Output Format

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Rev 2.0   2002/9

Rev 3.0   2002/11

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Nippon Telesoft Co., Ltd.

Outline

This output Format explains the structure of output data to print out by the Braille printers (DOG-basic, DOG-pro, DOG-Multi) manufactured by the Nippon Telesoft Co., Ltd.

1. The structure of output data

・The output data consists of print configuration and print data, and print configuration should come to the top of the output data.

・As for print configuration, TBP command and ESC/P command are to be used. Using each command, describe the print configuration for Braille print and also Ink character print. Regarding The structure of print configuration. Please refer "2. The structure of print configuration".

・Following the print configuration, describe print data of each page divided into every 1 page. Regarding The structure of print data, please refer "3. The structure of print data".

・When need to print plural pages, please concatenate the data of each part with Form Feed (FF:0x0C). In case Finish of data to print (ETX:0x03) is used in each part, it will be printed incorrectly.

2. The structure of print configuration

・The description of print configuration is to be described at the top of the whole output data, and set in order of for Braille print then for Ink character print.

・At the top of the part of print configuration, the Start of print configuration (SOH n1 n2) must to be described always. Describe the command of Braille print for n1; describe the command of Ink character print for n2.

　　　*Example of print configuration (Binary-Data)

　　　　　　　　　　　　　　　　　Configure Braille print

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01 18 10　1B 1B 43 20 1B 1B 49 02 1B 1B 48 50 1B 1B 56 64 1B 1B 42 02 1B 1B 4D 02　1B 40 1C

　　　　Configure Ink character print　　Print data…

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2E 1B 50 1B 6C 0E 1C 53 00 13 1B 74 01　XX XX XX …

・TBP command is to be used for print configuration of Braille print. Please describe in the range specified by the Start of print configuration. Regarding TBP command, please refer to "TBP command reference" of another sheet.

・ESC/P command is to be used for print configuration of Ink character print. Please describe in the range specified by the Start of print configuration. Regarding ESC/P command, please refer to the command specification of another sheet.

* The print configuration has priority over the default setup by the slide switches on the printer.

3. The structure of print data.

・Divide the each page data of print data into Ink character data and Braille data. By concatenating Ink character data and Braille data for each 1 page, print data for 1 page is formed.

・Describe the Start of print data (STX 0 n) at the top of the Ink character data of each page data, and specify the line numbers for n in the page.

・Describe the Start of print data (STX m n) at the top of the Braille data of each page data. When Braille data: specify 1 for m, when graphic data: specify 2 for m. For n, specify the line numbers of the data in the page.

・Describe the Start of print data even if the output data is for the Braille data only.

・The number of character in the line data for Braille, should not exceed the value of setup number of cells. In case exceeded, the rest will be ignored.

・The line numbers in the page data, should not exceed the printable line numbers.

・At the end of the data, please describe the Form Feed (FF:0x0C) always or the Finish of data to print (ETX:0x03).

3.1. The structure of Ink character data

・Following the Start of print data (STX 0 n), describe the Ink character data. At the top of each line, describe the data value (numbers of byte) of the line with 2 bytes, and then describe the data for 1 line.

n1 n2　data・・・　CR LF

The formula for the data value is as below:

n1 + n2 * 256 = the data value　　　$0 \leqq n1, n2 \leqq 255$

・The end of the each line should be finished with CR LF always.

・The Ink character data should be described by the single byte Alphanumeric character (ANK code) or the double-byte Korean character (KS C 5601). To switch them each other, it is possible by the double-bite specification of ESC/P Command and the cancel command.

3.2. The structure of Braille data

・Following the Start of print data (STX m n), describe the Braille data. At the top of each line, describe the data value (number of byte) of the line with 1 byte, and then describe the data for 1 line.

・When specify graphics, specify m = 2 ,and at the top of each line, describe the data value (0x08 always) to describe the dot pattern for 8 bytes (64 dots). Please find the detailed explanation in the TBP command reference regarding graphics.

・The end of each line should be finished with CR LF always.

・Describe the Braille data with the Braille character code specified by TBP command

Structure figure of Output data (Braille and Ink character)

Outline	Output data	Explanation
	Strat of print configuration SOH n1 n2	Specify (both of) Braille and Ink character's print configuration.
print configuration	printconfiguratoin of Braille print(n1 bytes)	According to the TBP control code, describe Print configuration for Braille print.
	print configuration of Ink character print(n2 bytes)	According to the ESC/P control code, describe Print configuration for Ink character print.
	Strat of print data STX 0 n	Specify the line numbers (data value) of Ink character data for 1 page for n.
	Ink character data	Describe Ink character data for 1 page, as using Character code, CR LF, Graphic and specification of absolute position. At the top of each line, specify the line data value with 2 bytes.
print data for the 1st page	**Strat of print data** STX m n	Specify the line numbers (data value) of Braille data for 1 page for n.
	Braille data	Describe Braille data for 1 page, as using Braille code (6 dots, 8 dots) and Graphics. At the top of line, specify the line data value with 1 byte.
	Form Feed FF	At the end of page data, describe FF or ETX.
	Strat of print data STX 0 n	
	Ink character data	
print data for the 2nd page	Strat of print data STX m n	
	Braille data	
	Form Feed FF	
⋮	⋮	
	Strat of print data STX 0 n	
	Ink character data	
print data for the last page	Strat of print data STX m n	
	Braille data	
	Finish of data to print ETX	

Structure figure of Output data (Braille only)

Outline	Output data	Explanation

	Strat of print configuration SOH n1 0	Specify Braille print configuration.
print configuration	printconfiguratoin of Braille print(n1 bytes)	According to the TBP control code, describe Print configuration for Braille print.
	Strat of print data STX m n	Specify the line numbers (data value) of Braille data for 1 page for n.
print data for the 1st page	Braille data	Describe Braille data for 1 page, as using Braille code (6 dots, 8 dots) and Graphics. At the top of line, specify the line data value with 1 byte.
	Form Feed FF	At the end of page data, describe FF or ETX.
	Strat of print data STX m n	
print data for the 2nd page	Braille data	
	Form Feed FF	
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	Strat of print data STX m n	
print data for the last page	Braille data	
	Finish of data to print ETX	