



Unicode and Non Unicode Printing with the Swiss™721 Font

There are many methods of printing international characters with Unicode fonts on a Zebra printer.

We offer a free Swiss 721 font with 983 characters for printing any European, Middle Eastern or African languages including Arabic & Hebrew with the font that can be added to a ZPL printer.

The font may be pre-installed in the printer or can also be downloaded from the Zebra website after accessing the printer support page.

The Swiss 721 BT font is supplied as TT0003M_.TTF for the PC and 77849_002.ZSU for the Printer.

This font is 169KB in size and is able to fit in ZPL printers that have available Flash memory. This font contains Latin, Greek, Cyrillic, Hebrew & Arabic characters.

Setting up the printer with the required font.

Copy the 77849_002.ZSU file to the printer. This will actually store on the printer as TT0003M_.FNT or TT0003M_.TTF (depending on the printer).

Then send the following command to allocate font recall reference of X to the Swiss 721 font. (Any value can be used as long as it is not in use by the printer.)

```
^XA^CW^X,E:TT0003M_.FNT^XZ
```

(Please Note: This command is not saved – See note at the end of this document for Autoexec info)

International Font and Encoding Programming differences

The ZPL programming file I am using is written in Notepad using Unicode characters and stored as a UTF-16 Big-Endian Unicode file. If the file is not stored in this format when you open the file or send the file to the printer it will either not print or will try to recall different characters.

(Please Note: If you open the file in a Non-Unicode capable program or DOS window it will not display correctly)

Example 1 – Using Unicode UTF-16 Encoding

This example uses Unicode characters (with ^CI29) that display as the actual characters to be printed.

```
^XA^CI29
```

```
^FO50,50^AX,80,70^FDSwiss 721 font: ^FS
```

```
^FO50,160^AX,80,70^FDGreek CY ЁЂЃЄЅІЇЈЉЊЋЌЎЏЏАБВГДЕЖЗИЙКЛМН^FS
```

```
^FO50,340^AX,80,70^FDCyrillic: ЖЛЗ^FS
```

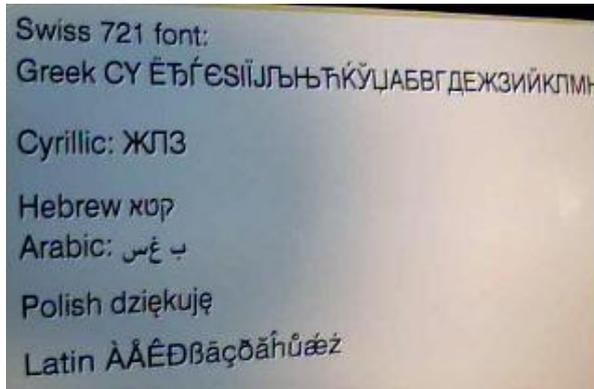
^FO50,500^AX,80,70^FDHebrew קטן

^FS ^FO50,600^AX,80,70^FDArabic: سدغ گب ^FS

^FO50,750^AX,80,70^FDPolish dziękuje ^FS

^FO50,900^AX80,80^FDLatin ÀÁÊÐβāçďăĥŭæž^FS^XZ

This will print



Example 1b – Using Unicode UTF-16 Encoding – RIGHT TO LEFT PRINTING

As you can see from the example above certain characters should be written from Right to Left instead of the default Left to Right printing.

To turn this on you would specify the ^FPR for Reverse Printing (Right to Left)

To turn this off in the same format you would specify ^FPH (Left to Right)

You would also have to change the location as this will not print in the correct location.

^XA^CI29^FPH

^FO50,50^AX,80,70^FDSwiss 721 font: ^FS

^FO50,160^AX,80,70^FDGreek CY ÊËËSIİĴĽŃŦĶŸЦАБВГДЕЖЗИЙКЛМН^FS

^FO50,340^AX,80,70^FDCyrillic: ЖЛЗ^FS

^FPR^FO500,500^AX,80,70^FDHebrew קטן

^FS^FPR^FO500,600^AX,80,70^FDArabic: سدغ گب ^FS

^FPH^FO50,750^AX,80,70^FDPolish dziękuje ^FS

^FO50,900^AX80,80^FDLatin ÀÁÊÐβāçďăĥŭæž^FS^XZ

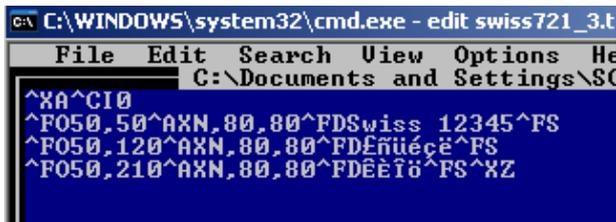
Example 2 – Using Latin characters from non Unicode (DOS) Environment

This example shows programming using the character reference from Codepage 850 for each actual character (with ^C10) to be printed.

The first character on the 2nd line in the example is recalled using Alt 156 (£).

This means that the file should show the character (but this depends on the program being used) and should also print correctly.

Creating the programming file in DOS EDIT

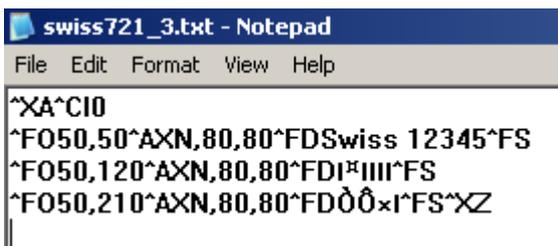


```
C:\WINDOWS\system32\cmd.exe - edit swiss721_3.t
File Edit Search View Options He
C:\Documents and Settings\SC
^XA^C10
^FO50,50^AXN,80,80^FDSwiss 12345^FS
^FO50,120^AXN,80,80^FDEñüéçë^FS
^FO50,210^AXN,80,80^FDEËÏö^FS^XZ
```

Line 1 of data uses Character Values of 156 (£), 164 (ñ), 129 (ü), 130 (é), 135 (ç), 137 (ë)

Line 2 of data uses Character Values of 210 (Ê), 212 (Ë), 215 (Ï), 148 (ö)

If you view the file in Notepad



```
swiss721_3.txt - Notepad
File Edit Format View Help
^XA^C10
^FO50,50^AXN,80,80^FDSwiss 12345^FS
^FO50,120^AXN,80,80^FDI±IIII^FS
^FO50,210^AXN,80,80^FDÏÏ×I^FS^XZ
```

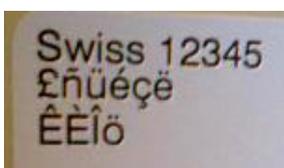
Notepad will show the characters differently than DOS will.

^XA^C10^FO50,50^AXN,80,80^FDSwiss 12345^FS

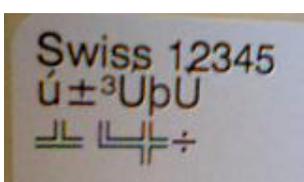
^FO50,120^AXN,80,80^FDEñüéçë^FS

^FO50,210^AXN,80,80^FDEËÏö^FS^XZ

If I send this from a (DOS EDIT) non-Unicode created file this will print



If I send this from a Notepad created file this will print



For additional details on this font please visit these links:

- **Swiss 721 Font Character Set document**

https://support.zebra.com/cpws/docs/fonts/Swis721_BT_CharList.pdf

- **Swiss 721 Supported Printers - Printers using Vxx.14 firmware and later.**
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- **Swiss 721 Font download - Download from the printer support page**
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- **Programming Example**

The link below contains a Unicode file that can be sent to the Zebra printer to print an example of some Unicode characters, it should be sent from a Unicode capable program (like ZebraNet Bridge, Zebra Setup Utility or other suitable communication utility).

The File contains:

The font allocation command to set the font (TT0003M_) to X

Setting to character set 29 which is Unicode UTF-16 Big Endian encoding

There an example of printing English, Greek, Cyrillic, Arabic/Hebrew, Polish characters

<https://support.zebra.com/cpws/docs/fonts/unic/Unicode.zip>

- **Storing the Font Assignment and Encoding with an Autoexec file**

The printer will not permanently store the Font Assignment command (^CW) or Encoding table command (^SE) so if the printer is powered off these settings will be lost.

The Swiss 721 font uses the default UNICODE.DAT encoding table which is built into the printer firmware and therefore it not required to be set.

We usually recommend to either send the commands at the beginning of the format, or to use an Autoexec file which will automatically send these settings upon power on.

^XA^DFE:AUTOEXEC.ZPL^CWX,E:TT0003M_.FNT^XZ