# TUP900

## Star Line Mode Printer Driver Manual

### for Windows 2000/XP/Vista 32bit

Rev. 1.0

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# Table of Contents

# Introduction

● This driver supports Windows 2000/XP/Vista 32bit.

● This driver conforms to the Star Line command set. This implements the following features using Star Line commands.

  • Graphics printing

  • Text Printing via Device Fonts(with CP1252 support)

  • 2 Color printing

  • Barcode printing via Device Fonts

  • Page Length Control (including Black Mark sensing)

  • Cutter Control

  • Presenter Control

● This driver should be used with the printer at its default settings. However, to use some features (such as for black mark and the like), it is necessary to change the printer's settings. For details, see section 6. Printer Configuration.

● This driver supports serial I/F, parallel I/F and USB I/F.

# 1. Installation

## 1.1 Interfaces Other than USB (Windows 2000/XP/Vista 32 bit)

Use the Windows Add Printer Wizard to install the driver.
When doing so, be careful of the following.

- If you use Windows Vista 32bit, run the Add Printer Wizard from [Run as Administrator].
- Click on [Have Disk...] when selecting the printer type, and specify "PrinterDriver\smjtup900l.inf" in the folder you expanded "TUP900_LinePrtDrvWithstlm_yyyymmdd.zip".
- In the Hardware Installation dialog box, click the [Continue Anyway] button.

If <Star TUP992 Line Mode Printer> or <Star TUP942 Line Mode Printer> is displayed in the printer folder, the installation was successful.

## 1.2 USB Interface (Windows 2000/XP)

When the printer is turned ON, the driver begins installation by plug & play.
Be careful of the following during installation.

- To install, select [Install from a specific location], and specify the PrinterDriver folder in the folder you expanded TUP900_LinePrtDrvWithstlm_yyyymmdd.zip.
- In the Hardware Installation dialog box, click the [Continue Anyway] button.
- When specifying the location where "StarLM_TUP942.gpd" or "StarLM_TUP992.gpd" are stored, specify "PrinterDriver\i386" in the folder you expanded "TUP900_LinePrtDrvWithstlm_yyyymmdd.zip".

If <Star TUP992 Line Mode Printer> or <Star TUP942 Line Mode Printer> is displayed in the printer folder, the installation was successful.

## 1.3 USB Interface (Windows Vista 32 bit)

When the printer is turned on, the in-box driver <Star TUP900 Presenter (TUP992)> or <Star TUP900 (TUP942)> (TUP900 simple driver) are installed.
Select the icon of the simple driver installed from the printer folder, open [Run as Administrator] - [Properties], and click on [New Driver] in the [Advanced] tab to start the Add Printer Wizard.
Install the Star Line Mode driver while being careful of the following items.

- Click on [Have Disk...] when selecting the printer type, and specify "PrinterDriver\smjtup900l.inf" in the folder you expanded "TUP900_LinePrtDrvWithstlm_yyyymmdd.zip".
- When the Wizard is done, check that "Star TUP992 Line Mode Printer" or "Star TUP942 Line Mode Printer" is displayed in the Driver: field, and open up the properties.

If <Star TUP992 Line Mode Printer> or <Star TUP942 Line Mode Printer> is displayed in the printer folder, the installation was successful.

# 2. Setting the Printer Driver

Use the printer driver properties sheet to set various driver settings. The following shows how to display the printer properties sheet.

1. Open Windows Printer folder.

2. Right-click on the printer icon and click on [Properties] for Windows 2000/XP and [Run as Administrator] - [Properties] for Windows Vista 32 bit.

3. If you are using Windows Vista, the User Account Control screen is displayed. Click on [Continue].
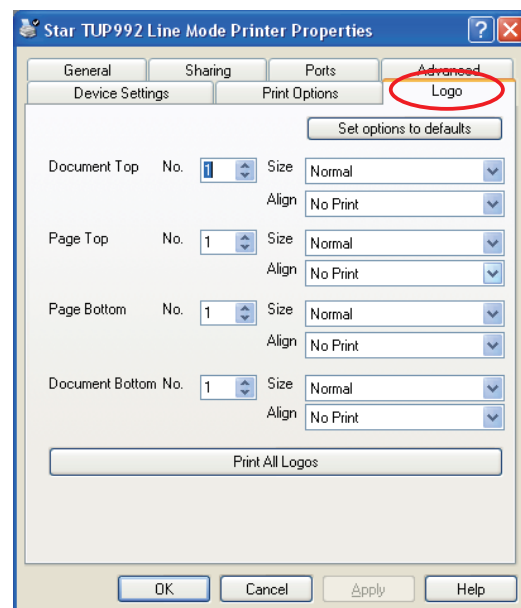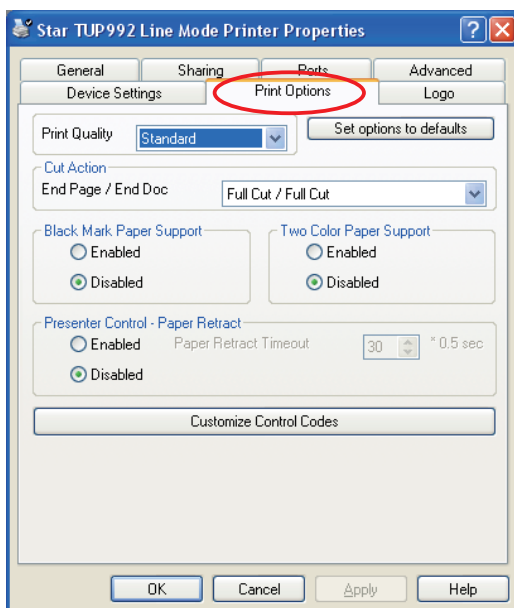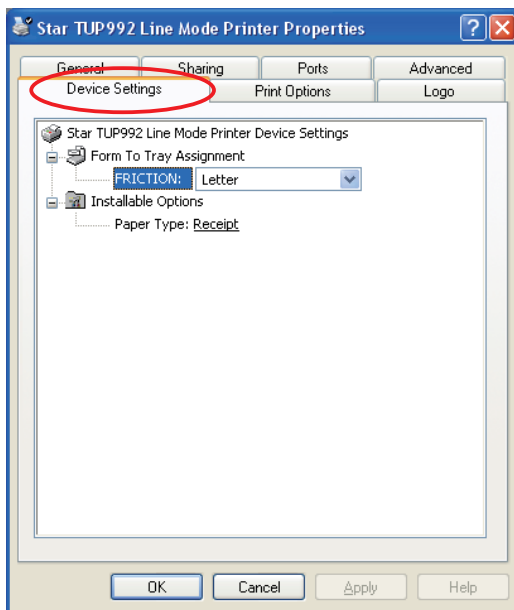
\* **[Set options to defaults] button**

This driver has a Return to Standard Values button on several settings screens.

Use this button to return the setting values of those screens to their default status.

## 2.1   Device Settings

### • Paper Type

The Paper Type option has been added to this property sheet page by this driver.  Its function is described in the following table:

| Choice | Default | Meaning |
| --- | --- | --- |
| Receipt | * | Each printed page ends immediately after the last line. (Variable length pages) |
| Ticket | | Each printed page has a consistent length defined by the application. |

If you want the printed receipt to have the minimum required length then choose Receipt.  This will cause each page to end after the last printed line.

 *For example:*
> If the first document contains 10 lines then the receipt will be 40mm (10 lines * 4mm/line).
> If the second document contains 13 lines then the receipt will be 52mm (13 lines * 4mm/line).

In the majority of retailing and POS applications, this is the desired mode of operation.  As such, the Receipt choice is this option's default.

If you want each printout to have a consistent length then choose Ticket.  As the name implies, this mode of operation is most suitable for the printing of tickets, where each one must be of a uniform and unchanging length.  The length of each printed page is determined by the document layout within the controlling application.

## 2.2   Print Options

The options present on the Print Options property sheet page allow you to control the printer during the printing process.  The following table lists all options and their respective choices that are present on the Print Options property sheet.  Note that not all options are available for all models

### • Print Quality

| Choice | Default | Meaning |
|---|---|---|
| Standard | * | Printing occurs at fasted rate |
| High | | Trade-off between quality & speed |
| Best | | Slowest printing for best quality |

### • Cut Action (TUP942)

| Choice | Default | Meaning |
|---|---|---|
| Form Feed / Form Feed | | No Paper cut or feed occurs |
| Form Feed / Tear Bar | | Last page is fed to the tear bar position |
| Form Feed / Partial Cut | * | Last page is fed to the cutter and partially cut |
| Form Feed / Full Cut | | Last page is fed to the cutter and fully cut |
| Partial Cut No Feed / Partial Cut No Feed | | All Pages are partially cut without feeding |
| Partial Cut / Partial Cut | | All pages are fed to the cutter and partially cut |
| Partial Cut No Feed / Full Cut No Feed | | Pages 1 ~ n-1 are partially cut, page n is fully cut (without feeding) |
| Partial Cut / Full Cut | | Pages 1 ~ n-1 are partially cut, page n is fully cut (with feeding) |
| Full Cut No Feed / Full Cut No Feed | | All pages are fully cut without feeding |
| Full Cut / Full Cut | | All pages are fed to the cutter and fully cut |

### • Cut Action (TUP992)

| Choice | Default | Meaning |
|---|---|---|
| Full Cut No Feed / Full Cut No Feed | * | All pages are fully cut without feeding |
| Full Cut / Full Cut | | All pages are fed to the cutter and fully cut |

## • Black Mark Paper Support

| Choice | Default | Meaning |
|---|---|---|
| Enabled<br>*(requires printer memory switch change)* | | The printer feeds paper according to the black mark sensor. |
| Disabled | * | The printer does not use the black mark sensor. |

## • Two Color Paper Support

| Choice | Default | Meaning |
|---|---|---|
| Enabled | | The printer prints for effectiveness on two-color paper. |
| Disabled | * | The printer prints for effectiveness on standard paper. |

## • Presenter Control Paper Retract (TUP992 Only)

| Choice | Default | Meaning |
|---|---|---|
| Enabled | | The paper will be automatically retracted after timeout. |
| Disabled | * | The paper will not be automatically retracted. |

## • Paper Retract Timeout (TUP992 Only)

| Choice | Default | Meaning |
|---|---|---|
| 1 ~ 255 | 30<br>(15 sec) | Paper retract timeout is set to n * 0.5 sec. |

## • Customize Control Code

All models support this dialog box.  It can be opened by clicking on the Customize Control Codes button contained on the Print Options property sheet.

Windows prints documents via the printer's printer driver, and does so by breaking the printing process up into 4 sections:

- • Document Top
- o Page Top
- o Page Bottom
- • Document Bottom

The options you configure determine the control codes the printer driver sends to the printer at each one of these timing points.  Via the Customize Control Codes form, you can instruct the driver to send any control code sequence to the printer before and after each one of these timing points.  This results is eight different timing points, as shown on the Customize Control Codes form:



To use this form, simply enter the text and control codes you want sent to the printer during each timing point.

**The format for entering control codes is:**

   **\xhh**

   \* Where hh is the two digit hex value to be sent to the printer.
     (*Note:* hex digits a ~ f must be entered in lower case)

You can also send plain text to the printer by simply typing it in.  For example:

If you want your store address to be printed at the top of each document, before anything else, you would enter the following into the Before Document Top field:

   Store Name\x0aaddress\x0acity, state, zip\x0aphone\x0a\x1b\x2d\x31www.store-url.com\x1b\x2d\x30\x0a

The printed result will be:

   Store Name
   address
   city, state, zip
   phone
   www.store-url.com

*Please note:*
- • Only Star Line Mode commands can be used.
- • A maximum of 500 characters (following hex conversion) can be entered into each field.

## 2.3   Logo

The options present on the Logo property sheet page allow you to control the printing of logos stored within the printer.  The following table lists all options and their respective choices that are present on the Print Options property sheet.

### • Document Top

| Option | Choice | Default | Meaning |
|---|---|---|---|
| No. | 1 ~ 255 | 1 | The specified logo will be printed once at the document top. |
| Size | Normal | * | The specified logo will be printed at its original size. |
| | Double Width | | The specified logo will be printed at double width. |
| | Tall | | The specified logo will be printed at double height. |
| | Double Width / Tall | | The specified logo will be printed at double width and double height. |
| Align | No Print | * | No logo will be printed at the document top. |
| | Left | | The logo will be printed and aligned with the left edge. |
| | Center | | The logo will be printed and center aligned. |
| | Right | | The logo will be printed and aligned with the right edge. |

### • Page Top

| Option | Choice | Default | Meaning |
|---|---|---|---|
| No. | 1 ~ 255 | | The specified logo will be printed top of each page. |
| Size | Normal | * | The specified logo will be printed at its original size. |
| | Double Width | | The specified logo will be printed at double width. |
| | Tall | | The specified logo will be printed at double height. |
| | Double Width / Tall | | The specified logo will be printed at double width and double height. |
| Align | No Print | * | No logo will be printed at the page top. |
| | Left | | The logo will be printed and aligned with the left edge. |
| | Center | | The logo will be printed and center aligned. |
| | Right | | The logo will be printed and aligned with the right edge. |

### • Page Bottom

| Option | Choice | Default | Meaning |
|---|---|---|---|
| No. | 1 ~ 255 | 1 | The specified logo will be printed bottom of each page. |
| Size | Normal | * | The specified logo will be printed at its original size. |
| | Double Width | | The specified logo will be printed at double width. |
| | Tall | | The specified logo will be printed at double height. |
| | Double Width / Tall | | The specified logo will be printed at double width and double height. |
| Align | No Print | * | No logo will be printed at the page bottom. |
| | Left | | The logo will be printed and aligned with the left edge. |
| | Center | | The logo will be printed and center aligned. |
| | Right | | The logo will be printed and aligned with the right edge. |

## • Document Bottom

| Option | Choice | Default | Meaning |
|---|---|---|---|
| No. | 1 ~ 255 | 1 | The specified logo will be printed once at the document bottom. |
| Size | Normal | * | The specified logo will be printed at its original size. |
|  | Double Width |  | The specified logo will be printed at double width. |
|  | Tall |  | The specified logo will be printed at double height. |
|  | Double Width / Tall |  | The specified logo will be printed at double width and double height. |
| Align | No Print | * | No logo will be printed at the document bottom. |
|  | Left |  | The logo will be printed and aligned with the left edge. |
|  | Center |  | The logo will be printed and center aligned. |
|  | Right |  | The logo will be printed and aligned with the right edge. |

*Please Note:*

- Logos must be stored within the printer before they can be printed.

- Logos can be stored into the printer via Star's Logo Store Printer Driver.

- If Two Color Paper Support is Enabled then the printer must contain two color logos within its memory.  In this case please use the Star Logo Store RB Printer Driver to create two color logos.

## 2.4   Paper Sizes

The TUP900 drivers let you use both preset standard sizes and custom, user-defined sizes.

### 2.4.1   Standard Paper Sizes

The following table shows the predefined paper sizes available for the TUP900 driver.

| Paper Size | Width | Length |
|---|---|---|
| 104mm x 254mm | 104mm | 254mm |
| 104mm x Receipt | 104mm | 3,000mm (3meter) |
| 80mm x 254mm | 80mm | 254mm |
| 80mm x Receipt | 80mm | 3,000mm (3meter) |
| 72mm x 254mm | 72mm | 254mm |
| 72mm x Receipt | 72mm | 3,000mm (3meter) |

> *Note:* **To use paper that is wider than 104 mm, the printer memory switch must be set. Refer to the product specifications manual for details.**

*Receipt Paper Size – Description:*

Each of the above models defines one "Receipt" paper size.  This paper size has the following dimensions:

- Width: the maximum allowable printable width for the model (expressed in mm)
- Length: the longest page length allowed by Windows for a printer of a given resolution

This paper size is very long.  By using this paper length you can create arbitrarily long receipts and have them printed as one page.  Printing documents on one page ensures that there are no inter-page gaps, and yields the best layout for most receipting applications.

### 2.4.2 User Defined Paper Sizes

User defined paper sizes are created through the Server Properties form accessible from the Windows Printer Folder. The procedure for creating a user defined paper size is as follows:

1. Open the Windows Printer Folder
2. Enter the File menu and choose Server Properties
3. Enter the Forms property sheet page
4. Check the "Create a new form" checkbox
5. Type the name of your new form in the "Form Name" field
6. Choose the units of measurement for specified values (either Metric or English)
7. Enter the width into the Paper Size Width field
8. Enter the height into the Paper Size Height field
9. Enter 0 into all of the Printer area margin fields
10. Click the "Save Form" button to save your new form

The following table lists the maximum user defined paper size dimensions for the printer driver.

| Maximum Width | Maximum Height |
|---|---|
| 104mm | 3,276mm |

Creating a user defined paper size of the maximum length and using the Receipt choice for the Paper Type option results in printing with no page breaks, and is often the optimal setting for retail POS.

## 3. Device Fonts

The TUP900 printer driver provides device fonts .

As these fonts were designed specifically to match the characteristics of the printer, they offer clearer printing than TrueType fonts.

> **Note:** Select the proper height when using device fonts.
> For two-color printing, refer to "2.2 Print Options" for setup.

| Fonts | Width (pixels) | Height (pixels) | Columns at 104 mm (832 dots) | Meaning |
|---|---|---|---|---|
| Printer 17cpi | 12 | 24 | 69 | Thermal printer fonts |
| Printer 8.5cpi | 24 | 24 | 34 | |
| Printer 17cpi Tall | 12 | 48 | 69 | |
| Printer 8.5cpi Tall | 24 | 48 | 34 | |
| Printer 16cpi | 13 | 24 | 64 | |
| Printer 8cpi | 26 | 24 | 32 | |
| Printer 16cpi Tall | 13 | 48 | 64 | |
| Printer 8cpi Tall | 26 | 48 | 32 | |
| Printer 14cpi | 15 | 24 | 55 | |
| Printer 7cpi | 30 | 24 | 27 | |
| Printer 14cpi Tall | 15 | 48 | 55 | |
| Printer 7cpi Tall | 30 | 48 | 27 | |
| Printer 17cpi (RED) | 12 | 24 | 69 | |
| Printer 8.5cpi (RED) | 24 | 24 | 34 | |
| Printer 17cpi Tall (RED) | 12 | 48 | 69 | |
| Printer 8.5cpi Tall (RED) | 24 | 48 | 34 | |
| Printer 16cpi (RED) | 13 | 24 | 64 | |
| Printer 8cpi (RED) | 26 | 24 | 32 | |
| Printer 16cpi Tall (RED) | 13 | 48 | 64 | |
| Printer 8cpi Tall (RED) | 26 | 48 | 32 | |
| Printer 14cpi (RED) | 15 | 24 | 55 | |
| Printer 7cpi (RED) | 30 | 24 | 27 | |
| Printer 14cpi Tall (RED) | 15 | 48 | 55 | |
| Printer 7cpi Tall (RED) | 30 | 48 | 27 | |

| Fonts | Width (pixels) | Height (pixels) | Columns at 104 mm (832 dots) | Meaning |
|---|---|---|---|---|
| Control | 12 | 24 | 69 | Control fonts |
| ESC_FONT | 1 | 24 | 832 | |
| UPC-E | 12 | 24 | 69 | Barcode fonts |
| UPC-A | 12 | 24 | 69 | |
| JAN/EAN-8 | 12 | 24 | 69 | |
| JAN/EAN-13 | 12 | 24 | 69 | |
| CODE39 | 12 | 24 | 69 | |
| ITF | 12 | 24 | 69 | |
| NW-7(Codaber) | 12 | 24 | 69 | |

# 4. Control Fonts

The control font is used to execute various printer actions, and is not used for printing. Each character is the font is associated with a particular action.

## 4.1 Control Font Characters and Their Operations

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

| Character | Operation | Control Code Translation |
|-----------|-----------|--------------------------|
| A | Drive cash drawer 1 (50 ms) | \x1b\x07\x05\x05\x07 |
| B | Drive cash drawer 1 (100 ms) | \x1b\x07\x0a\x0a\x07 |
| C | Drive cash drawer 1 (150 ms) | \x1b\x07\x0f\x0f\x07 |
| D | Drive cash drawer 1 (200 ms) | \x1b\x07\x14\x14\x07 |
| E | Drive cash drawer 1 (250 ms) | \x1b\x07\x19\x19\x07 |
| d | Drive cash drawer 2 (200 ms) | \x1a |
| 6 | Output LF | \x0a |
| 7 | Output CR | \x0d |
| F | Auto-cutter: Full-cut | \x1bd0 |
| P | Auto-cutter: Partial-cut | \x1bd1 |
| G | Print NV Bit Image 1 in regular mode | \x0a\x1b\x1cp\x01\x00 |
| H | Print NV Bit Image 2 in regular mode | \x0a\x1b\x1cp\x02\x00 |
| I | Print NV Bit Image 3 in regular mode | \x0a\x1b\x1cp\x03\x00 |
| J | Print NV Bit Image 4 in regular mode | \x0a\x1b\x1cp\x04\x00 |
| K | Print NV Bit Image 5 in regular mode | \x0a\x1b\x1cp\x05\x00 |
| Q | Print NV Bit Image 1 in double-width mode | \x0a\x1b\x1cp\x01\x01 |
| R | Print NV Bit Image 2 in double-width mode | \x0a\x1b\x1cp\x02\x01 |
| S | Print NV Bit Image 3 in double-width mode | \x0a\x1b\x1cp\x03\x01 |
| T | Print NV Bit Image 4 in double-width mode | \x0a\x1b\x1cp\x04\x01 |
| U | Print NV Bit Image 5 in double-width mode | \x0a\x1b\x1cp\x05\x01 |
| V | Print NV Bit Image 1 in double-height mode | \x0a\x1b\x1cp\x01\x02 |
| W | Print NV Bit Image 2 in double-height mode | \x0a\x1b\x1cp\x02\x02 |
| X | Print NV Bit Image 3 in double-height mode | \x0a\x1b\x1cp\x03\x02 |
| Y | Print NV Bit Image 4 in double-height mode | \x0a\x1b\x1cp\x04\x02 |
| Z | Print NV Bit Image 5 in double-height mode | \x0a\x1b\x1cp\x05\x02 |
| [ | Print NV Bit Image 1 in 4x mode | \x0a\x1b\x1cp\x01\x03 |
| ] | Print NV Bit Image 2 in 4x mode | \x0a\x1b\x1cp\x02\x03 |

| Character | Operation | Control Code Translation |
|---|---|---|
| ^ | Print NV Bit Image 3 in 4x mode | \x0a\x1b\x1cp\x03\x03 |
| _ | Print NV Bit Image 4 in 4x mode | \x0a\x1b\x1cp\x04\x03 |
| ` | Print NV Bit Image 5 in 4x mode | \x0a\x1b\x1cp\x05\x03 |
| a | Align left | \x1b\x1da\x00 |
| b | Align center | \x1b\x1da\x01 |
| c | Align right | \x1b\x1da\x02 |
| e | Set new line to 3 mm (1/8 inch) | \x1b0 |
| f | Set new line to 4 mm (1/6 inch) | \x1bz1 |
| g | International character select: USA | \x1bR\x00 |
| h | International character select: France | \x1bR\x01 |
| i | International character select: Germany | \x1bR\x02 |
| j | International character select: England | \x1bR\x03 |
| k | International character select: Denmark I | \x1bR\x04 |
| l | International character select: Sweden | \x1bR\x05 |
| m | International character select: Italy | \x1bR\x06 |
| n | International character select: Spain I | \x1bR\x07 |
| o | International character select: Japan | \x1bR\x08 |
| p | International character select: Norway | \x1bR\x09 |
| q | International character select: Denmark II | \x1bR\x0a |
| r | International character select: Spain II | \x1bR\x0b |
| s | International character select: Latin America | \x1bR\x0c |
| t | Print using black/white inversion | \x1b4 |
| u | Cancel black/white inversion | \x1b5 |
| v | Customer display: Start data transfer | \x1bS |
| w | Customer display: End data transfer | \x1bG |
| x | Customer display: Display clear | \x04\x01C1\x17 |

**Note:** The printer ignores control font characters that it does not support.
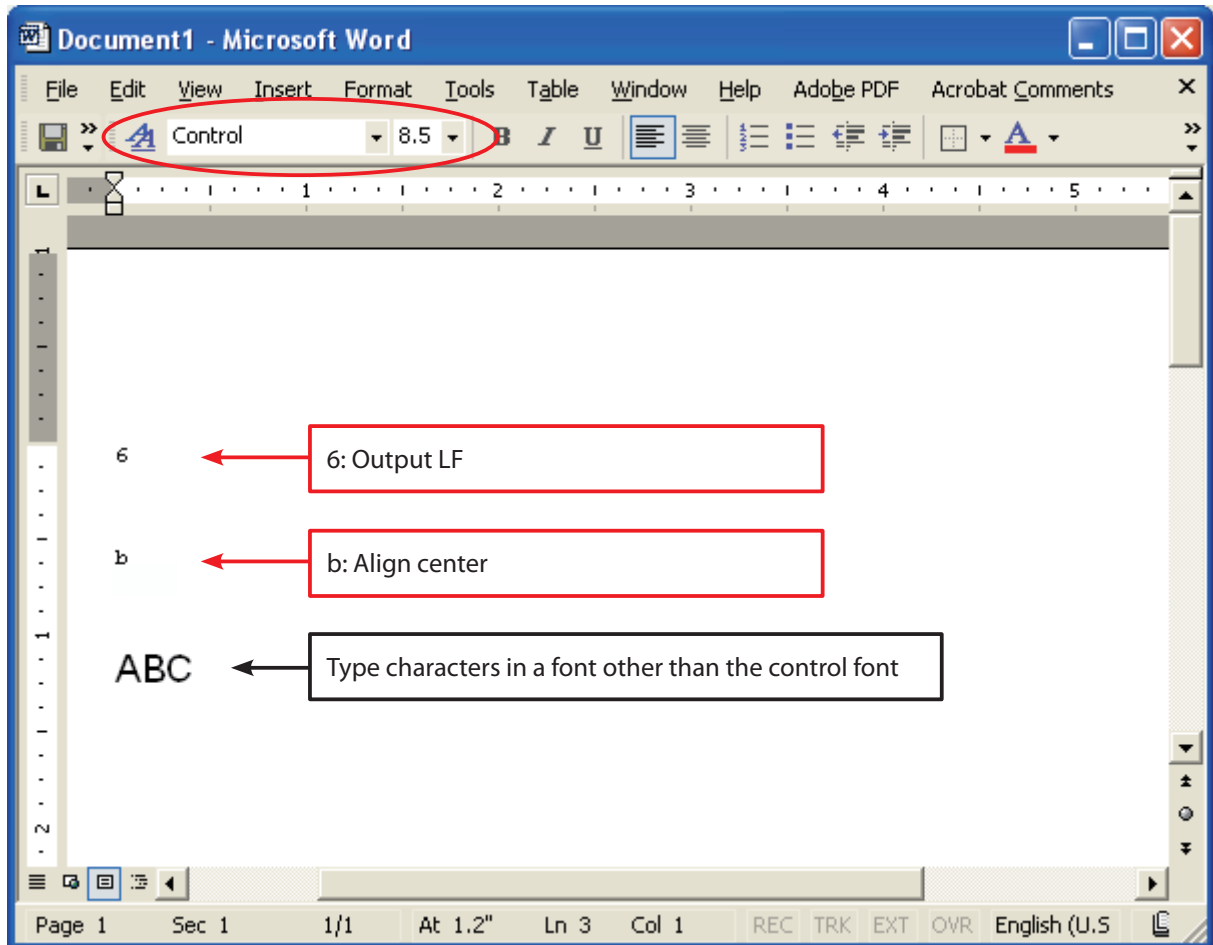
## 4.2   Using the Control Font

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

1.   Select the **Control** font from the font list.
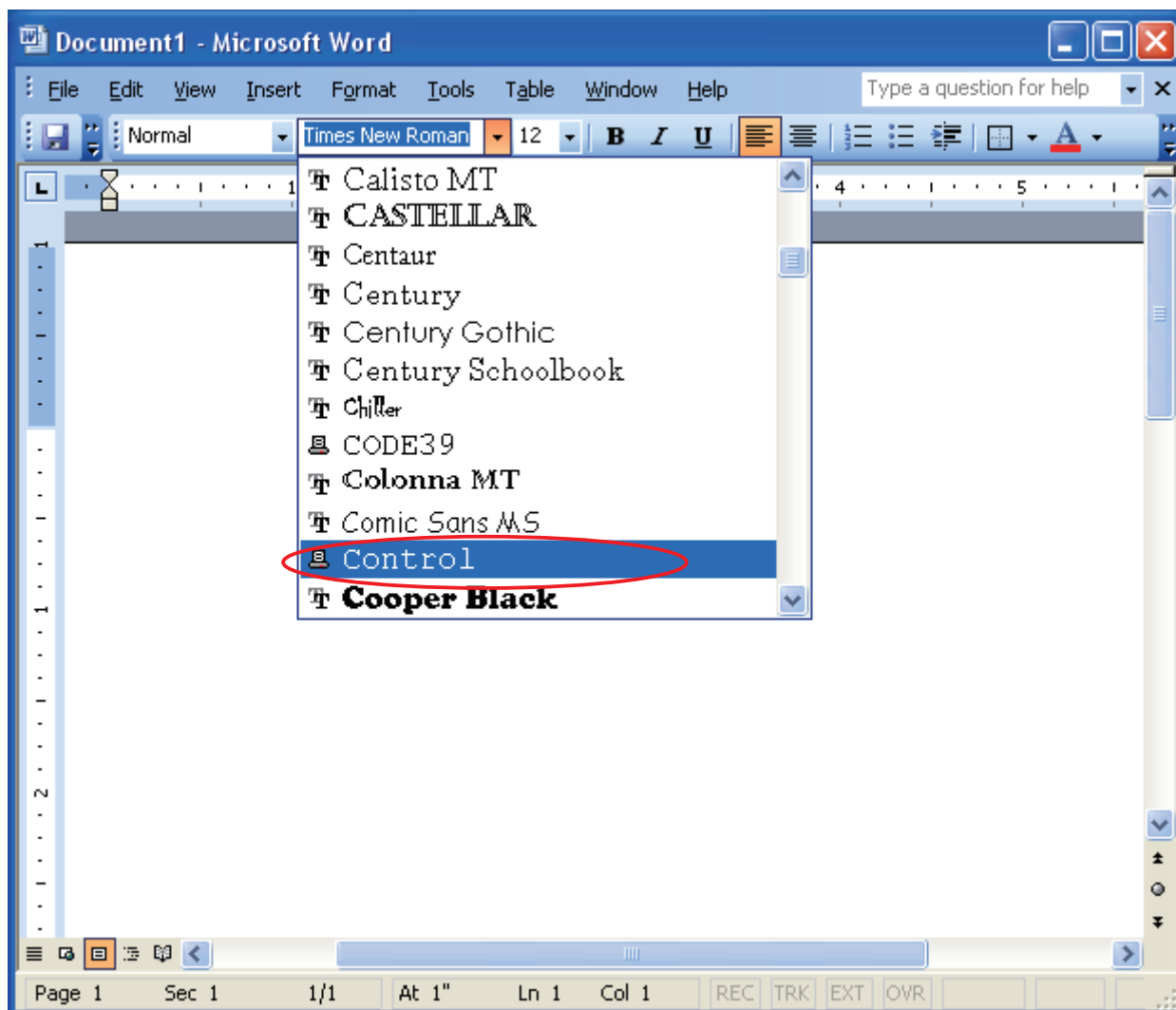
2.  Input the character for each operation you wish to execute (refer to Section "4.1 Control Font Characters and Their Operations").



| 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>
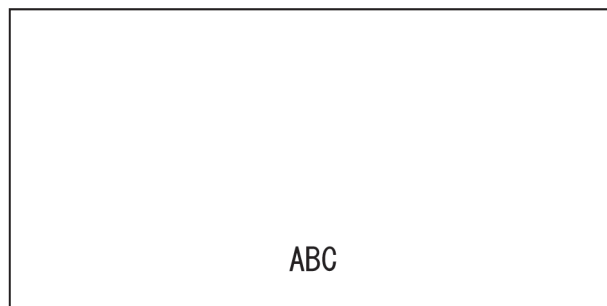
# 5. Barcode Fonts

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.

## 5.1 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<br>Symbol: –, ., <SP>, $, /, +, %<br>Alphabet: A to Z<br>Start/stop code: * (*1) |
| ITF | More than 2 column (even number) | Value: 0 to 9 |
| NW-7 (Codaber) | More than 1 column | Value: 0 to 9<br>Symbol: –, $, :, /, ., +,<br>Alphabet: A to D |

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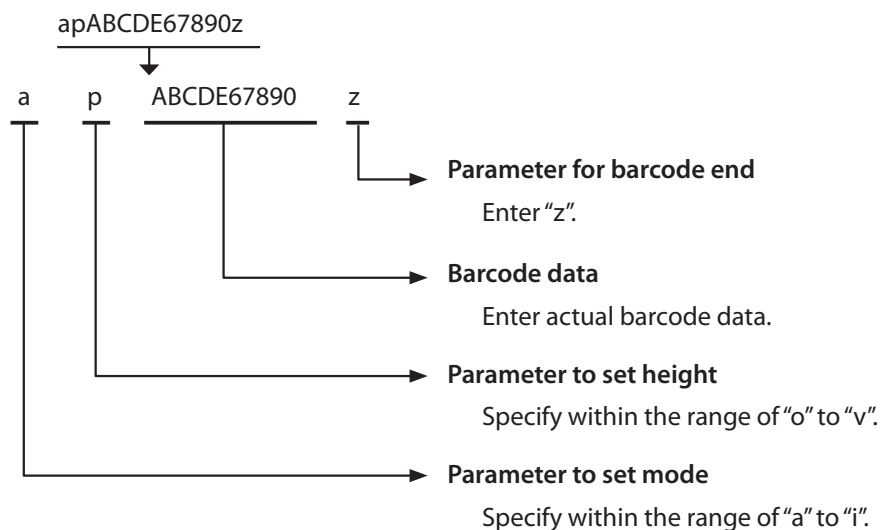
## 5.2    Entering the Barcode Font

Enter barcode fonts in the following format.
Enter "z", which is the final character of the barcode font, at the end of the code.

*e.g., For CODE39*

Data to enter:          apABCDE67890z

a        p        ABCDE67890        z

**Parameter for barcode end**

Enter "z".

**Barcode data**

Enter actual barcode data.

**Parameter to set height**

Specify within the range of "o" to "v".

**Parameter to set mode**

Specify within the range of "a" to "i".

For details of each parameter, refer to **Barcode Font Parameter List** on the next page.

## ■ Barcode Font Parameter List

| Character to use barcode font | Operation | | | Remarks |
|---|---|---|---|---|
| | UPC-E, UPC-A JAN/EAN-8, JAN/EAN-13 | CODE39 NW-7 (*1) | ITF (*1) | UPC-E, UPC-A JAN/EAN-8, JAN/EAN-13 |
| a | 2 dots | 2 dots (6) | 2 dots (5) | Minimum module width |
| b | 3 dots | 3 dots (9) | 4 dots (10) | Minimum module width |
| c | 4 dots | 4 dots (12) | 6 dots (15) | Minimum module width |
| d | — | 2 dots (5) | 2 dots (4) | Minimum module width |
| e | — | 3 dots (8) | 4 dots (8) | Minimum module width |
| f | — | 4 dots (10) | 6 dots (12) | Minimum module width |
| g | — | 2 dots (4) | 2 dots (6) | Minimum module width |
| h | — | 3 dots (6) | 3 dots (9) | Minimum module width |
| i | | 4 dots (8) | 4 dots (12) | Minimum module width |
| 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) | | | |
| z | Ending code of barcode data (1 EH) | | | |

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

## 5.3 Using the Barcode Font

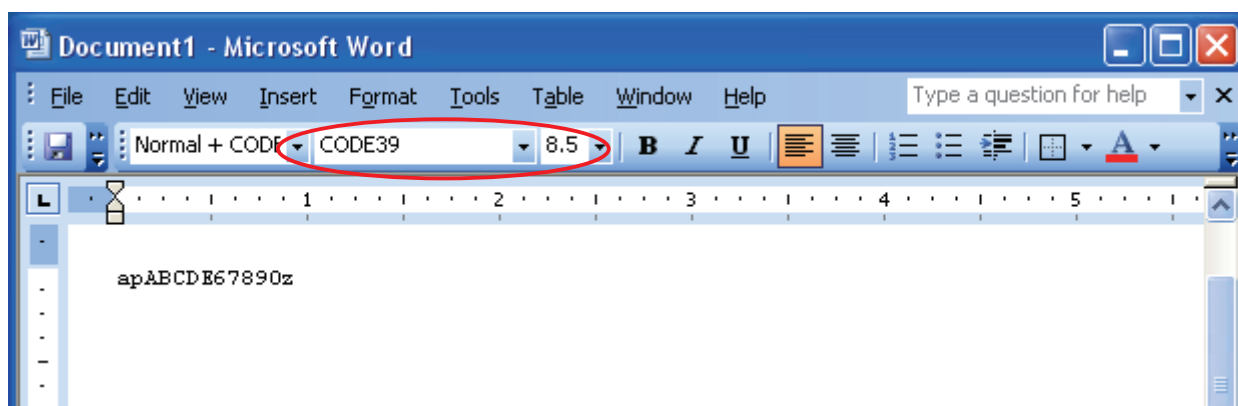The following is an example of how to set and use barcode fonts.

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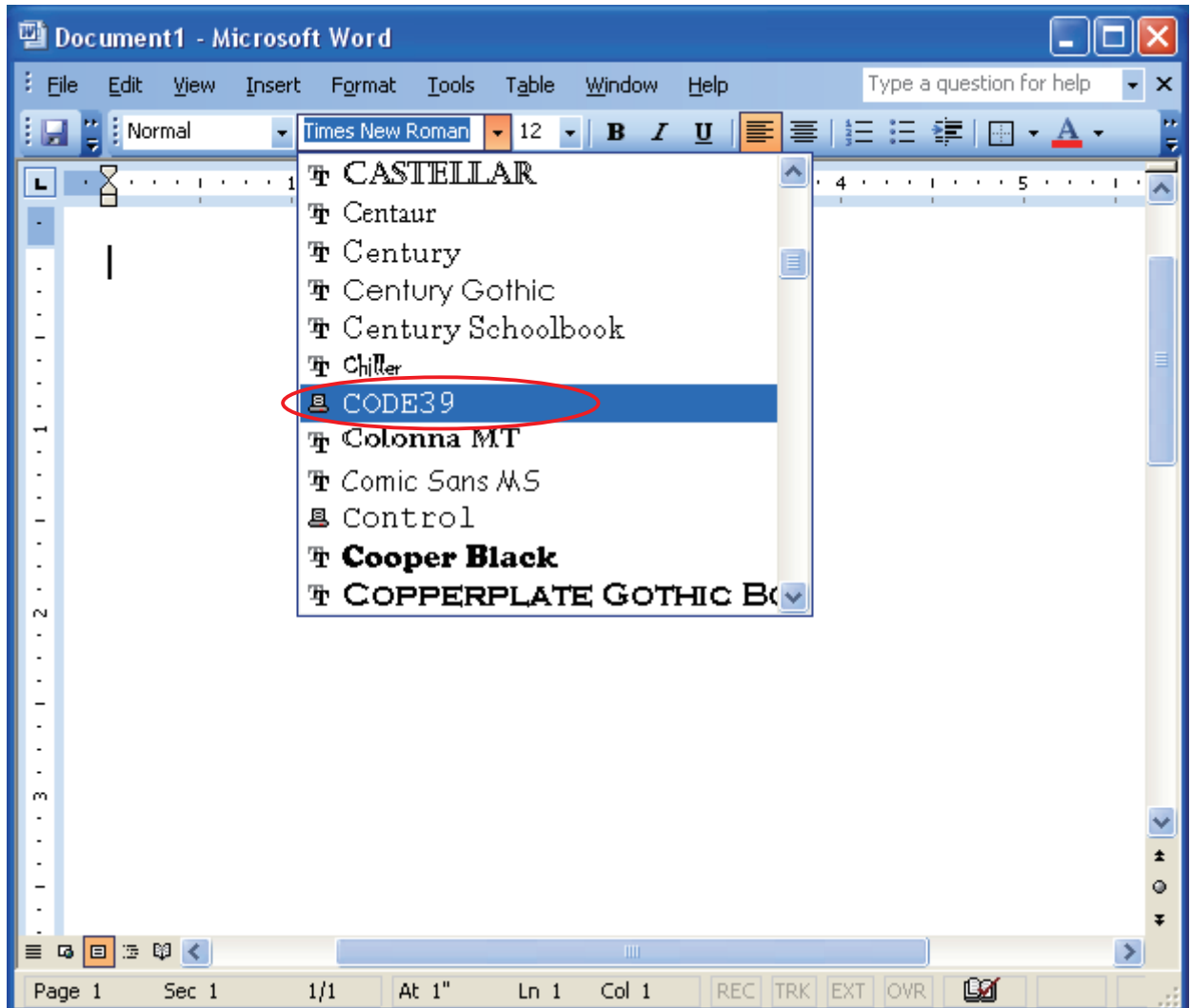
2. Enter codes.

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>

# 6. Printer Configuration

Star printers can be configured via two different mechanisms.

    1.   DIP switches (mechanical switched)

    2.   Memory switches

When using these drivers with your Star printer **no changes to the factory default DIP switch settings are required.**

In addition, the **factory default memory switch settings do not need to be changed <u>unless you choose to use black mark paper.</u>**

When using black mark paper with your printer you must enable the printer's black mark sensor.  This is done via memory switches.  The table below lists the memory switch position used to enable the black mark sensor for TUP900.

| Memory seitch 1 ( MSW1 ) | Function | ON : 1 | OFF : 0 ( Default Setting ) |
|---|---|---|---|
| 8 | black mark sensor | Enabled | Disabled |
| 9 | top search function | Enabled | Disabled |

# 7. Document Formatting Guidelines

So that you can most effectively use your printer with this printer driver, please observe the following points when creating your documents and print forms:

- Margins:
  This driver do not require any margins.  Set all document margins to 0.

- User defined paper sizes:
  This driver include one predefined paper size, but support user defined paper sizes.  You can create a custom paper size via the Server Properties form available off the File menu of the Windows Printer Folder.  Refer to the Windows help system for information on how to do this.  Remember that no margins are required.

- Device Font Usage:
  Use device fonts to print text when ever possible.  Printing text via device fonts will greatly increase the print speed.

- 1 Device Font / Line
  Use only one type of device font per line.

- Red Device Font Usage
  After using a red device font, it is necessary to print one or more characters using a black device font in order to return to the black printing mode.  Space characters are acceptable.

- Graphics & Device Fonts
  Do not print device fonts and graphics on the same horizontal line.  Printing device fonts and graphics on the same horizontal line will cause the printed document to differ from the displayed document.

- Barcode Device Fonts
  When using the barcode device fonts, only characters will appear on the computer's display.  The printed result will be a barcode.  This difference can cause the displayed and printed document lengths to vary slightly.

# 8. Revision History

| Rev. No. | Date | Content |
|---|---|---|
| Rev. 1.0 | Feb, 2009 | New release |
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