# P-touch Template Manual

Model Name: MW-145BT/MW-260/PJ-623/PJ-663

Created by: Brother Industries, Ltd.

**Machine Model:** MW-145BT/MW-260/PJ-623/PJ-663

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# Contents

## Introduction

This material provides the necessary information for directly controlling the transferred templates in MW-145BT/MW-260/PJ-623/PJ-663.

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.

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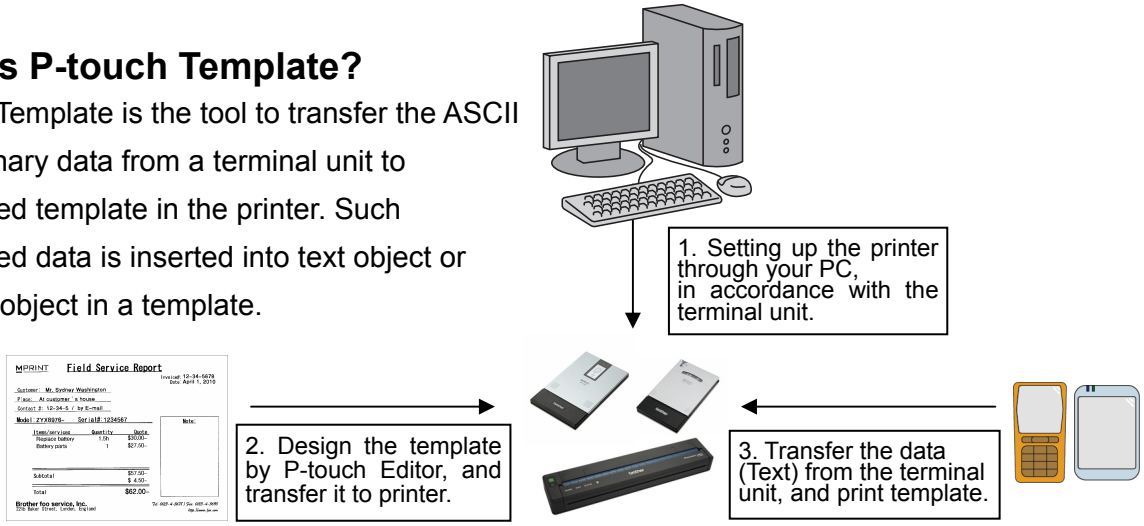
## What is P-touch Template?

P-touch Template is the tool to transfer the ASCII text & binary data from a terminal unit to transferred template in the printer. Such transferred data is inserted into text object or barcode object in a template.




It helps the user develop the printing system which connects directly from the terminal unit. The types of terminal unit are as below.

- Smartphone
- Handy terminal etc.

Notes:

*P-touch Template is not compatible with some terminal units.

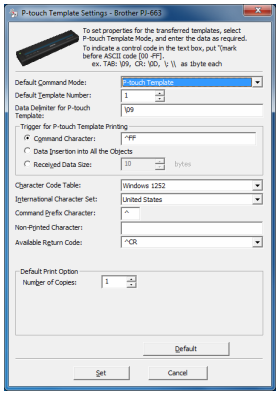
*Terminal unit should have an interface to transfer the data.

# How to use P-touch Template

1. Printer setting

   Set up the initial printer setting by P-touch Template settings tool, in accordance with the environment of host system or the terminal unit, which MW-145BT/MW-260/PJ-623/PJ-663 connect to.

   (Please refer to P-touch Template Settings Tool User's Guide in page 6.)



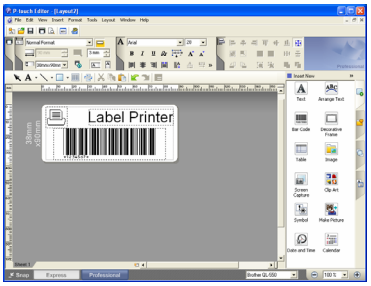
*Printer image in the screen may differ depending on your product model.

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

2. Design the template

   Design the transferred template by P-touch Editor

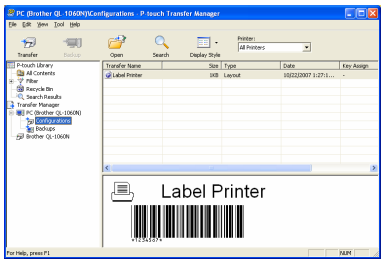
   (Please refer to P-touch Template Limitations in page 11.)




3. Transfer the templates

   Transfer the templates to the printer by P-touch transfer manager.

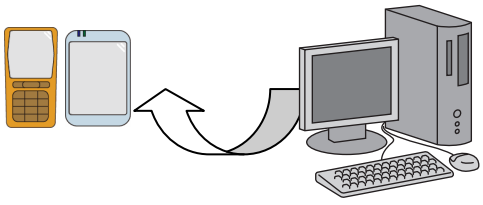
   (Please refer to MW-Series/PockeJet Software User's Guide.)




4. Program by P-touch template commands

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

   (Please refer to P-touch Template Command Reference.)

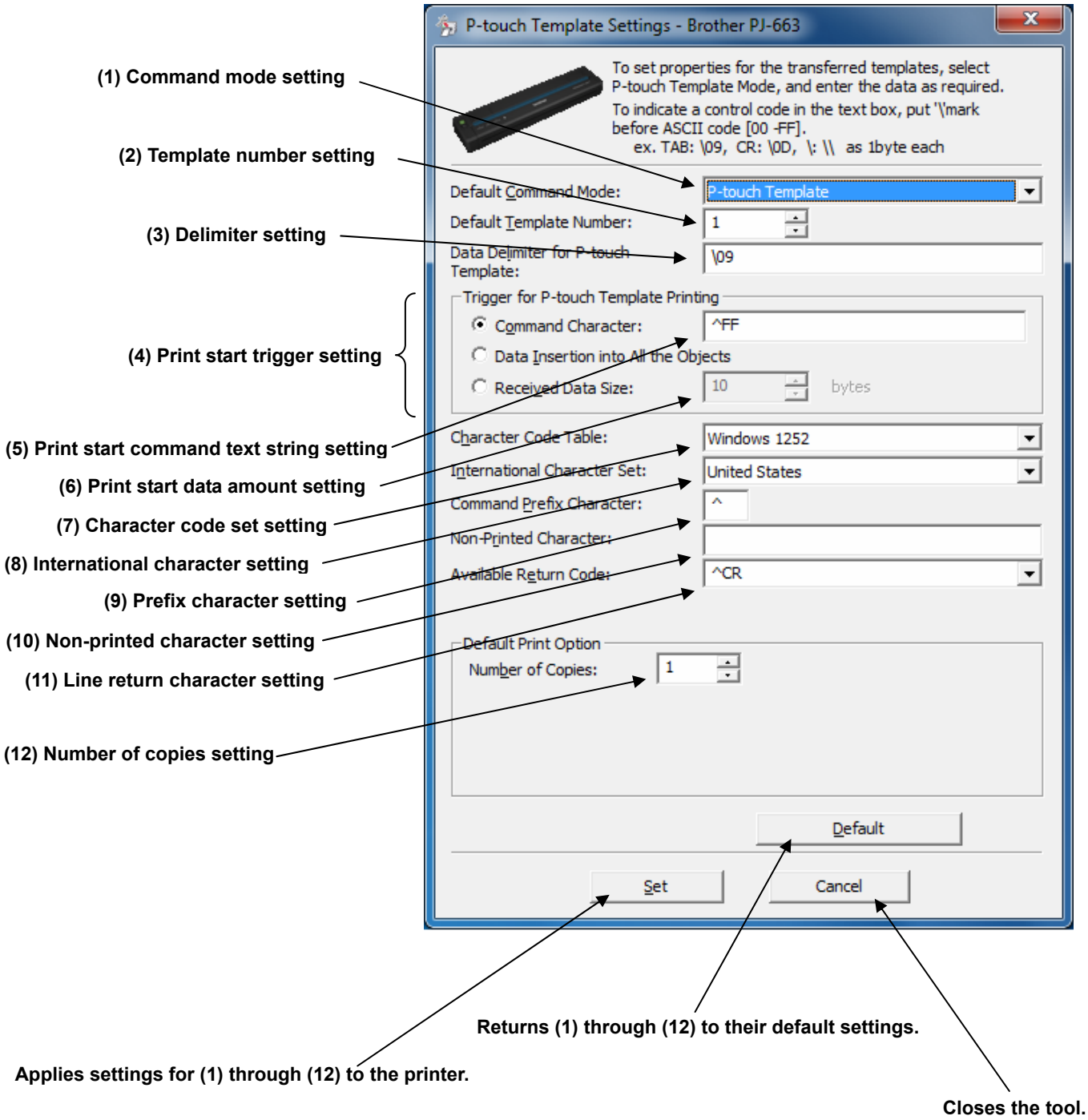


5. Connect the printer with the terminal unit and print slips etc.

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

# P-touch Template Settings Tool User's Guide

*Printer image in the screen may differ depending on your product model.



**(1) Command mode setting**

· P-touch Template mode

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

· ESC/P mode

· Raster mode

**(2) Template number setting**

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

However if any number of template not be transferred to the printer, then it cannot be specified such number of template.

**(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. Between1 to 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 codes. For character code tables, refer to the character code tables in the P-touch Template Command.

· Windows1252

· Windows1250

· Brother standard

**(8) International character setting**

Select one of the following as the character set of the country.

· USA

· France

· Germany

· Britain

· Denmark

· Sweden

· Italy

· Spain

· Japan

· Norway

· Denmark II

· Spain II

· Latin America

· Korea

· Legal

The following 12 codes are switched depending on the country selected from those mentioned 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 the P-touch Template Command.

**(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 return character setting**

The line return 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 return codes can be selected, or 1 to 20 characters can be specified as the line return code.

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

**(12) Number of copies setting**

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

**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.

(MW-145BT)
C:\Documents and Settings\(user_account_name)\Application Data\Brother
\Printer Settings\Pts3532.ini

(MW-260)
C:\Documents and Settings\(user_account_name)\Application Data\Brother
\Printer Settings\Pts3432.ini

(PJ-623)
C:\Documents and Settings\(user_account_name)\Application Data\Brother
\Printer Settings\pts3236.ini

(PJ-663)
C:\Documents and Settings\(user_account_name)\Application Data\Brother
\Printer Settings\pts3436.ini

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

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]

Return control code: [\0D]

\: [\\]

## P-touch Template Limitations

■ Relating to text objects

(Please also refer to Relationship between the P-touch Editor setting and the printer image in page 20.)

Fonts specified in P-touch Editor are converted to Helsinki, Letter Gothic or Brussels, depending on the font shape, when the data is sent to the printer.

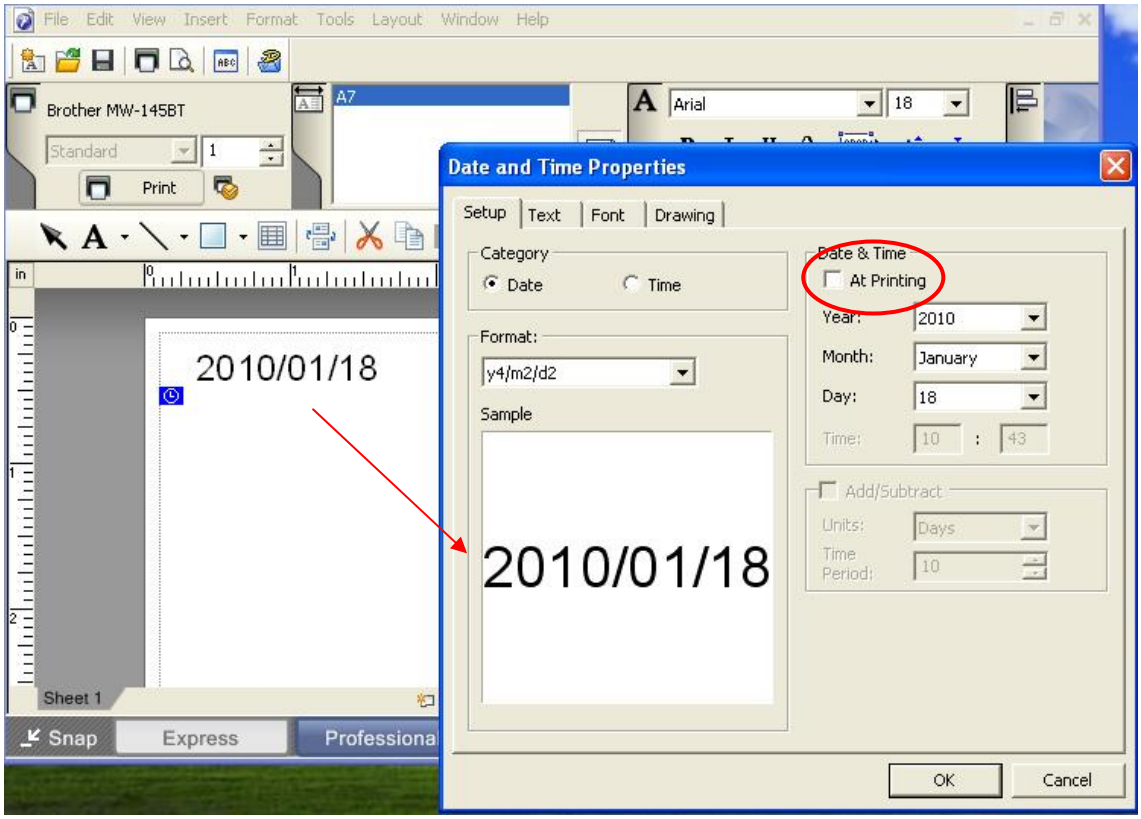
(The font is converted according to the following rules: fixed pitch: Letter Gothic; serif: Brussels; sans serif: Helsinki. With symbol fonts, symbols are converted to text objects if text input mode has been entered, and the font is converted to one of the three described above. If the text input mode has been exited, symbols are converted to image objects and the selected font is not converted.)

· 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.

· If “At Printing” is selected, a time stamp specified in P-touch Editor is not printed. If “At Printing” is not selected, the time stamp is printed with the date and time that the data was created in P-touch Editor.

“At Printing” setting



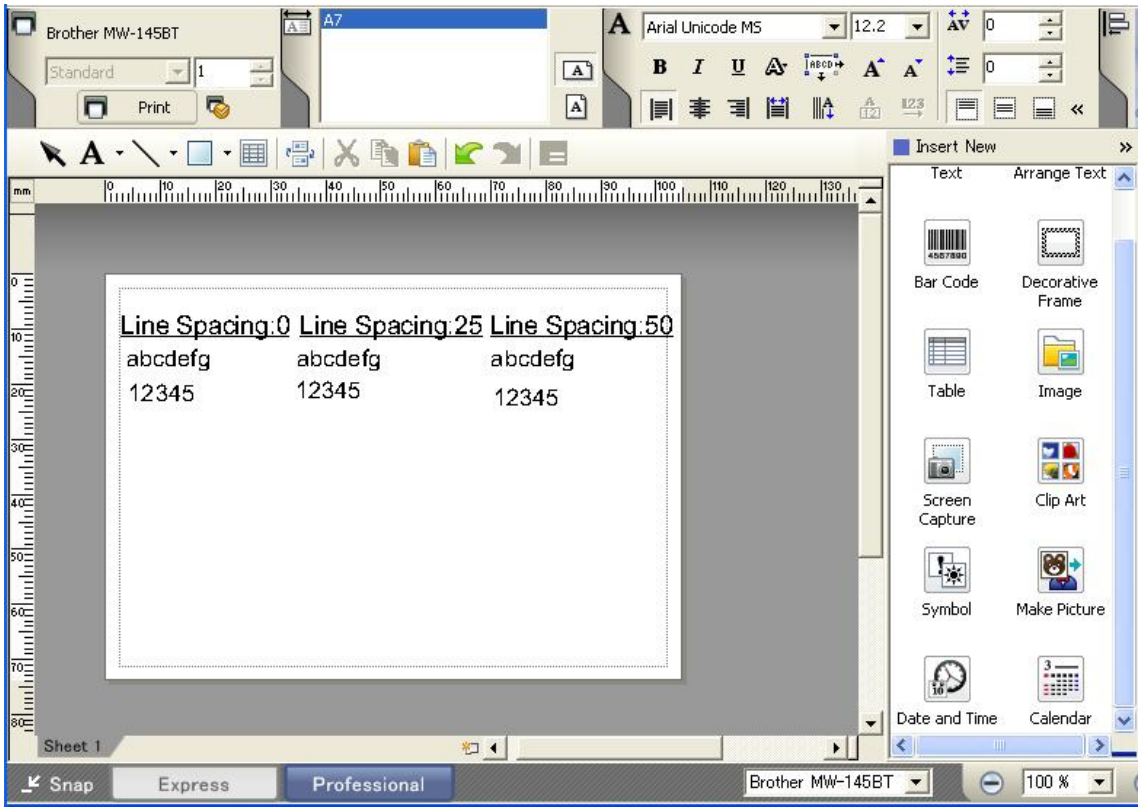

(To cancel the “At Printing” setting for a date/time in P-touch Editor, display the properties for the Date and Time object, and then clear the “At Printing” check box.)

· Horizontal alignment settings (“Justify” or “Equal Length”) specified in P-touch Editor are changed to the left alignment setting.

· The setting for line spacing with a line return 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 (about 21 mm) 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




・Numbering settings specified in P-touch Editor are invalid.
(The text specified as the default numbering text is printed with P-touch Template.)

Default numbering


For the numbering text specified in P-touch Editor and shown above, “100” is the default; therefore, “No. 100” will be printed when printing with the printer.

· Character styles specified in P-touch Editor are all made the same style within an object.
· If the “Long Text” setting is selected below “Text Layout” in P-touch Editor, the vertical alignment setting is normally set for top alignment.
· 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 paper with a

fixed size or fixed length is specified in P-touch Editor, or that “Automatic Length” be selected when an automatic media length is specified.)

1. Shrink to Fit: The text object size is fixed, and the text size is changed depending on the text length.

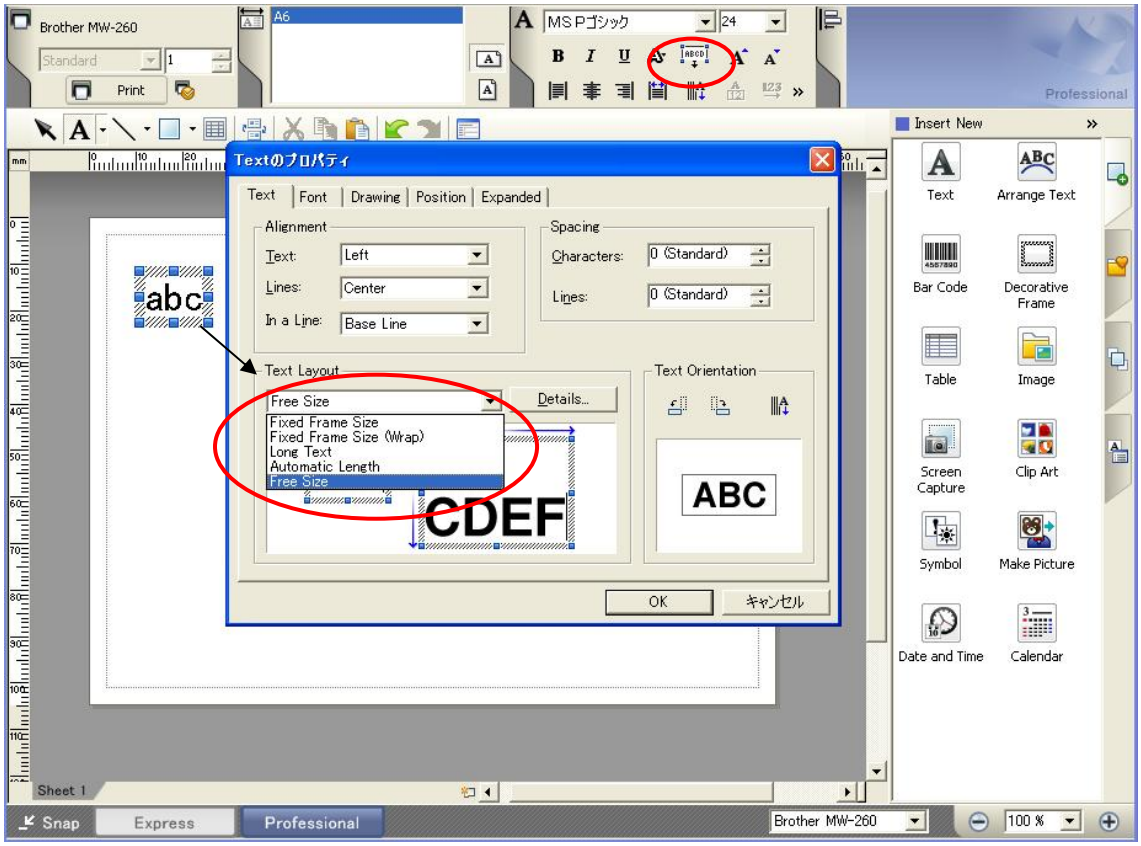
2. Clip Text: The text object size is fixed, and the text size is fixed. If the text is too long, the text is not printed.

3. 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.

4. 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.

5. 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.

■ Relating to bar codes

● Bar codes

· When trying to transfer a template containing a bar code that is not compatible with the printer, an error will occur while transferring and the template cannot be transferred to the printer.

The following bar codes are compatible with the printer.

1D bar codes

CODE39, I-2/5,UPC-A, UPC-E, EAN-13, EAN-8, CODE128, GS1-128 (UCC/EAN-128), CODABAR

2D bar codes

PDF417, QR Code, Micro QR Code, DataMatrix

· If data containing characters incompatible with the protocol are fed into the bar code object, that bar code object is not printed.

· The bar code size may differ from that in the print result with P-touch Editor.

· Since CODE128/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 bar code in a template created with P-touch Editor causes an extremely long bar code, the bar code may not be fully printed.

· Do not insert line returns immediately before or immediately after the bar code data. Otherwise, it will be considered as part of the bar code data. In that case, the bar code will be created containing the line return code, or the bar code will not be printed since data incompatible with the bar code protocol is entered.

· A delimiter or print start text string should be entered immediately after the bar code data.

●1D bar codes

· The ratio setting for 1D bar codes specified in P-touch Editor is invalid. Normally, this is fixed at 3:1.

· A 1D bar code taller than the maximum printing width is converted as follows;

MW-260/PJ-623/PJ-663 : taller than 96 mm → 96 mm

MW-145BT : taller than 69 mm → 69 mm

· The number of characters that can be entered for each protocol is shown below.

CODE39: 1 to 50 characters (not including “*” on both sides)

I-2/5: 3 to 64 characters

EAN-8: 7 characters

EAN-13: 12 characters

UPC-A: 11 characters

UPC-E: 6 characters

CODABAR: 4 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

When trying to transfer data exceeding the ranges describe above, an error will occur while transferring. If the data that is fed does not meet the minimum limit, the bar code is not printed. If the data exceeds the maximum limit, only the data to the maximum limit is applied. However, if the data exceeds 64 characters, the bar code is not printed.

· If a template is created in P-touch Editor with an extremely low bar code bar height, the bars may not be printed.

●CODE39

· When feeding data, the asterisks (*) at the beginning and end of the data are skipped.

●I-2/5

· The bearer bar setting specified in P-touch Editor is invalid.

●GS1-128 (UCC/EAN-128)/CODE128

· If the bar code width has been set to “Minimum” in P-touch Editor, the characters below the bar code are not printed, even if the “Show Characters” setting has been selected.

●QR Code

· The version setting for a QR Code specified in P-touch Editor is invalid. The version setting must be turned off.

· The joining setting specified in P-touch Editor is 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 bar code may change when it is printed with P-touch Template.

· The width for PDF417 specified in P-touch Editor may change from “Minimum” to “Small”.

· The joining setting specified in P-touch Editor is invalid.

● DataMatrix

· The joining setting specified in P-touch Editor is invalid.

· Macro settings specified in P-touch Editor are invalid.

■ 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.)

■ Others

· A maximum of 99 templates can be transferred. The transfer cannot be completed if the amount of data being transferred exceeds the followings;

MW-145BT/MW-260 : 512KB

PJ-623/PJ-663 : 5,888KB

· A single template can contain at the maximum the following numbers of objects. When trying to transfer more objects than the maximum, an error will occur and the transfer cannot be completed.

MW-145BT/MW-260 : 50 objects

PJ-623/PJ-663 : 200 objects

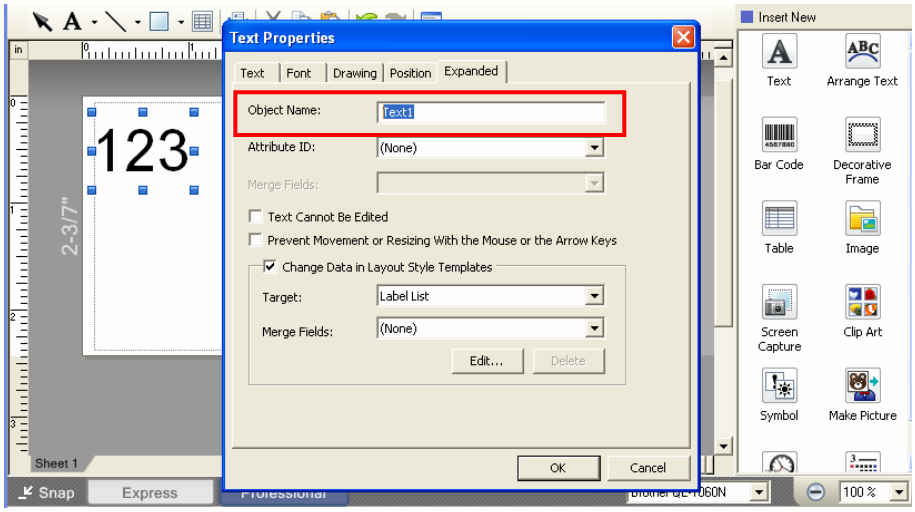
· A single template can contain a total of 1000 lines of text. If it exceeds this limit, an error will occur during printing.

· The line return codes (0D0A, 0D and 0A) in print data are read, then discarded. However, when specified as special data, such as delimiters or print start text strings or line return 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 bar codes, then 2D bar codes. 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 bar code object, and then specify the name in the “Object Name” box on the Expanded tab.)

Specifying the object name



· 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.
· Printing begins when the print start text string is received, even if the print start trigger is “when all objects are filled”.
· After printing from P-touch Editor, the command mode changes to ESC/P mode or raster mode (only raster mode for MW-145BT/MW-260). In order to print a template, select the P-touch Template mode in the Printer Settings tool or, if the previous mode in the Printer Settings tool was the P-touch Template mode, turn the printer off, then on again to enter P-touch Template mode.

# Precautions

**Static commands**

Static commands are valid only in the following modes;

| | | |
|---|---|---|
| MW-145BT/MW-260 | : | raster mode |
| PJ-623/PJ-663 | : | maintenance mode |

Example: To statically change the template selection number to 10

1) Switch to maintenance mode.
   ESC i a 01h (1Bh 69h 61h 01h)
2) Select template number 10.
   ESC i X n 2 01h 00h 0Ah
   (1Bh 69h 58h 6Eh 32h 01h 00h 0Ah)
3) Dynamically enter the P-touch Template mode.
   ESC i a 03h (1Bh 69h 61h 03h)

**Notes for using Bluetooth (only MW-145BT/MW-260/PJ-663)**

When you are connecting the printer via Bluetooth, the printer may not start to receive the data immediately after the port is opened. We advise to wait for an interval of 500 msec before sending the print data to the printer.

If you normally close and re-open the Bluetooth port between prints, we would again advise to leave 500 msec between the port being closed and re-opened.

Also, once you have sent the print data, and the printing process has begun, do not close the port. Please ensure 32 bytes of data has been received by the printer, and then close the port.

**Relationship between the P-touch Editor setting and the printer image**

| P-touch Editor setting Text Option (Text Layout) | | | Printer image | | | | Printed image |
|---|---|---|---|---|---|---|---|
| | | | Width | | Height | | |
| Text Layout | Details-Options | Wrap Text | Frame Size | Text Size | Frame Size | Text Size | |
| Fixed Frame Size | Clip Text | | Fix<br>If the text is too long, the overflow text is not printed. | Fix | Fix<br>If the text is too long, the overflow text is not printed. | Fix | 1 (See below) |
| | Shrink to Fit | | Fix<br>If the text is too long, even with the minimum text size, the overflow text is printed outside the frame. | Auto<br>The text is automatically maximized to fit the frame size. | Fix<br>If the text is too long, even with the minimum text size, the overflow text is printed outside the frame. | Auto<br>The text is automatically maximized to fit the frame size. | 2 (See below) |
| | Clip Text | check | | | | | |
| | Shrink to Fit | check | | | | | |
| Fixed Frame Size (Wrap) | | | | | | | |
| Long Text | | | Fix<br>The overflow text is automatically sent to the new line. | Fix | Even the overflow text is printed outside the frame. | Fix | 3 (See below) |
| Automatic Length | | | Even the overflow text is printed outside the frame. | Fix | Fix<br>If the text is too long, even with the minimum text size, the overflow text is printed outside the frame. | Auto<br>The text is automatically maximized to fit the frame size. | 4 (See below) |
| Free Size | | | Even the overflow text is printed outside the frame. | Fix | Even the overflow text is printed outside the frame. | Fix | 5 (See below) |

Printed image

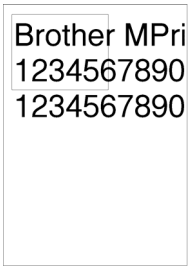
1


2


3


4


5



**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, select the [Expanded] tab and check “Text Cannot Be Edited”.
  - · When the [Expanded] tab is not seen in the [Text Properties] dialog, click [Tools] – [Options] – [General], and check [Display Expanded Tabs of Object Properties] in the [Others] box.
- Specify the Text Options (Text Layout) settings so that the text size is fixed.

# Appendix: Specifications

BROTHER MW-145BT/MW-260/PJ-623/PJ-663 P-touch Template specifications

| | | | | |
|---|---|---|---|---|
| Printing | Printing method | | [MW-145BT/MW-260]<br>Raster printing (PTCBP mode)<br>ESC/P printing<br>P-touch Template printing | [PJ-623/PJ-663]<br>Raster printing (PTCBP mode)<br>ESC/P printing<br>P-touch Template printing<br>Maintenance printing |
| | Resolution (dpi) | | 300 dpi × 300 dpi | |
| | Text | Font | Bitmap fonts: Helsinki, Brussels, Letter Gothic Bold<br>Outline fonts: Helsinki, Brussels, Letter Gothic | |
| | | Size (dots) | Bitmap fonts: 24 x 24, 32 x 32 (dots)<br>Outline fonts: 33 - 400 dot (22sizes) | |
| | | Character style | None, Bold, Italics, Outline, Shadow, Shadow + Outline | |
| | | Horizontal alignment | Left, Center, Right | |
| | | Rotate | Portrait, landscape | |
| | Bar code | Protocols *1 | CODE39, ITF (I-2/5), EAN-13, EAN-8, UPC-A, UPC-E, CODABAR, CODE-128, GS1-128 (UCC/EAN-128), QR Code (model 1, model 2, micro QR), PDF417 (Standard, Truncate), DataMatrix (ECC200 Square, ECC200 Rectangular) | |
| | | Width | Large, Medium, Small, Extra Small | |

*1 BarStar Pro Encode Library (DataMatrix, MaxiCode, PDF417, RSS) Copyright © 2007 AINIX Corporation.
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QR Code is registered trademark of DENSO WAVE INCORPORATED in JAPAN and other countries.
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# P-touch Template command reference

*Version 4.0.0*

Model Name:  Mobile thermal printer followings with Western language model

MW-260

MW-145BT

Created by: Brother Industries, Ltd

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## Contents

## Control Code List

Commands that can be set or obtained in P-touch Template mode

| | | | |
|---|---|---|---|
| ^PT | 5E 50 54 | Dynamic | Select print start trigger |
| ^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 |
| ^LS | 5E 4C 53 | Dynamic | Specify line spacing with line return |
| ^CC | 5E 43 43 | Dynamic | Change prefix character |
| ^RC | 5E 52 43 | Dynamic | Specify line return command text string |
| ^CN | 5E 43 4E | Dynamic | Specify number of copies |
| ^II | 5E 49 49 | | Initialize |
| ^SR | 5E 53 52 | | Status request |
| ^VR | 5E 56 52 | | Retrieve version Information |
| ^CR | 5E 43 52 | | Line return in object |
| ^OS | 5E 4F 53 | | Specify object selection (object number) |
| ^ON | 5E 4F 4E | | Specify object selection (object name) |
| ^DI | 5E 44 49 | | Direct object insertion |
| ESC ia | 1B 69 61 | Dynamic | Specify command mode |

* The commands mentioned above must be used in P-touch Template mode. They cannot be used in raster mode or ESC/P mode. (except ESC ia、ESC i!R)

Commands that can be set or obtained in raster mode

| | | | |
|---|---|---|---|
| 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 character text strings |
| ESC iXi2 | 1B 69 58 69 32 | Static | Specify command mode |
| ESC iXn2 | 1B 69 58 6E 32 | Static | Select template |
| ESC iXf2 | 1B 69 58 66 32 | Static | Change prefix character |
| ESC iXm2 | 1B 69 58 6D 32 | Static | Select character code set |
| ESC iXj2 | 1B 69 58 6A 32 | Static | Specify international character set |
| ESC iXR2 | 1B 69 58 52 32 | Static | Specify line return command text string |
| ESC iXC2 | 1B 69 58 43 32 | Static | Specify number of copies |
| ESC iXT1 | 1B 69 58 54 31 | | Retrieve select print start trigger items |
| 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 character text strings |
| ESC iXi1 | 1B 69 58 69 31 | | Retrieve command mode |
| ESC iXn1 | 1B 69 58 6E 31 | | Retrieve template selection number |
| 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 setting character |
| ESC iXR1 | 1B 69 58 52 31 | | Retrieve line return command setting text string |
| ESC iXC1 | 1B 69 58 43 31 | | Retrieve number of copies |

* The commands mentioned above must be used in raster mode.
They cannot be used in ESC/P mode or P-touch Template mode.

## About P-touch Template

Data can be sent from a host (such as measuring instruments, scales and bar code readers) and printed in a template previously transferred to the machine from P-touch Editor.

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

## Static and dynamic commands

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

With dynamic commands, items specified with a setting command are temporarily saved and applied until the machine is turned off.

## If printing does not begin (main most frequent causes)

1) The command mode is not in the P-touch Template mode.
2) The conditions for the print start trigger are not met.

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

i) When the specified text string is received
ii) When all objects are filled
iii)When the specified number of characters is received

If the settings described above are incorrect, use the machine setting tool to specify the settings.

## Control Command Details

| ^PT | Specify print start trigger selection |
|---|---|

[ASCII] ^ P T n

[Decimal] 94 80 84 nd

[Hexadecimal] 5E 50 54 nh

[Parameters] 1≤n≤3

[Description]

· Selects the print start trigger type.

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 when 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)

| ^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 when an attempt is made to specify more than 20 characters

[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 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 when an attempt is made to specify more than 20 characters

[Example]

· To change the delimiter to “,” (0x2C):

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

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

| ^TS | Specify template selection |
|---|---|

[ASCII] ^ T S n1 n2 n3

[Decimal] 94 84 83 nd1 nd2 nd3

[Hexadecimal] 5E 54 53 nh1 nh2 nh3

[Parameters] n1:0 (Fixed)

0≤n2≤9

0≤n3≤9

[Description]

· Specifies the template selected from the machine as a number.

(n2*10)+n3: Template number (1 to 99)

· The default selection number is 1.

· This command is a dynamic command.

[Remarks]

· The template numbers that can be set are between 1 and 99. This is invalid when an attempt is made to specify a value other than these or when the number that is specified is of a template not transferred to the machine.

[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)

| ^LS Specify line spacing with line return |
|---|

[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 return 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 return 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 is invalid when an attempt is made to specify a value other than these.

1 dot = 1/300 inch

1 dot ≈ 0.085 mm

[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 “_”, send the command shown below.

^ C C 5Fh (5Eh 43h 43h 5Fh)

(“_”)

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

| ^RC Specify line return 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 return 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 return command is “^CR”.

· This command is a dynamic command.

[Remarks]

· Invalid when an attempt is made to specify more than 20 characters

[Example]

· To change the text string for the line return 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 machine.

[Example]

· To change the number of copies to 100 characters: 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)

| ^II Initialize |
|---|

[ASCII] ^ I I

[Decimal] 94 73 73

[Hexadecimal] 5E 49 49

[Parameters] None

[Description]

· Reverts all dynamic settings to the machine settings.

1) Print start trigger selections
2) Print start command text strings
3) Print start received character count
4) Delimiter
5) Template selection number
6) Prefix character
7) The text string for the line return command.

| ^S R Status request |
|---|

[ASCII] ^ S R

[Decimal] 94 83 82

[Hexadecimal] 5E 53 52

[Parameters] None

[Description]

· The printer status is returned.

The printer status consists of 32 bytes.

| Number | Offset | Size | Name | Value/Reference |
|---|---|---|---|---|
| 1 | 0 | 1 | Print head mark | Fixed at “80 Hex” |
| 2 | 1 | 1 | Size | Fixed at “20 Hex” |
| 3 | 2 | 1 | “Brother” code | Fixed at “’B’ Char (42 Hex)” |
| 4 | 3 | 1 | Series code | Fixed at “’2’ Char (32 Hex)” |
| 5 | 4 | 1 | Model code (MW-260) | Fixed at “’4’ Char (34 Hex)” |
| | | | Model code (MW-145BT) | Fixed at “’5’ Char (35 Hex)” |
| 6 | 5 | 1 | Country code | Fixed at “’0’ Char (30 Hex)” |
| 7 | 6 | 1 | Reserved | Fixed at “00 Hex” |
| 8 | 7 | 1 | Reserved | Fixed at “00 Hex” |
| 9 | 8 | 1 | Error information 1 | Refer to the following table. |
| 10 | 9 | 1 | Error information 2 | Refer to the following table. |
| 11 | 10 | 1 | Media width | Refer to the following table. |
| 12 | 11 | 1 | Media type | Refer to the following table. |
| 13 | 12 | 1 | Number of colors | Fixed at “00 Hex” |
| 14 | 13 | 1 | Font | Fixed at “00 Hex” |
| 15 | 14 | 1 | Japanese font | Fixed at “00 Hex” |
| 16 | 15 | 1 | Mode | Fixed at “00 Hex” |
| 17 | 16 | 1 | Density | Fixed at “00 Hex” |
| 18 | 17 | 1 | Media length (lower order bytes) | Refer to the following table. |
| 19 | 18 | 1 | Status type | Refer to the following table. |
| 20 | 19 | 1 | Phase type | Fixed at “00 Hex” |
| 21 | 20 | 1 | Higher order bytes of phase number | Fixed at “00 Hex” |
| 22 | 21 | 1 | Lower order bytes of phase number | Fixed at “00 Hex” |
| 23 | 22 | 1 | Notification number | Not used |
| 24 | 23 | 1 | Number of bytes in the expanded area | Fixed at “00 Hex” |
| 25 | 24 | 8 | Reserved | Fixed at “00 Hex” |

Error information 1

| Flag | Mask | Definition |
|---|---|---|
| Bit 0 | 0x01 | "No media” error |
| Bit 1 | 0x02 | “End of media” error |
| Bit 2 | 0x04 | “Jam” error |
| Bit 3 | 0x08 | Battery empty |
| Bit 4 | 0x10 | Machine in use |
| Bit 5 | 0x20 | Not used |
| Bit 6 | 0x40 | High-voltage adapter |
| Bit 7 | 0x80 | Not used |

Error information 2

| Flag | Mask | Definition |
|---|---|---|
| Bit 0 | 0x01 | “Replace the media.” error |
| Bit 1 | 0x02 | “Expansion buffer is full.” error |
| Bit 2 | 0x04 | Transmission error |
| Bit 3 | 0x08 | Image error occurred |
| Bit 4 | 0x10 | Not used |
| Bit 5 | 0x20 | Overheat error |
| Bit 6 | 0x40 | Leading edge detection error |
| Bit 7 | 0x80 | System error |

Media width

| Media width | Value | Remarks |
|---|---|---|
| None | 00 Hex | No media |
| MW-260 | 69 Hex | |
| MW-145BT | 4A Hex | |

Media type (MW-260)

| Media type | Value | Remarks |
|---|---|---|
| None | 00 Hex | No media |
| Regular thermal paper1 | 11 Hex | |
| Spare1<br>Perforated<br>Spare2<br>Copy paper1<br>Spare3<br>Wrong paper cassette orientation | 12 Hex<br>13 Hex<br>14 Hex<br>15 Hex<br>16 Hex<br>0F Hex | |

Media type (MW-145BT)

| Media type | Value | Remarks |
|---|---|---|
| None | 00 Hex | No media |
| Regular thermal paper1 | 01 Hex | |
| Spare1<br>With adhesive<br>Spare2<br>Copy paper1<br>Spare3<br>Wrong paper cassette orientation | 02 Hex<br>03 Hex<br>09 Hex<br>08Hex<br>0A Hex<br>0F Hex | |

Media length (lower order bytes)

| Media length | Value | Remarks |
|---|---|---|
| None | 00 Hex | No media |
| MW-260 | 94 Hex | |
| MW-145BT | 69 Hex | |

Status type

| Status type | Value |
|---|---|
| Reply to status request | 00 Hex |
| Printing completed | 01 Hex |
| Error occurred | 02 Hex |
| Turned off<br>Notification<br>Phase change | 04 Hex<br>05 Hex<br>06 Hex |

| ^V R | Retrieve version Information |
|---|---|

[ASCII] ^ V R

[Decimal] 94 86 82

[Hexadecimal] 5E 56 52

[Parameters] None

[Description]

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

| ^CR | Line return in object |
|---|---|

[ASCII] ^ C R

[Decimal] 94 67 82

[Hexadecimal] 5E 43 52

[Parameters] None

[Description]

· Adds a return to the next line in the text object.

[Example]

· To print three lines:

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 | Specify object selection (object number) |
|---|---|

[ASCII] ^ O S n1 n2

[Decimal] 94 79 83 nd1 nd2

[Hexadecimal] 5E 4F 53 nh1 nh2

[Parameters] 0≤n1≤5

0≤n2≤9

[Description]

· Selects an object by its object number.

(n1*10)+n2: Object number (1 to 50)

[Remarks]

· The object number can be set between 1 and 50. This is invalid when an attempt is made to specify a value other than these.

· Use this command to insert data from an intermediary object.

[Example]

· To select the 33rd object:

^ O S 3 3 (5Eh 4Fh 53h 33h 33h)

| ^ON | Specify object selection (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 is specified, the command is invalid. In addition, the command is invalid if no text is 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 Direct object insertion

[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. (If even a print command or delimiter is within the specified number of characters, they are treated as data.)

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

data: Text string

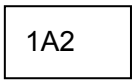
[Example]

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

^ D I 03h 00h 1 A 2 A

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

Print result




## ESC ia Specify command mode

[ASCII] ESC i a n

[Decimal] 27 105 97 nd

[Hexadecimal] 1B 69 61 nh

[Parameters] nh=00h 01h 03h 30h 31h 33h

[Description]

· Switches the mode.

nh=00h or 30h: ESC/P mode (default)

nh=01h or 31h: Raster mode

nh=03h or 33h: P-touch Template 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 | Specify print start trigger selection |
|---|---|

[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 print start trigger type.

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 when 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 when an attempt is made to specify more than 20 characters

[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 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] ESCi 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 when an attempt is made to specify more than 20 characters

[Example]

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

Since the text string contains one character, nh1=01h and nh2=00h and, 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 character 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 character 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 when an attempt is made to specify more than 20 characters

[Example]

· To specify the Non-Printed character text string as “ABCD”:

Since the text string contains four characters, nh1=05h and nh2=00h, and then 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 iXi2Specify 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 |

[Description]

· Switches the mode.

nh3=00h: ESC/P mode (default)

nh3=01h: Raster mode

nh3=03h: P-touch Template mode

· This command is a static command.

[Remarks]

Invalid when the specified value is any other than those that can be set

| ESC iXn2 | Specify template selection |
|---|---|
| [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≤63h |

[Description]

· Specify the template selected from the machine as a number.
  n3: Template number (1 to 99)

· The default selection number is 1.

· This command is a static command.

[Remarks]

· The template numbers that can be set are between 1 and 99. This is invalid when an attempt is made to specify a value other than these or when the number that is specified is of a template not transferred to the machine.

[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 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) |
| | nh3:00h 01h 02h |

[Description]

· Selects the character code set. (For details on the character code sets, refer to the character code tables.)

nh3 = 00h : Brother standard

nh3 = 01h : Windows1250 Eastern Europe

nh3 = 02h : Windows1252 Western Europe

· Invalid if nh3 is set to a value other than 00h through 02h

· This command is a static command.

[Example]

· When setting 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 | Specify 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 for the country, and switches some character codes of the code table with the value for nh3.

nh3=00h: USA

nh3=01h: France

nh3=02h: Germany

nh3=03h: Britain

nh3=04h: Denmark

nh3=05h: Sweden

nh3=06h: Italy

nh3=07h: Spain

nh3=08h: Japan

nh3=09h: Norway

nh3=0Ah: Denmark II

nh3=0Bh: Spain II

nh3=0Ch: Latin America

nh3=0Dh: Korea

nh3=40h: Legal

· The following are the 12 switching codes.

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.)

· The default setting is nh3=00h (USA) for overseas and nh3=08h (Japan) in Japan.

· This command is a static command.

[Example]

· To change the international character setting to that for Japan:

ESC i X j 2 01h 00h 08h

(1Bh 69h 58h 6Ah 32h 01h 00h 08h)

| ESC iXR2 | Specify line return 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 return 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 return command is “^CR”.

· This command is a static command.

[Remarks]

· Invalid when an attempt is made to specify more than 20 characters

[Example]

· To change the text string for the print start 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 sheets: 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 iXT1 | Retrieve select print start trigger items |
|---|---|
| [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 machine is retrieved. When the setting is “When the specified text string is received”:

ESC i X T 1 00h 00h

(1Bh 69h 58h 54h 31h 00h 00h)

01h 00h 00h is returned from the machine.

| 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 machine. (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”:

If the command ESC i X P 1 00h 00h (1Bh 69h 58h 50h 31h 00h 00h) is sent,

05h 00h S T A R T (05h 00h 53h 54h 41h 52h 54h) is returned from the machine.

| 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 to start printing.

· 4-byte data is returned from the machine.

[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:

If the command ESC i X r 1 00h 00h (1Bh 69h 58h 72h 31h 00h 00h) is sent to the machine, 02h 00h F4h 01h is returned from the machine. 244 (F4h) + (1 (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 machine. (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):

The command ESC i X D 1 00h 00h (1Bh 69h 58h 44h 31h 00h 00h) is sent to the machine.

01h 00h , (01h 00h 2Ch) is returned from the machine.

| ESC iXa1 | Retrieve Non-Printed character 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 character text string.

· 2- to 22-byte data is returned from the machine. (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 character text string:

The following command is sent to the machine.

ESC i X a 1 01h 00h 01h

(1Bh 69h 58h 61h 31h 01h 00h 01h)

The following is returned from the machine.

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 machine.

[1]:01h (Fixed)

[2]:00h (Fixed)

[3]: Setting

00h: ESC/P mode

01h: Raster mode

03h: P-touch Template mode

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

[Example]

When the setting is for raster mode:

ESC i X i 1 00h 00h

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

The following is returned from the machine.

01h 00h 01h

| ESC iXn1 | Retrieve template selection number |
|---|---|
| [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 machine.

· 3-byte data is returned from the machine.

[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:

If ESC i X n 1 00h 00h (1Bh 69h 58h 6Eh 31h 00h 00h) is sent to the machine, the following is returned from the machine.

01h 00h 63h

| ESC iXm1 | Retrieve character code set |
|---|---|

[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 the character code tables.)

· 3-byte data is returned from the machine.

[1]:01h (Fixed)

[2]:00h (Fixed)

[3]: Setting

00h : Brother standard

01h : Windows1250 Eastern Europe

02h : Windows1252 Western Europe

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

[Example]

· When the character code set is set to the Brother standard:

If ESC i X m 1 00h 00h (1Bh 69h 58h 6Dh 31h 00h 00h) is sent to the machine, the following is returned from the machine.

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 machine.

[1]:01h (Fixed)

[2]:00h (Fixed)

[3]: Setting

00h: USA

01h: France

02h: Germany

03h: Britain

04h: Denmark

05h: Sweden

06h: Italy

07h: Spain

08h: Japan

09h: Norway

0Ah: Denmark II

0Bh: Spain II

0Ch: Latin America

0Dh: Korea

40h: Legal

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

[Example]

· When the international character setting is set to that for Japan:

If ESC i X j 1 00h 00h (1Bh 69h 58h 6Ah 31h 00h 00h) is sent to the machine, the following is returned from the machine.

01h 00h 08h

| ESC iXf1 | Retrieve the 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 machine.

[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 "_":

If ESC i X f 1 00h 00h (1Bh 69h 58h 66h 31h 00h 00h) is sent to the machine, the following is returned from the machine.

01h 00h 5Fh

("_")

| ESC iXR1 | Retrieve line return 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 return command.

· 2- to 22-byte data is returned from the machine. (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 return command is specified as “0Dh 0Ah”:

If ESC i X R 1 00h 00h (1Bh 69h 58h 52h 31h 00h 00h) is sent to the machine, 02h 00h 0Dh 0Ah is returned from the machine.

| ESC iXC1 | Retrieve number of copies |
|---|---|

[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 machine.

[1]: 02h (Fixed)

[2]: 00h (Fixed)

[3, 4]: nh3 nh4 Settings

nh3+(nh4*256): Copy number of sheets.

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

[Example]

· When the number of copies is set to 500 sheets:

If the command ESC i X C 1 00h 00h (1Bh 69h 58h 43h 31h 00h 00h) is sent to the machine, 02h 00h F4h 01h is returned from the machine. 244 (F4h) + (1 (01h) * 256) = 500 characters

Character code

Character code table

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 | Đ | 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 | *f* | “ | £ | 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 | ^ | ~ | ¨ | ¸ | 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 |

“■” indicates that a space is printed.

“■” indicates that the character will change if the international character set is switched.

Character code table

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 | ‘ | ˅ | ± | Á | Ń | á | ń |
| 2 | | | " | 2 | B | R | b | r | , | ’ | ˘ | ˛ | Â | Ň | â | ň |
| 3 | | | # | 3 | C | S | c | s | Ľ | “ | 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 | ˙ |

“■” indicates that a space is printed.

“■” indicates that the character will change if the international character set is switched.

Character code table

Brother standard

| | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | A | B | C | D | E | F |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
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| 1 | | | ! | 1 | A | Q | a | q | ü | æ | í | ▒ | ┴ | | ß | ± |
| 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 | |
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| E | | | . | > | N | ^ | n | ~ | Ä | Pts | « | FAX | ╬ | | | |
| F | | | / | ? | O | _ | o | DEL | Å | *f* | » | ┐ | | □ | | |

“■” indicates that a space is printed.

“■” indicates that the character will change if the international character set is switched.

## International character set table

Compatible characters in each language when the international character set is switched

| n | | 23 | 24 | 40 | 5B | 5C | 5D | 5E | 60 | 7B | 7C | 7D | 7E |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 | United States | # | $ | @ | [ | \ | ] | ^ | ` | { | ¦ | } | ~ |
| 1 | France | # | $ | à | ° | ç | § | ^ | ` | é | ù | è | ¨ |
| 2 | Germany | # | $ | § | Ä | Ö | Ü | ^ | ` | ä | ö | ü | ß |
| 3 | Britain | £ | $ | @ | [ | \ | ] | ^ | ` | { | ¦ | } | ~ |
| 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 | Korea | # | $ | @ | [ | ₩ | ] | ^ | ` | { | ¦ | } | ~ |
| 64 | Legal | # | $ | § | ° | ´ | " | ¶ | ` | © | ® | † | ™ |