



Star Windows Printer Drivers FAQ

This document contains a list questions (and answers) frequently asked by users who are installing the Star Windows printer drivers for use with standard Windows based applications.

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Answers

A – Installation

1. How can I get the latest Star POS drivers?

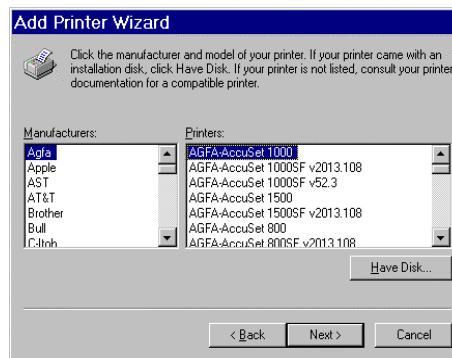
For the latest drivers for Star 'Point of Sale' printers please visit the support section of the Star Micronics Web site at www.starmicronics.com

2. How do I install the Star Printer Drivers?

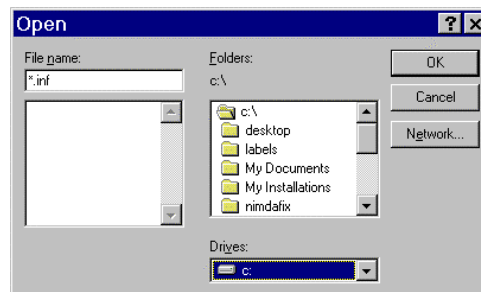
From Version 1.54 onwards, the drivers are packaged as a self-extracting ZIP archive and are downloaded as a single executable file. Once you have downloaded the file, run it to extract all driver files, documentation and utilities onto your hard drive.

Once the files are extracted you can add a new printer by loading Windows Control Panel (Click on 'Start' → 'Settings' → 'Control Panel'), clicking on 'Printers' and then clicking on 'Add Printer...'

The Windows 'Add Printer Wizard' will now run, follow the prompts, answering the system specific questions until prompted for the printer manufacturer and model:



Click on "HAVE DISK" and on the following 'Install From Disk' dialog, click "BROWSE". Next you must select the driver information (*.inf) file that represents your printer and operating system.



The default location for the drivers is 'C:\Star\DriversXXX' where XXX is the version of the printer drivers that you have downloaded. Within this directory you can find the printer driver documentation, utilities and printer drivers for Windows 95, 98, NT4, 2000 and ME. The subdirectory 'Windows 9x' contains drivers for Windows 95, 98 and ME, the sub directory 'Windows2000' contains drivers for Windows 2000 and 'WindowsNT' contains the drivers for Windows NT4.0. Click on "OK" to continue.

Windows will now install all of the files required for your printer; you may need your original Windows CD in order to retrieve certain Windows files required for printing.

Please refer to the documentation supplied with the printer drivers to find out which *.inf file is correct for your particular printer model.

NOTE: Early versions of Windows 95 sometimes have trouble locating and installing certain Windows system files, these files are 'UNIDRV.DLL', 'UNIDRV.HLP' and 'ICONLIB.DLL'. These files are located on the Windows 95 CD.

3. Why are no drivers listed for my printer model?

Most star printers have a 'series' name printed on the front instead of the actual printer model name. E.g. TSP400 is the name of a series of printers and not an actual printer model, the model name is printed on a label underneath the printer (in the case of the TSP400 this would be either a TSP412 or TSP442).

4. What is 'DTool.EXE' ?

'DTool.EXE' is a small utility, which can be used to modify internal settings in some Star Printers that can affect the behavior of the Windows Drivers.

It supports all Star printers that have internal memory switches:

- TSP200
- TSP400 and TSP400z
- TUP400 (versions 1, 2 and 'z')
- TSP600
- TSP700
- TSP800
- SP2000
- SCP700

Other Star printers may have similar configuration options available via traditional DIP Switches.

'DTool.exe' is supplied inside the main driver archive ('drv_v15.zip') or can be downloaded from the Star Micronics Web Site (<http://www.starmicronics.com>).

5. Why does the printer feed about 10cm at the end of a print instead of cutting?

If you are using a Star SP200 series printer please select the full or partial cut versions of the driver during installation (available from driver version 1.5 and later).

If using an SP300 series printer, please ensure that you are using the driver for the correct printer model as not all SP300 models have an auto cutter.

For all other printers the current Windows drivers send a <FF> (form feed) instruction at the end of a print job. The default behavior on receiving a <FF> is to feed to the end of the page, but they may be configured to cut instead when used with the Windows drivers

For the TSP552 or TSP2000 you need to switch DIP Switch 2-2 (bank 2, switch 2).

For SP2000, TSP200, TSP400, TSP800, SCP700 printers you can use 'DTool.exe' which is supplied with the current drivers or available from our web site (<http://www.starmicronics.com>). Some printers also have advanced set-up utilities available, which provide a greater degree of configurability than 'DTool.exe'.

6. Why does my printer go into an error condition or do nothing when I try to print?

Many Star printers support more than one instruction set, usually 'Star Line Mode', 'Star Page Mode' or 'ESC/POS Emulation'. Please ensure that your printer is using 'Star Line Mode', this is usually set by a standard DIP Switch, please refer to your documentation.

The Star TSP400 and TUP400 series printers default to 'Star Page Mode' and can be switched into 'Star Line Mode' using 'DTool.exe' which is supplied with current drivers or available from our web site (www.starmicronics.com).

7. What are the 'raster' mode printer drivers?

For our recent products (the TSP600, TSP700 and TSP800) we provide two different sets of Windows drivers, a standard, and 'raster' set. The standard drivers are supplied as part of the usual Star printer drivers suite and work in the same way as our existing drivers. The 'raster' drivers are a graphics only (no resident, bar code or control fonts) printer driver that obtain high print speed by using a compressed 'raster graphics' data format. These drivers are extremely fast and are ideal for most standard Windows applications that use graphics to print everything (including TrueType fonts) such as Microsoft Word. The Raster printer drivers also provide a facility for scaling and printing larger page sizes (such as A4), which is ideal for printing from any application that is designed only for A4 printers (such as Internet Explorer).

** All questions and answers in this document refer to the 'standard' mode printer drivers unless otherwise stated **

B - General Use**1. Why are the control codes that I send to the printer being ignored?**

It is not possible to send control codes to the printer via the Windows drivers. Windows strips non-printing characters such as <ESC>, which are used to form commands, to the printer.

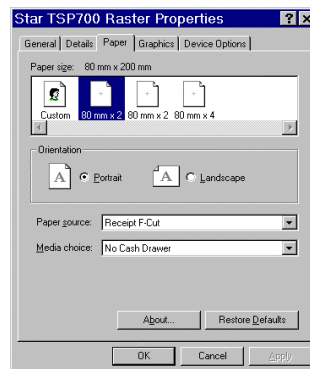
There is a font built-in to the drivers called 'control' which allows you to trigger special features, for example you can switch to the 'control' font and print an 'A' to open cash drawer 1, or a 'F' to perform a full cut

2. Is there any way to send control codes to the printer via the windows drivers?

There is if you are a programmer, you can use the Windows API function WritePrinter() to send data directly to the printer.

3. How can I open a cash drawer?

All of our current drivers can be configured to open a cash drawer via either the 'Media Choice' or 'Paper Source' setting. The cash drawer will be opened at the start of the print job.



If you need to control the point at which the cash drawer is opened then you can use the 'control' font that is built into our drivers. Switch to the 'control' font and print a character 'A' to open cash drawer 1.

4. How can I open a cash drawer without the printer spooling/cutting some paper?

This is only possible by sending a control code directly to the printer. Please see answer B2.

5. I am using TrueType fonts and printing is very slow. Is there any way to speed the printing up?

TrueType fonts have to be printed as graphics, which means that a lot of data needs to be sent to the printer. Current serial and parallel ports have a limited speed, which means that the printer will often have to stop and wait until it has received a complete line of data.

Our drivers contain some 'resident' fonts, which use the character set that is built-in to the printer. If you use a resident printer font, then no graphics data needs to be transmitted and the printer should be able to run at full speed. When printing graphics (including TrueType fonts) to a Star SP2000, SP300 or SP298, please try using driver version 1.5 or later and select a resolution of 170x72, 154x72 or lower, which uses a single-pass printing method that is much quicker.

It is also possible to improve performance of the SP2000 by selecting bi-directional graphics printing (using dtool.exe). If your SP2000 is out of alignment, bi-directional graphics will look poor, please refer to page 25 of the user manual for the re-alignment procedure.

6. Is there any way to speed up graphics printing?

If you are printing a few common graphics (such as a logo at the top of a receipt. Then you may be able to use Logo Store. Logo store enables you to permanently store up to 255 graphics in the printer and is supported by all of our printers, which have a FlashROM (TSP552, TSP2000, TSP600, TSP700, TSP800).

If you have a TSP200, TSP400, TUP400 or SCP700 then you can improve the printing speed by setting the printers line spacing to 3mm (see **Answer B8**).

Once you have your logo's stored in the printer you can use the 'control' font (see the 'Star Developers FAQ' for a detailed description of the 'control' font) to ask the printer to print them out. Stored logos always print at full speed.

7. Why can I not print anything on this Star SP200 or DP8340 dot-matrix printer?

The Star SP200 and DP8340 series of printers are only capable of printing text. If your application is using a TrueType font then Windows will try to send the data as a graphic which the printer can not print (and will therefore do nothing).

To print to one of these printers you should use a printer resident font (see answer B-5). Alternatively you can use the Generic/Text-only printer driver that is supplied with Windows. This driver is able to convert TrueType fonts into resident fonts and will, therefore, print pure text from any Windows application.

8. Why does my printer shuffle forwards and backwards frequently when printing?

The standard line spacing of most Star thermal printers is 4mm but Windows outputs it's data in 3mm lengths, the effect of this is that the printer must reverse feed 1mm after every line of print to maintain the correct measurements. This problem is only noticeable in the TSP200, TSP400, TUP400 and SCP700 printer series as later models are able to adjust to the correct feed length automatically.

This problem can be solved by setting your printers default line spacing to 4mm using 'dtool.exe' (Version 1.5.5 or later). This will also increase the overall print speed.

9. How can I print a barcode?

All Star thermal printers are able to generate and print bar codes. In order to generate a barcode from any Windows application our drivers contain a set of built-in barcode fonts. Following is a list of barcode fonts.

Printer font name	column	characters
UPC-E	12	Numeric (0-9)
UPC-A	12	Numeric (0-9)
JAN/EAN-8	8	Numeric (0-9)
JAN/EAN-13	13	Numeric (0-9)
CODE39	More than 1 column	Numeric (0-9) Symbols - . (space) \$ / + % Alphabet: A to Z (capital letters only)
ITF	More than 2 column (have to even columns)	Numeric (0-9)
NW-7 (Codabar)	More than 1 column	Numeric (0-9) Symbols - \$: / . + Alphabet: A to D (capital letters only)

To print a barcode:

- *Within your application, select the barcode font that prints the bar code type that you require.*
- *Type a single letter, between 'a' and 'l' which represents the mode of the bar code (the mode of a barcode equates to the minimum and maximum line thickness – more information is given in the barcode documentation that is supplied with the driver).*
- *Type another letter (between 'o' and 'v'), which represents the height of the barcode.*
- *Type the barcode data, the rules of what type of data is allowed vary between different types of barcode.*
- *End the barcode data with a 'z' character.*

You should now have a line in you document which looks like this:

ap5000278598276z

Where '5000278598276' is the data that will be encoded into the barcode.

Please refer to the barcode-printing document that is supplied with the Windows drivers for information about what barcode types are supported.

10. How do I print stored logos?

It is possible to use the 'control' font that is built into the printer driver to print logo's that have been pre-stores in the printer's FlashROM. The advantage of stored logo's is that they no not need to be re-sent to the printer every time they are printed ant can, therefore, print at full speed and full quality (even over a slow connection such as serial running at 9600 baud). Logo Store is supported by the TSP552, TSP552II, TSP2000, TSP600, TSP700 and TSP800 printer series. To print a stored logo, select the 'control' font in your application and type a letter according to the table below:

G	NV BIT IMAGE # • Normal mode print
H	NV BIT IMAGE # • Normal mode print
I	NV BIT IMAGE # • Normal mode print
J	NV BIT IMAGE # • Normal mode print
K	NV BIT IMAGE # • Normal mode print
Q	NV BIT IMAGE # • Double width mode print
R	NV BIT IMAGE # • Double width mode print
S	NV BIT IMAGE # • Double width mode print
T	NV BIT IMAGE # • Double width mode print
U	NV BIT IMAGE # • Double width mode print
V	NV BIT IMAGE # • Double height mode print
W	NV BIT IMAGE # • Double height mode print
X	NV BIT IMAGE # • Double height mode print
X	NV BIT IMAGE # • Double height mode print
Z	NV BIT IMAGE # • Double height mode print
[NV BIT IMAGE # • Double width & height mode print
]	NV BIT IMAGE # • Double width & height mode print
^	NV BIT IMAGE # • Double width & height mode print
_	NV BIT IMAGE # • Double width & height mode print
`	NV BIT IMAGE # • Double width & height mode print

11. What is the 'control' font?

The 'control' font is a font that is built-in to the printer driver; it becomes available to any Windows application that is currently using a Star printer. The control font can be used to send instructions to the printer that can usually only be sent by software that controls the printer directly (such as instructions to fire a cash drawer, cut or print a stored logo). A document is supplied with the printer drivers, which lists all of the functions of the 'control' font.

As an example of selecting the 'control' font from within the WordPad application (supplied with Windows):

- Run WordPad
- Select 'File' → 'Page Setup...' from the pull down menu's
- Click on PRINTER and select the Star Printer that you are using.
- Now, from the main WordPad font list you will be able to select all of the fonts that are built-in to the driver including the 'control' font (as well as printer resident and barcode fonts).

Following is a list of control fonts.

Control Font	Function	Command
A	Drive peripheral unit #1 (50ms)	\x1B\x07\x05\x05\x07
B	Drive peripheral unit #1 (100ms)	\x1B\x07\x0A\x0A\x07
C	Drive peripheral unit #1 (150ms)	\x1B\x07\x0F\x0F\x07
D	Drive peripheral unit #1 (200ms)	\x1B\x07\x14\x14\x07
E	Drive peripheral unit #1 (250ms)	\x1B\x07\x19\x19\x07
d	Drive peripheral unit #2 (200ms)	\x1A
6	<LF>	\x0A
7	<CR>	\x0D
F	Cut paper (Full cut : when the printer supports full and partial cut)	\x1Bd0
P	Cut paper (Partial cut : when the printer supports full and partial cut)	\x1Bd1
a	Align position(left)	\x1B\x1Da\x00
b	Align position(center)	\x1B\x1Da\x01
c	Align position(right)	\x1B\x1Da\x02
e	Set line spacing to 3mm	\x1B0
f	Set line spacing to 4mm	\x1Bz1
g	International character set (U.S.A)	\x1BR\x00
h	International character set (France)	\x1BR\x01
i	International character set (Germany)	\x1BR\x02
j	International character set (U.K.)	\x1BR\x03
k	International character set (Denmark I)	\x1BR\x04
l	International character set (Sweden)	\x1BR\x05
m	International character set (Italy)	\x1BR\x06
n	International character set (Spain I)	\x1BR\x07
o	International character set (Japan)	\x1BR\x08
p	International character set (Norway)	\x1BR\x09
q	International character set (Denmark II)	\x1BR\x0A
r	International character set (Spain II)	\x1BR\x0B
s	International character set (Latin America)	\x1BR\x0C
t	Set RED printing	\x1B4
u	Cancel RED printing	\x1B5
v	Start customer display transmitting	\x1BS
w	End customer display transmitting	\x1BG
x	Clear customer display	\x04\x01C1\x17

Note: Above functions are available for printers that support the functions.

* The 'control' font is for the above functions only and not for regular text input*

For additional Technical support, please contact your supplier or distributor.