COMMANDS MANUAL

KPM150HIII
B202HIII

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 *(Limits and methods of measurements of radio disturbance characteristics of Information Technology Equipment)*
- EN 55024 *(Information Technology Equipment – Immunity characteristics – Limits and methods of measurement)*
- EN 60950-1 *(Safety of information equipment including electrical business 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 2002/96/EC, 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 

SVELTA EMULATION 

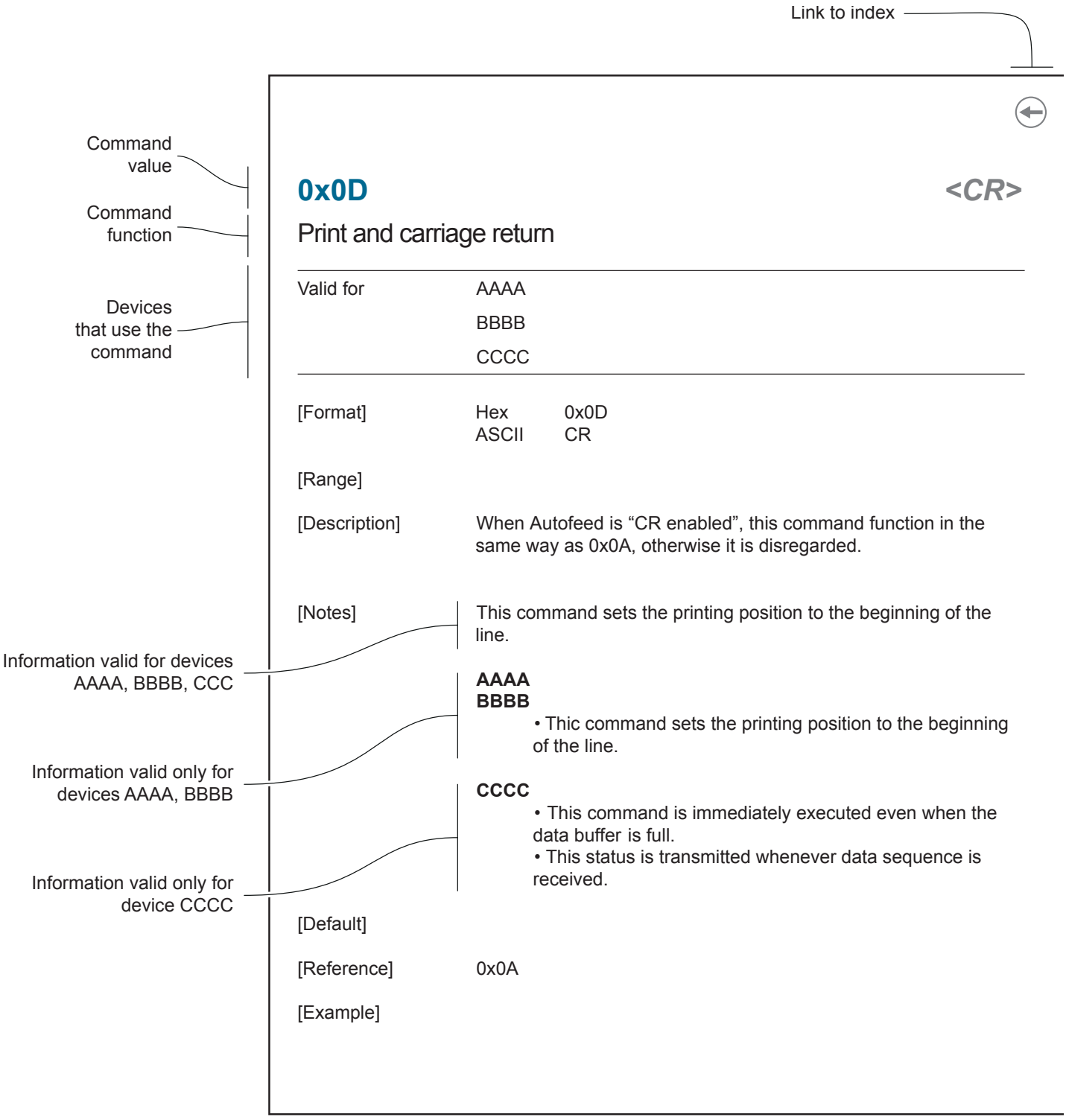
ALIGNMENT 

PAGE MODE 

INTRODUCTION

1 CONSULTATION OF 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

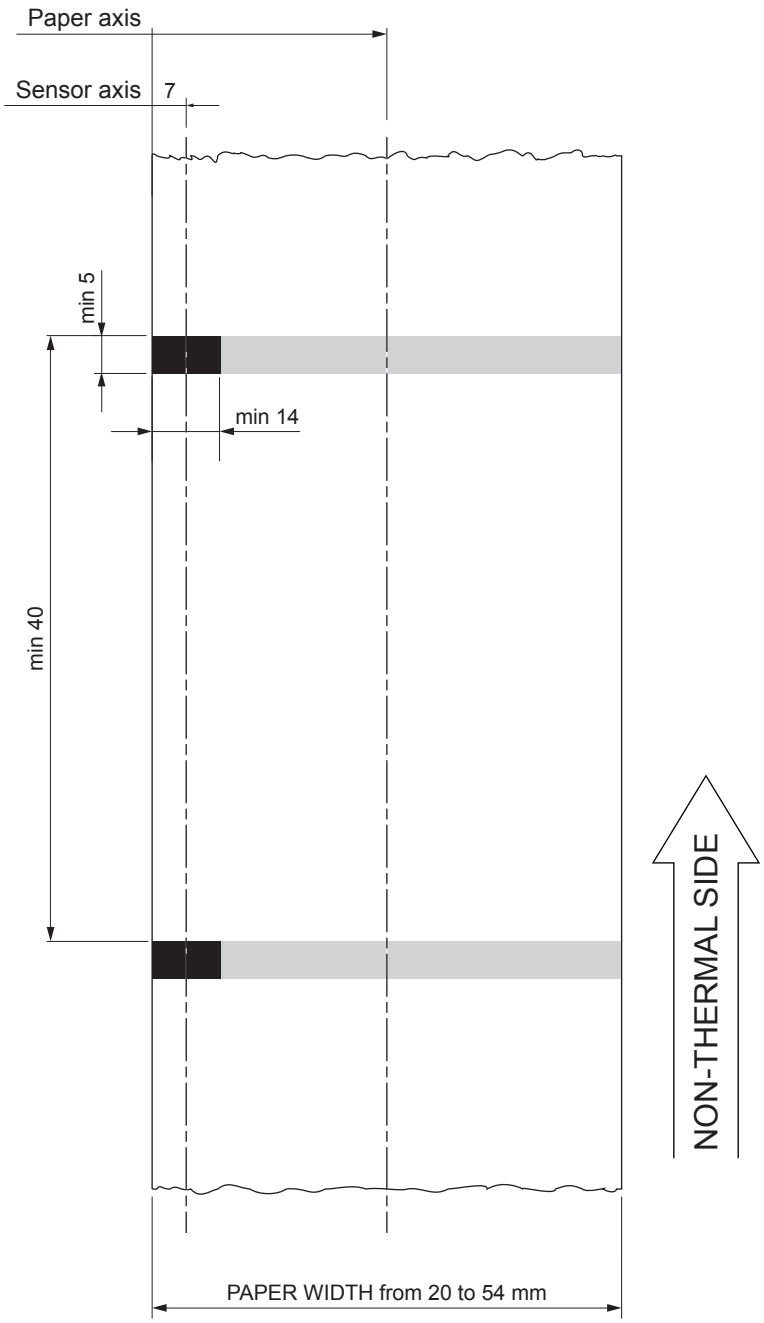
NOMENCLATURE	DESCRIPTION
KPM150HIII LAT	KPM150HIII base configuration (OEM model with lateral connectors)
KPM150HIII LAT UHF	KPM150HIII LAT with UHF Custom RFID reader / writer
KPM150HIII REAR	KPM150HIII base configuration (OEM model with rear connectors)
KPM150HIII REAR UHF	KPM150HIII REAR with UHF Custom RFID reader / writer
B202HIII	B202HIII base configuration (TKT model)
B202HIII UHF	B202HIII base configuration (TKT model with UHF Custom RFID reader / writer)

3 PAPER SPECIFICATIONS

NOTE: All the dimensions shown in the following figures are in millimetres.

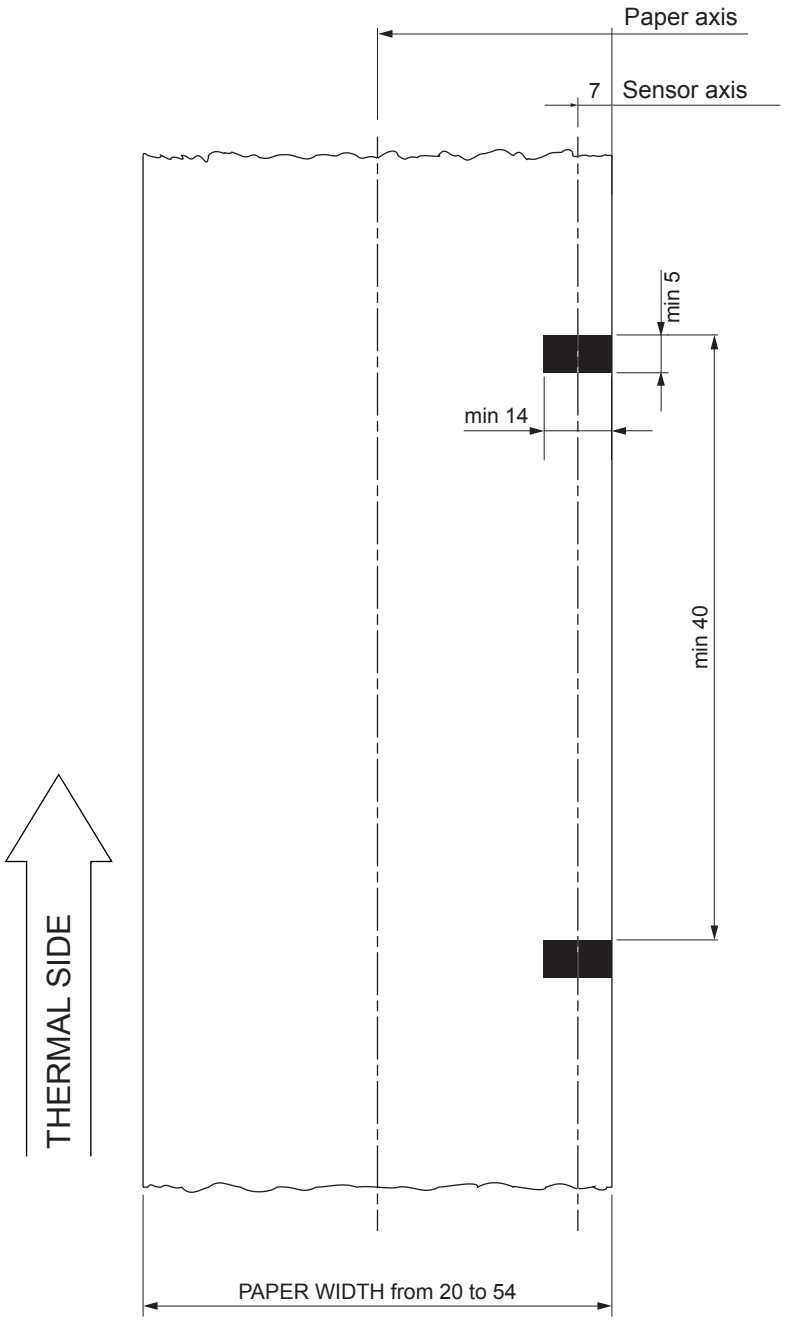
Paper with black mark on the non-thermal side

The following image shows the placement of the black mark on the non-thermal side of the paper. The black mark can be positioned anywhere on the whole width of the paper, because the black mark detector is a mobile sensor.
For more information about the use of paper with black mark see user manual.



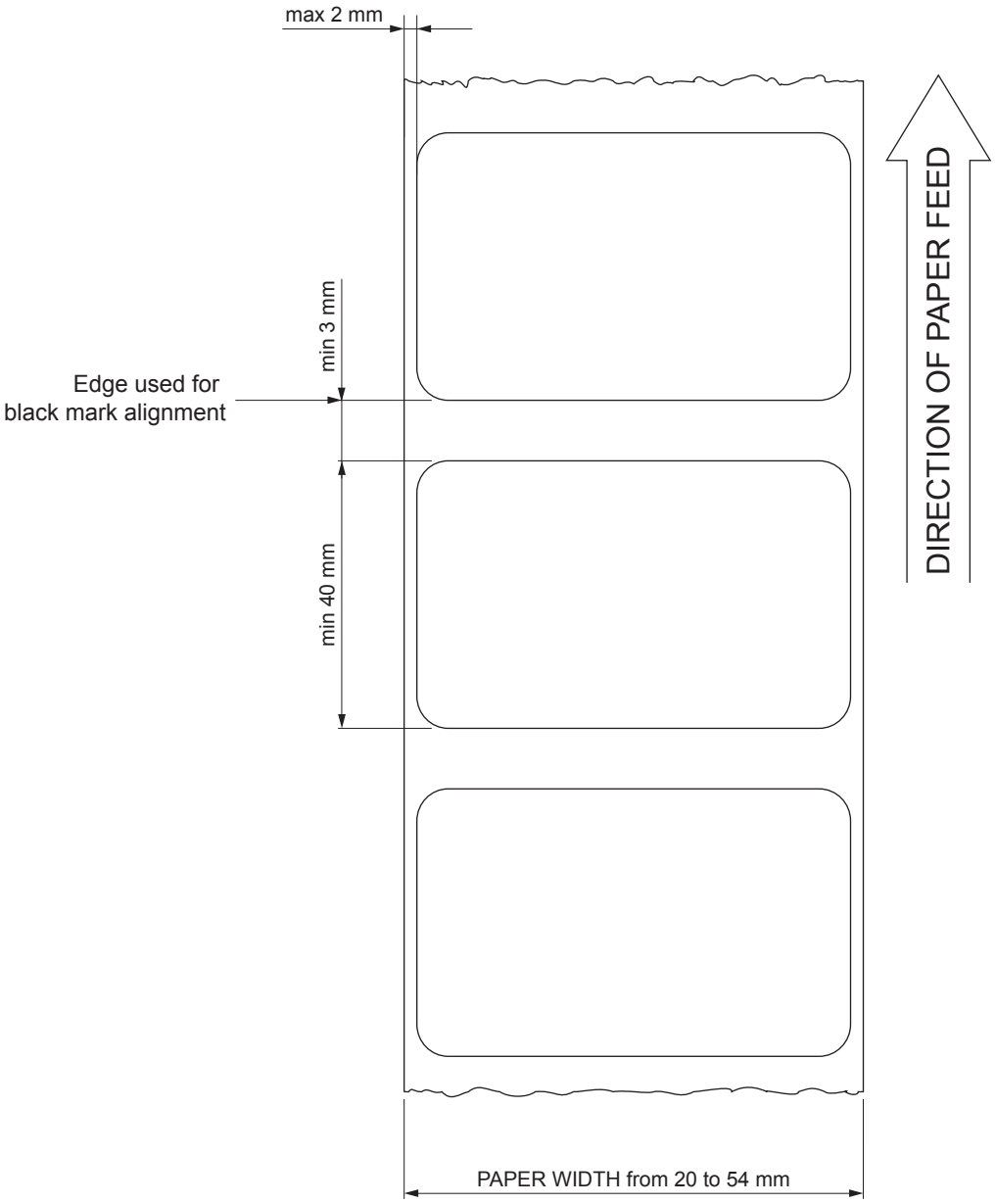
Paper with black mark on the thermal side

The following image shows the placement of the black mark on the thermal side of the paper. This sample paper is for the printer models with the upper black mark detector.
For more information about the use of paper with black mark see user manual.



Paper with labels

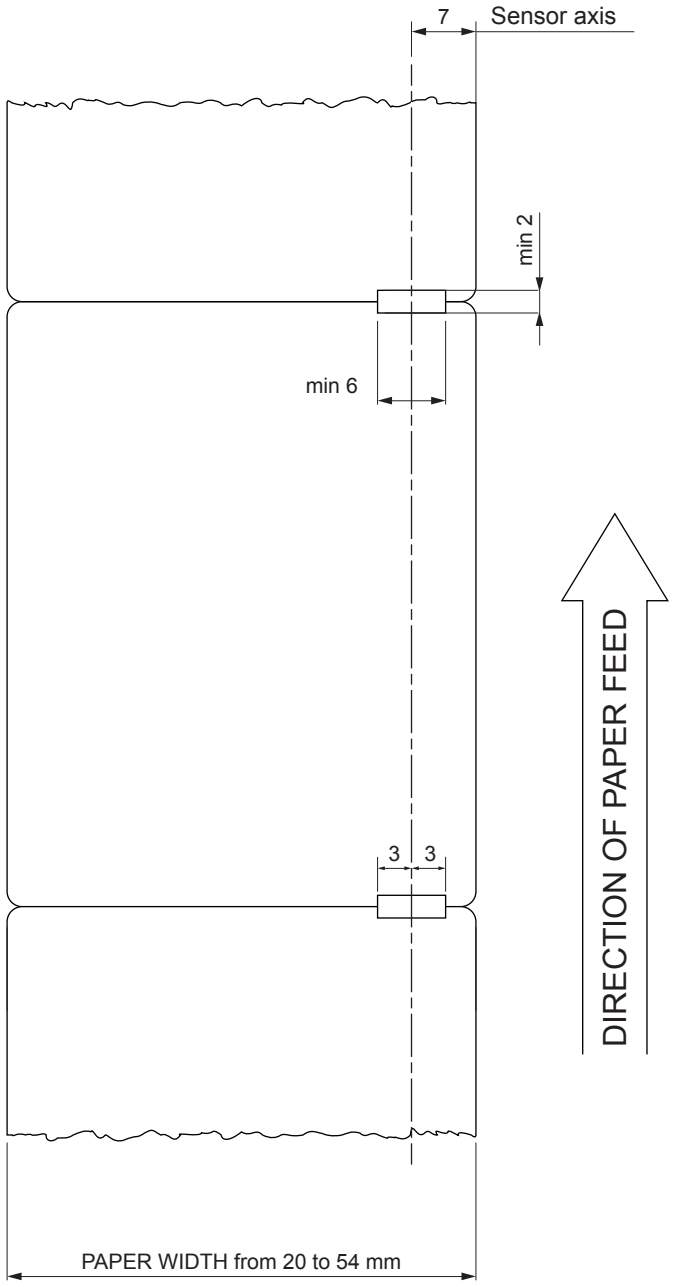
The following image shows a portion of paper with labels. To manage paper with label, you need to set the parameter “Ticket Management” to “Short Label” value.
For more information about the use of paper with labels see user manual.



Fan-fold paper with hole

The following image shows the placement of the hole on the paper. To manage tickets with hole, set the parameter “Black Mark Position” to “Transparent”.
For more information about the use of paper with hole see user manual.

NOTE: The valid format of the ticket is ISO size 54 x 85 mm.



Ticket with RFID tag
(for KPM150HIII LAT UHF, KPM150HIII REAR UHF, B202HIII UHF)

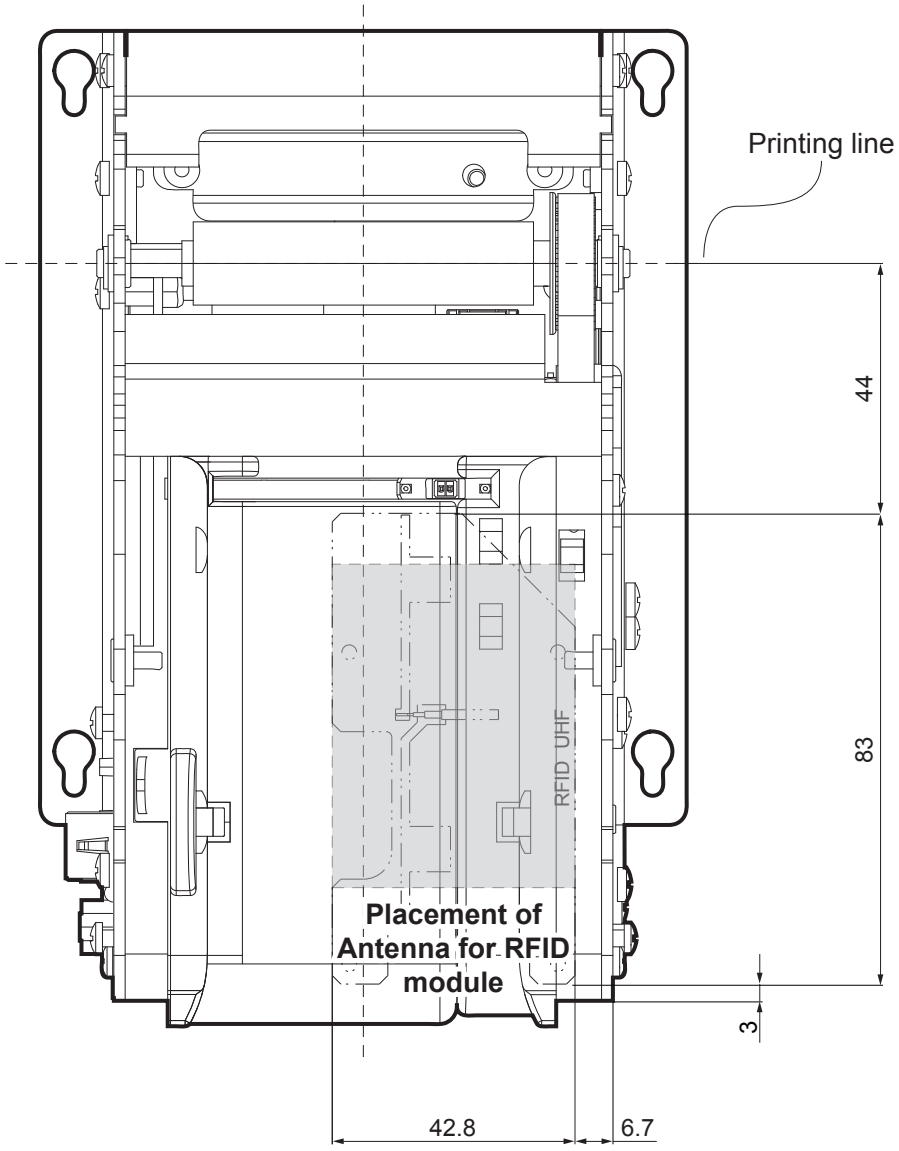
RFID (acronym for Radio Frequency IDentification) is a technology to identify automatically items using radio waves; this system is based on wireless data capture from RFID tag using appropriate readers. The RFID tag, or transponder, is made up of :

- the microchip that stores the data (including also a unique serial number written);
- an RFID antenna.

The models with RFID reader/writer are equipped with an RFID transceiver, provided with antenna, that allows to send and receive RF data to and from the tag. For this application the ticket dimensions are not binding but for good reading is important that the tag inside the ticket, after alignment, intersects the antenna area.

The following figure shows the antenna's area and its position under the paper guide inside the device.

models with UHF RFID module



NOTES:
Using ticket with RFID tag, the minimum managed length is a credit card size ticket (84x54 mm).
For ease of reference, for some models is represented only the printer group without the external plastic chassis.

CUSTOM/POS EMULATION

1 COMMANDS LISTED IN ALPHANUMERIC ORDER

2 COMMANDS LISTED BY FUNCTION

BARCODE COMMANDS

CHARACTERS COMMANDS

COMMANDS FOR TT FONTS MANAGEMENT

LINE SPACING COMMANDS

PRINTING COMMANDS

STATUS COMMANDS

BIT-IMAGE COMMANDS

PRINTING POSITION COMMANDS

MACRO FUNCTIONS COMMANDS

MECHANISM CONTROL COMMANDS

ALIGNMENT COMMANDS

EJECTOR MANAGEMENT COMMANDS

LOGOS MANAGEMENT COMMANDS

MISCELLANEOUS COMMANDS

PAGE MODE COMMANDS

0x1D 0x28 0x6B

<GS (>

Print two-dimensional barcode

Valid for	KPM150HIII LAT, KPM150HIII REAR, KPM150HIII LAT UHF, KPM150HIII REAR UHF B202HIII, B202HIII UHF

[Format]

Hex	1D	28	6B	pL	pH	cn	fn
ASCII	GS	(	k	pL	pH	cn	fn

[Range]

cn = 0x30, 0x31, 0x33, 0x50, 0x51
0x41 ≤ fn ≤ 0x45
0x50 ≤ fn ≤ 0x52

[Description]

Processes the data concerning two-dimensional barcode.
• Barcode type is specified by cn
• Function is specified by fn

cn	fn	FUNCTION	
0x30	0x41	Function 065	PDF 417: Specify the number of columns
0x30	0x42	Function 066	PDF 417: Specify the number of rows
0x30	0x43	Function 067	PDF 417: Specify the width of module
0x30	0x44	Function 068	PDF 417: Specify the module height
0x30	0x45	Function 069	PDF 417: Specify the error correction level
0x30	0x50	Function 080	PDF 417: Store the received data in the barcode save area
0x30	0x51	Function 081	PDF 417: Print the barcode data in the barcode save area
0x31	0x41	Function 165	QRcode: Specify encoding scheme
0x31	0x42	Function 166	QRcode: Specify the selected version
0x31	0x43	Function 167	QRcode: Specify size of barcode
0x31	0x45	Function 169	QRcode: Specify the error correction level
0x31	0x50	Function 180	QRcode: Store the received data in the barcode save area
0x31	0x51	Function 181	QRcode: Print the barcode data
0x31	0x52	Function 182	QRcode: Transmit the barcode size in the barcode save area
0x33	0x43	Function 367	Two-dimensional GS1 Databar: Module width setting
0x33	0x50	Function 380	Two-dimensional GS1 Databar: Store the received data in the barcode save area

0x33	0x51	Function 381	Two-dimensional GS1 Databar: Print symbol archive area symbol data
0x33	0x52	Function 382	Two-dimensional GS1 Databar: Send symbol archive area symbol data size information
0x50	0x41	Function P65	AZTEC: Specify encoding scheme
0x50	0x43	Function P67	AZTEC: Specify dot size of the module
0x50	0x44	Function P68	AZTEC: Specify size of barcode
0x50	0x45	Function P69	AZTEC: Specify the error correction level
0x50	0x50	Function P80	AZTEC: Store the received data in the barcode save area
0x50	0x51	Function P81	AZTEC: Print the barcode
0x51	0x41	Function Q65	DATAMATRIX: Set encoding scheme
0x51	0x42	Function Q66	DATAMATRIX: Set rotate
0x51	0x43	Function Q67	DATAMATRIX: Set dot size of the module
0x51	0x44	Function Q68	DATAMATRIX: Set size of barcode
0x51	0x50	Function Q80	DATAMATRIX: Store the received data in the barcode save area
0x51	0x51	Function Q81	DATAMATRIX: Print the barcode data in the barcode save area

[Notes]

[Default]

[Reference]

[Example]

0x1D 0x28 0x6B [fn 065]

<GS (k>

Specify the number of columns of PDF417 barcode

Valid for	KPM150HIII LAT, KPM150HIII REAR, KPM150HIII LAT UHF, KPM150HIII REAR UHF B202HIII, B202HIII UHF

[Format]

Hex	1D	28	6B	pL	pH	30	41	n
ASCII	GS	(	k	pL	pH	0	A	n

[Range]

(pL + pH × 256) = 3 (pL = 0x03, pH = 0x00)
0x00 ≤ n ≤ 0x1E

[Description]

Specifies the number of columns of PDF417 barcode.

- pL and pH specify the number of successive bytes to be sent.
- n = 0x00 specifies auto processing.
- When n is not 0x00, specifies the number of columns of the data area as n code word.
- When auto processing (n = 0x00) is specified, the maximum number of columns in the data area is 30 columns.

[Notes]

- The following data is not included in the number of columns:
  - start pattern and stop pattern
  - indicator code word of left and right
- Settings are effective until 0x1B 0x40 is executed, the printer is reset or the power is turned off.

[Default]

n = 0x00

[Reference]

0x1D 0x28 0x6B

[Example]

To define 3 columns, the command sequence is
0x1D 0x28 0x6B 0x03 0x00 0x30 0x41 0x03

0x1D 0x28 0x6B [fn 066]

<GS (k>

Specify the number of rows of PDF417 barcode

Valid for	KPM150HIII LAT, KPM150HIII REAR, KPM150HIII LAT UHF, KPM150HIII REAR UHF B202HIII, B202HIII UHF

[Format]

Hex	1D	28	6B	pL	pH	30	42	n
ASCII	GS	(	k	pL	pH	0	B	n

[Range]

(pL + pH × 256) = 3 (pL = 3, pH = 0)
n = 0x00
0x03 ≤ n ≤ 0x14

[Description]

Specifies the number of rows of PDF417 barcode.
- pL and pH specify the number of successive bytes to be sent.
- n = 0x00 specifies auto processing.
- When n is not 0x00, specifies the number of rows of the data area as n rows.
- When auto processing (n = 0x00) is specified, the maximum number of rows is 20.

[Notes]

Settings are effective until 0x1B 0x40 is executed, the printer is reset or the power is turned off.

[Default]

n = 0x00

[Reference]

0x1D 0x28 0x6B

[Example]

To define 3 rows, the command sequence is
0x1D 0x28 0x6B 0x03 0x00 0x30 0x42 0x03

0x1D 0x28 0x6B [fn 067]

<GS (k>

Specify the width of a module of PDF417 barcode

Valid for	KPM150HIII LAT, KPM150HIII REAR, KPM150HIII LAT UHF, KPM150HIII REAR UHF B202HIII, B202HIII UHF

[Format]								
	Hex	1D	28	6B	pL	pH	30	43	n
	ASCII	GS	(	k	pL	pH	0	C	n

[Range] (pL + pH × 256) = 3 (pL = 0x03, pH = 0x00)
0x02 ≤ n ≤ 0x08

[Description] Specifies the width of a module of PDF417 barcode.

[Notes]
- Settings are effective until 0x1B 0x40 is executed, the printer is reset or the power is turned off.
- pL and pH specify the number of successive bytes to be sent.

[Default] n = 0x03

[Reference] 0x1D 0x28 0x6B

[Example] To set width = 4, the command sequence is
0x1D 0x28 0x6B 0x03 0x00 0x30 0x43 0x04

0x1D 0x28 0x6B [fn 068]

<GS (k>

Specify the height of the module of PDF417 barcode

Valid for	KPM150HIII LAT, KPM150HIII REAR, KPM150HIII LAT UHF, KPM150HIII REAR UHF B202HIII, B202HIII UHF

[Format]

Hex	1D	28	6B	pL	pH	30	44	n
ASCII	GS	(	k	pL	pH	0	D	n

[Range] (pL + pH × 256) = 3 (pL = 0x03, pH = 0x00)
0x02 ≤ n ≤ 0x08

[Description] Specifies the height of the module of the PDF417 barcode.

[Notes]
- Settings are effective until 0x1B 0x40 is executed, the printer is reset or the power is turned off.
- pL and pH specify the number of successive bytes to be sent.

[Default] n = 0x03

[Reference] 0x1D 0x28 0x6B

[Example] To set height = 4, the command sequence is:
0x1D 0x28 0x6B 0x03 0x00 0x30 0x44 0x04

0x1D 0x28 0x6B [fn 069] <GS (k>

Specify the error correction level of PDF417 barcode

Valid for	KPM150HIII LAT, KPM150HIII REAR, KPM150HIII LAT UHF, KPM150HIII REAR UHF B202HIII, B202HIII UHF

[Format]										
	Hex	1D	28	6B	pL	pH	30	45	m	n
	ASCII	GS	(	k	pL	pH	0	E	m	n

[Range]
(pL + pH × 256) = 4 (pL = 0x04, pH = 0x0x)
m = 0x30 0x30 ≤ n ≤ 0x38
m = 0x31 0x01 ≤ n ≤ 0x28

[Description]
Specifies the error correction level of PDF417 barcode.
- pL and pH specify the number of successive bytes to be sent.
- The error correction level is specified by “level” when m = 0x30.
- The error correction level is specified by “ratio” when m = 0x31 [n × 10%].

[Notes]
- Error correction level is specified by either “level” or “ratio”.
- Error correction level specified by “level” (m = 48) is as follows. The number of the error correction code word is fixed regardless of the number of code words on the data area.

n	CORRECTION LEVEL	N. OF ERROR CORRECTION CODE WORD
0x30	Error correction level 0	2
0x31	Error correction level 1	4
0x32	Error correction level 2	8
0x33	Error correction level 3	16
0x34	Error correction level 4	32
0x35	Error correction level 5	64
0x36	Error correction level 6	128
0x37	Error correction level 7	256
0x38	Error correction level 8	512

- Error correction level specified by “ratio” (m = 0x31) is as follows. The error correction level is defined by the calculated value [number of data code word × n × 0.1 = (A)]. The number of the error correction code word is changeable in proportion to the number of the code words on the data area.

CALCULATED VALUE (A)	CORRECTION LEVEL	N. OF ERROR CORRECTION CODE WORD
0 - 3	Error correction level 1	4
4 - 10	Error correction level 2	8
11 - 20	Error correction level 3	16
21 - 45	Error correction level 4	32
46 - 100	Error correction level 5	64
101 - 200	Error correction level 6	128
201 - 400	Error correction level 7	256
> 400	Error correction level 8	512

• Settings are effective until 0x1B 0x40 is executed, the printer is reset or the power is turned off.

[Default] m = 0x31, n = 0x01 [ratio: 10%]

[Reference] 0x1D 0x28 0x6B

[Example] To set error correction = 0.2, the command sequence is:
0x1D 0x28 0x6B 0x03 0x00 0x30 0x45 0x30 0x02

0x1D 0x28 0x6B [fn 080]

<GS (k>

Store the PDF417 barcode data in the barcode save area

Valid for	KPM150HIII LAT, KPM150HIII REAR, KPM150HIII LAT UHF, KPM150HIII REAR UHF B202HIII, B202HIII UHF

[Format]

Hex	1D	28	6B	pL	pH	30	50	30	d1...dk
ASCII	GS	(	k	pL	pH	0	P	0	d1...dk

[Range]

0x00 ≤ d ≤ 0xFF

k = (pL + pH × 256) - 3

- PDF417 barcode only with ASCII characters:
  4 ≤ (pL + pH × 256) ≤ 1112 (0x00 ≤ pL ≤ 0xFF, 0x00 ≤ pH ≤ 0x04)
- PDF417 barcode only with alphanumeric characters:
  4 ≤ (pL + pH × 256) ≤ 1854 (0x00 ≤ pL ≤ 0xFF, 0x00 ≤ pH ≤ 0x07)
- PDF417 barcode only with numeric characters:
  4 ≤ (pL + pH × 256) ≤ 2729 (0x00 ≤ pL ≤ 0xFF, 0x00 ≤ pH ≤ 0x0A)

[Description]

Store the PDF417 barcode data (d1...dk) in the barcode save area.

[Notes]

- Data stored in the barcode save area by this function are processed by Function 081 and then reserved.
- pL and pH specify the number of successive bytes to be sent.
- k bytes of d1...dk are processed as barcode data.
- Specify only the data code word of the barcode with this function. Be sure not to include the control data in the data d1...dk because they are added automatically by the printer.
- Settings are effective until 0x1B 0x40 is executed, the printer is reset or the power is turned off.

[Default]

[Reference]

0x1D 0x28 0x6B

[Example]

0x1D 0x28 0x6B [fn 081]

<GS (k>

Encodes and prints the PDF417 barcode data in the barcode save area

Valid for	KPM150HIII LAT, KPM150HIII REAR, KPM150HIII LAT UHF, KPM150HIII REAR UHF B202HIII, B202HIII UHF

[Format]

Hex	1D	28	6B	pL	pH	30	51	30
ASCII	GS	(	k	pL	pH	0	Q	0

[Range] (pL + pH × 256) = 3 (pL = 0x03, pH = 0x00)

[Description] Encodes and prints the PDF417 barcode data in the barcode save area.

[Notes]

- In standard mode, use this function when printer is at the beginning of a line or there is no data in the print buffer.
- pL and pH specify the number of successive bytes to be sent.
- A barcode that size exceeds the printing area cannot be printed.
- If there is any error described below in the data of the barcode save area, it cannot be printed.
  - There is no data (Function 080 is not processed).
  - If [(number of columns × number of rows) < number of code word] when auto processing is specified for number of columns and number of rows.
  - Number of code word exceeds 928 in the data area.
- When auto processing (Function 065) is specified, the number of columns is calculated by the current printing area, module width (Function 067) and the code word in the data area. Maximum number of the columns is 30.

[Default]

[Reference] 0x1D 0x28 0x6B

[Example] To print the PDF417 barcode data the command sequence is
0x1D 0x28 0x6B 0x03 0x00 0x30 0x51 0x30

0x1D 0x28 0x6B [fn 165]

<GS (>

Specify encoding scheme of QRcode barcode

Valid for	KPM150HIII LAT, KPM150HIII REAR, KPM150HIII LAT UHF, KPM150HIII REAR UHF B202HIII, B202HIII UHF

[Format]

Hex	1D	28	6B	pL	pH	31	41	n1	n2
ASCII	GS	(	k	pL	pH	1	A	n1	n2

[Range] (pL+pH × 256) = 4 (pL = 0x04, pH = 0x00)
0x32 ≤ n1 ≤ 0x33
n2 = 0x000

[Description] Specifies encoding type of QRcode barcode, based on the value of n1 as follows:

n1	ENCODING SCHEME
0x32	QRcode model 2
0x33	MicroQR

[Notes]
- QRcode: Encode all extended ASCII characters data up to a maximum length of 7089 numeric digits, 4296 alphabetic characters or 2953 bytes of data.
- pL and pH specify the number of successive bytes to be sent.
- MicroQR (a miniature version of the QRcode barcode for short message): Encode all numbers from 0 to 9 up to a maximum length of 35 characters.

[Default] n1 =0x32, n2 = 0x00

[Reference] 0x1D 0x28 0x6B

[Example]

QRcode Model 2

MicroQR

0x1D 0x28 0x6B [fn 166]

<GS (>

Specify QRcode version

Valid for	KPM150HIII LAT, KPM150HIII REAR, KPM150HIII LAT UHF, KPM150HIII REAR UHF B202HIII, B202HIII UHF

[Format]

Hex	1D	28	6B	pL	pH	31	42	n
ASCII	GS	(	k	pL	pH	1	B	n

[Range] (pL+pH × 256) = 3 (pL = 0x03, pH = 0x00)
0x00 ≤ n ≤ 0x28

[Description] Defines QRcode version to be printed.

[Notes]
- If selected version has not enough capacity to store the saved amount of data, next smallest version capable of that capacity will be printed.
- For QRcode version capacity according to ECC (Error Correction Capability) and data type refer to following table.
- With n = 0x00 the selection of the version occurs automatically according to the one that allows the printing of the requested data.

n	VERSION	MODULES	ECC LEVEL	NUMERIC	ALPHANUMERIC	BINARY
0x00	AUTO	-	-	-	-	-
0x01	1	21 x 21	L	40	24	16
			M	33	19	13
			Q	26	15	10
			H	16	9	6
0x02	2	25 x 25	L	76	46	31
			M	62	37	25
			Q	47	28	19
			H	33	19	13
0x03	3	29 x 29	L	126	76	52
			M	100	60	41
			Q	76	46	31
			H	57	34	23
0x04	4	33 x 33	L	186	113	77
			M	148	89	61
			Q	110	66	45
			H	81	49	33
0x05	5	37 x 37	L	254	153	105
			M	201	121	83
			Q	143	86	59
			H	105	63	43
0x06	6	41 x 41	L	321	194	133
			M	254	153	105
			Q	177	107	73
			H	138	83	57

n	VERSION	MODULES	ECC LEVEL	NUMERIC	ALPHANUMERIC	BINARY
0x07	7	45 x 45	L	369	223	153
			M	292	177	121
			Q	206	124	85
			H	153	92	63
0x08	8	49 x 49	L	460	278	191
			M	364	220	151
			Q	258	156	107
			H	201	121	83
0x09	9	53 x 53	L	551	334	229
			M	431	261	179
			Q	311	188	129
			H	234	142	97
0x0A	10	57 x 57	L	651	394	270
			M	512	310	212
			Q	363	220	150
			H	287	173	118
0x0B	11	61 x 61	L	771	467	320
			M	603	365	250
			Q	426	258	176
			H	330	199	136
0x0C	12	65 x 65	L	882	534	366
			M	690	418	286
			Q	488	295	202
			H	373	226	154
0x0D	13	69 x 69	L	1021	618	424
			M	795	482	330
			Q	579	351	240
			H	426	258	176
0x0E	14	73 x 73	L	1100	666	457
			M	870	527	361
			Q	620	375	257
			H	467	282	193
0x0F	15	77 x 77	L	1249	757	519
			M	990	599	411
			Q	702	425	291
			H	529	320	219
0x10	16	81 x 81	L	1407	853	585
			M	1081	655	449
			Q	774	469	321
			H	601	364	249
0x11	17	85 x 85	L	1547	937	643
			M	1211	733	503
			Q	875	530	363
			H	673	407	279
0x12	18	89 x 89	L	1724	1045	717
			M	1345	815	559
			Q	947	573	393
			H	745	451	309
0x13	19	93 x 93	L	1902	1152	791
			M	1499	908	623
			Q	1062	643	441
			H	812	492	337

n	VERSION	MODULES	ECC LEVEL	NUMERIC	ALPHANUMERIC	BINARY
0x14	20	97 x 97	L	2060	1248	857
			M	1599	969	665
			Q	1158	701	481
			H	918	556	381
0x15	21	101 x 101	L	2231	1351	928
			M	1707	1034	710
			Q	1223	741	508
			H	968	586	402
0x16	22	105 x 105	L	2408	1459	1002
			M	1871	1133	778
			Q	1357	822	564
			H	1055	639	438
0x17	23	109 x 109	L	2619	1587	1090
			M	2058	1247	856
			Q	1467	889	610
			H	1107	671	460
0x18	24	113 x 113	L	2811	1703	1170
			M	2187	1325	90
			Q	1587	92	60
			H	1227	73	50
0x19	25	117 x 117	L	3056	1852	1272
			M	2394	1450	96
			Q	1717	1040	74
			H	1285	78	54
0x1A	26	121 x 121	L	3282	198	1366
			M	2543	1541	1058
			Q	1803	1093	70
			H	1424	83	52
0x1B	27	125 x 125	L	3516	2131	1464
			M	2700	1636	1124
			Q	1932	1171	84
			H	1500	89	64
0x1C	28	129 x 129	L	3668	2222	1527
			M	2856	1731	118
			Q	2084	1262	87
			H	1580	97	67
0x1D	29	133 x 133	L	3908	2368	1627
			M	3034	1838	1263
			Q	2180	1321	97
			H	1676	1015	67
0x1E	30	137 x 137	L	4157	251	1731
			M	3288	1993	136
			Q	2357	1428	91
			H	1781	107	71
0x1F	31	141 x 141	L	4416	2676	183
			M	3485	2112	1451
			Q	2472	1498	102
			H	1896	114	69
0x20	32	145 x 145	L	4685	283	1951
			M	3692	2237	1537
			Q	266	1617	1111
			H	2021	1225	81

n	VERSION	MODULES	ECC LEVEL	NUMERIC	ALPHANUMERIC	BINARY
0x21	33	149 x 149	L	4964	3008	2067
			M	3908	2368	1627
			Q	2804	16	1167
			H	2156	1306	87
0x22	34	153 x 153	L	5252	3182	2187
			M	4133	2505	1721
			Q	2948	1786	1227
			H	2300	1393	97
0x23	35	157 x 157	L	5528	3350	2302
			M	4342	2631	1808
			Q	3080	1866	1282
			H	2360	1430	92
0x24	36	161 x 161	L	5835	3536	2430
			M	4587	277	1910
			Q	3243	1965	1350
			H	2523	152	1050
0x25	37	165 x 165	L	6152	3728	2562
			M	4774	2893	1988
			Q	3416	2070	1422
			H	2624	1590	1092
0x26	38	169 x 169	L	6478	3926	2698
			M	5038	3053	2098
			Q	3598	2180	1498
			H	2734	1657	1138
0x27	39	173 x 173	L	6742	4086	2808
			M	5312	321	2212
			Q	3790	2297	1578
			H	2926	1773	1218
0x28	40	177 x 177	L	7088	4295	2952
			M	5595	3390	2330
			Q	3992	241	1662
			H	3056	1851	1272

[Default] n = 0x00

[Reference] 0x1D 0x28 0x6B

[Example] To select QRcode version 8 the command sequence is:
0x1D 0x28 0x6B 0x03 0x00 0x31 0x42 0x08

0x1D 0x28 0x6B [fn 167]

<GS (>

Specify dot size of the module of the QR Code barcode

Valid for	KPM150HIII LAT, KPM150HIII REAR, KPM150HIII LAT UHF, KPM150HIII REAR UHF B202HIII, B202HIII UHF

[Format]	Hex	1D	28	6B	pL	pH	31	43	n
	ASCII	GS	(	k	pL	pH	1	C	n

[Range] (pL+pH × 256) = 3 (pL = 0x03, pH = 0x00)
0x02 ≤ n ≤ 0x18

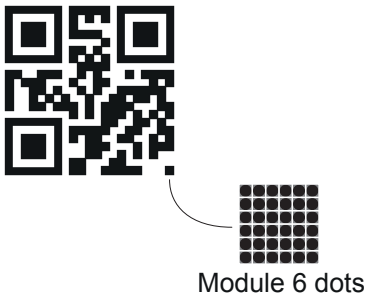
[Description] Specifies numbers of dot for each pixel of QRcode barcode.

[Notes] • pL and pH specify the number of successive bytes to be sent.

[Default] n = 0x06

[Reference] 0x1D 0x28 0x6B

[Example]



0x1D 0x28 0x6B [fn 169]

<GS (>

Specify the error correction level of the QRcode barcode

Valid for	KPM150HIII LAT, KPM150HIII REAR, KPM150HIII LAT UHF, KPM150HIII REAR UHF B202HIII, B202HIII UHF

[Format]

Hex	1D	28	6B	pL	pH	31	45	n
ASCII	GS	(	k	pL	pH	1	E	n

[Range] (pL+pH × 256) = 3 (pL = 0x03, pH = 0x00)
0x30 ≤ n ≤ 0x34

[Description] Specifies the ECC level (Error Correction Capability) of QRcode barcode.

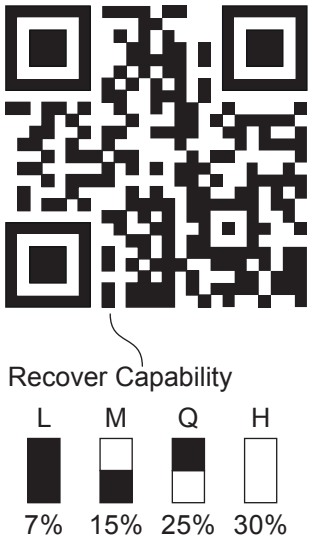
n	ECC level	
0x30	AUTO	
0x31	ECC L = approx 20% of symbol	Recovery Capability = approx 7%
0x32	ECC M = approx 37% of symbol	Recovery Capability = approx 15%
0x33	ECC Q = approx 50% of symbol	Recovery Capability = approx 25%
0x34	ECC H = approx 65% of symbol	Recovery Capability = approx 30%

[Notes] • pL and pH specify the number of successive bytes to be sent.

[Default] n = 0x30

[Reference] 0x1D 0x28 0x6B

[Example]



0x1D 0x28 0x6B [fn 180]

<GS (>

Store the QRcode barcode data in the barcode save area

Valid for	KPM150HIII LAT, KPM150HIII REAR, KPM150HIII LAT UHF, KPM150HIII REAR UHF B202HIII, B202HIII UHF

[Format]

Hex	1D	28	6B	pL	pH	31	50	30	d1...dk
ASCII	GS	(	k	pL	pH	1	P	0	d1...dk

[Range]

0x00 ≤ d ≤ 0xFF

k = (pL + pH × 256) - 3

• QRcode barcode only with binary characters (8 bit):

4 ≤ (pL + pH × 256) ≤ 2957 (0x00 ≤ pL ≤ 0xFF, 0x00 ≤ pH ≤ 0x0B)

• QRcode barcode only with alphanumeric characters:

4 ≤ (pL + pH × 256) ≤ 4300 (0x00 ≤ pL ≤ 0xFF, 0x00 ≤ pH ≤ 0x10)

• QRcode barcode only with numeric characters:

4 ≤ (pL + pH × 256) ≤ 7093 (0x00 ≤ pL ≤ 0xFF, 0x00 ≤ pH ≤ 0x1B)

[Description]

Store the QRcode barcode data (d1...dk) in the barcode save area.

[Notes]

• Data stored in the barcode save area by this function are processed by Function 181. The data in the barcode save area are reserved after processing Function 181.
• pL and pH specify the number of successive bytes to be sent.
• k bytes of d1...dk are processed as barcode data.
• Specify only the data code word of the barcode with this function.

[Default]

[Reference]

0x1D 0x28 0x6B

[Example]

0x1D 0x28 0x6B [fn 181]

<GS (>

Prints the QRcode barcode data

Valid for	KPM150HIII LAT, KPM150HIII REAR, KPM150HIII LAT UHF, KPM150HIII REAR UHF B202HIII, B202HIII UHF

[Format]	Hex	1D	28	6B	pL	pH	31	51	30
	ASCII	GS	(	k	pL	pH	1	Q	0

[Range] (pL+pH × 256) = 3 (pL = 0x03, pH = 0x00)

[Description] Prints the QRcode barcode in the current position.

[Notes] • pL and pH specify the number of successive bytes to be sent.

[Default]

[Reference] 0x1D 0x28 0x6B

[Example]

0x1D 0x28 0x6B [fn 182]

<GS (>

Transmit the QRcode barcode size in the barcode save area

Valid for	KPM150HIII LAT, KPM150HIII REAR, KPM150HIII LAT UHF, KPM150HIII REAR UHF B202HIII, B202HIII UHF

[Format]

Hex	1D	28	6B	pL	pH	31	52	30
ASCII	GS	(	k	pL	pH	1	R	0

[Range] (pL+pH × 256) = 3 (pL = 0x03, pH = 0x00)

[Description] Transmits the QRcode barcode size in the barcode save area.

[Notes]

• Data stored in the barcode save area are processed by Function 180.
• In standard mode, use this function when printer is “at the beginning of a line” or “there is no data in the print buffer”.
• pL and pH specify the number of successive bytes to be sent.
• The size information for each data is as follows:

SEND DATA	HEX	DATA
Header	37	1 byte
Identifier	36	1 byte
Horizontal size (1)	30-39	1 - 5 byte
Separator	1F	1 byte
Vertical size (1)	30-39	1 - 5 byte
Separator	1F	1 byte
Fixed value	31	1 byte
Separator	1F	1 byte
Other information (2)	30 or 31	1 byte
NUL	00	1 byte

(1) “Horizontal size” and “vertical size” indicate the number of dots of the symbol.
The decimal value of the vertical size and horizontal size is converted to text data and sent starting from the high order end. For example when horizontal size is 120 dots, horizontal size is “120” (0x31, 0x32 and 0x30), which is 3 bytes of data.
(2) ”Other information” indicates whether printing of the data in the symbol storage area is possible or impossible. The “Other information“ is the following:

HEX	CONDITION
30	Printing is possible
31	Printing is impossible

• Size information indicates size of symbol that is printed by Function 181.
• The quiet zone is not included in the size information.
• If “other information” is “Printing is impossible“(0x31), use one of the solutions shown below:

CAUSE	SOLUTION
There are data in the print buffer in the standard mode	Clear the data in the print buffer by executing 0x0A, 0x0D, 0x1B 0x4A print commands.
Symbol is bigger than the current print area.	Expand the print area by 0x1D 0x57, 0x1B 0x57, 0x1B 0x24. Reduce the module size by using Function 167. Lower the error correction level by using Function 169.
The data in the symbol storage area is too large.	Send correct data by using Function 180. Lower the error correction level by using Function 169.
There is no data in the symbol storage area.	Send data to the symbol storage area by using Function 180.

[Default]

[Reference] 0x1D 0x28 0x6B

[Example] If the answer from printer is:
0x37 0x36 0x31 0x32 0x36 0x1F 0x31 0x32 0x36 0x1F 0x31 0x1F 0x30 0x00
then it means that it is stored a barcode with size 126 x 126 dot and it is printable

0x1D 0x28 0x6B [fn 367]

<GS (>

Set the width of the module of two-dimensional GS1 Databar barcode

Valid for	KPM150HIII LAT, KPM150HIII REAR, KPM150HIII LAT UHF, KPM150HIII REAR UHF B202HIII, B202HIII UHF

[Format]

Hex	1D	28	6B	pL	pH	33	43	n
ASCII	GS	(	k	pL	pH	3	C	n

[Range] (pL+pH × 256) = 3 (pL = 0x03, pH = 0x00)
0x02 ≤ n ≤ 0x08

[Description] Sets the width of the module for GS1 Databar to n dots.

[Notes]
- pL and pH specify the number of successive bytes to be sent.
- Settings of this function affect the processing of Functions 381 and 382.
- Settings are effective until 0x1B 0x40 is executed, the printer is reset or the power is turned off.

[Default] n = 0x02

[Reference] 0x1D 0x28 0x6B

[Example]

0x1D 0x28 0x6B [fn 380] <GS (>

Store the two-dimensional GS1 Databar barcode data in the barcode save area

Valid for: KPM150HIII LAT, KPM150HIII REAR, KPM150HIII LAT UHF, KPM150HIII REAR UHF
B202HIII, B202HIII UHF

[Format]

Hex	1D	28	6B	pL	pH	33	50	30	n	d1...dk
ASCII	GS	(	k	pL	pH	3	P	0	n	d1...dk

[Range]

n = 0x48, 0x49, 0x4C
0x28 ≤ d ≤ 0x29 or 0x30 ≤ d ≤ 0x39
k = (pL + pH × 256) - 4

[Description]

Store the two-dimensional GS1 Databar barcode data (d1...dk) in the barcode save area specified by n as follows:

n	TWO-DIMENSIONAL GS1 Databar	DATA (k)	CHARACTERS (ASCII)	DATA (d)
0x48	GS1 Databar Stacked	k = 13	from '0' to '9'	0x30 ≤ d ≤ 0x39
0x49	GS1 Databar Stacked Omnidirectional	k = 13	from '0' to '9'	0x30 ≤ d ≤ 0x39 (however d1 = 0x30, 0x31)
0x4C	GS1 Databar Expanded Stacked	k = 30	all characters from '0' to '{' except for '#', '$', '@', '[', '\', ']', '^'	0x20 ≤ d ≤ 0x22, 0x25 ≤ d ≤ 0x3F, 0x41 ≤ d ≤ 0x5A, d = 0x5F, 0x61 ≤ d ≤ 0x7B

[Notes]

• Data stored in the barcode save area by this function are processed by Function 381 and 382. The data in the barcode save area are reserved after processing Function 381 or 382.
• pL and pH specify the number of successive bytes to be sent.
• k bytes of d1...dk are processed as barcode data.
• Settings are effective until 0x1B 0x40 is executed, the printer is reset or the power is turned off.
• Applied to two-dimensional GS1 Databar barcode with n = 0x48 and n = 0x49:
Transmit the 13-digit product identification number, excluding the application identifier (AI) and check digit, from the host.

[Default]

[Reference] 0x1D 0x28 0x6B

[Example]

0x1D 0x28 0x6B [fn 381] <GS (>

Encodes and prints the two-dimensional GS1 Databar barcode data in the barcode save area

Valid for	KPM150HIII LAT, KPM150HIII REAR, KPM150HIII LAT UHF, KPM150HIII REAR UHF B202HIII, B202HIII UHF

[Format]									
	Hex	1D	28	6B	pL	pH	33	51	30
	ASCII	GS	(	k	pL	pH	3	Q	0

[Range] (pL+pH × 256) = 3 (pL = 0x03, pH = 0x00)

[Description] Encodes and prints the two-dimensional GS1 Databar barcode data in the barcode save area.

[Notes]

- Data stored in the barcode save area are processed by Function 380.
- In standard mode, use this function when printer is “at the beginning of a line” or “there is no data in the print buffer”.
- pL and pH specify the number of successive bytes to be sent.
- A barcode that size exceeds the printing area cannot be printed.
- If there is any error described below in the data of the barcode save area, it cannot be printed.
  - There is no data (Function 380 is not processed).
  - When there is a problem with the amount of data saved in the barcode save area.
  - When the data saved in the barcode save area includes data outside the domain.
- Printing of symbol is not affected by print mode (emphasized, double-strike, underline, white/ black reverse printing, or 90° clockwise-rotated), except for character size and upside-down print mode.
- In standard mode, this command executes paper feeding for the amount needed for printing the symbol, regardless of the paper feed amount set by the paper feed setting command. The print position returns to the left side of the printable area after printing the symbol, and printer is in the status “beginning of the line,” or “there is no data in the print buffer.
- In page mode, the printer stores the symbol data in the print buffer without executing actual printing. The printer moves print position to the next dot of the last data of the symbol.
- The quiet zone is not included in the printing data. Be sure to include the quiet zone when using this function.
- Applied to GS1 Databar Stacked and GS1 Databar Stacked Omnidirectional. The data shown below is added automatically in encoding:
  - Application identifier (AI): The AI is ‘01’;
  - Check digit (1 character);
  - Guard pattern and separator pattern.
- Applied to GS1 Databar Expanded Stacked. The data shown below is added automatically in encoding:
  - Guard pattern, finder pattern and separator pattern;
- For encoding, the width of the symbol is decided by the setting value of Function 371 of this command (nL + nH x 256) and the current printing area.
  - When (nL + nH = 256) = 0x00, the width of the symbol is the current printing area.
  - When (nL + nH 256) is not 0x00 is specified and the setting value is greater than the current printing area, the width of the symbol is the current printing area.
  - In cases other than above, (nL + nH x 256) is the width of the symbol.

[Default]

[Reference] 0x1D 0x28 0x6B

[Example]

0x1D 0x28 0x6B [fn 382] <GS (>

Transmit the two-dimensional GS1 Databar barcode size in the barcode save area

Valid for	KPM150HIII LAT, KPM150HIII REAR, KPM150HIII LAT UHF, KPM150HIII REAR UHF B202HIII, B202HIII UHF

[Format]

Hex	1D	28	6B	pL	pH	33	52	30
ASCII	GS	(	k	pL	pH	3	R	0

[Range] (pL+pH × 256) = 3 (pL = 0x03, pH = 0x00)

[Description] Transmits the two-dimensional GS1 Databar barcode size in the barcode save area.

[Notes]

- Data stored in the barcode save area are processed by Function 380.
- In standard mode, use this function when printer is “at the beginning of a line” or “there is no data in the print buffer”.
- pL and pH specify the number of successive bytes to be sent.
- Size information of this command shows the size of the symbol which is printed with Function 381.
- The size information for each data is as follows:

SEND DATA	HEX	DATA
Header	37	1 byte
Identifier	4F	1 byte
Horizontal size (1)	30-39	1 - 5 byte
Separator	1F	1 byte
Vertical size (1)	30-39	1 - 5 byte
Separator	1F	1 byte
Fixed value	31	1 byte
Separator	1F	1 byte
Other information (2)	30 or 31	1 byte
NUL	00	1 byte

(1) “Horizontal size” and “vertical size” indicate the number of dots of the symbol.
The decimal value of the vertical size and horizontal size is converted to text data and sent starting from the high order end. (ex: When horizontal size is 120 dots, horizontal size is “120” (0x31, 0x32, and 0x30), which is 3 bytes of data.
(2) ”Other information” indicates whether printing of the data in the symbol storage area is possible or impossible. The “Other information“ is the following:

HEX	CONDITION
30	Printing is possible
31	Printing is impossible

• Size information indicates size of symbol that is printed by Function 181.
• The quiet zone is not included in the size information.
• If “other information” is “Printing is impossible“(0x31), use one of the solutions shown below:

CAUSE	SOLUTION
There are data in the print buffer in the standard mode	Put the printer in the “there is no data in the print buffer” status by executing print commands (0x0A, 0x0D, 0x1B 0x4A).
Symbol is bigger than the current print area.	Expand the print area by 0x1D 0x57, 0x1B 0x57, 0x1B 0x24. Reduce the module size by using Function 367.
There is a problem with the amount of data or with the data of the symbol data	Send correct data by using Function 380.
There is no data in the symbol storage area.	Send data to the symbol storage area by using Function 380.

[Default]

[Reference] 0x1D 0x28 0x6B

[Example]

0x1D 0x28 0x6B [fn P65]

<GS (>

Specify encoding scheme of AZTEC barcode

Valid for	KPM150HIII LAT, KPM150HIII REAR, KPM150HIII LAT UHF, KPM150HIII REAR UHF B202HIII, B202HIII UHF

[Format]

Hex	1D	28	6B	pL	pH	50	41	n
ASCII	GS	(	k	pL	pH	P	A	n

[Range] (pL + pH × 256) = 3 (pL = 0x03, pH = 0x00)
0x00 ≤ n ≤ 0x01

[Description] Specifies encoding type of AZTEC barcode.

n	ENCODING SCHEME
0x00	FULL AZTEC
0x01	AZTEC RUNE

[Notes]
- “FULL AZTEC“: Encode all extended ASCII characters data up to a maximum length of approximately 3823 numeric or 3067 alphabetic characters or 1914 bytes of data.
- pL and pH specify the number of successive bytes to be sent
- “AZTEC RUNE” (Compact Aztec Code, sometimes called Small Aztec Code): Encode all numbers from 0 to 255 up to a maximum length of 3 numbers.

[Default] n = 0x00

[Reference] 0x1D 0x28 0x6B

[Example]

0x1D 0x28 0x6B [fn P67]

<GS (>

Specify dot size of the module of the AZTEC barcode

Valid for	KPM150HIII LAT, KPM150HIII REAR, KPM150HIII LAT UHF, KPM150HIII REAR UHF B202HIII, B202HIII UHF

[Format]									
	Hex	1D	28	6B	pL	pH	50	43	n
	ASCII	GS	(	k	pL	pH	P	C	n

[Range] (pL+pH × 256) = 3 (pL = 0x03, pH = 0x00)
0x02 ≤ n ≤ 0x18

[Description] Specifies numbers of dot for each pixel of AZTEC barcode.

[Notes] pL and pH specify the number of successive bytes to be sent

[Default] n = 0x00

[Reference] 0x1D 0x28 0x6B

[Example]

0x1D 0x28 0x6B [fn P68]

<GS (>

Specify AZTEC barcode size

Valid for	KPM150HIII LAT, KPM150HIII REAR, KPM150HIII LAT UHF, KPM150HIII REAR UHF B202HIII, B202HIII UHF

[Format]	Hex	1D	28	6B	pL	pH	50	44	n
	ASCII	GS	(	k	pL	pH	P	D	n

[Range] (pL+pH × 256) = 3 (pL = 0x03, pH = 0x00)
0x00 ≤ n ≤ 0x24

[Description] Specifies AZTEC barcode format (rows and columns), as follows:

n	FORMAT	n	FORMAT	n	FORMAT
0x00	AUTO	0x0D	C53X53	0x1A	C109X109
0x01	C15X15 Compact	0x0E	C57X57	0x1B	C113X113
0x02	C19X19 Compact	0x0F	C61X61	0x1C	C117X117
0x03	C23X23 Compact	0x10	C67X67	0x1D	C121X121
0x04	C27X27 Compact	0x11	C71X71	0x1E	C125X125
0x05	C19X19	0x12	C75X75	0x1F	C131X131
0x06	C23X23	0x13	C79X79	0x20	C135X135
0x07	C27X27	0x14	C83X83	0x21	C139X139
0x08	C31X31	0x15	C87X87	0x22	C143X143
0x09	C37X37	0x16	C91X91	0x23	C147X147
0x0A	C41X41	0x17	C95X95	0x24	C151X151
0x0B	C45X45	0x18	C101X101		
0x0C	C49X49	0x19	C105X105		

[Notes] pL and pH specify the number of successive bytes to be sent

[Default] n = 0x00

[Reference] 0x1D 0x28 0x6B

[Example]

0x1D 0x28 0x6B [fn P69]

<GS (>

Specify the error correction level of the AZTEC barcode

Valid for	KPM150HIII LAT, KPM150HIII REAR, KPM150HIII LAT UHF, KPM150HIII REAR UHF B202HIII, B202HIII UHF

[Format]

Hex	1D	28	6B	pL	pH	50	45	n
ASCII	GS	(	k	pL	pH	P	E	n

[Range] (pL+pH × 256) = 4 (pL = 0x04, pH = 0x00)
0x00 ≤ n ≤ 0x04

[Description] Specifies the ECC level (Error Correction Capability) of AZTEC barcode.

n	ECC LEVEL
0x00	AUTO
0x01	> 10 % + 3 codewords
0x02	> 23 % + 3 codewords
0x03	> 36 % + 3 codewords
0x04	> 50 % + 3 codewords

• It is not possible to select both barcode size and error correction capacity for the same barcode. If both options are selected then the error correction capacity selection will be ignored.

[Notes] pL and pH specify the number of successive bytes to be sent

[Default] n = 0x00

[Reference] 0x1D 0x28 0x6B

[Example]

0x1D 0x28 0x6B [fn P80]

<GS (>

Store the AZTEC barcode data in the barcode save area

Valid for	KPM150HIII LAT, KPM150HIII REAR, KPM150HIII LAT UHF, KPM150HIII REAR UHF B202HIII, B202HIII UHF

[Format]

Hex	1D	28	6B	pL	pH	50	50	34	d1...dk
ASCII	GS	(	k	pL	pH	P	P	4	d1...dk

[Range]

0x00 ≤ d ≤ 0xFF

k = (pL + pH × 256) - 3

• AZTEC barcode only with ASCII characters:

4 ≤ (pL + pH × 256) ≤ 1918 (0x00 ≤ pL ≤ 0xFF, 0x00 ≤ pH ≤ 0x07)

• AZTEC barcode only with alphanumeric characters:

4 ≤ (pL + pH × 256) ≤ 3071 (0x00 ≤ pL ≤ 0xFF, 0x00 ≤ pH ≤ 0x0B)

• AZTEC barcode only with numeric characters:

4 ≤ (pL + pH × 256) ≤ 3836 (0x00 ≤ pL ≤ 0xFF, 0x00 ≤ pH ≤ 0x0E)

[Description]

Store the AZTEC barcode data (d1...dk) in the barcode save area.

[Notes]

• Data stored in the barcode save area by this function are processed by Function P81. The data in the barcode save area are reserved after processing Function 081.
• pL and pH specify the number of successive bytes to be sent
• k bytes of d1...dk are processed as barcode data.
• Specify only the data code word of the barcode with this function.

[Default]

[Reference]

0x1D 0x28 0x6B

[Example]

0x1D 0x28 0x6B [fn P81]

<GS (>

Prints the AZTEC barcode data

Valid for	KPM150HIII LAT, KPM150HIII REAR, KPM150HIII LAT UHF, KPM150HIII REAR UHF B202HIII, B202HIII UHF

[Format]	Hex	1D	28	6B	pL	pH	50	51	30
	ASCII	GS	(	k	pL	pH	P	Q	0

[Range] (pL+pH × 256) = 3 (pL = 0x03, pH = 0x00)

[Description] Prints the AZTEC barcode in the current position.

[Notes] pL and pH specify the number of successive bytes to be sent

[Default]

[Reference] 0x1D 0x28 0x6B

[Example]

0x1D 0x28 0x6B [fn Q65]

<GS (>

Specify the encoding scheme of DATAMATRIX barcode

Valid for	KPM150HIII LAT, KPM150HIII REAR, KPM150HIII LAT UHF, KPM150HIII REAR UHF B202HIII, B202HIII UHF

[Format]

Hex	1D	28	6B	pL	pH	51	41	n
ASCII	GS	(	k	pL	pH	Q	A	n

[Range] (pL+pH × 256) = 3 (pL = 0x03, pH = 0x00)
0x00 ≤ n ≤ 0x06

[Description] Set the encoding scheme for the DATAMATRIX barcode, specified by n as follows:

n	ENCODING SCHEME
0x00	ASCII
0x01	C40
0x02	Text
0x03	X12
0x04	Edifact
0x05	Base256
0x06	AutoBest

[Notes] pL and pH specify the number of successive bytes to be sent

[Default]

[Reference] 0x1D 0x28 0x6B

[Example] To set encoding = ASCII, the command sequence is:
0x1D 0x28 0x6B 0x03 0x00 0x33 0x41 0x00

0x1D 0x28 0x6B [fn Q66]

<GS (>

Set rotation of DATAMATRIX barcode

Valid for	KPM150HIII LAT, KPM150HIII REAR, KPM150HIII LAT UHF, KPM150HIII REAR UHF B202HIII, B202HIII UHF

[Format]

Hex	1D	28	6B	pL	pH	51	42	n
ASCII	GS	(	k	pL	pH	Q	B	n

[Range] (pL+pH × 256) = 3 (pL = 0x03, pH = 0x00)
n = 0x00, 0x01

[Description] Set barcode rotation specified by n as follows:

n	ROTATION
0x00	No rotation
0x01	90° rotation

[Notes] pL and pH specify the number of successive bytes to be sent

[Default]

[Reference] 0x1D 0x28 0x6B

[Example]

0x1D 0x28 0x6B [fn Q67]

<GS (>

Set dot size of the module of DATAMATRIX barcode

Valid for	KPM150HIII LAT, KPM150HIII REAR, KPM150HIII LAT UHF, KPM150HIII REAR UHF B202HIII, B202HIII UHF

[Format]	Hex	1D	28	6B	pL	pH	51	43	n
	ASCII	GS	(	k	pL	pH	Q	C	n

[Range] (pL+pH × 256) = 3 (pL = 0x03, pH = 0x00)
0x02 ≤ n ≤ 0x18

[Description] Set dot size of the module of the DATAMATRIX barcode.
n = dot dimension

[Notes] pL and pH specify the number of successive bytes to be sent

[Default] n = 0x06

[Reference] 0x1D 0x28 0x6B

[Example] To set dot size = 6 the command sequence is :
0x1D 0x28 0x6B 0x03 0x00 0x33 0x43 0x06

0x1D 0x28 0x6B [fn Q68]

<GS (>

Set size of DATAMATRIX barcode

Valid for	KPM150HIII LAT, KPM150HIII REAR, KPM150HIII LAT UHF, KPM150HIII REAR UHF B202HIII, B202HIII UHF

[Format]

ASCII	GS	(	k	pL	pH	51	44	n
Hex	1D	28	6B	pL	pH	Q	D	n

[Range] (pL + pH × 256) = 3 (pL = 0x03, pH = 0x00)
0x01 ≤ n ≤ 0x1D

[Description] Set the size of DATAMATRIX barcode specified by n as follows:

n	BARCODE SIZE	n	BARCODE SIZE
0x00	AUTO	0x0F	52 x 52
0x01	10 x 10	0x10	64 x 64
0x02	12 x 12	0x11	72 x 72
0x03	14 x 14	0x12	80 x 80
0x04	16 x 16	0x13	88 x 88
0x05	18 x 18	0x14	96 x 96
0x06	20 x 20	0x15	104 x 104
0x07	22 x 22	0x16	120 x 120
0x08	24 x 24	0x17	132 x 132
0x09	26 x 26	0x18	144 x 144
0x0A	32 x 32	0x19	8 x 18
0x0B	36 x 36	0x1A	8 x 32
0x0C	40 x 40	0x1B	12 x 26
0x0D	44 x 44	0x1C	12 x 36
0x0E	48 x 48	0x1D	16 x 36

[Notes] pL and pH specify the number of successive bytes to be sent

[Default] n = 0x00

[Reference] 0x1D 0x28 0x6B

[Example]

0x1D 0x28 0x6B [fn Q80]

<GS (>

Store the DATAMATRIX barcode data in the barcode save area

Valid for	KPM150HIII LAT, KPM150HIII REAR, KPM150HIII LAT UHF, KPM150HIII REAR UHF B202HIII, B202HIII UHF

[Format]

Hex	1D	28	6B	pL	pH	51	50	33	d1...dk
ASCII	GS	(	k	pL	pH	Q	P	3	d1...dk

[Range]

0x00 ≤ d ≤ 0xFF

k = (pL + pH × 256) - 3

• DATAMATRIX barcode only with ASCII characters (8 bit) :

4 ≤ (pL + pH × 256) ≤ 1560 (0x00 ≤ pL ≤ 0xFF, 0 ≤ pH ≤ 0x06)

• DATAMATRIX barcode only with alphanumeric characters:

4 ≤ (pL + pH × 256) ≤ 2339 (0x00 ≤ pL ≤ 0xFF, 0 ≤ pH ≤ 0x09)

• DATAMATRIX barcode only with numeric characters:

4 ≤ (pL + pH × 256) ≤ 3120 (0x00 ≤ pL ≤ 0xFF, 0x00 ≤ pH ≤ 0x0C)

[Description]

Store the DATAMATRIX barcode data (d1...dk) in the barcode save area.

[Notes]

• Data stored in the barcode save area by this function are processed by Function Q81. The data in the barcode save area reserved after processing Function 381.

• k bytes of d1...dk are processed as barcode data.

• Specify only the data code word of the barcode with this function. Be sure not to include the control data in the data d1...dk because they are added automatically by the printer.

• Settings are effective until 0x1B 0x40 is executed, the printer is reset or the power is turned off.

[Default]

[Reference]

0x1D 0x28 0x6B

[Example]

0x1D 0x28 0x6B [fn Q81] <GS (>

Encodes and prints the DATAMATRIX barcode data in the barcode save area

Valid for	KPM150HIII LAT, KPM150HIII REAR, KPM150HIII LAT UHF, KPM150HIII REAR UHF B202HIII, B202HIII UHF

[Format]

Hex	1D	28	6B	pL	pH	51	51	33
ASCII	GS	(	k	pL	pH	Q	Q	3

[Range] (pL+pH × 256) = 3 (pL = 0x03, pH = 0x00)

[Description] Encodes and prints the DATAMATRIX barcode data in the barcode save area.

[Notes]

- In standard mode, use this function when printer is “at the beginning of a line” or “there is no data in the print buffer”.
- pL and pH specify the number of successive bytes to be sent
- A barcode that size exceeds the printing area cannot be printed.
- If there is any error described below in the data of the barcode save area, it cannot be printer.
  - There is no data (Function Q80 is not processed).
  - If [(number of columns × number of rows) < number of code word] when auto processing is specified for number of columns and number of rows.
  - Number of code word exceeds 928 in the data area.
- When auto processing (Function Q65) is specified, the number of columns is calculated by the current printing area, module width (Function Q67) and the code word in the data area. Maximum number of the columns is 30.

[Default]

[Reference] 0x1D 0x28 0x6B

[Example] To print the DATAMATRIX barcode data the command sequence is:
0x1D 0x28 0x6B 0x03 0x00 0x51 0x51 0x33

0x1D 0x48 <GS H>

Select printing position of Human Readable Interpretation (HRI) characters

Valid for	KPM150HIII LAT, KPM150HIII REAR, KPM150HIII LAT UHF, KPM150HIII REAR UHF B202HIII, B202HIII UHF

[Format]

Hex	1D	48	n
ASCII	GS	H	n

[Range]

0x00 ≤ n ≤ 0x03
0x30 ≤ n ≤ 0x33

[Description]

Selects the printing position of HRI characters when printing barcodes. n selects the printing positions as follows:

n	FUNCTION
0x00, 0x30	Not printed
0x01, 0x31	Above the barcode
0x02, 0x32	Below the barcode
0x03, x033	Both above and below the barcode

[Notes]

HRI characters are printed using the font specified by 0x1D 0x66 command.

[Default]

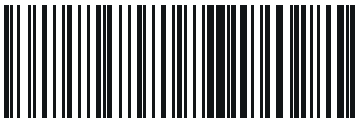
n = 0x00

[Reference]

0x1D 0x66, 0x1D 0x6B

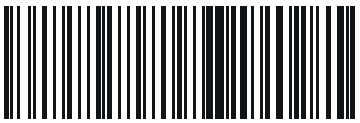
[Example]

Not printed

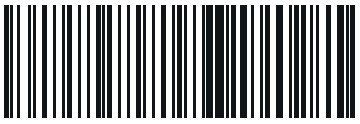


ABCDEFG123456

Above the barcode



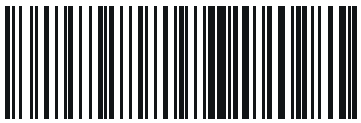
Below the barcode



ABCDEFG123456

ABCDEFG123456

Both above and below the barcode



ABCDEFG123456

0x1D 0x66

<GS f>

Select font for HRI characters

Valid for	KPM150HIII LAT, KPM150HIII REAR, KPM150HIII LAT UHF, KPM150HIII REAR UHF B202HIII, B202HIII UHF

[Format]

Hex	1D	66	n
ASCII	GS	f	n

[Range] n = 0x00, 0x01, 0x30, 0x31

[Description] Selects a font for the HRI characters used when printing a barcode. n selects a font from the following table:

n	FONT
0x00, 0x30	Font A
0x01, 0x31	Font B

[Notes] HRI characters are printed at the position specified by 0x1D 0x48.

[Default] n = 0x00

[Reference] 0x1D 0x48, 0x1D 0x6B

[Example]

0x1D 0x68 <GS h>

Set barcode height

Valid for	KPM150HIII LAT, KPM150HIII REAR, KPM150HIII LAT UHF, KPM150HIII REAR UHF B202HIII, B202HIII UHF

[Format]	Hex	1D	68	n
	ASCII	GS	h	n

[Range] 0x01 ≤ n ≤ 0xFF

[Description] Sets the height of the barcode.
n specifies the number of vertical dots.

[Notes]

[Default] n = 0xA2 (20.25 mm)

[Reference] 0x1D 0x6B

[Example] To print a barcode with height of 15 mm, the command sequence is:
0x1D 0x68 0x78

where:
15 mm = 15 × 8 dots = 120 dots which converted in hexadecimal value = 0x78

0x1D 0x6B

<GS k>

Print barcode

Valid for	KPM150HIII LAT, KPM150HIII REAR, KPM150HIII LAT UHF, KPM150HIII REAR UHF B202HIII, B202HIII UHF

[Format 1]	Hex	1D	6B	m	[d1...dk]	00
	ASCII	GS	k	m	[d1...dk]	NUL
[Format 2]	Hex	1D	6B	m	n	[d1...dn]
	ASCII	GS	k	m	n	[d1...dn]

[Range] Format 1 0x00 ≤ m ≤ 0x08, m = 0x14

Format 2 0x41 ≤ m ≤ 0x4E, m = 0x5A

[Description] Selects a barcode system and prints the barcode. m selects a barcode system as follows:

Format 1

m	BARCODE SYSTEM	No. OF CHARACTERS	DATA RANGE
0x00	UPC-A	0x0B ≤ k ≤ 0x0C	0x30 ≤ d ≤ 0x39
0x01	UPC-E	0x0B ≤ k ≤ 0x0C	0x30 ≤ d ≤ 0x39
0x02	EAN13 (JAN)	0x0C ≤ k ≤ 0x0D	0x30 ≤ d ≤ 0x39
0x03	EAN8 (JAN)	0x07 ≤ k ≤ 0x08	0x30 ≤ d ≤ 0x39
0x04	CODE39	0x01 ≤ k	0x30 ≤ d ≤ 0x39, 0x41 ≤ d ≤ 0x5A, 0x20, 0x24, 0x25, 0x2B, 0x2D, 0x2E, 0x2F
0x05	ITF	0x01 ≤ k (even number)	0x30 ≤ d ≤ 0x39
0x06	CODABAR	0x01 ≤ k	0x30 ≤ d ≤ 0x39, 0x41 ≤ d1 ≤ 0x44, 0x24, 0x2B, 0x2D, 0x2E, 0x2F, 0x3A
0x07	CODE93	0x01 ≤ k ≤ 0xFF	0x01 ≤ d ≤ 0x7F
0x08	CODE128	0x02 ≤ k ≤ 0xFF	0x01 ≤ d ≤ 0x7F
0x14	CODE32	0x08 ≤ k ≤ 0x09	0x30 ≤ d ≤ 0x39

Format 2

m	BARCODE SYSTEM	No. OF CHARACTERS	DATA RANGE
0x41	UPC-A	0x0B ≤ n ≤ 0x0C	0x30 ≤ d ≤ 0x39
0x42	UPC-E	0x0B ≤ n ≤ 0x0C	0x30 ≤ d ≤ 0x39
0x43	EAN13 (JAN)	0x0C ≤ n ≤ 0x0D	0x30 ≤ d ≤ 0x39
0x44	EAN8 (JAN)	0x07 ≤ n ≤ 0x08	0x30 ≤ d ≤ 0x39
0x45	CODE39	0x01 ≤ n ≤ 0xFF	0x30 ≤ d ≤ 0x39, 0x41 ≤ d ≤ 0x5A, 0x20, 0x24, 0x25, 0x2B, 0x2D, 0x2E, 0x2F
0x46	ITF	0x01 ≤ n ≤ 0xFF	0x30 ≤ d ≤ 0x39
0x47	CODABAR	0x01 ≤ n ≤ 0xFF	0x30 ≤ d ≤ 0x39, 0x41 ≤ d1 ≤ 0x44, 0x24, 0x2B, 0x2D, 0x2E, 0x2F, 0x3A
0x48	CODE93	0x01 ≤ n ≤ 0xFF	0x01 ≤ d ≤ 0x7F
0x49	CODE128	0x02 ≤ n ≤ 0xFF	0x01 ≤ d ≤ 0x7F
0x4B	GS1 Databar	n = 0x0D	0x30 ≤ d ≤ 0x39
0x4C	GS1 Databar Truncated	n = 0x0D	0x30 ≤ d ≤ 0x39
0x4D	GS1 Databar Limited	n = 0x0D	0x30 ≤ d ≤ 0x39 (however d1 = 0x30, 0x31)
0x4E	GS1 Databar Expanded	0x02 ≤ n ≤ 0xFF	0x30 ≤ d ≤ 0x39, 0x41 ≤ d ≤ 0x5A, 0x61 ≤ d ≤ 0x7A, 0x20 ≤ d ≤ 0x22, 0x25 ≤ d ≤ 0x2F, 0x3A ≤ d ≤ 0x3F, d = 0x5F, 0x7B (however d1 = 0x28, 0x30 ≤ d2 ≤ 0x39, 0x30 ≤ d3 ≤ 0x39 when 0x30 ≤ d1 ≤ 0x39, 0x30 ≤ d2 ≤ 0x39)
0x5A	CODE32	0x08 ≤ n ≤ 0x09	0x30 ≤ d ≤ 0x39

[Notes]

• If d is outside of the specified range, the printer prints the following message: “BARCODE GENERATOR IS NOT OK!” and processes the data which follows as normal data.
• If the horizontal size exceeds the printing area, the printer only feeds the paper.
• This command feeds as much paper as is required to print the barcode, regardless of the line spacing specified by 0x1B 0x32 or 0x1B 0x33.
• After printing the barcode, this command sets the print position to the beginning of the line.
• This command is not affected by print modes (emphasized, double-strike, underline or character size), except for upside-down and justification mode.

Format 1

• This command ends with a NUL code.
• When the barcode system used is UPC-A or UPC-E, the printer prints the barcode data after receiving 11 (without check digit) or 12 (with check digit) byte barcode data.
• When the barcode system used is EAN13, the printer prints the barcode data after receiving 12 (without check digit) or 13 (with check digit) byte barcode data.

• When the barcode system used is EAN8, the printer prints the barcode data after receiving 7 (without check digit) or 8 (with check digit) byte barcode data.
• The number of data for ITF barcode must be even numbers. When an odd number of data is input, the printer ignores the last received data.

Format 2

If n is outside of the specified range, the printer stops command processing and processes the following data as normal data.
When CODE93 is used the printer :
• prints an HRI character (o) as a start character at the beginning of the HRI character string.
• prints an HRI character (o) as a stop character at the end of the HRI character string.
• the printer prints an HRI character (n) as a control character (0x00 to 0x1F and 0x7F).

When CODE128 is used the printer :
• please note the following regarding data transmission:
• The top part of the barcode data string must be a code set selection character (CODE A, CODE B or CODE C) which selects the first code set.
• Special characters are defined by combining two characters “{“ and one character. ASCII character “{” is defined by transmitting “{“ twice, consecutively.

SPECIFIC CHARACTER	DATA TRANSMISSION	
	ASCII	HEX
SHIFT	{S	7B, 53
CODE A	{A	7B, 41
CODE B	{B	7B, 42
CODE C	{C	7B, 43
FNC1	{1	7B, 31
FNC2	{2	7B, 32
FNC3	{3	7B, 33
FNC4	{4	7B, 34
‘{‘	{{	7B, 7B

When UPC-E is used, introducing the barcode characters, the printer prints:

TRANSMITTED DATA											PRINTED DATA					
d1	d2	d3	d4	d5	d6	d7	d8	d9	d10	d11						
0	0-9	0-9	0	0	0	0	0	0-9	0-9	0-9	d2	d3	d9	d10	d11	0
0	0-9	0-9	1	0	0	0	0	0-9	0-9	0-9	d2	d3	d9	d10	d11	1
0	0-9	0-9	2	0	0	0	0	0-9	0-9	0-9	d2	d3	d9	d10	d11	2
0	0-9	0-9	3-9	0	0	0	0	0	0-9	0-9	d2	d3	d4	d10	d11	3
0	0-9	0-9	0-9	1-9	0	0	0	0	0	0-9	d2	d3	d4	d5	d11	4
0	0-9	0-9	0-9	0-9	1-9	0	0	0	0	5-9	d2	d3	d4	d5	d6	d11

[Default]

[Reference] 0x1D 0x48, 0x1D 0x66, 0x1D 0x68, 0x1D 0x77

[Example]

Format 1: For printing a CODE39 barcode the command sequence is
0x1D 0x6B 0x04 0x54 0x45 0x53 0x54 0x00

Format 2: For printing a CODE39 barcode the command sequence is
0x1D 0x6B 0x45 0x04 0x54 0x45 0x53 0x54

0x1D 0x77

<GS w>

Set barcode width

Valid for	KPM150HIII LAT, KPM150HIII REAR, KPM150HIII LAT UHF, KPM150HIII REAR UHF B202HIII, B202HIII UHF

[Format]

Hex	1D	77	n
ASCII	GS	w	n

[Range]

0x01 ≤ n ≤ 0x06
0x81 ≤ n ≤ 0x86

[Description]

Sets the horizontal size of the barcode. n specifies the barcode width (referred to the narrow bar) as follows:

n	MODULE WIDTH (mm)
0x01, 0x81	0.125
0x02, 0x82	0.25
0x03, 0x83	0.375
0x04, 0x84	0.5
0x05, 0x85	0.625
0x06, 0x86	0.75

This command is only enabled when inserted at the beginning of a line.

	n	WIDE BAR / NARROW BAR RATIO
If n < 0x80	0x01, 0x02, 0x03, 0x04, 0x05, 0x06	3:1
If n > 0x80	0x81	3:1
	0x82	2.5:1
	0x83	2.33:1
	0x84	2.25:1
	0x85	3:1
	0x86	3:1

[Notes]

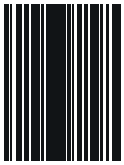
[Default]

n = 0x03

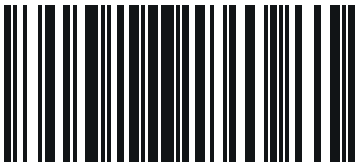
[Reference]

0x1D 0x6B

[Example]



n = 0x01



n = 0x03

0x18 <CAN>

Cancel current line transmitted

Valid for	KPM150HIII LAT, KPM150HIII REAR, KPM150HIII LAT UHF, KPM150HIII REAR UHF B202HIII, B202HIII UHF

[Format]

Hex	18
ASCII	CAN

[Range]

[Description] Deletes current line transmitted.

[Notes]
- Sets the print position to the beginning of the line.
- This command does not clear the receive buffer.

[Default]

[Reference]

[Example]

0x1B 0x20

Set right-side character spacing

Valid for	KPM150HIII LAT, KPM150HIII REAR, KPM150HIII LAT UHF, KPM150HIII REAR UHF B202HIII, B202HIII UHF

[Format]

Hex	1B	20	n
ASCII	ESC	SP	n

[Range] 0x00 ≤ n ≤ 0xFF

[Description] Sets the character spacing for the right side of the character to [n * horizontal or vertical motion units].

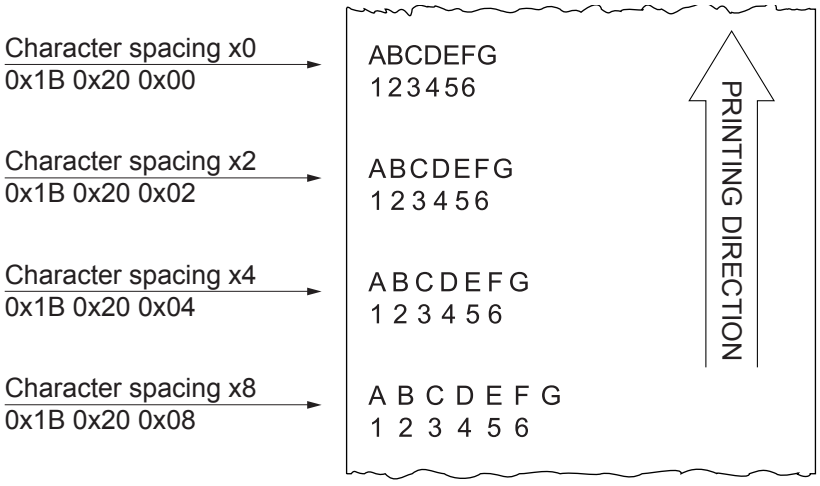
[Notes]

- The right character spacing for double-width mode is twice the normal value. When the characters are enlarged, the right side character spacing is m (2 or 8) times the normal value.
- The horizontal and vertical motion units are specified by 0x1D 0x50. Changing the horizontal or vertical motion units does not affect the current right side spacing.
- The 0x1D 0x50 command can change the horizontal (and vertical) motion unit. However, the value cannot be less than the minimum horizontal movement amount.
- The maximum right side spacing is 32 mm.
- In standard mode, the horizontal motion unit is used.

[Default] n = 0x00

[Reference] 0x1D 0x50

[Example]



0x1B 0x21

<ESC !>

Select print modes

Valid for	KPM150HIII LAT, KPM150HIII REAR, KPM150HIII LAT UHF, KPM150HIII REAR UHF B202HIII, B202HIII UHF

[Format]

Hex	1B	21	n
ASCII	ESC	!	n

[Range] 0 ≤ n ≤ 255

[Description] Selects print modes using n (see table below):

BIT	OFF/ON	n	FUNCTION	11/15 cpi	15/20 cpi
0	Off	0x00	Character font A selected	18 x 24	14 x 24
	On	0x01	Character font B selected	14 x 24	10 x 24
1	-	-	Undefined		
2	-	-	Undefined		
3	Off	0x00	Expanded mode not selected		
	On	0x08	Expanded mode selected		
4	Off	0x00	Double-height mode not selected		
	On	0x10	Double-height mode selected		
5	Off	0x00	Double-width mode not selected		
	On	0x20	Double-width mode selected		
6	Off	0x00	Italic mode not selected		
	On	0x40	Italic mode selected		
7	Off	0x00	Underline mode not selected		
	On	0x80	Underline mode selected		

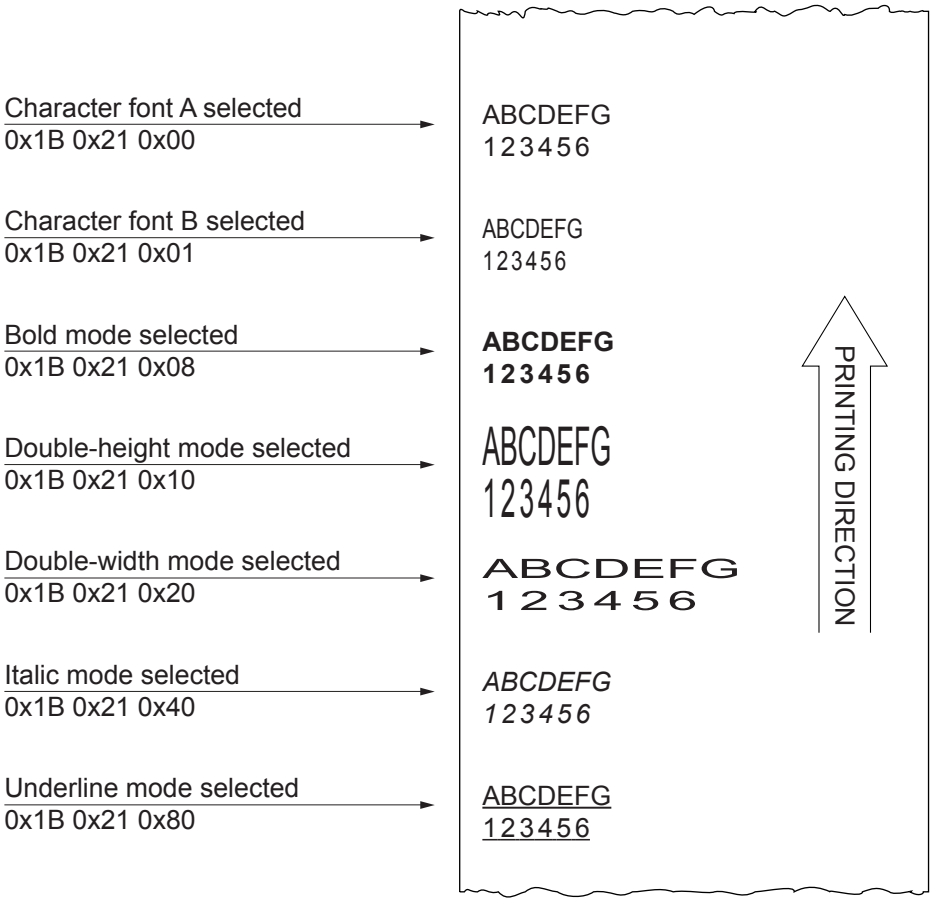
[Notes]

- The printer can underline all characters, but cannot underline the spaces set by 0x09, 0x1B 0x24, 0x1B 0x5C and 90°/270° rotated characters.
- This command resets the left and right margin at default value (see 0x1D 0x4C, 0x1D 0x57).
- 0x1B 0x45 can also be used to turn the emphasized mode on or off. However, the last-received setting command is the effective one.
- 0x1B 0x2D can also be used to turn the underlining mode on or off. However, the last-received setting command is the effective one.
- 0x1B 0x34 can also be used to turn the italic mode on or off. However, the last-received setting command is the effective one.
- 0x1D 0x21 can also be used to select character height/width. However, the last-received setting command is the effective one.
- Commands that change the height and width of characters are effective on the x and y axes. In case of 90°/270° rotated characters, command 0x1B 0x21 0x10 selects double-width mode and command 0x1B 0x21 0x20 selects double-height mode.

[Default] n = 0x00

[Reference] 0x1B 0x24, 0x1B 0x2D, 0x1B 0x34, 0x1B 0x45, 0x1D 0x21

[Example]



0x1B 0x25 <ESC %>

Select/cancel user-defined characters

Valid for	KPM150HIII LAT, KPM150HIII REAR, KPM150HIII LAT UHF, KPM150HIII REAR UHF B202HIII, B202HIII UHF

[Format]

Hex	1B	25	n
ASCII	ESC	%	n

[Range] n = 0x00, 0x01

[Description] Selects or cancels the user-defined character set.
When the Least Significant Bit (LSB) of n is 0, the user-defined character set is cancelled.
When the LSB of n is 1, the user-defined character set is selected.

[Notes]
- Only the LSB of n is applicable.
- When the user-defined character set is cancelled, the internal character set is automatically selected.

[Default] n=0x00

[Reference] 0x1B 0x26, 0x1B 0x3F

[Example]

0x1B 0x26

Defines user-defined characters

Valid for	KPM150HIII LAT, KPM150HIII REAR, KPM150HIII LAT UHF, KPM150HIII REAR UHF B202HIII, B202HIII UHF

[Format]

Hex	1B	26	y	c1	cn	x1[d0...dk] ... xn[d0...dk]
ASCII	ESC	&	y	c1	cn	x1[d0...dk] ... xn[d0...dk]

[Range]

y = 0x03
0x20 ≤ c1 ≤ cn ≤ 0x7E
0x00 ≤ x ≤ 0x12 (Font 18 x 24)
0x00 ≤ x ≤ 0x0E (Font 14 x 24)
0x00 ≤ x ≤ 0x0A (Font 10 x 24)
0x00 ≤ d0…dk ≤ 0xFF
k = cn – c1 + 1

[Description]

Defines user-defined characters.
y specifies the number of bytes in the vertical direction.
c1 specifies the beginning character code for the definition and cn specifies the final code.
x specifies the width of the character to be replaced.
d0...dk specifies the new character definition.

[Notes]

• The allowable character code range is from 0x20 to 0x7E (95 characters).
• It is possible to define multiple characters for consecutive character codes. If only one character is desired, use c1 = cn.
• If cn < c1, the command is not executed.
• d is the dot data for the characters. The dot pattern is in the horizontal direction starting from the left. Any remaining dots on the right remain blank.
• The data to define a user-defined character is (X x Y) bytes.
• To print a dot, set the corresponding bit to 1; to not have it print, set to 0.
• This command can define different user-defined character patterns for each font. To select the font, use 0x1B 0x21.
• The user-defined character definitions are cleared when: 0x1B 0x40 or 0x1D 0x2A or 0x1B 0x3F are executed or the printer is reset or the power shut off.
• x1[d0...dk] must be repeated for each character that is to be replaced.

[Default]

Internal character set

[Reference]

0x1B 0x25, 0x1B 0x3F

[Example]

To replace only the “A” character of the 11 cpi font table (font 18x24), the command sequence is:
0x1B 0x26 0x03 0x41 0x41 0x12 [54 bytes of the new character definition]

To replace “A” and “B” characters of the 11 cpi font table (font 18x24), the command sequence is:
0x1B 0x26 0x03 0x41 0x42 0x12 [54 bytes of the new character definition] 0x12 [54 bytes of the new character definition]

0x1B 0x2D

Select underline mode

Valid for	KPM150HIII LAT, KPM150HIII REAR, KPM150HIII LAT UHF, KPM150HIII REAR UHF B202HIII, B202HIII UHF

[Format]

Hex	1B	2D	n
ASCII	ESC	-	n

[Range]

0x00 ≤ n ≤ 0x02
0x30 ≤ n ≤ 0x32

[Description] Turns underline mode on or off, based on the following values of n:

n	DESCRIPTION
0x00, 0x30	Turns off underline mode
0x01, 0x31	Turns on underline mode (1-dot thick)
0x02, 0x32	Turns on underline mode (2-dot thick)

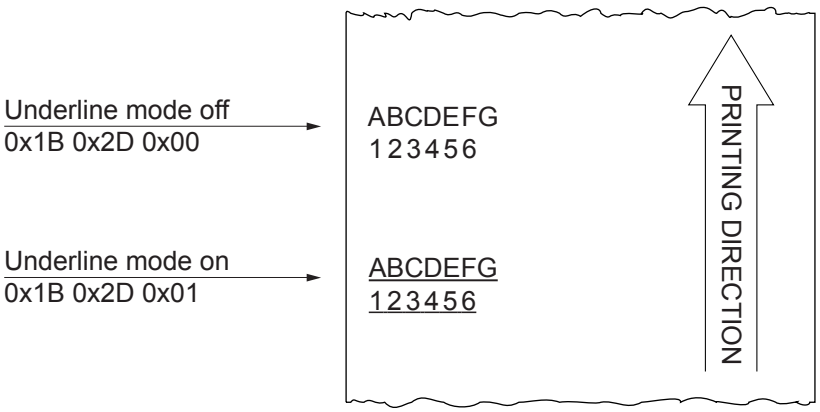
[Notes]

- The printer can underline all characters, but cannot underline the space and right-side character spacing set by command 0x09.
- The printer cannot underline 90°/270° rotated characters and white/black inverted characters.
- When underline mode is turned off by setting the value of n to 0 or 48, the data which follows is not underlined.
- Underline mode can also be turned on or off by using 0x1B 0x21. Note, however, that the last received command is the effective one.

[Default] n = 0x00

[Reference] 0x1B 0x21

[Example]



0x1B 0x34 <ESC 4>

Select italic mode

Valid for	KPM150HIII LAT, KPM150HIII REAR, KPM150HIII LAT UHF, KPM150HIII REAR UHF B202HIII, B202HIII UHF

[Format]

Hex	1B	34	n
ASCII	ESC	4	n

[Range]

0x00 ≤ n ≤ 0x01
0x30 ≤ n ≤ 0x31

[Description]

Turns italic mode on or off, based on the following values of n:

n	FUNCTION
0x00, 0x30	Turns off italic mode
0x01, 0x31	Turns on italic mode

[Notes]

- The printer can print any character in italic mode.
- When italic mode is turned off by setting the value of n to 0x00 or 0x30, the data which follows is printed in normal mode.
- Italic mode can also be turned on or off using 0x1B 0x21. However, the last-received setting command is the effective one.

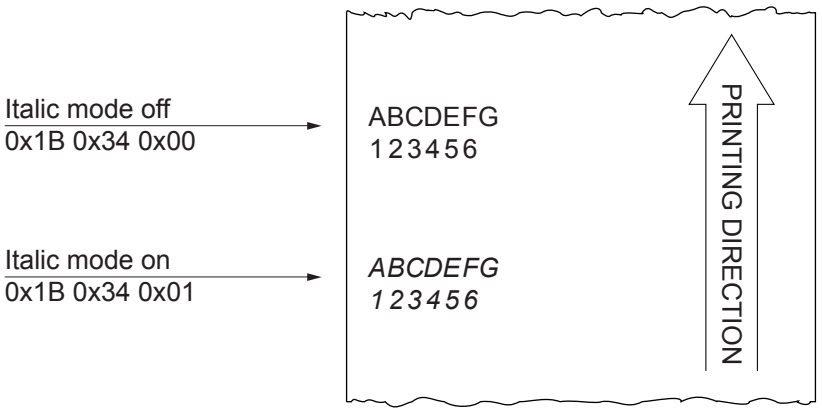
[Default]

n = 0x00

[Reference]

0x1B 0x21

[Example]



0x1B 0x3F <ESC ?>

Cancel user-defined characters

Valid for	KPM150HIII LAT, KPM150HIII REAR, KPM150HIII LAT UHF, KPM150HIII REAR UHF B202HIII, B202HIII UHF

[Format]

Hex	1B	3F	n
ASCII	ESC	?	n

[Range] 0x20 ≤ n ≤ 0x7E

[Description] Cancels user-defined characters.

[Notes]

- This command cancels the pattern defined for the character code specified by n.
- This command deletes the pattern defined for the specified character code in the font selected by 0x1B 0x26.
- If the user-defined character has not been defined for the specified character code, the printer ignores this command.

[Default]

[Reference] 0x1B 0x25, 0x1B 0x26

[Example]

0x1B 0x45 <ESC E>

Turn emphasized mode on/off

Valid for	KPM150HIII LAT, KPM150HIII REAR, KPM150HIII LAT UHF, KPM150HIII REAR UHF B202HIII, B202HIII UHF

[Format]

Hex	1B	45	n
ASCII	ESC	E	n

[Range] 0x00 ≤ n ≤ 0xFF

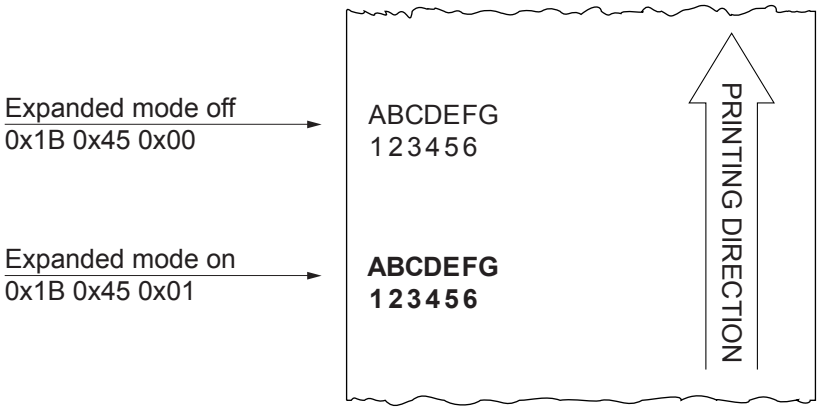
[Description] Turns emphasized mode on or off, based on the n value.
- When the LSB of n is 0, the emphasized mode is off.
- When the LSB of n is 1, the emphasized mode is on.

[Notes]
- Only the LSB of n is effective.
- 0x1B 0x21 also turns on and off the emphasized mode. However, the last received command is the effective one.

[Default] n = 0x00

[Reference] 0x1B 0x21

[Example]



0x1B 0x47

<ESC G>

Turn double-strike mode on/off

Valid for	KPM150HIII LAT, KPM150HIII REAR, KPM150HIII LAT UHF, KPM150HIII REAR UHF B202HIII, B202HIII UHF

[Format]

Hex	1B	47	n
ASCII	ESC	G	n

[Range] 0x00 ≤ n ≤ 0xFF

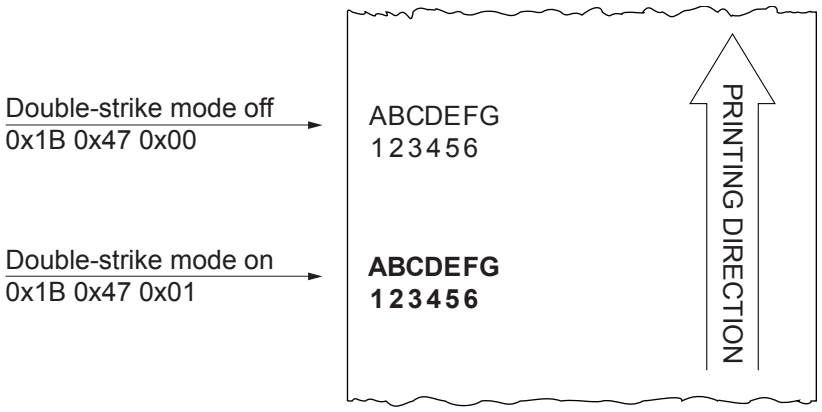
[Description] Turns double-strike mode on or off, based on the n value.
- When the LSB of n is 0, the double-strike mode is off.
- When the LSB of n is 1, the double-strike mode is on.

[Notes]
- Only the LSB of n is effective.
- Printer output is the same in double-strike and bold mode.

[Default] n = 0x00

[Reference] 0x1B 0x45

[Example]



0x1B 0x4D

Select character font

Valid for	KPM150HIII LAT, KPM150HIII REAR, KPM150HIII LAT UHF, KPM150HIII REAR UHF B202HIII, B202HIII UHF

[Format]

Hex	1B	4D	n
ASCII	ESC	M	n

[Range] n = 0x00, 0x01, 0x30, 0x31

[Description] Selects characters font depending of cpi value set (Char/Inch) as follows

CHAR/INCH	n	FUNCTION
A = 11 cpi B = 15 cpi	0x00, 0x30	Font 11 cpi (18x24)
	0x01, 0x31	Font 15 cpi (14x24)
A = 15 cpi B = 20 cpi	0x00, 0x30	Font 15 cpi (14x24)
	0x01, 0x31	Font 20 cpi (10x24)

[Notes]

[Default]

[Reference] 0x1B 0xC1

[Example]

0x1B 0x52 <ESC R>

Select international character set

Valid for: KPM150HIII LAT, KPM150HIII REAR, KPM150HIII LAT UHF, KPM150HIII REAR UHF
B202HIII, B202HIII UHF

[Format]

Hex	1B	52	n
ASCII	ESC	R	n

[Range] 0x00 ≤ n ≤ 0x0A

[Description] Selects the international character set n according to the table below:

HEX		23	24	40	5B	5C	5D	5E	60	7B	7C	7D	7E
n	CHARACTERS SET												
0x00	U.S.A.	#	$	@	[	\	]	^	`	{	|	}	~
0x01	France	#	$	à	°	ç	§	^	`	é	ù	è	“
0x02	Germany	#	$	§	Ä	Ö	Ü	^	`	ä	ö	ü	ß
0x03	United Kingdom	£	$	@	[	\	]	^	`	{	|	}	~
0x04	Denmark I	#	$	@	Æ	Ø	Å	^	`	æ	ø	å	~
0x05	Sweden	#	¤	É	Ä	Ö	Å	Ü	é	ä	ö	å	ü
0x06	Italy	#	$	@	°	\	é	^	ù	à	ò	è	ì
0x07	Spain I	Pt	$	@	i	Ñ	¿	^	`	“	ñ	}	~
0x08	Japan	#	$	@	[	¥	]	^	`	{	|	}	~
0x09	Norway	#	¤	É	Æ	Ø	Å	Ü	é	æ	ø	å	ü
0x0A	Denmark II	#	$	É	Æ	Ø	Å	Ü	é	æ	ø	å	ü

[Notes]

[Default] n = 0x00

[Reference]

[Example]

0x1B 0x56

<ESC V>

Select print mode 90° turned

Valid for	KPM150HIII LAT, KPM150HIII REAR, KPM150HIII LAT UHF, KPM150HIII REAR UHF B202HIII, B202HIII UHF

[Format]

Hex	1B	56	n
ASCII	ESC	V	n

[Range] n = 0x00, 0x01, 0x30, 0x31

[Description] Turns 90° rotation mode on or off. n is used as follows:

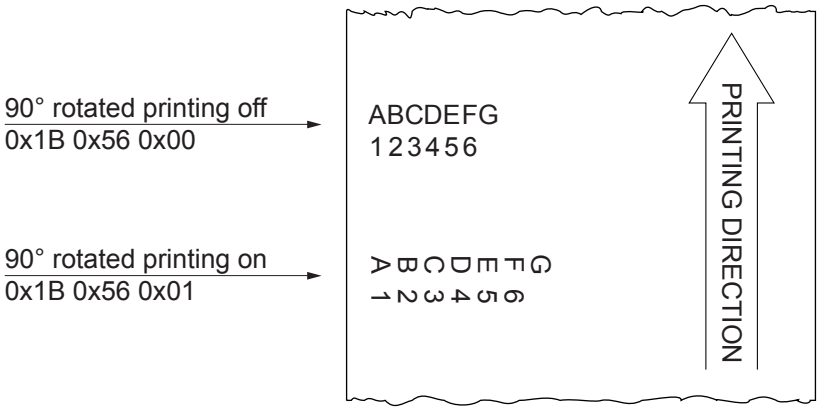
n	FUNCTION
0x00, 0x30	Turns off 90° rotation mode
0x01, 0x31	Turns on 90° rotation mode

[Notes]
- When underlined mode is turned on, the printer does not underline 90° rotated characters. All the same it's possible select the underline mode.
- Double-width and double-height commands in 90° rotation mode enlarge characters in the opposite directions from double-height and double-width commands in normal mode.
- This command is not available in Page mode.
- If this command is entered in Page mode, the printer all the same save the setting.

[Default] n = 0x00

[Reference] 0x1B 0x21, 0x1B 0x2D

[Example]



0x1B 0x74 <ESC t>

Select character code table

Valid for	KPM150HIII LAT, KPM150HIII REAR, KPM150HIII LAT UHF, KPM150HIII REAR UHF B202HIII, B202HIII UHF

[Format]

Hex	1B	74	n
ASCII	ESC	t	n

[Range]

0x01 ≤ n ≤ 0x35
n = 0xFF

[Description] Select a page n from the character code table, as follows:

n	PAGE	
0x00	PC437 - U.S.A., Standard Europe	
0x01	Katakana	
0x02	PC850 - Multilingual	
0x03	PC860 - Portuguese	
0x04	PC863 - Canadian/French	
0x05	PC865 - Nordic	
0x0B	PC851 - Greek	on request
0x0C	PC853 - Turkish	on request
0x0D	PC857 - Turkish	
0x0E	PC737 - Greek	
0x0F	ISO8859-7 - Greek	on request
0x10	WPC1252	
0x11	PC866 - Cyrillic 2	
0x12	PC852 - Latin 2	
0x13	PC858 for Euro symbol at position 0xD5	
0x14	KU42 - Thai	
0x15	TIS11 - Thai	on request
0x1A	TIS18 - Thai	on request
0x1E	TCVN_3 - Vietnamese	on request
0x1F	TCVN_3 - Vietnamese	on request
0x20	PC720 - Arabic	on request

0x21	WPC775 - Baltic Rim	on request
0x22	PC855 - Cyrillic	
0x23	PC861 - Icelandic	on request
0x24	PC862 - Hebrew	
0x25	PC864 - Arabic	
0x26	PC869 - Greek	on request
0x27	ISO8859-2 - Latin 2	on request
0x28	ISO8859-15 - Latin 9	on request
0x29	PC1098 - Farci	
0x2A	PC1118 - Lithuanian	on request
0x2B	PC1119 - Lithuanian	on request
0x2C	PC1125 - Ukrainian	
0x2D	WPC1250 - Latin 2	
0x2E	WPC1251 - Cyrillic	
0x2F	WPC1253 - Greek	
0x30	WPC1254 - Turkish	
0x31	WPC1255 - Hebrew	
0x32	WPC1256 - Arabic	
0x33	WPC1257 - Baltic Rim	
0x34	WPC1258 - Vietnamese	
0x35	KZ1048 - Kazakhstan	on request
0xFF	Space page	

[Notes]

• The tables are selectable only if the code pages are present on the machine. By selecting a code page not present on the machine, the code page remains the one currently in use.
• Make sure to select the font type “INTERNATIONAL” with the command 0x1C 0x25 or with the parameter “FONT TYPE” during the setup procedure (refer to the user manual of each device).

[Default]

n = 0

[Reference]

0x1C 0x25

[Example]

For printing Euro symbol (€), the command sequence is:
0x1B, 0x74, 0x13, 0xD5

0x1B 0x7B

<ESC {>

Set or cancel upside-down character printing

Valid for	KPM150HIII LAT, KPM150HIII REAR, KPM150HIII LAT UHF, KPM150HIII REAR UHF B202HIII, B202HIII UHF

[Format]

Hex	1B	7B	n
ASCII	ESC	{	n

[Range] 0x00 ≤ n ≤ 0xFF

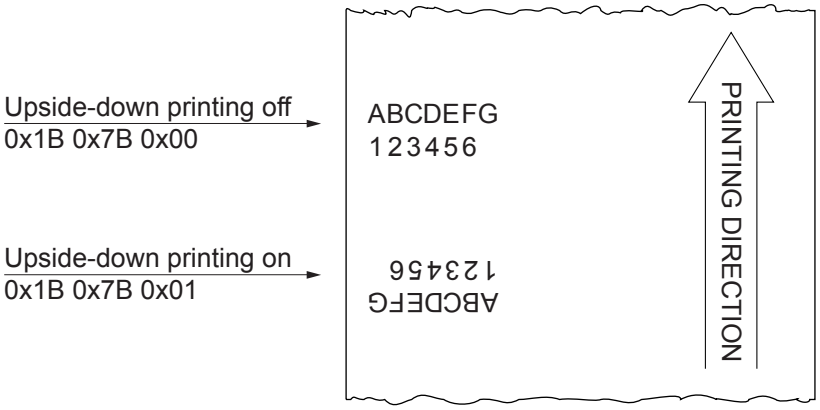
[Description] Turns upside-down printing mode on or off.
- When the LSB of n is 0, the upside-down printing mode is off.
- When the LSB of n is 1, the upside-down printing mode is on.

[Notes]
- Only the LSB of n is effective.
- This command is valid only if entered at the beginning of a line.
- In upside-down printing mode, the printer rotates the line to be printed 180° and then prints it.

[Default] n = 0x00

[Reference]

[Example]



0x1B 0xC1

Set or cancel cpi mode

Valid for	KPM150HIII LAT, KPM150HIII REAR, KPM150HIII LAT UHF, KPM150HIII REAR UHF B202HIII, B202HIII UHF

[Format]

Hex	1B	C1	n
ASCII	ESC	0xC1	n

[Range] n = 0x00, 0x01, 0x30, 0x31

[Description] Sets cpi mode based on the following values of n:

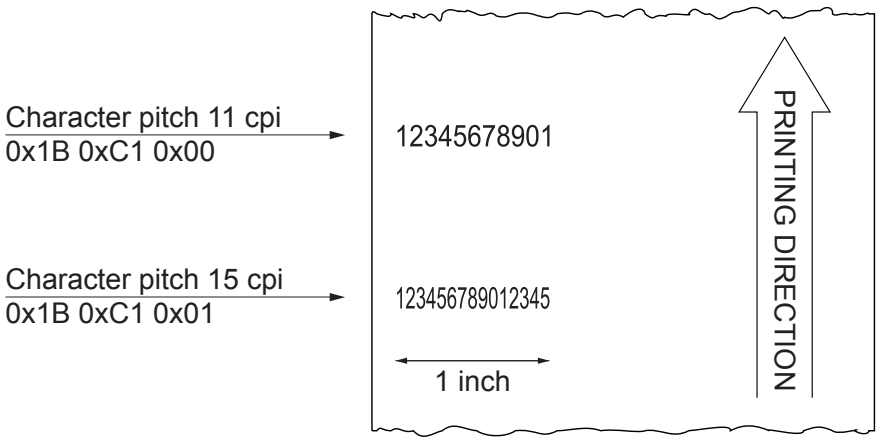
n	FUNCTION	
0x00, 0x30	Font A = 11 cpi	Font B = 15 cpi
0x01, 0x31	Font A = 15 cpi	Font B = 20 cpi

[Notes]

[Default] n = 0x00

[Reference] 0x1B 0x21

[Example]



0x1C 0x25 <FS %>

Select the font type

Valid for	KPM150HIII LAT, KPM150HIII REAR, KPM150HIII LAT UHF, KPM150HIII REAR UHF B202HIII, B202HIII UHF

[Format]

Hex	1C	25	n
ASCII	FS	%	n

[Range] 0x00 ≤ n ≤ 0x02

[Description] Select the font type specified by n as follows:

n	FONT TYPE
0x00	International
0x01	Chinese GB18030
0x02	Korean PC949

[Notes]
- The selection made by this command is stored in the RAM memory. Turn off the machine reverts to the default value, that can be set with the parameter “FONT TYPE” during the setup procedure (refer to the user manual of each device).
- After selecting the font type “INTERNATIONAL” it must be selected the desired character code table using the command 0x1B 0x74.

[Default] n = 0x00

[Reference] 0x1B 0x74, 0x1C 0x26, 0x1C 0x2E

[Example]

0x1C 0x26

<FS &>

Enable Chinese fonts

Valid for	KPM150HIII LAT, KPM150HIII REAR, KPM150HIII LAT UHF, KPM150HIII REAR UHF B202HIII, B202HIII UHF

[Format]	Hex	1C	26
	ASCII	FS	&

[Range]

[Description] Enable Chinese fonts.

[Notes] This command enable Chinese fonts in RAM. Does not intervene on the parameter setup (refer to the user manual of each device for further explanation).

[Default]

[Reference] 0x1C 0x25, 0x1C 0x2E, See the command manual “Chinese fonts management”.

[Example]

0x1C 0x2E

<FS .>

Disable Chinese fonts

Valid for	KPM150HIII LAT, KPM150HIII REAR, KPM150HIII LAT UHF, KPM150HIII REAR UHF B202HIII, B202HIII UHF

[Format]

Hex	1C	2E
ASCII	FS	.

[Range]

[Description] Disable Chinese fonts.

[Notes]
- This command disable Chinese fonts in RAM. Does not intervene on the parameter setup (refer to the user manual of each device for further explanation).
- Disabling the use of Chinese fonts will restore the codepage used previously.

[Default]

[Reference] 0x1C 0x25, 0x1C 0x26, See the command manual “Chinese fonts management”.

[Example]

0x1D 0x21

<GS !>

Select character size

Valid for	KPM150HIII LAT, KPM150HIII REAR, KPM150HIII LAT UHF, KPM150HIII REAR UHF B202HIII, B202HIII UHF

[Format]

Hex	1D	21	n
ASCII	GS	!	n

[Range]

0x00 ≤ n ≤ 0x07	0x10 ≤ n ≤ 0x17
0x20 ≤ n ≤ 0x27	0x30 ≤ n ≤ 0x37
0x40 ≤ n ≤ 0x47	0x50 ≤ n ≤ 0x57
0x60 ≤ n ≤ 0x67	0x70 ≤ n ≤ 0x77

[Description]

Selects character height and width, as follows:
- Bit 0 to 3: to select character height (see table 2).
- Bit 4 to 7: to select character width (see table 1).

Table 1 Select character width

HEX	WIDTH
00	1 (normal)
10	2 (width = 2x)
20	3 (width = 3x)
30	4 (width = 4x)
40	5 (width = 5x)
50	6 (width = 6x)
60	7 (width = 7x)
70	8 (width = 8x)

Table 2 Select character height

HEX	HEIGHT
00	1 (normal)
01	2 (height = 2x)
02	3 (height = 3x)
03	4 (height = 4x)
04	5 (height = 5x)
05	6 (height = 6x)
06	7 (height = 7x)
07	8 (height = 8x)

[Notes]

- This command is effective for all characters (except HRI characters).
- If n falls outside the defined range, this command is ignored.
- Characters enlarged to different heights on the same line are aligned at the baseline or topline.
- 0x1B 0x21 can also be used to select character size. However, the setting of the last received command is the effective one.
- This command is effective on the x and y axes. In case of 90°/270° rotated characters, bit from 0 to 3 select character width and bit from 4 to 7 select character height.

[Default]

n = 0

[Reference]

0x1B 0x21

[Example]

For printing a character with 6x width and height the command sequence is:
0x1D 0x21 0x55

0x1D 0x42 <GS B>

Turn white/black reverse printing mode on/off

Valid for	KPM150HIII LAT, KPM150HIII REAR, KPM150HIII LAT UHF, KPM150HIII REAR UHF B202HIII, B202HIII UHF

[Format]

Hex	1D	42	n
ASCII	GS	B	n

[Range] 0x00 ≤ n ≤ 0xFF

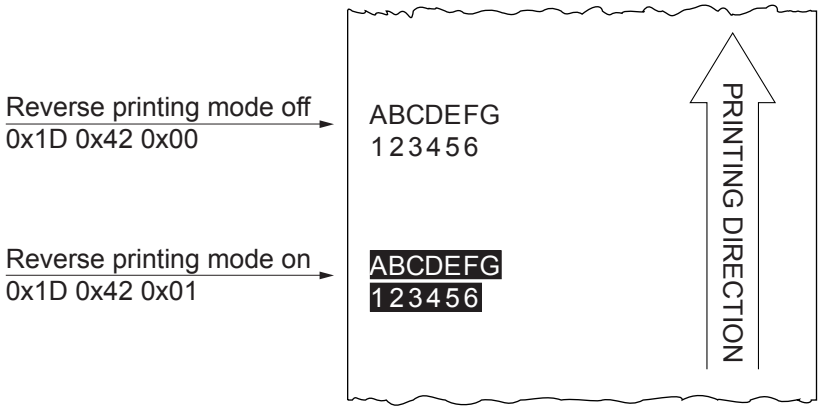
[Description]
Turns white/black reverse printing mode on or off.
• When the LSB of n is 0, white/black reverse printing is turned off.
• When the LSB of n is 1, white/black reverse printing is turned on.

[Notes]
• Only the LSB of n is effective.
• This command is available for both built-in and user-defined characters.
• This command does not affect bit image, downloaded bit image, barcode, HRI characters and spacing skipped by 0x09, 0x1B 0x24 and 0x1B 0x5C.
• This command does not affect white space between lines.
• White/black reverse mode has a higher priority than underline mode. Even if underline mode is on, it will be disabled (but not cancelled) when white/black reverse mode is selected.

[Default] n = 0x00

[Reference]

[Example]



0x1C 0x64 *<FS d>*

Set font dimension

Valid for	KPM150HIII LAT, KPM150HIII REAR, KPM150HIII LAT UHF, KPM150HIII REAR UHF B202HIII, B202HIII UHF

[Format]	Hex	1C	64	s
	ASCII	FS	d	s

[Range] 0x00 ≤ s ≤ 0xFF

[Description] Sets font dimension. The parameter s specifies the size of TTF in points.

[Notes]
- The size is not expressed in pixels but in points.
- This command is active only with TrueType fonts.
- This command is active only in Page Mode

[Default] s = 0x0A

[Reference] 0x1C 0x66

[Example]

0x1C 0x65

<FS e>

Enable or disable encoding for TrueType fonts

Valid for	KPM150HIII LAT, KPM150HIII REAR, KPM150HIII LAT UHF, KPM150HIII REAR UHF B202HIII, B202HIII UHF

[Format]

Hex	1C	65	n
ASCII	FS	e	n

[Range]

0x00 ≤ n ≤ 0x02
0x30 ≤ n ≤ 0x32

[Description] Enable or disable the text encoding based on the following values of n:

n	ENCODING
0x00, 0x30	Disabled
0x01, 0x31	Enable UTF-8
0x02, 0x32	Enable UTF-16

[Notes]

- This command is valid only for TrueType fonts of monospace type.
- If the text encoding is disabled, manage the characters coding by 0x1B 0x52 and 0x1B 0x74 commands.
- If the text encoding is enabled, the character's addressing respects the UNICODE™ standard (see www.unicode.org).

[Default] n = 0x00

[Reference] 0x1B 0x52, 0x1B 0x74, 0x1C 0x66

[Example]

0x1C 0x66

<FS f>

True Type fonts management

Valid for	KPM150HIII LAT, KPM150HIII REAR, KPM150HIII LAT UHF, KPM150HIII REAR UHF B202HIII, B202HIII UHF

[Format]

Hex	1C	66	m	n	d[0]...d[n]
ASCII	FS	f	m	n	d[0]...d[n]

[Range]

0x00 ≤ m ≤ 0xFF
0x00 ≤ n ≤ 0x40

[Description]

Manage the TrueType fonts depending on the following values of m:

m (BIT)	FUNCTION
0x00	Check glyph width
0x01	TTF enable hinting
0x02	Not used
0x03	Not used
0x04	Re-enable TrueType font
0x05	Disable TrueType font
0x06	De-init TrueType font
0x07	Clear all

n = length of the selected font name
d[0]...d[n] = name of the selected font

[Notes]

• If “Check glyph width” is selected, for every character, printer checks if the glyph width is different from default width. In this case, the font will be not installed. The check may require some time (it depends on the characters number of the font).
• For “Hinting” means the font adaptation to the grid. Whit hinting enabled, the characters are more legible but some characters may be too high (for example, the accented capital letters). This bit is active only when you install a new font.
• “Re-enable” function re-enables a TrueType font previously disabled.
• “Disable” function disables a TrueType font.
• “De-init” function uninstall a font and clear the memory used by the font. Use this function only when you intend to use the font more, otherwise use the “Disable” function to speed up operations.
• “Clear all” function uninstall all the installed fonts.
• If command is successful the printer transmits the ACK (0x06), otherwise return NACK (0x15).
• After “Disable”, “Re-enable” and “Clear-all” functions, do not pass the filename of the TrueType font.

[Default]

[Reference]

[Example] Select the TrueType font with dimensions check, with hinting:

0x1C 0x66 0x02 0x0C “veramono.ttf”

Return to use the embedded fonts:

0x1C 0x66 0x20 0x00

Select the font previously disabled:

0x1C 0x66 0x10 0x00

Uninstall a TrueType font:

0x1C 0x66 0x40 0x0C

0x1D 0xE9

Load a TrueType font

Valid for	KPM150HIII LAT, KPM150HIII REAR, KPM150HIII LAT UHF, KPM150HIII REAR UHF B202HIII, B202HIII UHF

[Format]													
	Hex	1D	E9	nHH	nHL	nLH	nLL	2C	43	2C	fd0...fdn	2C	d0...dn
	ASCII	GS	0xE9	nHH	nHL	nLH	nLL	,	C	,	fd0...fdn	,	d0...dn

[Range]

0x00 ≤ nHH, nHL, nLH, nLL ≤ 0xFF
0x00 ≤ d0, dn ≤ 0xFF

[Description]

Saves the font received from serial port into the printer flash.
• dimFile indicates the file size (4 bytes expressed in hexadecimal notation)
• nHH, nHL, nLH and nLL are 4 bytes that indicate the TrueType font dimension in bytes.
n = (nHH × 16777216) + (nHL × 65536) + (nLH × 256) + nLL indicates the number of bytes in the font (4 bytes expressed in hexadecimal notation)
• fd0..fdn it is a string which specifies the filename of TrueType font
• d0..dn are the data of theTrueType font.

[Notes]

• The maximum length of the True Type font name, specified by fd0..fdn, is 50 characters.
• The maximum file size is related to the free space in the flash.
• The font name specified in this command does not depend on the file name because it is uniquely assigned in flash; therefore the font into the flash will be called as specified.
• The ".ttf" extension is necessary for the correct management of the file.
• If the ".ttf" extension is missing the printer return NACK (0x15).
• If command is successful the printer transmits the ACK (0x06), otherwise return NACK (0x15).

Default]

[Reference]

[Example]

To load the TrueType font "ARIAL.ttf", send the command:
0x1D 0xE9 0x00 0x0B 0xE1 0x38 0x2C 0x43 0x2C "ARIAL.ttf" 0x2C "file.ttf"

where the sequence 0x00 0x0B 0xE1 0x38 indicates the file size (778552 byte).

0x1D 0xEA

Get TrueType fonts header list

Valid for	KPM150HIII LAT, KPM150HIII REAR, KPM150HIII LAT UHF, KPM150HIII REAR UHF B202HIII, B202HIII UHF

[Format]

Hex	1D	EA	43
ASCII	GS	0xEA	C

[Range]

[Description] This command requests to the printer the list of stored TrueType fonts into the printer flash. The printer returns a bytes sequence as follows:

“filename1.ttf, filename2.ttf, filename3.ttf, filename4.ttf 0x06”

where the ACK (0x06) character indicates that the command is successful, otherwise return NACK (0x15).

[Notes]

Default]

[Reference] 0x1D 0xE9

[Example] To request the list of stored TrueType fonts the command sequence is
0x1D 0xEA 0x43

If two fonts are stored in flash memory, the response of the printer will be
Vera.ttf,Veramono.ttf 0x06

0x1D 0xEB

Delete a TrueType font

Valid for	KPM150HIII LAT, KPM150HIII REAR, KPM150HIII LAT UHF, KPM150HIII REAR UHF B202HIII, B202HIII UHF

[Format]

Hex	1D	EB	43	2C	fd0..fdn	2A
ASCII	GS	0xEB	C	,	fd0..fdn	*

[Range] 0x00 ≤ d0, dn ≤ 0xFF

[Description]
Deletes the TrueType font specified from the printer flash.
• fd0..fdn it is a string which specifies the filename of TrueType font

[Notes]
• The maximum length of the True Type font name, specified by fd0..fdn, is 50 characters.
• If command is successful the printer transmits the ACK (0x06), otherwise return NACK (0x15).
• The ‘ * ’ star character is the terminator character of this command (in ASCII).

Default]

[Reference]

[Example]
To delete a TrueType font “veramono.ttf”, the command sequence is
0x1D 0xEB 0x43 0x2C “veramono.ttf” 0x2A

0x1D 0xEB 0x43

Clear all TrueType fonts

Valid for	KPM150HIII LAT, KPM150HIII REAR, KPM150HIII LAT UHF, KPM150HIII REAR UHF B202HIII, B202HIII UHF

[Format]

Hex	1D	EB	43	2C	41	4C	4C	2A
ASCII	GS	0xEB	C	,	A	L	L	*

[Range]

[Description] Clear all TrueType fonts stored into the printer flash.

[Notes]
- If command is successful the printer transmits the ACK (0x06), otherwise return NACK (0x15).
- All TrueType fonts stored in the printer are lost.
- The ‘ * ’ star character is the terminator character of this command (in ASCII).

[Default]

[Reference]

[Example]

0x1D 0xEC

Read a TrueType font

Valid for	KPM150HIII LAT, KPM150HIII REAR, KPM150HIII LAT UHF, KPM150HIII REAR UHF B202HIII, B202HIII UHF

[Format]

Hex	1D	EC	43	2C	fd0...fdn	t
ASCII	GS	0xEC	C	,	fd0...fdn	t

[Range] t = 0x2A, 0x2C, 0x3E

[Description]
Reads the font specifies by the string fd0..fdn.
• fd0..fdn it is a string which specifies the filename of TrueType font.
• t is the terminator character of this command.

[Notes]
• The maximum length of the True Type font name, specified by fd0..fdn, is 50 characters.
• The font name specified in this command does not depend on the file-name because it is uniquely assigned in flash; therefore the font into the flash will be called as specified.
• The ".ttf" extension must be specified for the correct management of the file.
• If command is successful the printer transmits the ACK (0x06) followed by data of the TrueType file, otherwise return NACK (0x15) if the font has not been found.

Default]

[Reference] 0x1D 0xE9, 0x1D 0xEA

[Example]

LINE SPACING COMMANDS

0x1B 0x30 *<ESC 0>*

Select 1/8-inch line spacing

Valid for	KPM150HIII LAT, KPM150HIII REAR, KPM150HIII LAT UHF, KPM150HIII REAR UHF B202HIII, B202HIII UHF

[Format]

Hex	1B	30
ASCII	ESC	0

[Range]

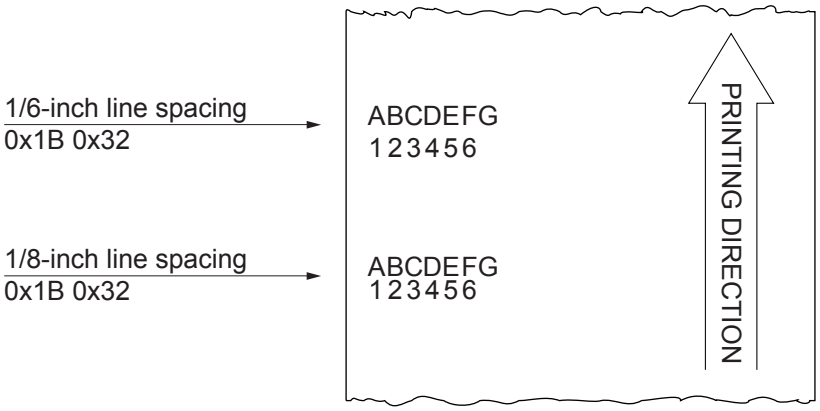
[Description] Selects 1/8-inch line spacing.

[Notes]

[Default]

[Reference] 0x1B 0x32, 0x1B 0x33

[Example]



0x1B 0x32

<*ESC 2*>

Select 1/6-inch line spacing

Valid for	KPM150HIII LAT, KPM150HIII REAR, KPM150HIII LAT UHF, KPM150HIII REAR UHF B202HIII, B202HIII UHF

[Format]

Hex	1B	32
ASCII	ESC	2

[Range]

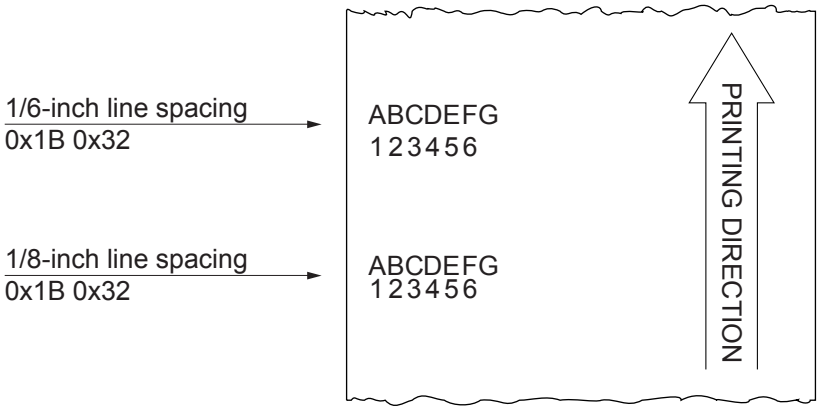
[Description] Selects 1/6-inch line spacing.

[Notes]

[Default]

[Reference] 0x1B 0x30, 0x1B 0x33

[Example]



0x1B 0x33 <ESC 3>

Set line spacing

Valid for	KPM150HIII LAT, KPM150HIII REAR, KPM150HIII LAT UHF, KPM150HIII REAR UHF B202HIII, B202HIII UHF

[Format]

Hex	1B	33	n
ASCII	ESC	3	n

[Range] 0x00 ≤ n ≤ 0xFF

[Description] Sets line spacing to [n * vertical or horizontal motion unit].

[Notes]
- The horizontal and vertical motion unit are specified by 0x1D 0x50. Changing the horizontal or vertical motion unit does not affect the current line spacing.
- The 0x1D 0x50 command can change the horizontal (and vertical) motion unit. However, the value cannot be less than the minimum vertical movement amount.
- In standard mode, the vertical motion unit is used.
- The maximum spacing is 32.5 mm.

[Default] n = 0x40 (1/6 inch)

[Reference] 0x1B 0x30, 0x1B 0x32, 0x1D 0x50

[Example]

0x0A <LF>

Print and line feed

Valid for	KPM150HIII LAT, KPM150HIII REAR, KPM150HIII LAT UHF, KPM150HIII REAR UHF B202HIII, B202HIII UHF

[Format]

Hex	0A
ASCII	LF

[Range]

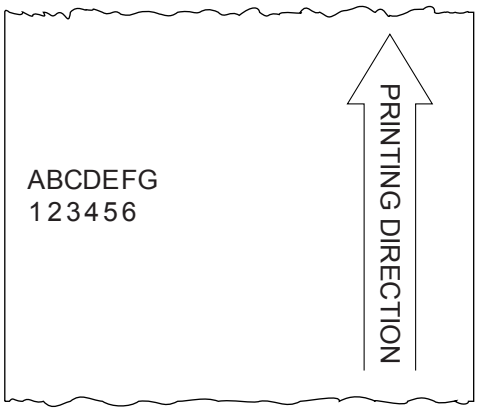
[Description] This command sets the print position to the beginning of the line printing the data in the buffer and feeding one line based on the line spacing set with the commands 0x1B 0x30 or 0x1B 0x32.

[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] 0x1B 0x30, 0x1B 0x32, 0x1B 0x33, 0x0D

[Example]



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

0x0C

<FF>

Print and return to standard mode in page mode

Valid for	KPM150HIII LAT, KPM150HIII REAR, KPM150HIII LAT UHF, KPM150HIII REAR UHF B202HIII, B202HIII UHF

[Format]

Hex	0C
ASCII	FF

[Range]

[Description] Prints the data in the buffer collectively and returns to standard mode.

[Notes]

- The buffer data is deleted after being printed.
- The printing area set by 0x1B 0x57 is reset to the default setting.
- The printer does not execute paper cutting.
- This command sets the print position to the beginning of the line.
- This command is enabled only in page mode.

[Default]

[Reference] 0x1B 0x4C, 0x1B 0x53

[Example]

0x0D

<CR>

Print and carriage return

Valid for	KPM150HIII LAT, KPM150HIII REAR, KPM150HIII LAT UHF, KPM150HIII REAR UHF B202HIII, B202HIII UHF

[Format]

Hex	0D
ASCII	CR

[Range]

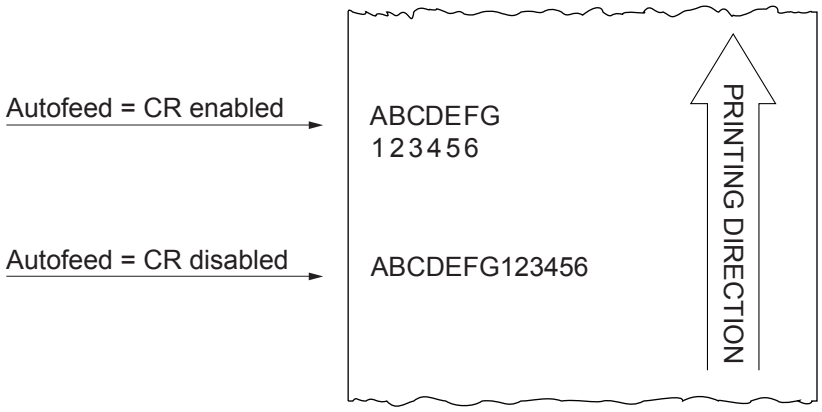
[Description] Sets the print position to the beginning of the line.

[Notes] When “Autofeed” parameter is CR enabled, this command functions in the same way as 0x0A, otherwise it is disregarded.

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

[Reference] 0x0A

[Example]



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

0x1B 0x4A

<ESC J>

Print and feed paper

Valid for	KPM150HIII LAT, KPM150HIII REAR, KPM150HIII LAT UHF, KPM150HIII REAR UHF B202HIII, B202HIII UHF

[Format]

Hex	1B	4A	n
ASCII	ESC	J	n

[Range] 0x00 ≤ n ≤ 0xFF

[Description] Prints the data in the print buffer and feeds the paper [n × (vertical or horizontal motion unit)] inches.

[Notes]

- After printing has been completed, this command sets the print starting position to the beginning of the line.
- The paper feed amount set by this command does not affect the values set by 0x1B 0x32 or 0x1B 0x33.
- The horizontal and vertical motion units are specified by 0x1D 0x50 command.
- 0x1D 0x50 command can change the horizontal (and vertical) motion unit. However, the value cannot be less than the minimum vertical movement amount.
- In standard mode, the vertical motion unit is used.

[Default]

[Reference] 0x1B 0x32, 0x1B 0x33, 0x1D 0x50

[Example]

0x1B 0x64 <ESC d>

Print and feed paper n lines

Valid for	KPM150HIII LAT, KPM150HIII REAR, KPM150HIII LAT UHF, KPM150HIII REAR UHF B202HIII, B202HIII UHF

[Format]

Hex	1B	64	n
ASCII	ESC	d	n

[Range] 0x00 ≤ n ≤ 0xFF

[Description] Prints the data in the print buffer and feeds the paper n lines.

[Notes]
- n rows paper feed is equivalent to (n * char height + line spacing set).
- Sets the print starting position at the beginning of the line.
- This command does not affect the line spacing set by 0x1B 0x32 or 0x1B 0x33.
- The maximum paper feed amount is 254 lines. Even if a paper feed amount of more than 254 lines is set, the printer feeds the paper only 254 lines.

[Default]

[Reference] 0x1B 0x32, 0x1B 0x33

[Example]

0x1C 0x82

Print date

Valid for	KPM150HIII LAT, KPM150HIII REAR, KPM150HIII LAT UHF, KPM150HIII REAR UHF B202HIII, B202HIII UHF

[Format]	Hex	1C	82
	ASCII	FS	0x82

[Range]

[Description] Prints date in the format specified by the command 0x1C 0x84 with the parameter n = 0x44.

[Notes]

[Default] “dd/mm/yy”

[Reference] 0x1C 0x83, 0x1C 0x84

[Example]

0x1C 0x83

Print time

Valid for	KPM150HIII LAT, KPM150HIII REAR, KPM150HIII LAT UHF, KPM150HIII REAR UHF B202HIII, B202HIII UHF

[Format]	Hex	1C	83
	ASCII	FS	0x83

[Range]

[Description] Prints date in the format specified by the command 0x1C 0x84 with the parameter n = 0x54.

[Notes]

[Default] “hh:mm:ss”

[Reference] 0x1C 0x82, 0x1C 0x84

[Example]

0x1D 0x7C

Set printing density

Valid for	KPM150HIII LAT, KPM150HIII REAR, KPM150HIII LAT UHF, KPM150HIII REAR UHF B202HIII, B202HIII UHF

[Format]

Hex	1D	7C	n
ASCII	GS	0x7C	n

[Range]

0x00 ≤ n ≤ 0x08
0x30 ≤ n ≤ 0x38

[Description] Sets printing density. n specifies printing density as follows:

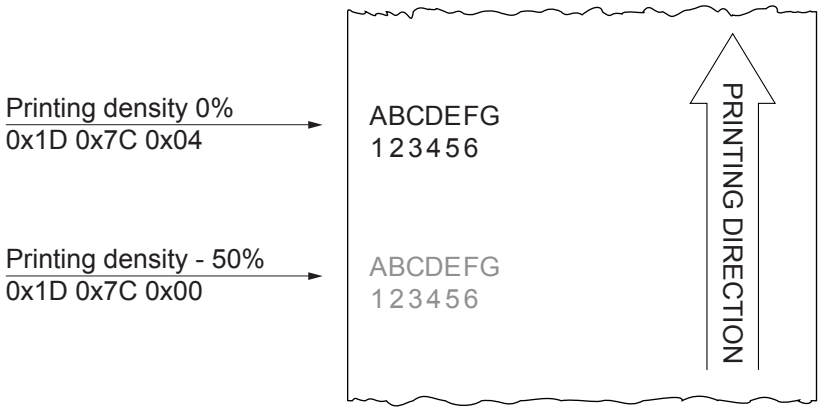
n	PRINTING DENSITY
0x00, 0x30	-50%
0x01, 0x31	-37.5%
0x02, 0x32	- 25%
0x03, 0x33	- 12.5%
0x04, 0x34	0%
0x05, 0x35	+ 12.5%
0x06, 0x36	+ 25%
0x07, 0x37	+37.5%
0x08, 0x38	+50%

[Notes] Printing density reverts to the default value when the printer is reset or turned off.

[Default] n = 0x04

[Reference]

[Example]



STATUS COMMANDS

0x10 0x04 *<DLE EOT>*

Real-time status transmission

Valid for	KPM150HIII LAT, KPM150HIII REAR, KPM150HIII LAT UHF, KPM150HIII REAR UHF B202HIII, B202HIII UHF

[Format]

Hex	10	04	n
ASCII	DLE	EOT	n

[Range]

0x01 ≤ n ≤ 0x04
n = 0x11
0x14 ≤ n ≤ 0x16

[Description] Transmits the selected printer status specified by n in real time according to the following parameters:

n = 0x01	transmit printer status
n = 0x02	transmit off-line status
n = 0x03	transmit error status
n = 0x04	transmit paper roll sensor status
n = 0x11	transmit print status
n = 0x14	transmit FULL STATUS
n = 0x15	transmit printer ID
n = 0x16	transmit FULL STATUS extended

n = 0x01: Printer status

BIT	OFF/ON	HEX	FUNCTION
0	Off	00	Not used. Fixed to off
1	On	02	Not used. Fixed to on
2	Off	00	Not used. Fixed to off
3	Off	00	On-line
	On	08	Off-line
4	On	10	Not used. Fixed to on
5	-	-	RESERVED
6	Off	00	LF LINE FEED key released
	On	40	LF LINE FEED key pressed
7	Off	00	Not used. Fixed to off

n = 0x02: Off-line status

BIT	OFF/ON	HEX	FUNCTION
0	Off	00	Not used. Fixed to off
1	On	02	Not used. Fixed to on
2	Off	00	Cover closed
	On	04	Cover opened
3	Off	00	Paper isn't fed by LF LINE FEED key
	On	08	Paper is fed by LF LINE FEED key
4	On	10	Not used. Fixed to on
5	Off	00	Paper present
	On	20	Printing stop due to paper end
6	Off	00	No error
	On	40	Error
7	Off	00	Not used. Fixed to off

n = 0x03: Error status

BIT	OFF/ON	HEX	FUNCTION
0	Off	00	Not used. Fixed to off
1	On	02	Not used. Fixed to on
2	Off	00	Not used. Fixed to off
3	Off	00	Cutter ok
	On	08	Cutter error
4	On	10	Not used. Fixed to on
5	Off	00	No unrecoverable error
	On	20	Unrecoverable error
6	Off	00	No auto-recoverable error
	On	40	Auto-recoverable error
7	Off	00	Not used. Fixed to off

n = 0x04: Paper roll sensor status

BIT	OFF/ON	HEX	FUNCTION
0	Off	00	Not used. Fixed to off
1	On	02	Not used. Fixed to on
2, 3	Off	00	Low paper sensor: Paper present
	On	0C	Low paper sensor: Low paper
4	On	10	Not used. Fixed to on
5, 6	Off	00	Paper presence sensor: Paper present
	On	60	Paper presence sensor: Paper end
7	Off	00	Not used. Fixed to off

n = 0x11: Print status

BIT	OFF/ON	HEX	FUNCTION
0	Off	00	Not used. Fixed to off
1	On	02	Not used. Fixed to on
2	Off	00	Paper drag motor off
	On	04	Paper drag motor on
3	-	-	RESERVED
4	On	10	Not used. Fixed to on
5	Off	00	Paper present
	On	20	Paper absent
6	-	-	RESERVED
7	Off	00	Not used. Fixed to off

n = 0x14: FULL status (6 bytes)

1st byte = 0x10 (DLE);

2nd byte = 0x0F

3rd byte = Paper status

BIT	OFF/ON	HEX	FUNCTION
0	Off	00	Paper present
	On	01	Paper not present
1	-	-	RESERVED
2	Off	00	Paper present in abundance
	On	04	Low paper
3	-	-	RESERVED
4	-	-	RESERVED
5	Off	00	Ticket not present in output
	On	20	Ticket present in output
6	Off	00	Paper virtually present (*)
	On	40	Virtual paper end (*)
7	Off	00	Black mark is not placed over the sensor
	On	80	Black mark is placed over the sensor

(*) : Virtual paper end is set when the paper length available, read by 0x1D 0xE1, is 0.

4th byte = User status

BIT	OFF/ON	HEX	FUNCTION
0	Off	00	No error, printing head down
	On	01	Printing head up error
1	Off	00	Cover closed
	On	02	Cover opened
2	Off	00	No spooling
	On	04	Spooling
3	Off	00	Drag paper motor off
	On	08	Drag paper motor on
4	-	-	RESERVED
5	Off	00	LF LINE FEED key released
	On	20	LF LINE FEED key pressed

6	Off	00	FF FORM FEED key released
	On	40	FF FORM FEED key pressed
7	-	-	RESERVED

5th byte = Recoverable error status

BIT	OFF/ON	HEX	FUNCTION
0	Off	00	Head temperature ok
	On	01	Head temperature error
1	Off	00	No COM error
	On	02	RS232 COM error
2	-	-	RESERVED
3	Off	00	Power supply voltage ok
	On	08	Power supply voltage error
4	-	-	RESERVED
5	Off	00	Acknowledge command
	On	20	Not acknowledge command error
6	Off	00	Free paper path
	On	40	Paper jam
7	Off	00	Black mark search ok
	On	80	Error in black mark search

6th byte = Unrecoverable error status

BIT	OFF/ON	HEX	FUNCTION
0	Off	00	Cutter ok
	On	01	Cutter error
1	Off	00	Cutter cover ok
	On	02	Cutter cover open
2	Off	00	RAM ok
	On	04	RAM error
3	-	-	RESERVED
4	-	-	RESERVED
5	-	-	RESERVED
6	-	-	RESERVED
7	-	-	RESERVED

n = 0x15: transmit printer ID

1st byte = 0xFF (refer to command 0x1D 0x49)

n = 0x16: FULL status extended (10 bytes)

1st byte = 0x10 (DLE);

2nd byte = 0x0F

3rd byte = Paper status

BIT	OFF/ON	HEX	FUNCTION
0	Off	00	Paper present
	On	01	Paper not present
1	-	-	RESERVED
2	Off	00	Paper present in abundance
	On	04	Low paper
3	-	-	RESERVED
4	-	-	RESERVED
5	Off	00	Ticket not present in output
	On	20	Ticket present in output
6	Off	00	Paper virtually present (*)
	On	40	Virtual paper end (*)
7	Off	00	Black mark is not placed over the sensor
	On	80	Black mark is placed over the sensor

(*) : Virtual paper end is set when the paper length available, read by 0x1D 0xE1 command is 0.

4th byte = User status

BIT	OFF/ON	HEX	FUNCTION
0	Off	00	No error, printing head down
	On	01	Printing head up error
1	Off	00	Cover closed
	On	02	Cover opened
2	Off	00	No spooling
	On	04	Spooling
3	Off	00	Drag paper motor off
	On	08	Drag paper motor on
4	-	-	RESERVED

5	Off	00	LF LINE FEED key released
	On	20	LF LINE FEED key pressed
6	Off	00	FF FORM FEED key released
	On	40	FF FORM FEED key pressed
7	-	-	RESERVED

5th byte = Recoverable error status

BIT	OFF/ON	HEX	FUNCTION
0	Off	00	Head temperature ok
	On	01	Head temperature error
1	Off	00	No COM error
	On	02	RS232 COM error
2	-	-	RESERVED
3	Off	00	Power supply voltage ok
	On	08	Power supply voltage error
4	-	-	RESERVED
5	Off	00	Acknowledge command
	On	20	Not acknowledge command error
6	Off	00	Free paper path
	On	40	Paper jam
7	Off	00	Black mark search ok
	On	80	Error in black mark search

6th byte = Unrecoverable error status

BIT	OFF/ON	HEX	FUNCTION
0	Off	00	Cutter ok
	On	01	Cutter error
1	Off	00	Cutter cover ok
	On	02	Cutter cover open
2	Off	00	RAM ok
	On	04	RAM error
3	-	-	RESERVED
4	-	-	RESERVED
5	-	-	RESERVED
6	-	-	RESERVED
7	-	-	RESERVED

7th byte = Ticket status

BIT	OFF/ON	HEX	FUNCTION
0	Off	00	One or more tickets printed after turn ON
	On	01	No tickets printed after turn ON
1	Off	00	One or more tickets printed after AUTOLOAD
	On	02	No tickets printed after AUTOLOAD
2	-	-	RESERVED
3	Off	00	A jam not occurred (*).
	On	08	A jam occurred (*).
4	-	-	RESERVED
5	-	-	RESERVED
6	-	-	RESERVED
7	-	-	RESERVED

(*) : The jam detection occurs only when the “AutoDetect Jam” parameter was enabled during the setup procedure (refer to the user manual of each device).

8th byte = RESERVED

9th byte = RESERVED

10th byte = RESERVED

[Notes]
- This command is immediately executed even when the data buffer is full.
- This status is transmitted whenever data sequence 0x10 0x04 n is received.

[Default]

[Reference]

[Example]

0x1B 0x76

<ESC v>

Transmit paper sensor status

Valid for	KPM150HIII LAT, KPM150HIII REAR, KPM150HIII LAT UHF, KPM150HIII REAR UHF B202HIII, B202HIII UHF

[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
0,1	Off	00	Low paper sensor: paper present
	On	03	Low paper sensor: paper not present
2,3	Off	00	Paper-end sensor: paper present
	On	0C	Paper-end sensor: paper not present
4	Off	00	Not used. Fixed to off
5	Off	00	Not used. Fixed to off
6	Off	00	Not used. Fixed to off
7	Off	00	Not used. Fixed to off

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

[Default]

[Reference] 0x10 0x04

[Example]

0x1C 0xEA

Transmit the printer serial number

Valid for	KPM150HIII LAT, KPM150HIII REAR, KPM150HIII LAT UHF, KPM150HIII REAR UHF B202HIII, B202HIII UHF

[Format]

Hex	1C	EA	n
ASCII	FS	0xEA	n

[Range] n = 0x52, 0x72

[Description] Transmits the printer serial number.

[Notes]
- The serial number is a string of 16 alphanumeric characters.
- If the printer serial number is not defined, the printer returns a string of 16 characters with a value of 0x00.

[Default]

[Reference]

[Example] To read the printer serial number send:
0x1C 0xEA 0x52

The printer returns a string just like the following:
‘CTM5014515180000’

0x1D 0xE0

<GS {}>

Enable or disable automatic FULL STATUS back

Valid for	KPM150HIII LAT, KPM150HIII REAR, KPM150HIII LAT UHF, KPM150HIII REAR UHF B202HIII, B202HIII UHF

[Format]

Hex	1D	E0	n
ASCII	GS	{}	n

[Range] 0x00 ≤ n ≤ 0xFF

[Description] Enable or disable automatic FULL STATUS back; n specifies the composition of FULL STATUS as follows:

BIT	OFF/ON	HEX	FUNCTION
0	Off	00	Disable paper status
	On	01	Enable paper status
1	Off	00	Disable user status
	On	02	Enable user status
2	Off	00	Disable recoverable error status
	On	04	Enable recoverable error status
3	Off	00	Disable unrecoverable error status
	On	08	Enable unrecoverable error status
4	Off	00	Disable ticket status
	On	10	Enable ticket status
5	-	-	Undefined
6	-	-	Undefined
7	-	-	Undefined

[Notes]
• Once enable at least one byte of the FULL STATUS, for each change of at least one of the bits which compose the required status, the status sent in automatic from the printer will be so composed as follows:
1st Byte = 0x10
2nd Byte = n
• The next bytes depending on the status enabled by n.

[Default]

[Reference] 0x10 0x04

[Example] To enable status back for user status and recoverable error status, send the command:
0x1D 0xE0 0x06

If the cover is open and no recoverable error has been detected, the answer will be:
0x10 0x06 0x03 0x00

0x1D 0xE1

Reading of length paper available before virtual paper-end

Valid for	KPM150HIII LAT, KPM150HIII REAR, KPM150HIII LAT UHF, KPM150HIII REAR UHF B202HIII, B202HIII UHF

[Format]

Hex	1D	E1
ASCII	GS	0xE1

[Range]

[Description] Reading of length paper available before virtual paper-end (expressed in centimetres).
The command return a string pointing out how much paper is available.

[Notes]
- The length of residual paper reported is just as an indication because tolerances and other factors are not taken into consideration (paper thickness, roll core diameter, roll core thickness).
- The virtual paper-end limit is set by the command 0x1D 0xE6.
- To set virtual paper-end limit, measure the length of the paper from low paper to the end of the roll, using several of them.

[Default]

[Reference] 0x1D 0xE6

[Example] If there are 5.1 m before paper end, the answer will be:
‘510cm’

0x1D 0xE2

Reading number of cuts performed from the printer

Valid for	KPM150HIII LAT, KPM150HIII REAR, KPM150HIII LAT UHF, KPM150HIII REAR UHF B202HIII, B202HIII UHF

[Format]	Hex	1D	E2
	ASCII	GS	0xE2

[Range]

[Description] Reading the number of cuts performed from the printer.

[Notes] The command return a string that points out how many cuts are performed by cutter.

[Default]

[Reference]

[Example] If there are performed 2376 cuts, the answer will be:
‘2376cuts’

0x1D 0xE3

Reading of length of printed paper

Valid for	KPM150HIII LAT, KPM150HIII REAR, KPM150HIII LAT UHF, KPM150HIII REAR UHF B202HIII, B202HIII UHF

[Format]	Hex	1D	E3
	ASCII	GS	0xE3

[Range]

[Description] Reading of length of printed paper (expressed in centimetres).

[Notes] The command return a string pointing out how much paper is printed.

[Default]

[Reference]

[Example] If the printer has print about 2515.5 m, the answer will be:
‘251550cm’

0x1D 0xE5

Reading number of power up

Valid for	KPM150HIII LAT, KPM150HIII REAR, KPM150HIII LAT UHF, KPM150HIII REAR UHF B202HIII, B202HIII UHF

[Format]	Hex	1D	E5
	ASCII	GS	0xE5

[Range]

[Description] Reading number of power up of the printer.

[Notes] The command return a string pointing out the number of turning on of the printer.

[Default]

[Reference]

[Example] If the printer is turned on 512 times, the answer will be:
‘512on’

0x1D 0xE6

Virtual paper-end limit

Valid for	KPM150HIII LAT, KPM150HIII REAR, KPM150HIII LAT UHF, KPM150HIII REAR UHF B202HIII, B202HIII UHF

[Format]

Hex	1D	E6	nH	nL
ASCII	GS	0xE6	nH	nL

[Range] 0x00 ≤ nH, nL ≤ 0xFF

[Description] This command sets the limit after which is pointed out the virtual paper-end.

[Notes]
- The calculation limit of the near paper-end is in centimetres.
- This value is expressed as [(nH x 256)+nL].

[Default]
nH = 0x00
nL = 0xF0

[Reference]

[Example] To see the virtual paper-end is pointed out after 15 metres from the first detection of near paper end, it's necessary convert 15 metres in 1500 centimetres and then, calculate nH and nL value in the following mode:

nH = 1500 / 256 = 5
nL = 1500 - (nH x 256) = 1500 - (5 x 256) = 220

and then send the following command:

Hex:	0x1D	0xE6	0x05	0xDC
Decimal:	29	230	5	220

BIT-IMAGE COMMANDS

0x1B 0x2A

*<ESC *>*

Select bit image mode

Valid for	KPM150HIII LAT, KPM150HIII REAR, KPM150HIII LAT UHF, KPM150HIII REAR UHF B202HIII, B202HIII UHF

[Format]

Hex	1B	2A	m	nL	nH	d1...dk
ASCII	ESC	*	m	nL	nH	d1...dk

[Range]

m = 0x00, 0x01, 0x20, 0x21
0x00 ≤ nL ≤ 0xFF
0x00 ≤ nH ≤ 0x03
0x00 ≤ d ≤ 0xFF

[Description]

Selects a bit image mode using m for the number of dots specified by nL and nH, as follows:

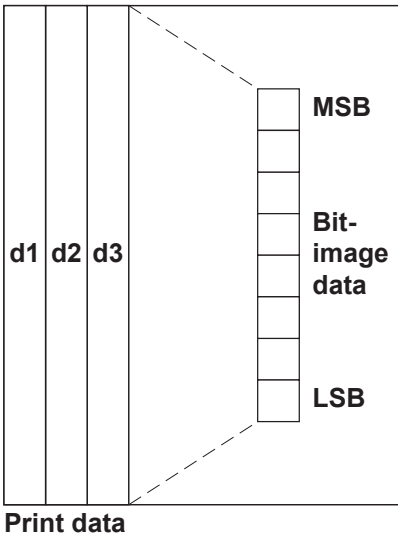
m	MODE	VERTICAL DIRECTION		HORIZONTAL DIRECTION	
		N. dots	DPI	DPI	N. data (k)
0x00	8 dots single density	8	67	100	nL + nH x 256
0x01	8 dots double density	8	67	200	nL + nH x 256
0x20	24 dots single density	24	200	100	(nL + nH x 256) x 3
0x21	24 dots double density	24	200	200	(nL + nH x 256) x 3

[Notes]

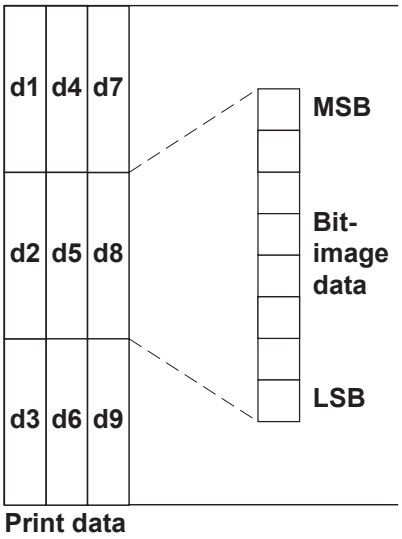
• The nL and nH parameters indicate the number of dots of the bit image in the horizontal direction. The number of dots is calculated using: nL + nH × 256.
• If the bit image data input exceeds the number of dots to be printed on a line, the excess data is ignored.
• d indicates the bit image data. Set a corresponding bit to 1 to print a dot, or to 0 to not print the dot.
• If the value of m is outside the specified range, nL and data following it are processed as normal data.
• If the width of the printing area set by 0x1D 0x4C and 0x1D 0x57 is less than the width required by the data set using 0x1B 0x2A, the excess data are ignored.
• To print the bit image use 0x0A, 0x0D, 0x1B 0x4A or 0x1B 0x64.
• After printing a bit image, the printer returns to normal data processing mode.
• This command is not affected by the emphasized, double-strike, underline (etc.) print modes, except for the upside-down mode.

• The relationship between the image data and the dots to be printed is as follows:

8-dots bit image



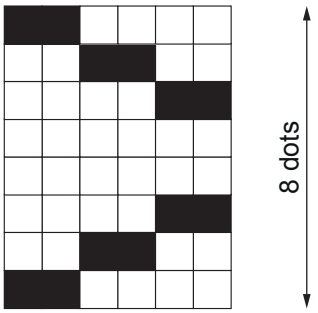
24-dots bit image



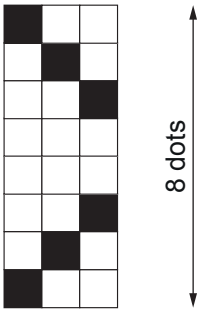
[Default]

[Reference]

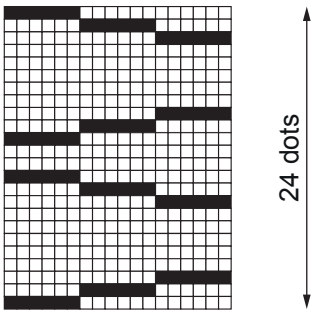
[Example]



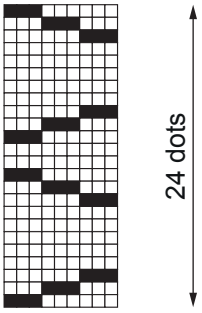
8 dots single density



8 dots double density



24 dots single density



24 dots double density

0x1C 0x70

<FS p>

Print NV bit image

Valid for	KPM150HIII LAT, KPM150HIII REAR, KPM150HIII LAT UHF, KPM150HIII REAR UHF B202HIII, B202HIII UHF

[Format]

Hex	1C	70	n	m
ASCII	FS	p	n	m

[Range]

0x01 ≤ n ≤ 0xFF
0x00 ≤ m ≤ 0x03
0x30 ≤ m ≤ 0x33

[Description]

Print a NV bit image n using the mode specified by m:

m	MODE
0x00, 0x30	Normal
0x01, 0x31	Double width
0x02, 0x32	Double heigth
0x03, 0x33	Quadruple

• n is the number of the NV bit image (defined using the 0x1C 0x71 command).

[Notes]

• NV bit image means a bit image which is defined in a non-volatile memory by 0x1C 0x71 and printed by 0x1C 0x70.
• This command is not effective when the specified NV bit image has not been defined.
• In standard mode, this command is effective only when there is no data in the print buffer.
• This command is not affected by print modes (emphasized, underline, character size, white/black reverse printing, etc.), except upside-down printing mode (180° rotation).
• If the downloaded bit image to be printed exceeds one line, the excess data is not printed.
• This command feeds dots (for the height n of the NV bit image) in normal and double-width modes, and (for the height n x 2 of the VN bit image) in double-height and quadruple modes, regardless of the line spacing specified by 0x1B 0x32 or 0x1B 0x33.
• After printing the bit image, this command sets the print position to the beginning of the line and processes the data that follows as normal data.
• In page mode, this command is effective only if m = 0x00.

[Default]

[Reference]

0x1C 0x71

[Example]

0x1C 0x71 <FS q>

Define NV bit image

Valid for	KPM150HIII LAT, KPM150HIII REAR, KPM150HIII LAT UHF, KPM150HIII REAR UHF B202HIII, B202HIII UHF

[Format]

Hex	1C	71	n [xL xH yL yH d1...dk] 1...[xL xH yL yH d1...dk] n
ASCII	FS	q	n [xL xH yL yH d1...dk] 1...[xL xH yL yH d1...dk] n

[Range]

0x01 ≤ n ≤ 0xFF
0x00 ≤ xL ≤ 0xFF
0x00 ≤ xH ≤ 0x03 (when 1 ≤ (xL + xH × 256) ≤ 1023
0x00 ≤ yL ≤ 0x01 (when 1 ≤ (yL + yH ×256) ≤ 288
0x00 ≤ d ≤ 0xFF
k = (xL + xH × 256) × (yL + yH × 256) × 8
Total defined data area = 1M bits (128 kB)

[Description]

Define the NV bit image specified by n.
• n specifies the number of the defined NV bit image.
• xL, xH specifies (xL + xH × 256) × 8 dots in the horizontal direction for the NV bit image you are defining.
• yL, yH specifies (yL + yH × 256) × 8 dots in the vertical direction for the NV bit image you are defining.

[Notes]

• Frequent write command execution may cause damage the NV memory. Therefore, it is recommended to write the least possible in the memory and no more then 10 times per day.
• This command cancels all NV bit images that have already been defined by this command. The printer can not redefine only one of several data definitions previously defined. In this case, all data needs to be sent again.
• NV bit image means a bit image which is defined in a non-volatile memory 0x1C 0x71 and printed by 0x1C 0x70.
• In standard mode, this command is effective only when processed at the beginning of the line.
• In page mode, this command is not effective.
• This command is effective when 7 bytes <FS~yH> is processed as a normal value.
• When the amount of data exceeds the capacity left in the range defined by xL, xH, yL, yH, the printer processes xL, xH, yL, yH out of the defined range.
• In the first group of NV bit images, when any of the parameters xL, xH, yL, yH is out of the definition range, this command is disabled.
• In groups of NV bit images other than the first one, when the printer processes xL, xH, yL, yH out of the defined range, it stops processing this command and starts writing into the non-volatile images. At this time, NV bit images that haven't been defined are disabled (undefined), but any NV bit images before that are enabled.
• The d indicates the definition data. In data (d) a 1 bit specifies a dot to be printed and a 0 bit specifies a dot not to be printed.
• This command defines n as the number of a NV bit image. Numbers rise in order from NV bit image 01H. Therefore, the first data group [xL xH yL yH d1...dk] is NV bit image 01H, and the last data group [xL xH yL yH d1...dk] is NV bit image n. The total agrees with the number of NV bit images specified by command 0x1C 0x70.

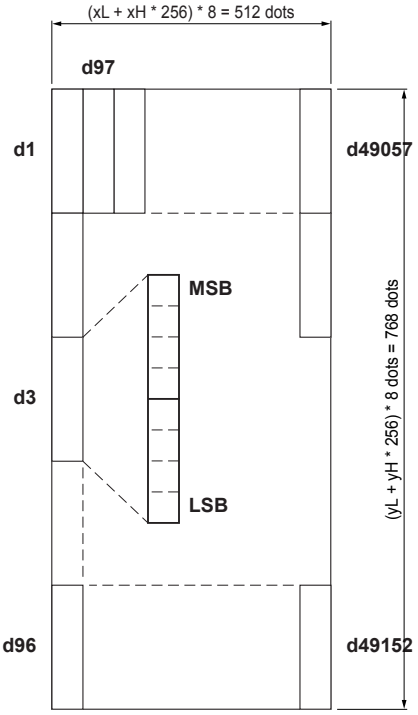
• A definition data of a NV bit image consists of [xL xH yL yH d1...dk]. Thefore, when only one NV bit image is defined, n=1.
• The printer processes a data group [xL xH yL yH d1...dk] once.
• The printer uses ([data: (xL + xH × 256) × (yL + yH × 256) × 8] + [header :4]) bytes of non-volatile memory.
• The definition area in this printer is a maximum of 1 Mbit (128 kB). This command can define several NV bit images, but cannot define a bit image data whose total capacity [bit image data + header] exceeds 1 Mbit (128 kB).
• When this command is received during macro definition, the printer ends macro definition, and begins executing this command.
• Once a NV bit image is defined, it is not erased by executing 0x1B 0x40, reset, and power off.
• This command executes only definition of a NV bit image and does not execute printing. Printing of the NV bit image is executed by the 0x1C 0x70 command.
• During processing this command, the printer is in BUSY when writing the data to the user NV memory and stops receiving data. Therefore it is prohibitted to transmit the data including the real-time commands during the execution of this command.
• From the beginning of the processing of this command till the finish of hardware reset, mechanical operations (including initializing the position of the printer head when the cover is open, paper feeding by using the PAPER FEED button, etc.) cannot be executed.
• The printer is busy immediately before writing into non-volatile memory.
• The printer does not transmit the ASB status and performs the status detection during the processing of this command even when the ASB is specified.

[Default]

[Reference] 0x1C 0x70

[Example] To make an image or logo of width = 512 dots and height = 768 dots must send the command 0x1C 0x71 0x01 0x40 0x00 0x60 0x00 followed by 49152 bytes which define the image as the following drawing:

When xL = 64, xH = 0
yL = 96, yH = 0



0x1D 0x2A

<GS *>

Define dowloaded bit image

Valid for	KPM150HIII LAT, KPM150HIII REAR, KPM150HIII LAT UHF, KPM150HIII REAR UHF B202HIII, B202HIII UHF

[Format]

Hex	1D	2A	m	d1...dk
ASCII	GS	*	m	d1...dk

[Range]

0x01 ≤ x ≤ 0xFF
0x01 ≤ y ≤ 0x30
x × y ≤ 1536
0x00 ≤ d ≤ 0xFF

[Description]

Defines a downloaded bit image using the number of dots specified by x and y.
• x specifies the number of dots in the horizontal direction.
• y specifies the number of dots in the vertical direction.

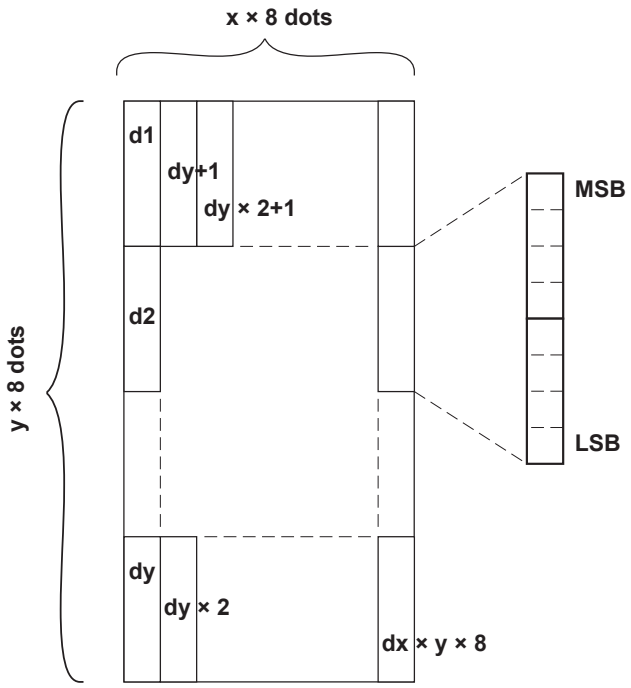
[Notes]

• The number of bytes in horizontal and vertical directions (x and y) are the horizontal and vertical size of the starting image divided by 8.
• If x × y is out of the specified range, this command is disabled.
• The d indicates bit-image data. Data (d) specifies a bit printed to 1 and not printed to 0.
• The downloaded bit image definition is cleared when:
- 0x1B 0x40 is executed.
- 0x1B 0x26 is executed.
- Device is reset or the power is turned off.

[Default]

[Reference] 0x1D 0x5C

[Example] • The following figure shows the relationship between the downloaded bit image and the printed data.



0x1D 0x2F

<GS />

Print downloaded bit image

Valid for	KPM150HIII LAT, KPM150HIII REAR, KPM150HIII LAT UHF, KPM150HIII REAR UHF B202HIII, B202HIII UHF

[Format]

Hex	1D	2F	m
ASCII	GS	/	m

[Range]

0x00 ≤ m ≤ 0x03
0x30 ≤ m ≤ 0x33

[Description]

Prints a downloaded bit image using the mode specified by m. m selects a mode from the table below:

m	MODE
0x00, 0x30	Normal
0x01, 0x31	Double width
0x02, 0x32	Double height
0x03, 0x33	Quadruple

[Notes]

• This command is ignored if a downloaded bit image has not been defined.
• In standard mode, this command is effective only when there is no data in the print buffer.
• This command has no effect in the print modes (emphasized, underline, character size, or white/black reverse printing), except for upside-down printing mode (180° rotation).
• If the downloaded bit-image to be printed exceeds the printable area, the excess data is not printed.
• If the printing area width set by 0x1D 0x4C and 0x1D 0x57 is less than one line in vertical, the following processing is performed only on the line in question:
1) The printing area width is extended to the right up to one line in vertical. In this case, printing does not exceed the printable area.
2) If the printing area width cannot be extended by one line in vertical, the left margin is reduced to accommodate one line in vertical.

[Default]

[Reference] 0x1D 0x2A

[Example]

0x1D 0x76 0x30

<GS v 0>

Print raster bit image

Valid for	KPM150HIII LAT, KPM150HIII REAR, KPM150HIII LAT UHF, KPM150HIII REAR UHF B202HIII, B202HIII UHF

[Format]

Hex	1D	76	30	m	xL xH yL yH d1...dk
ASCII	GS	v	0	m	xL xH yL yH d1...dk

[Range]

0x00 ≤ m ≤ 0x03, 0x30 ≤ m ≤ 0x33
0x00 ≤ xL ≤ 0xFF
0x00 ≤ xH ≤ 0xFF (1 ≤ xL + xH x 256 ≤ 65535)
0x00 ≤ yL ≤ 0xFF
0x00 ≤ yH ≤ 0x08 (1 ≤ yL + yH x 256 ≤ 2047)
0x00 ≤ d ≤ 0xFF
k = (xL + xH × 256) + (yL + yH × 256)
(except for k = 0)

[Description]

Selects raster bit image mode. The value of m selects the mode as follows:

m	MODE
0x00, 0x30	Normal
0x01, 0x31	Double width
0x02, 0x32	Double height
0x03, 0x33	Quadruple

• xL, xH selects the number of data bits (xL+xH x 256) in the horizontal direction for the bit image.
• yL, yH selects the number of data bits (yL+yH x 256) in the vertical direction for the bit image.
• k indicates number of the image data. k is an explanation parameter; it is not necessary to be transmitted.
• d indicates the image data.

[Notes]

• In standard mode for receipt paper, this command is effective only when there is no data in the print buffer.
• The data (d) identify as 1 a printer bit and as 0 a non-printed bit.
• If a raster bit image is longer than one line, the surplus data aren't printed.
• This command has no effect in the print modes (emphasized, underline, character size, or white/black reverse printing), except for upside-down printing mode (90° anticlockwise rotation).
• This command feed the paper as much as necessary to print the bit image without using spacing set by 0x1B 0x32 or 0x1B 0x33.
• Do not use this command during a macro executing because this command should not be included in a macro.
• After the printing the printing starting position moves to the beginning of the line.

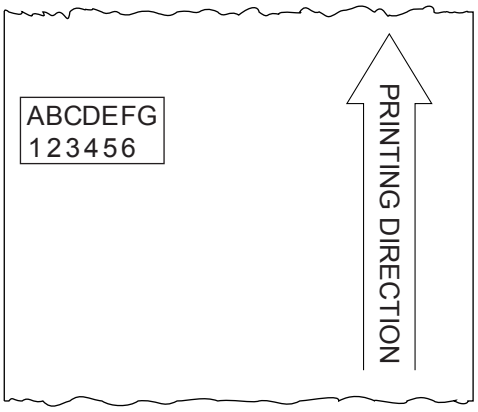
• The following table shows the relationship between the downloaded bit image and the printed data:

d1	d2	. . .	dx
dX+1	dX+2	. . .	dX x 2
:	:	. . .	:
. . .	dk-2	dk-1	d

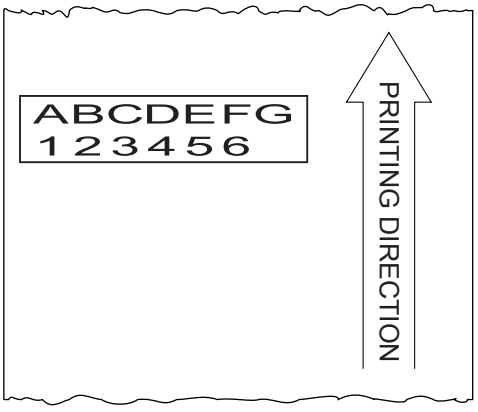
[Default]

[Reference]

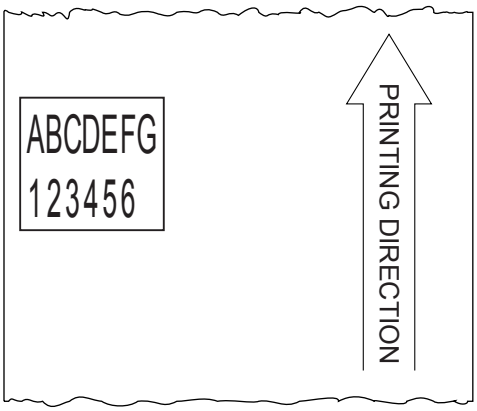
[Example] m = 0x00: Normal



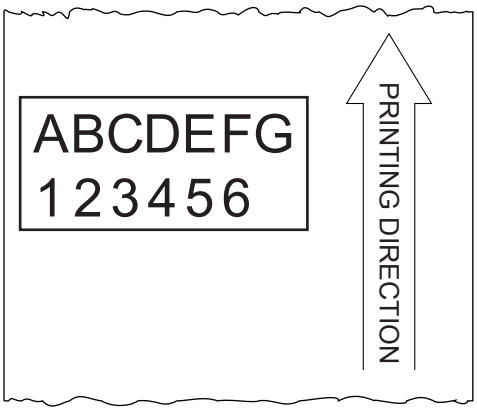
m = 0x01: Double width



m = 0x02: Double height



m = 0x03: Double width and double height



0x08 <BS>

Back space

Valid for	KPM150HIII LAT, KPM150HIII REAR, KPM150HIII LAT UHF, KPM150HIII REAR UHF B202HIII, B202HIII UHF

[Format] Hex 08
ASCII BS

[Range]

[Description] Moves print position to previous character.

[Notes] Can be used to put two characters at the same position.

[Default]

[Reference]

[Example]

0x09 <HT>

Horizontal tab

Valid for	KPM150HIII LAT, KPM150HIII REAR, KPM150HIII LAT UHF, KPM150HIII REAR UHF B202HIII, B202HIII UHF

[Format]

Hex	09
ASCII	HT

[Range]

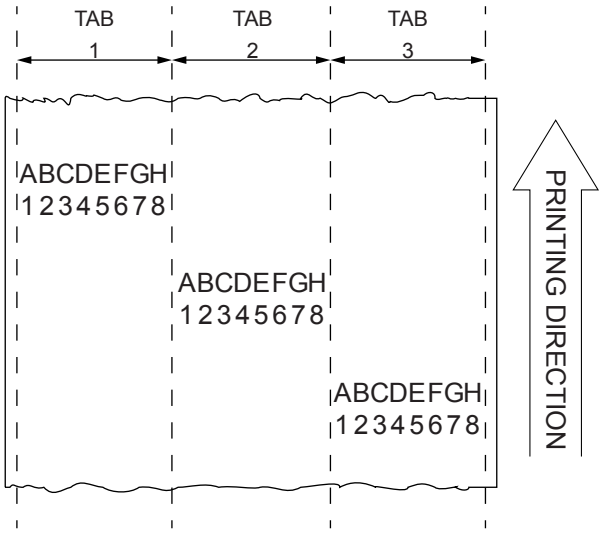
[Description] Moves the print position to the next horizontal tab position.

[Notes]
- Ignored unless the next horizontal tab position has been set..
- If the command is received when the printing position is at the right margin, the printer executes print buffer full printing and horizontal tab processing from the beginning of the next line.
- Horizontal tab positions are set using 0x1B 0x44.

[Default] Default tab positions are set at intervals of 8 characters (columns 9, 17, 25, …) when the right-side character spacing is 0.

[Reference] 0x1B 0x44

[Example]



0x1B 0x24 <ESC $>

Set absolute print position

Valid for	KPM150HIII LAT, KPM150HIII REAR, KPM150HIII LAT UHF, KPM150HIII REAR UHF B202HIII, B202HIII UHF

[Format]

Hex	1B	24	nL	nH
ASCII	ESC	$	nL	nH

[Range]

0x00 ≤ nL ≤ 0xFF
0x00 ≤ nH ≤ 0xFF

[Description]

Sets the distance from the beginning of the line to the position at which subsequent characters are to be printed.
The distance from the beginning of the line to the print position is [(nL + nH × 256) × vertical or horizontal motion unit].

[Notes]

- Settings outside the specified printable area are ignored.
- The horizontal and vertical motion unit are specified by 0x1D 0x50.
- 0x1D 0x50 can change the horizontal (and vertical) motion unit. However, the value cannot be less than the minimum horizontal movement amount.
- In standard mode, the horizontal motion unit (x) is used.
- If the setting is outside the printing area width, it sets the absolute print position, but the left or right margin is set at default value.

[Default]

[Reference] 0x1B 0x5C, 0x1D 0x50

[Example]

0x1B 0x28 0x76

<ESC (v>

Set relative vertical print position

Valid for	KPM150HIII LAT, KPM150HIII REAR, KPM150HIII LAT UHF, KPM150HIII REAR UHF B202HIII, B202HIII UHF

[Format]

Hex	1B	28	76	nL	nH
ASCII	ESC	(	v	nL	nH

[Range]

0x00 ≤ nL ≤ 0xFF
0x00 ≤ nH ≤ 0xFF

[Description]

Sets the print vertical position based on the current position by using the horizontal or vertical motion unit. This command sets the distance from the current position to [(nL + nH × 256) × (horizontal or vertical motion unit)].

[Notes]

- When the starting position is specified by N motion unit to the bottom: nL + nH × 256 = N
- When the starting position is specified by N motion unit to the top (negative direction), use the complement of 65536: nL + nH × 256 = 65536 - N
- The horizontal and vertical motion unit are specified by 0x1D 0x50.
- The 0x1D 0x50 command can change the horizontal (and vertical) motion unit. However, the value cannot be less than the minimum horizontal movement amount.
- In standard mode, the vertical motion unit is used.

[Default]

[Reference]

0x1D 0x50

[Example]

0x1B 0x44 <ESC D>

Set horizontal tab position

Valid for	KPM150HIII LAT, KPM150HIII REAR, KPM150HIII LAT UHF, KPM150HIII REAR UHF B202HIII, B202HIII UHF

[Format]

Hex	1B	44	n1...nk	00
ASCII	ESC	D	n1...nk	NUL

[Range]

0x01 ≤ n ≤ 0xFF
0x00 ≤ k ≤ 0x20

[Description]

Sets horizontal tab positions
• n specifies the column number for setting a horizontal tab position calculated from the beginning of the line.
• k indicates the total number of horizontal tab positions to be set.

[Notes]

• The horizontal tab position is stored as a value of [character width x n] measured from the beginning of the line. The character width includes the right-side character spacing and double-width characters are set with twice the width of normal characters.
• This command cancels previous tab settings.
• When setting n = 0x03, the print position is moved to column 4 sending 0x09 command.
• Up to 32 tab positions (k = 0x20) can be set. Data exceeding 32 tab positions is processed as normal data.
• Send [n] k in ascending order and place a 0 NUL code at the end. When [n] k is less than or equal to the preceding value [n] k-1, the setting is complete and the data which follows is processed as normal data.
• 0x1B 0x44 00 cancels all horizontal tab positions.
• The previously specified horizontal tab position does not change, even if the character width is modified.

[Default]

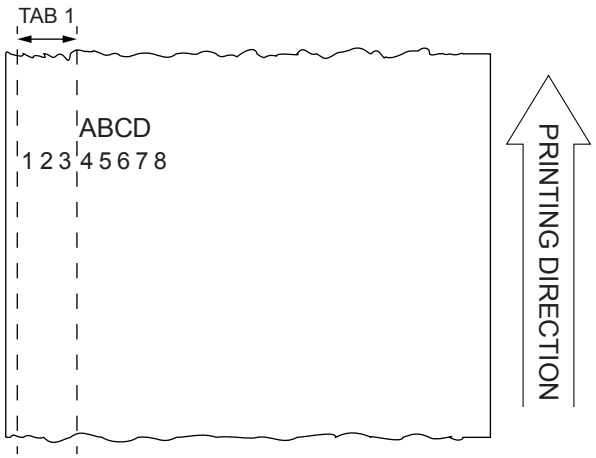
Default tab positions are set at intervals of 8 characters (columns 9, 17, 25, …) when the right-side character spacing is 0.

[Reference]

0x09

[Example]

To set a tabulation to column 4 send the command:
0x1B 0x44 0x03 0x00



To print the string ‘ABCD’ to the tabulation previously set, the command sequence is:
0x09 ‘ABCD‘

where:

0x09	move the print position to the set horizontal tab (4th column).
‘ABCD’	is the string to be printed.

0x1B 0x5C

<ESC \>

Set relative print position

Valid for	KPM150HIII LAT, KPM150HIII REAR, KPM150HIII LAT UHF, KPM150HIII REAR UHF B202HIII, B202HIII UHF

[Format]

Hex	1B	5C	nL	nH
ASCII	ESC	\	nL	nH

[Range]

0x00 ≤ nL ≤ 0xFF
0x00 ≤ nH ≤ 0xFF

[Description]

Sets the print starting position based on the current position by using the horizontal or vertical motion unit.
Sets the distance from the current position to [(nL+ nH × 256) × (horizontal or vertical motion unit)].

[Notes]

- When the starting position is specified by n motion units to the right: nL + nH × 256 = N
- When the starting position is specified by n motion units to the left (negative direction), use the complement of 65536: nL + nH × 256 = 65536 – N
- If setting exceeds the printing area width, the left or right margin is set to the default value.
- The horizontal and vertical motion unit are specified by 0x1D 0x50.
- 0x1D 0x50 can change the horizontal (and vertical) motion units. However, the value cannot be less than the minimum horizontal movement amount.
- In standard mode, the horizontal motion unit is used.
- It's possible to print further on the right margin set for every font. In this case the printing continues up to the maximum border of the printer mechanism and then begins a new row.
- Setting the right value, it's possible to print characters over the right edge.

[Default]

[Reference] 0x1B 0x24, 0x1D 0x50

[Example]

0x1B 0x61 <ESC a>

Select justification

Valid for	KPM150HIII LAT, KPM150HIII REAR, KPM150HIII LAT UHF, KPM150HIII REAR UHF B202HIII, B202HIII UHF

[Format]

Hex	1B	61	n
ASCII	ESC	a	n

[Range]

0x00 ≤ n ≤ 0x02
0x30 ≤ n ≤ 0x32

[Description] Aligns all data in one line to the specified position. n selects the type of justification as follows:

n	JUSTIFICATION
0x00, 0x30	Left justification
0x01, 0x31	Centred
0x02, 0x32	Right justification

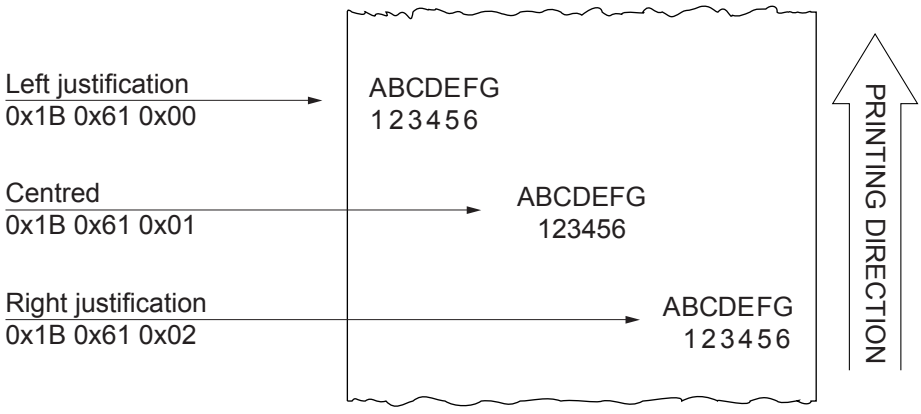
[Notes]

- This command is only enabled when inserted at the beginning of a line.
- Lines are justified within the specified printing area.
- Spaces set by 0x09, 0x1B 0x24 and 0x1B 0x5C will be justified according to the previously-entered mode.

[Default] n = 0x00

[Reference]

[Example]



0x1D 0x4C

<GS L>

Set left margin

Valid for	KPM150HIII LAT, KPM150HIII REAR, KPM150HIII LAT UHF, KPM150HIII REAR UHF B202HIII, B202HIII UHF

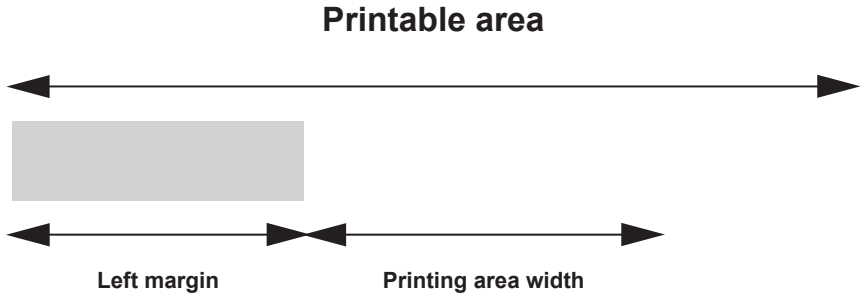
[Format]

Hex	1D	4C	nL	nH
ASCII	GS	L	nL	nH

[Range] 0x00 ≤ nL, nH ≤ 0xFF

[Description] Sets the left margin.

• The left margin is set to [(nL + nH × 256) × horizontal motion unit].



[Notes]

• This command is enabled only if set at the beginning of the line.
• If the setting exceeds the printable area, the maximum value of the printable area is used.
• If the left margin + printing area width is greater than the printable area, the printing area width is set at maximum value.
• The horizontal and vertical motion unit are specified by 0x1D 0x50. Changing the horizontal or vertical motion unit does not affect the current left margin.
• The 0x1D 0x50 command can change the horizontal (and vertical) motion unit.
• However, the value cannot be less than the minimum horizontal movement amount and it must be in even units of the minimum horizontal movement amount.

[Default]

[Reference] 0x1D 0x50, 0x1D 0x57

[Example]

0x1D 0x57

<GS W>

Set printing area width

Valid for	KPM150HIII LAT, KPM150HIII REAR, KPM150HIII LAT UHF, KPM150HIII REAR UHF B202HIII, B202HIII UHF

[Format]

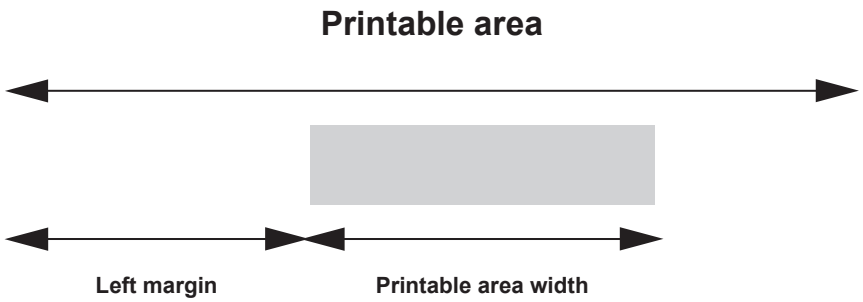
Hex	1D	57	nL	nH
ASCII	GS	W	nL	nH

[Range]

0x00 ≤ nL, nH ≤ 0xFF
0 ≤ (nL + nH × 256) ≤ 432

[Description]

Sets the printing area width to the area specified by nL and nH.
• The left margin is set to [(nL + nH × 256) × horizontal motion unit].



[Notes]

• This command is only enabled if set at the beginning of the line.
• If the right margin is greater than the printable area, the printing area width is set at maximum value.
• If the printing area width = 0, it is set at the maximum value.
• The horizontal and vertical motion units are specified by 0x1D 0x50. Changing the horizontal or vertical motion unit does not affect the current left margin.
• The 0x1D 0x50 command can change the horizontal (and vertical) motion unit.
• However, the value cannot be less than the minimum horizontal movement amount and it must be in even units of the minimum horizontal movement amount.

[Default]

[Reference]

0x1D 0x4C, 0x1D 0x50

[Example]

0x1D 0x3A

<GS :>

Start / end macro definition

Valid for	KPM150HIII LAT, KPM150HIII REAR, KPM150HIII LAT UHF, KPM150HIII REAR UHF B202HIII, B202HIII UHF

[Format]

Hex	1D	3A
ASCII	GS	:

[Range]

[Description] Starts or ends macro definition.

[Notes]

- Macro definition starts when this command is received during normal operation.
- When 0x1D 0x5E is received during macro definition, the printer ends macro definition and clears all definitions.
- Macros are not defined when power is turned on to the machine.
- Macro content is not cancelled by the 0x1B 0x40 command. Therefore, 0x1B 0x40 may be included in the content of macro definitions.
- If the printer receives 0x1D 0x3A a second time after previously receiving 0x1D 0x3A, the printer remains in macro undefined status.
- The contents of the macro can be defined up to 1024 bytes. If the macro definition exceeds 1024 bytes, excess data is not stored.

[Default]

[Reference] 0x1D 0x5E

[Example]

0x1D 0x5E

<GS ^>

Execute macro

Valid for	KPM150HIII LAT, KPM150HIII REAR, KPM150HIII LAT UHF, KPM150HIII REAR UHF B202HIII, B202HIII UHF

[Format]

Hex	1D	5E	r	t	m
ASCII	GS	^	r	t	m

[Range]

0x00 ≤ r, t ≤ 0xFF
m = 0x00, 0x01

[Description]

Executes a macro.
• r specifies the number of times to execute the macro.
• t specifies the waiting time for executing the macro. The waiting time is t × 100 ms for each macro execution.
• m specifies macro executing mode:
When the LSB of m = 0, the macro is executed r times continuously at the interval specified by t.
When the LSB of m = 1, after waiting for the period specified by t, the LED indicator blinks and the printer waits for the LF LINE FEED key to be pressed. After the button is pressed, the printer executes the macro once. The printer repeats the operation r times.

[Notes]

• This command has an interval of (t × 100 ms) after a macro is executed by t.
• If this command is received while a macro is being defined, the macro definition is aborted and the definition is cleared.
• If the macro is not defined or if r is 0x00, the command is not executed.
• When the macro is executed by pressing the LF LINE FEED key (m = 0x01), the paper cannot be fed using the LF LINE FEED key.

[Default]

[Reference]

0x1D 0x3A

[Example]

0x1B 0x69 <ESC i>

Total cut

Valid for	KPM150HIII LAT, KPM150HIII REAR, KPM150HIII LAT UHF, KPM150HIII REAR UHF B202HIII, B202HIII UHF

[Format]

Hex	1B	69
ASCII	ESC	i

[Description] This command prints the data in the buffer and enables cutter operation. If there is no cutter, a disabling flag is set and any subsequent cut commands will be ignored.

[Notes] The printer waits to complete all paper movement commands before it executes a total cut.

[Default]

[Reference]

[Example]

0x1C 0xC0 0x34

Total cut and automatic paper moving back

Valid for	KPM150HIII LAT, KPM150HIII REAR, KPM150HIII LAT UHF, KPM150HIII REAR UHF B202HIII, B202HIII UHF

[Format]

Hex	1C	C0	34
ASCII	FS	0xC0	4

[Range]

[Description] This command enables cutter operation and executes a total cut and automatic paper moving back; if there is no cutter, a disabling flag is set any subsequent cutting commands will be ignored.

[Notes]
- The printer waits until all the paper movement commands have been completed before executing total cut.
- After cutting, the ticket is set back to the printing line.

[Default]

[Reference]

[Example]

0x1C 0xC1

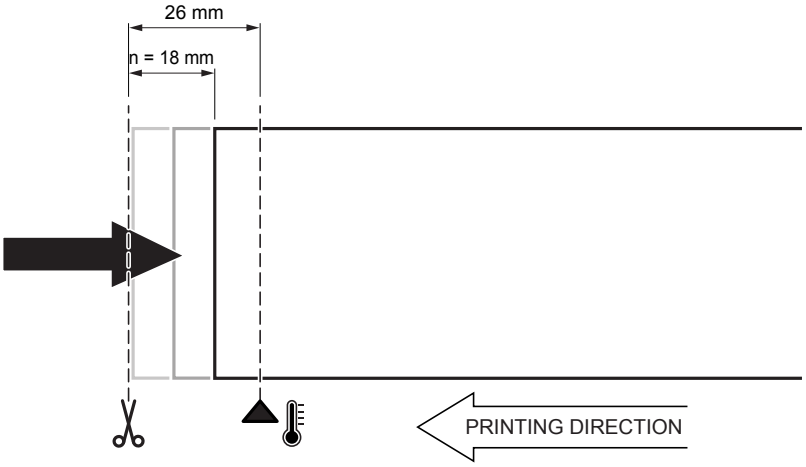
Paper recovery after cut

Valid for	KPM150HIII LAT, KPM150HIII REAR, KPM150HIII LAT UHF, KPM150HIII REAR UHF B202HIII, B202HIII UHF

[Format]	Hex	1C	C1	n
	ASCII	FS	0xC1	n

[Range] 0x00 ≤ n ≤ 0x1A

[Description] Set the paper moving (in millimetres) toward the print head after the paper cut.



[Notes]
- Set n = 0x1A to complete recover the paper.
- WARNING: setting n = 0x1A is not recommended for paper roll with low weight.

[Default] n = 0x12 (18 mm)

[Reference]

[Example]

0x1D 0x56

<GS V>

Select cut mode

Valid for	KPM150HIII LAT, KPM150HIII REAR, KPM150HIII LAT UHF, KPM150HIII REAR UHF B202HIII, B202HIII UHF

[Format 1]

Hex	1D	56	m	
ASCII	GS	V	m	

[Format 2]

Hex	1D	56	m	n
ASCII	GS	V	m	n

[Range]

Format 1: m = 0x00, 0x30

Format 2: m = 0x41, 0x42
0x00 ≤ n ≤ 0xFF

[Description]

Selects cut mode and executes the cut command. m selects cut mode as follows:

m	FUNCTION
0x00, 0x30	Total cut
0x41, 0x42	Form feed (cut position + [n × vertical motion unit]) and total cut

[Notes]

- This command is only enabled if set at the beginning of the line.
- The horizontal and vertical motion units are specified by 0x1D 0x50.

[Default]

[Reference] 0x1B 0x69

[Example]

0x1D 0xE7

Set the black mark distance

Valid for	KPM150HIII LAT, KPM150HIII REAR, KPM150HIII LAT UHF, KPM150HIII REAR UHF B202HIII, B202HIII UHF

[Format]	Hex	1D	E7	nH	nL
	ASCII	GS	0xE7	nH	nL

[Range] 0x00 ≤ nH, nL ≤ 0xFF

[Description] Set the distance in tenths of a mm of alignment point from the start of the black mark.

[Notes]
- This value is expressed as [(nH x 256) + nL]
- nH specifies the type of distance (0x00 = positive, 0x80 = negative).
- nL specifies the distance in millimetres.
- The distance is saved in nonvolatile memory: it is therefore recommended not to send this command for each printed ticket, because the number of rewrites is limited. In many devices, however, is checked the diversity of the data before performing the rescue to avoid reaching the limit of rewrites.
- The minimum and maximum limits range from -99.9 mm to 99.9 mm.
- The distance defined by this command is the same that can be set with the value of the “Black Mark Distance” during the setup procedure of the printer (refer to the user manual of each device) or by modifying the same parameter of the “Setup.ini” file.

[Default]
nH = 0x00
nL = 0x00

[Reference]

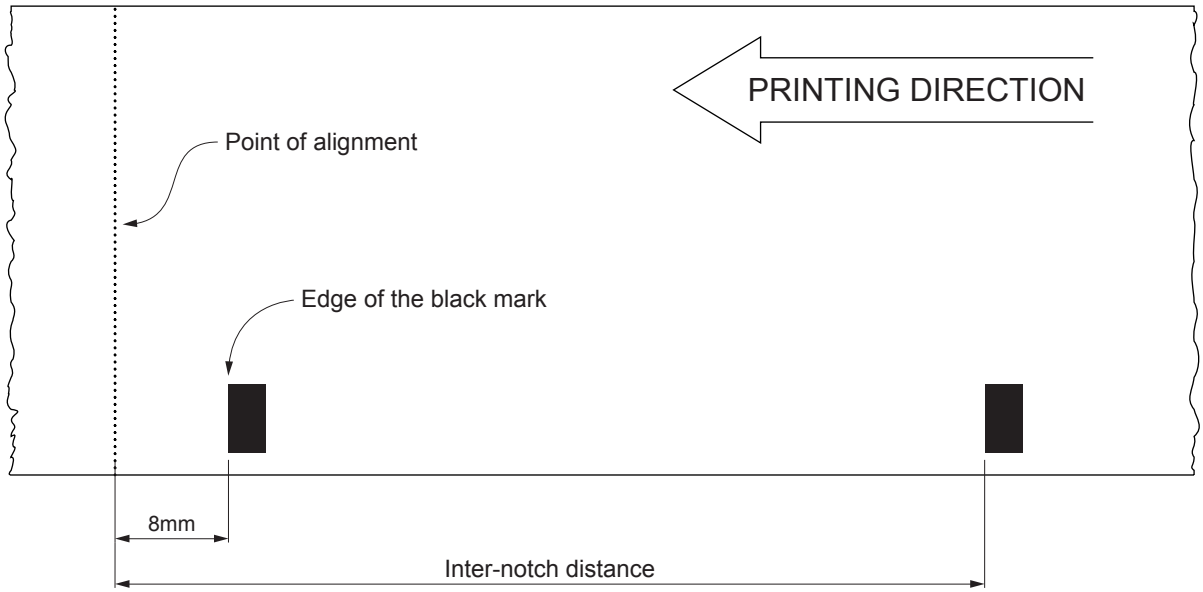
[Example] To set a black mark distance equal to 8 mm = 80 tenths of millimeter, send the command:
0x1D 0xE7 0x00 0x50

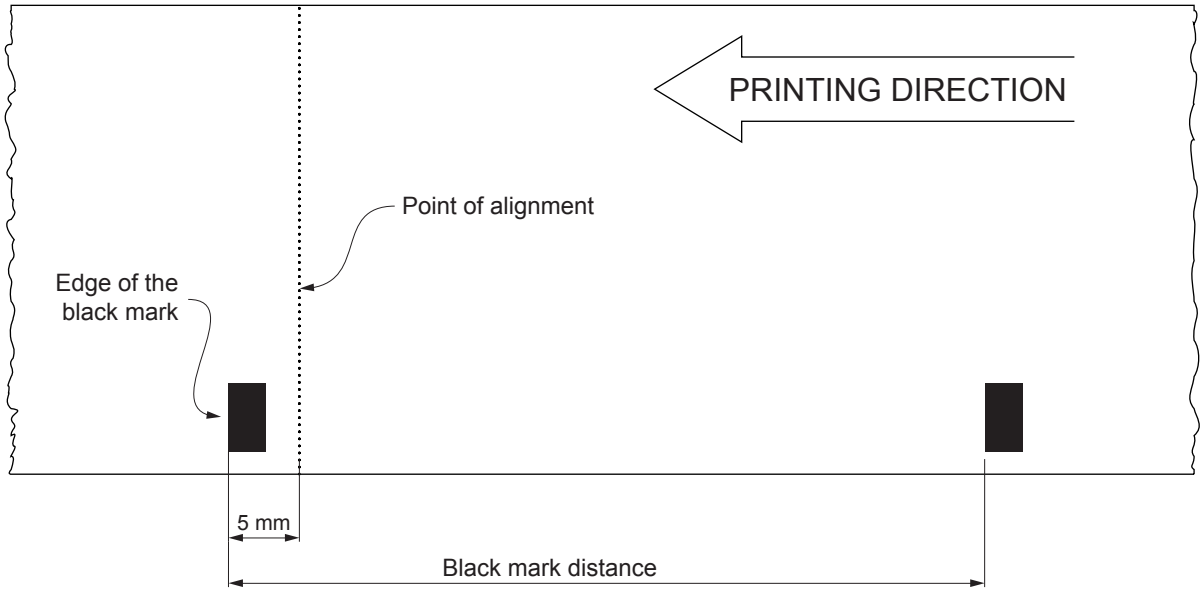
where:
0x00 defines the sign +
0x50 the absolute value defines the distance = 80 tenths of millimeter

To set a distance of -5 mm, send the command:
0x1D 0xE7 0x80 0x05

where:
0x80 defines the sign -
0x05 the absolute value defines the distance = 50 tenths of millimeter

The following images shows the tickets with “Alignment Point” positioned at 8 mm and -5mm from the black mark.





0x1D 0xF6

Align the ticket with the print head

Valid for	KPM150HIII LAT, KPM150HIII REAR, KPM150HIII LAT UHF, KPM150HIII REAR UHF B202HIII, B202HIII UHF

[Format]

Hex	1D	F6
ASCII	GS	0xF6

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

[Notes]
- Use the command 0x1D 0xE7 to set an offset between the black mark and the alignment point.
- To work properly, the “Black Mark Position” parameter must be enabled during the setup procedure (refer to the user manual of each device).
- Use this alignment command even to print more tickets without cutting.

[Default]

[Reference] 0x1D 0xE7, 0x1D 0xF8

[Example]

EXAMPLE OF CONSECUTIVE PRINTS WITHOUT CUTTING

0x1D 0xF6	Positioning ticket
<print ticket>	
0x1D 0xF6	Positioning ticket
<print ticket>	
...	
...	
...	

EXAMPLE OF PRINTS WITH ALIGNMENT AND CUT

0x1D 0xF6	Positioning ticket
<print ticket>	
0x1D 0xF8	Align ticket
0x1B 0x69	Total cut

0x1D 0xF7

Retrieve ticket

Valid for	KPM150HIII LAT, KPM150HIII REAR, KPM150HIII LAT UHF, KPM150HIII REAR UHF
	B202HIII, B202HIII UHF

[Format]

Hex	1D	F7
ASCII	GS	0xF7

[Range]

[Description] This command retrieves the ticket just printed and bring the ticket backwards under the print head.

This command retrieves a newly printed ticket and returns the ticket backwards under the head.

[Notes]

- The firmware retrieve the paper backwards of a distance equal to what has been produced after the last paper cut, the last power cycle, the last alignment command or the command itself.
- The maximum limit in mm of recovery is 100 mm because of mechanical limits.
- The paper produced is measured when the engine moves for printing or feeding. The counter of this amount of paper produced is reset to zero:
  - at cut;
  - at device power on;
  - align the black mark (0x1D 0xF6 or 0x1D 0xF8);
  - after the retrieve ticket command (0x1D 0xF7).

[Default]

[Reference] 0x1D 0xF6, 0x1D 0xF8

[Example]

0x1D 0xF8

Align the ticket at cut

Valid for	KPM150HIII LAT, KPM150HIII REAR, KPM150HIII LAT UHF, KPM150HIII REAR UHF B202HIII, B202HIII UHF

[Format]

Hex	1D	F8
ASCII	GS	0xF8

[Range]

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

[Notes]
- To work properly, the “Black Mark Position” parameter must be enabled during the setup procedure (refer to the user manual of each device).
- Use the command 0x1D 0xE7 to set an offset between the black mark and the alignment point.
- To work properly, you must send this command just before the cut command.

[Default]

[Reference] 0x1D 0xE7, 0x1D 0xF6

[Example]

0x1D 0xF6	Positioning ticket
<print ticket>	
0x1D 0xF8	Align ticket
0x1B 0x69	Total cut

0x1D 0x65 0X30 *<GS e 0>*

Disable the automatic ejection of the ticket

Valid for	KPM150HIII LAT, KPM150HIII REAR, KPM150HIII LAT UHF, KPM150HIII REAR UHF			
[Format]	Hex	1D	65	30
	ASCII	GS	e	0
[Range]				
[Description]	This command disable the automatic ejection of the printed ticket after the paper cut.			
[Notes]	With automatic ejection disabled, it is anyway possible to eject the ticket by sending the eject command 0x1D 0x65 0X35.			
[Default]				
[Reference]	0x1D 0x65 0X31, 0x1D 0x65 0X35			
[Example]				

0x1D 0x65 0X31

<GS e 1>

Enable the automatic ejection of the ticket

Valid for	KPM150HIII LAT, KPM150HIII REAR, KPM150HIII LAT UHF, KPM150HIII REAR UHF			
[Format]	Hex	1D	65	31
	ASCII	GS	e	1
[Range]				
[Description]	This command enable the automatic ejection of the printed ticket after the paper cut.			
[Notes]				
[Default]				
[Reference]	0x1D 0x65 0X30, 0x1D 0x65 0X35			
[Example]				

0x1D 0x65 0X35 <GS e 5>

Perform the ticket ejection

Valid for	KPM150HIII LAT, KPM150HIII REAR, KPM150HIII LAT UHF, KPM150HIII REAR UHF			
[Format]	Hex	1D	65	35
	ASCII	GS	e	5
[Range]				
[Description]	This command performs the ejection of the printed ticket.			
[Notes]				
[Default]				
[Reference]				
[Example]				

0x1C 0x50 <FS P>

Logos management

Valid for	KPM150HIII LAT, KPM150HIII REAR, KPM150HIII LAT UHF, KPM150HIII REAR UHF B202HIII, B202HIII UHF

[Format]

Hex	1C	50	fn
ASCII	FS	P	fn

[Range]

0x44 ≤ fn ≤ 0x47
fn = 0x41, 0x49, 0x4C, 0x4E, 0x50, 0x54

[Description]

Processes the data concerning logos management.
• Function is specified by fn

fn	FUNCTION	
0x50 ['P']	Function Print	Prints a logo previously saved
0x44 ['D']	Function Download	Load logo in bmp format
0x45 ['E']	Function Erase	Erase a single logo
0x41 ['A']	Function Erase all	Erase all logos
0x47 ['G']	Function Get logo	Read a logo
0x4E ['N']	Function Get logo number	Read the number of stored logos
0x4C ['L']	Function Get logo list	Return the list of currently stored logos
0x49 ['I']	Function Get logo info	Read the information of a specific logo
0x46 ['F']	Function Get free memory	Read the free space size
0x54 ['T']	Function Get total memory	Read the memory overall size (area where it's possible store logos)

[Notes]

• The fn parameter is a string variable

[Default]

[Reference]

[Example]

0x1C 0x50 0x50 [fn 'P']

<FS P>

Print a logo previously saved

Valid for	KPM150HIII LAT, KPM150HIII REAR, KPM150HIII LAT UHF, KPM150HIII REAR UHF B202HIII, B202HIII UHF

[Format]

Hex	1C	50	50	nH	nL	m	r
ASCII	FS	P	P	nH	nL	m	r

[Range]

0x00 ≤ nH, nL ≤ 0xFF
0x00 ≤ m ≤ 0x03
0x00 ≤ r ≤ 0x03

[Description]

Prints a logo previously saved. The value of m selects the mode as follows:

m	MODE
0x00	Normal
0x01	Double width
0x02	Double heigth
0x03	Quadruple

• nH and nL indicates the number of logo (2 bytes expressed in hexadecimal notation).

• The value of r specifies the rotation as follows:

r	ROTATION
0x00	No rotation
0x01	90° rotation
0x02	180° rotation
0x03	270° rotation

[Notes]

[Default]

[Reference]

[Example]

0x1C 0x50 0x44 [fn 'D']

<FS P>

Load logo in bmp format

Valid for	KPM150HIII LAT, KPM150HIII REAR, KPM150HIII LAT UHF, KPM150HIII REAR UHF B202HIII, B202HIII UHF

[Format]

Hex	1C	50	44	nH	nL	Kc1	Kc2	drv	szHH	szHL	szLH	szLL	d[1]...d[sz]
ASCII	FS	P	D	nH	nL	Kc1	Kc2	drv	szHH	szHL	szLH	szLL	d[1]...d[sz]

[Range]

0x00 ≤ nH, nL ≤ 0xFF
0x00 ≤ Kc1 ≤ 0xFF
0x00 ≤ Kc2 ≤ 0xFF
drv = 0x00
0x00 ≤ szHH, szHL, szLH, szLL ≤ 0xFF
0x00 ≤ d1, dsz ≤ 0xFF

[Description]

Loads a monochromatic BMP file as a logo, where:
• nH and nL indicates the number of logo (2 bytes expressed in hexadecimal notation).
• Kc1 and Kc2 2 bytes that indicate the Keycode. The Keycode is 2 byte optional data to identify loaded image; its content is free for the user to select as a progressive number, file CRC or else.
• drv is the storage drive. Its value must be 0x00.
• szHH, szHL, szLH and szLL 4 bytes that indicate the bmp dimension in bytes as follows:
sz = (szHH × 16777216) + (szHL × 65536) + (szLH × 256) + szLL indicates the number of bytes in the logo (4 bytes expressed in hexadecimal notation)
• d[1] ...d[sz] is the bmp image data.
• The image size depends on the amount of available memory on the device that you get by using the 0x1C 0x50 0x46 command.

[Notes]

• If command is not successful the printer transmits the NACK (0x15), otherwise returns ACK (0x06) followed by 13 bytes as shown in the command 0x1C 0x50 0x49.
• Device does not perform any check on Keycode since it is just an identification number.

[Default]

[Reference]

0x1C 0x50 0x46, 0x1C 0x50 0x49

[Example]

0x1C 0x50 0x45 [fn ‘E’]

<FS P>

Erase a single logo

Valid for	KPM150HIII LAT, KPM150HIII REAR, KPM150HIII LAT UHF, KPM150HIII REAR UHF B202HIII, B202HIII UHF

[Format]

Hex	1C	50	45	nH	nL
ASCII	FS	P	E	nH	nL

[Range] 0x00 ≤ nH, nL ≤ 0xFF

[Description] Erases a single logo defined by n as follows
• nH, nL identifies the number of the logo (2 bytes expressed in hexadecimal)

[Notes] • If command is successful the printer transmits the ACK (0x06), otherwise returns NACK (0x15).

[Default]

[Reference] 0x1C 0x50 0x41

[Example]

0x1C 0x50 0x41 [fn 'A']

<FS P>

Erase all logos

Valid for	KPM150HIII LAT, KPM150HIII REAR, KPM150HIII LAT UHF, KPM150HIII REAR UHF B202HIII, B202HIII UHF

[Format]	Hex	1C	50	41	drv
	ASCII	FS	P	A	drv

[Range] drv = 0x00

[Description] Earses all logos from the storage drive specified by drv parameter.
• drv is the storage drive. Its value must be 0x00.

[Notes] • If command is successful the printer transmits the ACK (0x06), otherwise returns NACK (0x15).

[Default]

[Reference] 0x1C 0x50 0x45

[Example]

0x1C 0x50 0x47 [fn ‘G’]

<FS P>

Read stored logo

Valid for	KPM150HIII LAT, KPM150HIII REAR, KPM150HIII LAT UHF, KPM150HIII REAR UHF B202HIII, B202HIII UHF

[Format]

Hex	1C	50	47	nH	nL
ASCII	FS	P	G	nH	nL

[Range] 0x00 ≤ nH, nL ≤ 0xFF

[Description] Reads a logo specified by [(nH x 256)+nL] number.

[Notes]

- If the transmission has been received correctly and the command is valid, the printer returns the ACK (0x06) followed by image data, otherwise return NACK (0x15) if the logo is not present.

[Default]

[Reference] 0x1C 0x50 0x44

[Example]

0x1C 0x50 0x4E [fn ‘N’] <FS P>

Read the number of stored logos

Valid for	KPM150HIII LAT, KPM150HIII REAR, KPM150HIII LAT UHF, KPM150HIII REAR UHF B202HIII, B202HIII UHF

[Format]

Hex	1C	50	4E
ASCII	FS	P	N

[Range]

[Description] Reads how many logos are loaded. It returns:
• ACK (0x06) character, followed by a 2 bytes nH and nL that indicate the number of stored logos. This value is expressed as [(nH x 256) + nL].

[Notes]

[Default]

[Reference] 0x1C 0x90

[Example] If 5 logos are stored in the printer, the answer will be:
0x06 0x00 0x05

where:

0x06	ACK character
0x00 0x05	2 bytes that indicates the number of stored logos

0x1C 0x50 0x4C [fn ‘L’]

<FS P>

Return the list of currently stored logos

Valid for	KPM150HIII LAT, KPM150HIII REAR, KPM150HIII LAT UHF, KPM150HIII REAR UHF B202HIII, B202HIII UHF

[Format]

Hex	1C	50	4C
ASCII	FS	P	L

[Range] 0x00 ≤ nH, nL ≤ 0xFF

[Description] Returns the indexes list of the stored logos.

[Notes] • If command is not successful the printer transmits the NACK (0x15), otherwise returns ACK (0x06) followed by 2 bytes nH and nL that indicates the number of stored logos (2 bytes expressed in hexa-decimal notation) and a list of indexes structured as follows:

Index 1		...	Index n	
Index H[1]	Index L[1]		Index H[n]	Index L[n]

[Default]

[Reference]

[Example] If the number of stored logos on the device is 3 and the relative indexes are 1, 2 and 4 the answer will be:
0x06 0x00 0x03 0x00 0x01 0x00 0x02 0x00 0x04

where:

0x06	ACK character
0x00 0x03	2 bytes that indicates the number of stored logos
0x00 0x01	2 bytes that indicates the index of first logo
0x00 0x02	2 bytes that indicates the index of second logo
0x00 0x04	2 bytes that indicates the Index of third logo

0x1C 0x50 0x49 [fn 'I'] <FS P>

Read the information of a specific logo

Valid for	KPM150HIII LAT, KPM150HIII REAR, KPM150HIII LAT UHF, KPM150HIII REAR UHF B202HIII, B202HIII UHF

[Format]

Hex	1C	50	49	nH	nL
ASCII	FS	P	I	nH	nL

[Range]

0x00 ≤ nH, nL ≤ 0xFF
0x00 ≤ xDimH ≤ 0xFF, 0x00 ≤ xDimL ≤ 0xFF
0x00 ≤ yDimH ≤ 0xFF, 0x00 ≤ yDimL ≤ 0xFF
0x00 ≤ sizeHH ≤ 0xFF, 0x00 ≤ sizeHL ≤ 0xFF
0x00 ≤ sizeLH ≤ 0xFF, 0x00 ≤ sizeLL ≤ 0xFF
0x00 ≤ crcH ≤ 0xFF, 0x00 ≤ crcL ≤ 0xFF

[Description]

Reads the informations of a specific logo, where:
• nH and nL indicates the number of logo (2 bytes expressed in hexadecimal notation).
• xDimH and xDimL specifiies the dimension X of logo = (xDimH × 256) + xDimL.
• yDimH and yDimL specifies the dimension Y of logo = (yDimH × 256) + yDimL.
• sizeHH, sizeHL, sizeLH and sizeLL 4 bytes that indicate the logo dimension in bytes.
• crcH and crcL 2 bytes that identifies the Cyclic Redundancy Check of logo's data.
• Kc1, Kc2 2 bytes that indicate the keycode.

[Notes]

• If command is not successful the printer transmits the NACK (0x15), otherwise returns ACK (0x06) followed by the following bytes:

BYTE	FUNCTION	DESCRIPTION
1st	ACK	
2nd	xDimH	Logo Horizontal dimension
3rd	xDimL	
4th	yDimH	Logo Vertical dimension
5th	yDimL	
6th	sizeHH	RAW image dimension
7th	sizeHL	
8th	size LH	
9th	size LL	
10th	crcH	Cyclic Redundancy Check of image data
11th	crcL	
12th	Kc1	Keycode stored by command 0x1C 0x50 0x44
13th	Kc2	

[Default]

[Reference] 0x1C 0x50 0x44

[Example]

0x1C 0x50 0x46 [fn ‘F’] <FS P>

Read the free space size

Valid for	KPM150HIII LAT, KPM150HIII REAR, KPM150HIII LAT UHF, KPM150HIII REAR UHF B202HIII, B202HIII UHF

[Format]

Hex	1C	50	46	drv
ASCII	FS	P	F	drv

[Range]

drv = 0x00
0x00 ≤ freeHH ≤ 0xFF, 0x00 ≤ freeHL ≤ 0xFF
0x00 ≤ freeLH ≤ 0xFF, 0x00 ≤ freeLL ≤ 0xFF

[Description]

Reads the free space size (amount of free memory of the storage drive).
• drv is the storage drive. Its value must be 0x00.

[Notes]

• If command is not successful the printer transmits the NACK (0x15), otherwise returns ACK (0x06) followed by 4 bytes that indicate the amount of free memory in bytes as follows:

BYTE	FUNCTION
1st	freeHH
2nd	freeHL
3rd	freeLH
4th	freeLL

• To calculate the free memory size in bytes (4 bytes expressed in hexadecimal notation) using this formula:
freesize = (freeHH × 16777216) + (freeHL × 65536) + (freeLH × 256) + freeLL

[Default]

[Reference]

[Example]

0x1C 0x50 0x54 [fn 'T']

<FS P>

Read the memory overall size

Valid for	KPM150HIII LAT, KPM150HIII REAR, KPM150HIII LAT UHF, KPM150HIII REAR UHF B202HIII, B202HIII UHF

[Format]

Hex	1C	50	54	drv
ASCII	FS	P	T	drv

[Range]

drv = 0x00
0x00 ≤ totHH ≤ 255, 0x00 ≤ totHL ≤ 0xFF
0x00 ≤ totLH ≤ 255, 0x00 ≤ totLL ≤ 0xFF

[Description]

Reads the total size of memory of the storage drive (area where it's possible store logos).
• drv is the storage drive. Its value must be 0x00.

[Notes]

• If command is not successful the printer transmits the NACK (0x15), otherwise returns ACK (0x06) followed by 4 bytes that indicate the amount of total memory in bytes as follows:

BYTE	FUNCTION
1st	totHH
2nd	totHL
3rd	totLH
4th	totLL

• To calculate the total memory size in bytes (4 bytes expressed in hexadecimal notation) using this formula:
totalsize = (totHH × 16777216) + (totHL × 65536) + (totLH × 256) + totLL

[Default]

The total memory is 9 MB.

[Reference]

[Example]

0x1C 0x90

Get number of stored logo

Valid for	KPM150HIII LAT, KPM150HIII REAR, KPM150HIII LAT UHF, KPM150HIII REAR UHF B202HIII, B202HIII UHF

[Format]

Hex	1C	90
ASCII	FS	0x90

[Range]

[Description] This command sends to the printer the request of number of stored logo; the printer returns a bytes sequence as follows:

<PNn>

where
n (in ASCII format) indicates the number of stored images.

[Notes]

[Default]

[Reference]

[Example] If in the flash memory are stored 10 logos, the command sequence is:
0x1C 0x90

The printer will answer:

HEX	0x3C	0x50	0x4E	0x31	0x30	0x3E
ASCII	<	P	N	1	0	>

0x1C 0x91

Get pictures header list

Valid for	KPM150HIII LAT, KPM150HIII REAR, KPM150HIII LAT UHF, KPM150HIII REAR UHF B202HIII, B202HIII UHF

[Format]

Hex	1C	91
ASCII	FS	0x91

[Range]

[Description] This command requests to the printer the list of stored logo. The printer returns a bytes sequence as follows : <PL CrLf [N-ID CrLf]>

where:

CrLf	indicates the two characters 0x0D (carriage return) and 0x0A (line feed).
N	is the number of stored logo.
[ID]	indicates the file-name that identify the logo, a sequence of 16 bytes that was defined when the logo is stored.

[Notes]

[Default]

[Reference] 0x1C 0x92, 0x1C 0x94

[Example]

0x1C 0x92

Get pictures header info

Valid for	KPM150HIII LAT, KPM150HIII REAR, KPM150HIII LAT UHF, KPM150HIII REAR UHF B202HIII, B202HIII UHF

[Format]

Hex	1C	92	nH	nL
ASCII	FS	0x92	nH	nL

[Range] 0x00 ≤ nH, nL ≤ 0xFF

[Description] Gets the logo header info stored specified by n (expressed in ASCII).
- n is the number of stored logo;
- The printer returns a byte sequence as follows:

<PIe[ID]>

where:

e	indicates the search result e = 0 picture not found e = 1 picture found
[ID]	indicates the file-name that identify the logo, a sequence of 16 bytes that was defined when the logo is stored.

[Notes]

[Default]

[Reference]

[Example]

0x1C 0x93

Print logo

Valid for	KPM150HIII LAT, KPM150HIII REAR, KPM150HIII LAT UHF, KPM150HIII REAR UHF B202HIII, B202HIII UHF

[Format]

Hex	1C	93	nH	nL	opt	sp	posH	posL
ASCII	FS	0x93	nH	nL	opt	sp	posH	posL

[Range] 0x00 ≤ nH, nL ≤ 0xFF

[Description] Prints logo defined by n.

- n is the number of image to print;
- opt is the option byte that specifies justification and rotation as shown in the following table:

BIT	DESCRIPTION	BIN	FUNCTION
0,1	Justification	00	Left
		01	Center
		10	Right
		11	User Define (on the basis of position specified by posH and posW)
2, 3	-	00	Not used. Fixed to off
4, 6	-	00	Not used. Fixed to off
7	Rotated print	0	Print normal
		1	Print rotate

- sp specifies the thickness of the image border (expressed in dot).
- posH, posL specifies the logo's horizontal position (from the left border); used only with user-defined justification.

[Notes]

[Default]

[Reference]

[Example] To print logo no.10 centered and rotated transmits:

0x1C 0x93 0x00 0x0A 0x81 0x01 0x00 0x00

where
0x1C 0x93 //print logo command
0x00 0x0A //Logo no. 10
0x81 //printing rotated and centered
0x01 //1 pixel of image border
0x00 0x00 //Positioning not used

To print logo no.10 not rotated and with a user-defined printing position transmits:

0x1C 0x93 0x00 0x0A 0x03 0x01 0x00 0x50

where
0x1C 0x93 //print logo command
0x00 0x0A //Logo no. 10
0x03 //printing with a user define positioning and not rotated
0x01 //1 pixel of image border
0x00 0x50 //Printing 10mm from the left border

0x1C 0x94

Save the image received from serial port into the flash

Valid for	KPM150HIII LAT, KPM150HIII REAR, KPM150HIII LAT UHF, KPM150HIII REAR UHF B202HIII, B202HIII UHF

[Format]

Hex	1C 94 nH nL xDimH xDimL yDimH yDimL TbdH TbdL Id0..Idn d0..dn 3E
ASCII	FS 0x94 nH nL xDimH xDimL yDimH yDimL TbdH TbdL Id0..Idn d0..dn >

[Range]

0x00 ≤ nH, nL ≤ 0xFF
0x00 ≤ xDimH, xDimL ≤ 0xFF
0x00 ≤ yDimH, yDimL ≤ 0xFF
0x00 ≤ d0, dn ≤ 0xFF

[Description]

Saves the image received from serial port into the printer flash. If the number used to store logo is not already present inside the printer, the new logo is appended to stored logos. Otherwise the new logo is updated.

- nH and nL indicates the number of logo (2 bytes expressed in hexadecimal notation).
- xDimH and xDimL indicate the logo horizontal dimension in pixel (2 bytes expressed in hexadecimal notation); the value must be multiple of 16.
- yDimH and yDimL indicates the logo vertical dimension in pixel (2 bytes expressed in hexadecimal notation).
- TbdH and TbdL 2 bytes fixed to 0x00 (RESERVED).
- Id0..Idn indicates the file-name of the logo, a sequence of 16 bytes to identify univocally the logo.
- d0 ...dn are the image data. The size of image is defined as follows:
  xSize = xDim /16; number of WORD (16 bit) in a horizontal image line
  Total Size = (xSize × yDim) × 2
- '>' is the character terminator (in ASCII) of this command.

The printer returns a sequence of bytes as follows:

<PC0> if the saving include an incorrect syntax or the memory in flash available for logos is finished (128 Kbyte)

<PC1n> if the syntax command is correct and there's memory enough in flash for saving logos; n returns the status of the flash programming:

0x88	sector not erased
0x77	error during programming
0xAA	programming done

[Notes]

- If file-name length is shorter than 16 byte, add a terminator (0x00) and make padding to 16 characters.
- If file-name extension is absent, it is automatically added to the name.

[Default]

[Reference]

[Example] The following example shows the bytes sequence received from serial port to store a logo into the printer flash:

```
Offset          Hexadecimal                                          ASCII
00000000: 1C 94 00-08 01 C0 02-49 00 00 4C-6F 67 6F 32 36° ° ° ´ + ˆ I L o g o - 2 6
00000010: 2E 42 4D-50 00 00 00-00 00 00 00-00 00 00 00 00 .BMP
00000020: 00 00 00-00 00 00 00-00 00 00 00-00 00 00 00 00
....                                                                 Image data
....
....
00008000: 00 00 00 00-00 00 00 00-00 00 00 00-00 00 00 00
00008010: 00 00 3E                                                   >
```

If the programming is successful, the printer's answer will be :

HEX	0x3C	0x50	0x43	0x31	0xAA	0x3E
ASCII	<	P	C	1	0xAA	>

0x1B 0x3D

<ESC =>

Select peripheral device

Valid for: KPM150HIII LAT, KPM150HIII LAT UHF, KPM150HIII REAR, KPM150HIII REAR UHF
B202HIII, B202HIII UHF

[Format]

Hex	1B	3D	n
ASCII	ESC	=	n

[Range]

0x01 ≤ n ≤ 0x03
0x31 ≤ n ≤ 0x33
n = 0x05, 0x35

[Description] Select the device to which the host computer sends data, using n as follows:

KPM150HIII LAT, KPM150HIII REAR, B202HIII

n	FUNCTION
0x01, 0x03, 0x31, 0x33	Printer enabled
0x02, 0x32	Printer disabled

KPM150HIII LAT UHF, KPM150HIII REAR UHF, B202HIII UHF

n	FUNCTION
0x01, 0x03, 0x31, 0x33	Printer enabled
0x02, 0x32	Printer disabled
0x05, 0x35	Select Pass-Through toward RFID module

[Notes]

- When the printer is disabled, it ignores all transmitted data until the printer is enabled through this command.
- When the Pass-through function is enabled, all transmitted data are sent on the 2nd serial.

KPM150HIII LAT UHF, KPM150HIII REAR UHF, B202HIII UHF

- When the Pass-trough function is enabled toward RFID module, to reactivate communication toward printer must send the 0x1B 0x3D 0x31 0xF1 0x5A 0xE0 command.

[Default] n = 0x01

[Reference]

[Example]

0x1B 0x40

<ESC @>

Initialize the printer

Valid for	KPM150HIII LAT, KPM150HIII LAT UHF, KPM150HIII REAR, KPM150HIII REAR UHF B202HIII, B202HIII UHF

[Format]

Hex	1B	40
ASCII	ESC	@

[Range]

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

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

[Default]

[Reference]

[Example]

0x1B 0x63 0x35 <ESC c 5>

Enable or disable front panel keys

Valid for	KPM150HIII LAT, KPM150HIII LAT UHF, KPM150HIII REAR, KPM150HIII REAR UHF B202HIII, B202HIII UHF

[Format]

Hex	1B	63	35	n
ASCII	ESC	c	5	n

[Range] n = 0x00, 0x01

[Description] Enables or disables the front panel keys based on the value of n as follows:

n	FUNCTION
0x00	Enables front panel keys
0x01	Disables front panel keys

[Notes]
- Only the LSB of n is effective.
- When the keys panel is disabled, the keys may only be used after the printer has been reset.

[Default] n = 0x01

[Reference]

[Example]

0x1C 0x3C 0x53 0x56 0x45 0x4C 0x3E

<FS < S V E L > >

Change printer emulation to SVELTA

Valid for	KPM150HIII LAT, KPM150HIII LAT UHF, KPM150HIII REAR, KPM150HIII REAR UHF B202HIII, B202HIII UHF

[Format]	Hex	1C	3C	53	56	45	4C	3E
	ASCII	FS	<	S	V	E	L	>

[Range]

[Description] Change the printer emulation to SVELTA emulation.

[Notes]

[Default]

[Reference]

[Example]

0x1C 0x44 <FS D>

Printing head test

Valid for	KPM150HIII LAT, KPM150HIII LAT UHF, KPM150HIII REAR, KPM150HIII REAR UHF B202HIII, B202HIII UHF

[Format]

Hex	1C	44
ASCII	FS	D

[Range]

[Description] The printer returns two bytes that represent the number of printing head dots not working.

[Notes] If the “Print Head Test” parameter of the printer setup is set on “Disabled”, the printer performs the printing head test before sending the answer, otherwise it returns the data of the test run at power up of the device (refer to the user manual of each device).

[Default]

[Reference]

[Example]

0x1C 0x6C

<FS I>

Reload paper

Valid for	KPM150HIII LAT, KPM150HIII LAT UHF, KPM150HIII REAR, KPM150HIII REAR UHF B202HIII, B202HIII UHF

[Format]

Hex	1C	6C
ASCII	FS	I

[Range]

[Description] When this command is received, the printer performs a paper reloading.

[Notes]
- During the execution of the command, the printer indicates the paper end.
- This command is active only if the alignment is enabled.

[Default]

[Reference]

[Example]

0x1C 0x6D <FS m>

Paper realignment

Valid for	KPM150HIII LAT, KPM150HIII LAT UHF, KPM150HIII REAR, KPM150HIII REAR UHF B202HIII, B202HIII UHF

[Format]

Hex	1C	6D
ASCII	FS	m

[Range]

[Description] When this command is received, the printer performs a paper realignment before printing the next ticket.

[Notes]
- During the execution of the command, the printer indicates the paper end.
- This command is used when setting the cut without paper recovering.

[Default]

[Reference]

[Example]

0x1C 0x73 <FS s>

Disable or enable black mark detection

Valid for	KPM150HIII LAT, KPM150HIII LAT UHF, KPM150HIII REAR, KPM150HIII REAR UHF B202HIII, B202HIII UHF

[Format]

Hex	1C	73	n
ASCII	FS	s	n

[Range] n = 0x00, 0x01

[Description] Sent before and after a feed command, this command disables and then enables the detection and counting of the alignment black mark, according to n values as shown in following table:

n	FUNCTION
0x00	Disable black mark detection
0x01	Enable black mark detection

[Notes]
- When you need to move paper outside the print job, you need to send command sequence 0x1C 0x73 0x00 to disable the detection and counting of the black marks by the alignment sensor to allow the device to properly position the paper at the end of the movement. Then, you need to enable the black mark detection with the command sequence 0x1C 0x73 0x01.
- Send this command always before and after a feed command.

[Default] n = 0x01

[Reference] 0x1B 0x4A, 0x1B 0x64

[Example]

0x1C 0x80

Read date/time of the real time clock

Valid for	KPM150HIII LAT, KPM150HIII LAT UHF, KPM150HIII REAR, KPM150HIII REAR UHF B202HIII, B202HIII UHF

[Format]

Hex	1C	80	m
ASCII	FS	0x80	m

[Range] 0x00 ≤ m ≤ 0x03

[Description] Read date/time of the real time clock in the format specified by m values as follows:

m	FORMAT
0x00	DD/MM/YY hh:mm:ss
0x01	DDMMYYhhmmss
0x02	YYMMDDhhmmss
0x03	YYMMDDkkmmssd

where:

DD	represents the day of the date
MM	represents the month of the date
YY	represents the year of the date
hh	represents the hour of the time
mm	represents the minutes of the time
ss	represents the seconds of the time
d	represents the day of the week

[Notes] Before send the date/time, if the m parameter is valid the printer transmits the ACK (0x06) followed by the number of bytes to sent, otherwise return NACK (0x15).

[Default]

[Reference]

[Example] To read date/time in the “DDYYMMhhmmss” format, transmit:

Host

HEX	0x1C	0x80	0x01
ASCII	FS	0x80	m

If the current date/time are “15 September 2006 at 10:56:20 (AM)”, the printer answers as follows

HEX	0x06	0x0C	0x31	0x35	0x30	0x39	0x30	0x36	0x31	0x30	0x35
ASCII	ACK	FF	1	5	0	9	0	6	1	0	5

0x36	0x32	0x30
6	2	0

0x1C 0x81

Set date/time of the real time clock

Valid for	KPM150HIII LAT, KPM150HIII LAT UHF, KPM150HIII REAR, KPM150HIII REAR UHF B202HIII, B202HIII UHF

[Format]

Hex	1C	81	m	n	d0...dn
ASCII	FS	0x81	m	n	d0...dn

[Range]

0x00 ≤ m ≤ 0x03
0x00 ≤ d0, dn ≤ 0xFF

[Description]

Sets date/time of the real time clock in the format specified by m values as follows:

m	FORMAT
0x00	DD/MM/YY hh:mm:ss
0x01	DDMMYYhhmmss
0x02	YYMMDDhhmmss
0x03	YYMMDDkkmmssd

where:

DD =	represents the day of the date
MM =	represents the month of the date
YY =	represents the year of the date
hh =	represents the hour of the time
mm =	represents the minutes of the time
ss =	represents the seconds of the time
d =	represents the day of the week

- n specifies the number of characters to send.
- d0...dn are the ASCII characters relative to the date and time to set.

[Notes]

- If the transmission has been received correctly and the command is valid, the printer returns the ACK (0x06), otherwise return NACK (0x15).
- The day of the week is calculated automatically from the printer and then it's possible that the returned value is different from the one transmitted.

[Default]

[Reference]

[Example] To set the date and time to “29 September 2006 at 13:51:00 (PM)” in the “YYMMDDhhmmss” format, transmit:

Host

Hex	0x1C	0x81	0x02	0x0C	0x30	0x36	0x30	0x39	0x32	0x39	0x31
ASCII	FS	0x81	STX	FF	0	6	0	9	2	9	1

0x33	0x35	0x31	0x30	0x30
3	5	1	0	0

The printer’s answer ACK (0x06) if the transmission is OK otherwise NACK (0x15).

0x1C 0x82

Print date

Valid for	KPM150HIII LAT, KPM150HIII LAT UHF, KPM150HIII REAR, KPM150HIII REAR UHF B202HIII, B202HIII UHF

[Format]	Hex	1C	82
	ASCII	FS	0x82

[Range]

[Description] Prints date in the format specified by the command 0x1C 0x84 with the parameter n = 0x44.

[Notes]

[Default] “dd/mm/yy”

[Reference] 0x1C 0x83, 0x1C 0x84

[Example]

0x1C 0x83

Print time

Valid for	KPM150HIII LAT, KPM150HIII LAT UHF, KPM150HIII REAR, KPM150HIII REAR UHF B202HIII, B202HIII UHF

[Format]	Hex	1C	83
	ASCII	FS	0x83

[Range]

[Description] Prints date in the format specified by the command 0x1C 0x84 with the parameter n = 0x54.

[Notes]

[Default] “hh:mm:ss”

[Reference] 0x1C 0x82, 0x1C 0x84

[Example]

0x1C 0x84

Set user-defined date/time formats

Valid for	KPM150HIII LAT, KPM150HIII LAT UHF, KPM150HIII REAR, KPM150HIII REAR UHF B202HIII, B202HIII UHF

[Format]	Hex	1C	84	n	d1...dk	0x00
	ASCII	FS	0x84	n	d1...dk	NUL

[Range]
n = 0x44, 0x54
0x00 ≤ d0, dK ≤ 0xFF

[Description]
Sets the format string for date and time used to printing.
• n specifies which user-defined string format is set:
- n = 0x44 (‘D’) for date
- n = 0x54 (‘T’) for time

• d0..dk are the ASCII characters relative to user-defined date/time formats.
• The maximum length of the user-defined date/time format string is 64 chars.
• The following table shows characters used to create user-defined date/time formats:

CHARACTER	DESCRIPTION
I	Select Italian language
E	Select English language (default language)
c	Select default data/time
d	Displays the day as a number without a leading zero (1-31)
dd	Displays the day as a number with a leading zero (01-31)
ddd	Displays the day as an abbreviation (for example, Sun)
dddd	Displays the day as a full name (for example, Sunday)
ddddd	Displays the date as a complete date in the short format where date values are formatted with day, month and year (the short date format is dd/mm/yy)
dddddd	Displays the date as a complete date in the extended format where date values are formatted with day, month and year (the extended date format is dd mmmm, yyyy)
m	Displays the month as a number without a leading zero (1-12). If the character m is immediately after the character h or hh ,displays the minutes instead of month (see also the n character formatting)
mm	Displays the month as a number with leading zeros (01-12). If the character m is immediately after the character h or hh , displays the minutes instead of month (see also the nn character formatting)
mmm	Displays the month as an abbreviation (for example, Jan)
mmmm	Displays the month as a full month name (for example, January)
yy	Displays the year in two-digit numeric format with a leading zero
yyyy	Displays the year in four digit numeric format

CHARACTER	DESCRIPTION
h	Displays the hour as a number without leading zeros (0-23)
hh	Displays the hour as a number with leading zeros (00-23)
n	Displays the minutes as a number without leading zeros (0-59)
nn	Displays the minutes as a number with leading zeros (00-59)
s	Displays the seconds as a number without leading zeros (0-59)
ss	Displays the seconds as a number with leading zeros (00-59)
ttttt	Displays the time in the extended format where time values are formatted with hour, minutes and seconds (the extended time format is h:mm:ss).
AM/PM	Using the 12-hour clock and displays the AM prefix in uppercase next to the hours that preceding midday and the PM prefix in uppercase next to the hours between midday and midnight.
am/pm	Using the 12-hour clock and displays the am prefix in lowercase next to the hours that preceding midday and the pm prefix in lowercase next to the hours between midday and midnight.
A/P	Using the 12-hour clock and displays the A prefix in uppercase next to the hours that preceding midday and the a prefix in uppercase next to the hours between midday and midnight.
a/p	Using the 12-hour clock and displays the a prefix in lowercase next to the hours that preceding midday and the a prefix in lowercase next to the hours between midday and midnight.

[Notes]

[Default]

[Reference]

[Example] To print the current time with the string format ‘yy/mm/dd hh:mm:ss’ follow these steps:

1. Send the following command to define the user-defined time string format:

HEX	0x1C	0x84	0x54	0x79	0x79	0x2F	0x6D	0x6D	0x2F	0x64	0x64
ASCII	FS	0x84	T	y	y	/	m	m	/	d	d
	0x20	0x68	0x68	0x3A	0x6E	6E	0x3A	0x73	0x73	0x00	
		h	h	:	n	n	:	s	s	NUL	

The printer’s answer ACK (0x06) if the transmission is OK otherwise NACK (0x15).
2. Send the following command to print the time:

HEX	0x1C	0x83	0x0A
ASCII	FS	0x83	LF

The character 0x0A feeds one line based on the current line spacing.
If the date and time is 22 October 2006 at 17:35:27 (PM) the output string printed will be 06/10/22 17:35:27

0x1C 0xC0

Hardware reset

Valid for	KPM150HIII LAT, KPM150HIII LAT UHF, KPM150HIII REAR, KPM150HIII REAR UHF B202HIII, B202HIII UHF

[Format 1]

Hex	1C	C0	18	10	14	1A
ASCII	FS	0xC0	CAN	DLE	DC4	SUB

[Range]

[Description] When this command is received, the printer perform an hardware reset (like a printer power-up).

[Notes]
- This command is executed immediately, even when the data buffer is full (Busy).
- The command execution stop the communication with host.

[Default]

[Reference]

[Example]

0x1D 0x49

<GS I>

Transmit printer ID

Valid for	KPM150HIII LAT, KPM150HIII LAT UHF, KPM150HIII REAR, KPM150HIII REAR UHF B202HIII, B202HIII UHF

[Format]

Hex	1D	49	n
ASCII	GS	I	n

[Range]

0x01 ≤ n ≤ 0x03
0x31 ≤ n ≤ 0x33
n = 0xFF

[Description]

Transmits the printer ID specified by n follows:

n	PRINTER ID	SPECIFICATION
0x01, 0x31	Printer model ID (1 byte)	0xFF (resend the command with n = 0xFF)
0x02, 0x32	Type ID	See table below
0x03, 0x33	ROM version ID	Depends on ROM version (4 characters)
0xFF	Printer model ID (2 bytes)	0x02 0x03

n = 0x02, 0x32 Type ID

BIT	OFF/ON	HEX	FUNCTION
0	Off	00	2-byte characters codes not supported
1	Off	00	Autocutter not supplied
	On	02	Autocutter supplied
2	Off	00	Thermal paper w/o label
	On	04	Thermal paper label
3	-	-	Undefined
4	Off	00	Not used. Fixed to off
5	-	-	Undefined
6	-	-	Undefined
7	Off	00	Not used. Fixed to off

[Notes]

• The printer only transmits 1 byte (printer ID) without confirmation that the host is ready to receive data.
• 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 0x50

<GS P>

Set horizontal and vertical motion units

Valid for	KPM150HIII LAT, KPM150HIII LAT UHF, KPM150HIII REAR, KPM150HIII REAR UHF B202HIII, B202HIII UHF

[Format]

Hex	1D	50	x	y
ASCII	GS	P	x	y

[Range] 0x00 ≤ x, y ≤ 0xFF

[Description]
Sets the horizontal and vertical motion units to 1/x inch and 1/y inch respectively.
When x is set to 0, the default setting value is used.
When y is set to 0, the default setting value is used.

[Notes]
• The horizontal direction is perpendicular to the paper feed direction.
• In standard mode, the following commands use x or y, regardless of character rotation (upside-down or 90° clockwise rotation):

Commands using x : 0x1B 0x20, 0x1B 0x24, 0x1B 0x5C, 0x1D 0x4C, 0x1D 0x57
Commands using y : 0x1B 0x33, 0x1B 0x4A

• This command does not affect the previously specified values.
• The calculated result from combining this command with others is truncated to the minimum value of the mechanical pitch or an exact multiple of that value.

[Default] x = 0xCC, y = 0xCC

[Reference] 0x1B 0x20, 0x1B 0x24, 0x1B 0x5C, 0x1B 0x33, 0x1B 0x4A, 0x1D 0x4C, 0x1D 0x57

[Example]

0x1D 0xE8

Setting minimum ticket length

Valid for	KPM150HIII LAT, KPM150HIII LAT UHF, KPM150HIII REAR, KPM150HIII REAR UHF B202HIII, B202HIII UHF

[Format]	Hex	1D	E8	n
	ASCII	GS	0xE8	n

[Range] 0x00 ≤ n ≤ 0xFF

[Description] This command set the minimum ticket length in mm, based on the value of n.

[Notes] Set values between 27 mm and 255 mm. Values lower or higher than the specified range are ignored.

[Default] n = 0x1B (27 mm)

[Reference]

[Example] To set the minimum ticket legth at 56 mm, the command sequence will be:
0x1D 0xE8 0x00 0x38

0x1D 0xF0

Set printing speed

Valid for	KPM150HIII LAT, KPM150HIII REAR, KPM150HIII LAT UHF, KPM150HIII REAR UHF B202HIII, B202HIII UHF

[Format]

Hex	1D	F0	n
ASCII	GS	0xF0	n

[Range] 0x00 ≤ n ≤ 0x02

[Description] Sets printing speed. n specifies the printing speed as follows:

n	PRINTING SPEED
0x00	High quality
0x01	Normal
0x02	High speed

[Notes] Printing speed reverts to the default value when the printer is reset or turned off.

[Default] n = 0x01

[Reference]

[Example]

0x1B 0x0C <ESC FF>

Print data in page mode

Valid for	KPM150HIII LAT, KPM150HIII LAT UHF, KPM150HIII REAR, KPM150HIII REAR UHF B202HIII, B202HIII UHF

[Format]

Hex	1B	0C
ASCII	ESC	FF

[Range]

[Description] In page mode, prints all buffered data in the printing area collectively.

[Notes]
- This command is enabled only in page mode.
- After printing, the printer does not clear the buffered data, setting values for 0x1B 0x54 and 0x1B 0x57, and the position for buffering character data.

[Default]

[Reference] 0x0C, 0x1B 0x4C, 0x1B 0x53

[Example] See the example in PAGE MODE section.

0x1B 0x4C

<ESC L>

Select page mode

Valid for	KPM150HIII LAT, KPM150HIII LAT UHF, KPM150HIII REAR, KPM150HIII REAR UHF B202HIII, B202HIII UHF

[Format]

Hex	1B	4C
ASCII	ESC	L

[Range]

[Description] Switches from standard mode to page mode.

[Notes]

- This command is enabled only when processed at the beginning of a line in standard mode.
- This command has no effect in page mode.
- After printing by 0x0C is completed or by using 0x1B 0x53, the printer returns to standard mode.
- This command sets the position where data is buffered to the position specified by 0x1B 0x54 within the printing area defined by 0x1B 0x57.
- This command switches the settings for the following commands (in which the values can be set independently in standard mode and page mode) to those for page mode:

1) Set right-side character spacing: 0x1B 0x20
2) Select default line spacing: 0x1B 0x32, 0x1B 0x33

- Only value settings is possible for the following commands in page mode; these commands are not executed.

1) Turn 90° clockwise rotation mode on/off: 0x1B 0x56
2) Select justification: 0x1B 0x61
3) Turn upside-down printing mode on/off: 0x1B 0x7B
4) Set left margin: 0x1D 0x4C
5) Set printable area width: 0x1D 0x57

- The following command is not available in page mode:

1) Print raster bit image: 0x1D 0x76 0x30

- The printer returns to standard mode when power is turned on, the printer is reset, or 0x1B 0x40 is used.

[Default]

[Reference] 0x0C, 0x1B 0x53, 0x1B 0x54, 0x1B 0x57, 0x1D 0x24, 0x1D 0x5C

[Example] See the example in PAGE MODE section.

0x1B 0x53 <ESC S>

Select standard mode

Valid for	KPM150HIII LAT, KPM150HIII LAT UHF, KPM150HIII REAR, KPM150HIII REAR UHF B202HIII, B202HIII UHF

[Format]

Hex	1B	53
ASCII	ESC	S

[Range]

[Description] Switches from page mode to standard mode.

[Notes]
- This command is effective only in page mode.
- Data buffered in page mode are cleared.
- This command sets the print position to the beginning of the line.
- The printing area set by 0x1B 0x57 are initialized.
- This command switches the settings for the following commands (in which the values can be set independently in standard mode and page mode) to those for standard mode:

1) Set right-side character spacing: 0x1B 0x20
2) Select default line spacing: 0x1B 0x32, 0x1B 0x33

- The following commands are enabled only to set in standard mode.

1) Set printing area in page mode: 0x1B 0x57
2) Select print direction in page mode: 0x1B 0x54

- The following commands are ignored in standard mode.

1) Set absolute vertical print position in page mode: 0x1D 0x24
2) Set relative vertical print position in page mode: 0x1D 0x5C

- Standard mode is selected automatically when power is turned on, the printer is reset, or command 0x1B 0x40 is used.

[Default]

[Reference] 0x0C, 0x1B 0x20, 0x1B 0x4C

[Example] See the example in PAGE MODE section.

0x1B 0x54 <ESC T>

Select print direction in page mode

Valid for	KPM150HIII LAT, KPM150HIII LAT UHF, KPM150HIII REAR, KPM150HIII REAR UHF B202HIII, B202HIII UHF

[Format]

Hex	1B	54	n
ASCII	ESC	T	n

[Range]

0x00 ≤ n ≤ 0x03
0x30 ≤ n ≤ 0x33

[Description]

Select the print direction and starting position in page mode.
n specifies the print direction and starting position as follows :

n	PRINT DIRECTION	STARTING POSITION
0x00, 0x30	Left to right	Upper left
0x01, 0x31	Bottom to top	Lower left
0x02, 0x32	Right to left	Lower right
0x03, 0x33	Top to bottom	Upper right

[Notes]

• When the command is input in standard mode, the printer executes only internal flag operation. This command does not affect printing in standard mode.
• This command sets the position where data is buffered within the printing area set by 0x1B 0x57.
• Parameters for horizontal or vertical motion units (x or y) differ as follows,depending on the starting position of the printing area:
1) If the starting position is the upper left or lower right of the printing area, data is buffered in the direction perpendicular to the paper feed direction:
Commands using horizontal motion units: 0x1B 0x20, 0x1B 0x24, 0x1B 0x5C.
Commands using vertical motion units: 0x1B 0x33, 0x1B 0x4A, 0x1D 0x24, 0x1D 0x5C.
2) If the starting position is the upper right or lower left of the printing area, data is buffered in the paper feed direction:
Commands using horizontal motion units: 0x1B 0x33, 0x1B 0x4A, 0x1D 0x24, 0x1D 0x5C.
Commands using vertical motion units: 0x1B 0x20, 0x1B 0x24, 0x1B 0x5C.

[Default]

n = 0x00

[Reference]

0x1B 0x24, 0x1B 0x4C, 0x1B 0x57, 0x1B 0x5C, 0x1D 0x24, 0x1D 0x50, 0x1D 0x5C

[Example]

See the example in PAGE MODE section.

0x1B 0x57 <ESC W>

Set printing area in page mode

Valid for	KPM150HIII LAT, KPM150HIII LAT UHF, KPM150HIII REAR, KPM150HIII REAR UHF B202HIII, B202HIII UHF

[Format]

Hex	1B	57	xL	xH	yL	yH	dxL	dxH	dyL	dyH
ASCII	ESC	W	xL	xH	yL	yH	dxL	dxH	dyL	dyH

[Range] 0x00 ≤ xL, xH, yL, yH, dxL, dxH, dyL, dyH ≤ 0xFF (except dxL= dxH = 0x00 or dyL = dyH = 0x00)

[Description] The horizontal starting position, vertical starting position, printing area width, and printing area height are defined as x0, y0, dx (inch), dy (inch), respectively.
Each setting for the printing area is calculated as follows:
x0 = [(xL + xH × 256) × (horizontal motion unit)]
y0 = [(yL + yH × 256) × (vertical motion unit)]
dx = [(dxL + dxH × 256) × (horizontal motion unit)]
dy = [(dyL + dyH × 256) × (vertical motion unit)]

[Notes]
- If this command is input in standard mode, the printer executes only internal flag operation. This command does not affect printing in standard mode.
- If the horizontal or vertical starting position is set outside the printable area, the printer stops command processing and processes the following data as normal data.
- If the printing area width or height is set to 0, the printer stops command processing and processes the following data as normal data.
- This command sets the position where data is buffered to the position specified by 0x1B 0x54 within the printing area.
- If (horizontal starting position + printing area width) exceeds the printable area, the printing area width is automatically set to (horizontal printable area -horizontal starting position).
- If (vertical starting position + printing area height) exceeds the printable area, the printing area height is automatically set to (vertical printable area - vertical starting position).
- The horizontal and vertical motion unit are specified by 0x1D 0x50. Changing the horizontal or vertical motion unit does not affect the current printing area.
- The 0x1D 0x50 command can change the horizontal (and vertical) motion unit. However, the value cannot be less than the minimum horizontal movement amount, and it must be in even units of minimum horizontal movement amount.
- Use the horizontal motion unit (x) for setting the horizontal starting position and printing area width, and use the vertical motion unit (y) for setting the vertical starting position and printing area height.
- When the horizontal starting position , vertical starting position, printing area width, and printing area height are defined as X, Y, Dx, and Dy respectively, the printing area is set.

[Default]

[Reference]

[Example] See the example in PAGE MODE section.

0x1D 0x24 <GS $>

Set absolute vertical print position in page mode

Valido per	KPM150HIII LAT, KPM150HIII LAT UHF, KPM150HIII REAR, KPM150HIII REAR UHF B202HIII, B202HIII UHF

[Format]

Hex	1D	24	nL	nH
ASCII	GS	$	nL	nH

[Range]

0x00 ≤ nL ≤ 0xFF
0x00 ≤ nH ≤ 0xFF

[Description]

• Set the absolute vertical print starting position for buffer character data in page mode.
• This command sets the absolute print position to [(nL + nH × 256) × (vertical or horizontal motion unit)] inches.

[Notes]

• This command is effective only in page mode.
• If the [(nL + nH × 256) × (vertical or horizontal motion unit)] exceeds the specified printing area, this command is ignored.
• The horizontal starting buffer position does not move.
• The reference starting position is that specified by 0x1B 0x54.
• This command operates as follows, depending on the starting position of the printing area specified by 0x1B 0x54:
1) When the starting position is set to the upper left or lower right, this command sets the absolute position in the vertical direction.
2) When the starting position is set to the upper right or lower left, this command sets the absolute position in the horizontal direction.
• The horizontal and vertical motion unit are specified by 0x1D 0x50.
• The 0x1D 0x50 command can change the horizontal and vertical motion unit. However, the value cannot be less than the minimum horizontal movement amount, and it must be in even units of the minimum horizontal movement amount.

[Default]

[Reference] 0x1B 0x24, 0x1B 0x54, 0x1B 0x57, 0x1B 0x5C, 0x1D 0x50, 0x1D 0x5C

[Example] See the example in PAGE MODE section.

0x1D 0x5C

<GS \>

Set relative vertical print position in page mode

Valido per	KPM150HIII LAT, KPM150HIII LAT UHF, KPM150HIII REAR, KPM150HIII REAR UHF B202HIII, B202HIII UHF

[Format]

Hex	1D	5C	nL	nH
ASCII	GS	\	nL	nH

[Range] 0x00 ≤ nL ≤ 0xFF, 0x00 ≤ nH ≤ 0xFF

[Description]
- Sets the relative vertical print starting position from the current position in page mode.
- This command sets the distance from the current position to [(nL + nH × 256) × vertical or horizontal motion unit] inches.

Notes]
- This command is ignored unless page mode is selected.
- When N is specified to the movement downward: nL + nH × 256 = N
- When N is specified to the movement upward (the negative direction), use the complement of 65536.
- When N is specified to the movement upward: nL + nH x 256 = 65536 - N
- Any setting that exceeds the specified printing area is ignored.
- This command function as follows, depending on the print starting position set by 0x1B 0x54:

1) When the starting position is set to the upper left or lower right of the printing, the vertical motion unit (y) is used.
2) When the starting position is set to the upper right or lower left of the printing area, the horizontal motion unit (x) is used.

- The horizontal and vertical motion unit are specified by 0x1D 0x50.
- The 0x1D 0x50 command can change the horizontal (and vertical) motion unit. However, the value cannot be less than the minimum horizontal movement amount, and it must be in even units of the minimum horizontal movement amount.

[Default]

[Reference] 0x1B 0x24, 0x1B 0x54, 0x1B 0x57, 0x1B 0x5C, 0x1D 0x24, 0x1D 0x50

[Example] See the example in PAGE MODE section.

SVELTA EMULATION

1 COMMANDS LISTED IN ALPHANUMERIC ORDER

2 COMMANDS LISTED BY FUNCTION

COMMANDS FOR BARCODE PRINTING

CHARACTERS COMMANDS

COMMANDS FOR TT FONTS MANAGEMENT

PRINT COMMANDS

STATUS COMMANDS

BIT-IMAGE COMMANDS

PRINT POSITION COMMANDS

COMMANDS FOR MECHANISM CONTROL

LOGOS MANAGEMENT COMMANDS

MISCELLANEOUS COMMANDS

<B2D k, A, x>

Set the number of columns of two-dimensional barcode PDF417

Valid for	KPM150HIII LAT, KPM150HIII LAT UHF, KPM150HIII REAR, KPM150HIII REAR UHF B202HIII, B202HIII UHF

[Format] ASCII <B2D k, A, x>

[Range] 0 ≤ x ≤ 30

[Description] Set the number of columns of PDF417 barcode.
- x = 0 specifies auto processing
- When x is not 0, specifies the number of columns of the data area as x code word.
- When auto processing (x = 0) is specified, the maximum number of columns in the data area is 30 columns.

[Notes]

[Default] x = 0

[Reference]

[Example]

<B2D k, B, x>

Set the number of rows of two-dimensional PDF417 barcode

Valid for	KPM150HIII LAT, KPM150HIII LAT UHF, KPM150HIII REAR, KPM150HIII REAR UHF B202HIII, B202HIII UHF

[Format] ASCII <B2D k, B, x>

[Range] 3 ≤ x ≤ 90

[Description] Set the number of rows of PDF417 barcode.
x specifies the number of rows of the data area as x rows.

[Notes]

[Default]

[Reference]

[Example]

<B2D k, C, x>

Set the width of a module of two-dimensional barcode PDF417

Valid for	KPM150HIII LAT, KPM150HIII LAT UHF, KPM150HIII REAR, KPM150HIII REAR UHF B202HIII, B202HIII UHF

[Format] ASCII <B2D k, C, x>

[Range] 2 ≤ x ≤ 8

[Description] Set the width of a module of PDF417 barcode.

[Notes]

[Default] x = 3

[Reference]

[Example]

<B2D k, D, x>

Set the height of two-dimensional barcode PDF417

Valid for	KPM150HIII LAT, KPM150HIII LAT UHF, KPM150HIII REAR, KPM150HIII REAR UHF B202HIII, B202HIII UHF

[Format] ASCII <B2D k, D, x>

[Range] 2 ≤ x ≤ 8

[Description] Set the height of PDF417 barcode.

[Notes]

[Default] x = 3

[Reference]

[Example]

<B2D k, E, m, x>

Set the error correction level of the PDF417 barcode

Valid for	KPM150HIII LAT, KPM150HIII LAT UHF, KPM150HIII REAR, KPM150HIII REAR UHF B202HIII, B202HIII UHF

[Format] ASCII <B2D k, E, m, x>

[Range] m = 0, 1
m = 0 0 ≤ x ≤ 8
m = 1 1 ≤ x ≤ 40

[Description] Set the error correction level of PDF417 barcode.

- m = 0 the error correction level is specified by “level”
- m = 1 the error correction level is specified by “ratio” [x × 10%]

[Notes]
- Error correction level is specified by either “level” or “ratio”.
- Error correction level specified by “level” (m = 0) is as follows. The number of the error correction code word is fixed regardless of the number of code words on the data area.

x	FUNCTION	N. OF ERROR CORRECTION CODE WORD
0	Error correction level 0	2
1	Error correction level 1	4
2	Error correction level 2	8
3	Error correction level 3	16
4	Error correction level 4	32
5	Error correction level 5	64
6	Error correction level 6	128
7	Error correction level 7	256
8	Error correction level 8	512

- Error correction level specified by “ratio” (m = 1) is as follows. The error correction level is defined by the calculated value [number of data code word × x × 0.1 = (A)]. The number of the error correction code word is changeable in proportion to the number of the code words on the data area.

CALCULATED VALUE (A)	CORRECTION LEVEL	N. OF ERROR CORRECTION CODE WORD
0 - 3	Error correction level 1	4
4 - 10	Error correction level 2	8
11 - 20	Error correction level 3	16
21 - 45	Error correction level 4	32
46 - 100	Error correction level 5	64
101 - 200	Error correction level 6	128
201 - 400	Error correction level 7	256
401 or more	Error correction level 8	512

[Default] m = 1, x = 1 [ratio: 10%]

[Reference]

[Example]

<B2D k, P, x, d1...dk>

Store the two-dimensional PDF417 barcode data in the barcode save area

Valid for	KPM150HIII LAT, KPM150HIII LAT UHF, KPM150HIII REAR, KPM150HIII REAR UHF B202HIII, B202HIII UHF

[Format] ASCII <B2D k, P, x, d1...dk>

[Range]

[Description] Store the PDF417 barcode data (d1...dk) in the barcode save area.
- x = number of characters (= dk)
- d1...dk = barcode data

[Notes]
- k bytes of d1...dk are processed as barcode data.
- Specify only the data code word of the barcode with this function. Be sure not to include the control data in the data d1...dk because they are added automatically by the printer.

[Default]

[Reference]

[Example]

<B2D I, A, x>

Specify the encoding scheme of DATAMATRIX barcode

Valid for	KPM150HIII LAT, KPM150HIII LAT UHF, KPM150HIII REAR, KPM150HIII REAR UHF B202HIII, B202HIII UHF

[Format] ASCII <B2D I, A, x>

[Range] 0 ≤ x ≤ 6

[Description] Set the encoding scheme for DATAMATRIX barcode specified by x as follows:

x	ENCODING
0	ASCII
1	C40
2	Text
3	X12
4	Edifact
5	Base256
6	AutoBest

[Notes]

[Default]

[Reference]

[Example]

<B2D I, B, x>

Set dot size of the module of the DATAMATRIX barcode

Valid for	KPM150HIII LAT, KPM150HIII LAT UHF, KPM150HIII REAR, KPM150HIII REAR UHF B202HIII, B202HIII UHF

[Format] ASCII <B2D I, B, x>

[Range] 2 ≤ x ≤ 24

[Description] Set dot size of the module of DATAMATRIX barcode:
x = dot dimension

[Notes]

[Default] x = 6

[Reference]

[Example]

<B2D I, C, x>

Set size of the DATAMATRIX barcode

Valid for	KPM150HIII LAT, KPM150HIII LAT UHF, KPM150HIII REAR, KPM150HIII REAR UHF B202HIII, B202HIII UHF

[Format] ASCII <B2D I, C, x>

[Range] 0 ≤ x ≤ 29

[Description] Set the size specified by x as follows:

x	BARCODE SIZE	x	BARCODE SIZE
0	AUTO	15	52 x 52
1	10 x 10	16	64 x 64
2	12 x 12	17	72 x 72
3	14 x 14	18	80 x 80
4	16 x 16	19	88 x 88
5	18 x 18	20	96 x 96
6	20 x 20	21	104 x 104
7	22 x 22	22	120 x 120
8	24 x 24	23	132 x 132
9	26 x 26	24	144 x 144
10	32 x 32	25	8 x 18
11	36 x 36	26	8 x 32
12	40 x 40	27	12 x 26
13	44 x 44	28	12 x 36
14	48 x 48	29	16 x 36

[Notes]

[Default] x = 0

[Reference]

[Example]

<B2D I, D, x>

Set rotation of the DATAMATRIX barcode

Valid for	KPM150HIII LAT, KPM150HIII LAT UHF, KPM150HIII REAR, KPM150HIII REAR UHF B202HIII, B202HIII UHF

[Format] ASCII <B2D I, D, x>

[Range] x = 0, 1

[Description] Set rotation by x as follows:

x	ROTATION
0	No rotation
1	90° rotation

[Notes]

[Default]

[Reference]

[Example]

<B2D l, P, x, d1...dk>

Store the two-dimensional DATAMATRIX barcode data in the barcode save area

Valid for	KPM150HIII LAT, KPM150HIII LAT UHF, KPM150HIII REAR, KPM150HIII REAR UHF B202HIII, B202HIII UHF

[Format] ASCII <B2D l, P, x, d1...dk>

[Range]

[Description] Store the DATAMATRIX barcode data (d1...dk) in the barcode save area.
- x = number of characters (= dk)
- d1...dk = barcode data

[Notes]
- k bytes of d1...dk are processed as barcode data.
- Specify only the data code word of the barcode with this function. Be sure not to include the control data in the data d1...dk because they are added automatically by the printer.

[Default]

[Reference]

[Example]

<B2D m, A, x>

Specify encoding scheme of AZTEC barcode

Valid for	KPM150HIII LAT, KPM150HIII LAT UHF, KPM150HIII REAR, KPM150HIII REAR UHF B202HIII, B202HIII UHF

[Format] ASCII <B2D m, A, x>

[Range] 0 ≤ x ≤ 1

[Description] Specifies encoding type of AZTEC barcode.

x	ENCODING
0	FULL AZTEC
1	AZTEC RUNE

[Notes]
- FULL AZTEC encodes all extended ASCII characters data up to a maximum length of approximately 3823 numeric or 3067 alphabetic characters or 1914 bytes of data.
- AZTEC RUNE is a compact AZTEC code, sometimes called SMALL AZTEC CODE. Encode all numbers from 0 to 9 up to a maximum length of 3 numbers.

[Default] x = 0

[Reference]

[Example]

<B2D m, B, x>

Specify dot size of the module of the AZTEC barcode

Valid for	KPM150HIII LAT, KPM150HIII LAT UHF, KPM150HIII REAR, KPM150HIII REAR UHF B202HIII, B202HIII UHF

[Format] ASCII <B2D, m, B, x>

[Range] 2 ≤ x ≤ 24

[Description] Specifies numbers of dot for each pixel of AZTEC barcode.

[Notes]

[Default] x = 0

[Reference]

[Example]

<B2D m, C, x>

Specify AZTEC barcode size

Valid for	KPM150HIII LAT, KPM150HIII LAT UHF, KPM150HIII REAR, KPM150HIII REAR UHF B202HIII, B202HIII UHF

[Format] ASCII <B2D m, C, x>

[Range] 0 ≤ x ≤ 36

[Description] Specifies AZTEC barcode format (rows and columns), as follows:

x	FORMAT	x	FORMAT	x	FORMAT
0	AUTO	13	C53X53	26	C109X109
1	C15X15 Compact	14	C57X57	27	C113X113
2	C19X19 Compact	15	C61X61	28	C117X117
3	C23X23 Compact	16	C67X67	29	C121X121
4	C27X27 Compact	17	C71X71	30	C125X125
5	C19X19	18	C75X75	31	C131X131
6	C23X23	19	C79X79	32	C135X135
7	C27X27	20	C83X83	33	C139X139
8	C31X31	21	C87X87	34	C143X143
9	C37X37	22	C91X91	35	C147X147
10	C41X41	23	C95X95	36	C151X151
11	C45X45	24	C101X101		
12	C49X49	25	C105X105		

[Notes]

[Default] x = 0

[Reference]

[Example]

<B2D m, D, x>

Specify the error correction level of the AZTEC barcode

Valid for	KPM150HIII LAT, KPM150HIII LAT UHF, KPM150HIII REAR, KPM150HIII REAR UHF B202HIII, B202HIII UHF

[Format] ASCII <B2D m, D, n>

[Range] 0 ≤ n ≤ 4

[Description] Specifies the ECC level (Error Correction Capability) of AZTEC barcode.

x	ECC level
0	AUTO
1	> 10 % + 3 codewords
2	> 23 % + 3 codewords
3	> 36 % + 3 codewords
4	> 50 % + 3 codewords

It is not possible to select both barcode size and error correction capability for the same barcode. If both options are selected then the error correction capability selection will be ignored.

[Notes]

[Default] x = 0

[Reference]

[Example]

<B2D m, P, x, d1...dk>

Store and prints the AZTEC barcode data in the barcode save area

Valid for	KPM150HIII LAT, KPM150HIII LAT UHF, KPM150HIII REAR, KPM150HIII REAR UHF B202HIII, B202HIII UHF

[Format] ASCII <B2D m, P, x, d1...dk>

[Range]

[Description] Store the AZTEC barcode data (d1...dk) in the barcode save area.
- x = number of characters (= dk)
- d1...dk = barcode data

[Notes]
- k bytes of d1...dk are processed as barcode data.
- Specify only the data code word of the barcode with this function.

[Default]

[Reference]

[Example]

<B2D n, A, x>

Specify encoding scheme of QRcode barcode

Valid for	KPM150HIII LAT, KPM150HIII LAT UHF, KPM150HIII REAR, KPM150HIII REAR UHF B202HIII, B202HIII UHF

[Format] ASCII <B2D n, A, x>

[Range] 0 ≤ x ≤ 1

[Description] Specifies encoding type of QRcode barcode.

x	ENCODING
0	QRcode model 2
1	MicroQR

[Notes]
- QRcode encodes all extended ASCII characters data up to a maximum length of 7089 numeric digits, 4296 alphabetic characters or 2953 bytes of data.
- MicroQR is a miniature version of the QRcode for short message. Encode all numbers from 0 to 9 up to a maximum length of 35 characters.

[Default] x = 0

[Reference]

[Example]

<B2D n, B, x>

Specify dot size of the module of the QRcode barcode

Valid for	KPM150HIII LAT, KPM150HIII LAT UHF, KPM150HIII REAR, KPM150HIII REAR UHF B202HIII, B202HIII UHF

[Format] ASCII <B2D, n, B, x>

[Range] 2 ≤ x ≤ 24

[Description] Specifies numbers of dot for each pixel of the module of the QRcode barcode.

[Notes]

[Default] x = 0

[Reference]

[Example]

<B2D n, C, x>

Specify QRcode barcode version

Valid for	KPM150HIII LAT, KPM150HIII LAT UHF, KPM150HIII REAR, KPM150HIII REAR UHF B202HIII, B202HIII UHF

[Format] ASCII <B2D n, C, x>

[Range] 0 ≤ x ≤ 40

[Description] Specifies the version of QRcode barcode to be printed.

[Notes]
- If selected version has not enough capacity to store the saved amount of data, next smallest version capable of that capacity will be printed.
- For QRcode version capacity according to ECC (Error Correction Capability) and data type refer to following table.
- With x = 0 the selection of the version occurs automatically according to the one that allows the printing of the requested data.

x	VERSION	MODULES	ECC LEVEL	NUMERIC	ALPHANUMERIC	BINARY
0	AUTO	-	-	-	-	-
1	1	21 x 21	L	40	24	16
			M	33	19	13
			Q	26	15	10
			H	16	9	6
2	2	25 x 25	L	76	46	31
			M	62	37	25
			Q	47	28	19
			H	33	19	13
3	3	29 x 29	L	126	76	52
			M	100	60	41
			Q	76	46	31
			H	57	34	23
4	4	33 x 33	L	186	113	77
			M	148	89	61
			Q	110	66	45
			H	81	49	33
5	5	37 x 37	L	254	153	105
			M	201	121	83
			Q	143	86	59
			H	105	63	43
6	6	41 x 41	L	321	194	133
			M	254	153	105
			Q	177	107	73
			H	138	83	57
7	7	45 x 45	L	369	223	153
			M	292	177	121
			Q	206	124	85
			H	153	92	63

x	VERSION	MODULES	ECC LEVEL	NUMERIC	ALPHANUMERIC	BINARY
8	8	49 x 49	L	460	278	191
			M	364	220	151
			Q	258	156	107
			H	201	121	83
9	9	53 x 53	L	551	334	229
			M	431	261	179
			Q	311	188	129
			H	234	142	97
10	10	57 x 57	L	651	394	270
			M	512	310	212
			Q	363	220	150
			H	287	173	118
11	11	61 x 61	L	771	467	320
			M	603	365	250
			Q	426	258	176
			H	330	199	136
12	12	65 x 65	L	882	534	366
			M	690	418	286
			Q	488	295	202
			H	373	226	154
13	13	69 x 69	L	1021	618	424
			M	795	482	330
			Q	579	351	240
			H	426	258	176
14	14	73 x 73	L	1100	666	457
			M	870	527	361
			Q	620	375	257
			H	467	282	193
15	15	77 x 77	L	1249	757	519
			M	990	599	411
			Q	702	425	291
			H	529	320	219
16	16	81 x 81	L	1407	853	585
			M	1081	655	449
			Q	774	469	321
			H	601	364	249
17	17	85 x 85	L	1547	937	643
			M	1211	733	503
			Q	875	530	363
			H	673	407	279
18	18	89 x 89	L	1724	1045	717
			M	1345	815	559
			Q	947	573	393
			H	745	451	309
19	19	93 x 93	L	1902	1152	791
			M	1499	908	623
			Q	1062	643	441
			H	812	492	337
20	20	97 x 97	L	2060	1248	857
			M	1599	969	665
			Q	1158	701	481
			H	918	556	381

x	VERSION	MODULES	ECC LEVEL	NUMERIC	ALPHANUMERIC	BINARY
21	21	101 x 101	L	2231	1351	928
			M	1707	1034	710
			Q	1223	741	508
			H	968	586	402
22	22	105 x 105	L	2408	1459	1002
			M	1871	1133	778
			Q	1357	822	564
			H	1055	639	438
23	23	109 x 109	L	2619	1587	1090
			M	2058	1247	856
			Q	1467	889	610
			H	1107	671	460
24	24	113 x 113	L	2811	1703	1170
			M	2187	1325	90
			Q	1587	92	60
			H	1227	73	50
25	25	117 x 117	L	3056	1852	1272
			M	2394	1450	96
			Q	1717	1040	74
			H	1285	78	54
26	26	121 x 121	L	3282	198	1366
			M	2543	1541	1058
			Q	1803	1093	70
			H	1424	83	52
27	27	125 x 125	L	3516	2131	1464
			M	2700	1636	1124
			Q	1932	1171	84
			H	1500	89	64
28	28	129 x 129	L	3668	2222	1527
			M	2856	1731	118
			Q	2084	1262	87
			H	1580	97	67
29	29	133 x 133	L	3908	2368	1627
			M	3034	1838	1263
			Q	2180	1321	97
			H	1676	1015	67
30	30	137 x 137	L	4157	251	1731
			M	3288	1993	136
			Q	2357	1428	91
			H	1781	107	71
31	31	141 x 141	L	4416	2676	183
			M	3485	2112	1451
			Q	2472	1498	102
			H	1896	114	69
32	32	145 x 145	L	4685	283	1951
			M	3692	2237	1537
			Q	266	1617	1111
			H	2021	1225	81
33	33	149 x 149	L	4964	3008	2067
			M	3908	2368	1627
			Q	2804	16	1167
			H	2156	1306	87

x	VERSION	MODULES	ECC LEVEL	NUMERIC	ALPHANUMERIC	BINARY
34	34	153 x 153	L	5252	3182	2187
			M	4133	2505	1721
			Q	2948	1786	1227
			H	2300	1393	97
35	35	157 x 157	L	5528	3350	2302
			M	4342	2631	1808
			Q	3080	1866	1282
			H	2360	1430	92
36	36	161 x 161	L	5835	3536	2430
			M	4587	277	1910
			Q	3243	1965	1350
			H	2523	152	1050
37	37	165 x 165	L	6152	3728	2562
			M	4774	2893	1988
			Q	3416	2070	1422
			H	2624	1590	1092
38	38	169 x 169	L	6478	3926	2698
			M	5038	3053	2098
			Q	3598	2180	1498
			H	2734	1657	1138
39	39	173 x 173	L	6742	4086	2808
			M	5312	321	2212
			Q	3790	2297	1578
			H	2926	1773	1218
40	40	177 x 177	L	7088	4295	2952
			M	5595	3390	2330
			Q	3992	241	1662
			H	3056	1851	1272

[Default] x = 0

[Reference]

[Example]

<B2D n, D, x>

Specify the error correction level of the QRcode barcode

Valid for	KPM150HIII LAT, KPM150HIII LAT UHF, KPM150HIII REAR, KPM150HIII REAR UHF B202HIII, B202HIII UHF

[Format] ASCII <B2D n, D, x>

[Range] 0 ≤ x ≤ 4

[Description] Specifies the ECC level (Error Correction Capability) of QRcode barcode.

x	ECC level	
0	AUTO	
1	ECC L = approx 20% of symbol	Recovery Capability = approx 7%
2	ECC M = approx 37% of symbol	Recovery Capability = approx 15%
3	ECC Q = approx 50% of symbol	Recovery Capability = approx 25%
4	ECC Q = approx 65% of symbol	Recovery Capability = approx 30%

[Notes]

[Default] x = 0

[Reference]

[Example]

<B2D n, P, x, d1...dk>

Store and prints the QRcode barcode data in the barcode save area

Valid for	KPM150HIII LAT, KPM150HIII LAT UHF, KPM150HIII REAR, KPM150HIII REAR UHF B202HIII, B202HIII UHF

[Format] ASCII <B2D n, P, x, d1...dk>

[Range]

[Description] Store the QRcode barcode data (d1...dk) in the barcode save area.
- x = number of characters (= dk)
- d1...dk = barcode data

[Notes]
- k bytes of d1...dk are processed as barcode data.
- Specify only the data code word of the barcode with this function.

[Default]

[Reference]

[Example]

<NCL x, y>Data

Print horizontal CODE128 barcode

Valid for	KPM150HIII LAT, KPM150HIII LAT UHF, KPM150HIII REAR, KPM150HIII REAR UHF B202HIII, B202HIII UHF

[Format] ASCII <NCL x, y>Data

[Range]

[Description] Print a CODE128 barcode type in horizontal, where:
x = barcode height in millimetres;
y = byte number of the string to encode.

[Notes] • The top part of the barcode data string must be a code set selection character (CODE A, CODE B or CODE C) which selects the first code set.
• Special characters are defined by combining two characters “{“ and one character. ASCII character “{” is defined by transmitting “{“ twice, consecutively.

SPECIFIC CHARACTER	DATA TRANSMISSION	
	ASCII	HEX
SHIFT	{S	7B, 53
CODE A	{A	7B, 41
CODE B	{B	7B, 42
CODE C	{C	7B, 43
FNC1	{1	7B, 31
FNC2	{2	7B, 32
FNC3	{3	7B, 33
FNC4	{4	7B, 34
‘{‘	{{	7B, 7B

[Default]

[Reference]

[Example] code A : <RC10,300><NCL15,9>{A3456789
code B: <RC10,300><NCL15,9>{B3456789
code C : <RC10,300><NCL15,9>{C3456789

<NCP x, y>Data

Print vertical CODE128 barcode

Valid for	KPM150HIII LAT, KPM150HIII LAT UHF, KPM150HIII REAR, KPM150HIII REAR UHF B202HIII, B202HIII UHF

[Format] ASCII <NCP x, y>Data

[Range]

[Description] Print a CODE128 barcode type in vertical, where:
x = barcode height in millimetres;
y = byte number of the string to encode.

[Notes] • The top part of the barcode data string must be a code set selection character (CODE A, CODE B or CODE C) which selects the first code set.
• Special characters are defined by combining two characters “{“ and one character. ASCII character “{” is defined by transmitting “{“ twice, consecutively.

SPECIFIC CHARACTER	DATA TRANSMISSION	
	ASCII	HEX
SHIFT	{S	7B, 53
CODE A	{A	7B, 41
CODE B	{B	7B, 42
CODE C	{C	7B, 43
FNC1	{1	7B, 31
FNC2	{2	7B, 32
FNC3	{3	7B, 33
FNC4	{4	7B, 34
‘{‘	{{	7B, 7B

[Default]

[Reference]

[Example]
code A : <RC10,300><NCP15,9>{A3456789
code B : <RC10,300><NCP15,9>{B3456789
code C : <RC10,300><NCP15,9>{C3456789

<NEL n>*Data*

Print horizontal EAN13 barcode

Valid for	KPM150HIII LAT, KPM150HIII LAT UHF, KPM150HIII REAR, KPM150HIII REAR UHF B202HIII, B202HIII UHF

[Format] ASCII <NEL n> *Data*

[Range]

[Description] Print an EAN13 barcode type in horizontal.
The n parameter indicates the barcode height in millimetres.
The Data parameter contains the data to convert, with start and stop characters of barcode.

[Notes] The “*” star character is the start and the stop character of the barcode.

[Default]

[Reference]

[Example] <X2,L>
<RC220,20><NEL10>*123456789012*

<NEP n>*Data*

Print vertical EAN13 barcode

Valid for	KPM150HIII LAT, KPM150HIII LAT UHF, KPM150HIII REAR, KPM150HIII REAR UHF B202HIII, B202HIII UHF

[Format] ASCII <NEP n>*Data*

[Range]

[Description] Print an EAN13 barcode type in vertical.
The n parameter indicates the barcode height in millimetres.
The Data parameter contains the data to convert, with start and stop characters of barcode.

[Notes] The “*” star character is the start and the stop character of the barcode.

[Default]

[Reference]

[Example] <X2,L>
<RC20,10><NEP10>*123456789012*

<NFL s>*Data*

Print horizontal ITF barcode

Valid for	KPM150HIII LAT, KPM150HIII LAT UHF, KPM150HIII REAR, KPM150HIII REAR UHF B202HIII, B202HIII UHF

[Format] ASCII <NFL s> *Data*

[Range]

[Description] Print an ITF barcode type in horizontal.
The s parameter indicates the barcode height in millimetres.
The Data parameter contains the data to convert, with start and stop characters of barcode.

[Notes] The “*” star character is the start and the stop character of the barcode.

[Default]

[Reference]

[Example] <X2,L>
<RC220,20><NFL10>*123456*

<NFP s>*Data*

Print vertical ITF barcode

Valid for	KPM150HIII LAT, KPM150HIII LAT UHF, KPM150HIII REAR, KPM150HIII REAR UHF B202HIII, B202HIII UHF

[Format] ASCII <NFP s>*Data*

[Range]

[Description] Print an ITF barcode type in vertical.
The s parameter indicates the barcode height in millimetres.
The Data parameter contains the data to convert, with start and stop characters of barcode.

[Notes] The “*” star character is the start and the stop character of the barcode.

[Default]

[Reference]

[Example] <X2,L>
<RC20,10><NFP10>*123456*

<NL s>*Data*

Print an horizontal CODE39 barcode

Valid for	KPM150HIII LAT, KPM150HIII LAT UHF, KPM150HIII REAR, KPM150HIII REAR UHF B202HIII, B202HIII UHF

[Format] ASCII <NL s>*Data*

[Range]

[Description] Print a CODE39 barcode type in horizontal.
The s parameter indicates the barcode height in millimetres.
The Data parameter contains the data to convert, with start and stop characters of barcode.

[Notes] The “*” star character is the start and the stop character of the barcode.

[Default]

[Reference]

[Example] <X2,L>
<RC220,120><NL10>*123456*

<NP s> *Data*

Print a vertical CODE39 barcode

Valid for	KPM150HIII LAT, KPM150HIII LAT UHF, KPM150HIII REAR, KPM150HIII REAR UHF B202HIII, B202HIII UHF

[Format] ASCII <NP s> *Data*

[Range]

[Description] Print a CODE39 barcode type in vertical.
The s parameter indicates the barcode height in millimetres.
The Data parameter contains the data to convert, with start and stop characters of barcode.

[Notes] The “*” star character is the start and the stop character of the barcode.

[Default]

[Reference]

[Example] <X2,L>
<RC120,10><NP10>*123456*

<X n, m>

Define the barcode lines dimension

Valid for	KPM150HIII LAT, KPM150HIII LAT UHF, KPM150HIII REAR, KPM150HIII REAR UHF B202HIII, B202HIII UHF

[Format] ASCII <X n, M>

[Range]

[Description] n defines the thins lines dimension (in dot) of barcode.
The M parameter defines the barcode printing speed if it must be printed rotated.

[Notes] If the M parameter = ‘H’ as ASCII value, the barcodes will be printed in high speed. Otherwise if if the M parameter = ‘L’ as ASCII value the barcodes will be printed at reduced speed (only if n is less than 4).

[Default]

[Reference]

[Example]

<BS height, width>

Define area for the box mode

Valid for	KPM150HIII LAT, KPM150HIII LAT UHF, KPM150HIII REAR, KPM150HIII REAR UHF B202HIII, B202HIII UHF

[Format] ASCII <BS height, width>

[Range]

[Description] Defines the area where position a character. If the box dimensions are bigger than the font, then the empty spaces are filled with white spaces, whereas if the box dimensions are smaller than the font, then the font is cut.

[Notes]
- To disable the Box Size set height and width parameters to 0 (<BS0,0>).
- This command is not active with TrueType fonts.

[Default]

[Reference]

[Example]

<F n>

Select the font

Valid for	KPM150HIII LAT, KPM150HIII LAT UHF, KPM150HIII REAR, KPM150HIII REAR UHF B202HIII, B202HIII UHF

[Format] ASCII <F n>

[Range] 0 ≤ n ≤ 18
n = 50

[Description] Selects the current font according to the value of n as described in the following table:

n	FONT	DESCRIPTION
0	Font 8x12	Fixed font
1	Font 12x12	Fixed font
2	Font 14x11	Fixed font
3	Font HEL10PT8	Proportional font with fixed height (H = 34 dot)
4	Font 8x12-2	Fixed font
5	Font 10x24	Font 10x24 in CUSTOM/POS emulation
6	Font HEL16PT8	Proportional font with fixed height (H = 55 dot)
7	Font HEL14PT8	Proportional font with fixed height (H = 50 dot)
8	Font HEL8PT8	Proportional font with fixed height (H = 28 dot)
9	Font 16x24	Fixed font
10	Font 16x24_1	Fixed font
11	Font 16x24_2	Fixed font
12	Font 14x24	Font 14x24 in CUSTOM/POS emulation
13	Font 14x24_1	Fixed font
14	Font 18x24	Font 18x24 in CUSTOM/POS emulation
15	Font 28x20	Fixed font
16	Font 20x15	Fixed font
17	Font 16x24CN	Fixed font
18	Font OCRB 20X32	Fixed font
50	Font GB18030	Fixed font

[Notes]

• A proportional font is a font in which different characters have different pitches (widths).
• A fixed font is the opposite of a proportional font and is a fixed-pitch font.
• The fonts with the same name and dimension contain different characters in different positions from theirs.
• During power-up, if the FORM FEED (FF) key is held down, the device executes the FONT TEST.

• In SVELTA emulation, it is possible to use TrueType fonts. True Type fonts are printable with every angle of rotation and in bold, reverse, italic and underlined mode.
• It is possible to address the TrueType font respects the UNICODE™ standard (see www.unicode.org), by using UTF-8 or UTF-16 encoding.
• For the correct printing of the code tables, it is necessary that the selected TrueType font contains all the characters in the tables. Otherwise, the '□' symbol will be printed instead the missing character.

[Default]

[Reference]

[Example]

<HW height, width>

Set height and width of the current font

Valid for	KPM150HIII LAT, KPM150HIII LAT UHF, KPM150HIII REAR, KPM150HIII REAR UHF B202HIII, B202HIII UHF

[Format] ASCII <HW height, width>

[Range]

[Description] Modifies the height and width of the current font where height and width are the multiplier coefficients of height and width of how enlarge the font. Both values can be:

height/ width	FONT DIMENSION
1	Font dimension ×1
2	Font dimension ×2
3	Font dimension ×3
4	Font dimension ×4
5	Font dimension ×5
6	Font dimension ×6
7	Font dimension ×7
8	Font dimension ×8

[Notes] The command is ignored if height or width has different value from that reported above.

[Default]

[Reference]

[Example]

<NR>

Restore the text in horizontal

Valid for	KPM150HIII LAT, KPM150HIII LAT UHF, KPM150HIII REAR, KPM150HIII REAR UHF B202HIII, B202HIII UHF

[Format] ASCII <NR>

[Range]

[Description] Restore the text in horizontal, without rotation.

[Notes]

[Default]

[Reference] <F:rotate:aa>

[Example]

<RL>

Rotate text 90° counter-clockwise

Valid for	KPM150HIII LAT, KPM150HIII LAT UHF, KPM150HIII REAR, KPM150HIII REAR UHF B202HIII, B202HIII UHF

[Format] ASCII <RL>

[Range]

[Description] Rotate text 90° counter-clockwise (to the left).

[Notes]

[Default]

[Reference] <F:rotate:aa>

[Example]

<RR>

Rotate text 90° clockwise

Valid for	KPM150HIII LAT, KPM150HIII LAT UHF, KPM150HIII REAR, KPM150HIII REAR UHF B202HIII, B202HIII UHF

[Format] ASCII <RR>

[Range]

[Description] Rotate text 90° clockwise (to the right).

[Notes]

[Default]

[Reference] <F:rotate:aa>

[Example]

<RU>

Rotate text 180°

Valid for	KPM150HIII LAT, KPM150HIII LAT UHF, KPM150HIII REAR, KPM150HIII REAR UHF B202HIII, B202HIII UHF

[Format] ASCII <RU>

[Range]

[Description] Rotate text 180°.

[Notes]

[Default]

[Reference] <F:rotate:aa>

[Example]

COMMANDS FOR TT FONTS MANAGEMENT

<CLTTFC, filename.ttf>

Delete a TrueType font

Valid for	KPM150HIII LAT, KPM150HIII LAT UHF, KPM150HIII REAR, KPM150HIII REAR UHF B202HIII, B202HIII UHF

[Format] ASCII <CLTTFC, filename.ttf>

[Range]

[Description] Deletes the specified font.

[Notes]
- This command is active only with TrueType fonts.
- If command is successful the printer transmits the ACK (0x06), otherwise returns NACK (0x15).

[Default]

[Reference]

[Example] To delete the TrueType font “arialN.ttf”, the command sequence is
<CLTTFC, arialN.ttf>

<CLTTFC, ALL>

Delete all TrueType fonts

Valid for	KPM150HIII LAT, KPM150HIII LAT UHF, KPM150HIII REAR, KPM150HIII REAR UHF B202HIII, B202HIII UHF

[Format] ASCII <CLTTFC, filename.ttf>

[Range]

[Description] Deletes all fonts stored into the printer.

[Notes]
- This command is active only with TrueType fonts.
- If command is successful the printer transmits the ACK (0x06), otherwise returns NACK (0x15).

[Default]

[Reference]

[Example]

<DIRTTFC>

Get fonts header list

Valid for	KPM150HIII LAT, KPM150HIII LAT UHF, KPM150HIII REAR, KPM150HIII REAR UHF B202HIII, B202HIII UHF

[Format] ASCII <DIRTTFC>

[Range]

[Description] This command requests to the printer the list of stored fonts into the flash.
The printer returns a bytes sequence as follows:

filename1.ttf, filename2.ttf, filename3.ttf, filename4.ttf 0x06

where the ACK (0x06) character indicates that the command is executed successfully, otherwise returns NACK (x15).

[Notes]

[Default]

[Reference] <LTTF dim-file, C, filename.ttf, data>

[Example]

<F:bold>

Set bold mode

Valid for	KPM150HIII LAT, KPM150HIII LAT UHF, KPM150HIII REAR, KPM150HIII REAR UHF B202HIII, B202HIII UHF

[Format] ASCII <F:bold>

[Range]

[Description] Set the bold printing mode.

[Notes] This command is active only with TrueType fonts.

[Default]

[Reference]

[Example]

<F:clear>

Uninstall all TrueType fonts

Valid for	KPM150HIII LAT, KPM150HIII LAT UHF, KPM150HIII REAR, KPM150HIII REAR UHF B202HIII, B202HIII UHF

[Format] ASCII <F:clear>

[Range]

[Description] Clear the installation memory by uninstalling TrueType fonts

[Notes]
- This command is active only with TrueType fonts.
- Use <F:err:n> command to verify the outcome of this command.

[Default]

[Reference] <F:err:n>

[Example]

<F:draw:n>

Set drawing mode

Valid for	KPM150HIII LAT, KPM150HIII LAT UHF, KPM150HIII REAR, KPM150HIII REAR UHF B202HIII, B202HIII UHF

[Format] ASCII <F:draw:n>

[Range] n = ’0’, ‘1’, ‘2’

[Description] Set drawing mode functioning with following n values:

n = ‘0’	OR mode
n = ‘1’	XOR mode
n = ‘2’	AND mode

[Notes] This command is active only with TrueType fonts.

[Default] n = ‘0’

[Reference]

[Example]

<F:enc:ascii>

Set ASCII encoding

Valid for	KPM150HIII LAT, KPM150HIII LAT UHF, KPM150HIII REAR, KPM150HIII REAR UHF B202HIII, B202HIII UHF

[Format] ASCII <F:enc:ascii>

[Range]

[Description] Set default encoding (ASCII) for TrueType fonts.

[Notes] This command is active only with TrueType fonts.

[Default]

[Reference]

[Example]

<F:enc:utf-8>

Set UTF-8 encoding

Valid for	KPM150HIII LAT, KPM150HIII LAT UHF, KPM150HIII REAR, KPM150HIII REAR UHF B202HIII, B202HIII UHF

[Format] ASCII <F:enc:utf-8>

[Range]

[Description] Set UTF-8 encoding for TrueType fonts

[Notes]
- This command is active only with TrueType fonts.
- The character's addressing respects the UNICODE™ standard (see www.unicode.org).

[Default]

[Reference]

[Example]

<F:enc:utf-16>

Set UTF-16 encoding

Valid for	KPM150HIII LAT, KPM150HIII LAT UHF, KPM150HIII REAR, KPM150HIII REAR UHF B202HIII, B202HIII UHF

[Format] ASCII <F:enc:utf-16>

[Range]

[Description] Set UTF-16 encoding for TrueType fonts

[Notes]
- This command is active only with TrueType fonts.
- The character's addressing respects the UNICODE™ standard (see www.unicode.org).

[Default]

[Reference]

[Example]

<F:err:n>

Get error

Valid for	KPM150HIII LAT, KPM150HIII LAT UHF, KPM150HIII REAR, KPM150HIII REAR UHF B202HIII, B202HIII UHF

[Format] ASCII <F:err:n>

[Range] n = ‘0’, ‘1’

[Description] Get the last error functioning with n, where
n = ‘0’ Get last error
n = ‘1’ Get last error + internal error code

If n = 0, the reply will be <F:err:k>
where k specifies the error code as described in the following table:

k	ERROR TYPE	ERROR DESCRIPTION
0	NO ERR	No error
1	INVALID PATH	The file path is invalid
2	FILE NOT FOUND	File not found
3	FILE ERROR	File opening error, file generic error or incorrect file type
4	OUT OF MEMORY	Out of memory error
5	INTERNAL ERROR	Internal error

If n = 1, the reply will be <F:err:k-m>
where
k specifies the error code as specified in the previous table.
m specifies the internal error code, expressed in hexadecimal value (from 0x00 to 0xFF).

[Notes]
- Use this command to know if an error occurs during the execution of commands for TrueType fonts management (as <F:filename.ttf> or <F:clear>).
- To know the internal error codes list, contact customer service.
- This command is active only with TrueType fonts.

[Default]

[Reference]

[Example]

<F:filename.ttf>

Install new font

Valid for	KPM150HIII LAT, KPM150HIII LAT UHF, KPM150HIII REAR, KPM150HIII REAR UHF B202HIII, B202HIII UHF

[Format] ASCII <F:filename.ttf>

[Range]

[Description] Install a new TrueType font.

[Notes]
- This command is active only with TrueType fonts.
- Use <F:err:n> command to verify the outcome of this command.

[Default]

[Reference] <F:err:n>

[Example]

<F:italic>

Set italic mode

Valid for	KPM150HIII LAT, KPM150HIII LAT UHF, KPM150HIII REAR, KPM150HIII REAR UHF B202HIII, B202HIII UHF

[Format] ASCII <F:italic>

[Range]

[Description] Set the italic printing mode.

[Notes] This command is active only with TrueType fonts.

[Default]

[Reference]

[Example]

<F:regular>

Set regular mode

Valid for	KPM150HIII LAT, KPM150HIII LAT UHF, KPM150HIII REAR, KPM150HIII REAR UHF B202HIII, B202HIII UHF

[Format] ASCII <F:regular>

[Range]

[Description] Set the regular printing mode.

[Notes] This command is active only with TrueType fonts.

[Default]

[Reference]

[Example]

<F:rotate:aa>

Set rotation angle for TrueType font

Valid for	KPM150HIII LAT, KPM150HIII LAT UHF, KPM150HIII REAR, KPM150HIII REAR UHF B202HIII, B202HIII UHF

[Format] ASCII <F:rotate:aa>

[Range] 0 ≤ aa ≤ 360

[Description] Set rotation angle for TrueType font, functioning with aa.

[Notes]
- This command is active only with TrueType fonts.
- For TrueType fonts, it is also possible to use the commands for standard angles of rotation (<NR>, <RR>, <RL>, <RU>).

[Default] aa = 0

[Reference] <NR>, <RR>, <RL>, <RU>

[Example]

<F:size:nn>

Set font dimension

Valid for	KPM150HIII LAT, KPM150HIII LAT UHF, KPM150HIII REAR, KPM150HIII REAR UHF B202HIII, B202HIII UHF

[Format] ASCII <F:size:nn>

[Range]

[Description] Set font dimension functioning with n.

[Notes]
- The size is not expressed in pixels but in points
- This command is active only with TrueType fonts.

[Default] 10 points

[Reference]

[Example]

<GETTTF pos-file, filename.ttf>

Read a TrueType font

Valid for	KPM150HIII LAT, KPM150HIII LAT UHF, KPM150HIII REAR, KPM150HIII REAR UHF B202HIII, B202HIII UHF

[Format] ASCII <GETTTF pos-file, filename.ttf>

[Range] pos-file = ‘C’, ‘D’

[Description] Reads the font specifies by the filename.ttf parameter where :

- pos-file indicates the file position
  if ‘C’ (indicates the flash disk)
  if ‘D’ (indicates the SD)
- filename.ttf indicates the file-name that identify univocally the font

[Notes]
- This command is active only with TrueType fonts.
- If command is successful the printer transmits the ACK (0x06) followed by data of the TrueType file, otherwise return NACK (0x15) if the font has not been found.

[Default]

[Reference]

[Example]

<LTTF dim-file, C, filename.ttf, data>

Load a TrueType font

Valid for	KPM150HIII LAT, KPM150HIII LAT UHF, KPM150HIII REAR, KPM150HIII REAR UHF B202HIII, B202HIII UHF

[Format] ASCII <LTTF dim-file, C, filename.ttf, data>

[Range]

[Description] Saves the font into printer flash where :

- dim-file indicates the file size expressed in byte
- C indicates the file position then flash disk
- filename.ttf indicates the file-name that identify univocally the font
- data are the font data transmitted in byte

[Notes]

- This command is active only with TrueType fonts.
- The ".ttf" extension is necessary for the correct management of the file.
- If the ".ttf" extension is missing the printer return NACK (0x15).

[Default]

[Reference]

[Example] To load the TrueType font ARIALN.ttf, transmit:
<LTTF175956,C,ARIALN.ttf,font>

<BA n>

Change the ticket print intensity

Valid for	KPM150HIII LAT, KPM150HIII LAT UHF, KPM150HIII REAR, KPM150HIII REAR UHF B202HIII, B202HIII UHF

[Format] ASCII <BA n>

[Range]

[Description] Changes the ticket print intensity where n indicates the print mode. The possible values of n are as follows:

n	PRINT MODE
0	Black/white printing at 100% of maximum intensity
8	Black/white printing at 50% of maximum intensity
16	Black/white printing at 25% of maximum intensity
24	Black/white printing at 12% of maximum intensity
32	Black/white printing at 7% of maximum intensity
40	Black/white printing at 5% of maximum intensity

[Notes]

[Default]

[Reference]

[Example]

<DATE>

Print date

Valid for	KPM150HIII LAT, KPM150HIII REAR B202HIII, B202HIII UHF

[Format] ASCII <DATE>

[Range]

[Description] Prints date in the format specified by the command <TDF m data>.

[Notes]

[Default] “dd/mm/yy”

[Reference] <TDF m data>, <TIME>

[Example]

<p>

Printing command (cut and buffer cleaning) in reverse

Valid for	KPM150HIII LAT, KPM150HIII LAT UHF, KPM150HIII REAR, KPM150HIII REAR UHF B202HIII, B202HIII UHF

[Format] ASCII <p>

[Range]

[Description] This command executes the following operations:
- align the ticket to black mark (based on the alignment set with the <LHT length, height, blackmark, dimblackmark> command)
- prints ticket
- clear the data in the print buffer
- align the ticket to cut (based on the alignment set with the <LHT length, height, blackmark, dimblackmark> command)
- executes a ticket cut
- recovers the portion of paper equal to the distance between cutter and printing head

[Notes] Print ticket in reverse.

[Default]

[Reference] <CB>, <LHT length, height, blackmark, dimblackmark>

[Example]

<P>

Printing command (cut and buffer cleaning) in normal

Valid for	KPM150HIII LAT, KPM150HIII LAT UHF, KPM150HIII REAR, KPM150HIII REAR UHF B202HIII, B202HIII UHF

[Format] ASCII <P>

[Range]

[Description] This command executes the following operations:
- align the ticket to black mark (based on the alignment set with the <LHT length, height, blackmark, dimblackmark> command)
- prints ticket
- clear the data in the print buffer
- align the ticket to cut (based on the alignment set with the <LHT length, height, blackmark, dimblackmark> command)
- executes a ticket cut
- recovers the portion of paper equal to the distance between cutter and printing head

[Notes] Print ticket in normal

[Default]

[Reference] <CB>, <LHT length, height, blackmark, dimblackmark>

[Example]

<PP n, x, y, sp>

Print image in graphic page

Valid for	KPM150HIII LAT, KPM150HIII LAT UHF, KPM150HIII REAR, KPM150HIII REAR UHF B202HIII, B202HIII UHF

[Format] ASCII <PP n, x, y, sp>

[Range]

[Description] Prints image in graphic page where
- n is the number of image to print;
- x indicates the horizontal position inside the graphic page
- y indicates the vertical position inside the graphic page
- sp indicates the thickness value of the image border (express in dot).

[Notes] If n is a negative number the image is printed as a background image, without deleting the area below.

[Default]

[Reference] <OXY x, y>

[Example] Several printing commands in graphic page; in the first printing command the image no. 2 is printed with border, instead the other images are printed without border:

```
<CB><n><BA8><HW1,1><BS0,0>
<PP2,10,10,8>                (image printed with border)
<PP1,10,200,0>               (image printed without border)
<PP3,210,200,0>              (image printed without border)
<PP4,620,200,0>              (image printed without border)
<q>
```

<PR n, x, y, sp>

Print rotated image

Valid for	KPM150HIII LAT, KPM150HIII LAT UHF, KPM150HIII REAR, KPM150HIII REAR UHF B202HIII, B202HIII UHF

[Format] ASCII <PR n, x, y, sp>

[Range]

[Description] Prints rotated image in graphic page where
- n is the number of image to print
- x indicates the horizontal position inside the graphic page
- y indicates the vertical position inside the graphic page
- sp indicates the thickness value of the image border (express in dot).

[Notes] If n is a negative number the image is printed as a background image, without deleting the area below.

[Default]

[Reference] <OXY x, y>

[Example] Several printing commands in graphic page; in the first printing command the image no. 2 is printed with border, instead the other images are printed without border:

```
<CB><n><BA8><HW1,1><BS0,0>
<PR2,10,10,8>          (image printed with border)
<PR1,10,200,0>         (image printed without border)
<PR3,210,200,0>        (image printed without border)
<PR4,620,200,0>        (image printed without border)
<q>
```

<q>

Printing command (only buffer cleaning) in reverse

Valid for	KPM150HIII LAT, KPM150HIII LAT UHF, KPM150HIII REAR, KPM150HIII REAR UHF B202HIII, B202HIII UHF

[Format] ASCII <q>

[Range]

[Description] This command executes the following operations:
- align the ticket to black mark (based on the alignment set with the <LHT length, height, blackmark, dimblackmark> command)
- prints ticket
- clear the data in the print buffer.

[Notes] Print ticket in reverse

[Default]

[Reference] <CB>, <LHT length, height, blackmark, dimblackmark>

[Example]

<Q>

Printing command (only buffer cleaning) in normal

Valid for	KPM150HIII LAT, KPM150HIII LAT UHF, KPM150HIII REAR, KPM150HIII REAR UHF B202HIII, B202HIII UHF

[Format] ASCII <Q>

[Range]

[Description] This command executes the following operations :
- align the ticket to black mark (based on the alignment set with the <LHT length, height, blackmark, dimblackmark> command)
- prints ticket
- clear the data in the print buffer

[Notes] Print ticket in normal

[Default]

[Reference] <CB>, <LHT length, height, blackmark, dimblackmark>

[Example]

<TDF m data>

Set user-defined date/time formats

Valid for	KPM150HIII LAT, KPM150HIII LAT UHF, KPM150HIII REAR, KPM150HIII REAR UHF B202HIII, B202HIII UHF

[Format] ASCII <TDF m data>

[Range]

[Description] Sets the format string for date and time used to printing.

• m specifies which user-defined string format is set
D for date
T for time

• data are the ASCII characters relative to user-defined date/time formats.
• the maximum length of the user-defined date/time format string is 64 chars.

The following table shows characters used to create user-defined date/time formats:

CHARACTER	DESCRIPTION
I	Selects Italian language
E	Selects English language (is the default language)
c	Selects default date/time
d	Displays the day as a number without a leading zero (1-31)
dd	Displays the day as a number with a leading zero (01-31)
ddd	Displays the day as an abbreviation (for example, Sun)
dddd	Displays the day as a full name (for example, Sunday)
ddddd	Displays the date as a complete date in the short format where date values are formatted with day, month and year (the short date format is dd/mm/yy)
dddddd	Displays the date as a complete date in the extended format where date values are formatted with day, month and year (the extended date format is dd mmmm, yyyy)
m	Displays the month as a number without a leading zero (1-12). If the character m is immediately after the character h or hh , displays the minutes instead of month (see also the n character formatting)
mm	Displays the month as a number with leading zeros (01-12). If the character m is immediately after the character h or hh , displays the minutes instead of month (see also the nn character formatting)
mmm	Displays the month as an abbreviation (for example, Jan)
mmmm	Displays the month as a full month name (for example, January)
yy	Displays the year in two-digit numeric format with a leading zero
yyyy	Displays the year in four digit numeric format

CHARACTER	DESCRIPTION
h	Displays the hour as a number without leading zeros (0-23)
hh	Displays the hour as a number with leading zeros (00-23)
n	Displays the minutes as a number without leading zeros (0-59)
nn	Displays the minutes as a number with leading zeros (00-59)
s	Displays the seconds as a number without leading zeros (0-59)
ss	Displays the seconds as a number with leading zeros (00-59)
ttttt	Displays the time in the extended format where time values are formatted with hour, minutes and seconds (the extended time format is h:mm:ss)
AM/PM	Using the 12-hour clock and displays the AM prefix in uppercase next to the hours that preceding midday and the PM prefix in uppercase next to the hours between midday and midnight
am/pm	Using the 12-hour clock and displays the am prefix in lowercase next to the hours that preceding midday and the pm prefix in lowercase next to the hours between midday and midnight
A/P	Using the 12-hour clock and displays the A prefix in uppercase next to the hours that preceding midday and the P prefix in uppercase next to the hours between midday and midnight
a/p	Using the 12-hour clock and displays the a prefix in lowercase next to the hours that preceding midday and the p prefix in lowercase next to the hours between midday and midnight

[Notes]

[Default]

[Reference]

[Example] To print the current time with the string format ‘yy/mm/dd hh:mm:ss’ follow these steps:

1. Send the following command to define the user-defined time string format:
<TDF T yy/mm/dd hh:mm:ss>

2. Send the following command to print the time:
<TIME>

If the date and time is 22 October 2006 at 17:35:27 (PM) the output string printed will be:
06/10/22 17:35:27

<TIME>

Print time

Valid for	KPM150HIII LAT, KPM150HIII LAT UHF, KPM150HIII REAR, KPM150HIII REAR UHF B202HIII, B202HIII UHF

[Format] ASCII <TIME>

[Range]

[Description] Prints time with the format specified by the command <TDF m data>.

[Notes]

[Default] “hh:nn:ss”

[Reference] <DATE>

[Example]

STATUS COMMANDS

<AFSB x>, <AFSB y x>

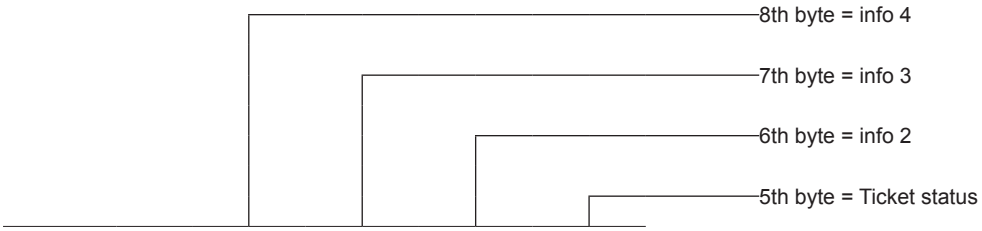
Enable / Disable auto FULL STATUS back

Valid for	KPM150HIII LAT, KPM150HIII LAT UHF, KPM150HIII REAR, KPM150HIII REAR UHF B202HIII, B202HIII UHF

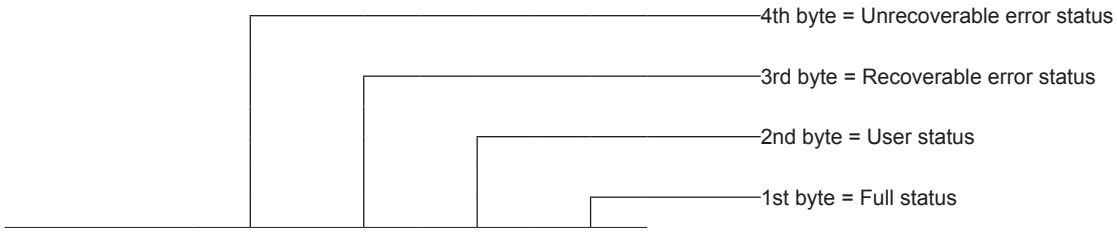
[Format] ASCII <AFSB x>, <AFSB x y>

[Range] ‘0’ ≤ x ≤ ‘9’, ‘A’ ≤ x ≤ ‘F’
‘0’ ≤ y ≤ ‘9’, ‘A’ ≤ y ≤ ‘F’

[Description]
- Enable/disable auto FULL STATUS back.
- y is an optional parameter.
- x and y specify the request for FULL STATUS, where x and y identify the bitmask with the following tables:



y		BIT7	BIT6	BIT5	BIT4
0	»	0	0	0	0
1	»	0	0	0	1
2	»	0	0	1	0
3	»	0	0	1	1
4	»	0	1	0	0
5	»	0	1	0	1
6	»	0	1	1	0
7	»	0	1	1	1
8	»	1	0	0	0
9	»	1	0	0	1
A	»	1	0	1	0
B	»	1	0	1	1
C	»	1	1	0	0
D	»	1	1	0	1
E	»	1	1	1	0
F	»	1	1	1	1



x		BIT3	BIT2	BIT1	BIT0
0	»	0	0	0	0
1	»	0	0	0	1
2	»	0	0	1	0
3	»	0	0	1	1
4	»	0	1	0	0
5	»	0	1	0	1
6	»	0	1	1	0
7	»	0	1	1	1
8	»	1	0	0	0
9	»	1	0	0	1
A	»	1	0	1	0
B	»	1	0	1	1
C	»	1	1	0	0
D	»	1	1	0	1
E	»	1	1	1	0
F	»	1	1	1	1

[Notes]

• Once enable at least one byte of the FULL STATUS, for each change of at least one of the bits which compose the required status, the status sent in automatic from the printer will be so composed as follows:

<SB yx, CHR1 ..... CHRn>

where:

SB	=	fixed characters
y	=	is the bitmask to identify the request.
x	=	is the bitmask to identify the request.
CHR1...CHRn	=	response bytes referred to the following tables:

Full status (1st byte)

BIT	OFF/ON	HEX	Decimal	FUNCTION
0	Off	00	0	Paper present
	On	01	1	Paper not present
1	-	-	-	RESERVED
2	Off	00	0	Paper present
	On	04	4	Low paper
3	-	-	-	RESERVED
4	-	-	-	RESERVED
5	Off	00	0	Ticket not present in output
	On	20	32	Ticket present in output
6	Off	00	0	Paper virtually present
	On	40	64	Virtual paper end
7	Off	00	0	Black mark is placed over the sensor
	On	80	128	Black mark is not placed over the sensor

User status (2nd byte)

BIT	OFF/ON	HEX	Decimal	FUNCTION
0	Off	00	0	No error, printing head down
	On	01	1	Printing head up error
1	Off	00	0	Cover closed
	On	02	2	Cover opened
2	Off	00	0	No spooling
	On	04	4	Spooling
3	Off	00	0	Drag paper motor off
	On	08	8	Drag paper motor on
4	-	-	-	RESERVED
5	Off	00	0	LF LINE FEED key released
	On	20	32	LF LINE FEED key pressed
6	Off	00	0	FF FORM FEED key released
	On	40	64	FF FORM FEED key pressed
7	-	-	-	RESERVED

Recoverable errore status (3rd byte)

BIT	OFF/ON	HEX	Decimal	FUNCTION
0	Off	00	0	Head temperature ok
	On	01	1	Head temperature error
1	Off	00	0	No COM error
	On	02	2	RS232 COM error
2	-	-	-	RESERVED
3	Off	00	0	Power supply voltage ok
	On	08	8	Power supply voltage error
4	-	-	-	RESERVED
5	Off	00	0	Acknowledge command
	On	20	32	Not acknowledge command error
6	Off	00	0	Free paper path
	On	40	64	Paper jam
7	Off	00	0	Black mark search ok
	On	80	128	Error in black mark search

Unrecoverable error status (4th byte)

BIT	OFF/ON	HEX	Decimal	FUNCTION
0	Off	00	0	Cutter ok
	On	01	1	Cutter error
1	Off	00	0	Cutter cover ok
	On	02	2	Cutter cover open
2	Off	00	0	RAM ok
	On	04	4	RAM error
3	-	-	-	RESERVED
4	-	-	-	RESERVED
5	-	-	-	RESERVED
6	-	-	-	RESERVED
7	-	-	-	RESERVED

Ticket status (5th byte)

BIT	OFF/ON	HEX	Decimal	FUNCTION
0	Off	00	0	One or more tickets printed after turn ON
	On	01	1	No ticket printed after turn ON
1	Off	00	0	One or more tickets printed after AUTOLOAD
	On	02	2	No tickets printed after AUTOLOAD
2	-	-	-	RESERVED
3	Off	00	0	A jam not occurred (*).
	On	08	8	A jam occurred (*).
4	-	-		RESERVED
5	-	-		RESERVED
6	-	-		RESERVED
7	-	-		RESERVED

(*) : The jam detection occurs only when the “AutoDetect Jam” parameter was enabled during the setup procedure (refer to the user manual of each device).

Info 2 (6th byte) = RESERVED

Info 3 (7th byte) = RESERVED

Info 4 (8th byte) = RESERVED

The printer transmits bytes as a pair of hexadecimal characters (between ‘0’ and ‘9’ or between ‘A’ and ‘F’). For example the first byte is equal to 0xA9, then will be sent from the printer the characters ‘A’ (0x41) and ‘9’ (0x39).

[Default]

[Reference] <SB x>, <SB y x>

[Example] To request the Full status (1° byte), the User status (2° byte) and the Info1 (5° byte) proceed as follow:

see bitmask:

BIT7 = 0	BIT6 = 0	BIT5 = 0	BIT4 =1	therefore	0001 = 1
BIT3 = 0	BIT2 = 0	BIT1 = 1	BIT0 =1	therefore	0011 = 3

Send the command: <AFSB13>
Possible answer: <SB13,050401>

where:

1st byte

0 = 0000	bit 7 = 0 (black mark found)	bit 6 = 0 (paper virtually present)	bit 5 = 0 (ticket not present)	bit 4 =0 (RESERVED)
5 = 0101	bit 3 = 0 (RESERVED)	bit 2 = 1 (low paper)	bit 1 = 0 (RESERVED)	bit 0 =1 (paper not present)

2nd byte

0 = 0000	bit 7 = 0 (RESERVED)	bit 6 = 0 (FF FORM FEED key released)	bit 5 = 0 (LF LINE FEED key released)	bit 4 =0 (RESERVED)
4 = 0100	bit 3 = 0 (drag paper motor off)	bit 2 = 1 (spooling)	bit 1 = 0 (cover closed)	bit 0 =0 (print head down)

5th byte

0 = 0000	bit 7 = 0 (RESERVED)	bit 6 = 0 (RESERVED)	bit 5 = 0 (RESERVED)	bit 4 =0 (RESERVED)
1 = 0001	bit 3 = 0 (a jam not occurred)	bit 2 = 1 (RESERVED)	bit 1 = 0 (one or more tickets printed after AUTOLOAD)	bit 0 =1 (no ticket printed after turn ON)

<SB x>, <SB y x>

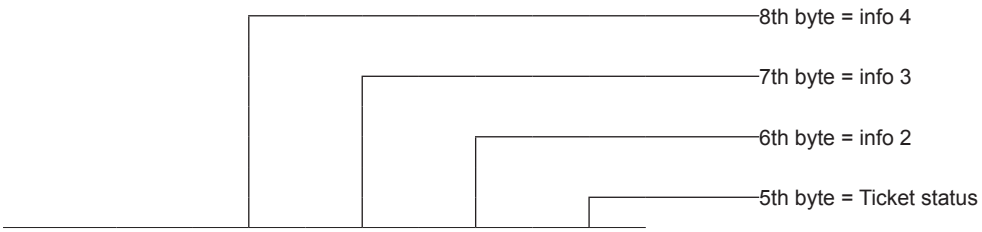
FULL STATUS back request

Valid for	KPM150HIII LAT, KPM150HIII LAT UHF, KPM150HIII REAR, KPM150HIII REAR UHF B202HIII, B202HIII UHF

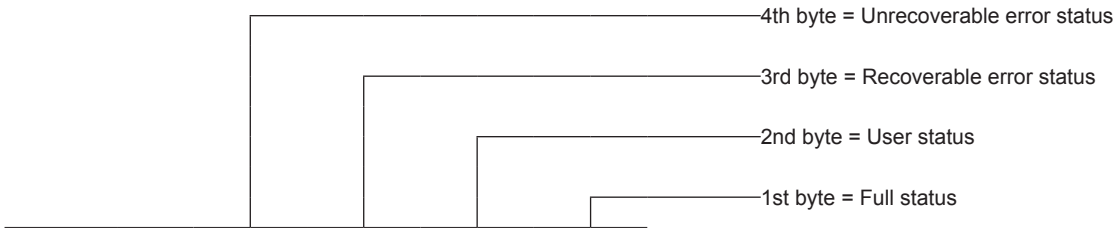
[Format] ASCII <SB x>, <SB y x>

[Range] ‘0’ ≤ x ≤ ‘9’, ‘A’ ≤ x ≤ ‘F’
‘0’ ≤ y ≤ ‘9’, ‘A’ ≤ y ≤ ‘F’

[Description]
- FULL STATUS back request.
- y is an optional parameter.
- x and y specify the request for FULL STATUS, where x and y identify the bitmask with the following tables:



y		BIT7	BIT6	BIT5	BIT4
0	»	0	0	0	0
1	»	0	0	0	1
2	»	0	0	1	0
3	»	0	0	1	1
4	»	0	1	0	0
5	»	0	1	0	1
6	»	0	1	1	0
7	»	0	1	1	1
8	»	1	0	0	0
9	»	1	0	0	1
A	»	1	0	1	0
B	»	1	0	1	1
C	»	1	1	0	0
D	»	1	1	0	1
E	»	1	1	1	0
F	»	1	1	1	1



x		BIT3	BIT2	BIT1	BIT0
0	»	0	0	0	0
1	»	0	0	0	1
2	»	0	0	1	0
3	»	0	0	1	1
4	»	0	1	0	0
5	»	0	1	0	1
6	»	0	1	1	0
7	»	0	1	1	1
8	»	1	0	0	0
9	»	1	0	0	1
A	»	1	0	1	0
B	»	1	0	1	1
C	»	1	1	0	0
D	»	1	1	0	1
E	»	1	1	1	0
F	»	1	1	1	1

[Notes]

• Once enable at least one byte of the FULL STATUS, for each change of at least one of the bits which compose the required status, the status sent in automatic from the printer will be so composed as follows:

<SB yx, CHR1 ..... CHRn>

where:

SB	=	fixed characters
y	=	is the bitmask to identify the request.
x	=	is the bitmask to identify the request.
CHR1...CHRn	=	response bytes referred to the following tables:

Full status (1st byte)

BIT	OFF/ON	HEX	Decimal	FUNCTION
0	Off	00	0	Paper present
	On	01	1	Paper not present
1	-	-	-	RESERVED
2	Off	00	0	Paper present
	On	04	4	Low paper
3	-	-	-	RESERVED
4	-	-	-	RESERVED
5	Off	00	0	Ticket not present in output
	On	20	32	Ticket present in output
6	Off	00	0	Paper virtually present
	On	40	64	Virtual paper end
7	Off	00	0	Black mark is placed over the sensor
	On	80	128	Black mark is not placed over the sensor

User status (2nd byte)

BIT	OFF/ON	HEX	Decimal	FUNCTION
0	Off	00	0	No error, printing head down
	On	01	1	Printing head up error
1	Off	00	0	Cover closed
	On	02	2	Cover opened
2	Off	00	0	No spooling
	On	04	4	Spooling
3	Off	00	0	Drag paper motor off
	On	08	8	Drag paper motor on
4	-	-	-	RESERVED
5	Off	00	0	LF LINE FEED key released
	On	20	32	LF LINE FEED key pressed
6	Off	00	0	FF FORM FEED key released
	On	40	64	FF FORM FEED key pressed
7	-	-	-	RESERVED

Recoverable errore status (3rd byte)

BIT	OFF/ON	HEX	Decimal	FUNCTION
0	Off	00	0	Head temperature ok
	On	01	1	Head temperature error
1	Off	00	0	No COM error
	On	02	2	RS232 COM error
2	-	-	-	RESERVED
3	Off	00	0	Power supply voltage ok
	On	08	8	Power supply voltage error
4	-	-	-	RESERVED
5	Off	00	0	Acknowledge command
	On	20	32	Not acknowledge command error
6	Off	00	0	Free paper path
	On	40	64	Paper jam
7	Off	00	0	Black mark search ok
	On	80	128	Error in black mark search

Unrecoverable error status (4th byte)

BIT	OFF/ON	HEX	Decimal	FUNCTION
0	Off	00	0	Cutter ok
	On	01	1	Cutter error
1	Off	00	0	Cutter cover ok
	On	02	2	Cutter cover open
2	Off	00	0	RAM ok
	On	04	4	RAM error
3	-	-	-	RESERVED
4	-	-	-	RESERVED
5	-	-	-	RESERVED
6	-	-	-	RESERVED
7	-	-	-	RESERVED

Ticket status (5th byte)

BIT	OFF/ON	HEX	Decimal	FUNCTION
0	Off	00	0	One or more tickets printed after turn ON
	On	01	1	No tickets printed after turn ON
1	Off	00	0	One or more tickets printed after AUTOLOAD
	On	02	2	No tickets printed after AUTOLOAD
2	-	-	-	RESERVED
3	Off	00	0	A jam not occurred (*).
	On	08	8	A jam occurred (*).
4	-	-	-	RESERVED
5	-	-	-	RESERVED
6	-	-	-	RESERVED
7	-	-	-	RESERVED

(*) : The jam detection occurs only when the “AutoDetect Jam” parameter was enabled during the setup procedure (refer to the user manual of each device).

Info 2 (6th byte) = RESERVED

Info 3 (7th byte) = RESERVED

Info 4 (8th byte) = RESERVED

• The printer transmits bytes as a pair of hexadecimal characters (between ‘0’ and ‘9’ or between ‘A’ and ‘F’). For example the first byte is equal to 0xA9, then will be sent from the printer the characters ‘A’ (0x41) and ‘9’ (0x39).
• To automatically receive a response to the change of a state, enable the status byte of interest using the command <AFSB x>, <AFSB y x>.

[Default]

[Reference]

[Example]

<SBF, 00000000> no errors
<SBF, 04000000> low paper
<SBF, 01030000> paper not present, print head up, cover open

<S n>

Status request

Valid for	KPM150HIII LAT, KPM150HIII LAT UHF, KPM150HIII REAR, KPM150HIII REAR UHF B202HIII, B202HIII UHF

[Format] ASCII <Sn>

[Range]

[Description] The host can ask to the printer many different status info; the n parameter indicates which type of request:

If n = 1 the printer return a byte that represent the status:

0x10	Paper end
0x11	No error
0x19	Wrong command
0x20	Black mark error
0x21	Print head over temperature error
0x22	Power supply voltage error
0x23	Cutter error

If n=3 the printer return ACK (0x06) if printing is properly finished, otherwise return NACK (0x15). If the request will be transmitted during printing phase, it waits the end of the process and then is sent the answer.

[Notes]

[Default]

[Reference]

[Example]

<BF x1 y1, x2, y2>

Command to create filled Box

Valid for	KPM150HIII LAT, KPM150HIII LAT UHF, KPM150HIII REAR, KPM150HIII REAR UHF B202HIII, B202HIII UHF

[Format] ASCII <BF x1,y1,x2,y2>

[Range]

[Description] Create a filled box on the basis of x1, y1, x2, y2 coordinates where :
x1 = minimum horizontal coordinate
y1 = minimum vertical coordinate
x2 = maximum horizontal coordinate
y2 = maximum vertical coordinate

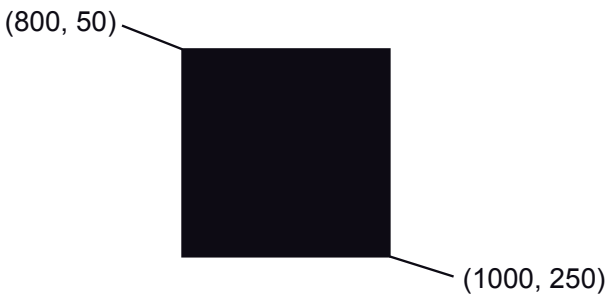
[Notes]
- If the coordinates are reversed, the printer automatically turns the points to create in any case the box.
- If the x2 is greater than the maximum horizontal width of graphic page, the box is drawn using the maximum width as last point.
- If the y2 is greater than the maximum length of graphic page defined by <LHT length, height, blackmark, dimblackmark> command, the box is drawn using the maximum length (defined by this command) as last point.

[Default]

[Reference] <OXY x, y>

[Example] Ticket example that use a filled box

```
<CB><BA8>
<BF800,50,1000,250>
<q>
```



<BV x1, y1, x2, y2>

Command to create empty Box

Valid for	KPM150HIII LAT, KPM150HIII LAT UHF, KPM150HIII REAR, KPM150HIII REAR UHF B202HIII, B202HIII UHF

[Format] ASCII <BF x1,y1,x2,y2>

[Range]

[Description] Create an empty box on the basis of x1, y1, x2, y2 coordinates where :
x1 = minimum horizontal coordinate
y1 = minimum vertical coordinate
x2 = maximum horizontal coordinate
y2 = maximum vertical coordinate

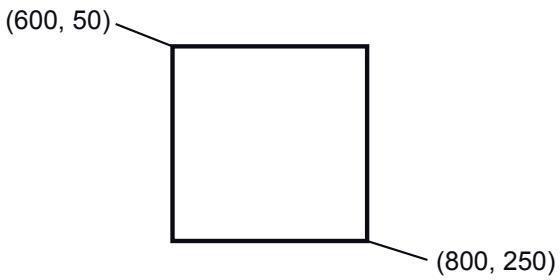
[Notes]
- If the coordinates are reversed, the printer automatically turns the points to create in any case the box.
- If the x2 is greater than the maximum horizontal width of graphic page, the box is drawn using the maximum width as last point.
- If the y2 is greater than the maximum length of graphic page defined by <LHT length, height, blackmark, dimblackmark> command, the box is drawn using the maximum length (defined by this command) as last point.
- The box border is fixed to 1 mm (8 dots).

[Default]

[Reference] <OXY x, y>

[Example] Ticket example that use an empty box:

```
<CB><BA8>
<BV600,50,800,250>
```



<BX x1, y1, x2, y2, s, t>

Command to create parametric Box

Valid for	KPM150HIII LAT, KPM150HIII LAT UHF, KPM150HIII REAR, KPM150HIII REAR UHF B202HIII, B202HIII UHF

[Format] ASCII <BX x1,y1,x2,y2, s, t >

[Range]

[Description] Create a box defined by the following parameters where:
x1 = minimum horizontal coordinate
y1 = minimum vertical coordinate
x2 = maximum horizontal coordinate
y2 = maximum vertical coordinate
s -> border thickness in dot (8 dot = 1 mm) with s ≤ 255
t = fill mode 0 ≤ t ≤ 9

t	FILL MODE
0	Deletes area
1	Fills area
2..8	Fills area with specific pattern
9	The area leaves unchanged (only for rectangle border)

[Notes]
- If t > 9 the fill mode is set to 9.
- If the coordinates are reversed, the printer automatically turns the points to create in any case the box.
- If the x2 is greater than the maximum horizontal width of graphic page, the box is drawn using the maximum width as last point.
- If the y2 is greater than the maximum length of graphic page defined by <LHT length, height, blackmark, dimblackmark> command, the box is drawn using the maximum length (defined by this command) as last point.
- If the defined thickness is greater than the half of box width, then the thickness is set to the half of box width to print (filled box).
- This command is not active with TrueType fonts.

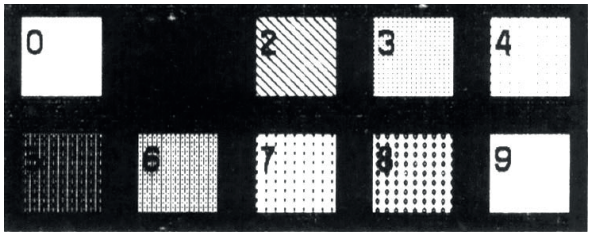
[Default]

[Reference] <OXY x, y>

[Example] Command sequence to generate a demo ticket with different kinds of box:

```
<CB><BA8><BS0,0>
<NR>
<BX200,100,300,200,16,0><RC120,220><F3><HW1,1>0
<BX300,100,400,200,16,1><RC120,320><F3><HW1,1>1
<BX400,100,500,200,16,2><RC120,420><F3><HW1,1>2
<BX500,100,600,200,16,3><RC120,520><F3><HW1,1>3
<BX600,100,700,200,16,4><RC120,620><F3><HW1,1>4
<BX200,200,300,300,16,5><RC220,220><F3><HW1,1>5
<BX300,200,400,300,16,6><RC220,320><F3><HW1,1>6
<BX400,200,500,300,16,7><RC220,420><F3><HW1,1>7
<BX500,200,600,300,16,8><RC220,520><F3><HW1,1>8
<BX600,200,700,300,16,9><RC220,620><F3><HW1,1>9
<q>
```

Example of what will be printed on ticket:



<CB>

Clear data in the print buffer

Valid for	KPM150HIII LAT, KPM150HIII LAT UHF, KPM150HIII REAR, KPM150HIII REAR UHF B202HIII, B202HIII UHF

[Format] ASCII <CB>

[Range]

[Description] Clear data in the print buffer, move the cursor to column 0, row 0, resets the text rotation, set the deault font as current and disables the Box Size function during the character writing.

[Notes]

[Default]

[Reference]

[Example]

<PG n>

Read stored logo

Valid for	KPM150HIII LAT, KPM150HIII LAT UHF, KPM150HIII REAR, KPM150HIII REAR UHF B202HIII, B202HIII UHF

[Format] ASCII <PG n>

[Range]

[Description] Reads a logo specified by [(nH x 256)+nL] number.

[Notes] • If the transmission has been received correctly and the command is valid, the printer returns the ACK (0x06) followed by image data, otherwise return NACK (0x15) if the logo is not present.

[Default]

[Reference]

[Example]

PRINT POSITION COMMANDS

<LHT length, height, blackmark, dimblackmark>

Set ticket dimension to print

Valid for	KPM150HIII LAT, KPM150HIII LAT UHF, KPM150HIII REAR, KPM150HIII REAR UHF B202HIII, B202HIII UHF

[Format] ASCII <LHT length, height, blackmark, dimblackmark>

[Range]

[Description] Sets the ticket dimension to print in the following mode:
• length is the ticket length (in dot)
• height is the ticket height (in dot)
• blackmark is the distance (in dot) between the ticket upper edge and strobe backside preprinted black mark
• dimblackmark is the black mark dimension (in dot).

[Notes]
• If using the point (.) character as decimal separator instead of commas then the passed value are stored in nonvolatile memory.
• The parameters are saved in nonvolatile memory: it is therefore recommended not to send this command for each printed ticket, because the number of rewrites is limited. In many devices, however, is checked the diversity of the data before performing the rescue to avoid reaching the limit of rewrites.
• 1mm = 8 dot.
• The parameters defined by this command are the same that can be set by modifying the same parameters of the “Setup.ini” file (see the user manual of each device for further explanation).

[Default]

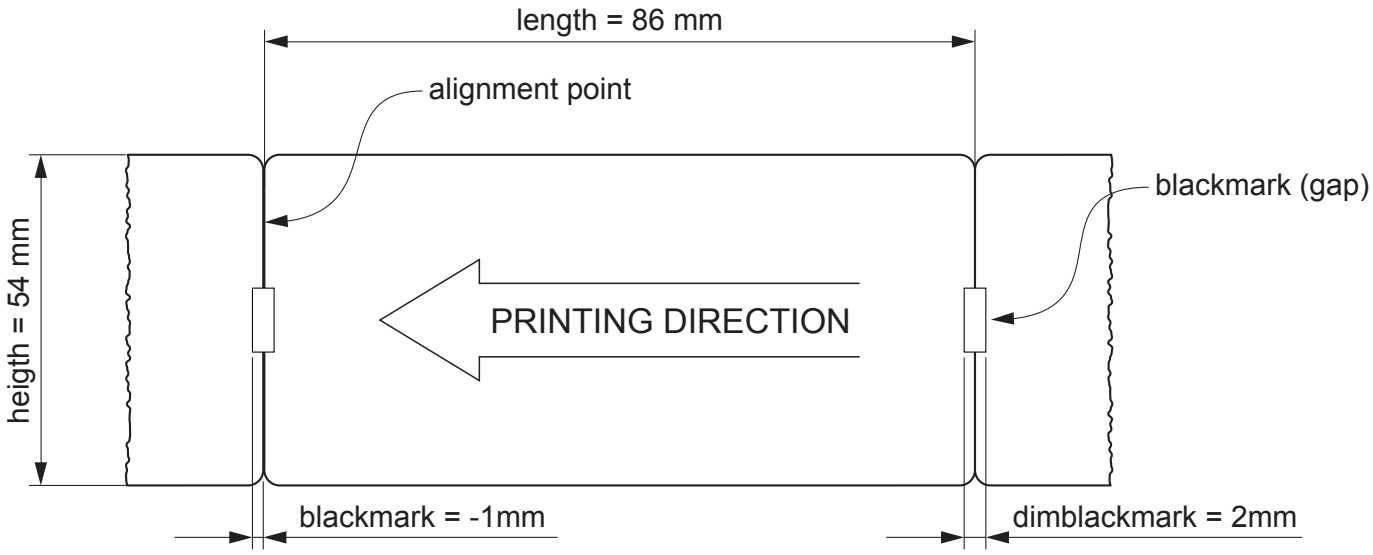
[Reference]

[Example] To set the ticket length to 86 mm and the height 54 mm with a blackmark distance of -1 mm from the edge of the ticket and with the blacmmark dimension of 2 mm, send the command:
<LHT688,432,-8,16>

where:

688	is the ticket length in dot
432	the ticket height in dot
-8	is the distance in dot the blackmark from the edge of the ticket
16	is the black mark dimension in dot

The following image shows the ticket with the measures set by the command previously sent:



<MM n>

Move the paper of n step

Valid for	KPM150HIII LAT, KPM150HIII LAT UHF, KPM150HIII REAR, KPM150HIII REAR UHF B202HIII, B202HIII UHF

[Format] ASCII <MM n>

[Range]

[Description] When this command is received, the paper feed or retract of n steps according to positive or negative values of n.

[Notes] 1 step = 0.125 mm (1/8 mm)

[Default]

[Reference]

[Example]

<OXY x, y>

Set printing offset

Valid for	KPM150HIII LAT, KPM150HIII LAT UHF, KPM150HIII REAR, KPM150HIII REAR UHF B202HIII, B202HIII UHF

[Format] ASCII <OXY x, y>

[Range]

[Description] Sets an offset that will be added to all the transmitted positions, where:
x is the distance (in dot) between the ticket upper edge and the starting point of printing
y is the distance (in dot) between the ticket lateral edge and the starting point of printing.

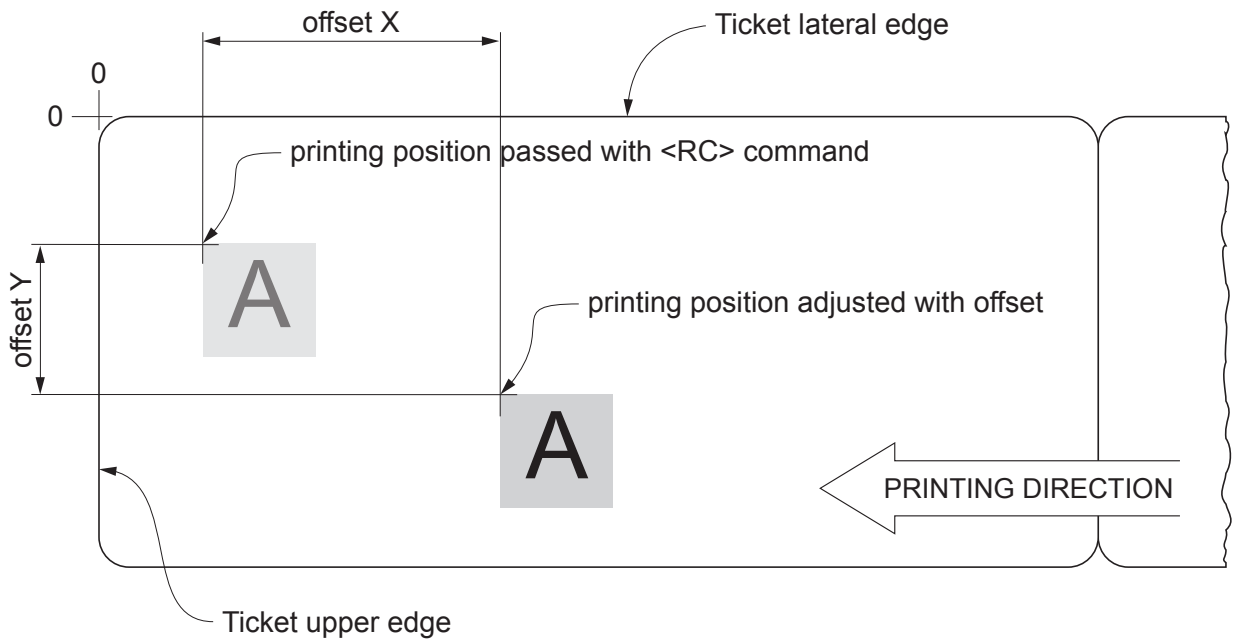
This command is useful to adjusting the printout positions, without having to modify all the transmitted positions.

[Notes]
- If using the point character '.' as decimal separator instead of commas then the passed value are stored in EEPROM.
- It's possible to set negative values of offset.
- If you get negative values after adding the offset, (the printing position is outside the ticket), the printing position is set to 0.
- 1mm = 8 dot.

[Default]

[Reference] <RC row, column>

[Example]



<RC row, column>

Position the cursor

Valid for	KPM150HIII LAT, KPM150HIII LAT UHF, KPM150HIII REAR, KPM150HIII REAR UHF B202HIII, B202HIII UHF

[Format] ASCII <RC row, column>

[Range]

[Description] Moves the cursor at the position specified by row and column parameters.

[Notes] The row and column values must be a number with four digit at most, otherwise the command will be ignored.

[Default]

[Reference] <OXY x, y>

[Example] To move the cursor at row (dot) 10, column (dot) 30 the command sequence is:
<RC 10,30>

<T>

Get the ticket dimension to print

Valid for	KPM150HIII LAT, KPM150HIII LAT UHF, KPM150HIII REAR, KPM150HIII REAR UHF B202HIII, B202HIII UHF

[Format] ASCII <T>

[Range]

[Description] Get the ticket dimensions to print, in the Ticket Size format.

[Notes]

[Default]

[Reference]

[Example]

<SP n>

Change speed

Valid for	KPM150HIII LAT, KPM150HIII LAT UHF, KPM150HIII REAR, KPM150HIII REAR UHF B202HIII, B202HIII UHF

[Format] ASCII <SP n>

[Range]

[Description] Sets printing speed using n as follows:

n	PRINTING SPEED
0	High quality
1	Normal
2	High speed

[Notes]

[Default]

[Reference]

[Example]

<PCHexNumLogo HexXDim HexYDim HexTBD Id Hexdata>

Save image into flash

Valid for	KPM150HIII LAT, KPM150HIII LAT UHF, KPM150HIII REAR, KPM150HIII REAR UHF B202HIII, B202HIII UHF

[Format] ASCII <PCHexNumLogo HexXDim HexYDim HexTBD Id Hexdata>

[Range]

[Description] Save the image received from serial port into printer flash; if the number used to store logo is not already present inside the printer, the new logo is appended to stored logos, otherwise the image is overwritten and moved in the last position of flash.

• The source image must be a monochrome bitmap.

HexNumLogo	indicates the number of logo, 2 bytes expressed in hexadecimal notation
HexXDim	indicates the logo horizontal dimension in pixel, 2 bytes expressed in hexadecimal notation; the value must be multiple of 32
HexYDim	indicates the logo vertical dimension in pixel, 2 bytes expressed in hexadecimal notation
HexTBD	2 bytes fixed to 0x00 (for future use)
Id	indicates the file-name of the logo, a sequence of 16 bytes that identify uniquely the logo
Hexdata	are the image data (logo's bytes less than the first 62 bytes of the header)

• The printer returns a sequence of bytes as follows :

<PC0>	if the saving include an incorrect syntax or the available memory in flash for logos is finished (128Kbyte)
<PC1n>	if the syntax command is correct and there's enough memory in flash for saving logos; n returns the status of the flash programming: 0x88 Sector not erased 0x77 Error during programming 0xAA Programming done.

[Notes]
- The logo is stored into the printer flipped vertically relative to the bitmap
- The colors of monochrome bitmaps may appear reversed if the "palette" in the header of the bitmap in position 0x3B is 0xFF 0xFF 0xFF 0x00.
- If file-name length is shorter than 16 byte, add a terminator byte NULL (0x00) up to 16 characters.
- If file-name extension is absent, it is automatically added to the name.

[Default]

[Reference]

[Example] The following example shows the bytes sequence received from serial port to store a logo into the printer flash:

```
Offset      Hexadecimal                                                 ASCII
00000000:   3C 50 43 00 08 00 60 00 58 00 00 65 78 61 6D 70 <PC...`.X..examp
00000010:   6C 65 6C 6F 67 6F 38 00 00 00 00 00 00 00 00 2F lelogo8.bmp
....
....                              Image data less than the first 62 bytes
....
>
```

If the programming is successful, the printer's answer will be:

HEX	0x3C	0x50	0x43	0x31	0xAA	0x3E
ASCII	<	P	C	1	0xAA	>

<PE n>

Delete image

Valid for	KPM150HIII LAT, KPM150HIII LAT UHF, KPM150HIII REAR, KPM150HIII REAR UHF B202HIII, B202HIII UHF

[Format] ASCII <PE n>

[Range]

[Description] Deletes image defined by n.
The printer returns a sequence of bytes as follows :

<PE0>	Image n not found
<PE1n>	Image found; n returns to the flash programming status 0xAA Erasing done.

[Notes]

[Default]

[Reference]

[Example]

<PEALL>

Delete all stored logo

Valid for	KPM150HIII LAT, KPM150HIII LAT UHF, KPM150HIII REAR, KPM150HIII REAR UHF B202HIII, B202HIII UHF

[Format] ASCII <PEALL>

[Range]

[Description] Deletes all stored logo.
The printer returns a sequence of bytes as follows :

<PE0>	Image n not found
<PE1n>	Image found; n returns to the flash programming status 0xAA Erasing done.

[Notes]

[Default]

[Reference]

[Example]

<PIn>

Get pictures header info

Valid for	KPM150HIII LAT, KPM150HIII LAT UHF, KPM150HIII REAR, KPM150HIII REAR UHF B202HIII, B202HIII UHF

[Format] ASCII <PI n>

[Range]

[Description] Gets the logo header info stored specified by n (express in ASCII). The printer returns a bytes sequence as follows :

<PIe[ID]>

where

- e indicates the search result:
  e = 0 picture not found
  e = 1 picture found
- [ID] indicates the file-name that identify the logo, a sequence of 16 bytes that was defined when the logo is stored. This field is returned only if the logo has been found.

[Notes]

[Default]

[Reference]

[Example]

<PL>

Get pictures header list

Valid for	KPM150HIII LAT, KPM150HIII LAT UHF, KPM150HIII REAR, KPM150HIII REAR UHF B202HIII, B202HIII UHF

[Format] ASCII <PL>

[Range]

[Description] This command requests to the printer the list of stored logo. The printer returns a bytes sequence as follows :

<PL CrLf [N-ID CrLf]>

where

- CrLf indicates the two characters 0x0D (Carriage return) and 0x0A (line feed)
- N is the number of stored logo
- [ID] indicates the file-name that identify the logo, a sequence of 16 bytes that was defined when the logo is stored. This field is returned only if the logo has been found.
- [N-ID CrLf] This field is returned only if the logo has been found.

[Notes] The fields enclosed in square bracket are repeated for all number of stored images.

[Default]

[Reference]

[Example]

<PN>

Get number of stored logo

Valid for	KPM150HIII LAT, KPM150HIII LAT UHF, KPM150HIII REAR, KPM150HIII REAR UHF B202HIII, B202HIII UHF

[Format] ASCII <PN>

[Range]

[Description] This command sends to the printer the request of number of stored logo; the printer returns a bytes sequence as follows:

<PNn>

where
n (in ASCII format) indicates the number of stored images.

[Notes]

[Default]

[Reference]

[Example] If in the flash memory are stored 10 logos send this command

HEX	0x1C	0x90
ASCII	FS	0x90

The printer's answer will be :

HEX	0x3C	0x50	0x4E	0x31	0x30	0x3E
ASCII	<	P	N	1	0	>

<COM1>

Terminate the communication toward RFID module

Valid for	KPM150HIII LAT UHF, KPM150HIII REAR UHF B202HIII UHF

[Format] ASCII <COM1>

[Range]

[Description] Terminates the communication toward RFID module.

[Notes]

[Default]

[Reference]

[Example]

<COM2>

Select the communication toward RFID module

Valid for	KPM150HIII LAT UHF, KPM150HIII REAR UHF B202HIII UHF

[Format] ASCII <COM2>

[Range]

[Description] Set the communication toward RFID module.

[Notes]

[Default]

[Reference]

[Example]

<DT m>

Read date and time

Valid for	KPM150HIII LAT, KPM150HIII LAT UHF, KPM150HIII REAR, KPM150HIII REAR UHF B202HIII, B202HIII UHF

[Format] ASCII <DT m>

[Range]

[Description] Read date and time of the real time clock and send it in the format specified by m values as follows:

m	FORMAT
0	DD/MM/YY hh:mm:ss
1	DDMMYYhhmmss
2	YYMMDDhhmmss
3	YYMMDDhhmmssd

where:

DD	represents the day of the date
MM	represents the month of the date
YY	represents year of the date
hh	represents the hour of the time
mm	represents the minutes of the time
ss	represents the seconds of the time
d	indicates the day of the week

The printer's answer will be:

<DT CR x data CR >

where
- x indicate the reading result; the x value can be :
'!' : the command is executed successfully
'#': the command is not executed successfully
- data are the ASCII characters that represent the date and time.

[Notes]

[Default]

[Reference]

[Example] To read date and time in the “DDMMYYhhmmss” format, send command:

<DT 1>

If the current date and time are “15 September 2006 at 10:56:20 (AM)” the printer’s answer is as follows:

<DT CR ! 151006105620 CR> if the transmission is successfully, otherwise
<DT CR # CR > if the transmission is not successful

<EPOS>

Change emulation to CUSTOM\POS

Valid for	KPM150HIII LAT, KPM150HIII LAT UHF, KPM150HIII REAR, KPM150HIII REAR UHF B202HIII, B202HIII UHF

[Format] ASCII <EPOS>

[Range]

[Description] Set the CUSTOM\POS emulation.

[Notes]

[Default]

[Reference]

[Example]

<IT>

Disable detection of alignment black mark

Valid for	KPM150HIII LAT, KPM150HIII LAT UHF, KPM150HIII REAR, KPM150HIII REAR UHF B202HIII, B202HIII UHF

[Format] ASCII <IT>

[Range]

[Description] Sent before the <MM n> feed command, this command disables the detection and counting of the alignment black mark.

[Notes]
- When you need to move paper outside the print job, you need to disable the detection and counting of the black marks by the alignment sensor to allow the device to properly position the paper at the end of the movement.
- Send this command always before <MM n> command and then enable the black mark detection with the <VT> command.

[Default]

[Reference] <MM n>, <VT>

[Example]

<JAM x>

Enable / Disable label control

Valid for	KPM150HIII LAT, KPM150HIII LAT UHF, KPM150HIII REAR, KPM150HIII REAR UHF B202HIII, B202HIII UHF

[Format] ASCII <JAM x>

[Range] x = 0, 1

[Description] Enables / disables the label control. This control, if enabled, allows to detetct the regular alternation of label and gap.
• When x = 0, the label control is disabled.
• When x = 1, the label control is enabled.

[Notes] • This control it works only if the alignment is enabled by setting the “Black Mark Position” parameter to “Transparent” value. For further information to use paper with label, refer to the User Manual of each device.
• When the label control is disabled, it is possible that occur serious jams due to curling of the roll or peeling of the labels.
• The label control defined by this command is the same that can be set with the value of the “Auto-Detect Jam” during the setup of the printer (refer to the user manual of each device) or by changing the same parameter of the “Setup.ini” file (see User Manual for further explanation).

[Default] x = 0

[Reference]

[Example]

<KEYS x>

Enable / Disable keys panel

Valid for	KPM150HIII LAT, KPM150HIII LAT UHF, KPM150HIII REAR, KPM150HIII REAR UHF B202HIII, B202HIII UHF

[Format] ASCII <KEYS x>

[Range] x = 0, 1

[Description] Enables or disables the keys panel.
- When x = 0, the keys panel is disabled.
- When x = 1, the keys panel is enabled.

[Notes] When the keys panel is disabled, the keys may only be used after the printer has been reset.

[Default] x = 1

[Reference]

[Example]

<LOAD>

Reload paper

Valid for	KPM150HIII LAT, KPM150HIII LAT UHF, KPM150HIII REAR, KPM150HIII REAR UHF B202HIII, B202HIII UHF

[Format] ASCII <LOAD>

[Range]

[Description] When this command is received, the printer performs a paper reloading.

[Notes]
- During the execution of the command, the printer indicates the paper end.
- This command is valid only if the alignment is enabled.

[Default]

[Reference]

[Example]

<SDT m data>

Set date and time of the real time clock

Valid for	KPM150HIII LAT, KPM150HIII LAT UHF, KPM150HIII REAR, KPM150HIII REAR UHF B202HIII, B202HIII UHF

[Format] ASCII <SDT m data>

[Range]

[Description] Set date/time of the real time clock, in the format specified by m values as follows:

m	FORMAT
0	DD/MM/YY hh:mm:ss
1	DDMMYYhhmmss
2	YYMMDDhhmmss
3	YYMMDDhhmmssd

where:

DD	represents the day of the date
MM	represents the month of the date
YY	represents year of the date
hh	represents the hour of the time
mm	represents the minutes of the time
ss	represents the seconds of the time
d	indicates the day of the week
data	are the ASCII characters relative to the date and time to set

If the transmission has been received correctly and the command is valid, the printer returns the following string:

<SDT CR x CR >

where
- x indicate the reading result; the x value can be:
'!' : the command is executed successfully
'#': the command is not executed successfully

[Notes] The day of the week is calculated automatically from the printer and then it's possible that the returned value is different from the one transmitted.

[Default]

[Reference]

[Example] To set the date and time to “29 September 2006 at 13:51:00 (PM)” in the “YYMMDDhhmmss” format send the command:

<SDT 2 061029135100>

The printer’s answer will be:

<SDT CR ! CR > if the transmission is successfully
<SDT CR # CR > if the transmission is not successfully

<SVEL>

Change emulation to SVELTA

Valid for	KPM150HIII LAT, KPM150HIII LAT UHF, KPM150HIII REAR, KPM150HIII REAR UHF B202HIII, B202HIII UHF

[Format] ASCII <SVEL>

[Range]

[Description] Set the SVELTA emulation.

[Notes]

[Default]

[Reference]

[Example]

<VT>

Enable detection of alignment black mark

Valid for	KPM150HIII LAT, KPM150HIII LAT UHF, KPM150HIII REAR, KPM150HIII REAR UHF B202HIII, B202HIII UHF

[Format] ASCII <VT>

[Range]

[Description] Sent after the <IT> command and the <MM n> feed command, this command enables the detection and counting of the alignment black mark.

[Notes]
- When you need to move paper outside the print job, you need to disable the detection and counting of the black marks by the alignment sensor by using the <IT> command to allow the device to properly position the paper at the end of the movement. The detection of black marks must be enabled whit this command.
- Send this command always after <IT> and <MM n> commands.

[Default]

[Reference] <IT>, <MM n>

[Example]

ALIGNMENT

1 ALIGNMENT COMMANDS

Devices listed in this manual are equipped with sensors that allow the use of alignment black mark in order to handle:
- rolls of with pre-printed and fixed length fields
- FanFold modules of tickets with pre-printed and fixed length fields.

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

The commands available for managing the alignment of the ticket are the following:
- 0x1D 0xE7: sets the distance between the point of alignment and the black mark (value of “Black Mark Distance” parameter)
- 0x1D 0xF6 and 0x1D 0xF8: perform the alignment of ticket, which is advanced to cut the ticket at the first alignment point available
- 0x1C 0xC1: performs the possible paper recovery after cutting operation.

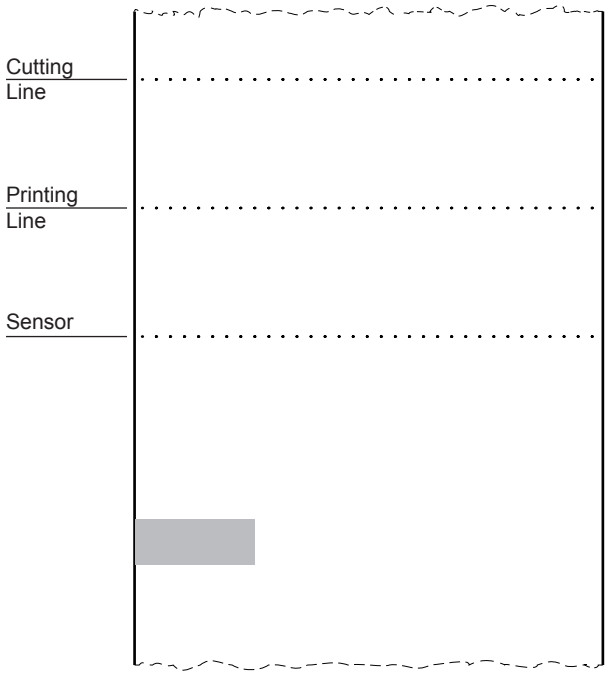
Print a ticket with alignment requires the following sequence of commands:
1. General settings of the ticket (character formatting, print density, margins etc.)
2. Alignment command: 0x1D 0xF6.
3. Ticket printout (printing text, logos or any graphic).
4. Alignment command: 0x1D 0xF8.
5. Cut command: 0x1B 0x69.
6. Command for paper recovery (optional).

NOTE: The settings take effect from next ticket to the one already in the printer.

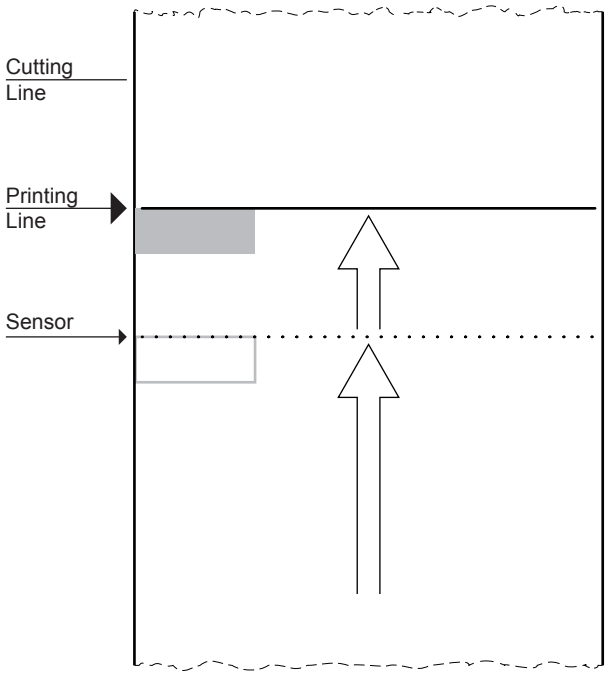
In the following examples, are described some sequences of commands to manage the alignment.

[Example 1] Commands sequence to print tickets with “alignment point” over the edge of the black mark (“Black Mark Distance” = 0 mm set from setup) and with full paper recovery (n = 26 mm).

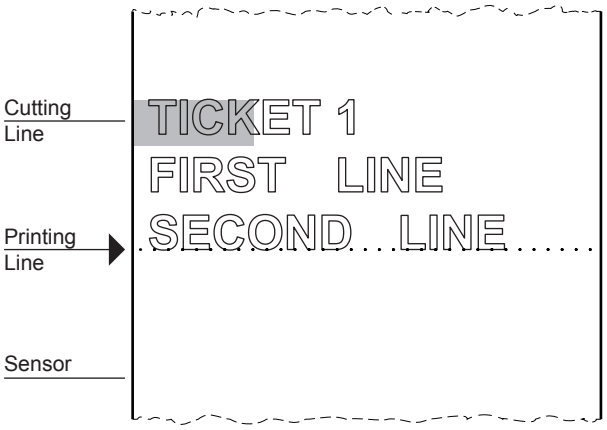
Start
Paper with black mark not aligned.



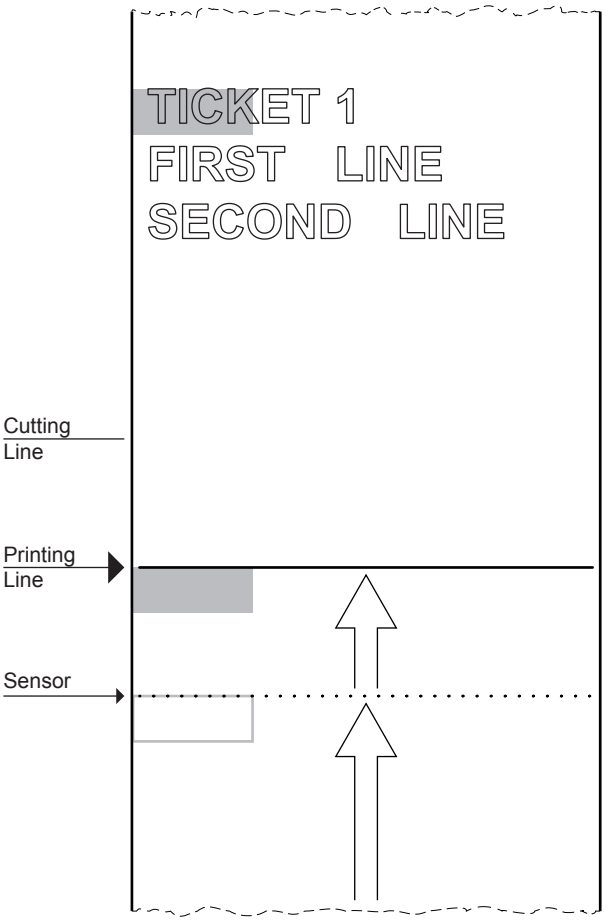
Alignment command 0x1D 0xF6.
Paper is fed. The black mark is recognized by the sensor and aligned under the printing line.



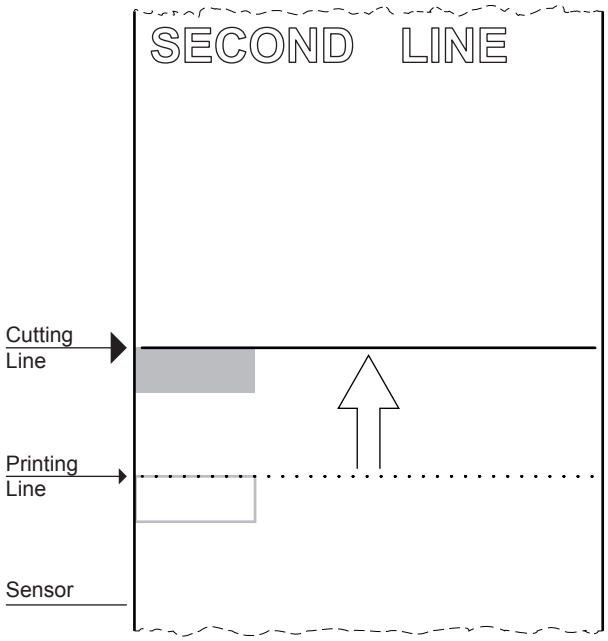
Command for text printing:
‘TICKET 1’, 0x0A, ’FIRST LINE’, 0x0A, ’SECOND LINE’, 0x0A



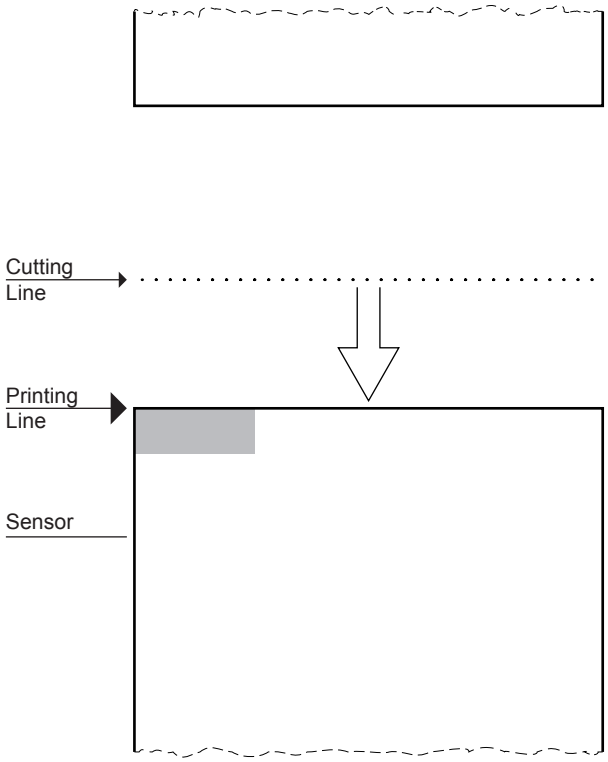
Alignment command 0x1D 0xF8.
Paper is fed. The next black mark is recognized by the sensor and aligned under the printing line.



Cut command 0x1B 0x69.
Paper is fed until the black mark is not aligned under the cutting line.

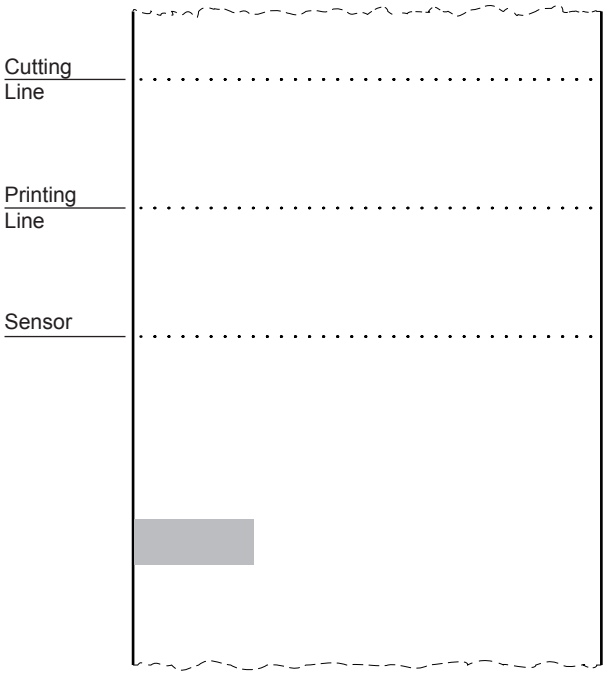


The paper is cut.
Command for paper recovery 0x1C 0xC1. The paper is retracted under the printing line.

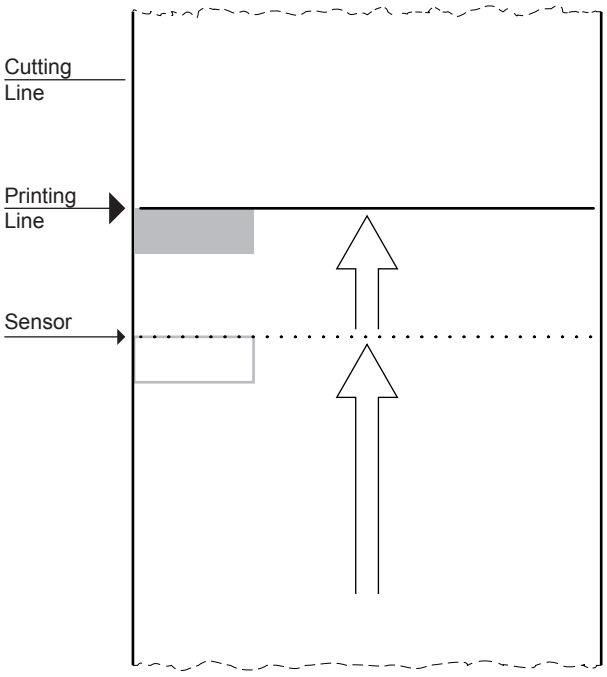


[Example 2] Commands sequence to print tickets with “alignment point” set to the edge of the black mark (“Black Mark Distance” = 0 mm set from setup) and no paper recovery.

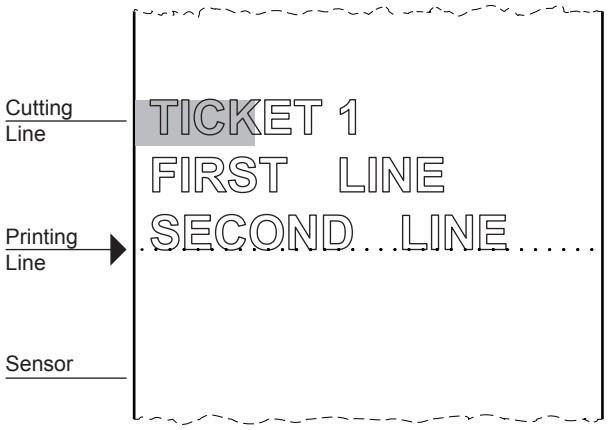
Start
Paper with black mark not aligned.



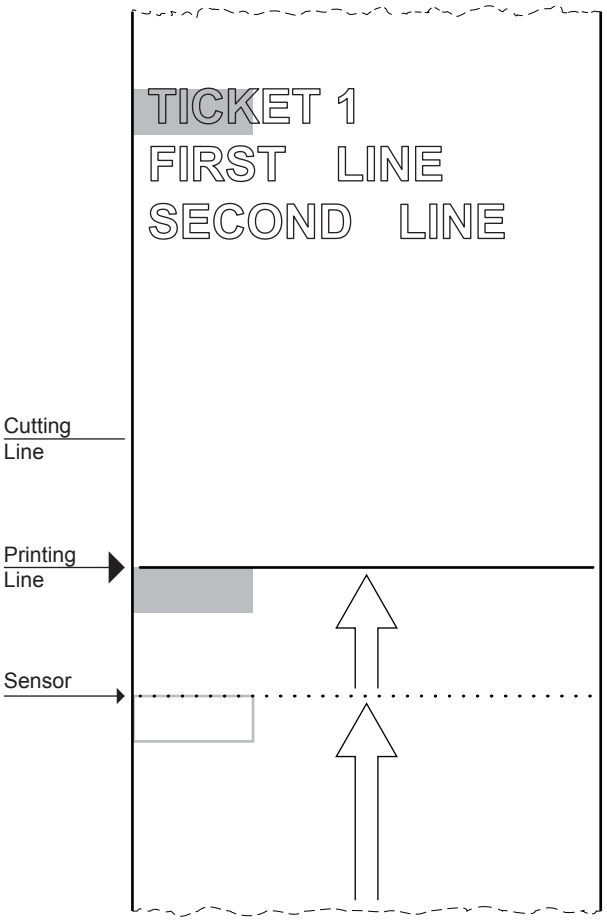
Alignment command 0x1D 0xF6.
Paper is fed. The black mark is recognized by the sensor and aligned under the printing line.



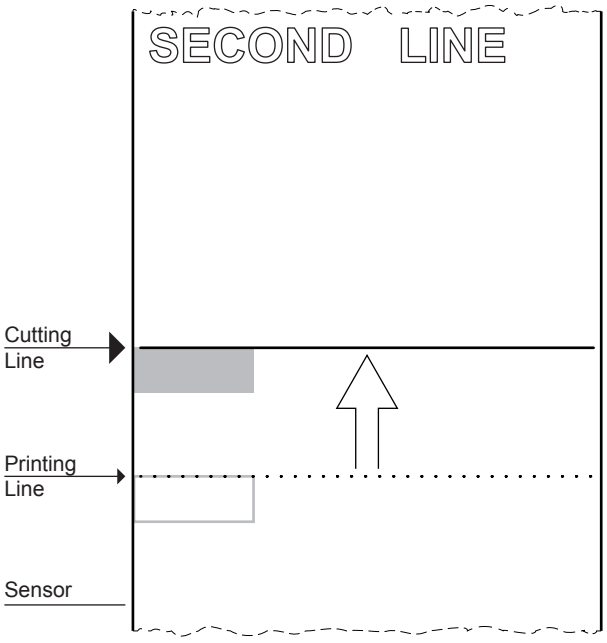
Command for text printing:
‘TICKET 1’, 0x0A, ’FIRST LINE’, 0x0A, ’SECOND LINE’, 0x0A



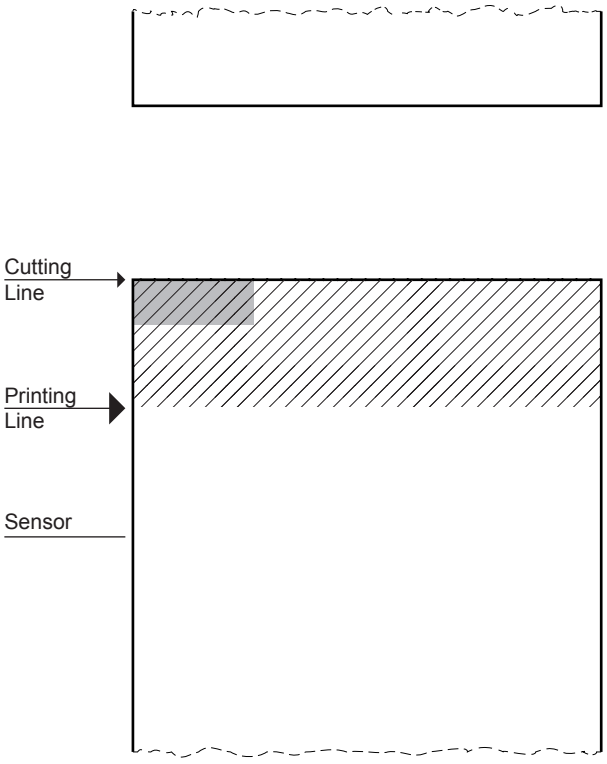
Alignment command 0x1D 0xF8.
Paper is fed. The next black mark is recognized by the sensor and aligned under the printing line.



Cut command 0x1B 0x69.
Paper is fed until the black mark is not aligned under the cutting line.

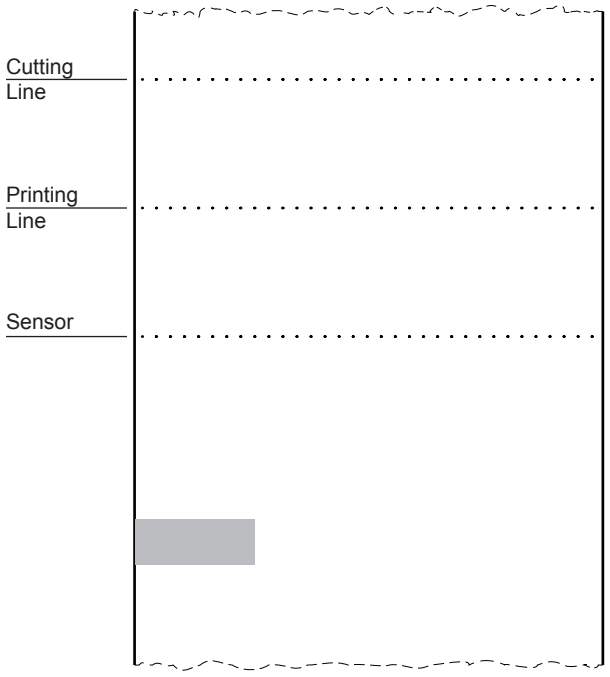


The paper is cut.
The portion of the paper between the cutting line and the printing line is not recovered

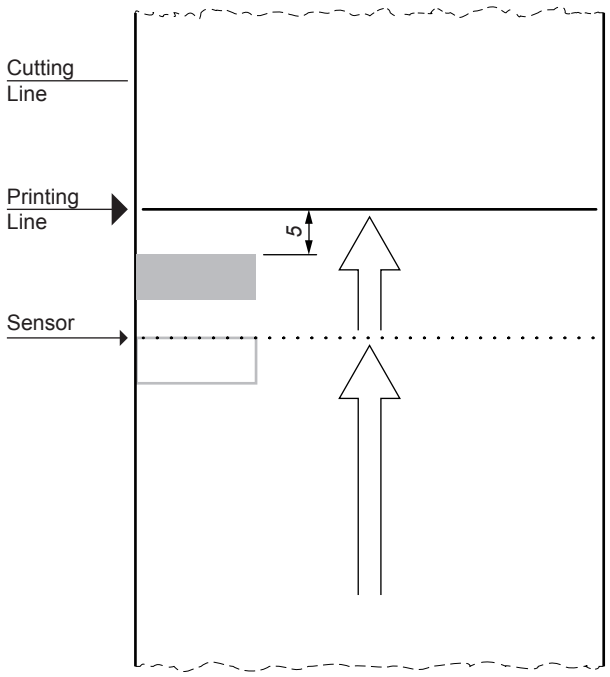


[Example 3] Commands sequence to print tickets with “alignment point” set to 5 mm before the edge of the notch (“Black Mark Distance” parameter = 5 mm set from setup) and with full paper recovery (n = 26).

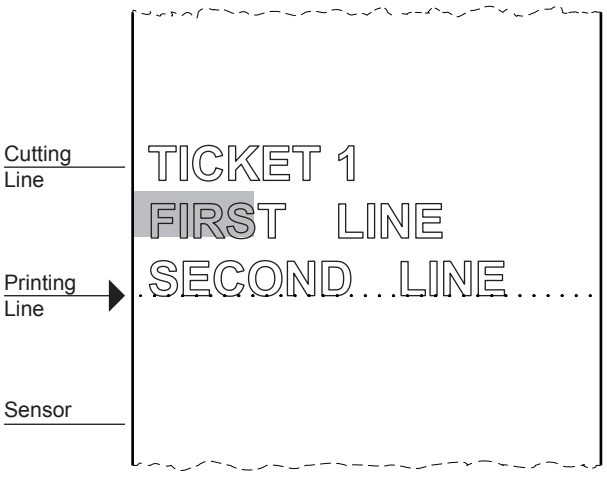
Start
Paper with black mark not aligned.



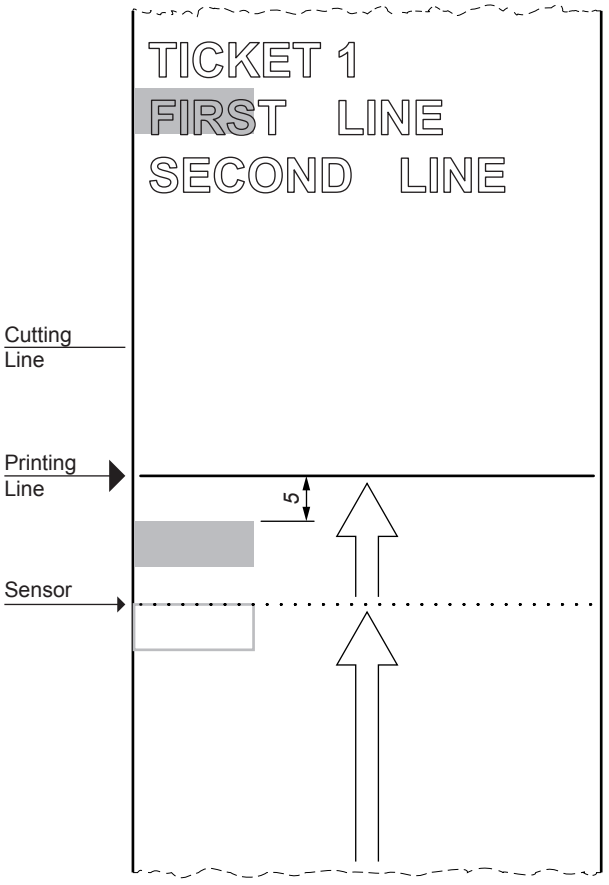
Alignment command 0x1D 0xF6
Paper is fed. The black mark is recognized by the sensor and aligned at a distance of 5 mm (“Black Mark Distance”) from the printing line.



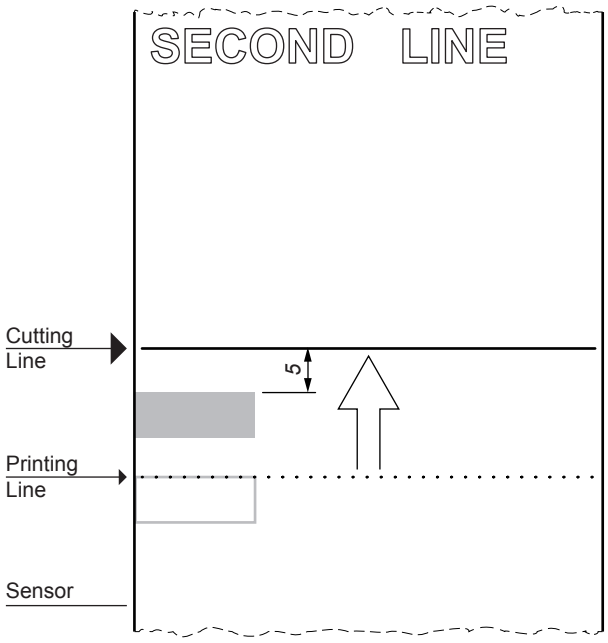
Command for text printing:
‘TICKET 1’, 0x0A, ’FIRST LINE’, 0x0A, ’SECOND LINE’, 0x0A



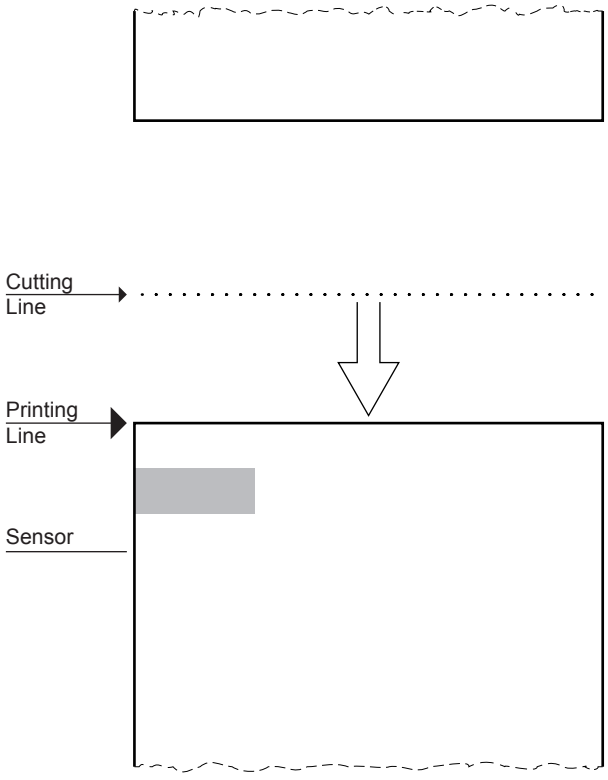
Alignment command 0x1D 0xF8.
Paper is fed. The next black mark is recognized by the sensor and aligned at a distance of 5 mm (“Black Mark Distance”) from the printing line.



Cut command 0x1B 0x69.
Paper is fed until the black mark is not aligned at a distance of 5 mm (“Black Mark Distance”) from the cutting line.



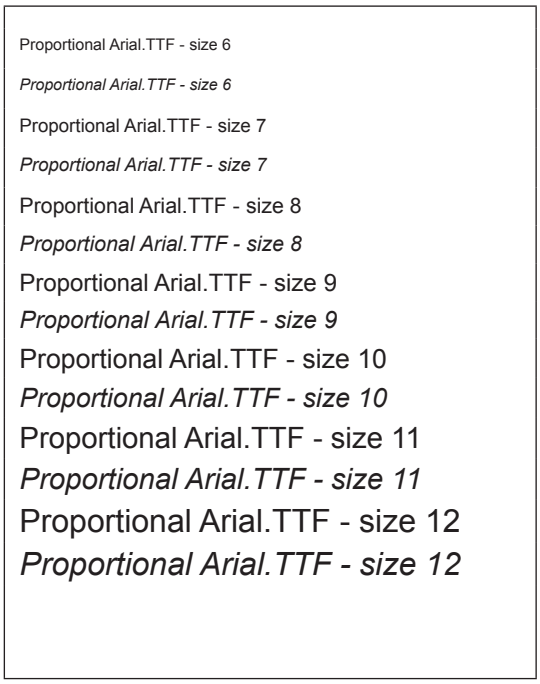
The paper is cut. The paper is retracted under the printing.



PAGE MODE

1 PAGE MODE SAMPLE

The following example shows the TrueType font “Arial.ttf” in Normal and Italic mode with different font sizes:



In the following table is shown the lines of code written to make the previous ticket layout:

INSTRUCTION	COMMENT
0x1B 0x4C	Enter page mode
0x1D 0x50 0xCC 0xCC	Set horizontal and vertical unit
0x1B 0x57 0x48 0x00 0x00 0x00 0x30 0x02 0x23 0x02	Set print area size
0x1B 0x33 0x24	Set line spacing
0x1B 0x54 0x00	Set orientation
0x1C 0x66 0x04 0x09 “Arial.TTF”	Set proportional mode for Arial.TTF
0x1C 0x64 0x06	Set TTF font size
0x1B 0x21 0x00 “Proportional Arial.TTF - size 6” 0x0A	Write normal text
0x1B 0x21 0x40 ”Proportional Arial.TTF - size 6” 0x0A	Write italic text
0x1C 0x66 0x06 0x09 “Arial.ttf”	Set proportional mode for Arial.TTF and enables hinting
0x1C 0x64 0x07	Set TTF font size
0x1B 0x21 0x00 “Proportional Arial.TTF - size 7” 0x0A	Write normal text
0x1B 0x21 0x40 “Proportional Arial.TTF - size 7” 0x0A	Write italic text
0x1C 0x64 0x08	Set TTF font size
0x1B 0x21 0x00 “Proportional Arial.TTF - size 8” 0x0A	Write normal text
0x1B 0x21 0x40 “Proportional Arial.TTF - size 8” 0x0A	Write italic text

0x1C 0x64 0x09	Set TTF font size
0x1B 0x21 0x00 “Proportional Arial.TTF - size 9” 0x0A	Write normal text
0x1B 0x21 0x40 “Proportional Arial.TTF - size 9” 0x0A	Write italic text
0x1C 0x64 0x0A	Set TTF font size
0x1B 0x21 0x00 “Proportional Arial.TTF - size 10” 0x0A	Write normal text
0x1B 0x21 0x40 “Proportional Arial.TTF - size 10” 0x0A	Write italic text
0x1C 0x64 0x0B	Set TTF font size
0x1B 0x21 0x00 “Proportional Arial.TTF - size 11” 0x0A	Write normal text
0x1B 0x21 0x40 “Proportional Arial.TTF - size 11” 0x0A	Write italic text
0x1C 0x64 0x0C	Set TTF font size
0x1B 0x21 0x00 “Proportional Arial.TTF - size 12” 0x0A	Write normal text
0x1B 0x21 0x40 “Proportional Arial.TTF - size 12” 0x0A	Write italic text
0x1B 0x0C	Print data in page mode
0x1D 0xF6	Align at print
0x1D 0x56 0x00	Total cut and put ticket into the stacker
0x1B 0x53	Return to standard mode

Part Number : 77200000004600 Rev.1.00

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