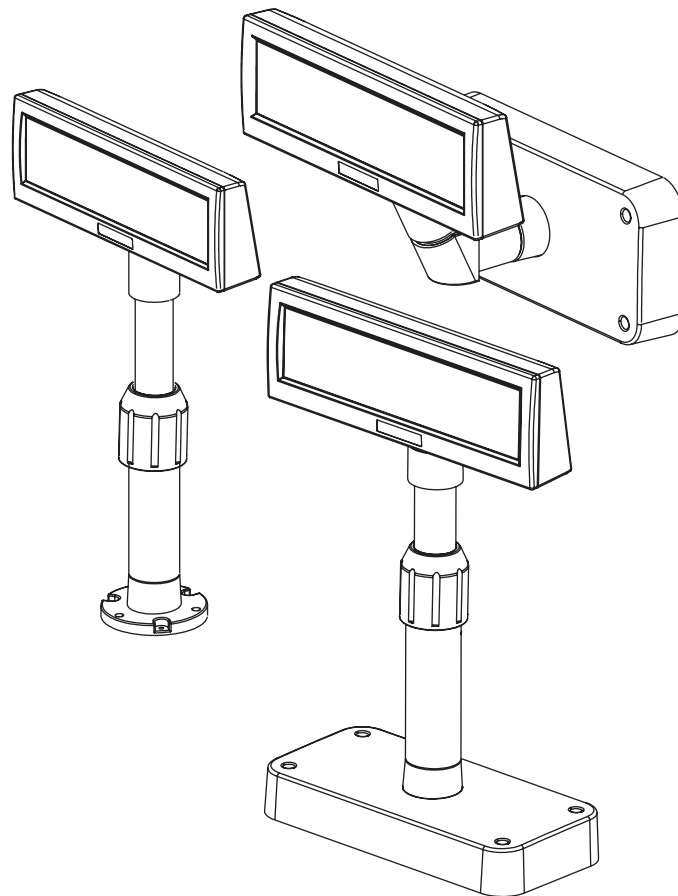




Windows Driver Manual

BCD Series

Customer Display
Rev. 2.05



<http://www.bixolon.com>

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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 2000
- Microsoft Windows XP (32bit)
- Microsoft Windows 2003 Server (32bit)
- Microsoft Windows Embedded For Point Of Service
- Microsoft Windows VISTA (32bit)
- Microsoft Windows 2008 Server (32bit)
- Microsoft Windows 7 (32bit)

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 BCD_Vx.x.xx.zip file, then unzip the file, and run the BCD_Vx.x.xx.exe file.

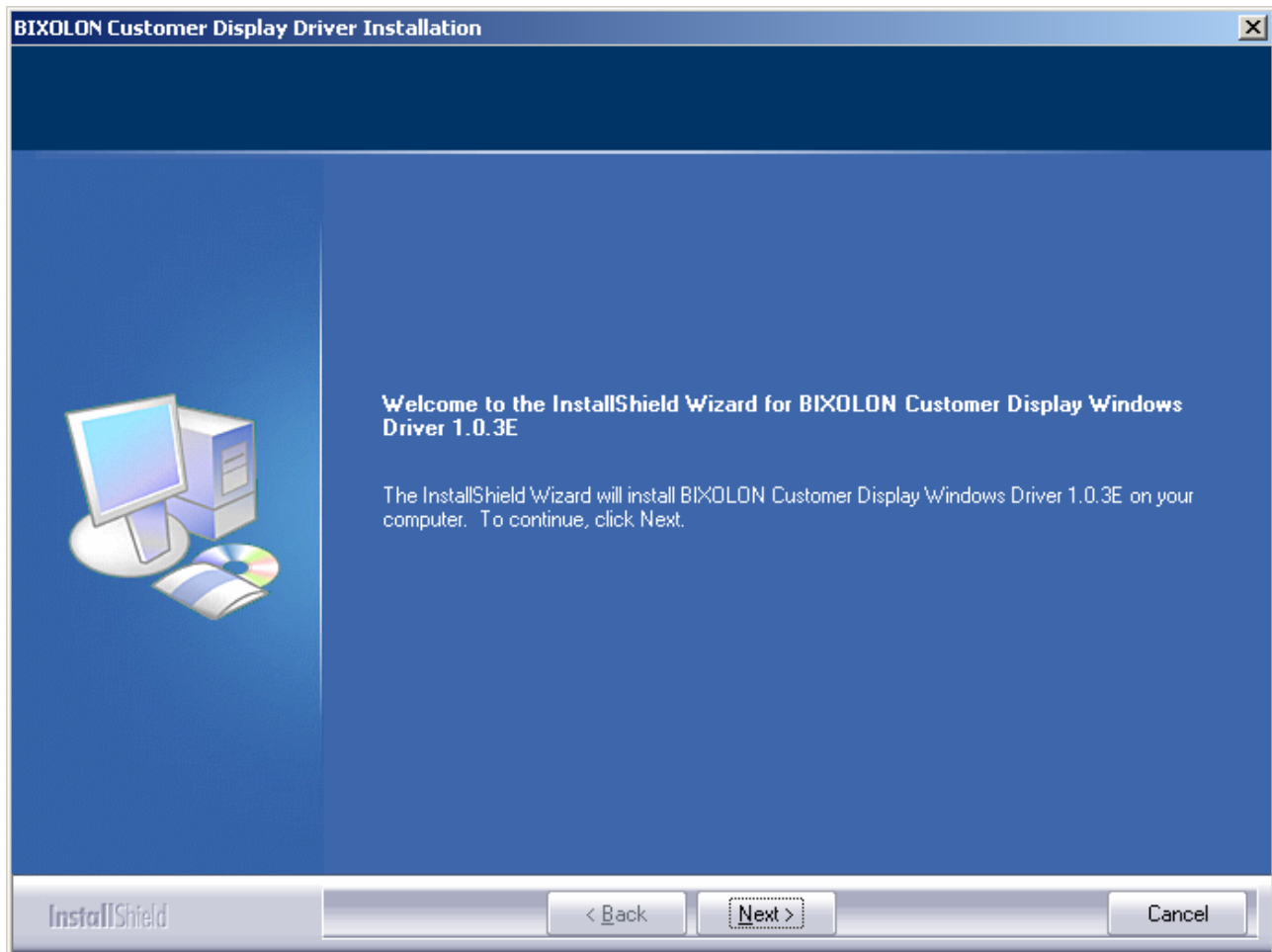
If using the enclosed CD, click the "Windows Driver" button to find and run the Windows Driver installation file (BCD_Vx.x.xx.exe).

4. Windows Driver Installation

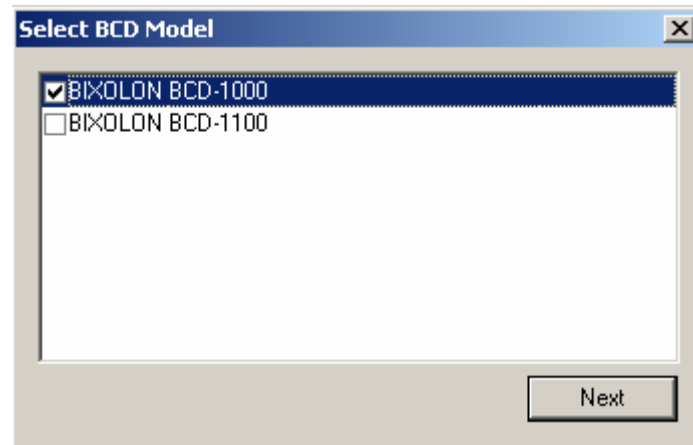
4-1 Installing on Windows 2000

4-1-1 Via Serial Port

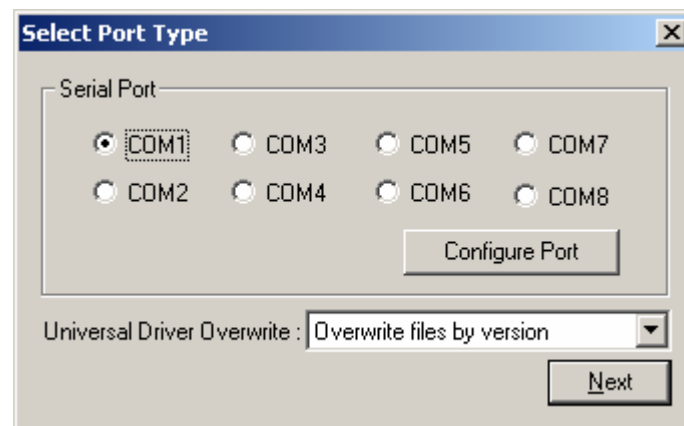
- 1) Double-click the Windows Driver installation file (BCD_Vx.x.xx.exe).
- 2) Click the “Next” button.



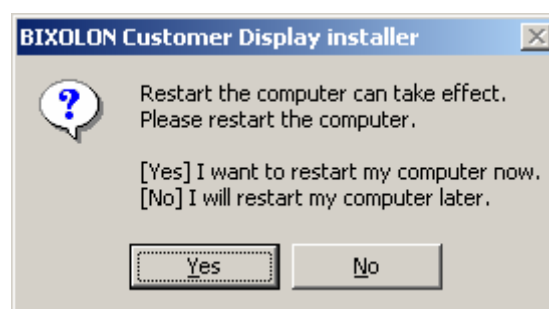
3) Select a model and click the “Next” button.



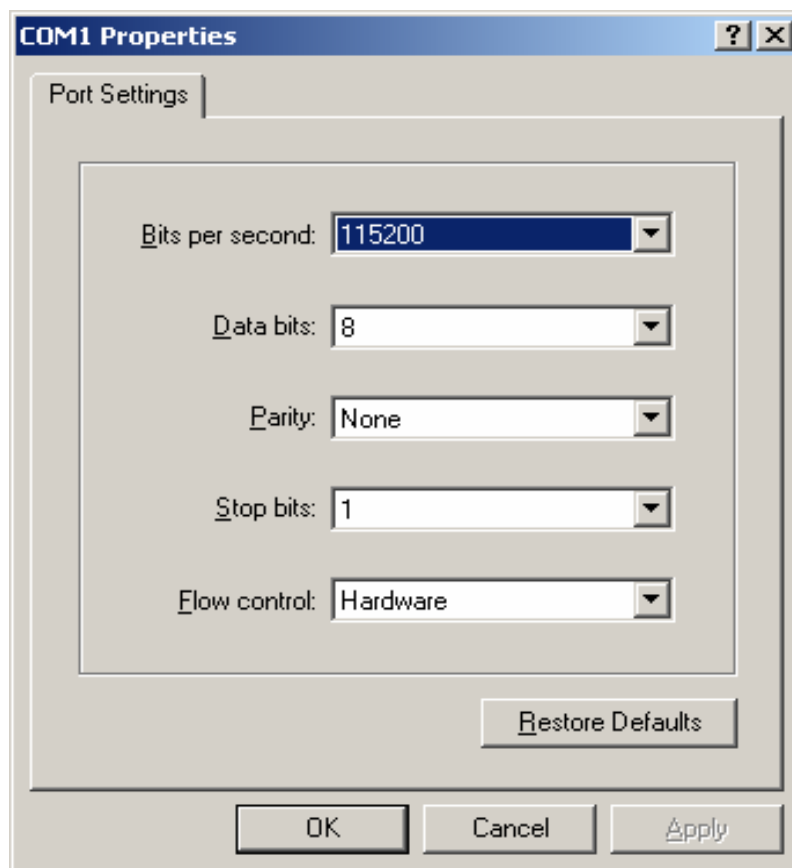
4) Select the COM port to be used and click the “Next” button.



5) Clicking the “Yes” button will reboot the PC.

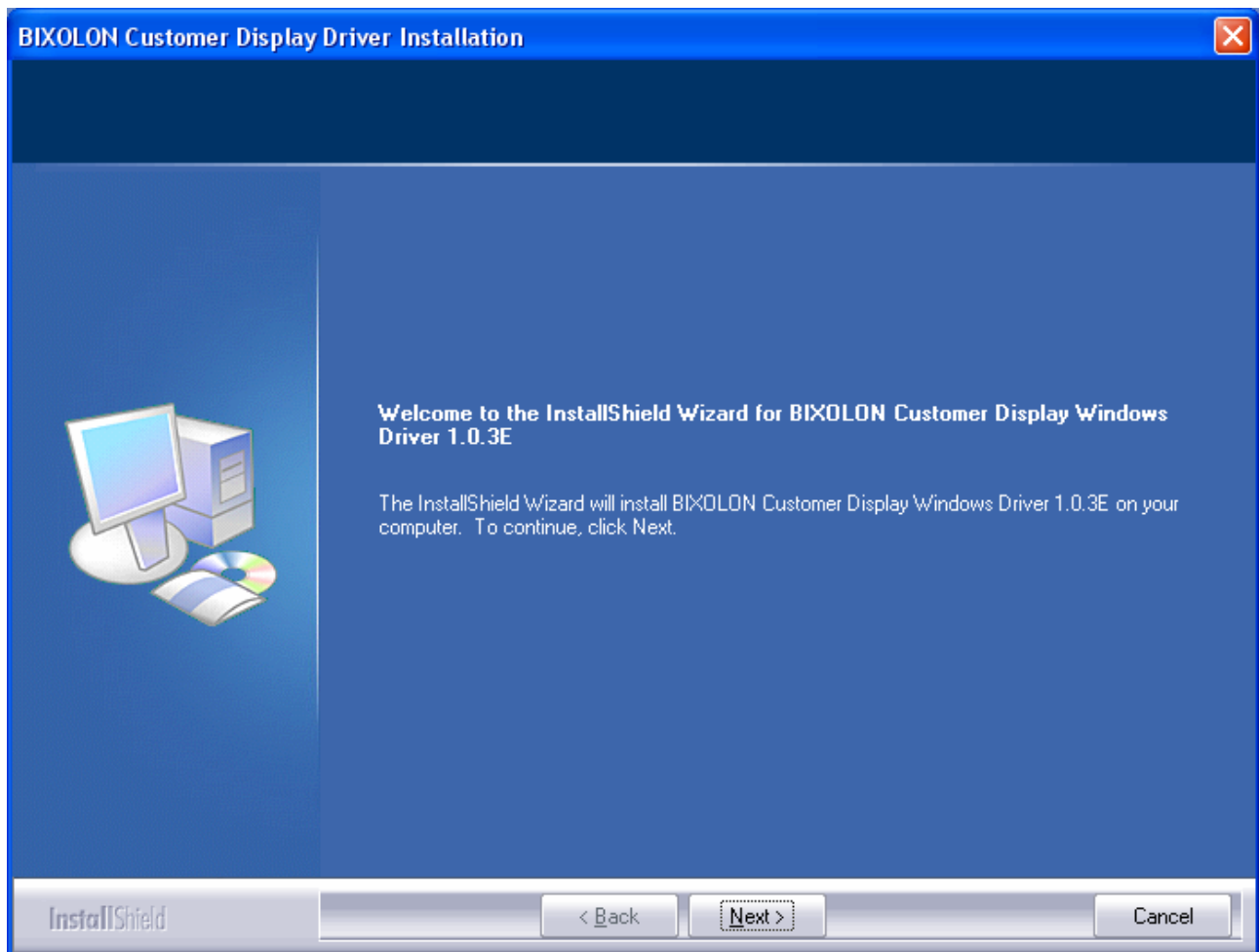


- 6) Open the printer properties window in the Windows OS.
- 7) Click the "Port Settings" button in the "Ports" tab.
- 8) Match the communication settings to those of the printer.
The communication settings of the customer display can be performed by turning on the customer display.

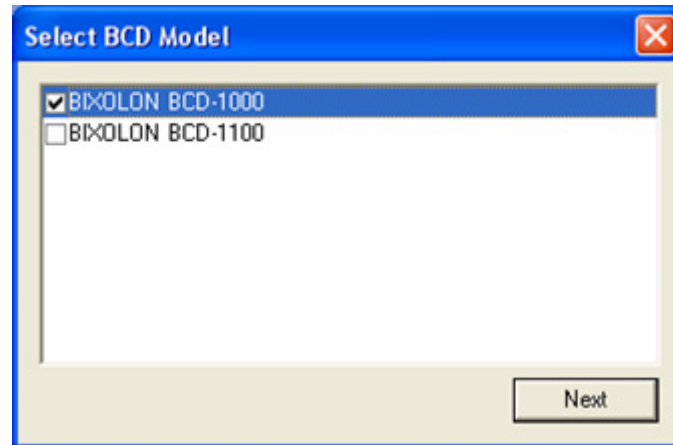


4-2 Installing on Windows XP/2003 Server**4-2-1 Via Serial Port**

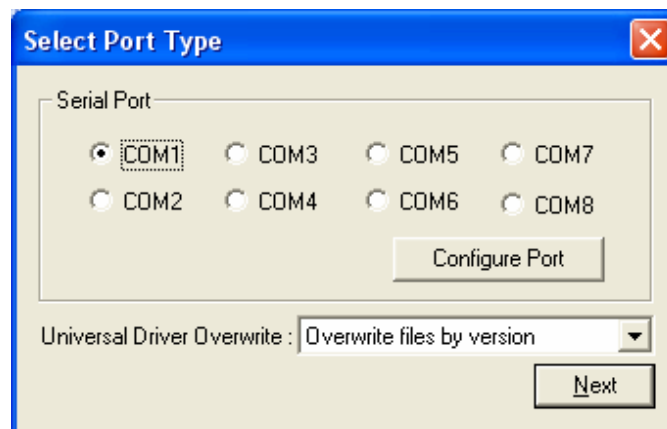
- 1) Double-click the Windows Driver installation file (BCD_Vx.x.xx.exe).
- 2) Click the “Next” button.



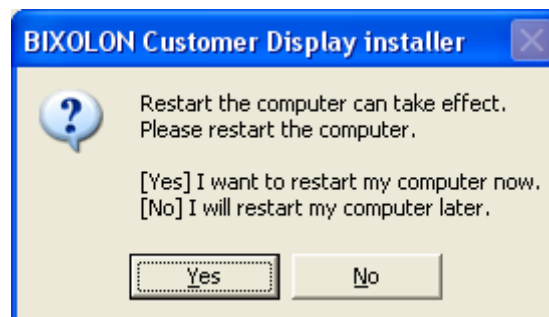
3) Select a model and click the “Next” button.



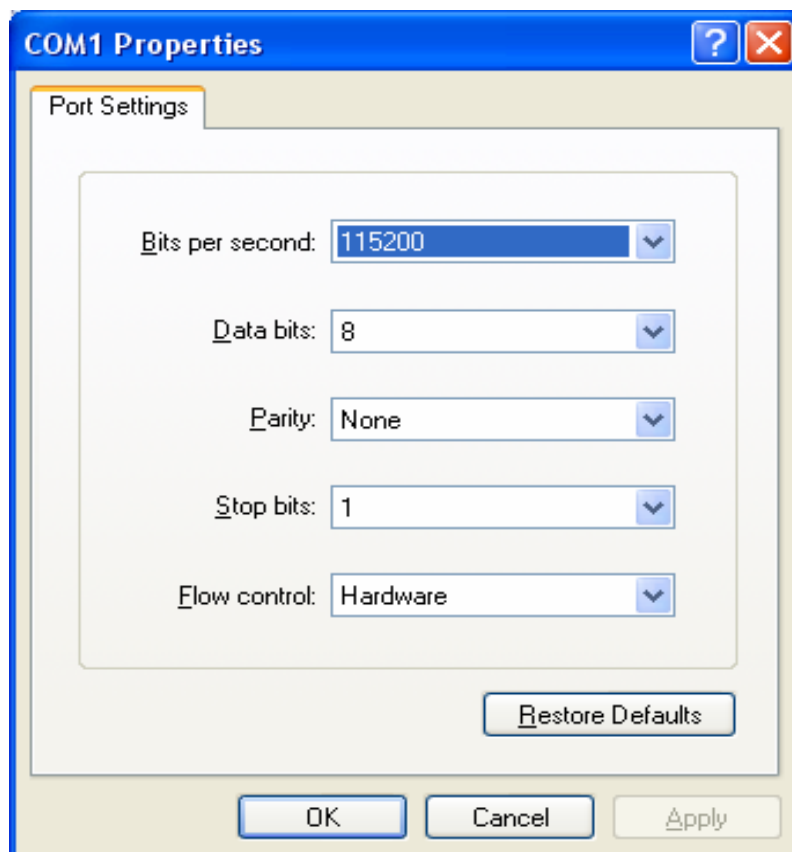
4) Select the COM port to be used and click the “Next” button.



5) Clicking the “Yes” button will reboot the PC.

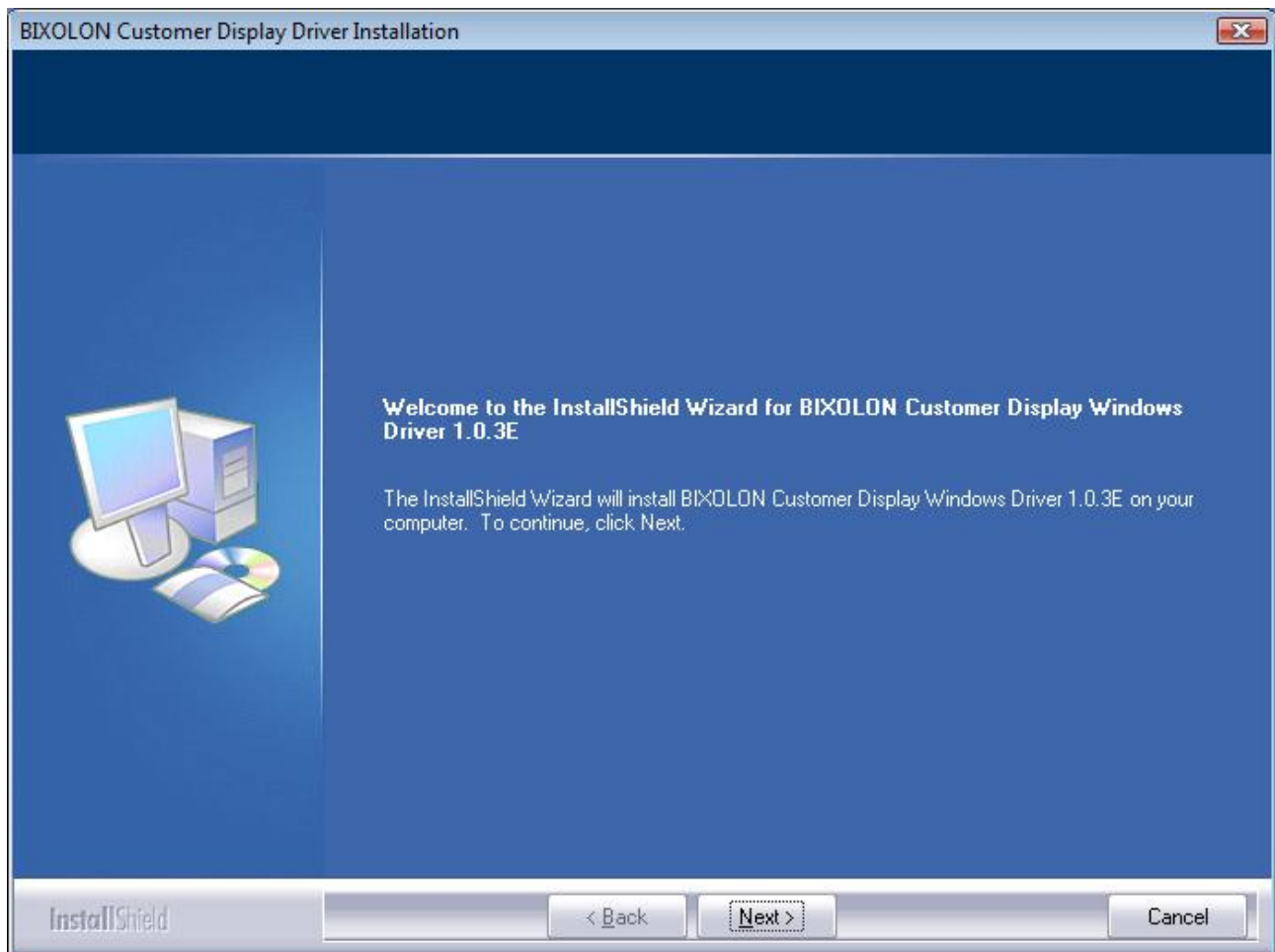


- 6) Open the printer properties window in the Windows OS.
- 7) Click the "Port Settings" button in the "Ports" tab.
- 8) Match the communication settings to those of the customer display.
The communication settings of the customer display can be performed by turning on the customer display.

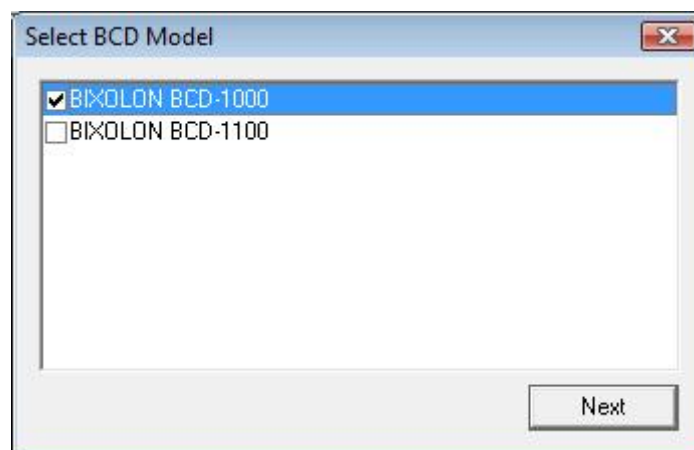


4-3 Installing on Windows VISTA/2008 Server/7**4-3-1 Via Serial Port**

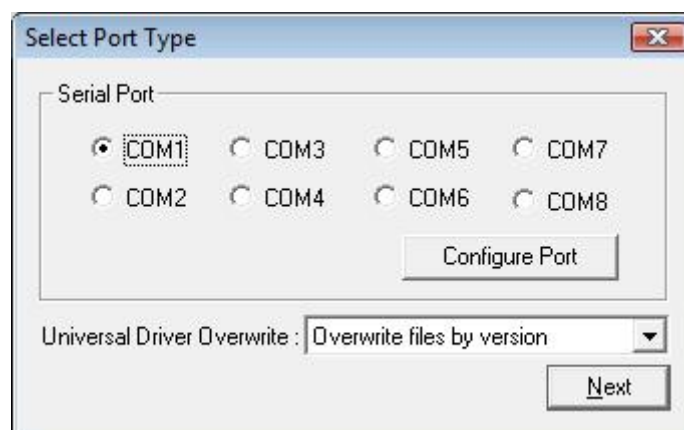
- 1) Double-click the Windows Driver installation file (BCD_Vx.x.xx.exe).
- 2) Click the “Next” button.



3) Select a model and click the “Next” button.



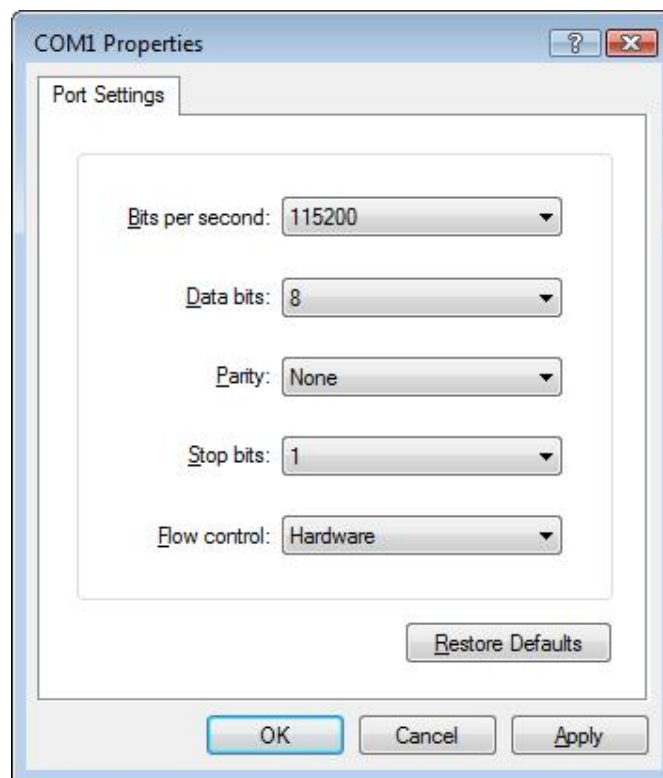
4) Select the COM port to be used and click the “Next” button.



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 customer display.
The communication settings of the customer display can be performed by turning on the customer display.



5. Detailed Windows Driver Settings

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

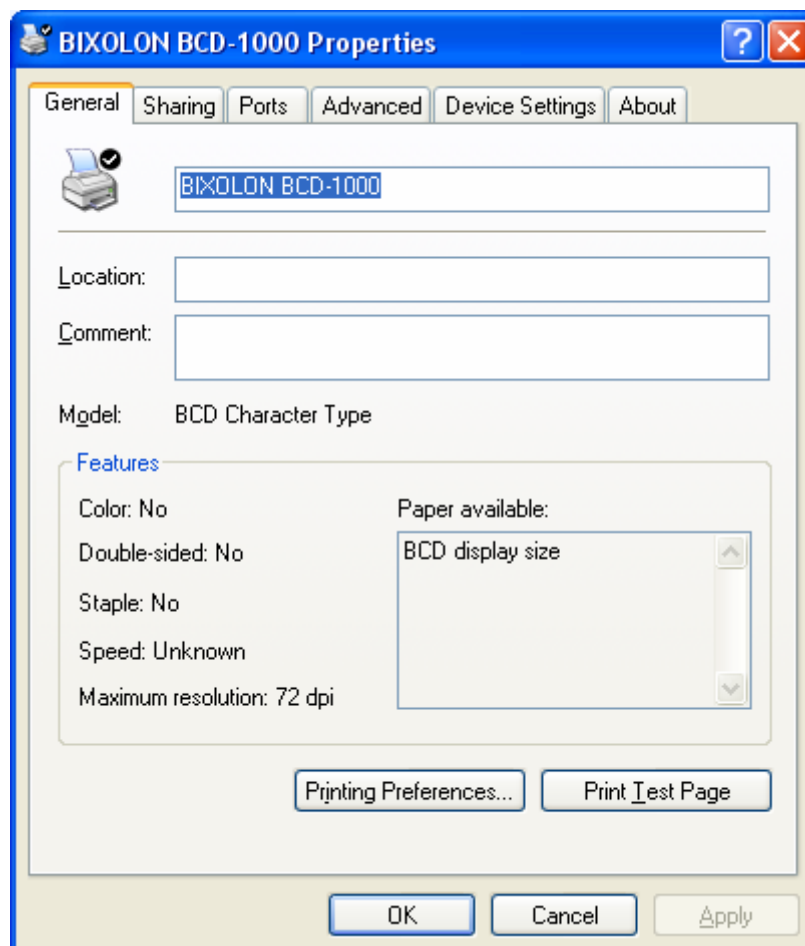
5-1 Brightness

The brightness available in the Windows Driver are as follows.

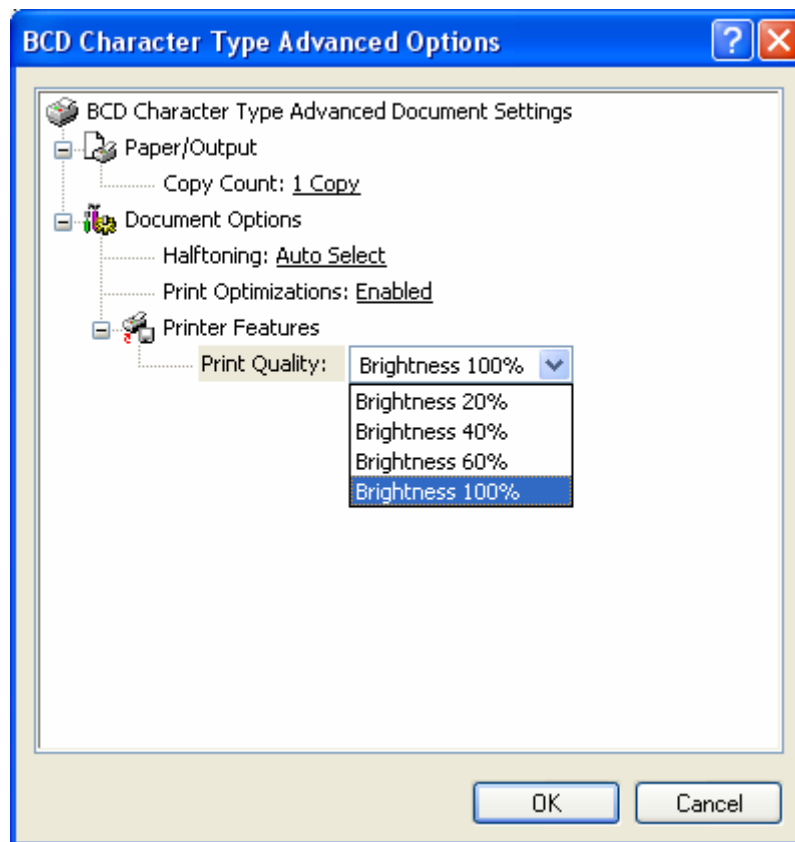
- Brightness 20%
- Brightness 40%
- Brightness 60%
- Brightness 100%

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.



6. Windows Driver Specifications

6-1 Specifications

	Specification
Driver name	BCD Character Type
Supported Printer font name	BCD 1st Line BCD 2nd Line
Supported Printer font name for special function	FontControl
Supported resolution	72 x 72
Supported paper size	BCD display size
Supported paper source	BCD 2line mode
Supported print Quality	Brightness 20% Brightness 40% Brightness 60% Brightness 100%

The Windows Driver of BCD Series supports the fonts listed below.

Driver Font	Sizes
BCD 1st Line	7
BCD 2nd Line	7
FontControl	7
FontControlA	7

Printer Fonts are defined as follows.

- 1) BCD 1st Line
 - Character is displayed in 1st line.
- 2) BCD 2nd Line
 - Character is displayed in 2nd line.

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 displaying function. Take special care.

Character	Special Function
a	Clear screen (CLS)
b	Clear 1st line (CAN for 1st line)
c	Clear 2nd line (CAN for 2nd line)
d	Screen is always lighting.
e	Screen is blinking at 10x50msec intervals.
f	Screen is blinking at 20x50msec intervals.
g	Screen is blinking at 40x50msec intervals.
h	Screen is blinking at 60x50msec intervals.
i	Put out light with saving displayed contents.
j	Set and display a counter time. (US T h m)
k	Display a counter. (US U)
l	Enable reversed character. (US r n)
m	Disable reversed character. (US r n)
n	Define macro process. (US :)
o	Do macro process. (US ^ n m, n =5 m=60)

1) Sample Use

If the “FontControl” font is selected and “a” is entered, the screen clearing operation is activated.

(Does not entail the printing of the character “a”)

6-3 Extended Special Functions

“FontControlA” font is provided as an inherent special function. By using with a command defined file (BCD.ini), you can designate a desired command string as the “FontControlA” font arbitrary character (a character code with a range between 20 to 7F). Details on how to use this are as follows: (Do not use “Read-only” file attribute.)

- FontControlA command defined file:
[File Name] BCD.ini
[Installation destination] The printer processor folder: The OS System32\Spool\Prtpprocs\W32x86 folder

- Description method:
Write descriptions similar to normal INI file format.
[Section Name]
Key_1=Data_1
Key_2=Data_2

Specify the Customer Display name as the section name.
E.g. [BCD-1000]

Specify each key in a hexadecimal character code corresponding to FontControlA font.
E.g. When “A” is specified for FontcontrolA font, write the key as 41=.

- * The range that can be specified for each key is 20 to 7F.

Specify each data as a hexadecimal command corresponding to the character code specified in FontcontrolA font.
E.g. When you want to send the initialization command (ESC @), write the data as 1B40.

- Sample description of an INI file:
[BCD-1000]
61=1F3AOC1F4500...
62=OC616263

6-4 Resolution

The resolution settings supported by BCD Character Type Driver are as follows

- 72 × 72

※ Note : In case of Character Type, graphic data is not displayed.

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 a customer display.

Sample programs are saved together if the Windows Driver is installed. Take note.

7-1-1 Windows Driver Selection

The following code is an example of the selection of the “BIXOLON BCD-1000” Windows Driver.

```
For Each prnPrinter In Printers
    If prnPrinter.DeviceName = "BIXOLON BCD-1000" Then
        Set Printer = prnPrinter
    Exit For
End If
Next
```

7-1-2 Text displaying

The following code displays a text string using a driver font. Each string gives the name and size of the font being used.

```
'Print in Windows font
Printer.FontSize = 7
Printer.FontName = "BCD 1st Line"
Printer.Print "BCD 1st Line"
Printer.EndDoc
```

7-1-3 Blinking the screen

The next example shows how to blink the screen at the desired interval.

```
Printer.FontSize = 7
Printer.FontName = "FontControl"

Printer.Print "e"
'Use special-function character to blink the screen.
'e: Screen is blinking at 10x50msec intervals.
'f: Screen is blinking at 20x50msec intervals.
'g: Screen is blinking at 40x50msec intervals.
'h: Screen is blinking at 60x50msec intervals.
Printer.EndDoc
```

7-1-4 Cleaning the screen

The next example shows how to clear the screen.

```
Printer.FontSize = 7
Printer.FontName = "FontControl"
Printer.Print "a".
Printer.EndDoc
```

7-2 Use of WordPad

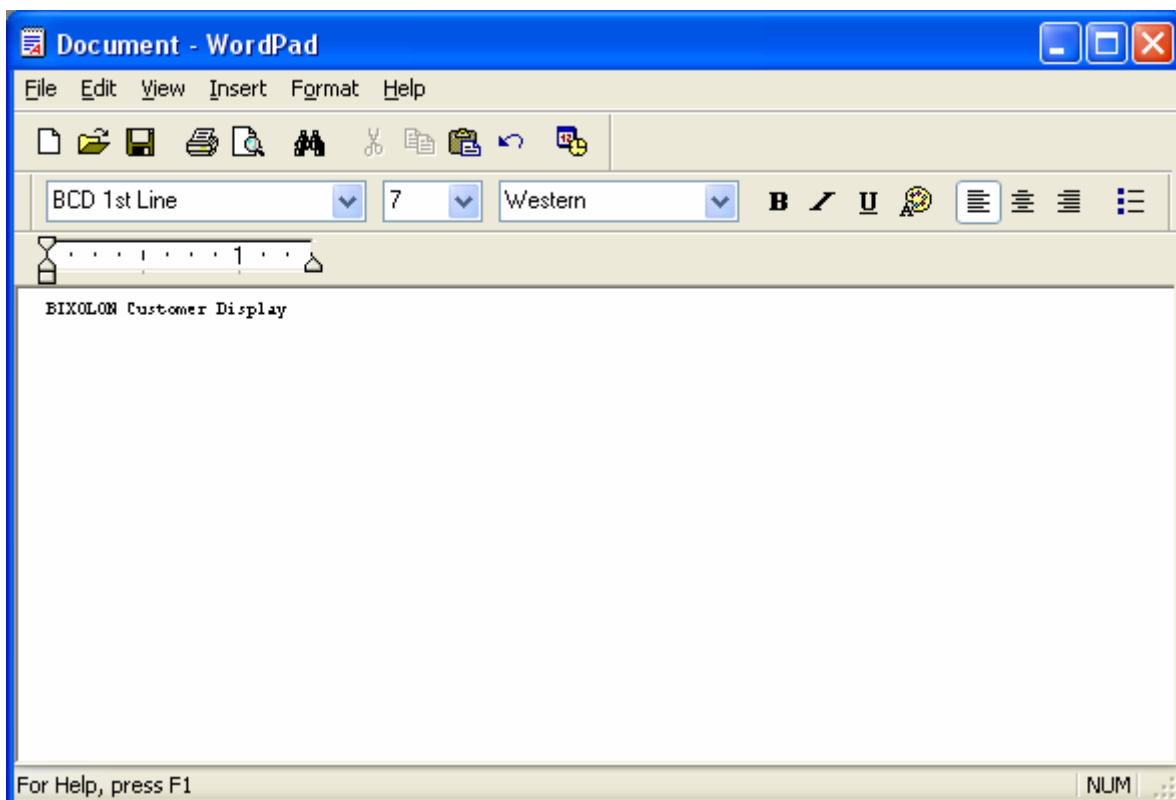
7-2-1 WordPad Environment Settings

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

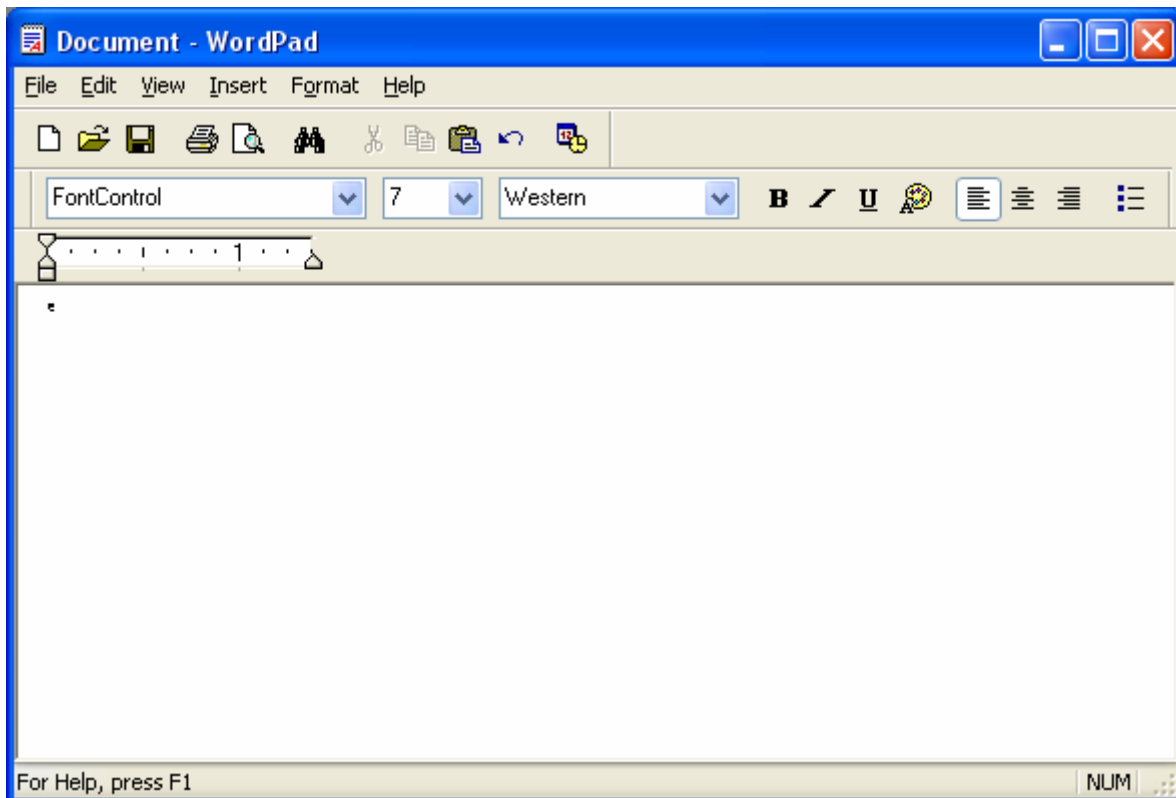
- Select Printer
After selecting "Print" from the "File" menu, select the customer display (BCD Series).
- Select Paper Size, Orientation, and Margins
After selecting "Page Setup" from the "File" menu, select the paper size, orientation, and margins.

7-2-2 Text displaying

Use the Windows Driver of the customer display to run a test.



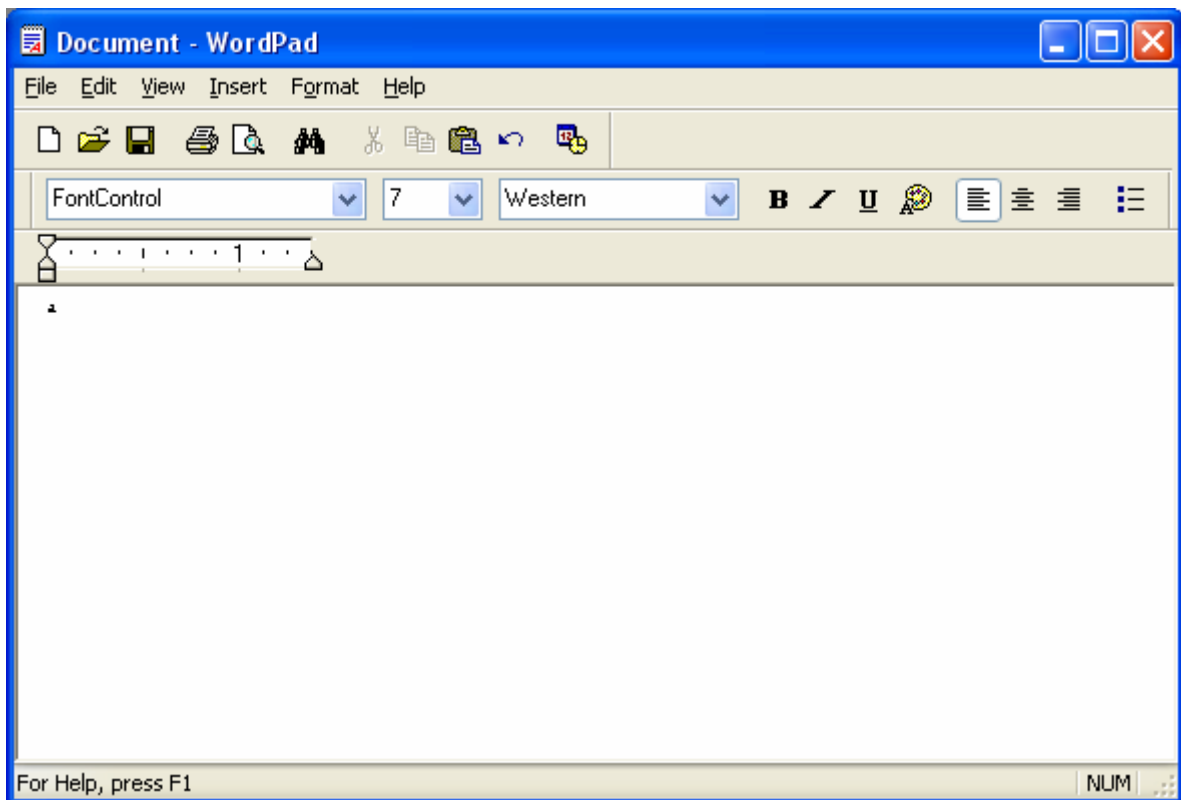
- 1) Select the font you wish to use from the font list.
- 2) Select the desired font size.
- 3) Enter the text to be displayed in Wordpad.
- 4) Click the Print button in the toolbar to print.

7-2-3 Blinking the screen

- 1) Select the "FontControl" font from the font list.
- 2) Set the font size to 7.
- 3) Enter "e" in Wordpad.
- 4) Click the Print button in the toolbar to print.

Clicking on Print will cause screen to be blinked at 10x50msec intervals. By changing the character that you input at Step 3, you can select a different interval. Refer to Section 6.2, "Special Functions," for a listing of characters and their functions.

7-2-4 Cleaning the screen



- 1) Select "FontControl" from the Font menu.
- 2) Set the font size to 7.
- 3) Enter "a" in Wordpad.
- 4) Click the Print button in the toolbar to print.