COMMANDS MANUAL

DPT100-S

CUSTOM®

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THE IMAGES USED IN THIS MANUAL ARE USED AS AN ILLUSTRATIVE EXAMPLES. THEY COULDN'T REPRODUCE THE DESCRIBED MODEL FAITHFULLY.

UNLESS OTHERWISE SPECIFIED, THE INFORMATION GIVEN IN THIS MANUAL ARE REFERRED TO ALL MODELS IN PRODUCTION AT THE ISSUE DATE OF THIS DOCUMENT.

GENERAL INSTRUCTIONS

CUSTOM S.p.A. declines all responsibility for accidents or damage to persons or property occurring as a result of tampering, structural or functional modifications, unsuitable or incorrect installations, environments not in keeping with the equipment's protection degree or with the required temperature and humidity conditions, failure to carry out maintenance and periodical inspections and poor repair work.

GENERAL SAFETY INFORMATION

Your attention is drawn to the following actions that could compromise the characteristics of the product:

- Read and retain the instructions which follow.
- Follow all indications and instructions given on the device.
- Make sure that the surface on which the device rests is stable. If it is not, the device could fall, seriously damaging it.
- Make sure that the device rests on a hard (non-padded) surface and that there is sufficient ventilation.
- Do not fix indissolubly the device or its accessories such as power supplies unless specifically provided in this manual.
- When positioning the device, make sure cables do not get damaged.
- [Only OEM equipment] The equipment must be installed in a kiosk or system that provides mechanical, electrical and fire protection.
- The mains power supply must comply with the rules in force in the Country where you intend to install the equipment.
- Make sure that there is an easily-accessible outlet with a capacity of no less than 10A closely to where the device is to be installed.
- Make sure the power cable provided with the appliance, or that you intend to use is suitable with the wall socket available in the system.
- Make sure the electrical system that supplies power to the device is equipped with a ground wire and is protected by a differential switch.
- Before any type of work is done on the machine, disconnect the power supply.
- Use the type of electrical power supply indicated on the device label.
- These devices are intended to be powered by a separately certified power module having an SELV, non-energy hazardous output. (IEC60950-1 second edition).
- [Only POS equipment] The energy to the equipment must be provided by power supply approved by CUSTOM S.p.A.
- Take care the operating temperature range of equipment and its ancillary components.
- Do not block the ventilation openings.
- Do not insert objects inside the device as this could cause short-circuiting or damage components that could jeopardize printer functioning.
- Do not carry out repairs on the device yourself, except for the normal maintenance operations given in the user manual.
- The equipment must be accessible on these components only to trained, authorized personnel.
- Periodically perform scheduled maintenance on the device to avoid dirt build-up that could compromise the correct, safe operation of the unit.
- Do not touch the head heating line with bare hands or metal objects. Do not perform any operation inside the printer immediately after printing because the head and motor tend to become very hot.
- Use consumables approved by CUSTOM S.p.A.

CE

THE CE MARK AFFIXED TO THE PRODUCT CERTIFY THAT THE PRODUCT SATISFIES THE BASIC SAFETY REQUIREMENTS.

The device is in conformity with the essential Electromagnetic Compatibility and Electric Safety requirements laid down in Directives 2014/30/EU and 2014/35/EU inasmuch as it was designed in conformity with the provisions laid down in the following Standards:

- EN 55032 *(Electromagnetic compatibility of multimedia equipment - Emission Requirements)*
- EN EN55024/EN55035 *(Electromagnetic compatibility of multimedia equipment - Immunity requirements)*
- EN IEC/EN62368-1 *(Audio/video, information and communication technology equipment)*

The device is in conformity with the essential requirements laid down in Directives 2014/53/EU about devices equipped with intentional radiators. The Declaration of Conformity and other available certifications can be downloaded from the site www.custom4u.it.

GUIDELINES FOR THE DISPOSAL OF THE PRODUCT

The crossed-out rubbish bin logo means that used electrical and electronic products shall NOT be mixed with unsorted municipal waste. For more detailed information about recycling of this product, refer to the instructions of your country for the disposal of these products.

- Do not dispose of this equipment as miscellaneous solid municipal waste, but arrange to have it collected separately.
- The re-use or correct recycling of the electronic and electrical equipment (EEE) is important in order to protect the environment and the wellbeing of humans.
- In accordance with European Directive WEEE 2012/19/EU, special collection points are available to which to deliver waste electrical and electronic equipment and the equipment can also be handed over to a distributor at the moment of purchasing a new equivalent type.
- The public administration and producers of electrical and electronic equipment are involved in facilitating the processes of the re-use and recovery of waste electrical and electronic equipment through the organisation of collection activities and the use of appropriate planning arrangements.
- Unauthorised disposal of waste electrical and electronic equipment is punishable by law with the appropriate penalties.

The format used for this manual improves use of natural resources reducing the quantity of necessary paper to print this copy.

INTRODUCTION 

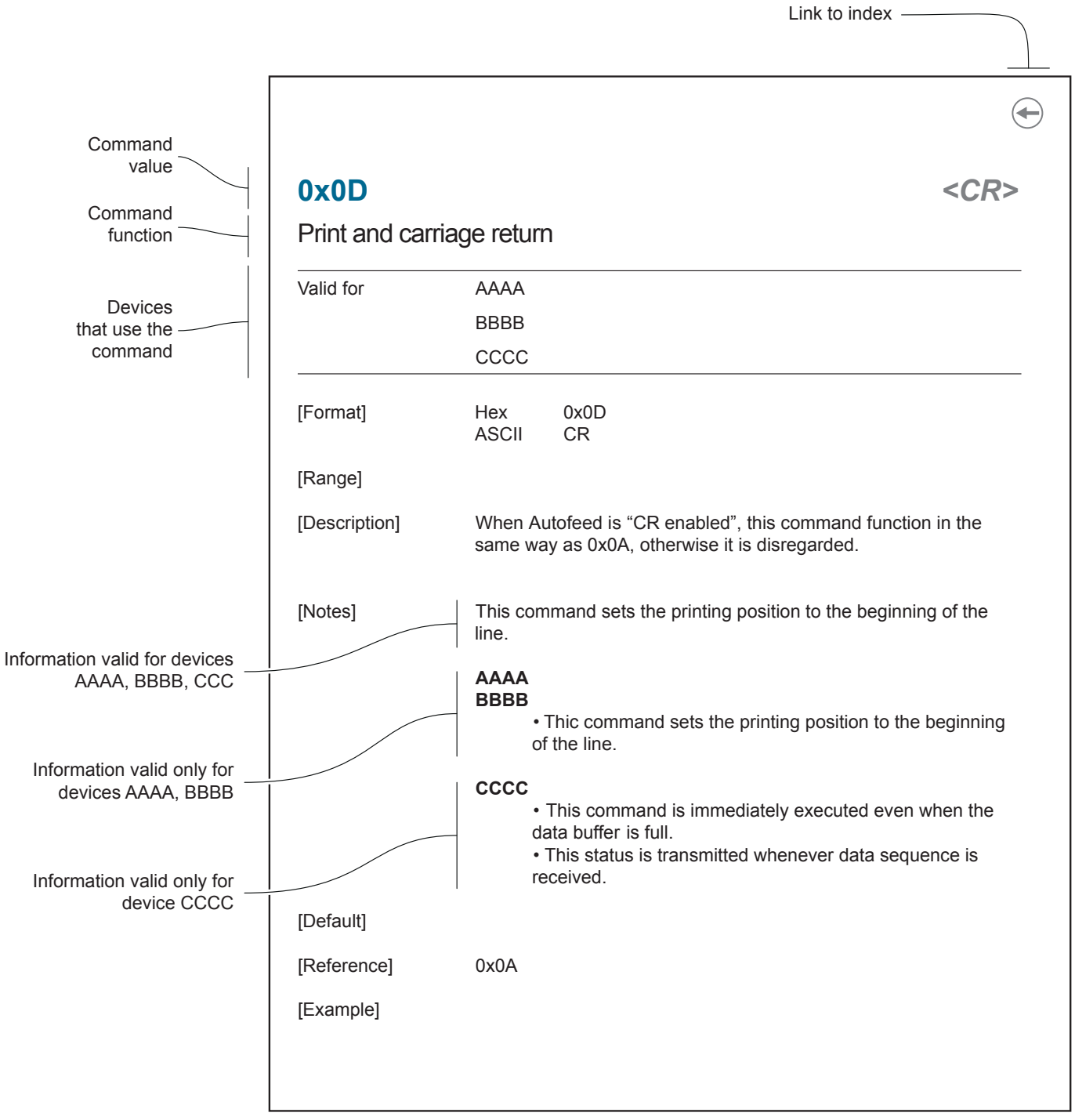
CUSTOM/POS EMULATION 

ALIGNMENT 

INTRODUCTION

1 CONSULTING COMMANDS MANUAL

Each command reported in this manual is described as shown in the following picture. In the first heading field is reported the hexadecimal command value and the ASCII command value. In the second heading field reported the command function. In the third heading field are listed the devices on which it is possible to use the command (for example, device AAAA).



The fields shown in the scheme of the previous figure have the following meaning:

[Format]	hexadecimal and ASCII command value.
[Range]	Limits of the values the command and its variables can take.
[Description]	Description of command function.
[Notes]	Additional information about command use and settings.
[Default]	Default value of the command and its variables.
[Reference]	Pertaining commands related to described command.
[Example]	Example of using the command.

Listed below are the meanings of some of symbols that may be found in the command description:

0x	indicates the representation of the command hexadecimal value (for example 0x40 means HEX 40).
n, m, t, x, y	are optional parameters that can have different values.

2 IDENTIFICATION OF THE MODELS

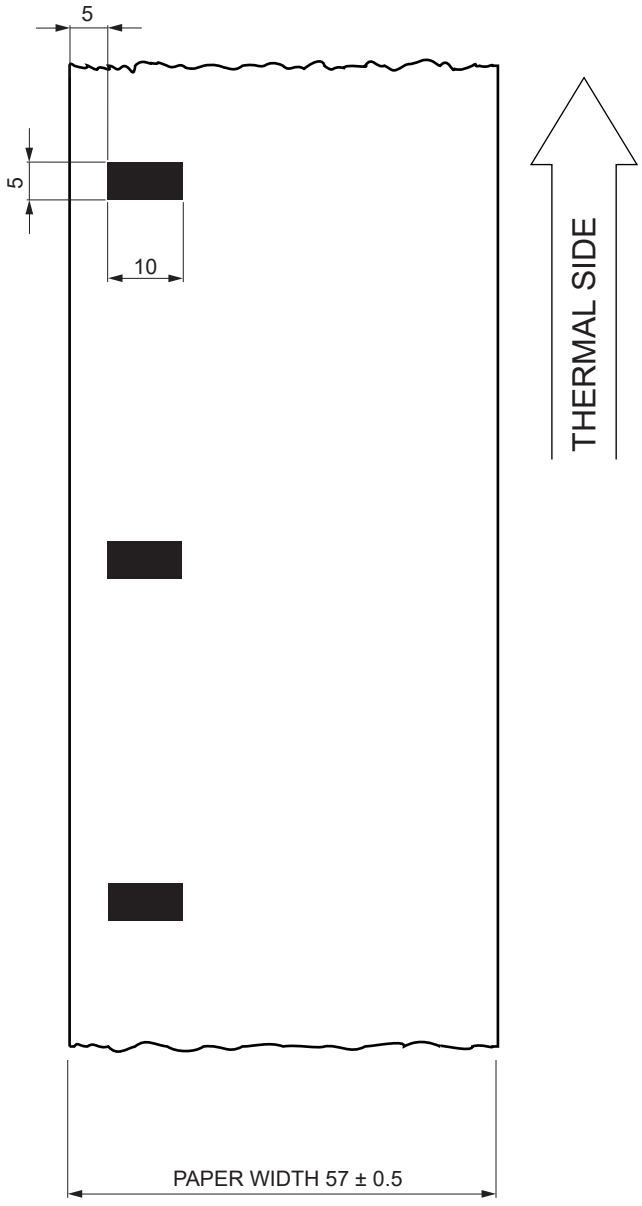
NOMENCLATURE	DESCRIPTION
DPT-S 24 characters per line	DPT-S 24 characters per line
DPT-S 40 characters per line	DPT-S 40 characters per line

3 PAPER SPECIFICATION

All the dimensions shown in following figures are in millimetres.

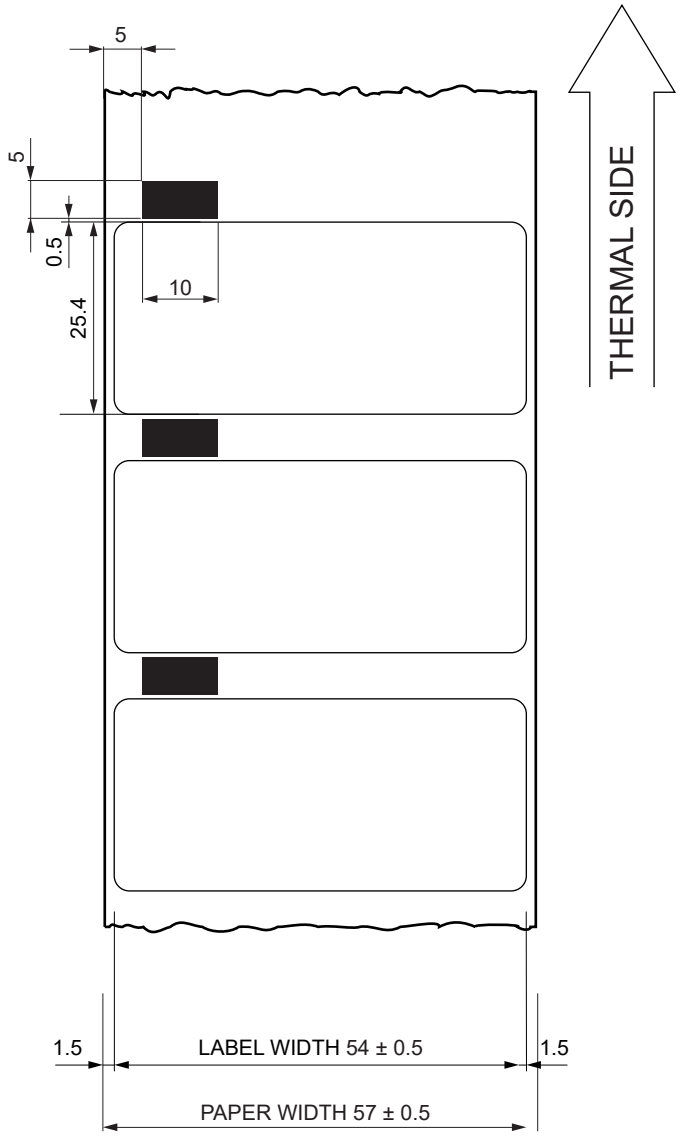
Paper with black mark on the termal side

The following image shows an example of black mark placement on the thermal side of the paper.
For more information about the use of paper with labels see user manual.



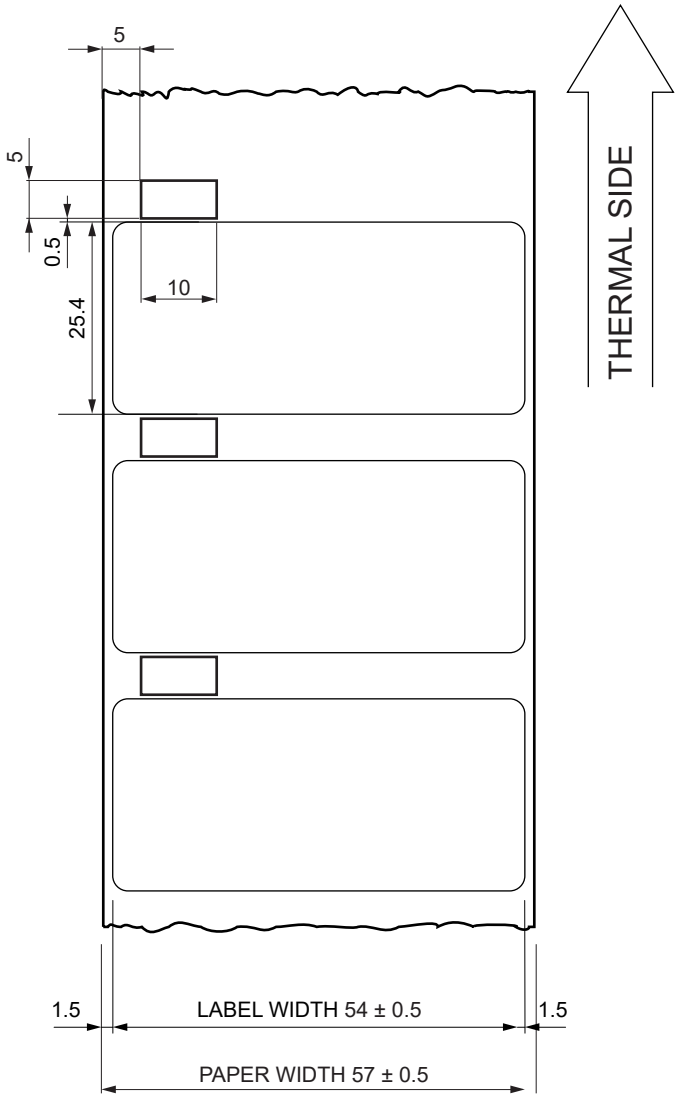
Paper with black mark and labels

The following image shows a portion of paper with labels placement of the black mark on the thermal side of the paper. To properly use the alignment commands, you need to use paper with labels that comply with the dimensions shown in the following figure.
For more information about the use of paper with labels see user manual.



Paper with hole and labels

The following image shows a portion of paper with labels placement of the black mark on the thermal side of the paper. To properly use the alignment commands, you need to use paper with labels that comply with the dimensions shown in the following figure.



CUSTOM/POS EMULATION

1 COMMANDS LISTED IN ALPHANUMERIC ORDER

2 COMMANDS LISTED BY FUNCTION

COMMANDS FOR BARCODE PRINTING

CHARACTERS COMMANDS

PRINT COMMANDS

PRINT POSITION COMMANDS

STATUS COMMANDS

ALIGNMENT COMMANDS

MISCELLANEOUS COMMANDS

COMMANDS FOR BARCODE PRINTING

0x1B 0x63 <ESC c>

Management of barcode printing

Valid for	DPT-S 24 characters per line
	DPT-S 40 characters per line

[[Format]	Hex	1B	63	[code] [height] [position] [options] [length] [data]
	ASCII	ESC	c	[code] [height] [position] [options] [length] [data]

[Description] This command executes a barcode printing with the following settings:

- [ASCII code] Type of barcode:
  - I Interleaved 2 of 5
  - C Code 39
  - B Codabar
  - e EAN-8
  - E EAN-13
- [height] Number of dot lines in 1/8 mm units.
- [position] Left hand margin, expressed in 1/8 mm units
- [options] Specify the barcode options trough a byte. In the following tables are listed all the possible values of single bit inside of byte:

BIT 0	FUNCTION	DESCRIPTION
0	Check digit is not printed	Check digit
1	Check digit is printed	

BIT 0	FUNCTION	DESCRIPTION
-	Not used	-

BIT 3	BIT 2	FUNCTION	DESCRIPTION
0	0	None	HRI position
0	1	Above	
1	0	Below	
1	1	Above and below	

BIT 5	BIT 4	FUNCTION	DESCRIPTION
0	0	Normal	Barcode width
0	1	Double	
1	0	Triple	
1	1	Not used	

BIT 6	FUNCTION	DESCRIPTION
-	Not used	-

BIT 7	FUNCTION	DESCRIPTION
-	Not used	-

• [length] Specify the characters number to print trough a byte; in following are listed the maximum lengths allowed:

Interleaved 2 of 5	= 12 characters
Code 39	= 10 characters
Codabar	= 10 characters
EAN-8	= 7 characters
EAN-13	= 12 characters

• [data] Specify the characters to print expressed in ASCII.

[Notes] • For EAN-8 and EAN-13 barcodes the check digit is automatic.
• When CODE 39 barcode is used with triple width function, if 6 characters + check digit are sent the print limits are exceeded, so the barcode can't be printed.

[Default]

[Reference]

[Example] In the following example is indicated the command sequence to print a barcode:
0x1B 0x4E, 0x1B 0x63, 'C', 0x50, 0x3C, 0x14, 0x04, 'SPRINT'

where:

0x1B 0x4E	(sets the printing in normal mode)
0x1B 0x63	(barcode printing command)
'C'	(barcode type = Code 39)
0x50	(barcode height = 10 mm)
0x3C	(starting position = 7.5 mm)
0x14	(HRI printing below, barcode width double)
0x04	(characters number to print)
'SPRINT'	(characters to print)

0x00 <NUL>

Small character printing

Valid for	DPT-S 24 characters per line	
	DPT-S 40 characters per line	
[Format]	Hex	00
	ASCII	NUL
[Range]		
[Description]	The printer prints in small characters (normal).	
[Notes]	• The commands 00H - 09H do not cancel the print buffer. • The commands which modify the direction of the characters are only active at the beginning of the line.	
[Default]	Setting in option register by means of front keys	
[Reference]	0x01, 0x02, 0x03, 0x04	
[Example]		

0x01 <SOH>

Double width printing

Valid for	DPT-S 24 characters per line
	DPT-S 40 characters per line

[Format]	Hex	01
	ASCII	SOH
[Range]		
[Description]	The printer prints in double width format.	
[Notes]		
[Default]		
[Reference]	0x00, 0x02, 0x03, 0x04	
[Example]		

0x02 <STX>

Double height printing

Valid for	DPT-S 24 characters per line	
	DPT-S 40 characters per line	
[Format]	Hex	02
	ASCII	STX
[Range]		
[Description]	The printer prints in double height format.	
[Notes]	• The commands 00H - 09H do not cancel the print buffer. • The commands which modify the direction of the characters are only active at the beginning of the line.	
[Default]		
[Reference]	0x00 0x01, 0x03, 0x04	
[Example]		

0x03 <ETX>

Expanded printing

Valid for	DPT-S 24 characters per line
	DPT-S 40 characters per line

[Format]	Hex	03
	ASCII	ETX
[Range]		
[Description]	The printer prints in expanded character mode.	
[Notes]	• commands 00H-09H do not cancel the print buffer • the commands which modify the dimensions of the characters are only active at the beginning of the line	
[Default]		
[Reference]	0x00, 0x01, 0x02, 0x04	
[Example]		

0x04

< EOT>

Restore small character printing

Valid for	DPT-S 24 characters per line
	DPT-S 40 characters per line

[Format]	Hex	04
	ASCII	EOT

[Range]

[Description] The printer resumes printing with small characters.

[Notes]
- The commands 00H-09H do not cancel the print buffer.
- The commands which modify the dimensions of the characters are only active at the beginning of the line.

[Default]

[Reference] 0x00, 0x01, 0x02, 0x03

[Example]

0x07

< BEL>

Cancel print data buffer

Valid for	DPT-S 24 characters per line
	DPT-S 40 characters per line

[Format]

Hex	07
ASCII	BEL

[Range]

[Description] Deletes all the print data in the current print buffer.

[Notes] If data that existed in the previously specified printing area also exists in the currently specified printing area, it is deleted.

[Default]

[Reference]

[Esempio

0x11 <DC1>

Enable graphic mode

Valid for	DPT-S 24 characters per line
	DPT-S 40 characters per line

[Format]

Hex	11
ASCII	DC1

[Range]

[Description] Enables graphic mode:
a line in 24 column mode corresponds to 144 horizontal dots divided into 24 blocks of 6 dots each;
a line in 40 column mode corresponds to 240 horizontal dots divided into 40 blocks of 6 dots each.

[Notes]
- To obtain graphic printing, enter the command 0x11 at the beginning of each line.
- The format of the byte in graphic configuration is:

X	R	P6	P5	P4	P3	P2	P1
D7	D6	D5	D4	D3	D2	D1	D0

where:

X	is not used (0 is recommended);
R	must be fixed at level 1;
P1...P6	are the graphic dot data (1 prints, 0 does not print).

The P6 bit of the string of dots transmitted is printed on the left and the others follow from left to right (P5, P4, P3, P2, P1) as shown:

1st byte è ►	2nd byte è ►	3rd byte è ►
P6 P5 P4 P3 P2 P1	P6 P5 P4 P3 P2 P1	P6 P5 P4 P3 P2 P1

[Default]

[Reference]

[Example] To print a line of dots, the command sequence is:
0x11, n x 0x7F (where n is the number of characters per line), 0x0D.

To print an empty line, the command sequence is:
0x11, 0x40, 0x0D

0x1B 0x4D

<ESC M>

Select character font

Valid for	DPT-S 24 characters per line
	DPT-S 24 characters per line

[Format]

Hex	dH	dL	1B	4D
ASCII	dH	dL	ESC	M

[Range]

[Description] Sets the print mode default parameters:

CHAR/INCH	n	FUNCTIONS
0x00, 0x30		Normal
0x01, 0x31		Double width printing
0x02, 0x32		Double height printing
0x03, 0x33		Expanded printing

[Notes] The setting is stored in the EEPROM

[Default]

[Reference] 0x1B 0x6D

[Example] For double height printing, transmit:

0x30 0x32 0x1B 0x4D

0x1B 0x4E

<ESC N>

Set normal mode printing

Valid for	DPT-S 24 characters per line
	DPT-S 40 characters per line

[Format]	Hex	1B	4E
	ASCII	ESC	N

[Range]

[Description] Select normal mode printing: the receipt feeds out of the printer with the printing upside down running from right to left.

[Notes]

[Default]

[Reference] 0x1B 0x4E

[Example]]

0x1B 0x51 <ESC Q>

Enable underlined printing

Valid for	DPT-S 24 characters per line
	DPT-S 40 characters per line

[Format]	Hex	1B	51
	ASCII	ESC	Q

[Range]

[Description] On receiving this command, the characters are printed underlined.

[Notes]

[Default]

[Reference] 0x1B 0x71

[Example]

0x1B 0x52

<ESC R>

Set reverse mode printing

Valid for	DPT-S 24 characters per line
	DPT-S 40 characters per line

[Format]	Hex	1B	52
	ASCII	ESC	R

[Range]

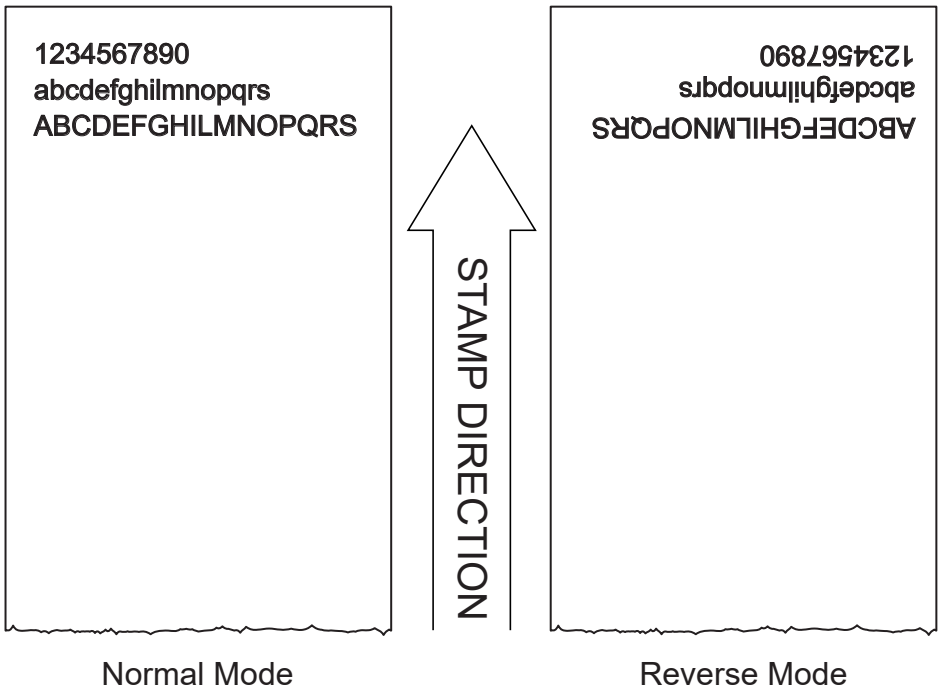
[Description] Set reverse mode printing: the receipt exits from the device with the printing not upside down running from left to right.

[Notes]

[Default] Setting of parameter “Print mode” in the printer setup.

[Reference] 0x1B 0x4E

[Example]]



0x1B 0x57 <ESC W>

Prints a graphic line at 203 dpi

Valid for	DPT-S 24 characters per line		
	DPT-S 40 characters per line		
[Format]	Hex	1B	57
	ASCII	ESC	W
[Range]			
[Description]	After receiving this command, the device waits for 48 bytes which correspond to an entire graphic line. 48 bytes of 8 bits each correspond to 384 dots per line.		
[Notes]	4		
[Default]			
[Reference]			
[Example]			

0x1B 0x71

<ESC q>

Disable underlined printing

Valid for	DPT-S 24 characters per line		
	DPT-S 40 characters per line		
Formato]	Hex	1B	71
	ASCII	ESC	q
[Range]			
[Description]	Disabled underlined printing.		
[Notes]			
[Default]			
[Reference]	0x1B 0x51		
[Example]			

0x1B 0x73 <ESC s>

Transmit the next character in serial

Valid for	DPT-S 24 characters per line		
	DPT-S 40 characters per line		
[Format]	Hex	1B	73
	ASCII	ESC	s
[Range]			
[Description]	Transmits the next character it receives on the serial port.		
[Notes]			
[Default]			
[Reference]			
[Example]	If you transmit 0x1B 0x73 0x41,the last character, 0x41, will not be printed but immediately transmitted on the serial.		

0x0A <LF>

Print and line feed

Valid for	DPT-S 24 characters per line DPT-S 40 characters per line

[Format]	Hex	0A
	ASCII	LF

[Range]

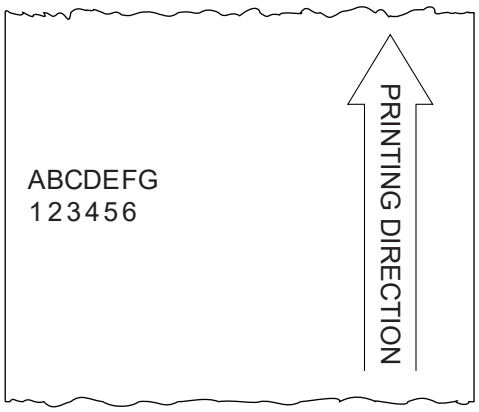
[Description] This command sets the print position to the beginning of the line printing the data in the buffer..

[Notes] If the buffer is empty, the printing feeds of a value equal to the sum of the character height and line spacing

[Default] 1/6-inch (32 dots)

[Reference] 0x0D

[Example]



To print the ticket shown in figure the command sequence is:
ABCDEFG 0x0A 123456 0x0A

0x0B

<VT>

Perform n line feeds

Valid for	DPT-S 24 characters per line
	DPT-S 40 characters per line

[Format]	Hex	0B	n
	ASCII	VT	n

[Range] 0x00 ≤ n ≤ 0x09

[Description] Perform as many line feeds as are specified by parameter n.

[Notes]
- The number must be ASCII and between 0 and 9 (when n = 0 the command is ignored)
- This command clears the line buffer.

[Default]

[Reference] 0x0A

[Example]

0x0D

<CR>

Print and carriage return

Valid for	DPT-S 24 characters per line
	DPT-S 40 characters per line

[Format]	Hex	0D
	ASCII	CR

[Range]

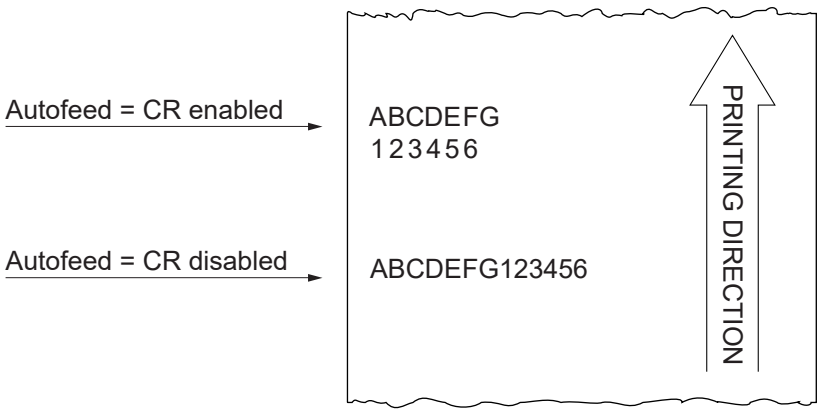
[Description] This command handles the end of a line text.

[Notes] If “Autofeed” setup parameter is set to “CR enabled”, this command works in the same way as 0x0A, otherwise it is disregarded.

[Default] See “Autofeed” setup parameter (refer to the user manual of the device).

[Reference] 0x0A

[Example]



To print the ticket shown in figure the command sequence is:
ABCDEFG 0x0D 123456 0x0D

0x0F <SI>

Set CRLF mode

Valid for	DPT-S 24 characters per line
	DPT-S 40 characters per line

[Format]

Hex	0F
ASCII	SI

[Range]

[Description] Inhibits the command 0x0D maintaining enabled only the command 0x0A for printing.

[Notes]
- To disable this option, reset the printer.
- This command clears the line buffer.

[Default]

[Reference] 0x0D

[Example]

0x1B 0x41

<ESC A>

Executes n dot lines feed

Valid for	DPT-S 24 characters per line				
	DPT-S 40 characters per line				
[Format]	Hex	1B	41	nH	nL
	ASCII	ESC	A	nH	nL
[Range]	0x00 ≤ nH, nL ≤ 0xFF				
[Description]	Executes n dots line feed where N = 256 x nH + nL.				
[Notes]	• 1 mm = 8 dot line. • The maximum paper line feed value is about 1 m.				
[Default]					
[Reference]					
[Example]	To perform a 40 mm feed the command sequence is: 0x1B 0x41 0x01 0x40				

PRINT POSITION COMMANDS

0x1B 0x61 *<ESC a>*

Select the number of dots space

Valid for	DPT-S 24 characters per line DPT-S 40 characters per line
[[Format]	Hex (dd) 1B 61 ASCII (dd) ESC a
[Range]	0x00 ≤ (dd) ≤ 0x7F
[Description]	By using (dd) parameters it's possible to select the dots line number between one print line and another
[Notes]	(dd) are two ASCII characters which identifies number from 0 to 127 in Hex form and corresponds to the number of dot lines between one print line and another.
[Default]	0x00
[Reference]	
[Example]	

0x1D 0x57

<GS W>

Prints n byte of a 200 dpi graphic line

Valid for	DPT-S 24 characters per line					
	DPT-S 40 characters per line					
[Format]	Hex	1D	57	n	d1...	dn
	ASCII	GS	W	n	d1...	dn
[Range]	0x01 ≤ n ≤ 0x31 0x00 ≤ d1... dn ≤ 0xFF					
[Description]	Print n byte of a 200 dpi graphic line where : • n specifies the number of byte to print; • d1...dn specify the bytes to print.					
[Notes]	• If the bit image data input exceeds the number of dots to be printed on a line, the excess data are processed as printable characters. • d indicates the bit image data. Set a corresponding bit to 1 to print a dot, or to 0 to not print the dot. • This command is not affected by the emphasized, doublestrike, underline (etc.) print modes, except for the upsidedown mode.					
[Default]						
[Reference]						
[Example]	For printing 12 bytes the command sequence is: 0x1D 0x57 0x0C 0xFF 0x00 0xFF 0x00 0xFF 0x00 0xFF 0x00 0xFF 0x00 0xFF 0x00					

STATUS COMMANDS

0x1B 0x76 <ESC v>

Transmit paper sensor status

Valid for	DPT-S 24 characters per line
	DPT-S 40 characters per line

[Format]

Hex	1B	76
ASCII	ESC	v

[Range]

[Description] When this command is received, transmit the current status of the paper sensor. The status to be transmitted is shown in the table below:

BIT	OFF/ON	HEX	FUNCTION
0	Off	0x00	Paper end sensor: working
1	On	0x03	Paper out sensor: not working
2, 3	Off	0x00	Paper out sensor: paper present
	On	0x0C	Paper out sensor: paper not present
4	-	-	Reserved
5	Off	0x00	Correct head temperature
	On	0x20	Head overtemperature error
6	-	-	Reserved
7	Off	0x00	Not used. Fixed to Off

[Notes] This command is executed immediately, even when the data buffer is full (Busy).

[Default]

[Reference]

[Example]

ALIGNMENT COMMANDS

0x1D 0xF6 <GS ö>

Align the ticket with the printhead

Valid for	DPT-S 24 characters per line DPT-S 40 characters per line

[Format]	Hex	1D	F6	nH	nL
	ASCII	GS	ö	nH	nL

[Range] nH and nL are the values of the shift to be made once the notch has been found.

[Description] This command align the edge of black mark to the alignment point (see ALIGNMENT section for further explanation).

[Notes] The command is executed only if alignment from setup is enabled.

[Default]

[Reference]

[Example] To print a logo on a ticket that is 25 mm long with the hole (or notch) at the end of the ticket, the following command must be sent:

0x1D, 0xF6, 0xFF, 0x7B	Perform alignment)
0x1B, 0xFA, 0x00, 0x55	Print logo

In this example, nH and nL are expressed in module 2 so that the motor will recede.

0x1B 0x6D

<ESC m>

Transmit the print mode configuration on the serial port

Valid for	DPT-S 24 characters per line		
	DPT-S 40 characters per line		
[Format]	Hex	1B	6D
	ASCII	ESC	m
[Range]			
[Description]	Transmits the print mode configuration on the serial port.		
[Notes]	• If the device is using the parallel protocol, nothing will be transmitted. • The response is on two bytes.		
[Default]			
[Reference]			
[Example]	If you receive 0x30, 0x32 it means that printing is in double height mode		

0x1B 0x23

Transmit printer ID

Valid for	DPT-S 24 characters per line DPT-S 40 characters per line

[Format]

Hex	1B	23	n
ASCII	ESC	#	n

[Range] ≤ n ≤ 0x03, 0x31 ≤ nH ≤ 0x33

[Description] Transmits the printer ID specified by n follows:

n	DEVICE ID	SPECIFICATION
0x01, 0x31	Device model ID (1 byte)	0x53 DPT-S 24 characters per line 0x55 DPT-S 40 characters per line
0x02, 0x32	Reserved	0x00 Fixed value
0x03, 0x33	ROM version ID (4 bytes)	Depends on ROM version (4 character)

[Notes] This command is executed when the data is processed in the data buffer. Therefore, there could be a time lag between command reception and data transmission, depending on data buffer status.

[Default]

[Reference]

[Example]

0x1B 0x40 <ESC @>

Initialize device

Valid for	DPT-S 24 characters per line DPT-S 40 characters per line

[Format]

Hex	1B	40
ASCII	ESC	@

[Range]

[Description] Clears the data in the print buffer and resets the device mode to that in effect when power was turned on.

[Notes]
- The data in the receiver buffer is not cleared.
- The macro definitions are not cleared.

[Default]

[Reference]

[Example]

0x1B 0xFA

<ESC ú>

Print graphic bank (384 x 85 dots)

Valid for	DPT-S 24 characters per line
	DPT-S 40 characters per line

[Format]	Hex	1B	FA	n1	n2
	ASCII	ESC	0xFA	n1	n2

[Range] 0x00 ≤ n1, n2 ≤ 0xFF

[Description] Prints the graphics bank from flash based on the values of n1 and n2 where:
- n1 specifies the starting dot line (1 ÷ 85).
- n2 specifies the number of lines to print.

[Notes] If n1 + n2 > 85 the device only prints 85 - n1 + 1 dot lines.

[Default]

[Reference]

[Example] To print the graphic bank from dotline 10 to dotline 40, the command sequence is:
0x1B 0xFA 0x0A 0x1E

0x1D 0x24 <GS $>

Set absolute print position into a graphic line

Valid for	DPT-S 24 characters per line DPT-S 40 characters per line

[Format]	Hex	1D	24	n
	ASCII	GS	$	n

[Range] 0x00 ≤ n ≤ 0x2F

[Description] Set the beginning print position into a graphic line based on the current value of n that indicate the byte number of shift from left margin.

[Notes] Settings outside the specified printable area are ignored.

[Default]

[Reference]

[Example]

0x1D 0x49

<GS I>

Transmit device ID

Valid for	DPT-S 24 characters per line DPT-S 40 characters per line

[Format]

Hex	1D	49	n
ASCII	GS	I	n

[Range] 0x01 ≤ n ≤ 0x03, 0x31 ≤ n ≤ 0x33

[Description] Transmits the device ID specified by n follows:

n	DEVICE ID	SPECIFICATION
0x01, 0x31	Device model ID (1 byte)	0x53 DPT-S 24 characters per line 0x55 DPT-S 40 characters per line
0x02, 0x32	Reserved	0x00 Fixed value
0x03, 0x33	ROM version ID (4 bytes)	Depends on ROM version (4 character)

[Notes] This command is executed when the data is processed in the data buffer. Therefore, there could be a time lag between command reception and data transmission, depending on data buffer status.

[Default]

[Reference]

[Example]

0x1D 0x55 <GS U>

Reset the device parameters to the default configuration

Valid for	DPT-S 24 characters per line		
	DPT-S 40 characters per line		
[Format]	Hex	1D	55
	ASCII	GS	U
[Range]			
[Description]	Reset the device parameters to the default configuration.		
[Notes]	After executing this command the printer is initialized.		
[Default]			
[Reference]			
[Example]			

ALIGNMENT

1 ALIGNMENT COMMANDS

Devices listed in this manual are equipped with sensors that allow the use of alignment notch in order to handle rolls of with pre-printed and fixed length fields.

For further information, refer to the user manual of each device.

The command available for managing the alignment of the ticket is the following:

- 0x1D 0xF6:perform the alignment of ticket, which is advanced to cut the ticket at the first alignment point available.

Print a ticket with alignment requires the following sequence of commands:

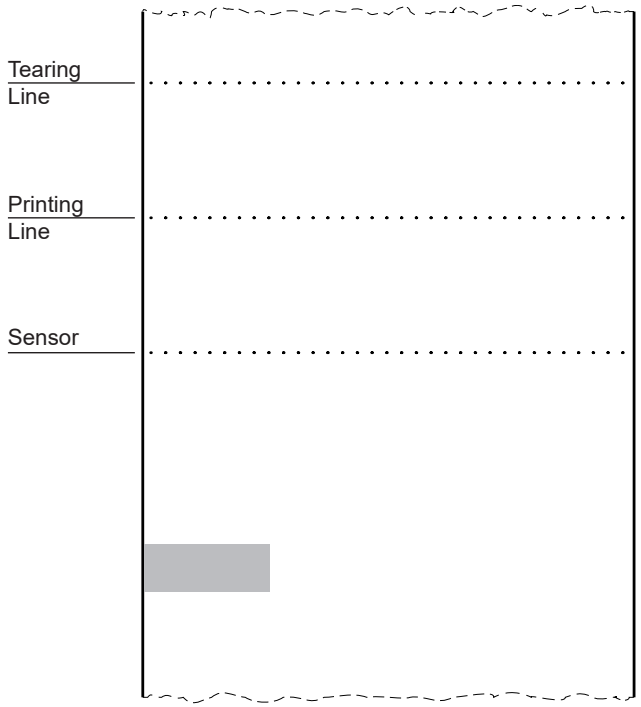
1. General settings of the ticket (character formatting, print density, margins etc.)
2. Alignment command: 0x1D 0xF6.
3. Ticket printout (printing text, logos or any graphic)

The settings take effect from next ticket to the one already in the device.

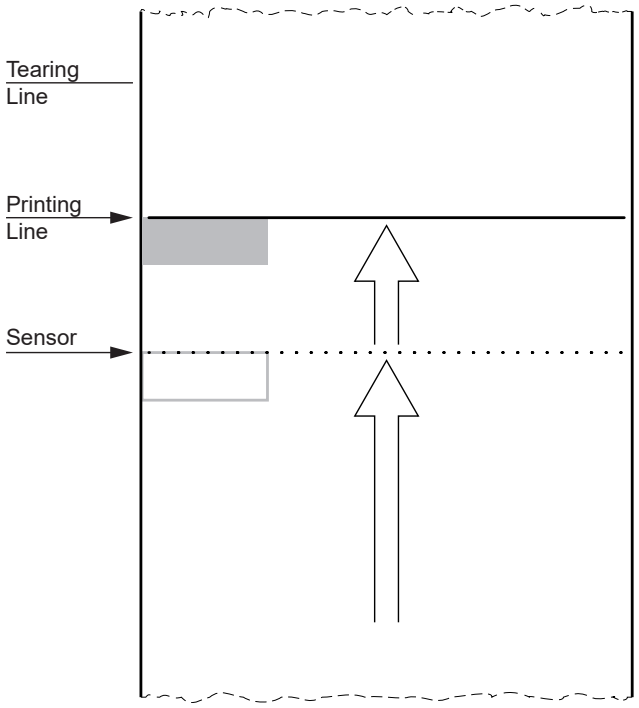
In the following examples, are described some sequences of commands to manage the alignment.

[Example 1] Commands sequence to print tickets with “alignment point” set to the edge of the notch (“Black Mark Distance” parameter = 0 mm set in the setup procedure).

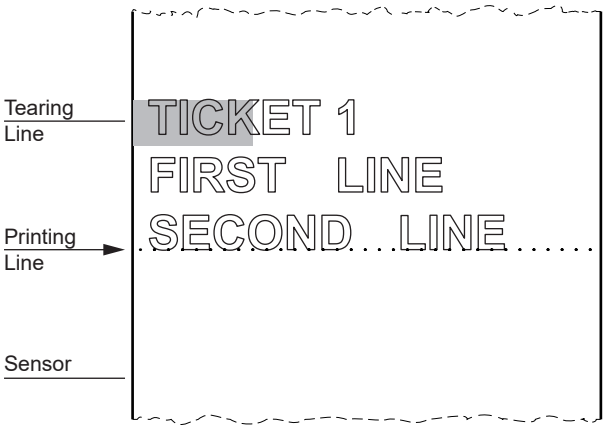
Start
Paper with black mark not aligned.



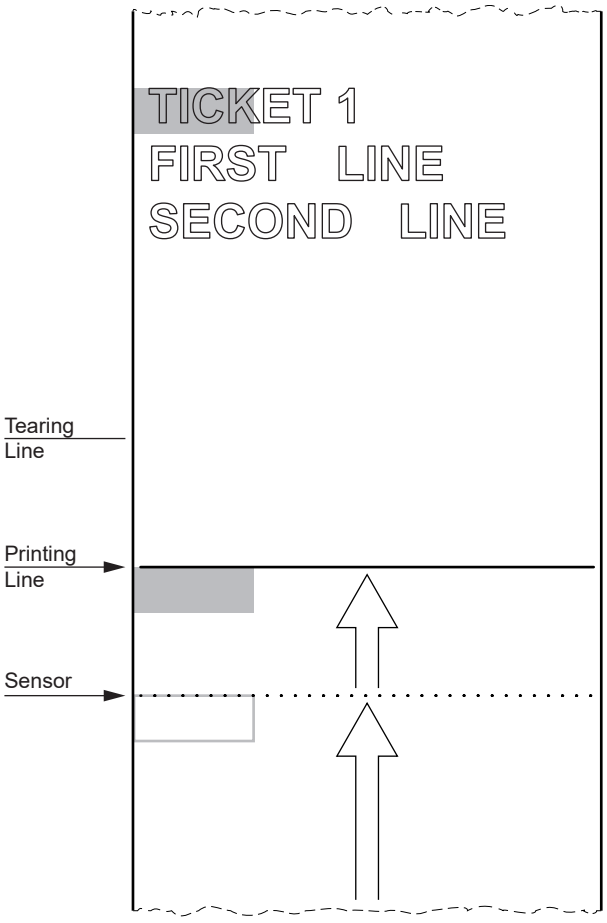
Alignment command 0x1D 0xF6
Paper is fed. The black mark is recognized by the sensor and aligned under the printing line.



Command for text printing:
'TICKET 1', 0x0A, 'FIRST LINE', 0x0A, 'SECOND LINE', 0x0A



Alignment command 0x1D 0xF6.
Paper is fed. The next black mark is recognized by the sensor and aligned under the printing line.



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