Software Developer's Manual

P-touch Template 2.0 Command Reference

RJ-2030/2050/2140/2150

Version 1.00

IMPORTANT - PLEASE READ CAREFULLY

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Contents

Introduction

This material provides the necessary information for directly controlling the templates transferred to RJ-2XXX. This information is provided assuming that the user has full understanding of the operating system being used and basic mastery of programming in a developer's environment.
Read the model names that appear in the screens in this manual as the name of your printer.

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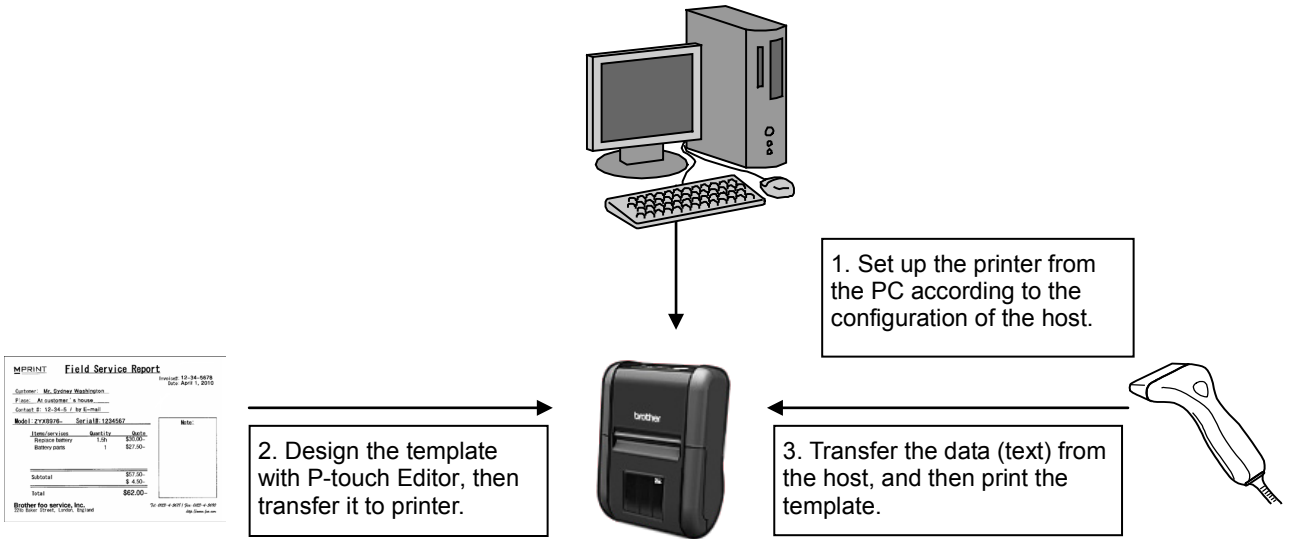
What is P-touch Template 2.0?

P-touch Template 2.0 helps the user develop a printing system that connects directly from the host and has following functions:

- transfers the template data from P-touch Editor to the printer (2)
- transfers the ASCII text and binary data from a host to the template in the printer (3)
  (“Host” includes medias such as barcode readers, smartphones or mobile terminals.)
- prints the transferred data (3)
  (See the figure shown below.)



P-touch Template 2.0 commands consist of a prefix character and a two-character text string.
When the prefix character is sent, the printer begins the analysis of the P-touch Template 2.0 command, and performs the specified process if the following two-character text string corresponds to a command.

Note

***P-touch Template 2.0 is not compatible with some hosts.**

***These hosts should have an interface to transfer the data.**

***ZPL II emulation is supported by P-touch Template 2.0.**

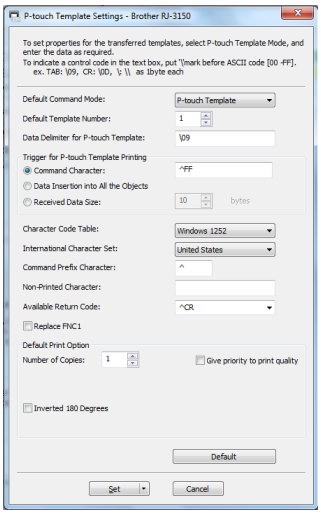
1. Using P-touch Template 2.0

(1) Specify the printer settings.

Using the P-touch Template Settings tool, specify the initial printer settings according to the host system environment or the host that the printer is connected to.

(Please refer to "2. P-touch Template Settings Tool User's Guide" on page 4.)

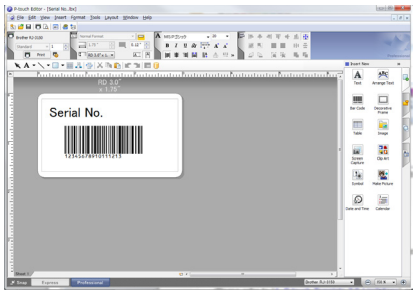
The printer driver must first be installed via a USB connection.



(2) Design the template.

Using P-touch Editor, design the template to be transferred to the printer.

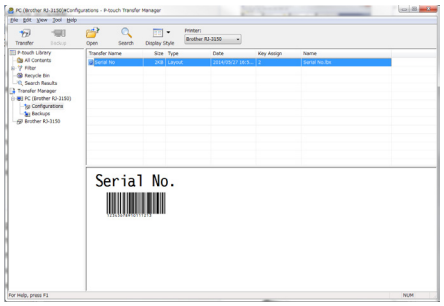
(Please refer to "4. P-touch Template 2.0 Limitations" on page 19.)



(3) Transfer the templates.

Using P-touch Transfer Manager, transfer the templates to the printer.

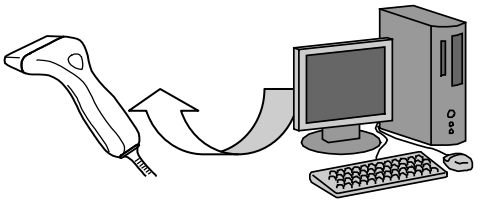
(Please refer to the TD Series Software User's Guide.)



(4) Program using P-touch Template 2.0 commands.

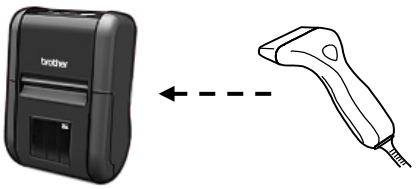
If any special commands are required to control the printer, change the terminal program in accordance with the P-touch Template 2.0 commands.

(Please refer to "6. Control Code Lists" on page 30.)

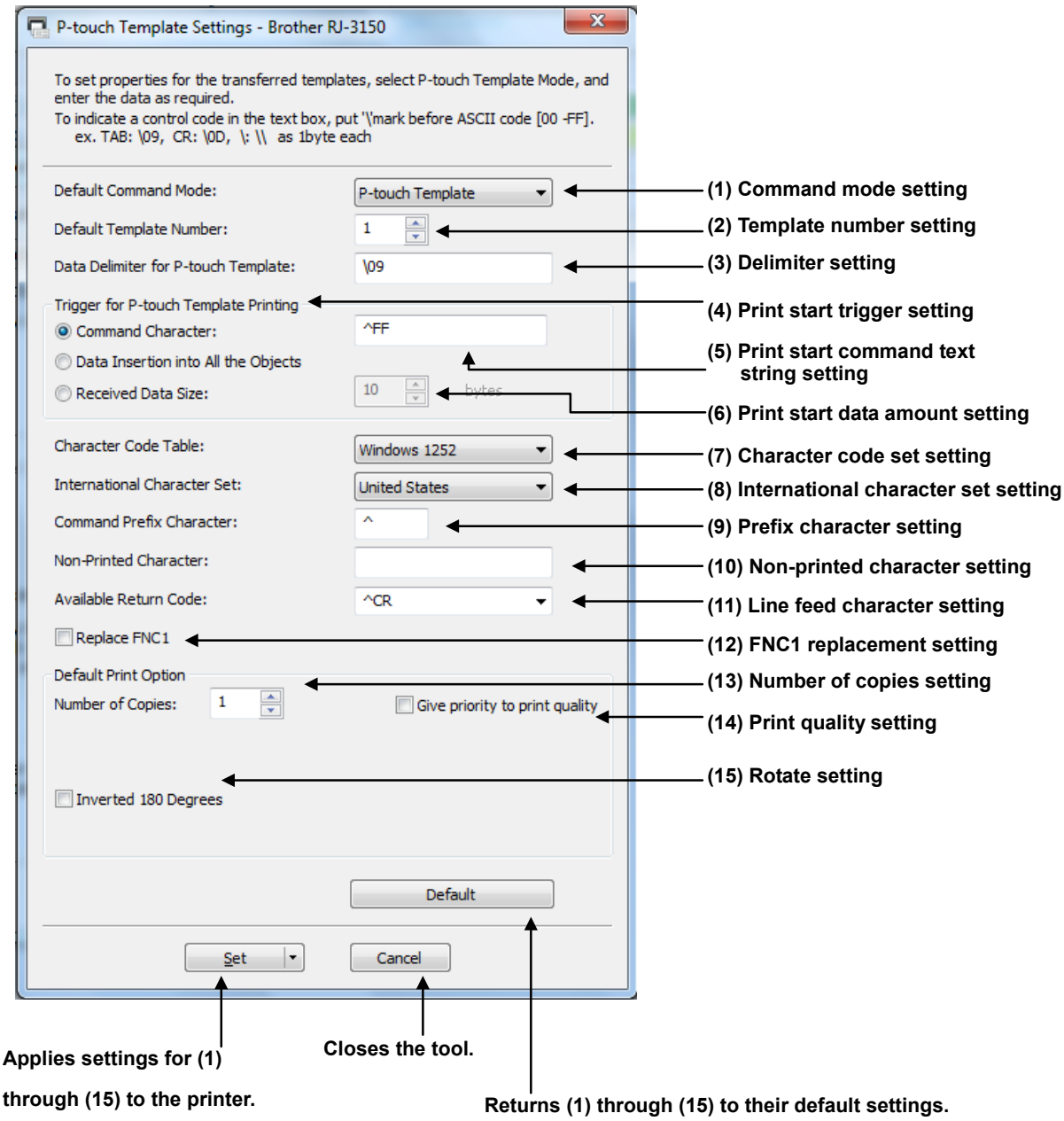


(5) Connect the printer with the host and print slips etc.

Transfer the data such as ASCII text from the host to templates in the printer, and print the slips etc.



2. P-touch Template Settings Tool User's Guide



(1) Command mode setting

- P-touch Template mode

To use P-touch Template 2.0, select the P-touch Template mode.

(2) Template number setting

Specify the template number selected as the default when the printer is turned on.

However, if any template has been set to not be transferred to the printer, the number of that template cannot be specified.

(3) Delimiter setting

A delimiter is the symbol used to indicate when to move to the next object in the data that is being sent. Between 1 and 20 characters can be specified.

(4) Print start trigger setting

Select one of the following three options for the print start trigger.

- Command Character

(Printing starts when the command character specified in (5) is received.)

- Data Insertion into All the Objects

(Printing starts when the delimiter for the last object is received.)

- Received Data Size

(Printing starts when the number of characters specified in (6) is received. However, delimiters are not counted in the number of characters.)

(5) Print start command text string setting

Specify 1 to 20 characters.

(6) Print start data amount setting

The amount of data that must be received before printing can begin can be set between 1 and 999.

(7) Character code set setting

Select one of the following three character code sets. For character code tables, refer to “Appendix B: Character Code Tables”.

- Windows1252
- Windows1250
- Brother standard

(8) International character set setting

Select one of the following countries for the character set.

- USA
- France
- Germany
- Britain
- Denmark I
- Sweden
- Italy
- Spain I
- Japan
- Norway
- Denmark II
- Spain II
- Latin America
- South Korea
- Legal

The following 12 codes are switched depending on the country selected from those listed above.

23h 24h 40h 5Bh 5Ch 5Dh 5Eh 60h 7Bh 7Ch 7Dh 7Eh

For the characters that are switched, refer to the "International character set table" in "Appendix B: Character Code Tables".

(9) Prefix character setting

Change the prefix character code. Specify as a one-character character code.

The prefix character is the code for the first character that identifies commands that can be used in P-touch Template mode.

(10) Non-printed character setting

The characters specified here are not printed when data is received. Specify 1 to 20 characters.

(11) Line feed character setting

The line feed code is used when feeding data to indicate that the following data should be moved to the next line in a text object. One of the following four line feed codes can be selected, or 1 to 20 characters can be specified as the line feed code.

1. ^CR
2. \0D\0A
3. \0A
4. \0D

(12) FNC1 replacement setting

This setting selects whether or not GS codes, which are included in barcode protocols such as GS1-128 (UCC/EAN-128), are replaced with FNC1 codes.

If the check box is selected, a received GS code is replaced with the FNC1 code. If the check box is cleared, a received GS code is outputted as is.

(13) Number of copies setting

Specify the number of copies. A number between 1 and 99 can be specified.

(14) Print quality setting

Select the print quality setting. If the check box is selected, priority is given to the print quality. If the check box is cleared, priority is given to the print speed.

(15) Rotate setting

Set print orientation. When the check box is checked, a print is 180 degrees rotated.

Others

· ini file

After the **[Set]** button (in the main dialog box or the Communications Settings dialog box) is clicked, the settings are saved when the dialog box is closed.

C:\Users\(user_account_name)\App Data\Roaming\Brother\Printer Settings\ptsXX37.ini

Note: A name of file “ptsXX37.ini” varies depending on printers like below.

- RJ-2030 pts3637.ini
- RJ-2050 pts3737.ini
- RJ-2140 pts3837.ini
- RJ-2150 pts3937.ini

Note: A file path above might be different depending on OS.

· Typing text into text boxes (3), (5), (9), (10) and (11)

Characters that can be entered as text can be typed in, and control codes can be entered as ASCII codes (00 to FF) with \ in front of them.

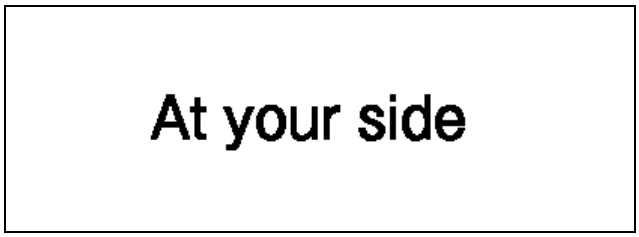
Example

PRINT	PRINT
Tab control code	\09
Line feed control code	\0D
\	\\

3. Examples for Using Commands

3.1 Example for using P-touch Template 2.0

Here is the label that will be made.

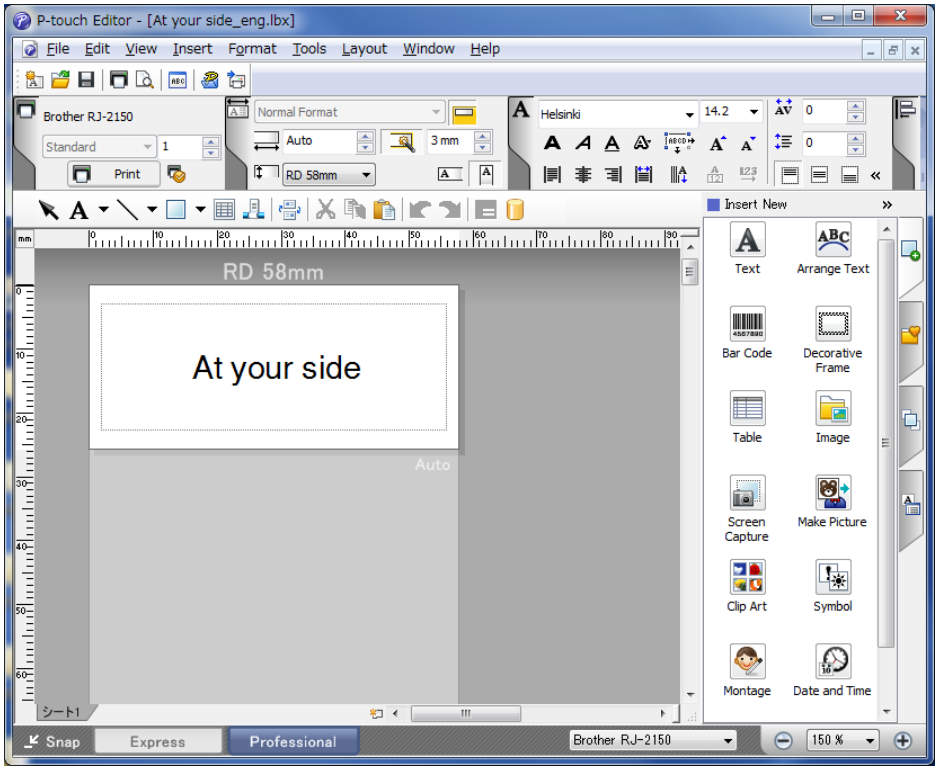


Steps

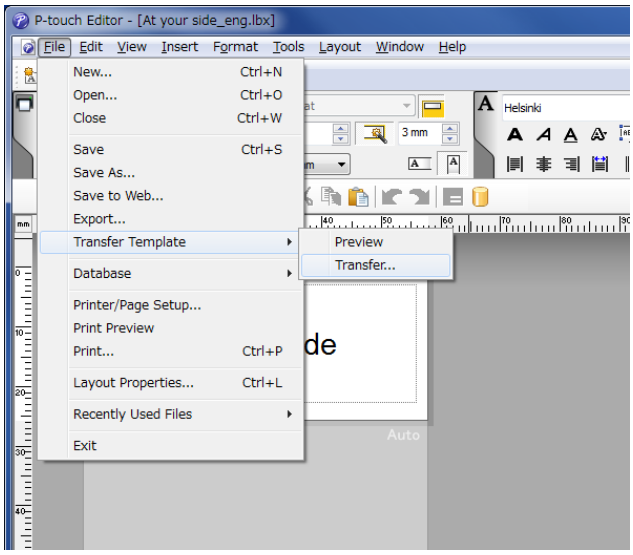
1. Make a template with P-touch Editor.
2. Transfer the template to Transfer Manager.
3. Transfer the template from Transfer Manager to the printer.
4. Use P-touch Template 2.0 commands for printing.

Step 1: Make a template with P-touch Editor.

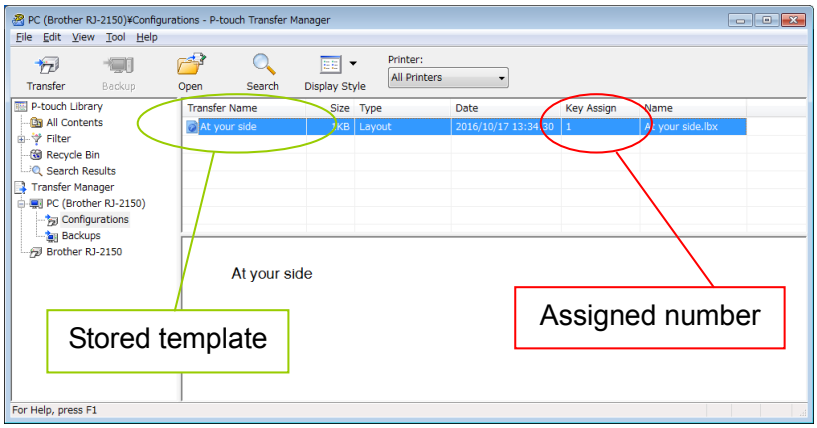
Start the P-touch Editor and make a label.



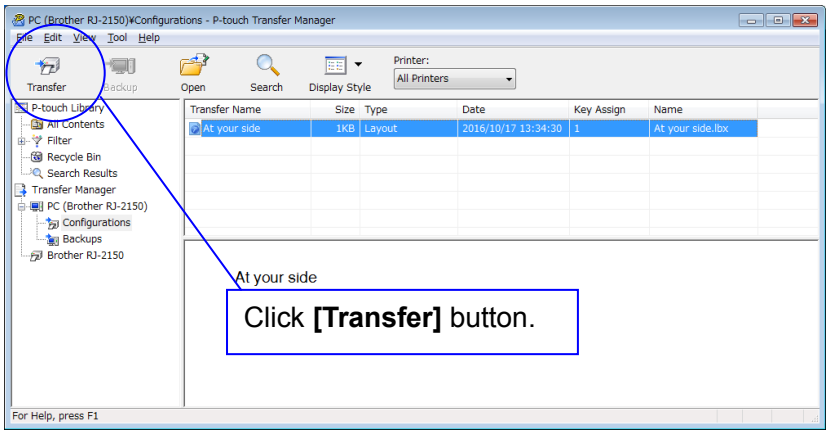
Step 2: Transfer the template to Transfer Manager.



The template sent in step 2 is stored in Transfer Manager, as shown below.



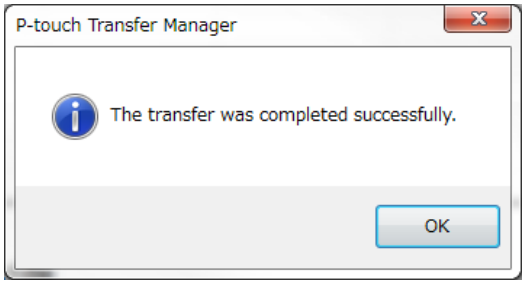
Step 3: Transfer the template from Transfer Manager to the printer.



Note

Make sure that the printer is turned on and hooked up to the PC with a USB cable before using Transfer Manager. Also, make sure that the printer communication setting is always bidirectional communication when Transfer Manager is used.

When the template is transferred to the printer, the following message appears.

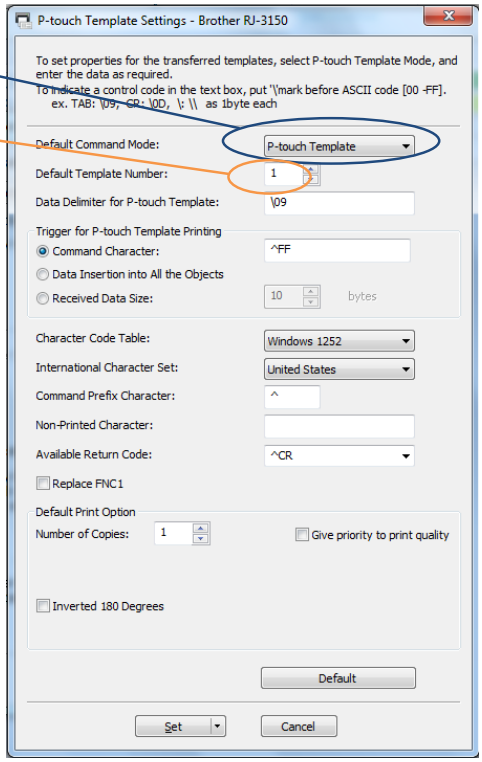


Step 4: Use P-touch Template 2.0 commands for printing.

When using P-touch Template 2.0 commands, at least these four commands are required. However, two out of the four can be set by using the P-touch Template Settings tool.

(1) Select the P-touch Template mode.

(2) Choose the assigned number.



After setting (1) and (2) with the P-touch Template Settings tool, the other two commands must be sent to the printer.

(3) Initialize P-touch Template 2.0

^II Initialize

ASCII:	^	I	I
Decimal:	94	73	73
Hexadecimal:	5E	49	49

Parameters

None

Entered command

^II

(4) Print Start

^FF Start printing

ASCII:	^	F	F
Decimal:	94	70	70
Hexadecimal:	5E	46	46

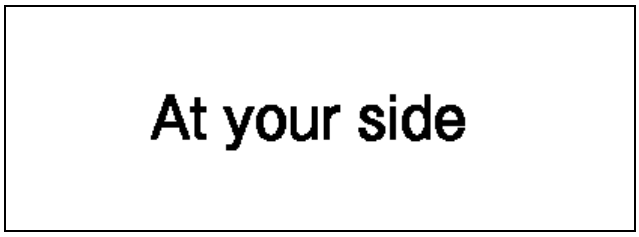
Parameters

None

Entered command

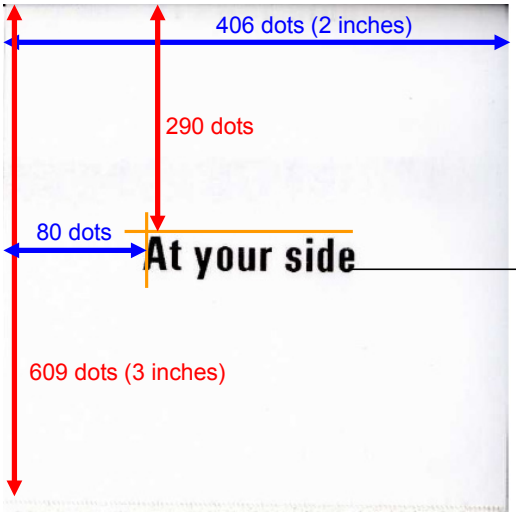
^FF

When the printer receives the command above, the label below is printed.



3.2 Example for using ZPL II in P-touch Template 2.0

Here is the label that will be made.



Example:
A case 203dpi printer is used

Font is outline font, and size is 50, 50 dots.

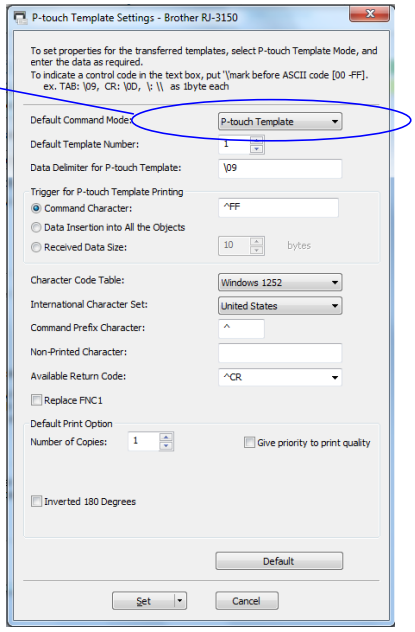
Steps

1. Change the mode to P-touch Template mode.
2. Set the label length with ^LL.
3. Set the label width with ^PW.
4. Send other ZPL II command.

Step 1: Change the mode to P-touch Template mode.

P-touch Template mode can be selected by using the P-touch Template Settings tool shown below.

Select P-touch Template mode.



Step 2: Set the label length with ^LL.

The label length is 609 dots.

Entered command

```
^LL609
```

Step 3: Set the label width with ^PW.

The label width is 406 dots.

Entered command

```
^PW406
```

Step 4: Send other ZPL II commands.

The orientation of the text is 80, 290.

The font is outline font and size is 50, 50.

The text is “At your side.”

Entered command

```
^FO80,290
^A0N,50,50
^FDAt your side
```

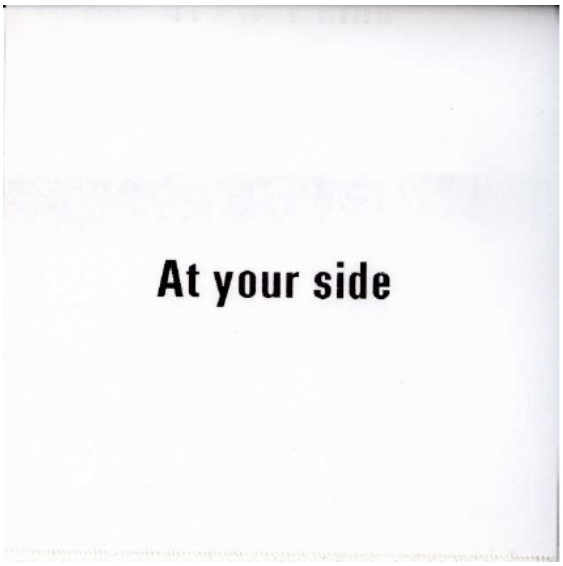
Summary -all commands to be sent to make the label-

```
^XA
^LL609
^PW406
^FO80,290
^A0N,50,50
^FDAt your side
^XZ
```

Note

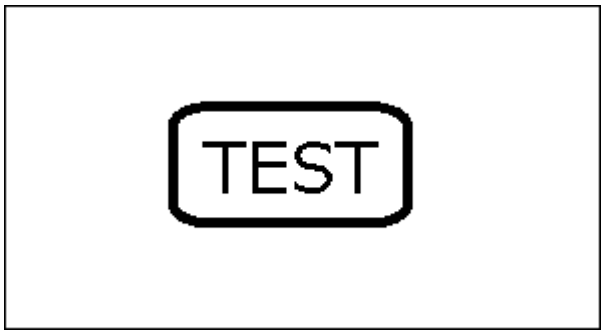
“^XZ” is the command required at the end of format with ZPL II commands.

With those commands above, the label below is printed.



3.3 Example for printing logo/external characters in P-touch Template 2.0

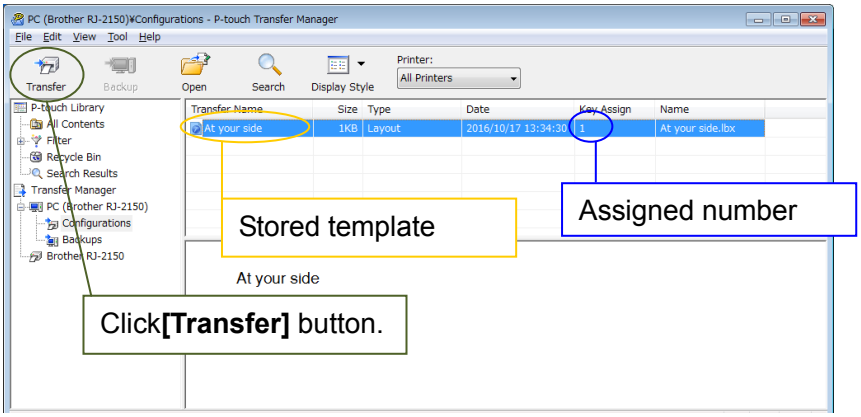
Here is the label to be printed.



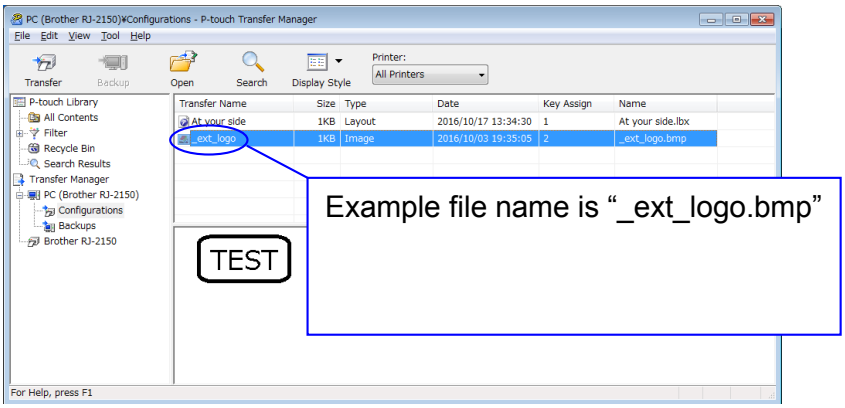
Steps

1. Make a template and transfer it to the printer.
2. Store the logo/external characters as a bitmap file.
3. Transfer the bitmap file from Transfer Manager to the printer.
4. In the P-touch Template Settings tool, select the assigned number for the stored template.
5. With the P-touch Template commands, select the assigned number for the bitmap file.

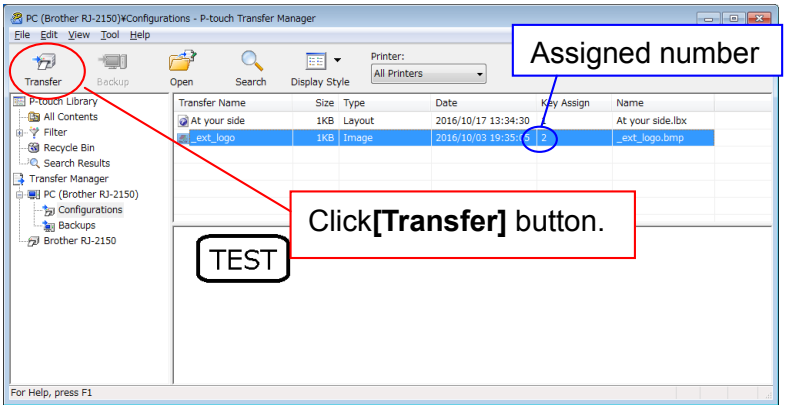
Step 1: Make a template and transfer it to the printer.



Step 2: Store the loge/external characters as a bitmap file. The file name should be started from "_ext_",, and drag & drop it to Transfer Manager.



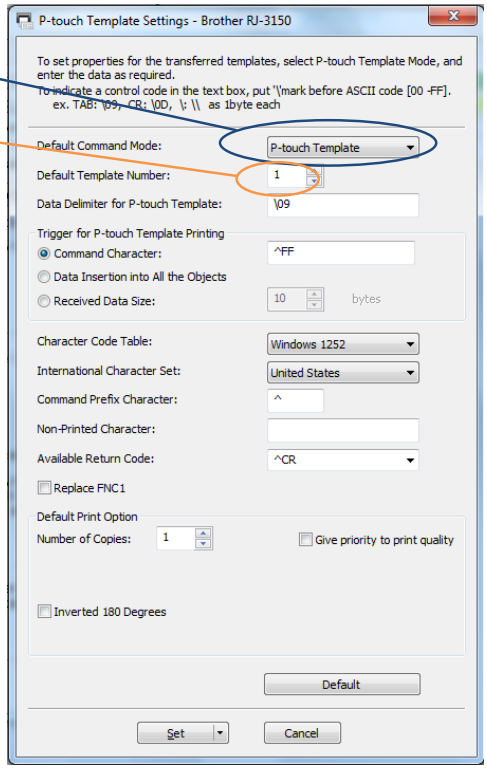
Step 3: Transfer the bitmap file from Transfer Manager to the printer.



Step 4: In the P-touch Template Settings tool, select the assigned number for the stored template.

(1) Select the P-touch Template mode.

(2) Choose the assigned number.



Step 5: With the P-touch Template 2.0 commands, select the assigned number for the bitmap file.

After using the P-touch Template Settings tool in Step 4, the remaining three commands must be sent to the printer.

(1) Initialize P-touch Template

^II Initialize

ASCII:	^	I	I
Decimal:	94	73	73
Hexadecimal:	5E	49	49

Parameters

None

Entered command

^II

(2) Select the bitmap file to be printed.

In order to select the bitmap file, enter a specific character "\" and the value one less than the assigned number for the bitmap file that is shown in Step 3.
For example, if the assigned number for the bitmap file is 2, enter \01 as shown right.

Entered command

\01

(3) Start printing.

^FF Start printing

ASCII:	^	F	F
Decimal:	94	70	70
Hexadecimal:	5E	46	46

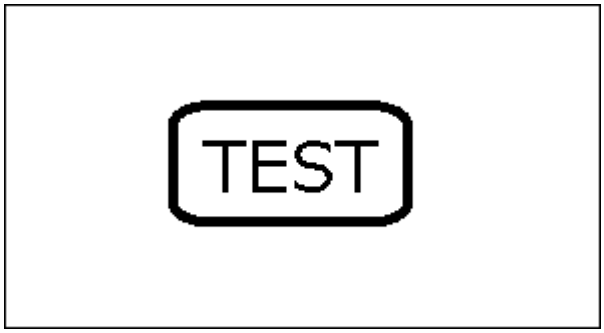
Parameters

None

Entered command

^FF

When the printer receives the command above, the label below is printed.



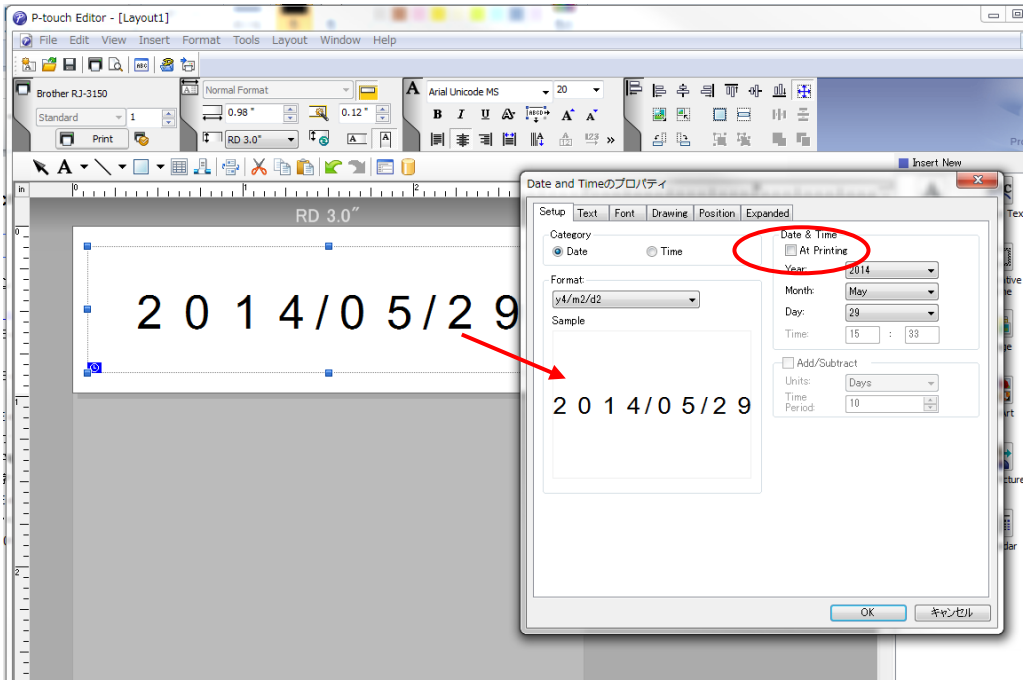
4. P-touch Template 2.0 Limitations

4.1 Relating to text objects

4.1.1 Font, size, etc.

Please also refer to "5.2 Relationship between the P-touch Editor settings and the printer image" on page 28

- When a template is transferred to a printer, a font specified in P-touch Editor is changed to most similar resident font in the printer.
- Character sizes specified in P-touch Editor are converted to the closest built-in character size when the data is sent to the printer.
- Character sizes specified in P-touch Editor are all made the same size within an object.
- Depending on the language of the computer used for transferring, either the Western European or the Eastern European character set is used for characters within text objects.
- "\" is used as control character for an external character. When "\" has to be used as a data, input "\\".
- When "At Printing" check box is NOT checked, the time and date when editing P-touch Editor is applied and printed. When "At Printing" check box is checked, time and date is not printed.



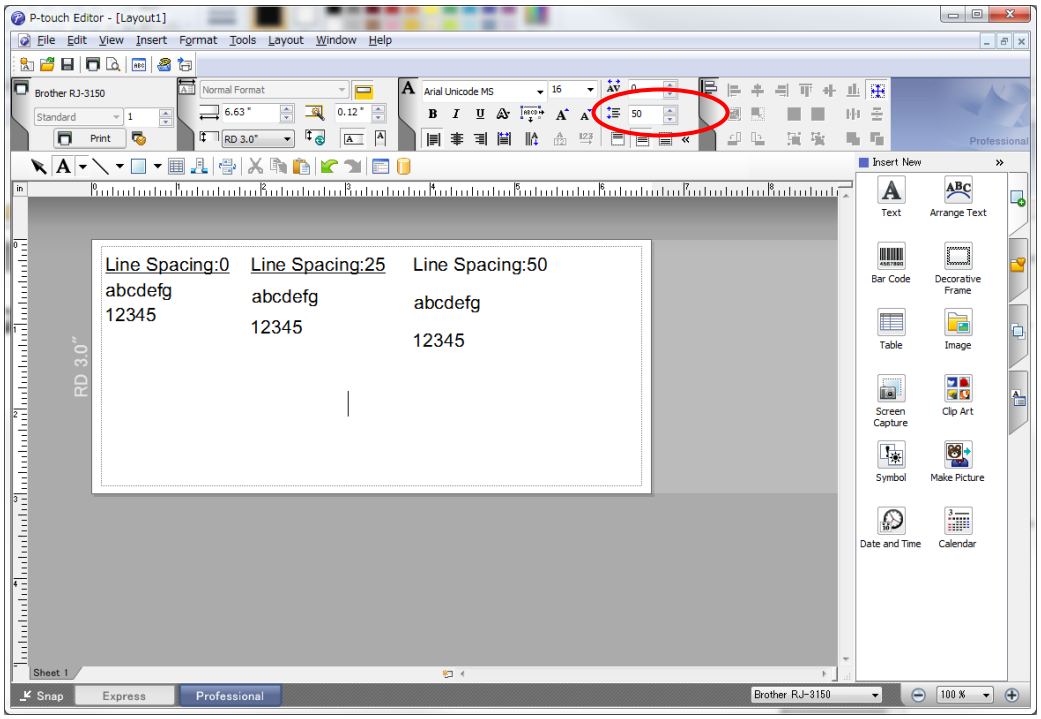
"At Printing" setting

To cancel the "At Printing" setting for a date/time in P-touch Editor, display the properties for the Date and Time object, and then clear the "At Printing" check box.

4.1.2 Character alignment

- Horizontal alignment settings (“Justify” or “Equal Length”) specified in P-touch Editor are changed to the left alignment setting.
- The setting for line feed with a line feed specified with the P-touch Editor can be set between 0 and 255 dots.

  A negative line spacing setting cannot be used in P-touch Editor. In addition, since there is an upper limit for the line width with the printer, a line spacing setting larger than this limit specified in P-touch Editor will not be applied on the printer.



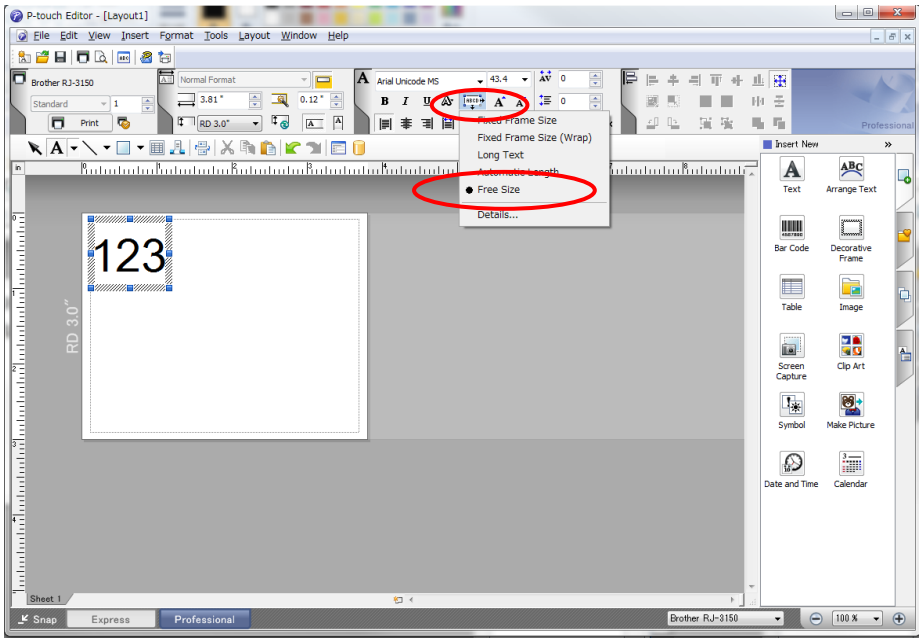
Specifying the line spacing setting in P-touch Editor

4.1.3 Text Layout settings

- Character styles specified in P-touch Editor all become the same style within an object.
- If the “Long text” is selected under “Text Layout” in P-touch Editor, the text is always aligned at top left.
- If the “Long Text” setting is selected under “Text Layout” in P-touch Editor and continuous length tape is used, the print length is increased to fit the text.
- If the “Fixed Frame Size (Wrap)” setting is selected under “Text Layout” in P-touch Editor, the object size does not change, and the text size is reduced.

  “Fixed Frame Size (Wrap)” is a setting that was added for inserting long text. Since it is possible that the text size may become extremely small if the wrapping feature is no longer applied, we recommend that “Fixed Frame Size” be selected when die-cut labels or a fixed length is specified in P-touch Editor, or that “Automatic Length” be selected when an automatic media length is specified.

Shrink to Fit	The text object size is fixed, and the text size is changed depending on the text length.
Clip Text	The text object size is fixed, and the text size is fixed. If the text is too long, the text is not printed.
Long Text	The text object width is fixed, and the text size is fixed. If the text is too long, the text object height is increased.
Automatic Length	The text object height is fixed, and the text size is fixed. If the text is too long, the text object width is increased.
Free Size	The text size is fixed. If the text is too long, the text object width is increased. If a new line is started, the text height is increased.



Specifying a Text Layout setting

Click the button circled in red to display a drop-down list, and then select the desired option.

4.2 Relating to barcodes

4.2.1 Barcodes

- When trying to transfer a template containing a barcode that is not compatible with the printer, an error will occur while transferring and the template cannot be transferred to the printer.
  The following barcodes are compatible with the RJ-2XXX.

1D barcodes	CODE39, ITF(I-2/5), UPC-A, UPC-E, EAN-13, EAN-8, CODABAR, CODE128, GS1-128(UCC/EAN-128) , RSS, POSTNET
2D barcodes	PDF417, QR Code, Data Matrix, MaxiCode, Aztec

- If data containing characters incompatible with the protocol are fed into the barcode object, that barcode object is not printed.
- The barcode size may differ from that in the print result with P-touch Editor.
- Since CODE128 and GS1-128(UCC/EAN-128) can easily be printed slightly larger, we recommend leaving larger margins when creating templates in P-touch Editor.
- If data fed into a barcode in a template created with P-touch Editor causes an extremely long barcode, the barcode may not be fully printed.
- Do not insert line feed immediately before or immediately after the barcode data. Otherwise, it will be considered as part of the barcode data. In that case, the barcode will be created containing the line feed code, or the barcode will not be printed since data incompatible with the barcode protocol is entered.
- A delimiter or print start text string should be entered immediately after the barcode data.

4.2.2 1D barcodes

- A barcode wider than 22.5 cm will not be printed.
- A 1D barcode taller than 1164 dots is converted to 1164dots.
- The number of characters that can be entered for each protocol is shown below.

CODE39	1 to 50 characters (not including “*” on both sides) When feeding data, the asterisks (*) at the beginning and end of the data are skipped.
ITF I-2/5	1 to 64 characters The bearer bar setting specified in P-touch Editor is invalid.
EAN-8	7 characters
EAN-13	12 characters
UPC-A	11 characters
UPC-E	6 characters
CODABAR	3 to 64 characters (with “A”, “B”, “C” or “D” at the beginning and end)
CODE128	1 to 64 characters
GS1-128 (UCC/EAN-128)	1 to 64 characters
RSS-14	3 to 15 characters (begins with “01”)
RSS Limited	3 to 15 characters (begins with “01”; third digit is “0” or “1”)
RSS Expanded	1 to 64 numbers or 1 to 40 letters*
POSTNET	5, 9 or 11 characters

* ISO646 characters can be printed.

<<numbers, letters, spaces, !, ”, %, &, ’, (,), *, +, ,, -, ., /, :, ;, <, =, >, ? and _>>

When trying to transfer data exceeding the ranges described above, an error will occur while transferring. If the data that is fed does not meet the minimum limit, the barcode is not printed. If the data exceeds the maximum limit, only the data to the maximum limit is applied.

4.2.3 2D barcodes

QR Code	The version setting for a QR Code specified in P-touch Editor is invalid. The version setting must be turned off. The Structured Append settings specified in P-touch Editor are invalid.
PDF417	Since the error correction levels for PDF417 specified in P-touch Editor are inconsistent with those on the printer, the size of the barcode may change when it is printed with P-touch Template 2.0. The Structured Append settings specified in P-touch Editor are invalid.
Data Matrix	The Structured Append settings specified in P-touch Editor are invalid. Macro settings specified in P-touch Editor are invalid
Maxi Code	The Structured Append settings specified in P-touch Editor are invalid. The barcode is partitioned when too much data is entered. When specifying the country code and service class with P-touch Editor, the number is entered at the beginning if the maximum number of characters is not reached. However, with the printer, the number is entered at the end. Example: “2” is specified. P-touch Editor: “200”; Printer: “002”
Aztec	The Remove Character setting specified in P-touch Editor is invalid. When the Number of Parts in the Set Structured Append setting is specified as Auto, the number of appended blocks becomes 2. The Code Spacing and Join Vertically in the Set Structured Append settings specified in P-touch Editor are invalid.

4.3 Relating to images

- If a template containing overlapping images is transferred with P-touch Editor, all image data will be overlapping. (P-touch Editor displays the image created last on top.)

4.4 Relating to Numbering

- A single object contains a single Numbering field.
- A Numbering field can contain a maximum of 15 digits.
- Only Numbering fields will be saved in Numbering objects when printing is finished.
- If the number of characters that was fed in is less than the number of characters in the Numbering object, it may not be printed correctly.
- If a line feed exists in the numbering area, characters after line feed are deleted.

  Note

  Numbering objects refer to text objects or barcode objects that have the Numbering function applied.

4.5 Relating to Database

- When a database is transferred, it is named using the file name + sheet name (when created in Excel).
- The file name can contain up to 15 bytes of characters (15 one-byte characters or 7 two-byte characters).
- A maximum of 255 databases can be transferred. However, the transfer cannot be completed if the amount of data being transferred exceeds 12 MB.
- If there is a line feed in a cell containing text to be replaced, only the string of characters before the line feed will be replaced.
- The text to be replaced can contain up to 256 characters.
- A database can contain a maximum of 65,000 rows.
- The maximum number of database line is 65000 lines included the title. If the database is over 65000 lines, the only lines over 65000 are deleted.
- A database can contain a maximum of 100 columns. If a database containing more than 100 columns is transferred, all data after the 100th column will be deleted.
- If there is no database linked to the template being printed, or if the corresponding string of characters to be replaced cannot be found, an error occurs.
- If columns linked to the template being printed are not in the database, the objects related to those columns remain as they were when the template was transferred.
- Depending on the language of the computer used for transferring, either the Western European or the Eastern European character set is used for characters within databases.

4.6 Others

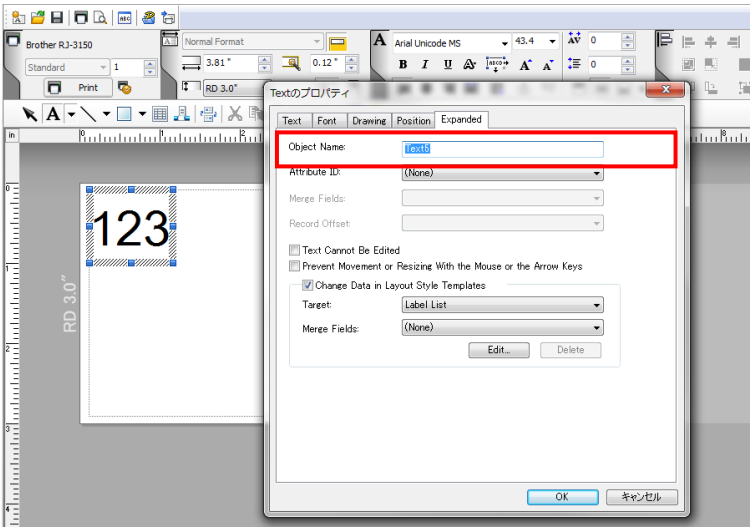
4.6.1 Transferring templates

- A maximum of 255 templates can be transferred. The transfer cannot be completed if the amount of data being transferred exceeds 12 MB.
- A single template can contain a maximum of 255 objects. If the objects exceed 64 KB, an error will occur and the transfer cannot be completed.
- When print data is fed, the command mode should be the P-touch Template mode.
- When a template is transferred to the printer, all values specified with dynamic commands are initialized.
- This is not compatible with split labels.
- After printing from P-touch Editor, the command mode changes to raster mode. In order to print a template, select the P-touch Template mode in the P-touch Template Settings tool or, if the previous mode in the P-touch Template Settings tool was the P-touch Template mode, turn the printer off, then on again to enter P-touch Template mode.

4.6.2 About objects in a template

- The line feed codes (0D0A, 0D and 0A) in print data are read, then discarded. However, when specified as special data, such as delimiters, print start text strings or line feed commands, they are applied.
- The order of the objects is determined only by the last four-digit number of the object name. Objects with no numbers in their names will be at the end of the order. If objects have the same number, the order is determined in the following order: text, 1D barcodes, then 2D barcodes. If the objects are of the same type, the object created first is first in the order. We recommend that the numbers indicating the order be added at the end of the object name.

(To specify the name of an object in P-touch Editor, display the properties of the text or barcode object, and then specify the name in the “Object Name” box on the Expanded tab.)



Specifying the object name

5. Precautions

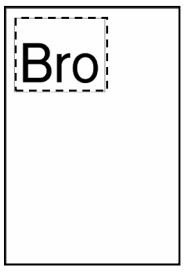
5.1 Notes for printers with Bluetooth interface

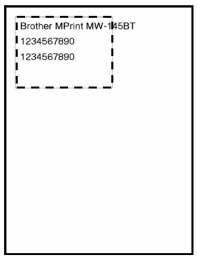
If the printer is connected using Bluetooth, the printer may not be ready immediately after the port is opened. When sending print data, wait at least 500 msec after the port has been opened before starting to send the data.
In addition, if the port is continuously opened and closed, for example, when printing multiple pages, wait at least 500 msec after the port is closed before opening the port the next time.
Once the print data for one page has been sent, do not close the Bluetooth port until printing is finished.

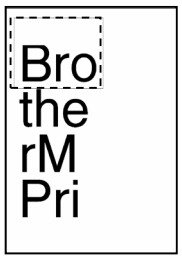
5.2 Relationship between the P-touch Editor settings and the printer image

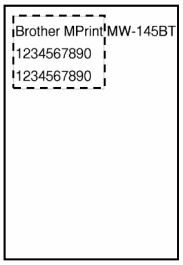
<table>
<tr><th colspan="3" rowspan="2">P-touch Editor setting
Text options
(Text Layout settings)</th><th colspan="4">Printer image</th><th rowspan="3">Printed image</th></tr>
<tr><th colspan="2">Width</th><th colspan="2">Height</th></tr>
<tr><th>Text Layout</th><th>Details-Options</th><th>Wrap Text</th><th>Frame Size</th><th>Text Size</th><th>Frame Size</th><th>Text Size</th></tr>
<tr><td rowspan="3">Fixed Frame Size</td><td colspan="2">Clip Text</td><td>Fixed
If the text is too long, the overflow text is not printed.</td><td>Fixed</td><td>Fixed
If the text is too long, the overflow text is not printed.</td><td>Fixed</td><td>1
(See below.)</td></tr>
<tr><td colspan="2">Shrink to Fit</td><td rowspan="3">Fixed
If the text is too long, even with the minimum text size, the overflow text is printed outside the frame.</td><td rowspan="3">Auto
The text is automatically maximized to fit the frame size.</td><td rowspan="3">Fixed
If the text is too long, even with the minimum text size, the overflow text is printed outside the frame.</td><td rowspan="3">Auto
The text is automatically maximized to fit the frame size.</td><td rowspan="3">2
(See below.)</td></tr>
<tr><td>Clip Text</td><td>Selected</td></tr>
<tr><td>Shrink to Fit</td><td>Selected</td></tr>
<tr><td>Fixed Frame Size (Wrap)</td><td colspan="2">-</td></tr>
<tr><td>Long Text</td><td colspan="2">-</td><td>Fixed
The overflow text is automatically sent to the new line.</td><td>Fixed</td><td>Even the overflow text is printed outside the frame.</td><td>Fixed</td><td>3
(See below.)</td></tr>
<tr><td>Automatic Length</td><td colspan="2">-</td><td>Even the overflow text is printed outside the frame.</td><td>Fixed</td><td>Fixed
If the text is too long, even with the minimum text size, the overflow text is printed outside the frame.</td><td>Auto
The text is automatically maximized to fit the frame size.</td><td>4
(See below.)</td></tr>
<tr><td>Free Size</td><td colspan="2">-</td><td>Even the overflow text is printed outside the frame.</td><td>Fixed</td><td>Even the overflow text is printed outside the frame.</td><td>Fixed</td><td>5
(See below.)</td></tr>
</table>

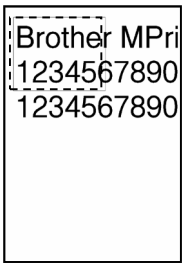
Printed image

1 

2 

3 

4 

5 

5.3 Making a template in order to save time before starting to print

- Perform the following operation to convert permanent objects into images.

- In the **Text Properties** dialog box, select the **Expanded** tab, and then select the "**Text Cannot Be Edited**" check box.

- If the **Expanded** tab of the **Text Properties** dialog box is not displayed, click [**Options**] on the **Tools** menu, and then select the "**Display Expanded Tabs of Object Properties**" check box on the **General** tab.

- Specify the text options (Text Layout settings) so that the text size is fixed.

6. Control Code Lists

6.1 Setting and retrieving commands for P-touch Template mode

ASCII Code	Binary Code	Static/Dynamic	Description
^PT	5E 50 54	Dynamic	Select print start trigger
^FF	5E 46 46		Start printing
^PS	5E 50 53	Dynamic	Specify print start command text string
^PC	5E 50 43	Dynamic	Specify print start received character count
^SS	5E 53 53	Dynamic	Specify delimiter
^TS	5E 54 53	Dynamic	Select template
^CO	5E 43 4F	Dynamic	Specify printer settings (cut options)
^LS	5E 4C 53	Dynamic	Specify line spacing with line feed
^CC	5E 43 43	Dynamic	Change prefix character
^RC	5E 52 43	Dynamic	Specify line feed command text string
^CN	5E 43 4E	Dynamic	Specify number of copies
^NN	5E 4E 4E	Dynamic	Specify number of Numbering copies
^ID	5E 49 44		Initialize template data
^QS	5E 51 53	Dynamic	Select print options
^QV	5E 51 56	Dynamic	Specify QR Code version
^FC	5E 46 43	Dynamic	FNC1 replacement setting
^II	5E 49 49		Initialize
^OP	5E 4F 50		Perform printer operation (feed)
^SR	5E 53 52		Status request
^VR	5E 56 52		Retrieve version information
^CR	5E 43 52		Line feed in object
^OS	5E 4F 53		Select object (object number)
^ON	5E 4F 4E		Select object (object name)
^DI	5E 44 49		Direct insert object
ESC ia	1B 69 61	Dynamic	Select command mode

Note

*** The commands listed above must be used in P-touch Template mode.**

*** These commands (except ESC ia) cannot be used in raster mode or ESC/P mode.**

*** With dynamic commands, settings specified with a command are temporarily saved and applied until the printer is turned off.**

6.2 Setting and retrieving commands for raster mode

ASCII Code	Binary Code	Static/Dynamic	Description
ESC iXT2	1B 69 58 54 32	Static	Select print start trigger
ESC iXP2	1B 69 58 50 32	Static	Specify print start command text string
ESC iXr2	1B 69 58 72 32	Static	Specify print start received character count
ESC iXD2	1B 69 58 44 32	Static	Specify delimiter
ESC iXa2	1B 69 58 61 32	Static	Specify non-printed text strings
ESC iXi2	1B 69 58 69 32	Static	Select command mode
ESC iXn2	1B 69 58 6E 32	Static	Select template
ESC iXf2	1B 69 58 66 32	Static	Change prefix character
ESC iXc2	1B 69 58 63 32	Static	Specify printer settings (cut options)
ESC iXy2	1B 69 58 79 32	Static	Specify printer settings (cut options–specifying number of labels)
ESC iXm2	1B 69 58 6D 32	Static	Select character code set
ESC iXj2	1B 69 58 6A 32	Static	Select international character set
ESC iXR2	1B 69 58 52 32	Static	Specify line feed command text string
ESC iXC2	1B 69 58 43 32	Static	Specify number of copies
ESC iXN2	1B 69 58 4E 32	Static	Specify number of Numbering copies
ESC iXF2	1B 69 58 46 32	Static	FNC1 replacement setting
ESC iXq2	1B 69 58 71 32	Static	Select print options
ESC iXd2	1B 69 58 64 32	Static	Specify recovery setting
ESC iXE2	1B 69 58 45 32	Static	Specify barcode margin setting
ESC iXh2	1B 69 58 68 32	Static	Specify rotated print
ESC iXT1	1B 69 58 54 31		Retrieve print start trigger setting
ESC iXP1	1B 69 58 50 31		Retrieve print start command setting text string
ESC iXr1	1B 69 58 72 31		Retrieve print start received character count
ESC iXD1	1B 69 58 44 31		Retrieve delimiter
ESC iXa1	1B 69 58 61 31		Retrieve non-printed text strings
ESC iXi1	1B 69 58 69 31		Retrieve command mode setting
ESC iXn1	1B 69 58 6E 31		Retrieve number of selected template
ESC iXc1	1B 69 58 63 31		Retrieves printer settings (cut options)
ESC iXy1	1B 69 58 79 31		Retrieve printer settings (cut options–specifying number of labels)
ESC iXm1	1B 69 58 6D 31		Retrieve character code set setting
ESC iXj1	1B 69 58 6A 31		Retrieve international character set setting
ESC iXf1	1B 69 58 66 31		Retrieve prefix character

(continued from the previous page)

ASCII Code	Binary Code	Static/Dynamic	Description
ESC iXR1	1B 69 58 52 31		Retrieve line feed command setting text string
ESC iXC1	1B 69 58 43 31		Retrieve number of copies setting
ESC iXN1	1B 69 58 4E 31		Retrieve number of Numbering copies setting
ESC iXF1	1B 69 58 46 31		Retrieve FNC1 replacement setting
ESC iXq1	1B 69 58 71 31		Retrieve print options
ESC iXd1	1B 69 58 64 31		Retrieve recovery setting
ESC iXE1	1B 69 58 45 31		Retrieve barcode margin setting
ESC iXh1	1B 69 58 68 31		Retrieve rotated print setting

Note

*** The commands listed above must be used in raster mode.**

*** These commands cannot be used in ESC/P mode or P-touch Template mode.**

*** With static commands, settings specified with a command are saved and stored in the memory.**

7. Control Command Details

^PT Select print start trigger

ASCII:	^	P	T	n
Decimal:	94	80	84	nd
Hexadecimal:	5E	50	54	nh

Parameters

1≤n≤3

Description

- Selects the type of print start trigger.

  n=1: When the specified text string is received (default)

  n=2: When all objects are filled
  (Prints with the delimiter at the end of the data.)

  n=3: When the specified number of characters is received
  (not including delimiters)

- This command is a dynamic command.

Remarks

- Invalid if n is a value other than 1 through 3

Example

- When the print start trigger is “when all objects are filled”:

```
^ P T 2
(5Eh 50h 54h 32h)
```

^FF Start printing

ASCII:	^	F	F
Decimal:	94	70	70
Hexadecimal:	5E	46	46

Parameters

None

Description

- Starts printing.
- However, the print start trigger must be “when the specified text string is received”.
  (Refer to “^PT” and “ESC iXT2”.)
- The text string for the print start command can be changed.
  (Refer to “^PS” and “ESC iXP2”.)

Example

- To print template number 3:

```
^ T S 0 0 3 ^ F F
(5Eh 54h 53h 30h 30h 33h 5Eh 46h 46h)
```

^PS Specify print start command text string

ASCII:	^	P	S	n1	n2	data
Decimal:	94	80	83	nd1	nd2	datad
Hexadecimal:	5E	50	53	nh1	nh2	datah

Parameters

0≤n1≤2

0≤n2≤9

00h≤datah≤FFh

Description

- Specifies the text string for the print start command.

  (n1*10)+n2: Length of the text string (can be set between 1 and 20)

  data: Text string (The maximum number of characters that can be set is 20 characters (bytes).)

- The default text string for the print start command is “^FF”.
- This command is a dynamic command.

Remarks

- Invalid if more than 20 characters have been specified

Example

- To change the text string for the print start command to “START”:

  Since the text string to be specified (data), “START”, contains 5 characters, n1=0 and n2=5. Therefore, the command will be as follows.

  ^ P S 0 5 S T A R T

  (5Eh 50h 53h 30h 35h 53h 54h 41h 52h 54h)

^PC Specify print start received character count

ASCII:	^	P	C	n1	n2	n3
Decimal:	94	80	67	nd1	nd2	nd3
Hexadecimal:	5E	50	43	nh1	nh2	nh3

Parameters

0≤n1≤9

0≤n2≤9

0≤n3≤9

Description

- Specifies the number of characters to be received in order to start printing.

  (n1*100)+(n2*10)+n3: Print start received character count (bytes) (1 to 999)
- The default print start received character count is 10.
- This command is a dynamic command.

Example

- To change the print start received character count to 100 characters:

  Since n1=1, n2=0 and n3=0, the command will be as follows.

  ^ P C 1 0 0

  (5Eh 50h 43h 31h 30h 30h)

^SS Specify delimiter

ASCII:	^	S	S	n1	n2	data
Decimal:	94	83	83	nd1	nd2	datad
Hexadecimal:	5E	53	53	nh1	nh2	datah

Parameters

0≤n1≤2

0≤n2≤9

00h≤datah≤FFh

Description

- The delimiter is used to indicate when to move to the next object in data that is being sent.
- Specifies the text string for the delimiter.

  (n1*10)+n2: Length of the text string (between 1 and 20)

  data: Text string (The maximum number of characters that can be set is 20 characters (bytes).)
- The default text string for the delimiter is “09h” (Tab code).

  A text string that will not appear in the print data should be specified.
- This command is a dynamic command.

Remarks

- Invalid if more than 20 characters have been specified

Example

- To change the delimiter to “,” (2Ch):

  Since the text string contains one character, n1=0 and n2=1. In addition, with the text string (datah) “,” (2Ch), the command will be as follows.

  ^ S S 0 1 ,
  (5Eh 53h 53h 30h 31h 2Ch)

^TS Select template

ASCII:	^	T	S	n1	n2	n3
Decimal:	94	84	83	nd1	nd2	nd3
Hexadecimal:	5E	54	53	nh1	nh2	nh3

Parameters

0≤n1≤2

0≤n2≤9

0≤n3≤9

Description

- Specifies the number of the template selected from the printer.
  (n1*100)+(n2*10)+n3: Template number (1 to 255)
- The default selection number is 1.
- This command is a dynamic command.

Remarks

- The template numbers that can be set are between 1 and 255.
  This command becomes invalid if any other value has been specified or if the number that has been specified is for a template not transferred to the printer.

Example

- To select template number 99:
  Since n2=9 and n3=9, the command will be as follows.

```
^ T S 0 9 9
(5Eh 54h 53h 30h 39h 39h)
```

^CO Select printer settings (cut options)

ASCII:	^	C	O	n1	n2	n3	n4
Decimal:	94	67	79	nd1	nd2	nd3	nd4
Hexadecimal:	5E	43	4F	nh1	nh2	nh3	nh4

Parameters

0≤n1≤1

0≤n2≤9

0≤n3≤9

0≤n4≤1

Description

- Specifies the various cut options.

  n1: Auto cut setting
  (ON: 1 (default); OFF: 0)

  (n2*10)+n3: Auto cut label number setting (1 to 99)
  (Default value: 1)

  n4: Cut at end setting
  (ON: 1 (default); OFF: 0)

- This command is a dynamic command.
- This command is applied to only a printer with auto cutter.

Remarks

- The auto cut label number setting can be between 1 and 99.
  This command becomes invalid if any other value has been specified.

Example

- To cut after every two labels:
  Since the auto cut setting will be set to ON and the auto cut label number will be two labels, n1=1, n2=0 and n3=2. Therefore, the command will be as follows.

  ^ C O 1 0 2 0
  (5Eh 43h 4Fh 31h 30h 32h 30h)

^LS Specify line spacing with line feed

ASCII:	^	L	S	n1	n2	n3
Decimal:	94	76	83	nd1	nd2	nd3
Hexadecimal:	5E	4C	53	nh1	nh2	nh3

Parameters

0≤n1≤2

0≤n2≤9

0≤n3≤9

Description

- Specifies the number of dots for the line spacing when a line feed is entered.
  (n1*100)+(n2*10)+n3: Number of dots for the line spacing (0 to 255)
- The default number of dots for the line spacing when a line feed is entered is the number of dots determined when the template is created in P-touch Editor.
- This command is a dynamic command.

Remarks

- The number of dots for the line spacing can be between 0 and 255. This command becomes invalid if any other value has been specified.

Example

- To set the line spacing to 10 dots:

```
^ L S 0 1 0
(5Eh 4Ch 53h 30h 31h 30h)
```

^CC Change the prefix character

ASCII:	^	C	C	n
Decimal:	94	67	67	nd
Hexadecimal:	5E	43	43	nh

Parameters

00h≤nh≤FFh

Description

- Changes the prefix character code.

  n: Character code

- The default text string for the prefix character is “^”.
- This command is a dynamic command.

Example

- To change the prefix character from “^” to “_”:

  ^ C C 5Fh

  (5Eh 43h 43h 5Fh) (5Fh stands for “_” in ASCII code)

- However, if the printer is later not turned off, then on again, the prefix character remains set to “_”, and the initialize command, for example, will be “_II” instead of “^II”.

^RC Specify line feed command text string

ASCII:	^	R	C	n1	n2	data
Decimal:	94	82	67	nd1	nd2	datad
Hexadecimal:	5E	52	43	nh1	nh2	datah

Parameters

0≤n1≤2

0≤n2≤9

00h≤datah≤FFh

Description

- Specifies the text string for the line feed command.
  - (n1*10)+n2: Length of the text string (can be set between 1 and 20)
  - data: Text string (The maximum number of characters that can be set is 20 characters (bytes).)
- The default text string for the line feed command is “^CR”.
- This command is a dynamic command.

Remarks

- Invalid if more than 20 characters have been specified

Example

- To change the text string for the line feed command to “0Dh 0Ah”:
  Since the text string to be specified (data) contains 2 characters, n1=0 and n2=2. Therefore, the command will be as follows.

```
^ R C 0 2 0Dh 0Ah
(5Eh 52h 43h 30h 32h 0Dh 0Ah)
```

^CN Specify number of copies

ASCII:	^	C	N	n1	n2	n3
Decimal:	94	67	78	nd1	nd2	nd3
Hexadecimal:	5E	43	4E	nh1	nh2	nh3

Parameters

0≤n1≤9

0≤n2≤9

0≤n3≤9

Description

- Specifies the number of copies to be printed.

  (n1*100)+(n2*10)+n3: Number of copies (bytes) (1 to 999)
- The default number of copies is 1.
- This command is a dynamic command.

Remarks

- When printing is finished, the number of copies specified with this command returns to the number of copies (static value) specified from the printer.

Example

- To change the number of copies to 100:

  Since n1=1, n2=0 and n3=0, the command will be as follows.

  ^ C N 1 0 0

  (5Eh 43h 4Eh 31h 30h 30h)

^NN Specify number of Numbering copies

ASCII:	^	N	N	n1	n2	n3
Decimal:	94	78	78	nd1	nd2	nd3
Hexadecimal:	5E	4E	4E	nh1	nh2	nh3

Parameters

0≤n1≤9

0≤n2≤9

0≤n3≤9

Description

- Specifies the number of copies to be printed with Numbering.
  (n1*100)+(n2*10)+n3: Number of Numbering copies (bytes) (1 to 999)
- The default number of copies printed with Numbering is 1.

Remarks

- When printing is finished, the number of copies specified with this command returns to the number of copies (static value) specified from the printer.

Example

- To change the number of Numbering copies to 100:
  Since n1=1, n2=0 and n3=0, the command will be as follows.

```
^ N N 1 0 0
(5Eh 4Eh 4Eh 31h 30h 30h)
```

^ID Initialize template data

ASCII:	^	I	D
Decimal:	94	73	68
Hexadecimal:	5E	49	44

Parameters

None

Description

- Returns the data in the selected template to what it was when the template was transferred.

^QS Select print options

ASCII:	^	Q	S	n
Decimal:	94	81	83	nd
Hexadecimal:	5E	51	53	nh

Parameters

n: 0, 1

Description

- Selects the print options.
  - n=0: Priority given to print speed
  - n=1: Priority given to print quality
- The default value for the print options is “0” (priority given to print speed).
- This command is a dynamic command.

Example

- To set the print options to give priority to print quality:

  Since n=1, the command will be as follows.

```
^ Q S 1
(5Eh 51h 53h 31h)
```

^QV Specify QR Code version

ASCII:	^	Q	V	n1	n2
Decimal:	94	81	86	nd1	nd2
Hexadecimal:	5E	51	56	nh1	nh2

Parameters

0≤n1≤4

0≤n2≤9

Description

- Specifies the QR Code version.

  (n1*10)＋n2: Version number (between 0 and 40)
- The default QR Code version is 0.
- This command becomes invalid if a value other than those that can be set (between 0 and 40) has been specified.
- This command is a dynamic command.

Example

- To change the version to 10:

  Since n1=1 and n2=0, the command will be as follows.

  ^ Q V 1 0

  (5Eh 51h 56h 31h 30h)

^FC FNC1 replacement setting

ASCII:	^	F	C	n
Decimal:	94	70	67	nd
Hexadecimal:	5E	46	43	nh

Parameters

0≤n≤1

Description

- Selects whether or not GS codes, which are included in barcode protocols such as GS1-128 (UCC/EAN-128), are replaced with FNC1 codes.

  n: FNC1 replacement setting
  (ON: 1; OFF: 0 (default))

- This command is a dynamic command.

Remarks

- Invalid if n is a value other than 1 or 0

Example

- To disable FNC1 replacement:

  Since FNC1 replacement will be disabled, n=0. Therefore, the command will be as follows.

  ^ F C 0
  (5Eh 46h 43h 30h)

^II Initialize

ASCII:	^	I	I
Decimal:	94	73	73
Hexadecimal:	5E	49	49

Parameters

None

Description

- Reverts all dynamic settings to the printer settings.
  - (1) Print start trigger setting
  - (2) Print start command text string
  - (3) Print start received character count
  - (4) Delimiter
  - (5) Number of selected template
  - (6) Machine settings (cut options)
  - (7) Prefix character
  - (8) Number of copies setting
  - (9) QR Code version setting
  - (10) Line feed command text string
  - (11) FNC1 replacement setting

^OP Perform printer operation (feed)

ASCII:	^	O	P	n
Decimal:	94	79	80	nd
Hexadecimal:	5E	4F	50	nh

Parameters

n: 0 (Fixed)

Description

- Causes the printer to perform a feed operation.

Example

- To specify that the printer performs a feed operation:

```
^ O P 0
(5Eh 4Fh 50h 30h)
```

^SR Status request

ASCII:	^	S	R
Decimal:	94	83	82
Hexadecimal:	5E	53	52

Parameters

None

Description

- Returns the printer status.

The printer status consists of 32 bytes.

Number	Offset	Size	Name	Value/Reference
1	0	1	Print head mark	Fixed at 80h
2	1	1	Size	Fixed at 20h
3	2	1	Brother code	Fixed at “B” (42h)
4	3	1	Series code	Fixed at “7” (37h)
5	4	1	Model code	Fixed at RJ-2030: “6” (36h) RJ-2050: “7” (37h) RJ-2140: “8” (38h) RJ-2150: “9” (39h)
6	5	1	Country code	Fixed at “0” (30h)
7	6	1	Battery level information	Refer to table (5) below.
8	7	1	Reserved	Fixed at 00h
9	8	1	Error information 1	Refer to table (1) below.
10	9	1	Error information 2	Refer to table (2) below.
11	10	1	Media width	
12	11	1	Media type	Refer table (3) below.
13	12	1	Number of colors	Fixed at 00h
14	13	1	Media length (higher order bytes)	
15	14	1	Media sensor value	
16	15	1	Mode	Fixed at 01h
17	16	1	Density	Fixed at 00h
18	17	1	Media length (lower order bytes)	
19	18	1	Status type	Refer to table (4) below.
20	19	1	Phase type	Fixed at 00h
21	20	1	Phase number (higher order bytes)	Fixed at 00h
22	21	1	Phase number (lower order bytes)	Fixed at 00h
23	22	1	Notification number	Not used
24	23	1	Expansion area (number of bytes)	Fixed at 00h

25	24	1	Reserved	Fixed at 00h
26	25	1	Reserved	Fixed at 00h
27	26	1	Reserved	Fixed at 00h
28	27	1	Reserved	Fixed at 00h
29	28	1	Reserved	Fixed at 00h
30	29	1	Reserved	Fixed at 00h
31	30	1	Reserved	Fixed at 00h
32	31	1	Reserved	Fixed at 00h

(1) Error information 1

Flag	Mask	Definition
Bit 0	01h	“No media” error
Bit 1	02h	“End of media” error
Bit 2	04h	“Cutter jam” error(When printer has a cutter.)
Bit 3	08h	Not used
Bit 4	10h	Printer in use
Bit 5	20h	Printer turned off
Bit 6	40h	Not used
Bit 7	80h	Not used

(2) Error information 2

Flag	Mask	Definition
Bit 0	01h	Not used
Bit 1	02h	“Expansion buffer is full.” error
Bit 2	04h	Communication error
Bit 3	08h	Not used
Bit 4	10h	“Cover open” error
Bit 5	20h	Not used
Bit 6	40h	Leading edge detection error
Bit 7	80h	System error

(3) Media type

Media Type	Value	Remarks
Continuous length tape	4Ah	
Die-cut label	4Bh	

(4) Status type

Status Type	Value	Remarks
Reply to status request	00h	
(Not used)	01h	
Error occurred	02h	
(Not used)	03h to FFh	

(5) Battery level information

Flag	Mask	Meaning
Bit 0	00h	Full battery
Bit 1	01h	Half battery
Bit 2	02h	Low battery
Bit 3	03h	Changing required
Bit 4	04h	AC adapter in use

^VR Retrieve version information

ASCII:	^	V	R
Decimal:	94	86	82
Hexadecimal:	5E	56	52

Parameters

None

Description

- Retrieves the version information for the printer as a 16-character text string.

^CR Line feed in object

ASCII:	^	C	R
Decimal:	94	67	82
Hexadecimal:	5E	43	52

Parameters

None

Description

- Adds a line feed to the next line in the text object.
- Valid even if the text string for the line feed command has been changed

Example

- To print three lines:

Code: 1 ^ C R 2 ^ C R 3 ^ F F

(31h 5Eh 43h 52h 32h 5Eh 43h 52h 33h 5Eh 46h 46h)

Print result:

1
2
3

^OS Select object (object number)

ASCII:	^	O	S	n1	n2
Decimal:	94	79	83	nd1	nd2
Hexadecimal:	5E	4F	53	nh1	nh2

Parameters

0≤n1≤9

0≤n2≤9

Description

- Selects an object by its object number.

  (n1*10)+n2: Object number (1 to 99)

Remarks

- The object number can be set between 1 and 99.

  This command becomes invalid if any other value has been specified.
- Use this command to insert data starting with an intermediary object.

Example

- To select the 33rd object:

  ^ O S 3 3

  (5Eh 4Fh 53h 33h 33h)

^ON Select object (object name)

ASCII:	^	O	N	data	00
Decimal:	94	79	78	datad	00
Hexadecimal:	5E	4F	4E	datah	00

Parameters

None

Description

- Selects an object by its object name.

  data: Text string (object name)

Remarks

- The maximum length of text that can be set is 20 characters. If text longer than this has been specified, the command becomes invalid. In addition, the command becomes invalid if no text has been specified.
- “00h” should be added at the end of the text. This indicates the end of the text.
- Use this command to insert data starting with an intermediary object.

Example

- To select an object with the name “TEXT1”:

  ^ O N T E X T 1 00h
  (5Eh 4Fh 4Eh 54h 45h 58h 54h 31h 00h)

^DI Directly insert object

ASCII:	^	D	I	n1	n2	data
Decimal:	94	68	73	nd1	nd2	datad
Hexadecimal:	5E	44	49	nh1	nh2	datah

Parameters

00h≤nh1≤FFh

00h≤nh2≤FEh

Description

- Inserts a text string for the specified number of characters into the object selected in the selected template. (Even if a print command or delimiter is within the specified number of characters, they are treated as data.)

  (nh2*256)+nh1: Specified number of characters

  data: Text string

Example

- If “A” is specified as the print start text string, and the print start trigger is specified as the print start text string, easily print “A” with the following command.

Code: ^ D I 03h 00h 1 A 2 A

(5Eh 44h 49h 03h 00h 31h 41h 32h 41h)

Print result: 1A2

ESC i a Select command mode

ASCII:	ESC	i	a	n
Decimal:	27	105	97	nd
Hexadecimal:	1B	69	61	nh

Parameters

nh=00h 01h 03h 04h 05h 30h 31h 33h 34h 35h

Description

- Switches the mode.

  nh=00h or 30h: ESC/P mode

  nh=01h or 31h: Raster mode

  nh=03h or 33h: P-touch Template mode (default)

  nh=04h or 34h: CPCL Page Print mode

  nh=05h or 35h: CPCL Line Print mode

- This command is a dynamic command.

Remarks

- If the specified value is one other than those that can be set, raster mode will be entered.

ESC iXT2 Select print start trigger

ASCII:	ESC	i	X	T	2	n1	n2	n3
Decimal:	27	105	88	84	50	nd1	nd2	nd3
Hexadecimal:	1B	69	58	54	32	nh1	nh2	nh3

Parameters

nh1=01h (Fixed)

nh2=00h (Fixed)

00h≤nh3≤02h

Description

- Selects the type of print start trigger.

  nh3=00h: When the specified text string is received (default)

  nh3=01h: When all objects are filled
  (Prints with the delimiter at the end of the data.)

  nh3=02h: When the specified number of characters is received
  (not including delimiters)

- This command is a static command.

Remarks

- Invalid if nh3 is a value other than 00h through 02h

Example

- When the print start trigger is “when all objects are filled”:

  ESC i X T 2 01h 00h 01h

  (1Bh 69h 58h 54h 32h 01h 00h 01h)

ESC iXP2 Specify print start command text string

ASCII:	ESC	i	X	P	2	n1	n2	data
Decimal:	27	105	88	80	50	nd1	nd2	datad
Hexadecimal:	1B	69	58	50	32	nh1	nh2	datah

Parameters

01h≤nh1≤14h

nh2: 00h (Fixed)

00h≤datah≤FFh

Description

- Specifies the text string for the print start command.

  nh1+(nh2*256): Length of the text string (can be set between 1 and 20)

  data: Text string (The maximum number of characters that can be set is 20 characters (bytes).)

- The default text string for the print start command is “^FF”.
- This command is a static command.

Remarks

- Invalid if more than 20 characters have been specified

Example

- To change the text string for the print start command to “START”:

  Since the text string to be specified (data), “START”, contains 5 characters, nh1=05h and nh2=00h. Therefore, the command will be as follows.

  ESC i X P 2 05h 00h S T A R T

  (1Bh 69h 58h 50h 32h 05h 00h 53h 54h 41h 52h 54h)

ESC iXr2 Specify print start received character count

ASCII:	ESC	i	X	r	2	n1	n2	n3	n4
Decimal:	27	105	88	114	50	nd1	nd2	nd3	nd4
Hexadecimal:	1B	69	58	72	32	nh1	nh2	nh3	nh4

Parameters

nh1: 02h (Fixed)

nh2: 00h (Fixed)

00h≤nh3≤FFh

00h≤nh4≤03h

Description

- Specifies the number of characters to be received in order to start printing.

  nh3+(nh4*256): Print start received character count (bytes) (1 to 999)
- The default print start received character count is 10.
- This command is a static command.

Example

- To change the print start received character count to 100 characters:

  Since nh3=64h and nh4=00h, the command will be as follows.

  ESC i X r 2 02h 00h 64h 00h

  (1Bh 69h 58h 72h 32h 02h 00h 64h 00h)

ESC iXD2 Specify delimiter

ASCII:	ESC	i	X	D	2	n1	n2	data
Decimal:	27	105	88	68	50	nd1	nd2	datad
Hexadecimal:	1B	69	58	44	32	nh1	nh2	datah

Parameters

01h≤nh1≤14h

nh2: 00h (Fixed)

00h≤datah≤FFh

Description

- The delimiter is used to indicate when to move to the next object in data that is being sent.
- Specifies the text string for the delimiter.

  nh1+(nh2*256): Length of the text string (between 1 and 20)

  data: Text string (The maximum number of characters that can be set is 20 characters (bytes).)
- The default text string for the delimiter is “09h” (Tab code).
- This command is a static command.

Remarks

- Invalid if more than 20 characters have been specified

Example

- To change the delimiter to “,” (2Ch):

  Since the text string contains one character, nh1=01h and nh2=00h. In addition, with the text string (datah) “,” (2Ch), the command will be as follows.

  ESC i X D 2 01h 00h 2Ch

  (1Bh 69h 58h 44h 32h 01h 00h 2Ch)

ESC iXa2 Specify non-printed text strings

ASCII:	ESC	i	X	a	2	n1	n2	n3	data
Decimal:	27	105	88	97	50	nd1	nd2	nd3	datad
Hexadecimal:	1B	69	58	61	32	nh1	nh2	nh3	datah

Parameters

01h≤nh1≤15h

nh2: 00h (Fixed)

nh3: 01h (Fixed)

00h≤datah≤FFh

Description

- Specifies the non-printed text string.

  nh1+(nh2*256): Length of the text string (0 to 20) + 1

  data: Text string (The maximum number of characters that can be set is 20 characters (bytes).)

- This command is a static command.

Remarks

- Invalid if more than 20 characters have been specified

Example

- To specify the non-printed text string as “ABCD”:

  Since the text string contains four characters, nh1=05h and nh2=00h. Therefore, the command will be as follows.

  ESC i X a 2 05h 00h 01h A B C D

  (1Bh 69h 58h 61h 32h 05h 00h 01h 41h 42h 43h 44h)

ESC iXi2 Select command mode

ASCII:	ESC	i	X	i	2	n1	n2	n3
Decimal:	27	105	88	105	50	nd1	nd2	nd3
Hexadecimal:	1B	69	58	69	32	nh1	nh2	nh3

Parameters

nh1: 01h (Fixed)

nh2: 00h (Fixed)

nh3: 00h 01h 03h 04h 05h

Description

- Switches the mode.

  nh3=00h: ESC/P mode

  nh3=01h: Raster mode

  nh3=03h: P-touch Template mode (default)

  nh3=04h: CPCL Page Print mode

  nh3=05h: CPCL Line Print mode

- This command is a static command.

Remarks

- Invalid if a value other than those that can be set has been specified

ESC iXn2 Select template

ASCII:	ESC	i	X	n	2	n1	n2	n3
Decimal:	27	105	88	110	50	nd1	nd2	nd3
Hexadecimal:	1B	69	58	6E	32	nh1	nh2	nh3

Parameters

nh1: 01h (Fixed)

nh2: 00h (Fixed)

01h≤nh3≤FFh

Description

- Selects the number of the template selected from the printer.

  n3: Template number (1 to 255)
- The default selection number is 1.
- This command is a static command.

Remarks

- The template numbers that can be set are between 1 and 255.

  This command becomes invalid if any other value has been specified or if the number that has been specified is for a template not transferred to the printer.

Example

- To select template number 99:

  Since nh3=63h, the command will be as follows.

  ESC i X n 2 01h 00h 63h

  (1Bh 69h 58h 6Eh 32h 01h 00h 63h)

ESC iXf2 Change the prefix character

ASCII:	ESC	i	X	f	2	n1	n2	n3
Decimal:	27	105	88	102	50	nd1	nd2	nd3
Hexadecimal:	1B	69	58	66	32	nh1	nh2	nh3

Parameters

nh1: 01h (Fixed)

nh2: 00h (Fixed)

00h≤nh3≤FFh

Description

- Changes the prefix character code.

  n3: Character code

- The default text string for the prefix character is “^”.
- This command is a static command.

Example

- To change the prefix character to “_”:

  ESC i X f 2 01h 00h 5Fh (“_”)
  (1Bh 69h 58h 66h 32h 01h 00h 5Fh)

ESC iXc2 Select printer settings (cut options)

ASCII:	ESC	i	X	c	2	n1	n2	n3
Decimal:	27	105	88	99	50	nd1	nd2	nd3
Hexadecimal:	1B	69	58	63	32	nh1	nh2	nh3

Parameters

nh1: 01h (Fixed)

nh2: 00h (Fixed)

nh3: 00h 01h 08h 09h

Description

- Selects the various cut options.

  nh3=00h: No cutting

  nh3=01h: Automatically cuts

  nh3=08h: Cut at end of printing

  nh3=09h: Automatically cuts, and cuts at end of printing
- This command is a static command.
- This command is applied to only a printer with auto cutter

Example

- To select auto cutting:

  ESC i X c 2 01h 00h 01h
  (1Bh 69h 58h 63h 32h 01h 00h 01h)

ESC iXy2 Select printer settings (cut options–specifying number of labels)

ASCII:	ESC	i	X	y	2	n1	n2	n3
Decimal:	27	105	88	121	50	nd1	nd2	nd3
Hexadecimal:	1B	69	58	79	32	nh1	nh2	nh3

Parameters

nh1: 01h (Fixed)

nh2: 00h (Fixed)

01h≤nh3≤63h

Description

- Specifies that the tape will be cut after the specified number of labels. (If the auto cut setting is ON, the tape will be cut after the number of labels specified with this setting.)

  nh3: Cuts after a specified number of labels (01h to 63h)
- This command is a static command.
- This command is applied to only a printer with auto cutter.

Example

- To cut after every five labels (However, the auto cut setting must be set to ON.):

  ESC i X y 2 01h 00 05h
  (1Bh 69h 58h 79h 32h 01h 00h 05h)

ESC iXm2 Select character code set

ASCII:	ESC	i	X	m	2	n1	n2	n3
Decimal:	27	105	88	109	50	nd1	nd2	nd3
Hexadecimal:	1B	69	58	6D	32	nh1	nh2	nh3

Parameters

nh1: 01h (Fixed)

nh2: 00h (Fixed)

00h≤nh3≤04h

Description

- Selects the character code set. (For details on the character code sets, refer to the character code tables in "Appendix B: Character Code Tables".)

  nh3=00h: Brother standard

  nh3=01h: Windows1250 (Eastern Europe)

  nh3=02h: Windows1252 (Western Europe)

  nh3=03h: ZPL II Emulation

  nh3=04h: Japan
- Invalid if nh3 is set to a value other than 00h through 04h.
- This command is a static command.

Example

- To set the character code set to the Brother standard:

  ESC i X m 2 01h 00h 00h
  (1Bh 69h 58h 6Dh 32h 01h 00h 00h)

ESC iXj2 Select international character set

ASCII:	ESC	i	X	j	2	n1	n2	n3
Decimal:	27	105	88	106	50	nd1	nd2	nd3
Hexadecimal:	1B	69	58	6A	32	nh1	nh2	nh3

Parameters

nh1: 01h (Fixed)

nh2: 00h (Fixed)

00h≤nh3≤0Dh, 40h

Description

- Selects the character set according to the country selected, and switches some character codes in the code table according to the value for nh3.

  nh3=00h: USA
  nh3=01h: France
  nh3=02h: Germany
  nh3=03h: Britain
  nh3=04h: Denmark I
  nh3=05h: Sweden
  nh3=06h: Italy
  nh3=07h: Spain I
  nh3=08h: Japan
  nh3=09h: Norway
  nh3=0Ah: Denmark II
  nh3=0Bh: Spain II
  nh3=0Ch: Latin America
  nh3=0Dh: South Korea
  nh3=40h: Legal

- The following 12 codes are switched.
  23h 24h 40h 5Bh 5Ch 5Dh 5Eh 60h 7Bh 7Ch 7Dh 7Eh
  (For the characters that are switched, refer to "International character set table".)
- The default setting is nh3=00h (USA).
- This command is a static command.

Example

- To change the international character set to that for Japan:

  ESC i X j 2 01h 00h 08h
  (1Bh 69h 58h 6Ah 32h 01h 00h 08h)

ESC iXR2 Specify line feed command text string

ASCII:	ESC	i	X	R	2	n1	n2	data
Decimal:	27	105	88	82	50	nd1	nd2	datad
Hexadecimal:	1B	69	58	52	32	nh1	nh2	datah

Parameters

01h≤nh1≤14h

nh2: 00h (Fixed)

00h≤datah≤FFh

Description

- Specifies the text string for the line feed command.

  nh1+(nh2*256): Length of the text string (can be set between 1 and 20)

  data: Text string (The maximum number of characters that can be set is 20 characters (bytes).)

- The default text string for the line feed command is “^CR”.
- This command is a static command.

Remarks

- Invalid if more than 20 characters have been specified

Example

- To change the text string for the line feed command to “0Dh 0Ah”:

  Since the text string to be specified (data), contains 2 characters, nh1=02h and nh2=00h. Therefore, the command will be as follows.

  ESC i X R 2 02h 00h 0Dh 0Ah

  (1Bh 69h 58h 52h 32h 02h 00h 0Dh 0Ah)

ESC iXC2 Specify number of copies

ASCII:	ESC	i	X	C	2	n1	n2	n3	n4
Decimal:	27	105	88	67	50	nd1	nd2	nd3	nd4
Hexadecimal:	1B	69	58	43	32	nh1	nh2	nh3	nh4

Parameters

nh1: 02h (Fixed)

nh2: 00h (Fixed)

00h≤nh3≤FFh

00h≤nh4≤03h

Description

- Specifies the number of copies to be printed.

  nh3+(nh4*256): Number of copies (bytes) (1 to 999)
- The default number of copies is 1.
- This command is a static command.

Example

- To change the number of copies to 100:

  Since nh3=64h and nh4=00h, the command will be as follows.

  ESC i X C 2 02h 00h 64h 00h

  (1Bh 69h 58h 43h 32h 02h 00h 64h 00h)

ESC iXN2 Specify number of Numbering copies

ASCII:	ESC	i	X	N	2	n1	n2	n3	n4
Decimal:	27	105	88	78	50	nd1	nd2	nd3	nd4
Hexadecimal:	1B	69	58	4E	32	nh1	nh2	nh3	nh4

Parameters

nh1: 02h (Fixed)

nh2: 00h (Fixed)

00h≤nh3≤FFh

00h≤nh4≤03h

Description

- Specifies the number of copies to be printed with Numbering.

  nh3+(nh4*256): Number of Numbering copies (bytes) (1 to 999)
- The default number of copies printed with Numbering is 1.
- This command is a static command.

Example

- To change the number of Numbering copies to 100:

  Since nh3=64h and nh4=00h, the command will be as follows.

  ESC i X N 2 02h 00h 64h 00h
  (1Bh 69h 58h 4Eh 32h 02h 00h 64h 00h)

ESC iXF2 FNC1 replacement setting

ASCII:	ESC	i	X	F	2	n1	n2	n3
Decimal:	27	105	88	70	50	nd1	nd2	nd3
Hexadecimal:	1B	69	58	46	32	nh1	nh2	nh3

Parameters

nh1: 01h (Fixed)

nh2: 00h (Fixed)

nh3: 00h 01h

Description

- Selects whether or not GS codes, which are included in barcode protocols such as GS1-128 (UCC/EAN-128), are replaced with FNC1 codes.

  nh3=00h: FNC1 replacement setting OFF

  nh3=01h: FNC1 replacement setting ON
- This command is a static command.

Example

- To disable FNC1 replacement:

  ESC i X F 2 01h 00h 00h
  (1Bh 69h 58h 46h 32h 01h 00h 00h)

ESC iXq2 Select print options

ASCII:	ESC	i	X	q	2	n1	n2	n3
Decimal:	27	105	88	113	50	nd1	nd2	nd3
Hexadecimal:	1B	69	58	71	32	nh1	nh2	nh3

Parameters

nh1: 01h (Fixed)

nh2: 00h (Fixed)

nh3: 00h, 01h

Description

- Selects the print options.

  nh3=00h: Priority given to print speed

  nh3=01h: Priority given to print quality
- The default value for the print options is “00h” (priority given to print speed).
- This command is a static command.

Example

- To set the print options to priority given to print quality:

  Since nh3=01h, the command will be as follows.

  ESC i X q 2 01h 00h 01h
  (1Bh 69h 58h 71h 32h 01h 00h 01h)

ESC iXd2 Specify recovery setting

ASCII:	ESC	i	X	d	2	n1	n2	n3
Decimal:	27	105	88	100	50	nd1	nd2	nd3
Hexadecimal:	1B	69	58	64	32	nh1	nh2	nh3

Parameters

nh1: 01h (Fixed)

nh2: 00h (Fixed)

nh3: 00h, 01h

Description

- Select enable or disable of recovery print.

  nh3=00h: Disable recovery print

  nh3=01h: Enable recovery print
- The default value of “nh3” is 01h.
- This command is a static command.

Example

- For being enable recovery print.

  Since nh3=01h, the command will be as follows.

  ESC i X d 2 01h 00h 01h
  (1Bh 69h 58h 64h 32h 01h 00h 01h)

ESC iXE2 Specify barcode margin setting

ASCII:	ESC	i	X	E	2	n1	n2	n3
Decimal:	27	105	88	69	50	nd1	nd2	nd3
Hexadecimal:	1B	69	58	45	32	nh1	nh2	nh3

Parameters

nh1: 01h (Fixed)

nh2: 00h (Fixed)

nh3: 00h, 01h

Description

- Select an existence of barcode margin.

  nh3=00h: No margin

  nh3=01h: Add margin
- The default value of nh3 is 01h.
- This command is a static command.

Example

- For setting “No margin”.

  Since nh3=00h, the command will be as follows.

  ESC i X E 2 01h 00h 00h
  (1Bh 69h 58h 45h 32h 01h 00h 00h)

ESC iXh2 Specify rotated print

ASCII:	ESC	i	X	h	2	n1	n2	n3
Decimal:	27	105	88	104	50	nd1	nd2	nd3
Hexadecimal:	1B	69	58	68	32	nh1	nh2	nh3

Parameters

nh1: 01h (Fixed)

nh2: 00h (Fixed)

nh3: 00h, 01h

Description

- Select rotate setting.

  nh3=00h: No rotation

  nh3=01h: 180 degrees rotation
- The default value for the rotate setting is "00h" (No rotaion).
- This command is a static command.

Example

- To set the rotate setting to 180 degrees rotation:

  Since nh3=01h, the command will be as follows.

  ESC i X h 2 01h 00h 01h
  (1Bh 69h 58h 68h 32h 01h 00h 01h)

ESC iXT1 Retrieve print start trigger setting

ASCII:	ESC	i	X	T	1	n1	n2
Decimal:	27	105	88	84	49	nd1	nd2
Hexadecimal:	1B	69	58	54	31	nh1	nh2

Parameters

nh1=00h (Fixed)

nh2=00h (Fixed)

Description

- The print start trigger is returned as 3-byte data.

  [1]: 01h (Fixed)

  [2]: 00h (Fixed)

  [3]: Setting
  00h: When the specified text string is received
  01h: When all objects are filled
  02h: When the specified number of characters is received

- The retrieved value is a value specified by a static command.

Example

- The print start trigger specified for the printer is retrieved. When the setting is “when the specified text string is received”:

  Code: ESC i X T 1 00h 00h
  (1Bh 69h 58h 54h 31h 00h 00h)
  Returned value: 01h 00h 00h

ESC iXP1 Retrieve print start command setting text string

ASCII:	ESC	i	X	P	1	n1	n2
Decimal:	27	105	88	80	49	nd1	nd2
Hexadecimal:	1B	69	58	50	31	nh1	nh2

Parameters

nh1: 00h (Fixed)

nh2: 00h (Fixed)

Description

- Retrieves the text string specified for the print start command.
- 3- to 22-byte data is returned from the printer. (Varies depending on the length of the text string)

  [1,2]: nh1 nh2 (number of characters) nh1+(nh2*256)

  [3 and later]: Text string
- The retrieved value is a value specified by a static command.

Example

- When the text string for the print start command is specified as “START”:

  Code: ESC i X P 1 00h 00h

  (1Bh 69h 58h 50h 31h 00h 00h)

  Returned value: 05h 00h S T A R T

  (05h 00h 53h 54h 41h 52h 54h)

ESC iXr1 Retrieve print start received character count

ASCII:	ESC	i	X	r	1	n1	n2
Decimal:	27	105	88	114	49	nd1	nd2
Hexadecimal:	1B	69	58	72	31	nh1	nh2

Parameters

nh1: 00h (Fixed)

nh2: 00h (Fixed)

Description

- Retrieves the number of characters specified to be received in order to start printing.
- 4-byte data is returned from the printer.

  [1]: 02h (Fixed)

  [2]: 00h (Fixed)

  [3,4]: nh3 nh4 settings
  nh3+(nh4*256): Print start received character count
- The retrieved value is a value specified by a static command.

Example

- For a print start received character count of 500 characters:

  Code: ESC i X r 1 00h 00h
  (1Bh 69h 58h 72h 31h 00h 00h)

  Returned value: 02h 00h F4h 01h (244+1*256=F4h+01h*256=500 characters)

ESC iXD1 Retrieve delimiter

ASCII:	ESC	i	X	D	1	n1	n2
Decimal:	27	105	88	68	49	nd1	nd2
Hexadecimal:	1B	69	58	44	31	nh1	nh2

Parameters

nh1: 00h (Fixed)

nh2: 00h (Fixed)

Description

- Retrieves the text string specified for the delimiter.
- 3- to 22-byte data is returned from the printer. (Varies depending on the length of the text string)

  [1,2]: nh1 nh2 (number of characters) nh1+(nh2*256)

  [3 and later]: Text string
- The retrieved value is a value specified by a static command.

Example

- When the delimiter is set as “,” (2Ch):

  Code: ESC i X D 1 00h 00h

  (1Bh 69h 58h 44h 31h 00h 00h)

  Returned value: 01h 00h

  (01h 00h 2Ch)

ESC iXa1 Retrieve non-printed text strings

ASCII:	ESC	i	X	a	1	n1	n2	n3
Decimal:	27	105	88	97	49	nd1	nd2	nd3
Hexadecimal:	1B	69	58	61	31	nh1	nh2	nh3

Parameters

nh1: 01h (Fixed)

nh2: 00h (Fixed)

nh3: 01h (Fixed)

Description

- Retrieves the specified non-printed text string.
- 2- to 22-byte data is returned from the printer. (Varies depending on the length of the text string)

  [1,2]: nh1 nh2 (number of characters) nh1+(nh2*256)

  [3 and later]: Text string
- The retrieved value is a value specified by a static command.

Example

- When “ABCD” is specified as the non-printed text string:

  The following command is sent to the printer.

  Code: ESC i X a 1 01h 00h 01h
  (1Bh 69h 58h 61h 31h 01h 00h 01h)
  Returned value: 04h 00h A B C D
  (04h 00h 41h 42h 43h 44h)

ESC iXi1 Retrieve command mode setting

ASCII:	ESC	i	X	i	1	n1	n2
Decimal:	27	105	88	105	49	nd1	nd2
Hexadecimal:	1B	69	58	69	31	nh1	nh2

Parameters

nh1: 00h (Fixed)

nh2: 00h (Fixed)

Description

- Retrieves the setting for the command mode.
- 3-byte data is returned from the printer.

  [1]: 01h (Fixed)

  [2]: 00h (Fixed)

  [3]: Setting
  00h: ESC/P mode
  01h: Raster mode
  03h: P-touch Template mode
  04h: CPCL Page Print mode
  05h: CPCL Line Print mode
- The retrieved value is a value specified by a static command.

Example

- When the setting is for raster mode:

  Code: ESC i X i 1 00h 00h
  (1Bh 69h 58h 69h 31h 00h 00h)
  Returned value: 01h 00h 01h

ESC iXn1 Retrieve number of selected template

ASCII:	ESC	i	X	n	1	n1	n2
Decimal:	27	105	88	110	49	nd1	nd2
Hexadecimal:	1B	69	58	6E	31	nh1	nh2

Parameters

nh1: 00h (Fixed)

nh2: 00h (Fixed)

Description

- Retrieves the template number selected from the printer.
- 3-byte data is returned from the printer.
  - [1]: 01h (Fixed)
  - [2]: 00h (Fixed)
  - [3]: Setting
- The retrieved value is a value specified by a static command.

Example

- When template number 99 is selected:

Code: ESC i X n 1 00h 00h
(1Bh 69h 58h 6Eh 31h 00h 00h)
Returned value: 01h 00h 63h

ESC iXc1 Retrieve printer settings (cut options)

ASCII:	ESC	i	X	c	1	n1	n2
Decimal:	27	105	88	99	49	nd1	nd2
Hexadecimal:	1B	69	58	63	31	nh1	nh2

Parameters

nh1: 00h (Fixed)

nh2: 00h (Fixed)

Description

- Retrieves the various cut settings.
- 3-byte data is returned from the printer.

  [1]: 01h (Fixed)

  [2]: 00h (Fixed)

  [3]: Setting
  00h: No cutting
  01h: Automatically cuts
- The retrieved value is a value specified by a static command.
- This command is applied to only a printer with auto cutter.

Example

- When auto cutting is selected:

  Code: ESC i X c 1 00h 00h
  (1Bh 69h 58h 63h 31h 00h 00h)
  Returned value: 01h 00h 01h

ESC iXy1 Retrieve printer settings (cut options–specifying number of labels)

ASCII:	ESC	i	X	y	1	n1	n2
Decimal:	27	105	88	121	49	nd1	nd2
Hexadecimal:	1B	69	58	79	31	nh1	nh2

Parameters

nh1: 00h (Fixed)

nh2: 00h (Fixed)

Description

- Retrieves the setting for cutting after a specified number of labels.
- 3-byte data is returned from the printer.
  - [1]: 01h (Fixed)
  - [2]: 00h (Fixed)
  - [3]: Setting
- The retrieved value is a value specified by a static command.
- This command is applied to only a printer with auto cutter.

Example

- When cutting is specified for every five labels:

  Code: ESC i X y 1 00h 00h
  (1Bh 69h 58h 79h 31h 00h 00h)
  Returned value: 01h 00h 05h

ESC iXm1 Retrieve character code set setting

ASCII:	ESC	i	X	m	1	n1	n2
Decimal:	27	105	88	109	49	nd1	nd2
Hexadecimal:	1B	69	58	6D	31	nh1	nh2

Parameters

nh1: 00h (Fixed)

nh2: 00h (Fixed)

Description

- Retrieves the specified character code set. (For details on the character code sets, refer to "Appendix B: Character Code Tables".)
- 3-byte data is returned from the printer.

  [1]: 01h (Fixed)

  [2]: 00h (Fixed)

  [3]: Setting
  00h: Brother standard
  01h: Windows1250 (Eastern Europe)
  02h: Windows1252 (Western Europe)
  03h: ZPL II Emulation
  04h: Japan
- The retrieved value is a value specified by a static command.

Example

- When the character code set is the Brother standard:

  Code: ESC i X m 1 00h 00h
  (1Bh 69h 58h 6Dh 31h 00h 00h)
  Returned value: 01h 00h 00h

ESC iXj1 Retrieve international character set setting

ASCII:	ESC	i	X	j	1	n1	n2
Decimal:	27	105	88	106	49	nd1	nd2
Hexadecimal:	1B	69	58	6A	31	nh1	nh2

Parameters

nh1: 00h (Fixed)

nh2: 00h (Fixed)

Description

- Retrieves the international character set setting.
- 3-byte data is returned from the printer.

  [1]: 01h (Fixed)

  [2]: 00h (Fixed)

  [3]: Setting

  00h: USA
  01h: France
  02h: Germany
  03h: Britain
  04h: Denmark I
  05h: Sweden
  06h: Italy
  07h: Spain I
  08h: Japan
  09h: Norway
  0Ah: Denmark II
  0Bh: Spain II
  0Ch: Latin America
  0Dh: South Korea
  40h: Legal
- The retrieved value is a value specified by a static command.

Example

- When the international character set is that for Japan:

  Code: ESC i X j 1 00h 00h
  (1Bh 69h 58h 6Ah 31h 00h 00h)
  Returned value: 01h 00h 08h

ESC iXf1 Retrieve prefix character

ASCII:	ESC	i	X	f	1	n1	n2
Decimal:	27	105	88	102	49	nd1	nd2
Hexadecimal:	1B	69	58	66	31	nh1	nh2

Parameters

nh1: 00h (Fixed)

nh2: 00h (Fixed)

Description

- Retrieves the prefix character code.
- 3-byte data is returned from the printer.
  - [1]: 01h (Fixed)
  - [2]: 00h (Fixed)
  - [3]: Specified character
- The retrieved value is a value specified by a static command.

Example

- When the prefix character is set to "_":

Code: ESC i X f 1 00h 00h
(1Bh 69h 58h 66h 31h 00h 00h)
Returned value: 01h 00h 5Fh (5Fh stands for "_" in ASCII code)

ESC iXR1 Retrieve line feed command setting text string

ASCII:	ESC	i	X	R	1	n1	n2
Decimal:	27	105	88	82	49	nd1	nd2
Hexadecimal:	1B	69	58	52	31	nh1	nh2

Parameters

nh1: 00h (Fixed)

nh2: 00h (Fixed)

Description

- Retrieves the text string specified for the line feed command.
- 2- to 22-byte data is returned from the printer. (Varies depending on the length of the text string)

  [1, 2]: nh1 nh2 (number of characters) nh1+(nh2*256)

  [3 and later]: Text string
- The retrieved value is a value specified by a static command.

Example

- When the text string for the line feed command is specified as “0Dh 0Ah”:

  Code: ESC i X R 1 00h 00h

  (1Bh 69h 58h 52h 31h 00h 00h)

  Returned value: 02h 00h 0Dh 0Ah

ESC iXC1 Retrieve number of copies setting

ASCII:	ESC	I	X	C	1	n1	n2
Decimal:	27	105	88	67	49	nd1	nd2
Hexadecimal:	1B	69	58	43	31	nh1	nh2

Parameters

nh1: 00h (Fixed)

nh2: 00h (Fixed)

Description

- Retrieves the number of copies specified to be printed.
- 4-byte data is returned from the printer.

  [1]: 02h (Fixed)

  [2]: 00h (Fixed)

  [3, 4]: nh3 nh4 settings
  nh3+(nh4*256): Print start received character count
- The retrieved value is a value specified by a static command.

Example

- When the number of copies is set to 500:

  Code: ESC i X C 1 00h 00h
  (1Bh 69h 58h 43h 31h 00h 00h)

  Returned value: 02h 00h F4h 01h (F4h+01h*256=244+256=500)

ESC iXN1 Retrieve number of Numbering copies setting

ASCII:	ESC	i	X	N	1	n1	n2
Decimal:	27	105	88	78	49	nd1	nd2
Hexadecimal:	1B	69	58	4E	31	nh1	nh2

Parameters

nh1: 00h (Fixed)

nh2: 00h (Fixed)

Description

- Retrieves the number of copies specified to be printed with Numbering.
- 4-byte data is returned from the printer.

  [1]: 02h (Fixed)

  [2]: 00h (Fixed)

  [3, 4]: nh3 nh4 settings
  nh3+(nh4*256): Number of Numbering copies
- The retrieved value is a value specified by a static command.

Example

- When the number of Numbering copies is set to 500:

  Code: ESC i X N 1 00h 00h
  (1Bh 69h 58h 4Eh 31h 00h 00h)

  Returned value: 02h 00h F4h 01h (F4h+01h*256=244+256=500)

ESC iXF1 Retrieve FNC1 replacement setting

ASCII:	ESC	i	X	F	1	n1	n2
Decimal:	27	105	88	70	49	nd1	nd2
Hexadecimal:	1B	69	58	46	31	nh1	nh2

Parameters

nh1: 00h (Fixed)

nh2: 00h (Fixed)

Description

- Retrieves the FNC1 replacement setting.
- 3-byte data is returned from the printer.

  [1]: 01h (Fixed)

  [2]: 00h (Fixed)

  [3]: Setting
  00h: FNC1 replacement setting OFF
  01h: FNC1 replacement setting ON
- The retrieved value is a value specified by a static command.

Example

- When the FNC1 replacement setting is OFF:

  Code: ESC i X F 1 00h 00h
  (1Bh 69h 58h 46h 31h 00h 00h)
  Returned value: 01h 00h 00h

ESC iXq1 Retrieve print options

ASCII:	ESC	i	X	q	1	n1	n2
Decimal:	27	105	88	113	49	nd1	nd2
Hexadecimal:	1B	69	58	71	31	nh1	nh2

Parameters

nh1: 00h (Fixed)

nh2: 00h (Fixed)

Description

- Retrieves the print options setting.
- 3-byte data is returned from the printer.
  - [1]: 01h (Fixed)
  - [2]: 00h (Fixed)
  - [3]: nh3 Settings
- The retrieved value is a value specified by a static command.

Example

- When the print options are set to priority given to print quality:

Code: ESC i X q 1 00h 00h
(1Bh 69h 58h 71h 31h 00h 00h)
Returned value: 01h 00h 01h

ESC iXd1 Retrieve recovery setting

ASCII:	ESC	i	X	d	1	n1	n2
Decimal:	27	105	88	100	49	nd1	nd2
Hexadecimal:	1B	69	58	64	31	nh1	nh2

Parameters

nh1: 00h (Fixed)

nh2: 00h (Fixed)

Description

- Retrieve the recovery print setting.
- 3-byte data is returned from the printer.
  - [1]: 01h (Fixed)
  - [2]: 00h (Fixed)
  - [3]: nh3 Settings
- The retrieved value is a value specified by a static command.

Example

- The case the recovery print setting is enabled.

Code: ESC i X d 1 00h 00h
(1Bh 69h 58h 64h 31h 00h 00h)
Returned value: 01h 00h 01h

ESC iXE1 Retrieve barcode margin setting

ASCII:	ESC	i	X	E	1	n1	n2
Decimal:	27	105	88	69	49	nd1	nd2
Hexadecimal:	1B	69	58	45	31	nh1	nh2

Parameters

nh1: 00h (Fixed)

nh2: 00h (Fixed)

Description

- Retrieve the barcode margin setting.
- 3-byte data is returned from the printer.
  - [1]: 01h (Fixed)
  - [2]: 00h (Fixed)
  - [3]: nh3 Settings
- The retrieved value is a value specified by a static command.

Example

- The case the barcode margin setting is set as “Add margin”.

Code: ESC i X E 1 00h 00h
(1Bh 69h 58h 45h 31h 00h 00h)
Returned value: 01h 00h 01h

ESC iXh1 Retrieve rotated print setting

ASCII:	ESC	i	X	h	1	n1	n2
Decimal:	27	105	88	104	49	nd1	nd2
Hexadecimal:	1B	69	58	68	31	nh1	nh2

Parameters

nh1: 00h (Fixed)

nh2: 00h (Fixed)

Description

- Retrieve rotated print setting.
- 3-byte data is returned from the printer.

  [1]: 01h (Fixed)

  [2]: 00h (Fixed)

  [3]: nh3 Settings
- The retrieved value is a value specified by a static command.

Example

- When the rotate setting is set to 180 degrees rotation:

  Code: ESC i X h 1 00h 00h

  (1Bh 69h 58h 68h 31h 00h 00h)

  Returned value: 01h 00h 01h

8. ZPL II supported by RJ-2030/2050/2140/2150

ZPL II	Description
^A	Select font
^B0	Aztec
^B2	Interleaved 2 of 5
^B3	Code39
^B7	PDF417
^B8	EAN-8
^B9	UPC-E
^BA	Code93
^BC	Code128
^BD	MaxiCode
^BE	EAN-13
^BF	MicroPDF417
^BI	Industrial 2 of 5
^BJ	Standard 2 of 5
^BK	ANSI CodaBar
^BM	MSI
^BO	Aztec
^BQ	QR Code
^BR	GS1 Databar
^BS	UPC-EAN Extension
^BU	UPC-A
^BX	DataMatrix
^BY	Bar setting for barcodes
^BZ	PostNet
^CC	Change prefix ^
~CC	Change prefix ^
^CD	Change delimiter character
~CD	Change delimiter character
^CF	Change default font
^CI	Change international character set
^CT	Change prefix ~
~CT	Change prefix ~
^CW	Name downloaded font with 1 alphanumeric character.

ZPL II	Description
^DB	Download bitmap font
~DB	Download bitmap font
^DF	Download format
^DG	Download graphic
~DG	Download graphic
^EF	Clear all formats in RAM except GRF
~EF	Clear all formats in RAM except GRF
^EG	Clear all GRF
~EG	Clear all GRF
^FA	Allocate space for the field to be saved
^FB	Set field block
^FD	Set input data area
^FH	Use hexadecimal character for input data
^FN	Set data area as a number
^FO	Set position from home position of label
^FR	Reverse field color
^FS	Point to last position of field
^FT	Set position of field
^FV	Set the number of data to be inserted in field
^FW	Set the default orientation
^FX	Insert comment
^GB	Draw box
^GF	Graphic field
^GS	GS fonts
^HG	Return graphic data to host
~HI	Retrieve printer information
~HS	Return printer settings to host
^ID	Delete image file
^IL	Recall image files stored with ^IS
^IM	Recall image files
^IS	Store image files
~JA	Cancel format
^JB	Initialize memory
~JP	Clear format holding ~JP
~JR	Initialize when printer turned on

ZPL II	Description
^JU	Printer setting
^JZ	Select print setting after error occurs
^KL	Set language
^LH	Set home position of label
^LL	Set label length
^LR	Reverse field data color
^LS	Set horizontal print position
^LT	Set vertical print position
^MC	Clear data after printing
^MF	Feed setting
^MN	Media setting
^MU	Unit setting
^PM	Mirror printing
^PO	Upside-down printing
^PQ	Copy printing
^PW	Set print width
~SD	Set print density
^SF	Serialization
^SN	Serialization
~TA	Reverse feed length setting when printing
~WC	Print printer settings
^WD	Print list of stored files
^XA	Command required at beginning of format
^XF	Recall format stored with ^DF
^XG	Recall format stored with ^DG or ^DG
^XZ	Command required at end of format

9. CPCL supported by RJ-2030/2050/2140/2150

- UTILITIES

CPCL	Description
!	Command Start Line
UTILITIES	Start utility session
U1	One-line utility session
VERSION	Return firmware version string
CHECKSUM	Return application checksum
DEL	Delete a file
DIR	Return file directory
DF	Write a file
DEFINE-FILE	
DF	Define saved format file
DEFINE-FORMAT	
UF	Use saved format file for data
USE-FORMAT	
TYPE	Return file contents
COUNTRY	Character set / Code page
CHAR-SET	
TIMEOUT	Inactivity power-off timeout
BEEP	Sound the beeper
LT	Line terminator character(s)
SET-TIME	Set real-time clock time
GET-TIME	Report real-time clock time
SET-DATE	Set real-time clock date
GET-DATE	Report real-time clock date

- CPCL Job/Mode Control

CPCL	Description
;	Comment
LEFT	Justification (field alignment)
CENTER	
RIGHT	
PAGE-WIDTH	Page width
PW	

IN-CENTIMETERS	Units of measure
IN-DOTS	
IN-INCHES	
IN-MILLIMETERS	
COUNTRY	Character set / code page
SETSP	Character spacing
FG	Define font group
SETMAG	Font magnification
BARCODE-TEXT	Print text of barcode
BT	
PRINT	Terminate and print
END	Terminate and print
ABORT	Terminate

- CPCL Printer Control

CPCL	Description
JOURNAL	Disable automatic correction of media alignment
CONTRAST	Specify print darkness
TONE	Specify print darkness
FORM	Form feed after print
PACE	Wait for key after print
AUTO-PACE	Wait for presentation sensor
NO-PACE	Cancel PACE or AUTO-PACE
WAIT	Delay after print
SPEED	Set maximum motor speed
PREFEED	Feed before print
POSTFEED	Feed after print
PRESENT-AT	Conditional advance/retract
BEEP	Sound the beeper
CUT-AT	Retract after cut

- CPCL Pre-scaled Text

CPCL	Description
TEXT	Horizontal text
T	
VTEXT	Vertical text
VT	
TEXT90	Vertical text
T90	
TEXT180	Inverted text
T180	
TEXT270	Inverted vertical text
T270	
CONCAT	Horizontal pre-scaled text concatenation
VCONCAT	Vertical pre-scaled text concatenation
ENDCONCAT	End text concatenation
MULTILINE	Multiple-line text block
ML	
ENDMULTILINE	End multiple-line text block

- CPCL Scalable Text

CPCL	Description
SCALE-TEXT	Horizontal scalable text size
ST	
VSCALE-TEXT	Vertical scalable text size
VST	
SCALE-TO-FIT	Scale horizontal scalable text to fit window
STF	
VSCALE-TO-FIT	Scale vertical scalable text to fit window
VSTF	
CONCAT ... ST	Horizontal scalable text concatenation
VCONCAT ... ST	Vertical scalable text concatenation
ROTATE	Rotate scalable text
R	

- CPCL Linear Barcodes

CPCL	Description
BARCODE UPCA	Horizontal Barcode UPC-A
B UPCA	
VBARCODE UPCA	Vertical Barcode UPC-A
VB UPCA	
BARCODE UPCA2	Horizontal Barcode UPC-A with extension
BARCODE UPCA5	
B UPCA2	
B UPCA5	
VBARCODE UPCA2	Vertical Barcode UPC-A with extension
VBARCODE UPCA5	
VB UPCA2	
VB UPCA5	
BARCODE UPCE	Horizontal Barcode UPC-E
B UPCE	
VBARCODE UPCE	Vertical Barcode UPC-E
VB UPCE	
BARCODE UPCE2	Horizontal Barcode UPC-E with extension
BARCODE UPCE5	
B UPCE2	
B UPCE5	
VBARCODE UPCE2	Vertical Barcode UPC-E with extension
VBARCODE UPCE5	
VB UPCE2	
VB UPCE5	
BARCODE I2OF5	Horizontal Barcode ITF
B I2OF5	
VBARCODE I2OF5	Vertical Barcode ITF
VB I2OF5	
BARCODE I2OF5C	Horizontal Barcode ITF with Checksum
B I2OF5C	
VBARCODE I2OF5C	Vertical Barcode ITF with Checksum
VB I2OF5C	
BARCODE I2OF5G	Horizontal Barcode German Post Code
B I2OF5G	

VBARCODE I2OF5G	Vertical Barcode German Post Code
VB I2OF5G	
BARCODE EAN13	Horizontal Barcode EAN13
B EAN13	
VBARCODE EAN13	Vertical Barcode EAN13
VB EAN13	
BARCODE EAN132	Horizontal Barcode EAN13 with extension
BARCODE EAN135	
B EAN132	
B EAN135	
VBARCODE EAN132	Vertical Barcode EAN13 with extension
VBARCODE EAN135	
VB EAN132	
VB EAN135	
BARCODE EAN8	Horizontal Barcode EAN8
B EAN8	
VBARCODE EAN8	Vertical Barcode EAN8
VB EAN8	
BARCODE EAN82	Horizontal Barcode EAN8 with extension
BARCODE EAN85	
B EAN82	
B EAN85	
VBARCODE EAN82	Vertical Barcode EAN8 with extension
VBARCODE EAN85	
VB EAN82	
VB EAN85	
BARCODE 39	Horizontal Barcode 39
B 39	
VBARCODE 39	Vertical Barcode 39
VB 39	
BARCODE 39C	Horizontal Barcode 39 with Checksum
B 39C	
VBARCODE 39C	Vertical Barcode 39 with Checksum
VB 39C	
BARCODE F39	Horizontal Barcode 39 with Full ASCII
B F39	

VBARCODE F39	Vertical Barcode 39 with Full ASCII
VB F39	
BARCODE F39C	Horizontal Barcode 39 with Full ASCII and Checksum
B F39C	
VBARCODE F39C	Vertical Barcode 39 with Full ASCII and Checksum
VB F39C	
BARCODE 93	Horizontal Barcode 93
B 93	
VBARCODE 93	Vertical Barcode 93
VB 93	
BARCODE 128	Horizontal Barcode 128 Subsets A/B/C Auto
B 128	
VBARCODE 128	Vertical Barcode 128 Subsets A/B/C Auto
VB 128	
BARCODE UCCEAN128	Horizontal Barcode UCC-128 Standard
B UCCEAN128	
VBARCODE UCCEAN128	Vertical Barcode UCC-128 Standard
VB UCCEAN128	
BARCODE CODABAR	Horizontal Barcode CODABAR (no checksum)
B CODABAR	
VBARCODE CODABAR	Vertical Barcode CODABAR (no checksum)
VB CODABAR	
BARCODE CODABAR16	Horizontal Barcode CODABAR with mod 16 Checksum
B CODABAR16	
VBARCODE CODABAR16	Vertical Barcode CODABAR with mod 16 Checksum
VB CODABAR16	
BARCODE MSI	Horizontal Barcode MSI Plessey
B MSI	
VBARCODE MSI	Vertical Barcode MSI Plessey
VB MSI	
BARCODE MSI10	Horizontal Barcode MSI Plessey with Checksum(s)
BARCODE MSI1010	
BARCODE MSI1110	
B MSI10	
B MSI1010	
B MSI1110	

VBARCODE MSI10	Vertical Barcode MSI Plessey with Checksum(s)
VBARCODE MSI1010	
VBARCODE MSI1110	
VB MSI10	
VB MSI1010	
VB MSI1110	
BARCODE POSTNET	Horizontal Barcode Postnet
B POSTNET	
VBARCODE POSTNET	Vertical Barcode Postnet
VB POSTNET	
BARCODE FIM	Horizontal Facing Identification Marks
B FIM	
VBARCODE FIM	Vertical Facing Identification Marks
VB FIM	

- CPCL RSS(with 6 subtypes)

CPCL	Description
BARCODE RSS	Horizontal Reduced Space Symbology and Composite Symbols
B RSS	
VBARCODE RSS	Vertical Reduced Space Symbology and Composite Symbols
VB RSS	

- CPCL 2D Barcodes

CPCL	Description
BARCODE PDF-417	Horizontal Barcode PDF417
B PDF-417	
VBARCODE PDF-417	Vertical Barcode PDF417
VB PDF-417	
ENDPDF	End Barcode PDF417
BARCODE MAXICODE	Horizontal Barcode Maxicode
B MAXICODE	
VBARCODE MAXICODE	Vertical Barcode Maxicode
VB MAXICODE	
ENDMAXICODE	End Barcode Maxicode
BARCODE QRCODE	Horizontal Barcode QRCode
B QRCODE	

VBARCODE QRCODE	Vertical Barcode QRCode
VB QRCODE	
ENDQR	End Barcode QRCode
BARCODE AZTEC	Horizontal Barcode Aztec
B AZTEC	
VBARCODE AZTEC	Vertical Barcode Aztec
VB AZTEC	
ENDAZTEC	End Barcode Aztec

- CPCL Graphics

CPCL	Description
COUNT	Serialization
BOX	Draw rectangle
B	
LINE	Draw horizontal, vertical or diagonal line
L	
INVERSE-LINE	Overdraw inverse horizontal or vertical line
IL	
PATTERN	Pattern line or scalable text
EXPANDED-GRAPHICS	Horizontal expanded graphics
EG	
VEXPANDED-GRAPHICS	Vertical expanded graphics
VEG	
COMPRESSED-GRAPHICS	Horizontal compressed graphics
CG	
VCOMPRESSED-GRAPHICS	Vertical compressed graphics
VCG	
PCX	Print ".PCX" graphics data

- CPCL Line Print Mode

CPCL	Description
LP-ORIENT	Line print mode orientation
SETLP	Line print mode font
SETLF	Line print mode line spacing
X	Move right absolute
Y	Move down absolute

XY	Move right and down absolute
RX	Move right relative to present position
RY	Move down relative to present position
RXY	Move right and down relative to present position
LMARGIN	Line print mode left margin
SETBOLD	Set text darkness/width
SETSP	Character spacing
PAGE-WIDTH	Page width
PW	
PAGE-HEIGHT	Line print mode pagination
PH	
0x0C(ASCII Character)	Form-feed
0x08(ASCII Character)	Non-destructive backspace
SETFF	Line print mode top-of-form
SET-TOF	Distance between top-of-form and index
PRESENT-AT	Conditional advance/retract
CUT-AT	Retract after cut
SETLP-TIMEOUT	Print after idle time
(Any linear barcode or graphics command)	Any linear barcode or graphics command are able to be used in Line Print Mode.

Appendix A: Specifications

BROTHER RJ-2030/2050/2140/2150 P-touch Template 2.0 specifications

Printing	Printing method		Raster printing (PTCBP mode) ESC/P printing **P-touch Template printing** CPCL Page Print mode CPCL Line Print mode
	Maximum print length		1 meter
	Resolution (dpi)		203 dpi × 203 dpi
	Text	Font	Outline fonts: Helsinki, Brussel, Letter Gothic, Gothic
		Size (dots)	Outline fonts: Maximum 400 dots
		Character style	None, Bold, Italics, Outline, Shadow, Shadow + Outline
		Underline	-
		Character width	-
		Horizontal alignment	Left, Center, Right
		Rotate	Portrait, landscape
	Bar-code	Protocols	CODE39, ITF (I-2/5), EAN-13, EAN-8, UPC-A, UPC-E, CODABAR, CODE128, GS1-128 (UCC/EAN-128), QR Code, PDF417, Data Matrix, MaxiCode, RSS-14(Standard, Truncated, Stacked, Stacked Omni), RSS-Limited, RSS Expanded(Standard, Stacked) , POSTNET, Aztec
		Width	Large, Medium, Small, Extra Small
Transmission	RS	Baud rate (bps)	-
		Busy	-
		Bit length	-
		Parity	-
		Stop bit	-

Settings that appear in **bold** and underlined are the default settings.

Appendix B: Character Code Tables

Character code tables

(1) Windows1252 (Western Europe)

	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0			SP	0	@	P	`	p	€			°	À	Ð	à	ð
1			!	1	A	Q	a	q	~	‘	¡	±	Á	Ñ	á	ñ
2			”	2	B	R	b	r	,	’	¢	²	Â	Ò	â	ò
3			#	3	C	S	c	s	*ƒ*	“	£	³	Ã	Ó	ã	ó
4			$	4	D	T	d	t	„	”	¤	´	Ä	Ô	ä	ô
5			%	5	E	U	e	u	…	•	¥	µ	Å	Õ	å	õ
6			&	6	F	V	f	v	†	-	|	¶	Æ	Ö	æ	ö
7			’	7	G	W	g	w	‡	—	§	·	Ç	×	ç	÷
8			(	8	H	X	h	x	ˆ	˜	¨	¸	È	Ø	è	ø
9			)	9	I	Y	i	y	‰	™	©	¹	É	Ù	é	ù
A			*	:	J	Z	j	z	Š	š	ª	º	Ê	Ú	ê	ú
B			+	;	K	[	k	{	<	>	«	»	Ë	Û	ë	û
C			,	<	L	\	l	¦	Œ	œ	¬	¼	Ì	Ü	ì	ü
D			-	=	M	]	m	}			-	½	Í	Ý	í	ý
E			.	>	N	^	n	~	Ž	ž	®	¾	Î	Þ	î	þ
F			/	?	O	_	o	DEL		Ÿ	¯	¿	Ï	ß	ï	ÿ

Note

" ■ " indicates that a space is printed.

" ■ " indicates that the character will switch when the international character set is changed.

(2) Windows1250 (Eastern Europe)

	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0			SP	0	@	P	`	p	€	t˘		°	Ŕ	Đ	ŕ	đ
1			!	1	A	Q	a	q	À	‘	ˇ	±	Á	Ń	á	ń
2			"	2	B	R	b	r	¸	’	˘	˛	Â	Ň	â	ň
3			#	3	C	S	c	s	ˇ L	“	Ł	ł	Ă	Ó	ă	ó
4			$	4	D	T	d	t	„	”	¤	´	Ä	Ô	ä	ô
5			%	5	E	U	e	u	…	•	Ą	µ	Ĺ	Ő	Í	ő
6			&	6	F	V	f	v	†	–	|	¶	Ć	Ö	ć	ö
7			’	7	G	W	g	w	‡	—	§	·	Ç	×	ç	÷
8			(	8	H	X	h	x	Ǐ		¨	¸	Č	Ř	č	ř
9			)	9	I	Y	i	y	‰	™	©	ą	É	Ů	é	ů
A			*	:	J	Z	j	z	Š	š	Ş	ş	Ę	Ú	ę	ú
B			+	;	K	[	k	{	<	>	«	»	Ë	Ű	ë	ű
C			,	<	L	\	l	¦	Ś	ś	¬	Ľ	Ě	Ü	ě	ü
D			–	=	M	]	m	}	Ť	ť	–	˝	Í	Ý	í	ý
E			.	>	N	^	n	~	Ž	ž	®	ľ	Î	Ţ	î	ţ
F			/	?	O	_	o	DEL	Ź	ź	Ż	ż	Ď	ß	ď	˙

Note

" ■ " indicates that a space is printed.

" ■ " indicates that the character will switch when the international character set is changed.

(3) Brother standard

	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0			SP	0	@	P	`	p	Ç	É	á	▒	└		α	
1			!	1	A	Q	a	q	ü	æ	í	▒	┴		β	±
2			”	2	B	R	b	r	é	Æ	ó	▓	┬			
3			#	3	C	S	c	s	â	ô	ú	│	├			¾
4			$	4	D	T	d	t	ä	ö	ñ	┤	─			
5			%	5	E	U	e	u	à	ò	Ñ		┼			§
6			&	6	F	V	f	v	å	û	ª				µ	÷
7			’	7	G	W	g	w	ç	ù	º					
8			(	8	H	X	h	x	ê	ÿ	¿	©	╚			°
9			)	9	I	Y	i	y	ë	Ö	®	╣	╔	┘		·
A			*	:	J	Z	j	z	è	Ü	€	║	╩	┌	Ω	
B			+	;	K	[	k	{	ï	¢	½	╗	╦	✓	δ	
C			,	<	L	\	l	¦	î	£	¼	╝	╠	☑		³
D			-	=	M	]	m	}	ì	¥	¡	TEL	═		ø	²
E			.	>	N	^	n	~	Ä	Pts	«	FAX	╬			
F			/	?	O	_	o	DEL	Å	*ƒ*	»	┐		☐		

Note

" ■ " indicates that a space is printed.

" ■ " indicates that the character will switch when the international character set is changed.

(4) Japan

	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0			SP	0	@	P	`	p	–		SP	ー	タ	ミ		
1			!	1	A	Q	a	q			。	ア	チ	ム		
2			”	2	B	R	b	r			「	イ	ツ	メ		
3			#	3	C	S	c	s			」	ウ	テ	モ		
4			$	4	D	T	d	t			、	エ	ト	ヤ		
5			%	5	E	U	e	u			・	オ	ナ	ユ		
6			&	6	F	V	f	v			ヲ	カ	ニ	ヨ		
7			’	7	G	W	g	w			ァ	キ	ヌ	ラ		
8			(	8	H	X	h	x			ィ	ク	ネ	リ		
9			)	9	I	Y	i	y			ゥ	ケ	ノ	ル		
A			*	:	J	Z	j	z			ェ	コ	ハ	レ		
B			+	;	K	[	k	{			ォ	サ	ヒ	ロ		
C			,	<	L	¥	l	|			ャ	シ	フ	ワ		
D			-	=	M	]	m	}			ュ	ス	ヘ	ン		
E			.	>	N	^	n	~			ョ	セ	ホ	゛		
F			/	?	O	_	o	DEL			ッ	ソ	マ	゜		

注意:

" ■ " indicates that a space is printed.

" ■ " indicates that the character will switch when the international character set is changed.

International character set table

Corresponding characters that switch in each language when the international character set is changed

n		23	24	40	5B	5C	5D	5E	60	7B	7C	7D	7E
0	United States (U.S.A)	#	$	@	[	\	]	^	`	{	¦	}	~
1	France	#	$	à	°	ç	§	^	`	é	ù	è	¨
2	Germany	#	$	§	Ä	Ö	Ü	^	`	ä	ö	ü	ß
3	Britain (U.K.)	£	$	@	[	\	]	^	`	{	¦	}	~
4	Denmark I	#	$	@	Æ	Ø	Å	^	`	æ	ø	å	~
5	Sweden	#	¤	É	Ä	Ö	Å	Ü	é	ä	ö	å	ü
6	Italy	#	$	@	°	\	é	^	ù	à	ò	è	ì
7	Spain I	Pt	$	@	¡	Ñ	¿	^	`	¨	ñ	}	~
8	Japan	#	$	@	[	¥	]	^	`	{	¦	}	~
9	Norway	#	¤	É	Æ	Ø	Å	Ü	é	æ	ø	å	ü
10	Denmark II	#	$	É	Æ	Ø	Å	Ü	é	æ	ø	å	ü
11	Spain II	#	$	á	¡	Ñ	¿	é	`	í	ñ	ó	ú
12	Latin America	#	$	á	¡	Ñ	¿	é	ü	í	ñ	ó	ú
13	South Korea	#	$	@	[	₩	]	^	`	{	¦	}	~
64	Legal	#	$	§	°	´	"	¶	`	©	®	†	TM

Appendix C: Troubleshooting

If printing does not begin (main most frequent cause)

(1) The communication settings are incorrect.

(2) The command mode is not in the P-touch Template mode.

(3) The conditions for the print start trigger are not met.

The following three types of print start triggers exists, but the current selection is incorrect.

- When the specified text string is received
- When all objects are filled
- When the specified number of characters is received

If the settings described above are incorrect, use the P-touch Template Settings tool to specify the settings.

If a template linked to a database is not printed

(1) A delimiter character must be entered after the search text.

(2) The print start trigger must be “when the specified text string is received”.

Example:

To search for the key code (333333333333) for “Chocolate”, then print:

	A	B	C
1	Key code	Product	Price
2	111111111111	Cake	1.5
3	222222222222	Candy	1
4	333333333333	Chocolate	2.5
5	444444444444	Cookie	1.5
6	555555555555	Pie	4.5

333333333333 09h ^ F F

Appendix D: Introducing the Brother Developer Center

Useful information for developers, such as applications, tools, SDKs as well as FAQs, are provided in the Brother Developer Center.

http://www.brother.com/product/dev/index.htm