NV Bit Image definieren und ausdrucken vom NV- Speicher (SII Logo)

Befehl (HEX)	Befehl	Beschreibung	Anmerkungen
1C 71 n (xL xH yl yh [DATA])1 to (xL xH yL yH [DATA])n	FS + "q" + n + xL + xH + yl + yh	NV Bit Image Define	"n" ist der Speicherplatz im NV. Wenn mehrer Bit Images abgelegt sind un eine änderung vorgenommen wird, müssen alle Daten erneut gesenet warden!
1C 70 n m *o*	FS + "p" + n + m + *o*	NV Bit Image Print	Druckt NV bit image "n" im mode "m"

- o **Zusätzliche Informationen (Bit Image Konvertierung):**

Das Image / Logo muss in eine für den APU9x47 verstädnliche Bit Image Data code Datei umgewandelt werden.

Diese konvertierten Daten können dem dazugehörigem Befehl hinzugefügt werden.

- o **Beispielsdatein für die Umsetzung:**

set_NVimg.bin   =   NV Bit Image defieren mit Bit Image Data Information
prn_NVimg.bin   =   NV Bit Image ausdruck
SII_mark_bk.bmp   =   SII Bitmap

- o Mögliche anwendungen zur realisierung:

bitimage_reader.exe   =   Konvertiert Bitmap zu einem Bit Image
OutputFile.exe   =   Sendet Data /Befehle zur Schnittstelle COM/LPT/USB

Detaillierte Beschreibung der Befehle (Auszug aus dem Manual)

(1) FS 'p' n m
(2) FS 'p' n m o

NV Bit Image Print

Code

(1) 1CH 70H n m
    1≤n≤255, 0≤m≤3, 48≤m≤51

(2) 1CH 70H n m o
    1≤n≤255, 4≤m≤7, 52≤m≤55, 0≤o≤255

Default

Canceled

Function

Prints NV bit image specified with n in mode m.

In the ranges 4≤m≤7 and 52≤m≤55, the print position in the horizontal direction of NV bit image can be specified with o.

(The print position is specified with o×8-dot from the leftmost of the thermal paper.)

m	Position
0, 48	Normal mode printing
1, 49	Double width mode printing
2, 50	Double height mode printing
3, 51	Double height and width printing
4, 52	Normal mode selection
5, 53	Double width mode selection
6, 54	Double height mode selection
7, 55	Double height and width selection

Notes

NV bit image refers to a bit image that can be printed using this command according to the definition of NV bit image in the nonvolatile memory.

If specified NV bit image n is undefined, this command is invalid.

When the standard mode is selected, this command is valid only when there is no data in the print buffer.

Except for inversion (flip) printing, this command does not affect the print mode (bold print, double strike printing, underline, character size, etc.).

If the print area set by setting the left margin (with GS 'L') and the print area width (with GS 'W') is less than one vertical column of NV bit image mode, the following processing actions are executed only for this line. (One vertical column in NV bit image mode is 1 bit in the normal mode (m=0, 48) and the double height mode (m=2, 50), and 2 bits in the horizontal mode (m=1, 49) and double height and width mode (m=3, 51).)

(1) In a range that does not exceed the printable area, the print area is expanded to the right side to a size where one vertical column of NV bit image can be printed.

(2) If a sufficient area cannot be secured even when processing (1) is performed, the print area is expanded to the left side (the left margin is reduced).

If a bit image of a size exceeding the print area is specified, the data in the print area becomes the target for printing, but data beyond the print area is not printed.

Regardless of the line spacing set with the initial lines spacing setting (ESC '2') or the line spacing setting (ESC '3'), paper feed is performed (height of NV bit image n) dots when the normal mode and double width mode are specified, and (height of NV bit image n × 2) dots when the double height mode and the double height and double width mode are specified.

Upon the completion of printing of the bit image, the beginning of the line becomes the next print position and normal data processing is executed.

When this command is received with m in the range 0≤m≤3 or 48≤m≤51, printing starts automatically.

When m is in the range 4≤m≤7 or 52≤m≤55, the selected NV bit image is printed in the character print area and the area between lines.   Printing is also done in the paper feed area with ESC 'J' and ESC 'd'.

When NV bit image is selected, specifying m outside the range 4≤m≤7 or 52≤m≤55 cancels NV bit image selection.

Multiple NV bit images cannot be selected. Only the last selection is valid.

In the page mode, NV bit image selection is invalid.

In the page mode, when printing of NV bit image is specified, NV bit image is allocated in the image memory inside the printer unit. Actual printing is not performed until page mode printing with the FF or ESC FF command.

Related Commands

ESC '*', FS 'q', GS '/', GS 'v' '0'

FS 'q' n [xL xH yL yH [d]k]1 to   [xL xH yL yH [d]k]n — NV Bit Image Define

Code	
	1CH 71H n [xL xH yL yH [d]k]1 to [xL xH yL yH [d]k]n

$1 \leq n \leq 255$

$0 \leq xL \leq 255$

$0 \leq xH \leq 3$, however, $1 \leq (xH \times 256 + xL) \leq 1023$

$0 \leq yL \leq 255$

$0 \leq yH \leq 1$, however $1 \leq (yH \times 256 + yL) \leq 288$

$0 \leq d \leq 255$

$k = (xH \times 256 + xL) \times (yH \times 256 + yL) \times 8$

Entire definition area=(260096 bytes)

Default

Undefined

Function

Defines NV bit image.

Operation

NV bit images refers to items defined with this command in nonvolatile memory, which can be printed with NV Bit Image Print (FS 'p') command.

n specifies the number of NV bit images to be defined.

xL and xH specify the horizontal direction of NV bit image as $(xH \times 256 + xL) \times 8$ bits.

yL and yH specify the vertical direction of NV bit image as $(yH \times 256 + yL) \times 8$ bits.

One NV bit image definition data consists of [xL xH yL yH d1 ... dk].

Defines n number of NV bit images in ascending order from NV bit image number 01H.

Therefore, the first data group [xL xH yL yH d1 ... dk] becomes NV bit image number 01H, and the last data group [xL xH yL yH d1 ... dk] becomes NV bit image number n. This corresponds to NV bit image number specified with NV Bit Image Print (FS 'p') command.

d indicates the definition data. Bits that correspond to dots to be printed are 1, and bits that correspond to dots that are not printed are 0.

This command becomes valid when the 7 bytes from FS to yH are processed as normal values.

All the already defined NV bit images are deleted when this command is executed. Therefore, it is not possible to redefine only one NV bit image among multiple already defined NV bit images. In this case, all the data must be resent.

After writing to nonvolatile memory is completed, the printer unit resets the hardware.

The definition area in this printer unit is a maximum of 260096 bytes. Multiple NV bit images can be defined, but bit image data whose total capacity (bit image data + header) exceeds 260096 bytes cannot be defined.

CONFIDENTIAL

If parameters that exceed the total capacity are specified in the first NV bit image data group, $(xH \times 256+xL>1023)$, $(yH \times 256+yL>288)$ or $(k>260096)$, this command is invalid. The data following the parameter is processed as character code or a command. In this case, deletion of nonvolatile memory and writing to the nonvolatile memory are not performed.

If a parameter that exceeds the remaining capacity of the definition area in the second and subsequent NV bit image data group is specified with xL, xH, yL and yH, execution of this command is interrupted and writing to nonvolatile memory starts. At this time, NV bit image in the process of being defined becomes invalid (undefined), but NV bit images before that are valid.
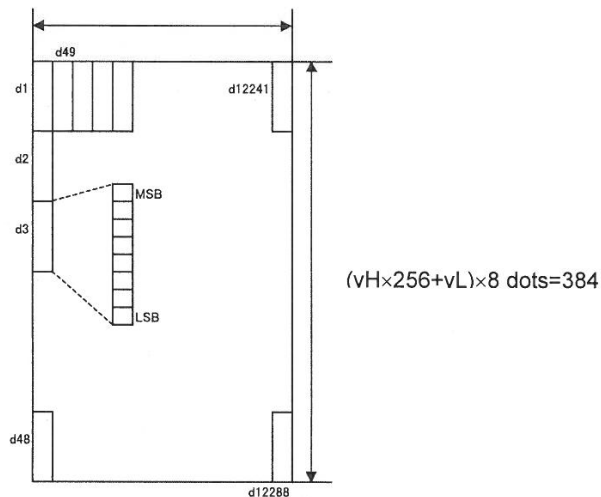
When this command is processed during macro definition, macro definition is interrupted, processing of this command is started, and the contents of macro definition are cleared.

This command defines only NV bit images without printing them. NV bit image printing is executed with NV Bit Image Print (FS 'p') command.

Whether to use the column scan mode or the row scan mode for transfer data can be selected with the DC2 'I' command.

The relationship between NV bit images and print data in the column scan mode is as follows.

$(xH \times 256+xL) \times 8=256$ dots

$(vH \times 256+vL) \times 8$ dots$=384$

Example: Using the column scan mode, with xL=32, xH=0, yL=48, yH=0

| Related Commands | FS 'p' |