

Label Printer

TSP828L

Printer Driver Manual



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Introduction

This driver software runs on Windows 2000 (SP3 and later), XP, Vista and 7.

If your PC is connected to the TSP828L through the USB interface, to print from Windows applications, install the USB Printer Class Driver; to print from other applications, install the USB Vendor Class Driver.

Caution: To install or configure the printer software, log on to your PC as an administrator.

1. Installing/Uninstalling

If you have already installed a printer driver which the version is previous than this, you must first uninstall it before proceeding with installation of the driver software described here.

◆ Using USB Vendor Class Driver

If you have already installed a printer driver which the version is previous than this, and you want to use the USB Vendor Class Driver after installing this driver, the first thing you must do is to uninstall the previous driver. You must also update the USB Vendor Class Driver.

If you want to do so, please follow the following steps to install this driver.

- 1) Uninstalling the driver in previous version.
- 2) Installing this driver. (Refer to Page 1 or Page 11 *)
- 3) Updating the USB Vendor Class Driver. (Refer to Page 10 or Page 20 *)

* Refer to the supporting information of your operating system.

The installation steps vary according to the operating system. Therefore, refer to the section for the environment that you are using.

"1.1 Installing (Windows 2000/XP)"

"1.2 Installing (Windows Vista/7)"

1.1 Installing (Windows 2000/XP)

To install the driver, proceed as follows.

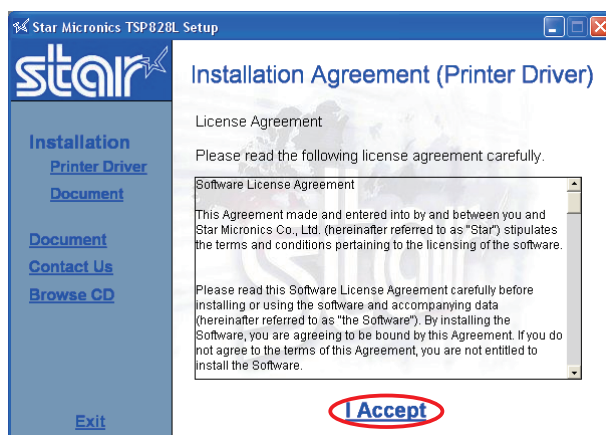
Note: If you are connecting to the printer by USB, do not turn the printer on yet. First carry out the steps under "1.1.1 Installing from CD". Then proceed to either "1.1.2 Installing the USB Printer Class Driver" or "1.1.4 Installing the USB Vendor Class Driver", and turn on the power when instructed to do so.

1.1.1 Installing from CD

- ① Insert the included CD-ROM into your PC's CD-ROM drive. If an Autorun confirmation dialog appears, click **Run Autorun.exe**. When the following window appears, click **Installation—Printer Driver**.

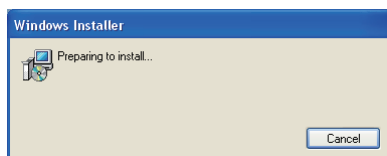


- ② Read the license agreement. If you agree with the terms and conditions of the agreement, click **I Accept**.

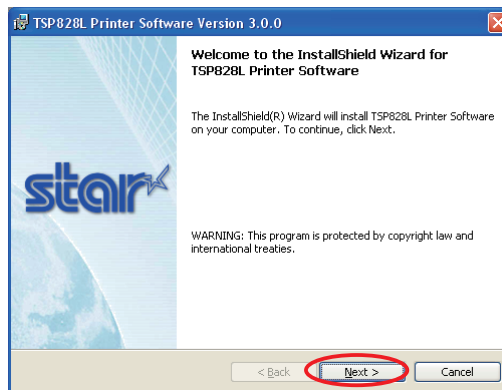


The following window appears, and the wizard prepares to start the installation.

The time required for installation may be longer than usual depending on the environment used.

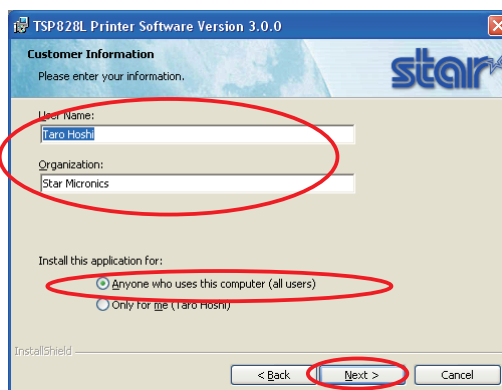


- ③ Click the **Next>** button to proceed.



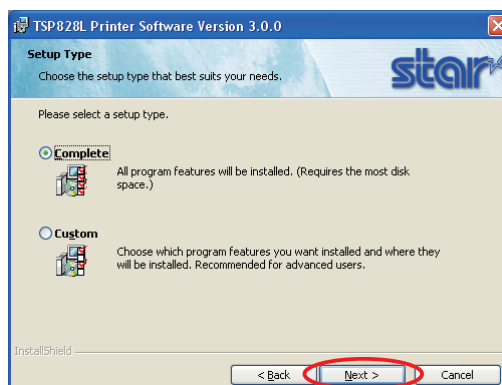
- ④ Type your user information.

After typing your user name and the name of your organization and selecting whether the installed program is to be available to all users of this computer or only to you, click the **Next>** button.

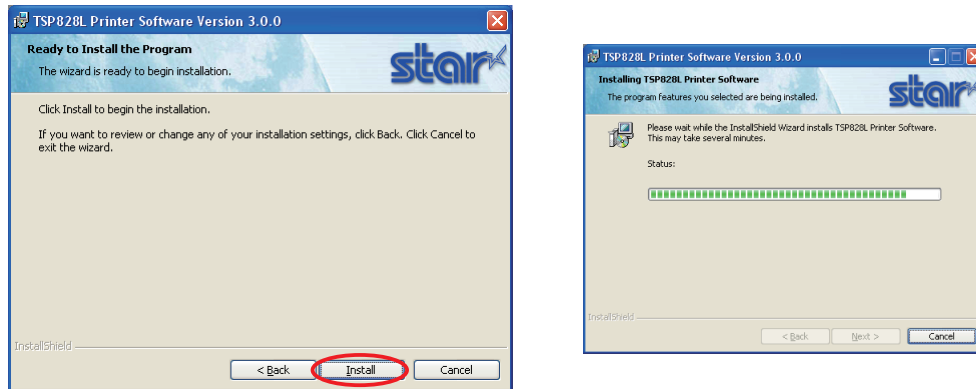


- ⑤ Select the type of setup.

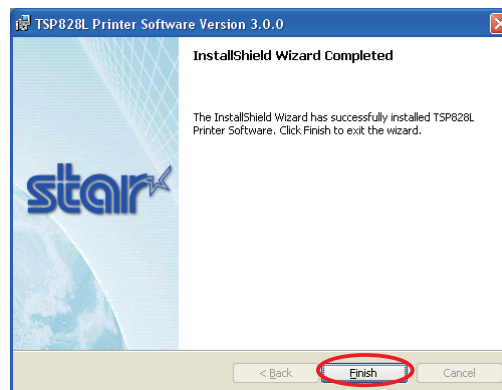
Select **Complete** to install all of the program's features, and then click the **Next>** button.



- ⑥ Click the **Install** button to begin the installation.



- ⑦ The wizard has completed installation of the program.
Click the **Finish** button to close the wizard.



- ⑧ Now install the driver software that matches your interface and intended use. Proceed to one of the following sections, in accordance with your needs:

- “1.1.2 Installing the USB Printer Class Driver”
- “1.1.3 Installing the Non-USB Printer Driver”
- “1.1.4 Installing the USB Vendor Class Driver”

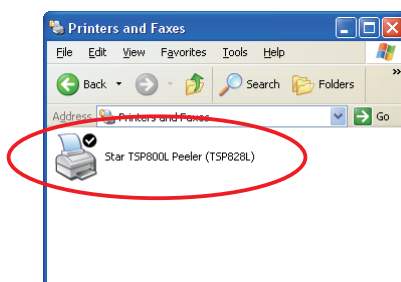
1.1.2 Installing the USB Printer Class Driver

To install the USB printer class driver, proceed as follows.

- ① Connect the printer, and then turn on the printer's power switch.
The computer's Plug and Play feature detects the connection of the printer hardware and automatically installs the driver software.
At this time, the following message will appear on the lower right of the Windows desktop.



- ② From the Windows Start menu, select **Printers and Faxes** and confirm that < **Star TSP828L Peeler (TSP828L)** > appears in the folder. If the appropriate printer appears there, installation was completed successfully.



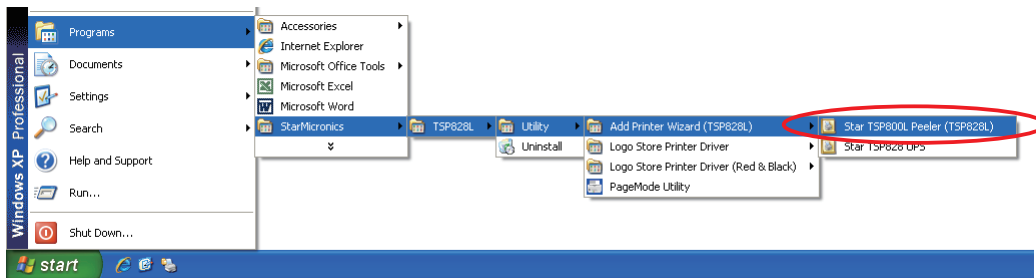
1.1.3 Installing the Non-USB Printer Driver

To install the non-USB driver, proceed as follows.

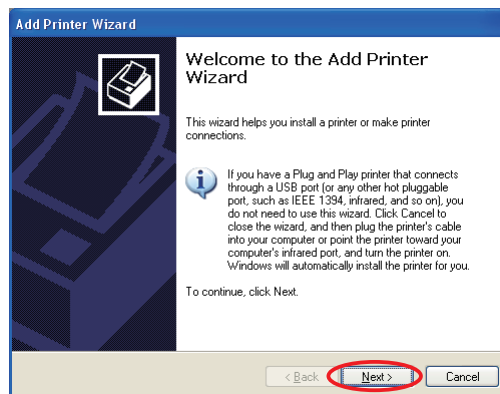
When using a Serial Interface or a TCP/IP interface, the port must be configured beforehand.

For details, "4.1 Notes for Printing via a Serial Interface" or "5.3. Setting up a TCP/IP Printer Port".

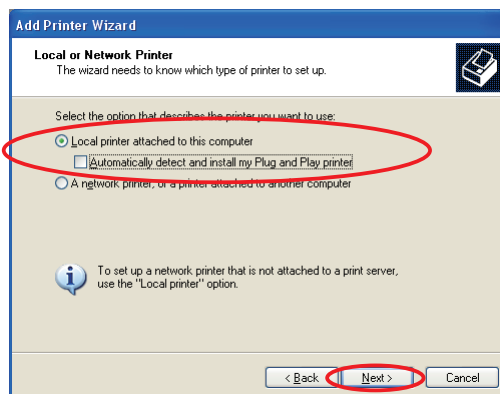
- ① From the Windows Start menu, select **Programs – StarMicronics – TSP828L – Utility – Add Printer Wizard (TSP828L) – Star TSP800L Peeler(TSP828L)**.



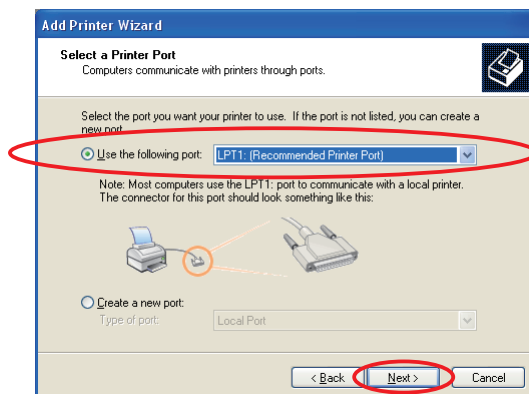
- ② In the **Add Printer Wizard** dialog box, click the **Next** button.



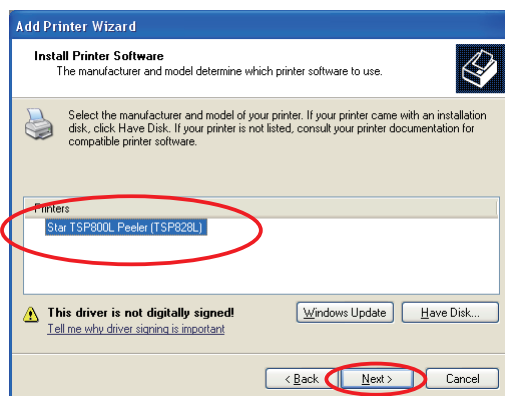
- ③ In the Local or Network Printer dialog box, select **Local printer attached to this computer** and uncheck **Automatically detect and install my Plug and Play printer**. Click the **Next** button to proceed.



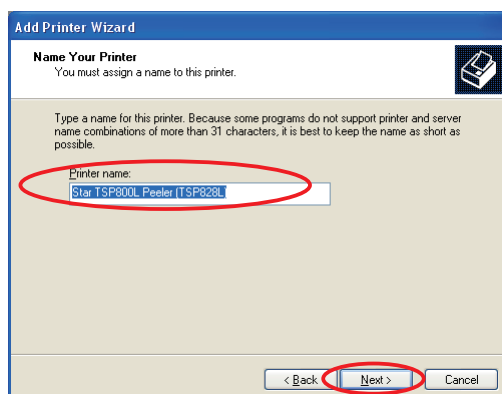
- ④ In the Select a Printer Port dialog box, select the port to use, and then click the **Next** button.



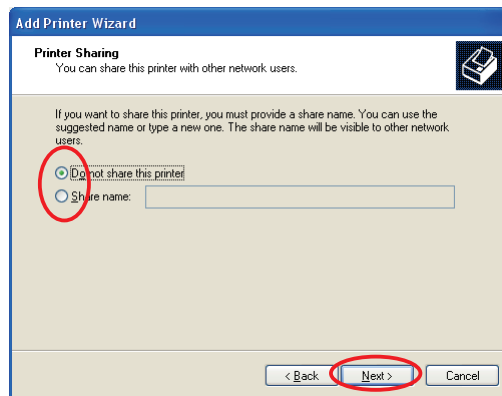
- ⑤ Select the printer to install, and then click the **Next** button.



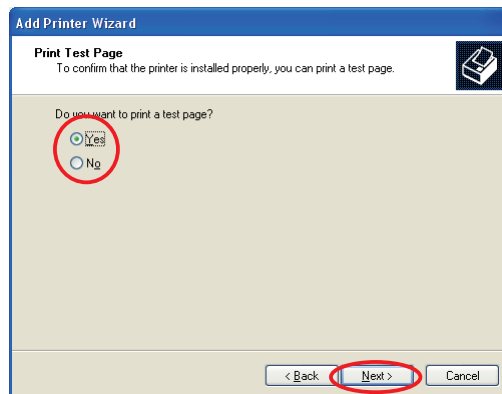
- ⑥ Specify the printer name that will be used after installation in Windows-based programs. Type the printer name if you wish to change it. Additionally, you may set the printer currently being installed as the default printer. Confirm the settings, and then click the **Next** button.



- ⑦ Make the appropriate printer-sharing settings, and then click the **Next** button.

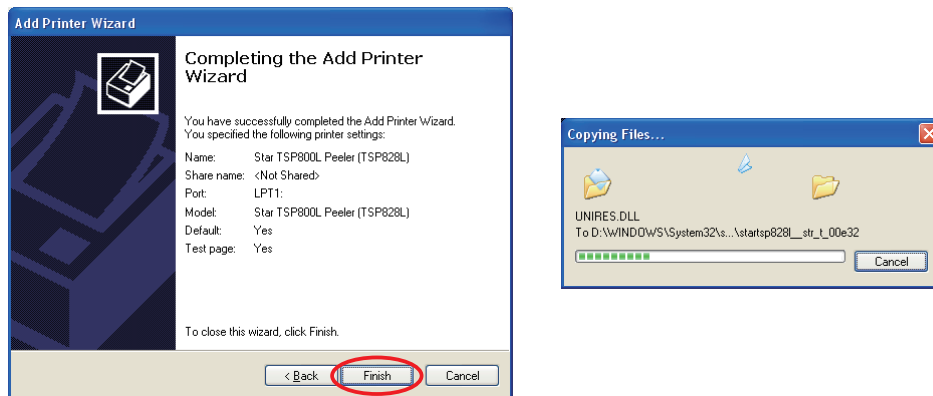


- ⑧ Select **Yes** to print a test page or **No** to not print one, and then click the **Next** button.

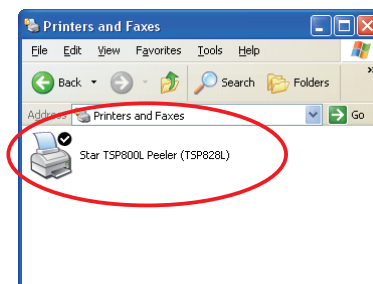


Note: When using a serial port, do not print the test page.
Confirm the printer and computer printer port settings when printing via a serial port.
For details, see "4.1 Notes for Printing via a Serial Interface" .

- ⑨ The settings are displayed. If the settings are correct, click the **Finish** button to add the printer.



- ⑩ From the Windows Start menu, select **Printers and Faxes** and confirm that **Star TSP828L Peeler (TSP828L)** appears in the folder. If the appropriate printer appears there, installation was completed successfully.



1.1.4 Installing the USB Vendor Class Driver

If you need to update your USB Vendor Class Driver, please refer to the following description.

◆ Updating the USB Vendor Class Driver

When you update your USB Vendor Class Driver, please refer to the separate volume of "USB Vendor Class Update Manual".

In doing this, you need to specify the following folders as the reference location for the driver updating. The reference location which is supported by each operating system is as following.

	Page	Specified folder
Windows 2000	P13 ⑨	Program Files\StarMicronics\TSP828L\UsbVendorClassDriver
Windows XP	P7 ⑦	Program Files\StarMicronics\TSP828L\UsbVendorClassDriver

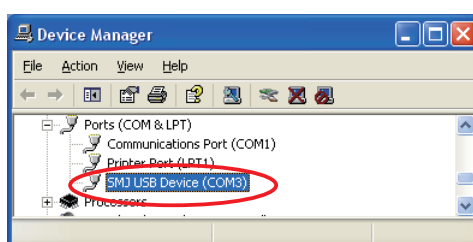
To install the USB vendor class driver, proceed as follows.

- ① At the printer, set DIP switch 1-5 to OFF. Then connect the printer to the computer, and turn on the printer's power.

The computer's Plug and Play feature detects the connection of the printer hardware and automatically installs the USB vendor class driver software.

Point! For information about the printer's DIP switches, refer to the Product Specifications Manual (issued separately).

- ② From the Start menu, select **Control Panel – System – Hardware – Device Manager** and confirm that **SMJ USB Device (COM*)** appears under **Ports (COM & LPT)**. If it does, installation has completed successfully.



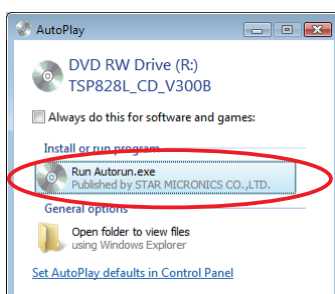
1.2 Installing (Windows Vista/7)

To install the driver, proceed as follows.

Note: If you are connecting to the printer by USB, do not turn the printer on yet. First carry out the steps under "1.2.1 Installing from CD". Then proceed to either "1.2.2 Installing the USB Printer Class Driver" or "1.2.4 Installing the USB Vendor Class Driver", and turn on the power when instructed to do so.

1.2.1 Installing from CD

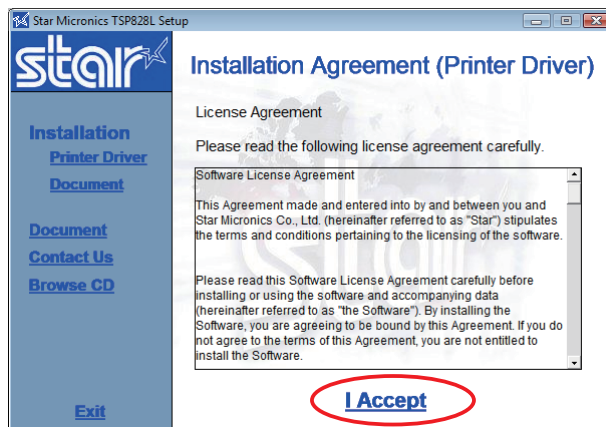
- ① Insert the CD-ROM that shipped with your printer into your computer.
In the following dialog box, click **Run Autorun.exe**.



- ② In the following dialog box, click **Installation - Printer Driver**.



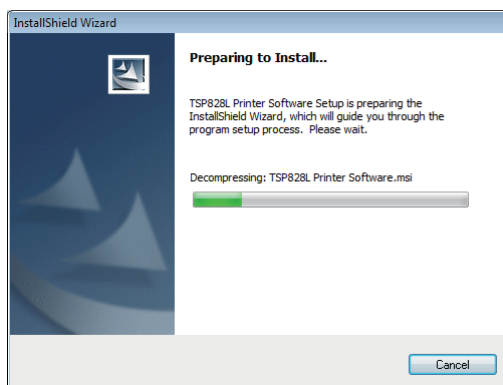
- ③ Read the license agreement. If you agree with the terms and conditions of the agreement, click **I Accept**.



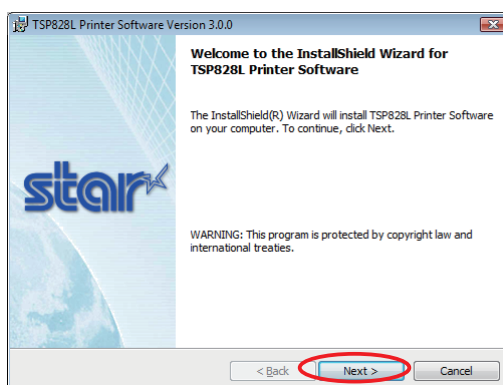
- ④ In the **User Account Control** dialog box, click the **Continue** or **Allow** button.

The following window appears, and the wizard prepares to start the installation.

The time required for installation may be longer than usual depending on the environment used.

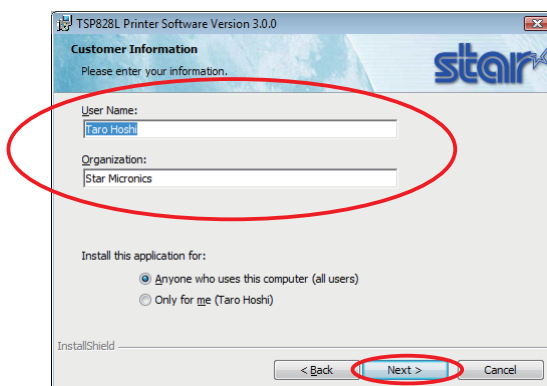


- ⑤ Click the **Next** button to proceed.

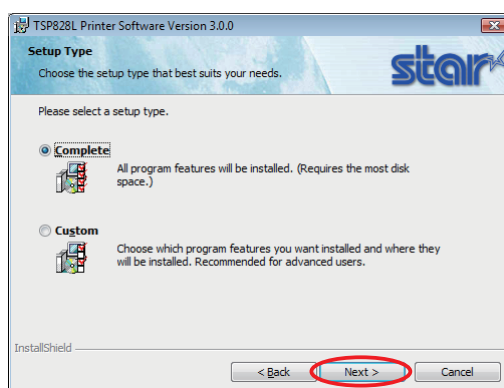


⑥ Type your user information.

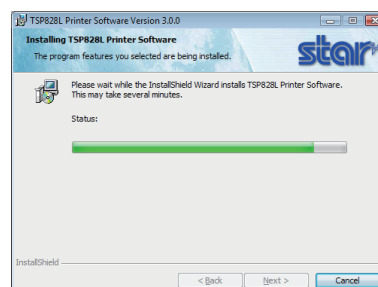
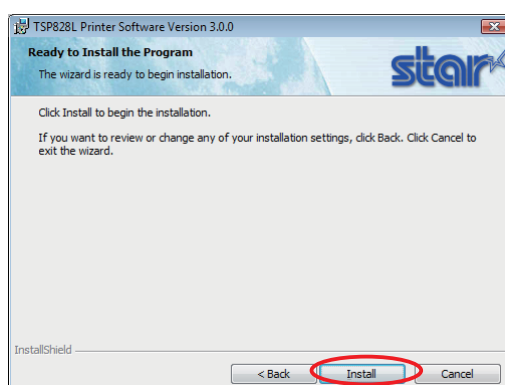
After typing your user name and the name of your organization and selecting whether the installed program is to be available to all users of this computer or only to you, click the **Next** button.



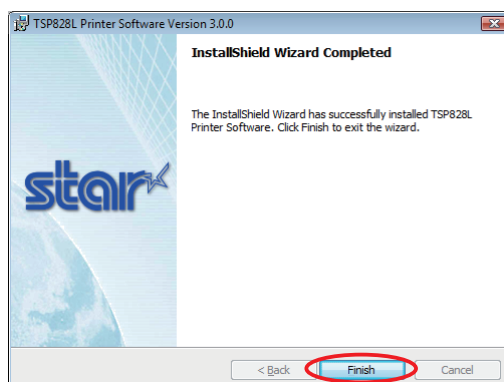
⑦ Select the setup type, either **Complete** or **Custom**. Use **Custom** if you wish to suppress installation of features that you do not need. Otherwise, select **Complete**. After selecting, click **Next**.



⑧ Click the **Install** button to begin the installation.



- ⑨ Software installation is now completed.
Click the **Finish** button to close the wizard.



- ⑩ Now install the driver software that matches your interface and intended use. Proceed to one of the following sections, in accordance with your needs:

“1.2.2 Installing the USB Printer Class Driver”

“1.2.3 Installing the Non-USB Printer Driver”

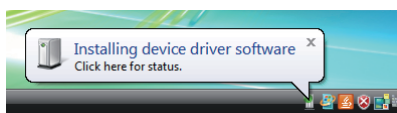
“1.2.4 Installing the USB Vendor Class Driver”

1.2.2 Installing the USB Printer Class Driver

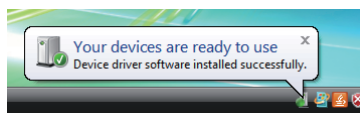
To install the USB printer class driver, proceed as follows.

- ① Connect the printer, and then turn on the printer's power switch.

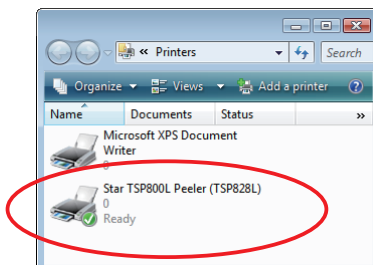
The Plug and Play feature detects the connection of the printer hardware and automatically installs the driver software.



If installation was completed successfully, the following message will appear on the lower right of the Windows desktop.



- ② On the taskbar, click Start. On Windows Vista, click **Control Panel**, and then click **Printer** to open the printer folder. On Windows 7, click **Devices and Printers** to open the printer folder. Confirm that **Star TSP828L Peeler (TSP828L)** appears in the folder. If the appropriate printer appears there, installation was completed successfully.



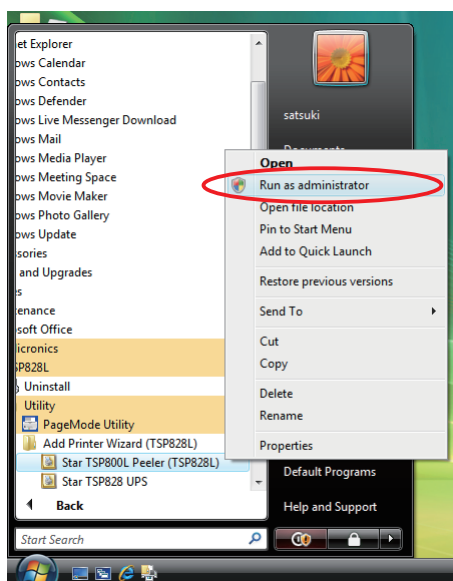
1.2.3 Installing the Non-USB Printer Driver

To add a printer, proceed as follows.

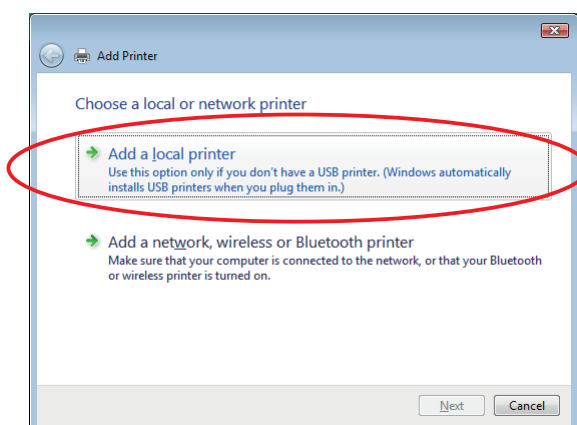
When using a Serial Interface or a TCP/IP interface, the port must be configured beforehand.

For details, see "4.1 Notes for Printing via a Serial Interface" or "5.3. Setting up a TCP/IP Printer Port".

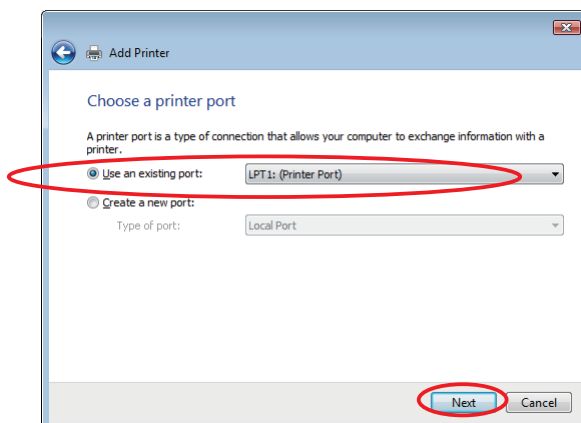
- ① From the Windows Start menu, select **All Programs – StarMicronics – TSP828L – Utility - Add Printer Wizard (TSP828L)** , right-click **Star TSP800L Peeler(TSP828L)**, and then select **Run as administrator**.



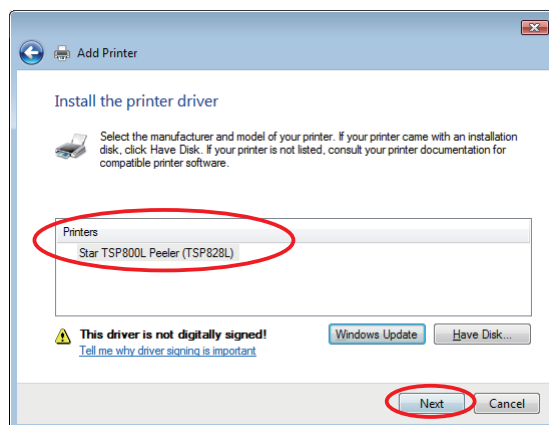
- ② In the **User Account Control** dialog box, click the **Continue** or **Yes** button.
- ③ In the Choose a local or network printer dialog box, click **Add a local printer**.



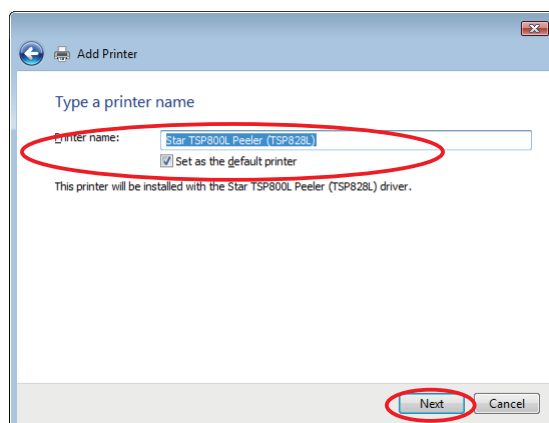
- ④ In the Choose a printer port dialog box, select the port to use, and then click the **Next** button.



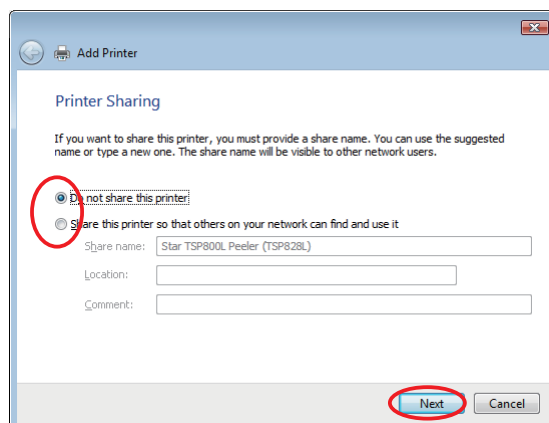
- ⑤ Select the printer to install, and then click the **Next** button.



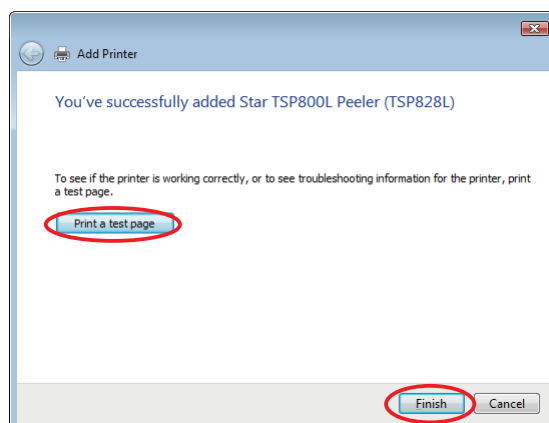
- ⑥ Specify the printer name that will be used after installation in Windows-based programs. Type the printer name if you wish to change it. Additionally, you may set the printer currently being installed as the default printer. Click the **Next** button to begin the installation.



- ⑦ Make the appropriate printer-sharing settings, and then click the **Next** button.



- ⑧ If installation was completed successfully, the following dialog box will appear. To print a test page, click the **Print a test page** button. Click the **Finish** button to complete the installation.

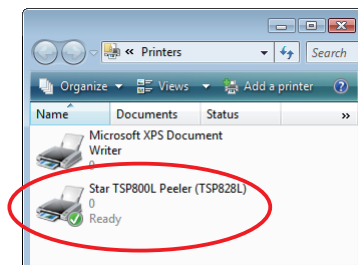


Note: When using a serial port, do not print the test page.

Confirm the printer and computer printer port settings when printing via a serial port.
For details, see "4.1 Notes for Printing via a Serial Interface".

- ⑨ On the taskbar, click Start. On Windows Vista, click **Control Panel**, and then click **Printer** to open the printer folder. On Windows 7, click **Devices and Printers** to open the printer folder.

Confirm that **Star TSP828L Peeler (TSP828L)** appears in the folder. If the appropriate printer appears there, installation was completed successfully.



1.2.4 Installing the USB Vendor Class Driver

If you need to update your USB Vendor Class Driver, please refer to the following description.

◆ Updating the USB Vendor Class Driver

When you update your USB Vendor Class Driver, please refer to the separate volume of "USB Vendor Class Update Manual".

In doing this, you need to specify the following folders as the reference location for the driver updating. The reference location which is supported by each operating system is as following.

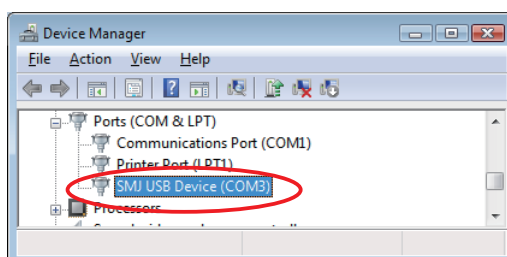
Page	Specified folder
P2 ⑤	Program Files\StarMicronics\TSP828L\UsbVendorClassDriver

To install the USB vendor class driver, proceed as follows.

- ① At the printer, set DIP switch 1-5 to OFF. Then connect the printer to the computer, and turn on the printer's power. The computer's Plug and Play feature detects the connection of the printer hardware and automatically installs the USB vendor class driver software.

Point! For information about the printer's DIP switches, refer to the Product Specifications Manual (issued separately).

- ② On the desktop, right-click the Computer icon, and then click **Manage** on the drop-down menu.
- ③ In the **User Account Control** dialog box, click the **Continue** or **Yes** button.
- ④ From the Start menu, select **Device Manager** and confirm that **SMJ USB Device (COM*)** appears under **Ports (COM & LPT)**. If it does, installation has completed successfully.



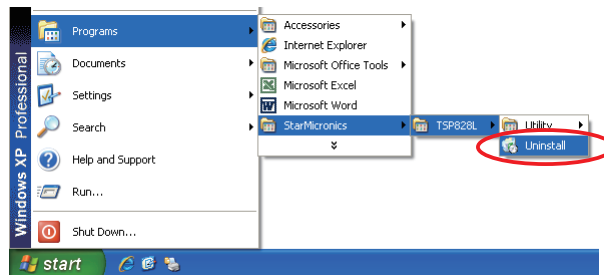
1.3 Uninstalling

1.3.1 Windows 2000/XP

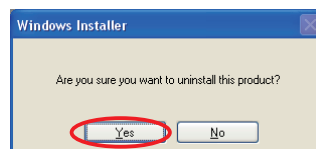
Point! When using a USB vendor class driver, read the "Readme_En.txt" file located in the CD-ROM.

To uninstall the driver, proceed as follows.

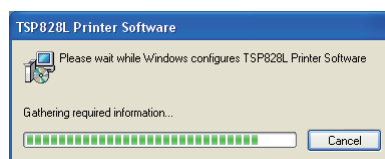
- ① Turn off the power switch of the TSP828L.
- ② From the Windows Start menu, select **Programs – StarMicronics – TSP828L – Uninstall**.



- ③ When the following confirmation dialog box appears, click the **Yes** button to continue.



- ④ The uninstaller launches to remove all of the TSP828L software from your computer.



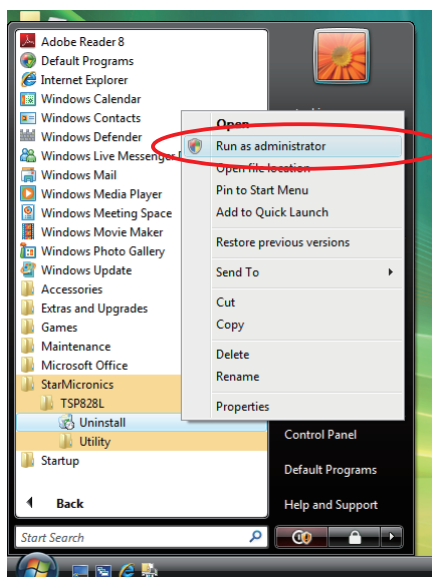
1.3.2 Windows Vista/7

To uninstall the driver, proceed as follows.

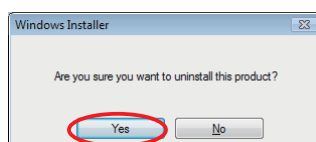
Note: Please do not uninstall the driver software using the Windows uninstaller (Control Panel - Programs and Features), as this will not fully uninstall the software.
Please uninstall by following the procedure below.

Point! When using a USB vendor class driver, read the "Readme_En.txt" file located in the CD-ROM.

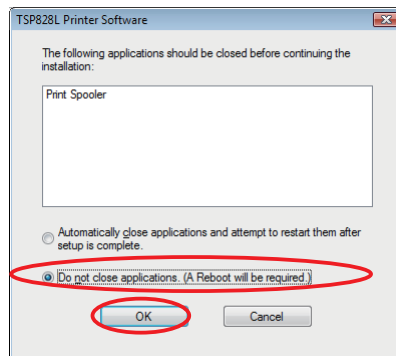
- ① Turn off the power switch of the TSP828L.
- ② From the Windows Start menu, select **Programs – StarMicronics – TSP828L**, right-click **Uninstall**, and then select **Run as administrator**.



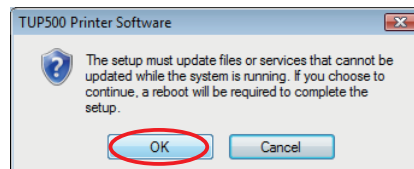
- ③ In the **User Account Control** dialog box, click the **Continue** or **Yes** button.
When the following confirmation dialog box appears, click the **Yes** button to continue.



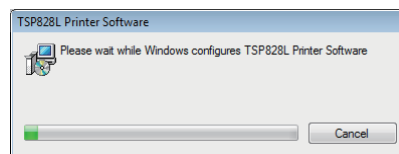
- ④ If the following window appears, select **Do not close applications**, and click **OK**.



- ⑤ If the following window appears, click **OK**.



- ⑥ The uninstaller launches to remove all of the TSP828L software from your computer.



2. Windows 2000/XP/Vista/7 Printer Driver Settings


The driver supports two print modes: **Raster** and **Line**.

Notable differences between these two modes are as follows.

- | | |
|---|---|
| <div style="border: 1px solid #0070C0; border-radius: 10px; padding: 2px 10px; display: inline-block; background-color: #0070C0; color: white; font-weight: bold;">Raster</div> | <ul style="list-style-type: none"> • Prints graphics at high speed. • Suitable for reverse printing. |
| <div style="border: 1px solid #990066; border-radius: 10px; padding: 2px 10px; display: inline-block; background-color: #990066; color: white; font-weight: bold;">Line</div> | <ul style="list-style-type: none"> • Supports device fonts. • Suitable for printing barcode device fonts. |

The main capabilities that can be set by this driver are as follows.

	Raster	Line
Paper Type	Yes	Yes
Label Detect at Power On	Yes	Yes
Page Feed Type	Yes	Yes
Document Feed Type	Yes	Yes
Print Speed	Yes	Yes
Print Density	Yes	Yes
Document Top/Bottom Logos	Yes	Yes
Page Top/Bottom Logos	No	Yes
2-Color Printing	Yes	No
Device Font	No	Yes
Control Font	No	Yes
Barcode Font	No	Yes
2-Dimensional Barcodes	No	Yes

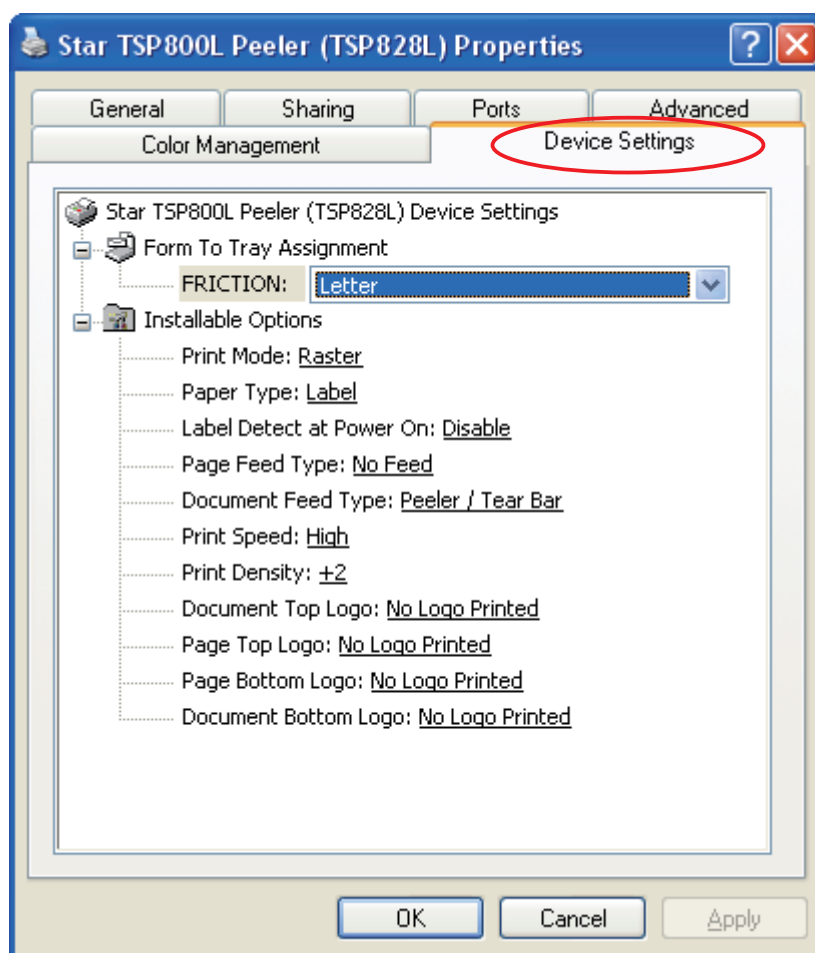
Note: Some of the above operations are mutually exclusive. If a  mark appears in the Device Settings tab, refer to Section 3.2 and recheck your settings.

Point! Operational settings may not work as expected if you switch between Raster and Line mode while your application is still running. Please restart the application after switching the mode.

2.1 Setting the Printer

Using the printer's Properties dialog box, you can set various functions of this driver. Begin by opening the Properties dialog box, as follows.

- ① On the taskbar, click Start. On Windows 2000 and XP, click **Printers and Faxes**. On Windows Vista, click **Control Panel**, and then click **Printers**. On Windows 7, click **Devices and Printers**.
- ② Right-click the **TSP828L** printer icon to display the drop-down menu. On Windows 2000 and XP, click **Properties**. On Windows Vista, click **Run as administrator**, and then click **Properties**. On Windows 7, click **Printer properties**.
- ③ If you are using Windows Vista, the **User Account Control** dialog appears. Click **Continue**.
- ④ At the **Properties** dialog, click the **Device Settings** tab.



Point! Available device settings vary according to whether operation is in Raster or Line .

In the following explanations, **Raster** and **Line** appear to the right of the setting name to indicate the mode to which the setting applies.

2.2 Explanation of Device Settings

• Print Mode

Raster

Line

Sets the print mode. For details of each mode, refer to "2. Windows 2000/XP/Vista/7 Printer Driver Settings".

Setting	Default	Meaning
Raster	<input type="radio"/>	Sets Raster mode.
Line	<input type="radio"/>	Sets Line mode.

• Setting the Paper Type

Raster

Line

Changes the paper type setting.

Setting	Default	Meaning
Label	<input type="radio"/>	Select this to print labels.
Receipt	<input type="radio"/>	Variable length: the printer does not output white-space padding at the end of the page data.
Ticket	<input type="radio"/>	Fixed length: the printer outputs white-space padding up to the end of the fixed-length page.

• Label Detect at Power On

Raster

Line

If the printer's DIP switches 1-8 are set to OFF (normal mode), the paper type is set to **Label**, and this feature is set to **Enable**, the first time you print after you turn on the power or after you set the paper type to Label, the printer will feed the paper to the top position of the label on the next page if the paper in the printer is in the middle of a label.

This setting is effective only in Label Paper Type.

Setting	Default	Meaning
Disable	<input type="radio"/>	On the first printing, the printer does not feed the paper by detecting the label position.
Enable	<input type="radio"/>	On the first printing, the printer feed the paper by detecting the label position.

Note: This setting is not available if the paper type is set to **Receipt** or **Ticket**.

Point! If you set the printer's DIP switches 1-8 to ON (Label mode; the factory default setting), the printer always detects the label position.
For information about the printer's DIP switches, refer to the Product Specifications Manual (issued separately).

• Page Feed Type

Raster

Line

This sets the paper feed method for the end of all pages, excluding the last page.
When the printer is set to use the Peel Mode, paper is fed regardless of the Page Feed Type settings.

Setting	Default	Meaning
No Feed	○	The paper feed operation is not performed.
Peeler / Tear Bar		Paper is fed to the Tear Bar (cutting position).

Note: Refer to the separate Hardware Manual for the setting of the peel mode.

• Document Feed Type

Raster

Line

This sets the paper feed method for the last page.
When the printer is set to use the Peel Mode, paper is fed regardless of the Document Feed Type settings.

Setting	Default	Meaning
No Feed	○	The paper feed operation is not performed.
Peeler / Tear Bar		Paper is fed to the tear bar (Cutting position).

Note: Refer to the separate Hardware Manual for the setting of the peel mode.

• Print Speed

Raster

Line

Sets the print speed. Note that the setting also affects the print quality.

Setting	Default	Meaning
High	○	Priority is given to print speed over print quality.
Middle		Sets print quality and print speed to intermediate level.
Low		Provides the highest print quality but lowers print speed.

Note: When setting up color printing, this density setting has no effect on black print density (which is fixed).

• Print Density

Raster

Line

Sets the print density.

Setting	Default	Meaning
-3 to -1		Larger value with – (minus) makes print density lighter.
Standard		Prints with normal density.
+1 to +3	○ (+2)	Larger value with + (plus) makes print density darker.

• Document Top Logo

Line

The NV logos are identified by their NV logo (image list) numbers. To select a top-of-document logo, choose the appropriate logo number. Before making this setting, you must load NV logos into the printer's nonvolatile memory.

Setting	Default	Meaning
No Logo Printed	○	No logo printed at the document top.
Print Logo 1, ..., 10		Prints the selected logo at the document top.

Note: This setting is effective only in Line print mode.

• Page Top Logo

Line

The NV logos are identified by their NV logo (image list) numbers. To select a top-of-page logo, choose the appropriate NV logo (image list) number. Before making this setting, you must load NV logos into the printer's nonvolatile memory.

Setting	Default	Meaning
No Logo Printed	○	No logo printed at the page top.
Print Logo 1, ..., 10		Prints the selected logo at the page top.

Note: This setting is effective only in Line print mode.

• Page Bottom Logo

Line

The NV logos are identified by their NV logo (image list) numbers. To select the bottom-of-page logo, choose the appropriate NV logo (image list) number. Before making this setting, you must load NV logos into the printer's nonvolatile memory.

Setting	Default	Meaning
No Logo Printed	○	No logo printed at the page bottom.
Print Logo 1, ..., 10		Prints the selected logo at the page bottom.

Note: This setting is effective only in Line print mode.

• Document Bottom Logo

Line

The NV logos are identified by their NV logo (image list) numbers. To select the bottom-of-document logo, choose the appropriate NV logo (image list) number. Before making this setting, you must load NV logos into the printer's nonvolatile memory.

Setting	Default	Meaning
No Logo Printed	○	No logo printed at the document bottom.
Print Logo 1, ..., 10		Prints the selected logo at the document bottom.

Note: This setting is effective only in Line print mode.

2.3 Setting the Paper Size

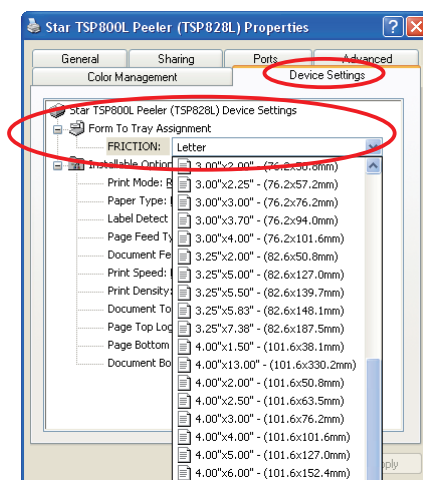
Raster

Line

This drivers let you use both preset standard sizes and custom, user-defined sizes.

2.3.1 Standard Sizes

The paper size can be selected separately for each driver. To proceed, open the driver's Properties window and click the **Device Settings** tab.



Paper sizes are classified into the A group mainly for receipt paper and ticket paper, and the B group mainly for label paper.

◆ A Group (Mainly Receipt paper and Ticket paper)

Built-in Paper Sizes	Default	Print Range		Margins (Left/Right/Top/Bottom)
		Width	Height	
104mm × 200mm		104mm	200mm	0mm
104mm × Receipt		104mm	*OS's maximum print height	0mm
A4		210mm	297mm	0mm
Letter	○	8.5 inch	11 inch	0mm
50.8mm × 200mm		50.8mm	200mm	0mm
50.8mm × Receipt		50.8mm	*OS's maximum print height	0mm
52.5mm × 200mm		52.5mm	200mm	0mm
52.5mm × Receipt		52.5mm	*OS's maximum print height	0mm
72mm × 200mm		72mm	200mm	0mm
72mm × Receipt		72mm	*OS's maximum print height	0mm

* In general, the operating system's maximum print height is about 3 m (3,000 mm).

Point! Please be sure to set a print width that is smaller than the paper width, so as to allow for margins.

◆ **B Group** (Mainly Label paper)

Built-in Paper Size	Print Range		Margins (mm)			
	Width(mm)	Height(mm)	Left	Right	Top	Bottom
Internet Postage - 3.29" x 3.5"	78.6	82.9	2.5	2.5	3	3
2.00" x 1.37" - (50.8 x 34.8mm)	45.8	28.8	2.5	2.5	3	3
2.00" x 1.50" - (50.8 x 38.1mm)	45.8	32.1	2.5	2.5	3	3
2.00" x 2.00" - (50.8 x 50.8mm)	45.8	44.8	2.5	2.5	3	3
2.00" x 4.00" - (50.8 x 101.6mm)	45.8	95.6	2.5	2.5	3	3
2.20" x 2.00" - (55.9 x 50.8mm)	50.9	44.8	2.5	2.5	3	3
2.20" x 3.00" - (55.9 x 76.2mm)	50.9	70.2	2.5	2.5	3	3
2.20" x 4.00" - (55.9 x 101.6mm)	50.9	95.6	2.5	2.5	3	3
2.25" x 1.37" - (57.1 x 34.8mm)	52.1	28.8	2.5	2.5	3	3
2.25" x 2.00" - (57.1 x 50.8mm)	52.1	44.8	2.5	2.5	3	3
2.25" x 3.00" - (57.1 x 76.2mm)	52.1	70.2	2.5	2.5	3	3
2.25" x 4.00" - (57.1 x 101.6mm)	52.1	95.6	2.5	2.5	3	3
2.25" x 5.50" - (57.1 x 139.7mm)	52.1	133.7	2.5	2.5	3	3
2.38" x 5.50" - (50.8 x 139.7mm)	55.4	133.7	2.5	2.5	3	3
2.50" x 2.00" - (63.5 x 50.8mm)	58.5	44.8	2.5	2.5	3	3
3.00" x 2.00" - (76.2 x 50.8mm)	71.2	44.8	2.5	2.5	3	3
3.00" x 2.25" - (76.2 x 57.2mm)	71.2	51.2	2.5	2.5	3	3
3.00" x 3.00" - (76.2 x 76.2mm)	71.2	70.2	2.5	2.5	3	3
3.00" x 3.70" - (76.2 x 94.0mm)	71.2	88.0	2.5	2.5	3	3
3.00" x 4.00" - (76.2 x 101.6mm)	71.2	95.6	2.5	2.5	3	3
3.25" x 2.00" - (82.6 x 50.8mm)	77.6	44.8	2.5	2.5	3	3
3.25" x 5.00" - (82.6 x 127.0mm)	77.6	121.0	2.5	2.5	3	3
3.25" x 5.50" - (82.6 x 139.7mm)	77.6	133.7	2.5	2.5	3	3
3.25" x 5.83" - (82.6 x 148.1mm)	77.6	142.1	2.5	2.5	3	3
3.25" x 7.38" - (82.6 x 187.5mm)	77.6	181.5	2.5	2.5	3	3
4.00" x 1.50" - (101.6 x 38.1mm)	96.6	32.1	2.5	2.5	3	3
4.00" x 2.00" - (101.6 x 50.8mm)	96.6	44.8	2.5	2.5	3	3
4.00" x 2.50" - (101.6 x 63.5mm)	96.6	57.5	2.5	2.5	3	3
4.00" x 3.00" - (101.6 x 76.2mm)	96.6	70.2	2.5	2.5	3	3
4.00" x 4.00" - (101.6 x 101.6mm)	96.6	95.6	2.5	2.5	3	3
4.00" x 5.00" - (101.6 x 127.0mm)	96.6	121.0	2.5	2.5	3	3
4.00" x 6.00" - (101.6 x 152.4mm)	96.6	146.4	2.5	2.5	3	3
4.00" x 6.25" - (101.6 x 158.8mm)	96.6	152.8	2.5	2.5	3	3
4.00" x 6.50" - (101.6 x 165.1mm)	96.6	159.1	2.5	2.5	3	3
4.00" x 8.00" - (101.6 x 203.2mm)	96.6	197.2	2.5	2.5	3	3
4.00" x 13.00" - (101.6 x 330.2mm)	96.6	324.2	2.5	2.5	3	3

2.3.2 User-Defined Paper Settings

Raster

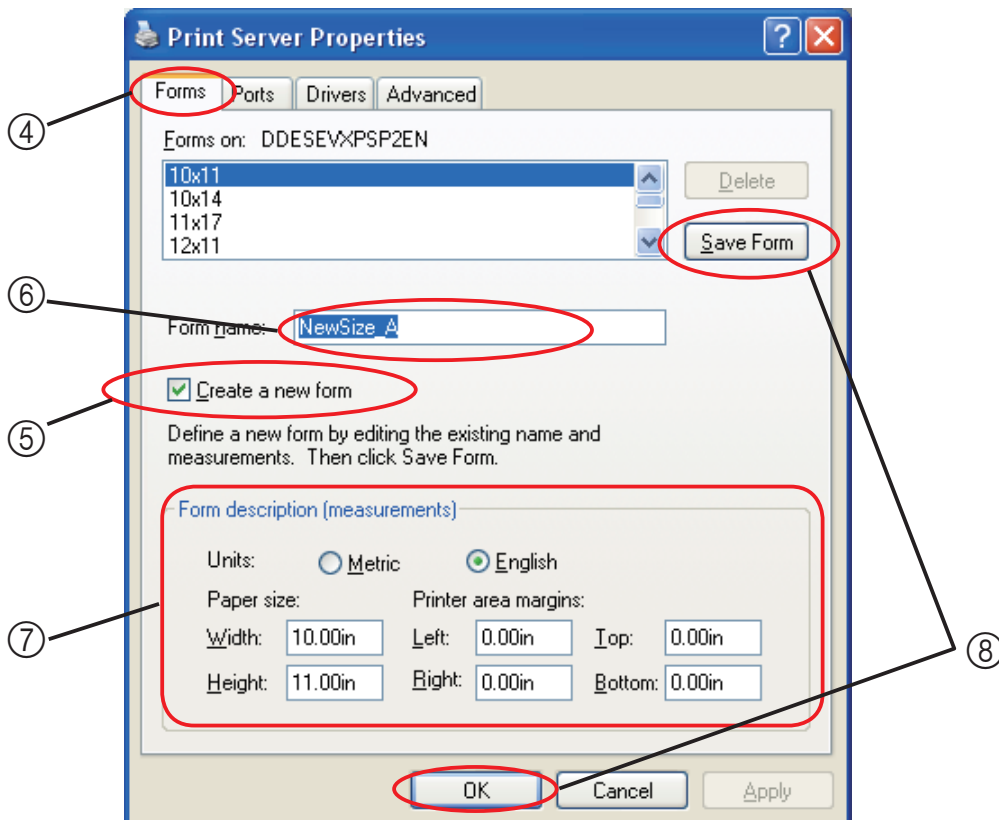
Line

The paper size that will be used can be defined. The procedure is as follows.

- ① On the taskbar, click Start. On Windows 2000 and XP, click **Printers and Faxes**. On Windows Vista, click **Control Panel**, and then click **Printers**. On Windows 7, click **Devices and Printers**.
- ② On Windows 2000, XP, and Vista, right-click a blank area in the Printers folder to display the drop-down menu. On Windows 2000 and XP, click **Server Properties**. On Windows Vista, click **Run as administrator**, and then click **Server Properties**. On Windows 7, select the printer icon, and click **Printer server properties** on the menu-bar.
- ③ If you are using Windows Vista, the **User Account Control** dialog appears. Click **Continue**.
- ④ Click the **Forms** tab.
- ⑤ If you are using Windows 7, click **Change Form Settings** button.
- ⑥ Select the **Create a new form** check box.
- ⑦ In the **Form name** textbox, overwrite the current name with a new name for the custom size you are defining.
- ⑧ In the **Form description (measurements)** area, select the appropriate Units and type the desired **Width** and **Height** settings.

Note: Set all four margins (left, right, top, and bottom) to "0".

- ⑨ Click the **Save Form** button. Click the **OK** button to close the dialog box.



Available paper sizes are as follows.

Width		Height	
Minimum	Maximum	Minimum	Maximum
30.0 mm	104.0 mm	25.4 mm	*OS's maximum print height

* In general, the operating system's maximum print height is about 3 m (3,000 mm).

Point! User-defined sizes are available to all drivers that can support the dimensions (as indicated in the table).

2.4 Setting the Print Color and Paper Type

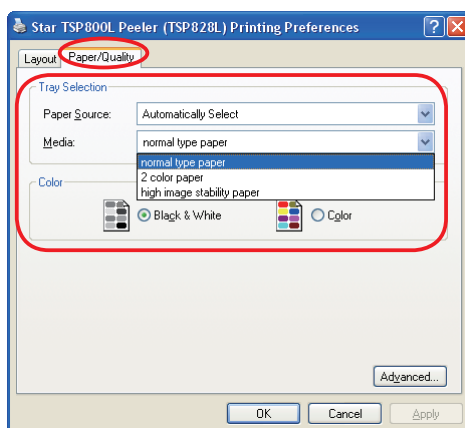
Raster

This printer driver's Raster mode supports two-color printing. This section explains how to set up color printing, and how to set the printer to print on special paper types.

- ① On the taskbar, click Start. On Windows 2000 and XP, click **Printers and Faxes**. On Windows Vista, click **Control Panel**, and then click **Printers**. On Windows 7, click **Devices and Printers**.
- ② Right-click the printer icon that you wish to set. In the drop-down menu, click **Printing Preference**.
- ③ Click the **Paper/Quality** tab.

Select the paper type appropriate for the specified print color.

Selecting the paper type and print color:



◆ For normal monochrome printing (Standard thermal paper)

- Media : Select **normal type paper**.
- Color : Select check button of **Black & White**.

◆ For color printing (2-color thermal paper)

- Media : Select **2 color paper**.
- Color : Select check button of **Color**.

◆ For printing on special paper (dense black printing; some special high-stability papers)

- Media : Select **high image stability paper**.
- Color : Select check button of **Black & White**.

3. Device Fonts

Line

This printer driver provides device fonts that can be used during operation in Line mode.

The printer driver supports a variety of device fonts that are installed on the printer. Printer fonts come in several font sizes and produce clearer printing than TrueType fonts. Barcode fonts and two-dimensional code fonts can be used to generate and print barcodes and two-dimensional codes of a variety of standards and sizes through the use of special codes. Control fonts can be used to control the printer through the embedding of character-based commands in print jobs.

3.1 Device Fonts List

The following table contains the device fonts that the printer driver supports. To use the device fonts, specify the font and the appropriate font size (in points) in the application's format settings. In Microsoft Word and Excel, the height of 24 pixels equals 8.5 points.

Fonts	Width (pixels)	Height (pixels)	Columns at 72 mm (576 dots)	Meaning
Printer 17cpi	12	24	48	Printer fonts (ANK Fonts)
Printer 8.5cpi	24	24	24	
Printer 17cpi Tall	12	48	48	
Printer 8.5cpi Tall	24	48	24	
Printer 16cpi	13	24	44	
Printer 8cpi	26	24	22	
Printer 16cpi Tall	13	48	44	
Printer 8cpi Tall	26	48	22	
Printer 14cpi	15	24	38	
Printer 7cpi	30	24	19	
Printer 14cpi Tall	15	48	38	
Printer 7cpi Tall	30	48	19	
Printer 17cpi (RED)	12	24	48	
Printer 8.5cpi (RED)	24	24	24	
Printer 17cpi Tall (RED)	12	48	48	
Printer 8.5cpi Tall (RED)	24	48	24	
Printer 16cpi (RED)	13	24	44	
Printer 8cpi (RED)	26	24	22	
Printer 16cpi Tall (RED)	13	48	44	
Printer 8cpi Tall (RED)	26	48	22	
Printer 14cpi (RED)	15	24	38	
Printer 7cpi (RED)	30	24	19	
Printer 14cpi Tall (RED)	15	48	38	
Printer 7cpi Tall (RED)	30	48	19	

Fonts	Width (pixels)	Height (pixels)	Columns at 72 mm (576 dots)	Meaning
Printer 14cpi (RED)	15	24	38	Printer fonts (ANK Fonts)
Printer 7cpi (RED)	30	24	19	
Printer 14cpi Tall (RED)	15	48	38	
Printer 7cpi Tall (RED)	30	48	19	
UPC-E	12	24	48	Barcode fonts
UPC-A	12	24	48	
JAN/EAN-8	12	24	48	
JAN/EAN-13	12	24	48	
CODE39	12	24	48	
ITF	12	24	48	
NW-7(Codabar)	12	24	48	
QR-CNTL	1	24	576	two-dimensional code fonts
PDF417	1	24	576	
DATA1	1	24	576	
DATA2	1	24	576	
DATA3	1	24	576	
Control	12	24	48	Control fonts
ESC_FONT	1	24	576	

3.2 Barcode Fonts

Line

This printer driver's barcode fonts are available for use during operation in Line mode.

Select barcode fonts and enter the code to generate and print the barcode.

When printing a barcode image is printed, and then notations are printed under the barcode image.

Barcode images do not appear in the window of the application.

3.2.1 Barcode Font List

The table below shows supported types of barcode fonts and available types of characters.

Barcode Type	Character Columns	Available Character Set
UPC-E	12 columns	Value: 0 to 9
UPC-A	12 columns	Value: 0 to 9
JAN/EAN-8	8 columns	Value: 0 to 9
JAN/EAN-13	13 columns	Value: 0 to 9
CODE39	More than 1 column	Value: 0 to 9 Symbol: -, ., <SP>, \$, /, +, % Alphabet: A to Z Start/stop code: * (*1)
ITF	More than 2 column (even number)	Value: 0 to 9
NW-7 (Codabar)	More than 1 column	Value: 0 to 9 Symbol: -, \$, :, /, ., +, Alphabet: A to D

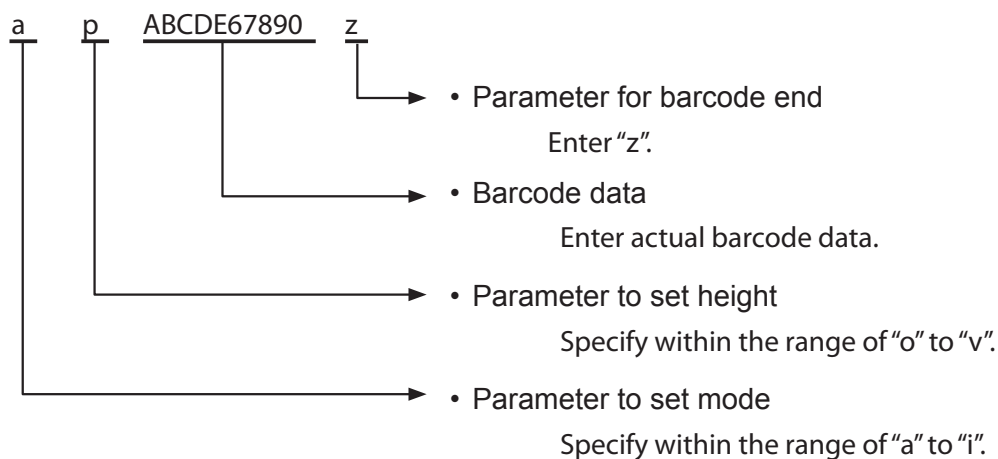
*1) Start/stop code is automatically entered, so there is no need to specify it when entering the code.

3.2.2 Entering the Barcode Font

Barcode fonts consist of the following parameters that are combined together: the parameter to set mode, the parameter to set height, the barcode data, and the parameter for barcode end.

Example: To generate the barcode for '0123ABC' using **CODE39** (2 dot mode, 8 mm height)

Data to enter: apABCDE67890z



Print Sample :



For details of each parameter, refer to "**3.2.3 Barcode Font Parameter List**".

3.2.3 Barcode Font Parameter List

◆ Parameter to set Minimum module width

Character to use barcode	UPC-E, UPC-A JAN/EAN-8, JAN/EAN-13	CODE39 NW-7 (*1)	ITF (*1)
a	2 dots	2 dots (6)	2 dots (5)
b	3 dots	3 dots (9)	4 dots (10)
c	4 dots	4 dots (12)	6 dots (15)
d	—	2 dots (5)	2 dots (4)
e	—	3 dots (8)	4 dots (8)
f	—	4 dots (10)	6 dots (12)
g	—	2 dots (4)	2 dots (6)
h	—	3 dots (6)	3 dots (9)
i		4 dots (8)	4 dots (12)

*1) Number in () means number of dots with thick pattern.

◆ Parameter to set height

Character to use barcode font	Barcode height
o	Barcode height: 32 dots (4 mm)
p	Barcode height: 64 dots (8 mm)
q	Barcode height: 96 dots (12 mm)
r	Barcode height: 128 dots (16 mm)
s	Barcode height: 160 dots (20 mm)
t	Barcode height: 192 dots (24 mm)
u	Barcode height: 224 dots (28 mm)
v	Barcode height: 255 dots (31.9 mm)

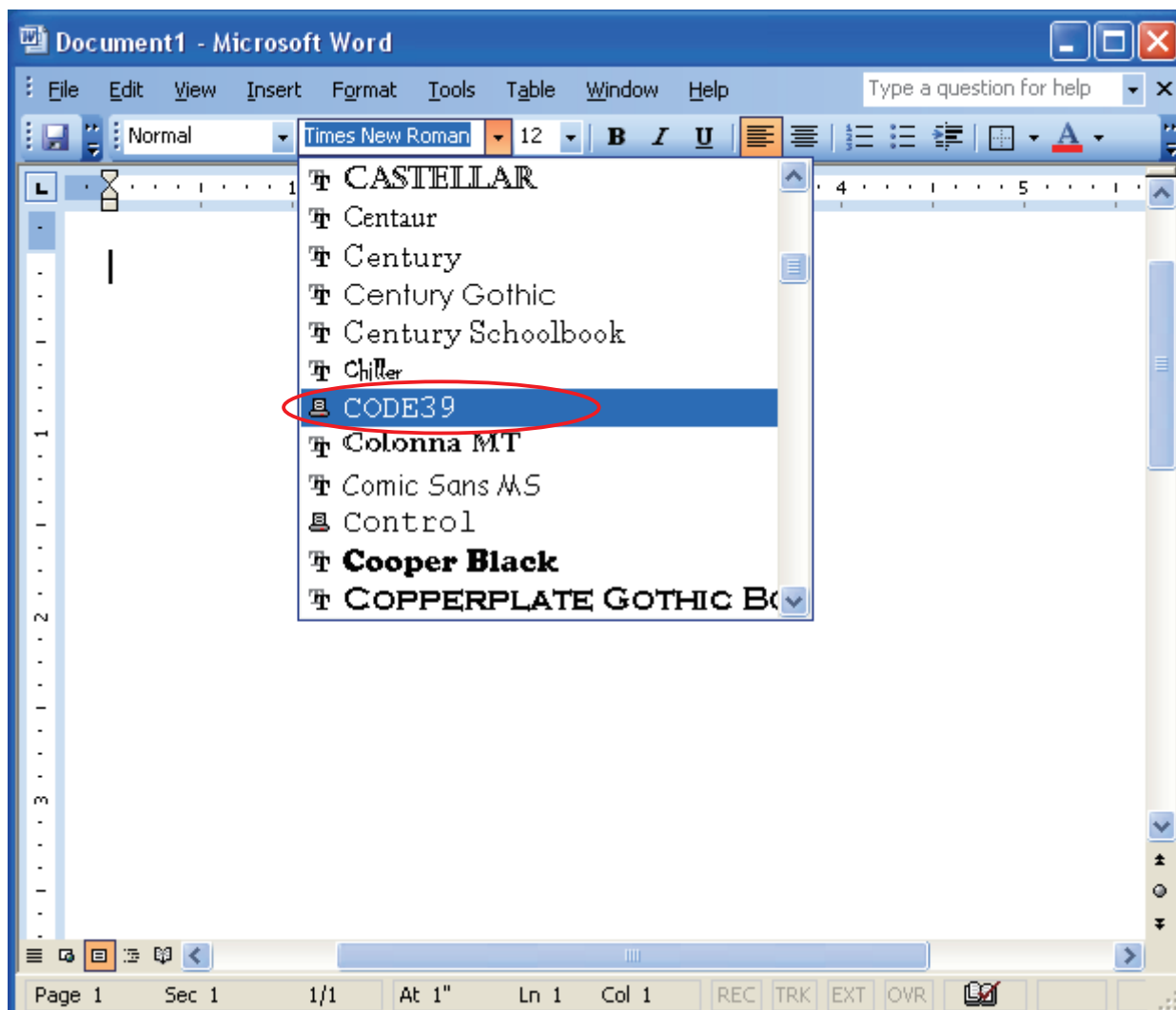
◆ Parameter for barcode end

Character to use barcode font	Barcode height
z	Ending code of barcode data (1 EH)

3.2.4 Generating a Barcode Using Microsoft Word

The following is an example of how to set and use barcode fonts.

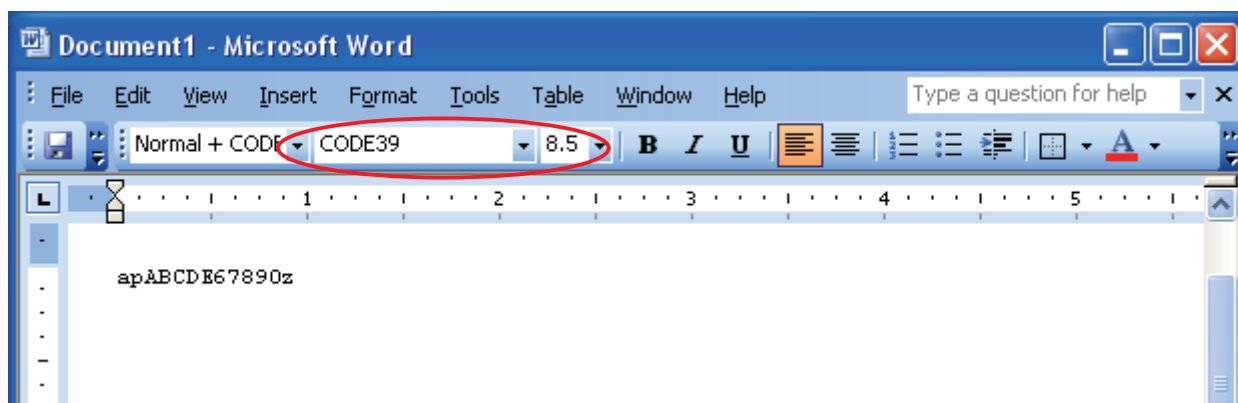
- ① Select the device font with the barcode name from the font list.
In the following example, select the barcode font of **CODE39**



Note: When using device fonts with Microsoft Word, refer to "4.2 Notes for Using Microsoft Word".

② Enter codes.

Also, set the font height. (For CODE39, set the font height to "8.5")



③ Print.

When printing, a barcode is generated and printed out.

<Print Sample>



3.3 Two-dimensional code font

The printer driver supports a two-dimensional code font ("QR_CNTL", "PDF417").

This printer driver, when operating in Line mode, is capable of printing QR and PDF417 codes through use of the appropriate TSP828L device fonts.

To print QR code/PDF417, use a two-dimensional code font ("QR_CNTL", "PDF417", "DATA1", "DATA2", "DATA3") and control font ("ESC_FONT") together.

3.3.1 Two-dimensional code font List

Each font has the following features.

Fonts	Operation	Comments	Remarks
QR_CNTL	QR code Command setting	Outputs each command for printing two-dimensional code.	
PDF417	PDF417 Command setting	Outputs each command for printing PDF417.	
DATA1	Data setting	Replaces ¥x20 ~ ¥x7F with ¥x00 to ¥x5F.	Can output ¥x00 to ¥xFF.
DATA2		Replaces ¥x20 to ¥x7F with ¥x60 to ¥xBF.	
DATA3		Replaces ¥x20 to ¥x5F with ¥xC0 to ¥xFF.	
ESC_FONT		Outputs without replacing ¥x20 to ¥x7F.	Can output ¥x20 to ¥x7F

3.3.2 Entering two-dimensional code font

Enter two-dimensional code fonts in the following format.

① **Set the two-dimensional code type**

Parameters are set to their default values. Enter only the parameters that you want to change.

② **Set the two-dimensional code data**

Enter the barcode cell size, the various parameters, and then the two-dimensional code data.

③ **Get barcode expansion information (optional)**

The printer returns an error if there is a conflict in the settings specified in steps 1 and 2.

④ **Print the two-dimensional code**

For details of each commands, refer to the Star Line Mode Command Specifications (issued separately).

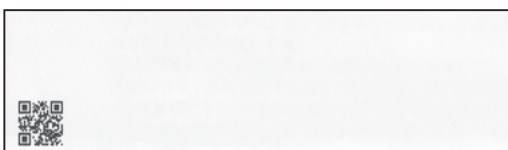
Example: To generate a two-dimensional code for '012345ABCD' in **QR code** (25% error correction rate)

Data to enter: E2A0* 012345ABCDP

	Character to enter	Fonts	Meaning
①	'E2'	QR_CNTL	Sets the Error Correction level to Q (25%)
②	'A0'	QR_CNTL	Sets the QR code data (auto analysis)
②	'*'	DATA1	Setting the QR code data parameter A = \x0A = '*' *1
②	' '	DATA1	Setting the QR code data parameter 0 = \x00 = ' ' (space) *1
②	'012345ABCD'	ESC_FONT	Sets the two-dimensional code data
④	'P'	QR_CNTL	Prints the two-dimensional code

*1 Enter '0A', which is the number of bytes of two-dimensional code data (10 bytes) expressed in hexadecimal notation. Enter the low byte (A) and then the high byte (0).

Print Sample :



For details of each fonts, refer to "**3.3.3 Two-dimensional Code Command Setting Font**".

3.3.3 Two-dimensional Code Command Setting Font

◆ QR code setting font (QR_CNTL)

Character to use for the "QR_CNTL" font	Operation	Code output by the driver
0	For parameters to set the command for each QR code	¥x00
1	For parameters to set the command for each QR code	¥x01
2	For parameters to set the command for each QR code	¥x02
3	For parameters to set the command for each QR code	¥x03
4	For parameters to set the command for each QR code	¥x04
5	For parameters to set the command for each QR code	¥x05
6	For parameters to set the command for each QR code	¥x06
7	For parameters to set the command for each QR code	¥x07
8	For parameters to set the command for each QR code	¥x08
9	For parameters to set the command for each QR code	¥x09
M	Model setting of QR code	¥x1b¥x1dyS0
M1	Model setting of QR code: Model 1	¥x1b¥x1dyS0¥x01
M2	Model setting of QR code: Model 2	¥x1b¥x1dyS0¥x02
E	Correction level setting	¥x1b¥x1dyS1
* El(E0)	Correction level L (Correction rate 7%)	¥x1b¥x1dyS1¥x00
* Em(E1)	Correction level M (Correction rate 15%)	¥x1b¥x1dyS1¥x01
* Eq(E2)	Correction level Q (Correction rate 25%)	¥x1b¥x1dyS1¥x02
* Eh(E3)	Correction level H (Correction rate 30%)	¥x1b¥x1dyS1¥x03
S1 to S8	Module size setting (unit: dot)	¥x1b¥x1dyS2(¥x01 to 08)
A0	QR code data setting (data automatic analysis)	¥x1b¥x1dyD1¥x00
B	QR code data setting (data manual analysis)	¥x1b¥x1dyD2
P	QR code printing	¥x1b¥x1dyP

*) The correction level can be set using the method in ().

◆ PDF417 setting font (PDF417)

Character to use for the "PDF417" font	Operation	Code output by the driver
0	For parameters to set the command for each PDF417	¥x00
1	For parameters to set the command for each PDF417	¥x01
2	For parameters to set the command for each PDF417	¥x02
3	For parameters to set the command for each PDF417	¥x03
4	For parameters to set the command for each PDF417	¥x04
5	For parameters to set the command for each PDF417	¥x05
6	For parameters to set the command for each PDF417	¥x06
7	For parameters to set the command for each PDF417	¥x07
8	For parameters to set the command for each PDF417	¥x08
9	For parameters to set the command for each PDF417	¥x09
S	Setting PDF417 barcode size	¥x1b¥x1dxS0
E	Setting PDF417 security level (ECC)	¥x1b¥x1dxS1
M	Setting X-direction size of PDF417 module	¥x1b¥x1dxS2
A	Setting aspect ratio of PDF417 module	¥x1b¥x1dxS3
D	Setting PDF417 barcode data	¥x1b¥x1dxD
P	Prints PDF417 barcode	¥x1b¥x1dxP
I	Acquires explanatory information of PDF417 barcode	¥x1b¥x1dxI

◆ Two-dimensional Code Data Setting Font (DATA1, DATA2, DATA3, ESC_FONT)

Data to enter Character information specified by the user in applications (Word, VB, etc.)		Data to output Character code to actually output to the printer by the printer driver			
Character	Character code	ESC_FONT	DATA1	DATA2	DATA3
Blank	¥x20	¥x20	¥x00	¥x60	¥xC0
!	¥x21	¥x21	¥x01	¥x61	¥xC1
"	¥x22	¥x22	¥x02	¥x62	¥xC2
#	¥x23	¥x23	¥x03	¥x63	¥xC3
\$	¥x24	¥x24	¥x04	¥x64	¥xC4
%	¥x25	¥x25	¥x05	¥x65	¥xC5
&	¥x26	¥x26	¥x06	¥x66	¥xC6
'	¥x27	¥x27	¥x07	¥x67	¥xC7
(	¥x28	¥x28	¥x08	¥x68	¥xC8
)	¥x29	¥x29	¥x09	¥x69	¥xC9
*	¥x2A	¥x2A	¥x0A	¥x6A	¥xCA
+	¥x2B	¥x2B	¥x0B	¥x6B	¥xCB
,	¥x2C	¥x2C	¥x0C	¥x6C	¥xCC
-	¥x2D	¥x2D	¥x0D	¥x6D	¥xCD
.	¥x2E	¥x2E	¥x0E	¥x6E	¥xCE
/	¥x2F	¥x2F	¥x0F	¥x6F	¥xCF
0	¥x30	¥x30	¥x10	¥x70	¥xD0
1	¥x31	¥x31	¥x11	¥x71	¥xD1
2	¥x32	¥x32	¥x12	¥x72	¥xD2
3	¥x33	¥x33	¥x13	¥x73	¥xD3
4	¥x34	¥x34	¥x14	¥x74	¥xD4
5	¥x35	¥x35	¥x15	¥x75	¥xD5
6	¥x36	¥x36	¥x16	¥x76	¥xD6
7	¥x37	¥x37	¥x17	¥x77	¥xD7
8	¥x38	¥x38	¥x18	¥x78	¥xD8
9	¥x39	¥x39	¥x19	¥x79	¥xD9
:	¥x3A	¥x3A	¥x1A	¥x7A	¥xDA
;	¥x3B	¥x3B	¥x1B	¥x7B	¥xDB
<	¥x3C	¥x3C	¥x1C	¥x7C	¥xDC
=	¥x3D	¥x3D	¥x1D	¥x7D	¥xDD
>	¥x3E	¥x3E	¥x1E	¥x7E	¥xDE
?	¥x3F	¥x3F	¥x1F	¥x7F	¥xDF
@	¥x40	¥x40	¥x20	¥x80	¥xE0
A	¥x41	¥x41	¥x21	¥x81	¥xE1

Data to enter Character information specified by the user in applications (Word, VB, etc.)		Data to output Character code to actually output to the printer by the printer driver			
Character	Character code	ESC_FONT	DATA1	DATA2	DATA3
B	¥x42	¥x42	¥x22	¥x82	¥xE2
C	¥x43	¥x43	¥x23	¥x83	¥xE3
D	¥x44	¥x44	¥x24	¥x84	¥xE4
E	¥x45	¥x45	¥x25	¥x85	¥xE5
F	¥x46	¥x46	¥x26	¥x86	¥xE6
G	¥x47	¥x47	¥x27	¥x87	¥xE7
H	¥x48	¥x48	¥x28	¥x88	¥xE8
I	¥x49	¥x49	¥x29	¥x89	¥xE9
J	¥x4A	¥x4A	¥x2A	¥x8A	¥xEA
K	¥x4B	¥x4B	¥x2B	¥x8B	¥xEB
L	¥x4C	¥x4C	¥x2C	¥x8C	¥xEC
M	¥x4D	¥x4D	¥x2D	¥x8D	¥xED
N	¥x4E	¥x4E	¥x2E	¥x8E	¥xEE
O	¥x4F	¥x4F	¥x2F	¥x8F	¥xEF
P	¥x50	¥x50	¥x30	¥x90	¥xF0
Q	¥x51	¥x51	¥x31	¥x91	¥xF1
R	¥x52	¥x52	¥x32	¥x92	¥xF2
S	¥x53	¥x53	¥x33	¥x93	¥xF3
T	¥x54	¥x54	¥x34	¥x94	¥xF4
U	¥x55	¥x55	¥x35	¥x95	¥xF5
V	¥x56	¥x56	¥x36	¥x96	¥xF6
W	¥x57	¥x57	¥x37	¥x97	¥xF7
X	¥x58	¥x58	¥x38	¥x98	¥xF8
Y	¥x59	¥x59	¥x39	¥x99	¥xF9
Z	¥x5A	¥x5A	¥x3A	¥x9A	¥xFA
[	¥x5B	¥x5B	¥x3B	¥x9B	¥xFB
¥	¥x5C	¥x5C	¥x3C	¥x9C	¥xFC
]	¥x5D	¥x5D	¥x3D	¥x9D	¥xFD
^	¥x5E	¥x5E	¥x3E	¥x9E	¥xFE
_	¥x5F	¥x5F	¥x3F	¥x9F	¥xFF
`	¥x60	¥x60	¥x40	¥xA0	-
a	¥x61	¥x61	¥x41	¥xA1	-
b	¥x62	¥x62	¥x42	¥xA2	-
c	¥x63	¥x63	¥x43	¥xA3	-
d	¥x64	¥x64	¥x44	¥xA4	-

Data to enter Character information specified by the user in applications (Word, VB, etc.)		Data to output Character code to actually output to the printer by the printer driver			
Character	Character code	ESC_FONT	DATA1	DATA2	DATA3
e	¥x65	¥x65	¥x45	¥xA5	-
f	¥x66	¥x66	¥x46	¥xA6	-
g	¥x67	¥x67	¥x47	¥xA7	-
h	¥x68	¥x68	¥x48	¥xA8	-
i	¥x69	¥x69	¥x49	¥xA9	-
j	¥x6A	¥x6A	¥x4A	¥xAA	-
k	¥x6B	¥x6B	¥x4B	¥xAB	-
l	¥x6C	¥x6C	¥x4C	¥xAC	-
m	¥x6D	¥x6D	¥x4D	¥xAD	-
n	¥x6E	¥x6E	¥x4E	¥xAE	-
o	¥x6F	¥x6F	¥x4F	¥xAF	-
p	¥x70	¥x70	¥x50	¥xB0	-
q	¥x71	¥x71	¥x51	¥xB1	-
r	¥x72	¥x72	¥x52	¥xB2	-
s	¥x73	¥x73	¥x53	¥xB3	-
t	¥x74	¥x74	¥x54	¥xB4	-
u	¥x75	¥x75	¥x55	¥xB5	-
v	¥x76	¥x76	¥x56	¥xB6	-
w	¥x77	¥x77	¥x57	¥xB7	-
x	¥x78	¥x78	¥x58	¥xB8	-
y	¥x79	¥x79	¥x59	¥xB9	-
z	¥x7A	¥x7A	¥x5A	¥xBA	-
{	¥x7B	¥x7B	¥x5B	¥xBB	-
|	¥x7C	¥x7C	¥x5C	¥xBC	-
}	¥x7D	¥x7D	¥x5D	¥xBD	-
~	¥x7E	¥x7E	¥x5E	¥xBE	-
< DEL > *	¥x7F	¥x7F	¥x5F	¥xBF	-

* Cannot be entered using a character.

3.3.4 Using the Two-dimensional Code Font

When using the QR code/PDF417 font, data of the two-dimensional code can be specified up to 500 bytes. (500 bytes includes the types of data entered and the separator.)

A sample program for Visual Basic using two-dimensional code font is provided below.

◆ QR code print—Sample 1 (QR code data setting: For data manual analysis setting)

```
Private Sub Command1_Click()
    Printer.Font.Name = "Printer 17cpi Tall"
    Printer.Print "QR Code Test Print for VB 6.0"

    Printer.Font.Name = "Printer 17cpi"
    Printer.Print
    Printer.Print "DATA:"
    Printer.Print "http://www.star-m.jp/"
    Printer.Print
    Printer.Print "QR code:";

    Printer.Font.Name = "QR_CNTL"           ' Sets QR_CNTL font
    Printer.Print "M2";                     ' Sets barcode model
    Printer.Print "Em";                     ' Sets correction level (Correction rate 15%)
    Printer.Print "S3"                      ' Sets module size (Module size 3 dots)

    Printer.Print "B1";                     ' Sets barcode data (Manual analysis) + Number of blocks
    Printer.Print "2";                      ' Alphanumeric (Data type)

    Printer.Font.Name = "DATA1"             ' DATA1 = 0x0000 - 0x005F
    Printer.Print Chr(&H35);                ' Converts 0x35→0x15, 0x20→0x0
    Printer.Print Chr(&H20);                ' Number of bytes: 21(0x15)+0(0x0)=21 byte

    Printer.Font.Name = "ESC_FONT"          ' ESC_FONT = 0x0020 - 0x007F
    Printer.Print "http://www.star-m.jp/";  ' Barcode data (21 byte)

    Printer.Font.Name = "QR_CNTL"           ' Sets QR_CNTL font
    Printer.Print "P"                       ' Prints barcode data

    Printer.EndDoc
End Sub
```

Point! When QR code data is set to data manual analysis, be sure to set the number of blocks and type of data to enter.
For details on setup, refer to the separate "STAR Line Mode Command Specifications".

◆ QR code print—Sample 2 (QR code data setting: For data automatic analysis setting)

```
Private Sub Command2_Click()
    Printer.Font.Name = "Printer 17cpi Tall"
    Printer.Print "QR Code Test Print for VB 6.0"

    Printer.Font.Name = "Printer 17cpi"
    Printer.Print
    Printer.Print "DATA:"
    Printer.Print "http://www.star-m.jp/"
    Printer.Print
    Printer.Print "QR code:";

    Printer.Font.Name = "QR_CNTL"
    Printer.Print "M1";
    Printer.Print "Eq";
    Printer.Print "S7"

    Printer.Print "A0";

    Printer.Font.Name = "DATA1"
    Printer.Print Chr(&H35);
    Printer.Print Chr(&H20);

    Printer.Font.Name = "ESC_FONT"
    Printer.Print "http://www.star-m.jp/";

    Printer.Font.Name = "QR_CNTL"
    Printer.Print "P"

    Printer.EndDoc
End Sub
```

◆ PDF417 print — Sample 1

```
Private Sub Command4_Click()
    Printer.Font.Name = "Printer 17cpi Tall"
    Printer.Print "PDF417 Test Print for VB 6.0"

    Printer.Font.Name = "Printer 17cpi"
    Printer.Print
    Printer.Print "DATA:"
    Printer.Print "1234567890"
    Printer.Print
    Printer.Print "PDF417:";

    Printer.Font.Name = "PDF417"

    Printer.Print "S023";           ' Sets barcode size
    Printer.Print "E3";             ' Sets ECC level
    Printer.Print "M3"              ' Sets X-direction size of the module
    Printer.Print "A3"              ' Sets aspect ratio of the module
    Printer.Print "D";              ' Sets barcode data

    Printer.Font.Name = "DATA1"     ' DATA1 = 0x0000 - 0x005F
    Printer.Print Chr(&H2A);        ' Number of bytes of barcode data
    Printer.Print Chr(&H20);

    Printer.Font.Name = "ESC_FONT"  ' ESC_FONT = 0x0020 - 0x007F
    Printer.Print "1234567890";

    Printer.Font.Name = "PDF417"
    Printer.Print "P"               ' Prints barcode data

    Printer.EndDoc
End Sub
```

◆ PDF417 print — Sample 2

```
Private Sub Command5_Click()
    Printer.Font.Name = "Printer 17cpi Tall"
    Printer.Print "PDF417 Test Print for VB 6.0"

    Printer.Font.Name = "Printer 17cpi"
    Printer.Print
    Printer.Print "DATA:"
    Printer.Print "http://star-m.jp/"
    Printer.Print
    Printer.Print "PDF417:";

    Printer.Font.Name = "PDF417"

    Printer.Print "S023";           ' Sets barcode size
    Printer.Print "E3";             ' Sets ECC level
    Printer.Print "M3"              ' Sets X-direction size of the module
    Printer.Print "A3"              ' Sets aspect ratio of the module

    Printer.Print "D";              ' Sets barcode data

    Printer.Font.Name = "DATA1"     ' DATA1 = 0x0000 - 0x005F
    Printer.Print Chr(&H31);        ' Number of bytes of barcode data
    Printer.Print Chr(&H20);

    Printer.Font.Name = "ESC_FONT"  ' ESC_FONT = 0x0020 - 0x007F
    Printer.Print "http://star-m.jp/";

    Printer.Font.Name = "PDF417"

    Printer.Print "P"               ' Prints barcode data

    Printer.EndDoc
End Sub
```

3.4 Control Fonts

Line

This printer driver provides a control font that can be used during operation in Line mode. The control font is used to execute various printer actions, and is not used for printing. Each character in the font is associated with a particular action.

3.4.1 Control Font Characters and Their Operations

The operations that can be executed through the control font are shown below.

Character	Operation
A	Drive cash drawer 1 (50 ms)
B	Drive cash drawer 1 (100 ms)
C	Drive cash drawer 1 (150 ms)
D	Drive cash drawer 1 (200 ms)
E	Drive cash drawer 1 (250 ms)
d	Drive cash drawer 2 (200 ms)
6	Output LF
7	Output CR
F	Auto-cutter: Full-cut
P	Auto-cutter: Partial-cut
G	Print NV Bit Image 1 in regular mode
H	Print NV Bit Image 2 in regular mode
I	Print NV Bit Image 3 in regular mode
J	Print NV Bit Image 4 in regular mode
K	Print NV Bit Image 5 in regular mode
Q	Print NV Bit Image 1 in double-width mode
R	Print NV Bit Image 2 in double-width mode
S	Print NV Bit Image 3 in double-width mode
T	Print NV Bit Image 4 in double-width mode
U	Print NV Bit Image 5 in double-width mode
V	Print NV Bit Image 1 in double-height mode
W	Print NV Bit Image 2 in double-height mode
X	Print NV Bit Image 3 in double-height mode
Y	Print NV Bit Image 4 in double-height mode
Z	Print NV Bit Image 5 in double-height mode
[	Print NV Bit Image 1 in 4x mode
]	Print NV Bit Image 2 in 4x mode

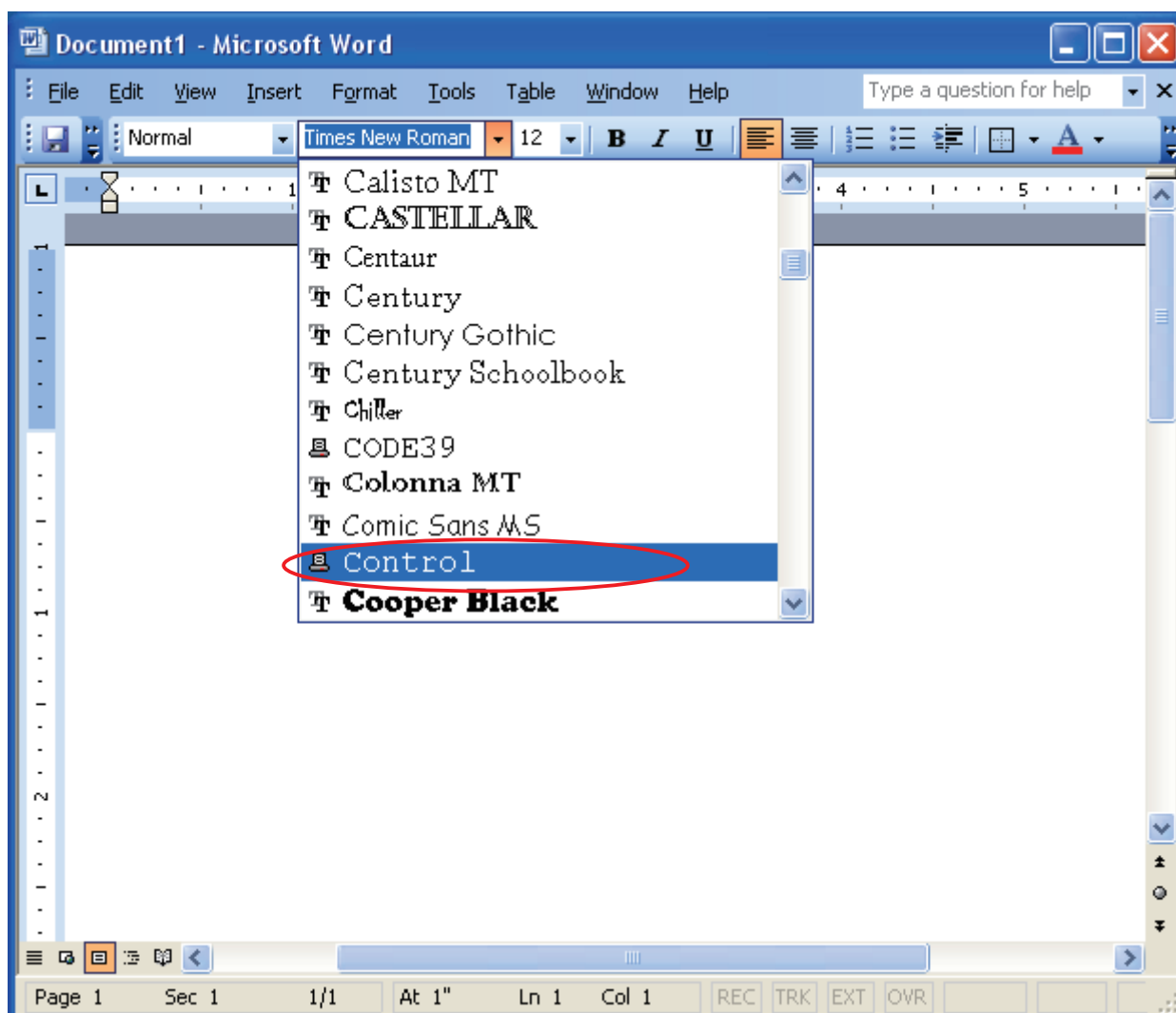
Character	Operation
^	Print NV Bit Image 3 in 4x mode
_	Print NV Bit Image 4 in 4x mode
`	Print NV Bit Image 5 in 4x mode
a	Align left
b	Align center
c	Align right
e	Set new line to 3 mm (1/8 inch)
f	Set new line to 4 mm (1/6 inch)
g	International character select: USA
h	International character select: France
i	International character select: Germany
j	International character select: England
k	International character select: Denmark I
l	International character select: Sweden
m	International character select: Italy
n	International character select: Spain I
o	International character select: Japan
p	International character select: Norway
q	International character select: Denmark II
r	International character select: Spain II
s	International character select: Latin America
t	Print using black/white inversion
u	Cancel black/white inversion
v	Customer display: Start data transfer
w	Customer display: End data transfer
x	Customer display: Display clear

Note: The printer ignores control font characters that it does not support.

3.4.2 Using the Control Font with Microsoft Word

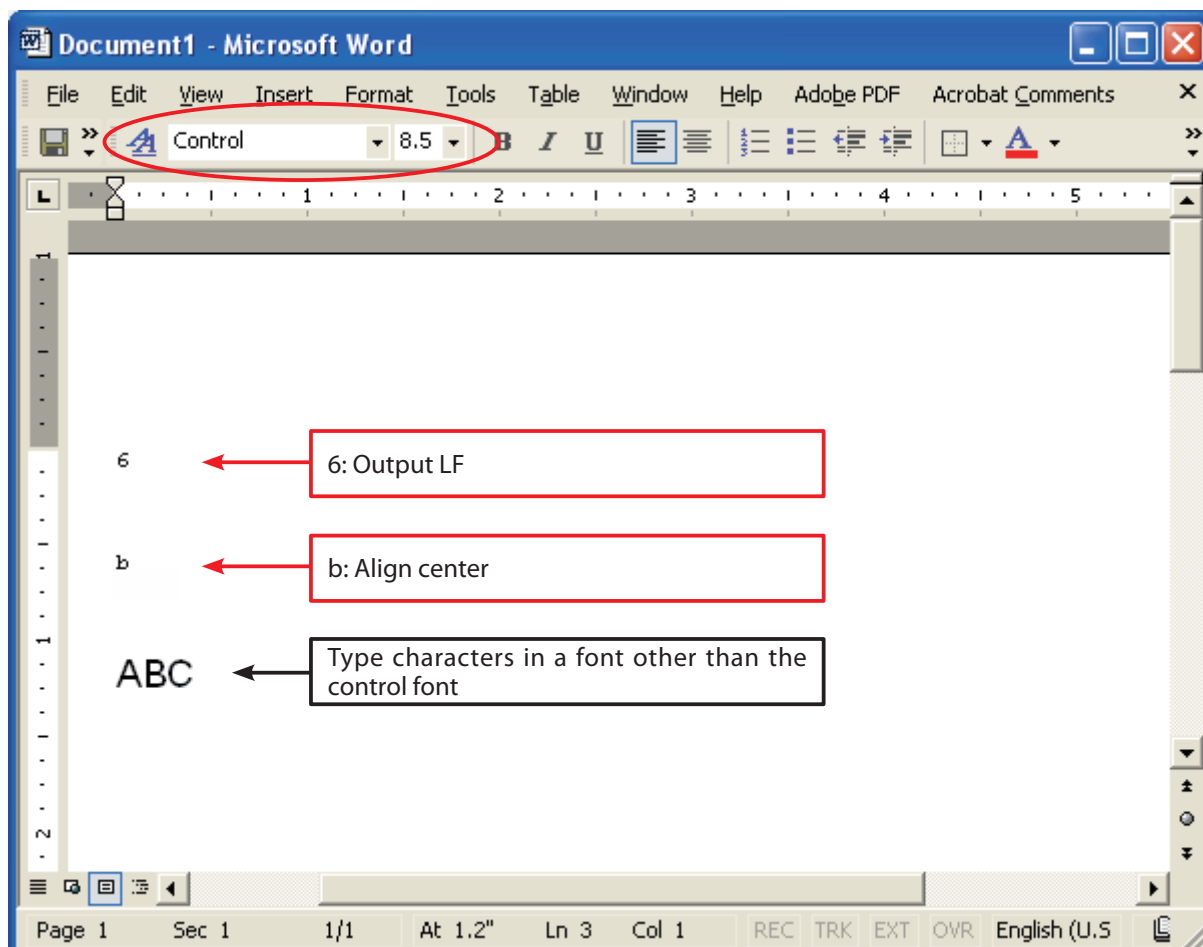
The following is an example of how to use the control font.

- ① Select the **Control** font from the font list.



Note: When using device fonts with Microsoft Word, refer to "4.2 Notes for Using Microsoft Word".

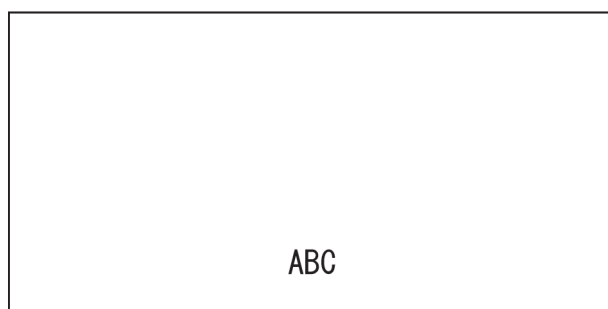
- ② Input the character for each operation you wish to execute (refer to "3.4.1 Control Font Characters and Their Operations").



Point! For the characters that set the control font, set the font height to the specified value "8.5".

- ③ Print.
In this example, the printer executes a linefeed and then prints **ABC** at the center of the page.

<Print Sample>



3.5 Restrictions and Precautions

- Please do not use more than one device font on a single line.
Mixing device fonts on a single line may result in skewed printing.
- Do not include graphic data (Windows fonts, ruled lines, etc.) on the same line with a device font, as this too may cause skewed print results.
- Remember that the "Control" device font cannot be used for normal character printing.
Use fonts other than the "Control" device font to print characters.
- If you use barcode fonts or two-dimensional code fonts, only the characters corresponding to the codes that you enter appear in the document window of software applications, such as Microsoft Word. The barcode image is generated when you print it.
- If you print barcodes or two-dimensional bar codes using the device fonts, they may not be printed with the correct page length.
- To print two-dimensional codes using the device fonts, enter the two-dimensional code data on one line.
Keep the size of the two-dimensional code data within 500 bytes. This data size limit is determined by the printable width of the paper that you will be printing on. 500 bytes is based on a printable width of 104 mm. If you use paper whose printable width is less than 104 mm, you may not be able to print data that is 500 bytes in size.
This limitation also applies to VB programs. When sending data using a VB program, keep the data length within 500 bytes.
If you enter two-dimensional code data that spans multiple lines or specify data that exceeds 500 bytes, the two-dimensional code will not be printed properly, and there is no guarantee that anything that comes after it will be printed properly.

4. Guidelines for Printing Documents

- This driver supports 4 predefined custom paper sizes and also user-defined paper sizes. Feel free to use user-defined sizes as needed. (For details, refer to "2.3.2 User-Defined Paper Settings".)

4.1 Notes for Printing via a Serial Interface

When using a TSP828L Windows driver to print through a serial interface, it is recommended that you use Line mode. For fastest print speed, use Line mode with device fonts.

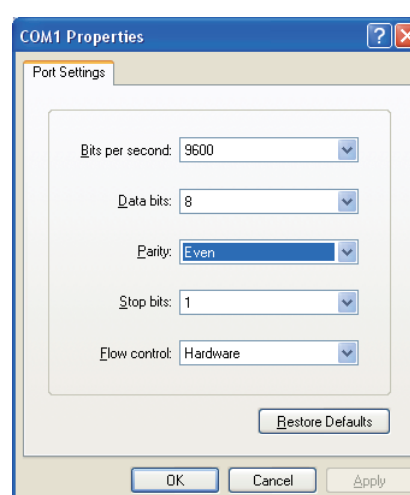
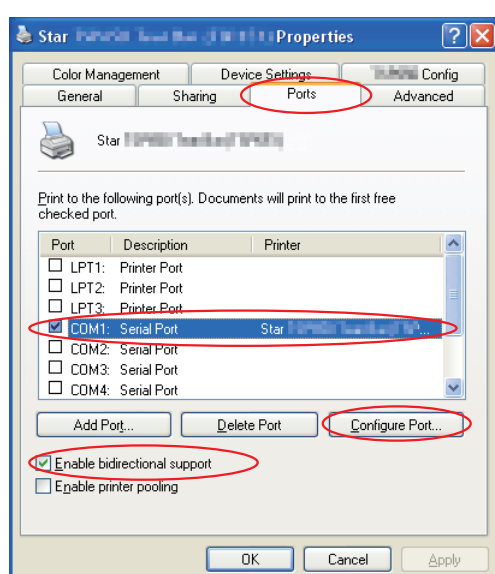
Note also that printer settings and printer-port settings must be correctly matched.

You can check the printer settings by doing a self-print.

For information, refer to the Product Specifications Manual (issued separately).

To configure the printer port, proceed as follows.

- ① On the taskbar, click Start. On Windows 2000 and XP, click **Printers and Faxes**. On Windows Vista, click **Control Panel**, and then click **Printers**. On Windows 7, click **Devices and Printers**.
- ② Right-click the **TSP828L** printer icon to display the drop-down menu. On Windows 2000 and XP, click **Properties**. On Windows Vista, click **Run as administrator**, and then click **Properties**. On Windows 7, click **Printer properties**.
- ③ If you are using Windows Vista, the **User Account Control** dialog appears. Click **Continue**.
- ④ Click the **Ports** tab.
Select the port you will connect to, and then click the **Configure Port** button to display the port properties dialog box. Match the settings to the printer settings.



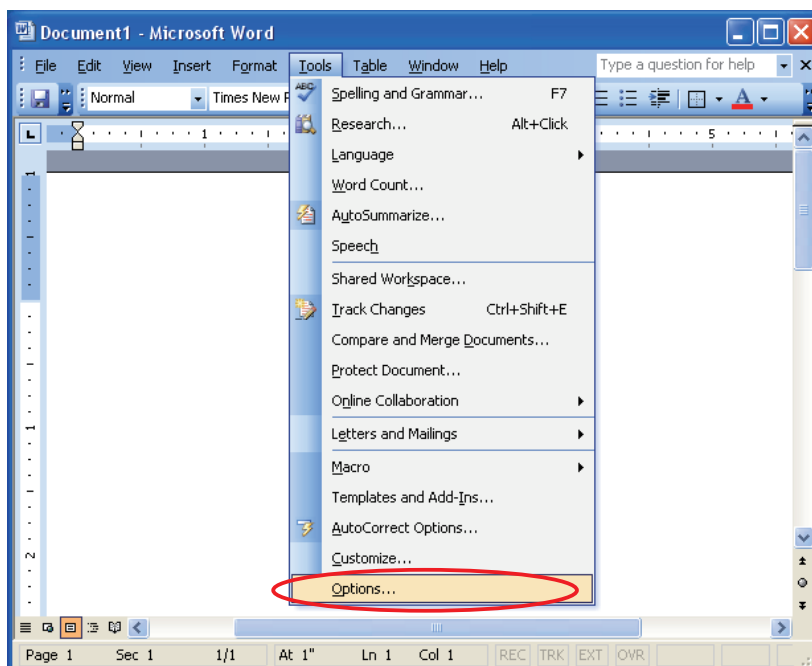
Point! If the **Flow Control** for the serial connection is set to **Xon/Xoff**, clear the **Enable bidirectional support** check box.

4.2 Notes for Using Microsoft Word

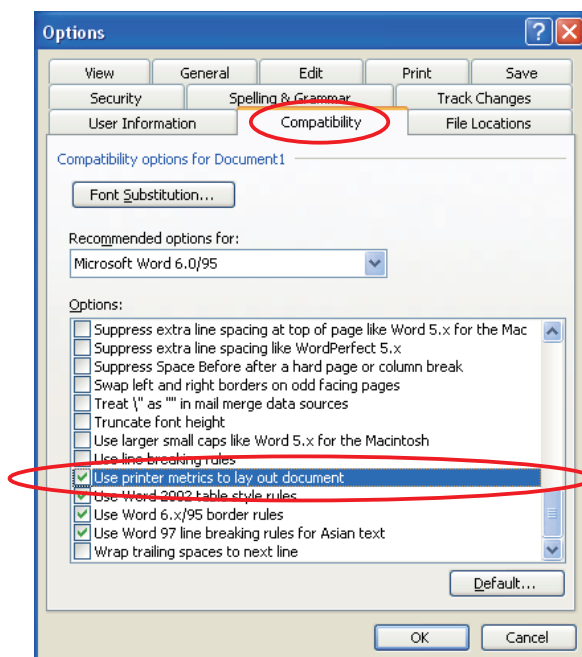
When you use default document formats of Word97 and later, device fonts will not work properly. To enable correct use of device fonts, perform the following settings.

◆ Microsoft Word 2002

- ① Open Microsoft Word's **Tools** menu, and select **Options**.



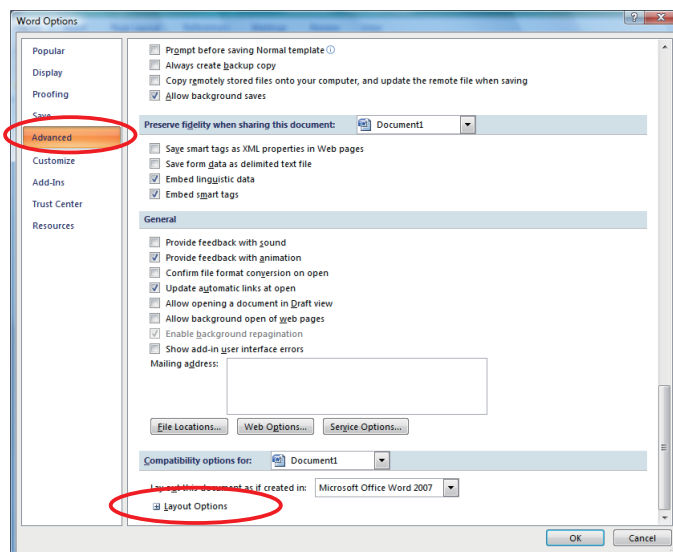
- ② Click the **Compatibility** tab, and in the **Options** area select the **Use printer metrics to lay out document** check box. Then click the **OK** button.



- ③ Open Word's **File** menu, and select **Save** to save the document.

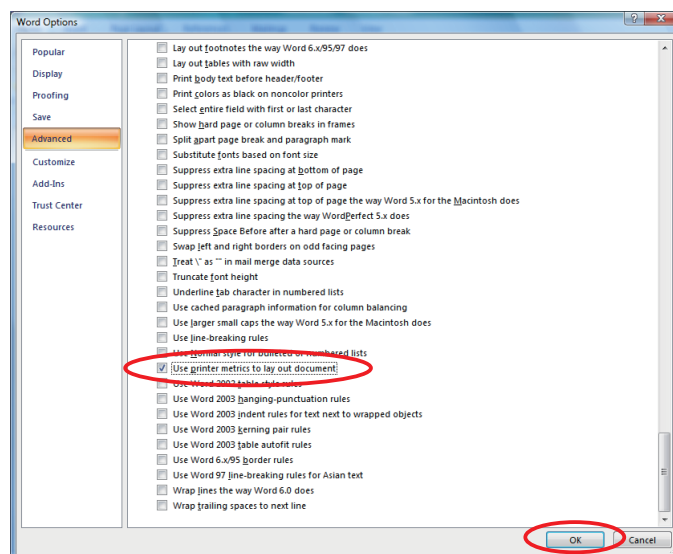
◆ Microsoft Word 2007

- 1 Click the Office Button , and then click the **Word Options** button.



- ② Select **Advanced**, and click **Layout Options**.

Select the **Use printer metrics to lay out document** check box. Then click the **OK** button.



- ③ Open Word's **File** menu, and select **Save** to save the document.

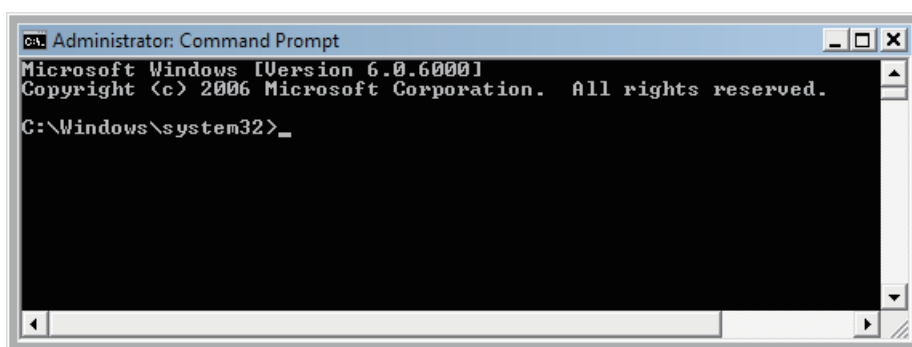
Note: When the page settings are changed, the option settings may return to the original settings.

5. Guidelines for Usage in an Ethernet Environment

5.1. Manually Setting a Temporary IP Address

You can use the following procedure to set a temporary IP address for the printer. Use of a temporary address will allow you to connect to a printer that does not yet have an IP address setting.

- ① At the Windows Start menu, select **All Programs – Accessories – Command Prompt**. (If using Windows Vista/7, right-click on **Command Prompt** and select **Run as administrator**.)
- ② If you are using Windows Vista/7, the User Account Control dialog appears. Click **Continue** or **Yes**.
- ③ At the command prompt, use the **arp** command to set a temporary IP address and a MAC address.



Use the following commands to set the temporary IP address for the printer.

1. **arp -d** printer's_temporary_IP_address
2. **arp -s** printer's_temporary_IP_address printer's_MAC_address
3. **ping** printer's_temporary_IP_address
4. **arp -d** printer's_temporary_IP_address

Example: To set a temporary IP address of 192.168.32.55

```
arp -d 192.168.32.55
arp -s 192.168.32.55 00-11-62-00-03-4D
ping 192.168.32.55
arp -d 192.168.32.55
```

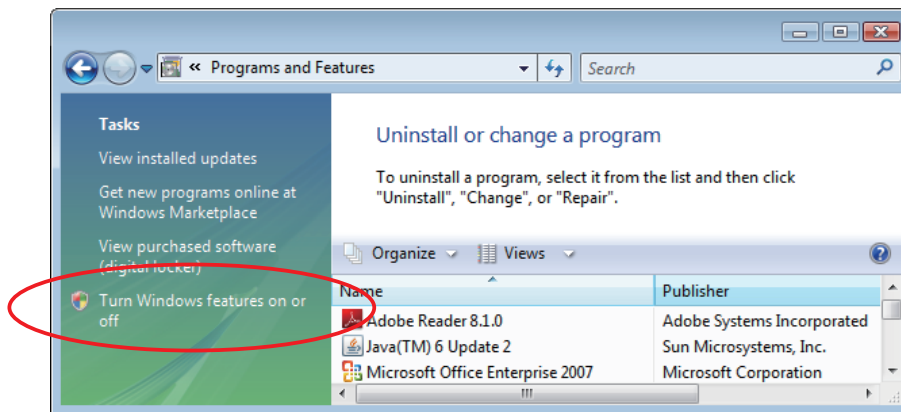
Point! The temporary IP address that you set here will be cleared when the printer's power is switched off. You should therefore immediately proceed to set a regular IP address for the printer.

5.2. Manually Setting an IP Address

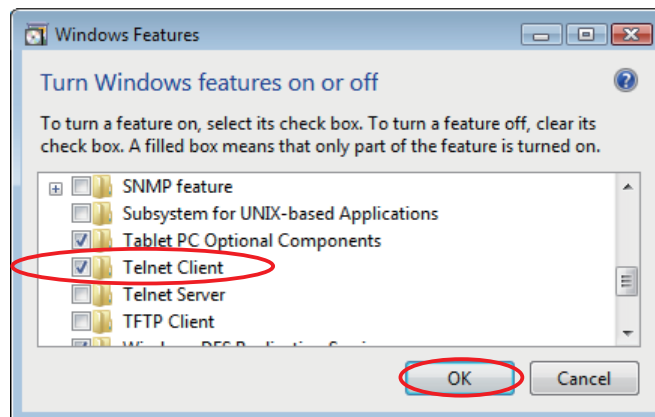
You can use the telnet command to connect directly to the printer.

◆ If using Windows Vista/7, begin with the following preliminary steps to ensure that Telnet is enabled.

- ① From the **Start** menu, open the **Control Panel**.
- ② Select **Programs and Features**.
- ③ Under **Tasks**, select **Turn Windows features on or off**.



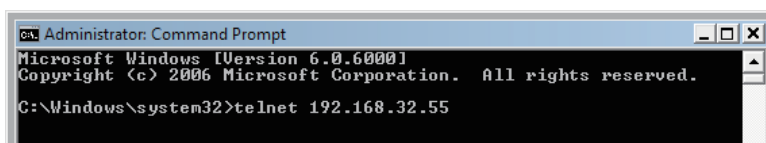
- ④ If you are using Windows Vista, the **User Account Control** dialog appears, click **Continue**.
- ⑤ If **Telnet Client** is not yet checked, place a check next to it. Then click **OK**.



- ⑥ If you had to add the check in the previous step (if Telnet Client was not already checked to begin with), you must now restart your computer.

To manually set the IP address, proceed as follows.

- ① Open a Command Prompt window.
At the Windows Start menu, select **All Programs – Accessories – Command Prompt**. (If using Windows Vista/7, right-click on **Command Prompt** and select **Run as administrator**.)
- ② If you are using Windows Vista/7, the **User Account Control** dialog appears, click **Continue** or **Yes**.
- ③ Use the telnet command to connect to the printer you wish to set.



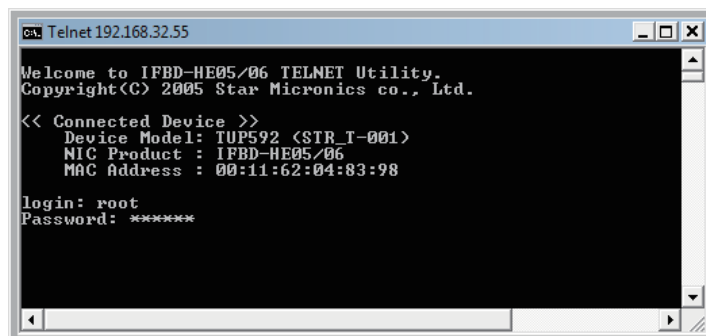
Example: > telnet 192.168.32.55



IP address of the printer you wish to set.

Point! You cannot connect to a printer that does not have an IP address. If necessary, set a temporary IP address for the printer before using telnet.
For instructions, refer to Section 6.1, "Manually Setting a Temporary IP Address."

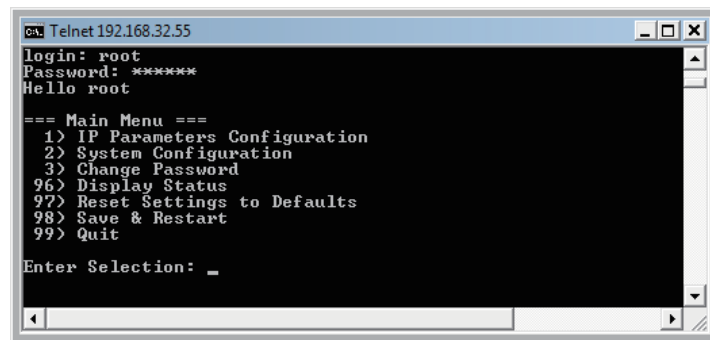
- ④ Log into the printer as "root".
The factory default setting for the password is "public".
(If the password has been changed, use the current password.)



- ⑤ The following menu appears.
- 1) IP Parameters Configuration
 - 2) System Configuration
 - 3) Change Password
 - 96) Display Status
 - 97) Reset Settings to Defaults
 - 98) Save & Restart
 - 99) Quit

Enter Selection:

Enter the number corresponding to the action you wish to carry out.



```

C:\> Telnet 192.168.32.55
login: root
Password: *****
Hello root

=== Main Menu ===
 1) IP Parameters Configuration
 2) System Configuration
 3) Change Password
96) Display Status
97) Reset Settings to Defaults
98) Save & Restart
99) Quit

Enter Selection: _

```

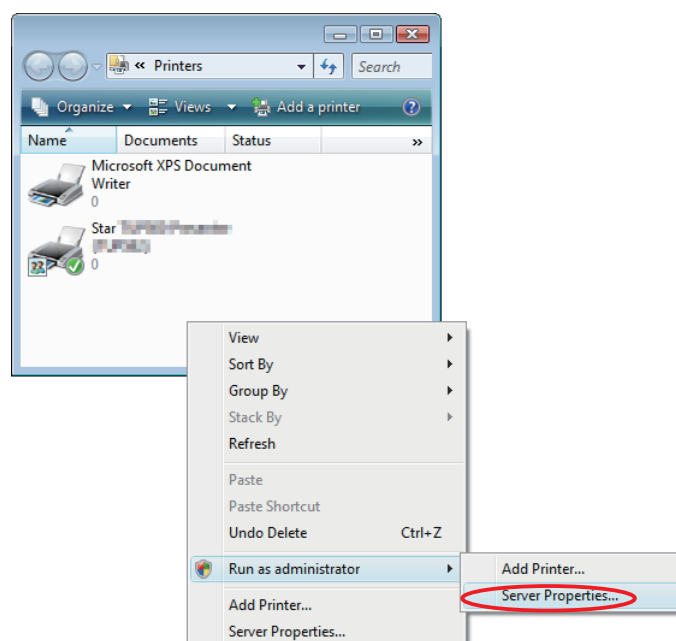
- ⑥ When you have finished making settings, select 98 (Save and Restart) and then select either 1 (Save & Restart device and Configuration printing) or 2 (Save & Restart Device). This will save the settings and reset the printer.

5.3. Setting up a TCP/IP Printer Port

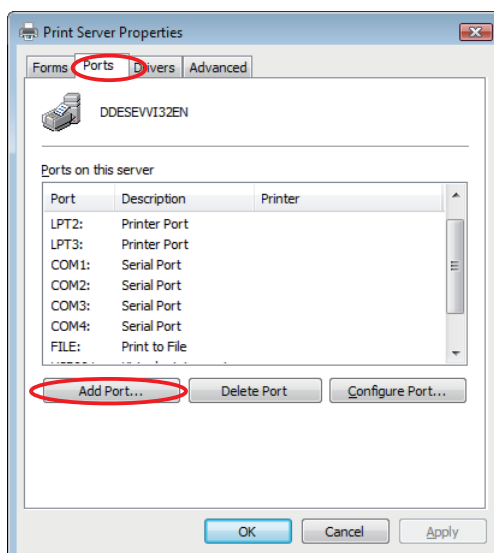
5.3.1 Adding a TCP/IP Printer Port

- ① On the taskbar, click Start. On Windows 2000 and XP, click **Printers and Faxes**. On Windows Vista, click **Control Panel**, and then click **Printers**. On Windows 7, click **Devices and Printers**.
- ② On Windows 2000, XP, and Vista, right-click a blank area in the Printers folder to display the drop-down menu. On Windows 2000 and XP, click **Server Properties**. On Windows Vista, click **Run as administrator**, and then click **Server Properties**. On Windows 7, select the printer icon, and click **Printer server properties** on the menu.

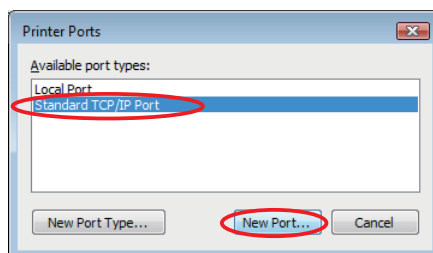
<<On Windows Vista>>



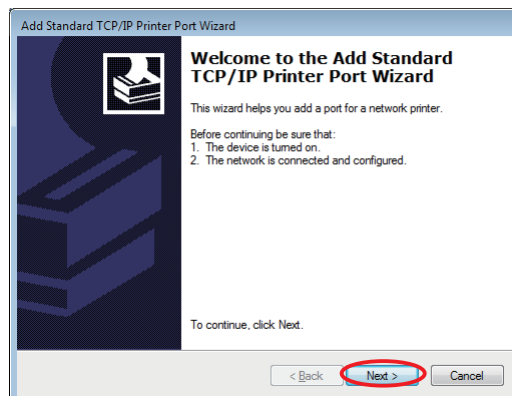
- ③ If you are using Windows Vista, the **User Account Control** dialog appears. Click **Continue**.
- ④ Select the **Ports** tab, and click **Add Port**.



- ⑤ For the port type, select **Standard TCP/IP Port**. Then click **New Port**.

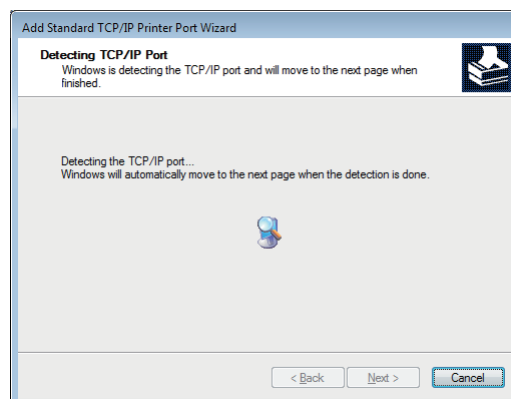
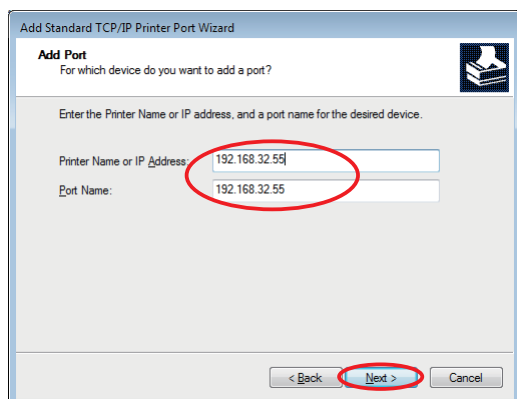


- ⑥ Click **Next**.

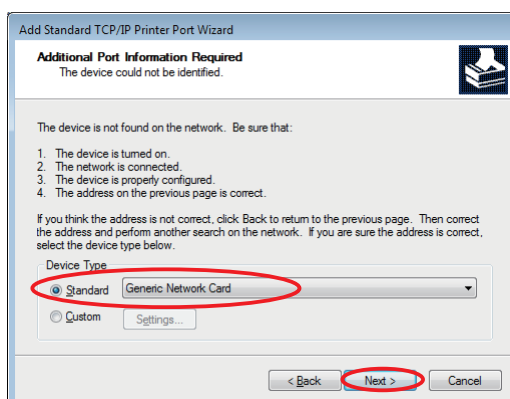


- ⑦ Next to **Printer Name or IP Address**, enter the IP address for the TCP/IP port you are creating. Next to **Port Name**, enter the port name to be created. Then click **Next**.

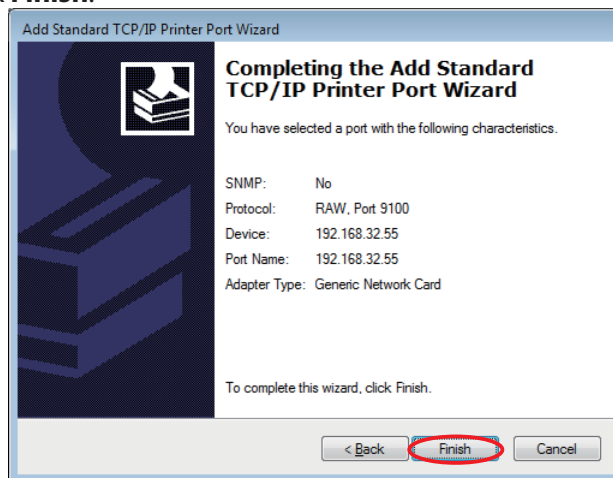
The TCP/IP port detection window appears, and Windows detects the port.



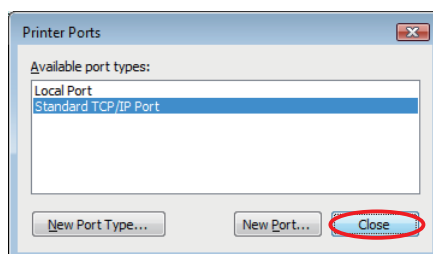
- ⑧ For the device type, select **Generic Network Card**. Then click **Next**.



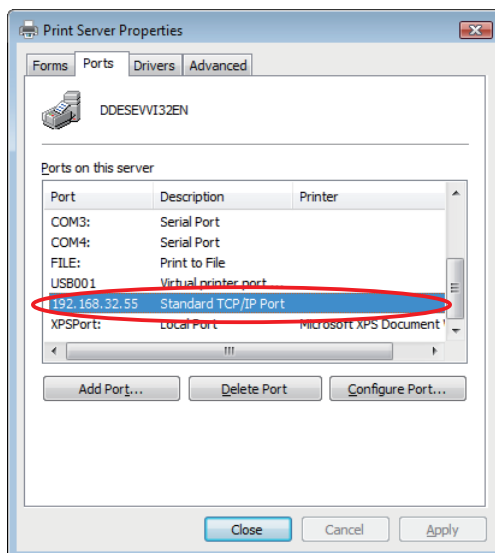
- ⑨ The wizard's completion window appears. To complete creation of the port with the displayed characteristics, click **Finish**.



- ⑩ Click **Close**.



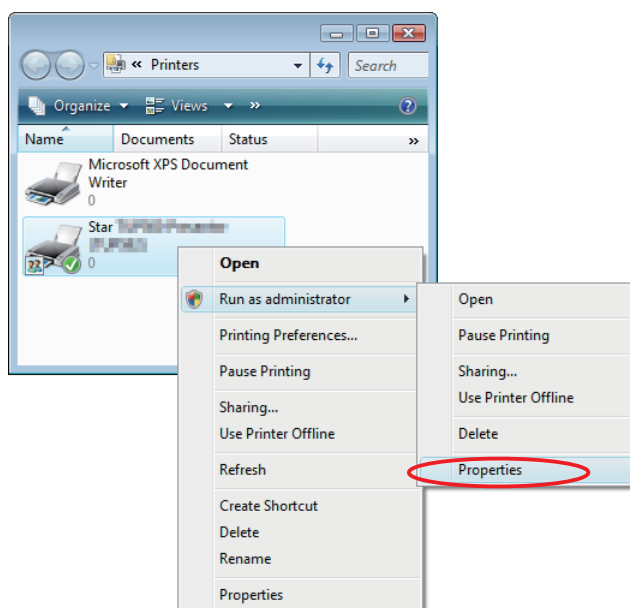
- ⑪ If the new TCP/IP port appears correctly in the port list, port creation has completed successfully.



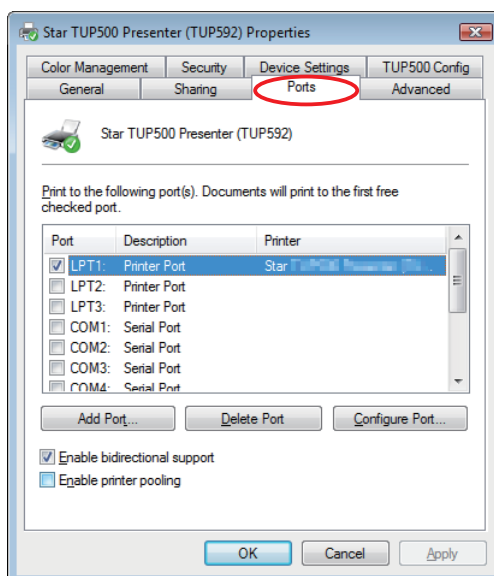
5.3.2 Changing a TCP/IP Printer Port

- ① On the taskbar, click Start. On Windows 2000 and XP, click **Printers and Faxes**. On Windows Vista, click **Control Panel**, and then click **Printers**. On Windows 7, click **Devices and Printers**.
- ② On Windows 2000, XP, and Vista, right-click a blank area in the Printers folder to display the drop-down menu. On Windows 2000 and XP, click **Server Properties**. On Windows Vista, click **Run as administrator**, and then click **Server Properties**. On Windows 7, select the printer icon, and click **Printer server properties** on the menu.

<<On Windows Vista>>

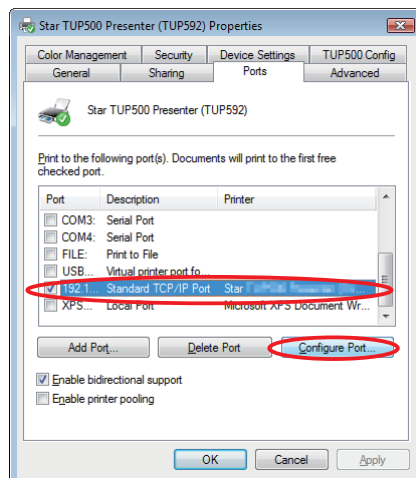


- ③ If you are using Windows Vista, the **User Account Control** dialog appears. Click **Continue**.
- ④ Select the **Ports** tab.

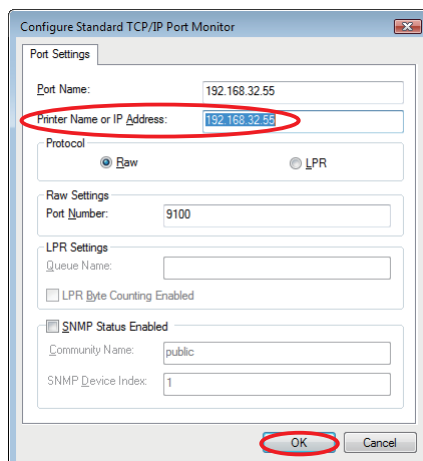


◆ To change the IP address...

- ① Select the port whose address you wish to change, and click **Configure Port**.

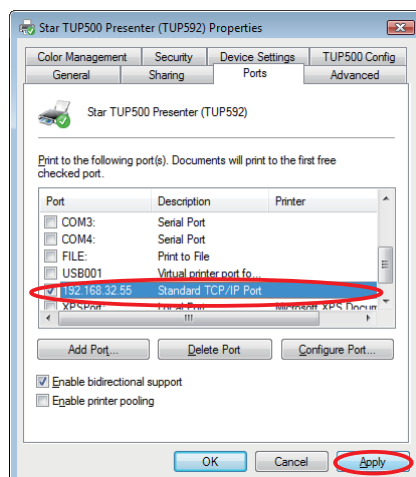


- ② Enter the new IP address, and click **OK**.



◆ To change the port used to print...

Select the desired port from the port list, and click **Apply**.



◆ To change the port name...

It is not possible to change the name of an existing port. Instead, add a new port under the desired new name, select that port for printing, and then delete the port with the old name.

6. Revision History

[illegible]



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<http://www.star-m.jp/eng/dl/dl02.htm>
for the latest revision of the manual.

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