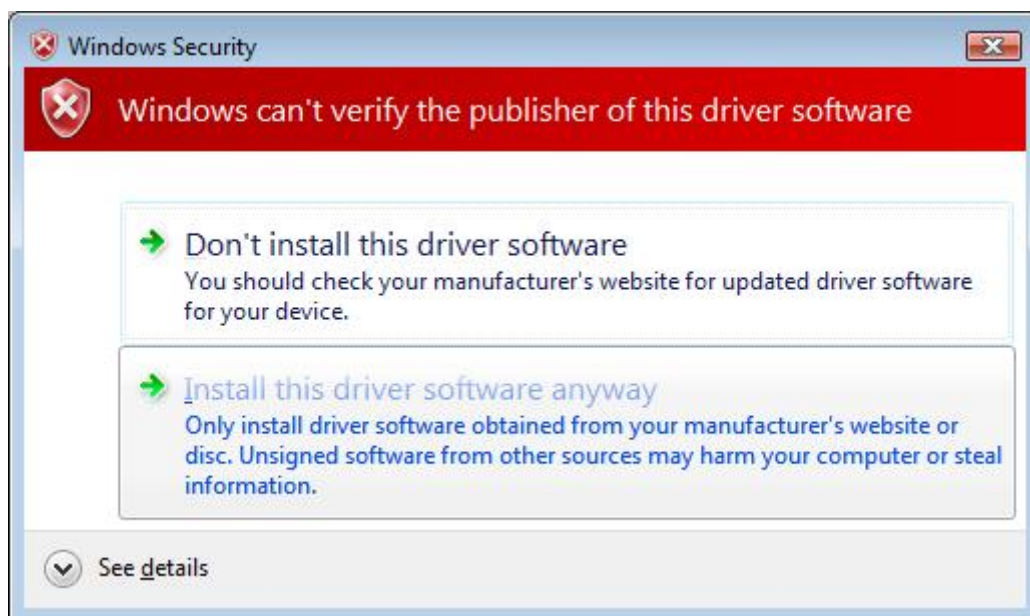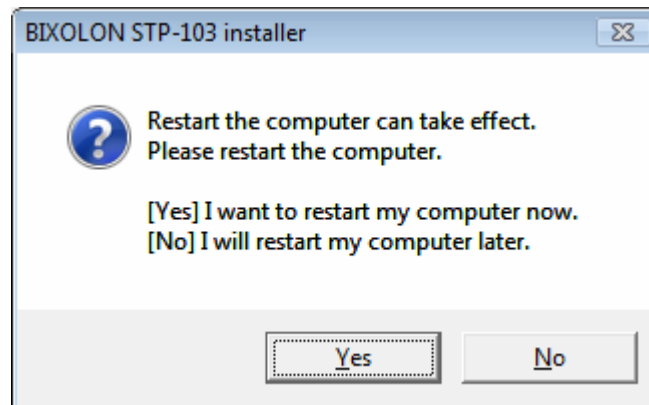
Windows Security

Windows can't verify the publisher of this driver software

➜ Don't install this driver software
You should check your manufacturer's website for updated driver software for your device.

➜ Install this driver software anyway
Only install driver software obtained from your manufacturer's website or disc. Unsigned software from other sources may harm your computer or steal information.

⌄ See details

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

BIXOLON STP-103 installer

Restart the computer can take effect.
Please restart the computer.

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

Yes   No
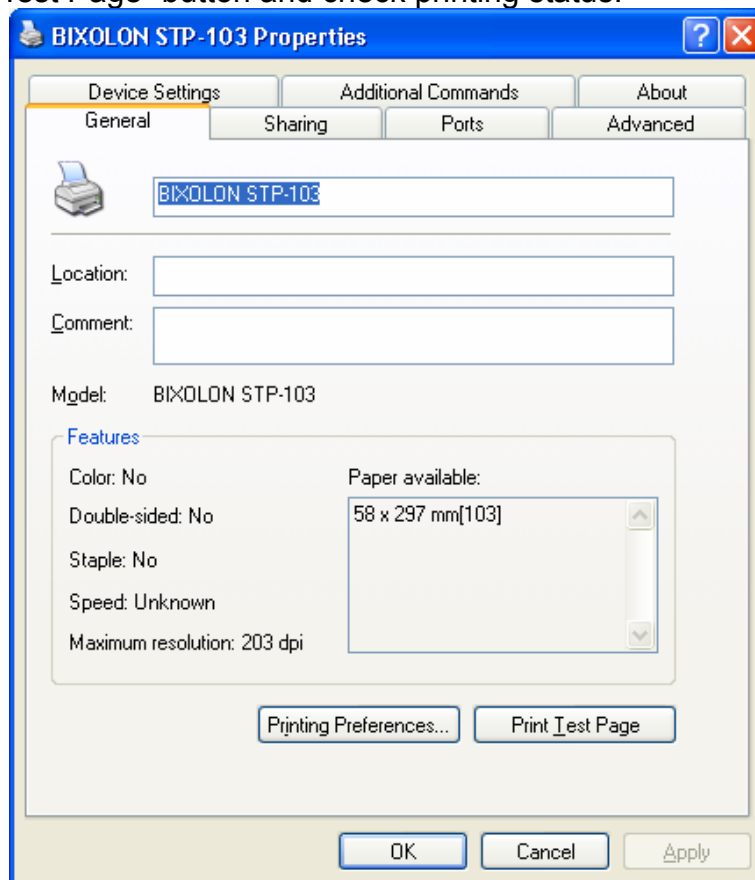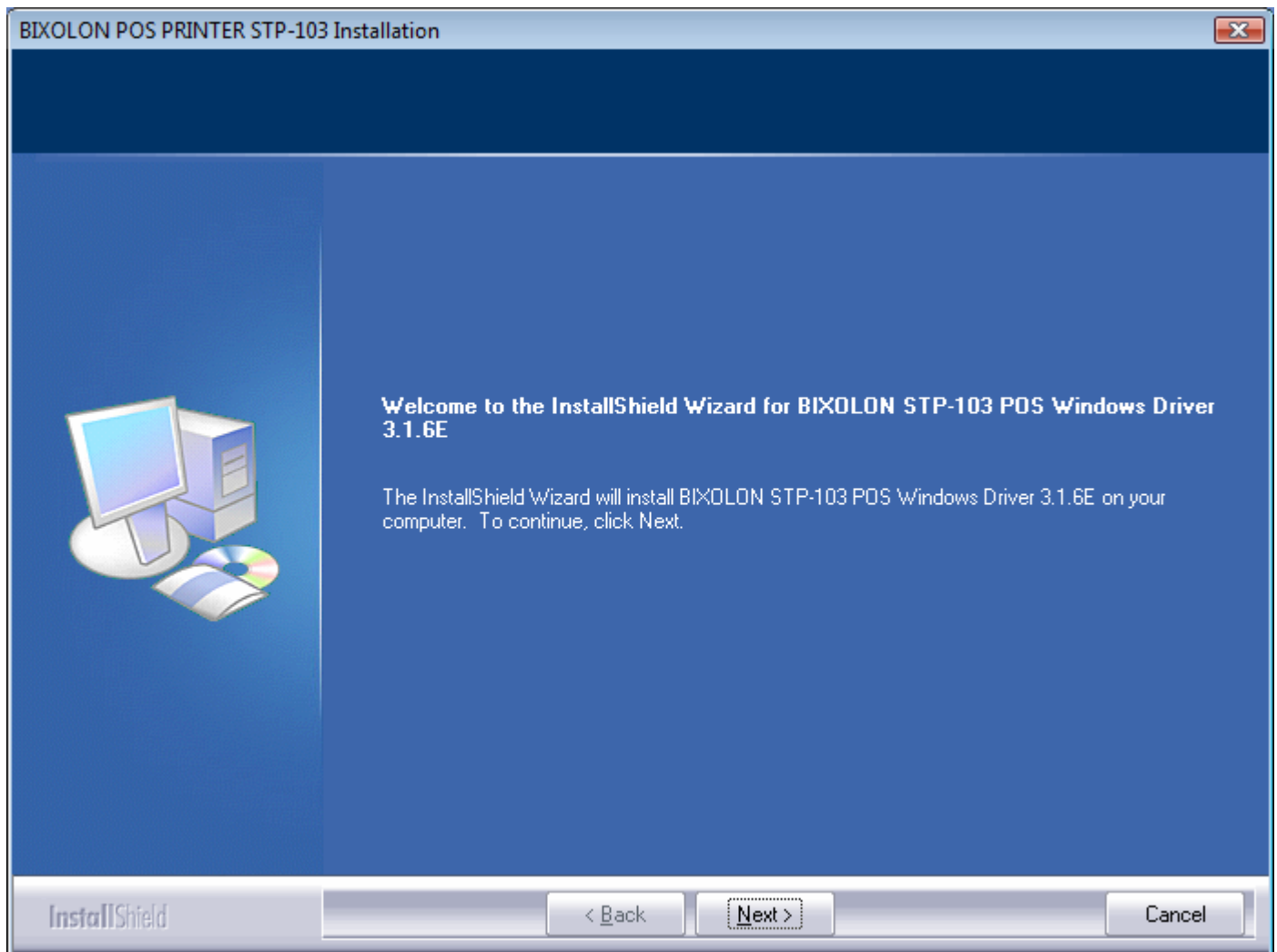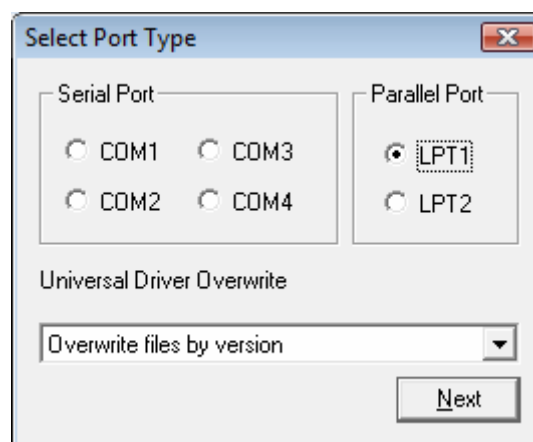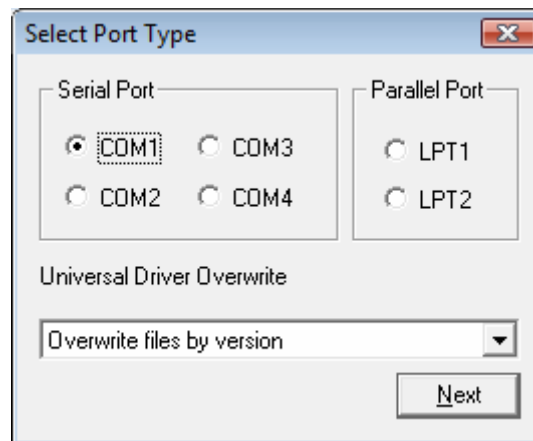
6) Open the printer properties window in the Windows OS.

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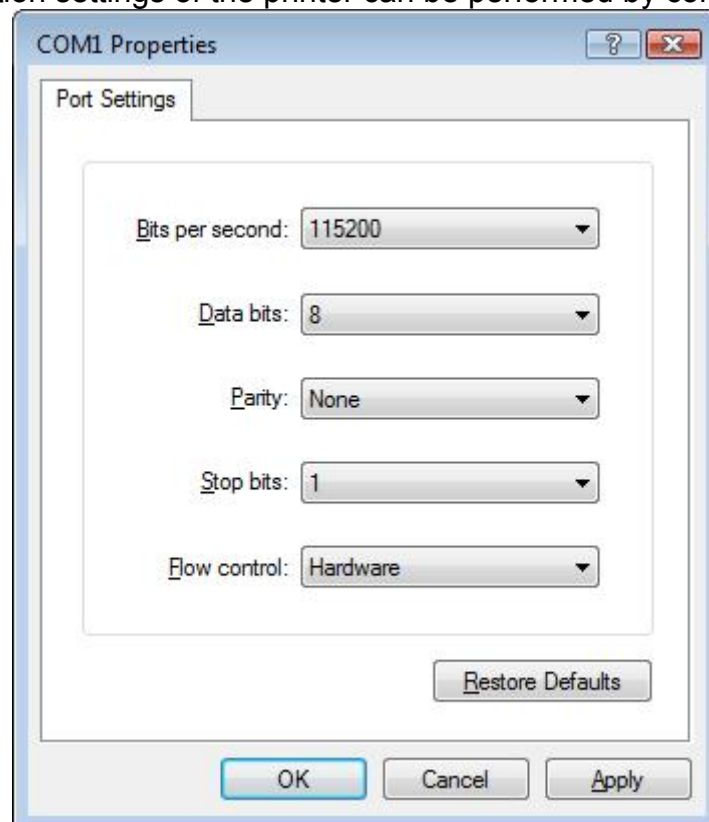
9) Click the "Print Test Page" button and check printing status.

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

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[Partial cut]" automatically.

- Receipt[Partial cut]: After printed text is transferred up to the cutter (auto cutter), a paper is cut by auto cutter.

- Receipt[No cut]: Printed text is transferred up to the cutter (manual cutter).

- Receipt[No cut:A Type]: Printed text is transferred up to the cutter (STP-103 A Type's manual cutter).

- Receipt[Partial cut without paper feeding]: A paper is cut by auto cutter without paper feeding.

- Receipt [No feed]: Printed text is transferred up to the next line only. (minimum transfer: 0x0A).

- Form[No Cut]: For long print jobs, printed text is transferred according to the Receipt option per selected paper size.

- Form[Partial Cut]: For long print jobs, printed text is transferred and cut according to the Receipt option per selected paper size.

Detailed setting can be done as follows.
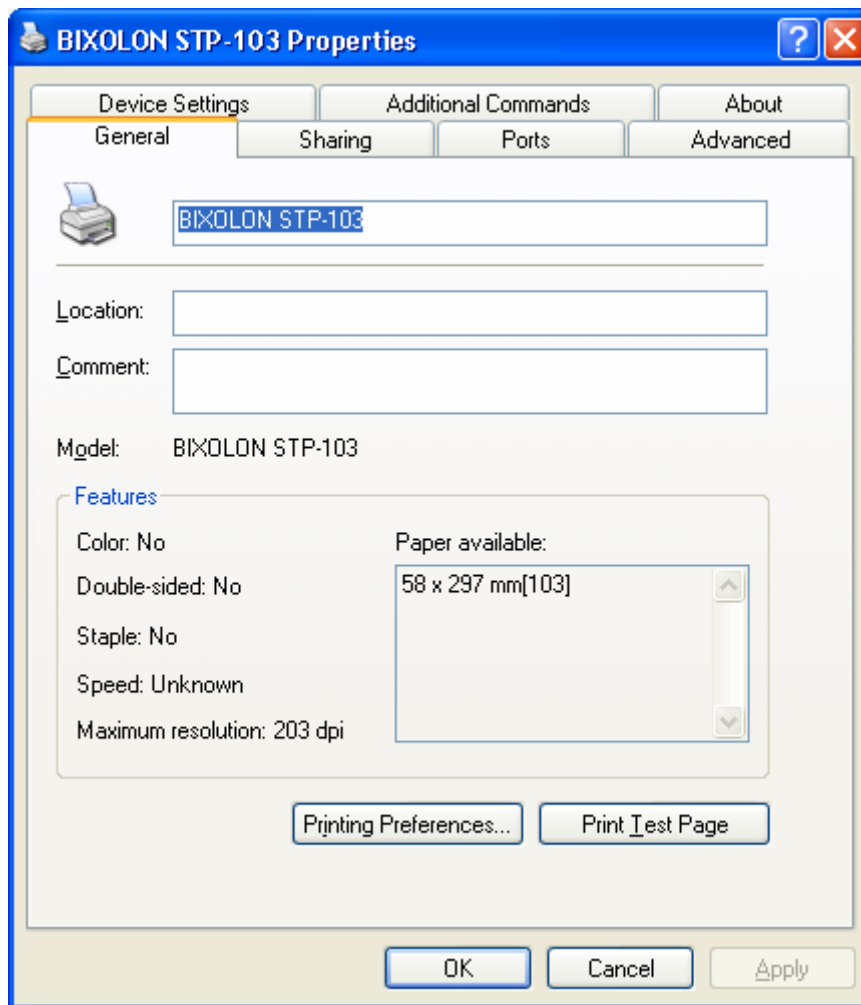
1) Open the printer properties window in the Windows OS.

2) Click the "Printing Preferences" button in the "General" tab.
   The button name varies by Windows OS.   Refer to the following.

    - Windows 95/98/ME: "Properties"
    - Windows NT4.0: "Document Defaults"
    - Windows 2000/XP/2003 Server: "Printing Preferences"
    - Windows WEPOS/VISTA: "Printing Preferences"

3) Select the desired setting in the "Paper/Quality" tab.

5-2 Paper Size

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

  - 58 × 120 mm [103]
  - 58 × 160 mm [103]
  - 58 × 200 mm [103]
  - 58 × 297 mm [103]
  - 58 × 3276 mm [103]
  - 58 × 40 mm [103]
  - 58 × 80 mm [103]
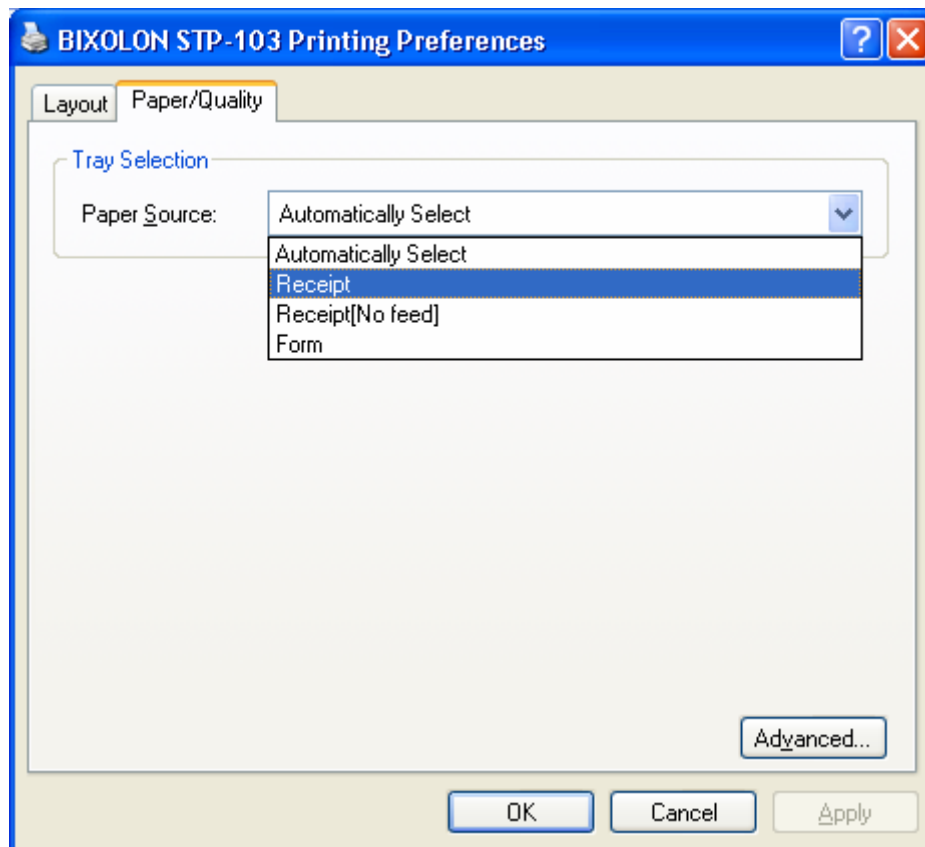
Detailed setting can be done as follows.

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

2) Click the "Printing Preferences" button in the "General" tab.
   The button name varies by Windows OS.   Refer to the following.

   - Windows 95/98/ME: "Properties"
   - Windows NT4.0: "Document Defaults"
   - Windows 2000/XP/2003 Server: "Printing Preferences"
   - Windows WEPOS/VISTA: "Printing Preferences"
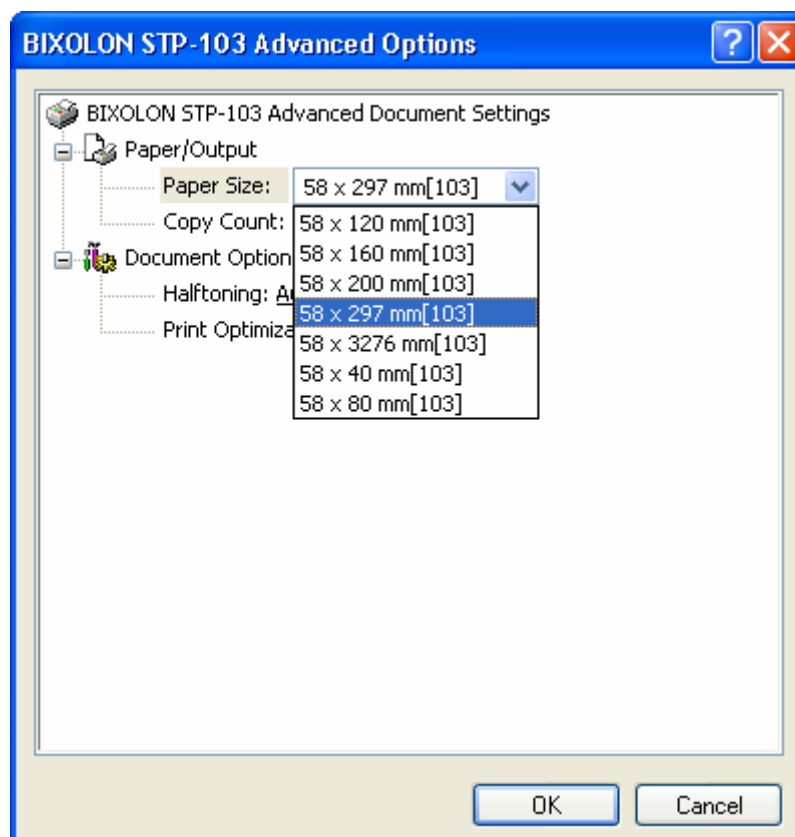

3) Select the "Paper/Quality" tab, and click the "Advanced" button.
   Select the desired setting.

5-3 Additional Commands

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

To use the Additional Commands in Windows Vista, the following OS options must be set.

"Control Panel → User Accounts → Uncheck the "Use User Account Control (UAC) to help protect your computer" checkbox under "Turn User Account Control On or Off".

The command functions available are as follows.

   - BeginDoc: addition of command at the beginning of the print content
   - EndDoc1: addition of command at the end of the print content
   - EndDoc2: addition of line feeding at the end of the print content

Detailed setting can be done as follows.

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

2) Click the " Additional Commands" tab.
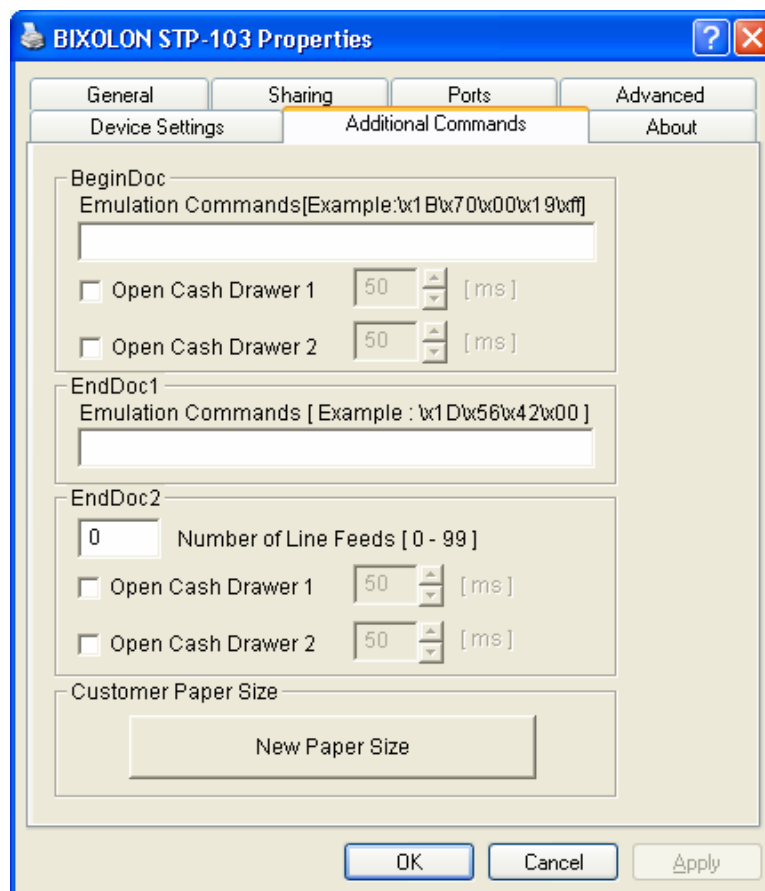
3) If the user wishes to open Cash Drawer 1 prior to printing, enter "\x1B\x70\x00\x19\xff" in the "BeginDoc" space and click the "OK" button.

4) If the user wishes to open Cash Drawer 1 at the end of printing, enter "\x1B\x70\x00\x19\xff" in the "EndDoc1" space and click the "OK" button.

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

For more information on the hexadecimals that can be entered in "BeginDoc" and " EndDoc1", refer to the Control Commands Manual.

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
FontB1x1	FontB1x1[Ext.]	FontB1x1[255]	FontB1x1(9x17)	8.5
FontB1x2	FontB1x2[Ext.]	FontB1x2[255]	FontB1x2(9x34)	17
FontB2x1	FontB2x1[Ext.]	FontB2x1[255]	FontB2x1(18x17)	8.5
FontB2x2	FontB2x2[Ext.]	FontB2x2[255]	FontB2x2(18x34)	17

Printer font for special function	Function	Size(point/dot)
FontControl	Open Drawer 1/2 Justification(Left/Center/Right) Output HT,Output LF, Output CR Barcode printing Print NV bit image	(8.5 / 12x24)

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	Note
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)	
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)	
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)

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.

7. Use of Windows Driver

7-1 Selecting the Printer Driver

The following code establishes the specified printer driver as your "default printer."

♦ VISUAL BASIC

```
For Each prnPrinter In Printers
If prnPrinter.DeviceName = "BIXOLON SAMSUNG STP-103" Then
Set Printer = prnPrinter
Exit For
End If
Next
```

7-2 Printing Text

The following code prints a text string using a Windows font, and then prints another text string using a printer font. Each string gives the name and size of the font being used.

♦ VISUAL BASIC

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

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

7-3 Bar Code Printing

The following code causes the printer to print Bar Code.

♦ VISUAL BASIC

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

7-4 Opening the Cash Drawer

The next example shows how to open the desired cash drawer at the desired speed.

♦ VISUAL BASIC

```
'Set up the control font.
Printer.FontSize = 8.5
Printer.FontName = "FontControl"

Printer.Print "A"
'Use special-function character to open the cash drawer.
'A: Open drawer 1 at 50ms
'B: Open drawer 1 at 100ms
'C: Open drawer 1 at 150ms
'D: Open drawer 1 at 200ms
'E: Open drawer 1 at 250ms
'a: Open drawer 2 at 50ms
'b: Open drawer 2 at 100ms
'c: Open drawer 2 at 150ms
'd: Open drawer 2 at 200ms
'e: Open drawer 2 at 250ms
Printer.EndDoc
```

1) Select the desired font from the Font menu (FontA 1x1).

2) Select the desired font size (8.5).

3) Enter the text to be printed in Wordpad.

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