TSPL/TSPL2 Programming Language

TAIWAN SEMICONDUCTOR BAR CODE PRINTER SERIES

PROGRAMMING MANUAL

TABLE OF CONTENTS

Document Conventions

This manual uses the following typographic conventions.

Convention	Description
[expression list]	Items inside square brackets are optional, expression maximum length 2*1024 bytes;
<ESC>	ESCAPE (ASCII 27), control code of status polling command, which returns the printer status immediately, no matter the printer is ready or not.
~	(ASCII 126), control code of status polling command, which returns the printer status only when the printer is ready.
Space	(ASCII 32) characters will be ignored in the command line.
"	(ASCII 34), beginning and ending of expression
CR,LF	(ASCII 13),(ASCII 10) is placed at the end of command line.
NULL	(ASCII 0) is not supported in the expression, except the 2D bar code commands.
Note: *200 DPI: 1 mm = 8 dots*	Arial font in bold and italic type is used for note.

Setup and System Commands
● SIZE

Description

This command defines the label width and length.

Syntax

(1) English system (inch)
SIZE m, n
(2) Metric system (mm)
SIZE m mm, n mm

Parameter	Description
m	Label width (inch or mm)
n	Label length (inch or mm)

Note:

200 DPI: 1 mm = 8 dots
300 DPI: 1mm = 12 dots
For metric system, there must be a space between parameter and "mm".

Max. width	72mm	104mm	106mm	108mm
TTP-243		X		
TTP-243E		X		
TTP-243 Plus		X		
TTP-243E Plus		X		
TTP-244ME		X		
TTP-244ME Plus		X		
TTP-244				X
TTP-245				X
TDP-245				X
TTP-245G				X
TDP-245G				X
TTP-246M				X
TTP-246G				X
TTP-248M		X		
TTP-342			X	
TTP-342 Plus			X	
TTP-342M			X	
TTP-342M Plus			X	
TTP-343			X	
TTP-344M			X	
TTP-346M			X	
TDP-643 Plus		X		
TDP-643R Plus		X		
TTP-2410M		X		

M23	**X**			

Example

(1) English system (inch)
  SIZE 3.5, 3.00
(2) Metric system (mm)
  SIZE 100 mm, 100 mm

m: Label Width
n: Label Height
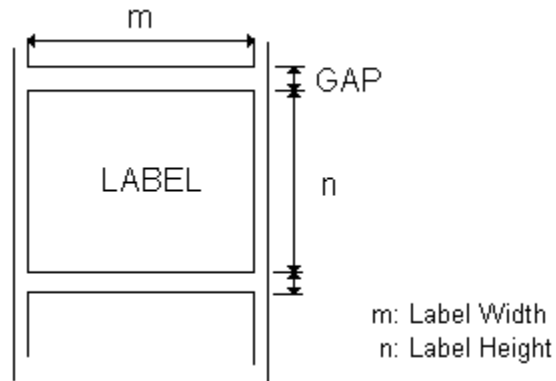
See Also

GAP, BLINE

● GAP

Description
Define the gap distance between two labels

Syntax
(1). English system (inch)
GAP m, n
(2) Metric system (mm)
GAP m mm, n mm

Parameter	Description
m	The gap distance between two labels
	$0 \leq m \leq 1$ (inch), $0 \leq m \leq 25.4$ (mm)
n	The offset distance of the gap
	$n \leq$ label length (inch or mm)
0,0	Continuous label.

Note: For metric system, there must be a space between parameter and mm.
When the sensor type is changed from "Black Mark" to "GAP", please send the "GAP" command to the printer first.
Ex: In DOS mode,
C:\>copy con lpt1 <Enter>
GAP 2 mm,0 <Enter>
<Ctrl>+<Z> <Enter>

Example
Normal gap
(1). English system (inch)
GAP 0.12,0
(2) Metric system (mm)
GAP 3 mm,0
(3). Continuous label
GAP 0,0
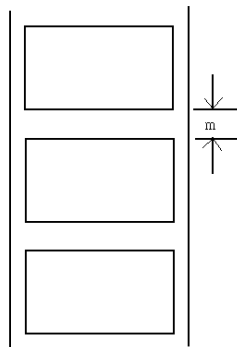
Special gap

    (1). English system (inch)
        GAP 0.30, 0.10
    (2). Metric system (mm)
        GAP 7.62 mm, 2.54 mm
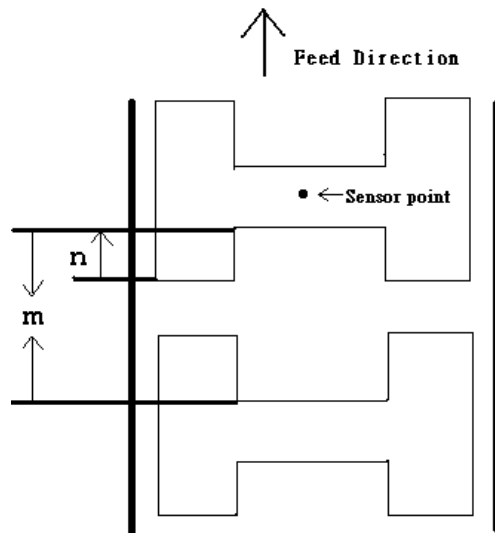
See Also

SIZE, BLINE

● BLINE

Description
This command is used to set the height of the black line and the user-defined extra label feeding length each form feed takes.

Syntax
(1) English system (inch)
      BLINE m, n
(2) Metric system (mm)
      BLINE m mm, n mm

Parameter	Description
m	The height of black line either in inch or mm. $0 \leq m \leq 1$ (inch), $0 \leq m \leq 25.4$ (mm)
n	The extra label feeding length. $0 \leq n \leq$ label length
0,0	Continuous label.

Note: For metric system, there must be a space between parameter and mm.
When the sensor type is changed from "GAP" to "Black Mark", please send the "BLINE" command to the printer first.
Ex: In DOS mode,
C:\>copy con lpt1 <Enter>
BLINE 2 mm,0 <Enter>
<Ctrl>+<Z> <Enter>

Example
(1) English system (inch)
      BLINE 0.20,0.50

(2) Metric system (mm)
      BLINE 5.08 mm,12.7 mm
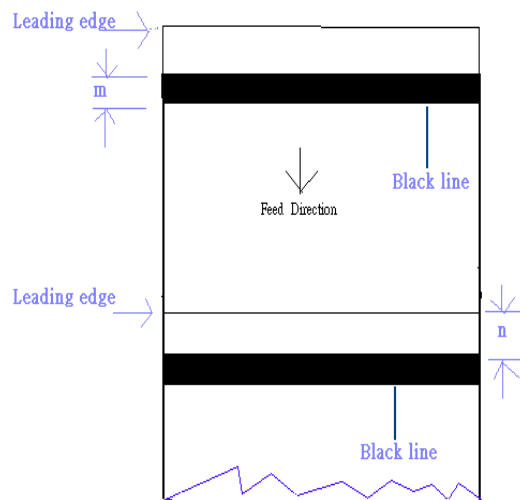
See Also
SIZE, GAP

● OFFSET

Description
This command defines the selective, extra label feeding length each form feed takes, which, especially in peel-off mode and cutter mode, is used to adjust label stop position, so as for label to register at proper places for the intended purposes. The printer backtracks the extra feeding length before the next run of printing.

Syntax
(1) English system (inch)
   OFFSET m
(2) Metric system (mm)
   OFFSET m mm

Parameter	Description
m	The offset distance (inch or mm)
	$-1 \leq m \leq 1$(inch)

CAUTION: Impropriety offset value may cause paper jam.

Example
(1) English system (inch)
   OFFSET 0.5

(2) Metric system (mm)
   OFFSET 12.7 mm

Feed Direction

Leading edge

m
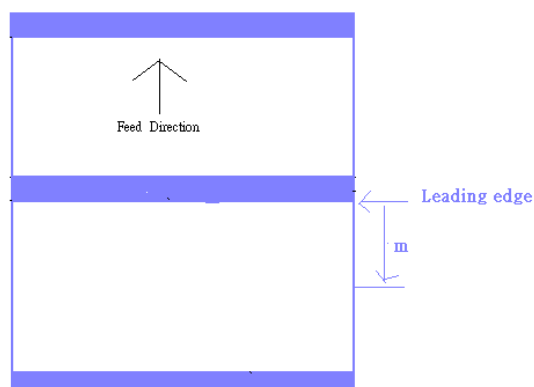
See Also
SIZE, GAP, SET PEEL, SET CUTTER

● SPEED

Description
This command defines the print speed.

Syntax
SPEED n

Parameter	Description
n	printing speed in inch per second

Model \ ips	1	1.5	2	2.5	3	3.5	4	5	6	8	10
TTP-243		x	x		x						
TTP-243E		x	x		x						
TTP-243 Plus		x	x		x						
TTP-243E Plus		x	x		x						
TTP-244ME		x	x		x		x				
TTP-244ME Plus		x	x		x		x				
TTP-342	x	x	x								
TTP-342 Plus	x	x	x								
TTP-342M	x	x	x								
TTP-342M Plus	x	x	x								
TDP-643 Plus		x	x		x						
TDP-643R Plus		x	x		x						
TTP-2410M							x		x	x	x
TTP-346M							x	x	x		
TTP-248M							x	x	x	x	
TTP-246M			x		x		x	x	x		
TTP-246G			x		x		x	x	x		
TTP-344M			x		x		x				
TTP-245			x		x		x	x			
TDP-245			x		x		x	x			
TTP-245G			x		x		x	x			
TDP-245G			x		x		x	x			
TTP-343			x		x						
TTP-244			x		x		x				
M23		x	x	x	x	x					

Example
SPEED 10

See Also
DENSITY

● DENSITY

Description
This command designates the level of darkness of printing.

Syntax
DENSITY n

Parameter	Description
n	0~15
	0, specifies the lightest level
	15, specifies the darkest level

Example
DENSITY 7

See Also
DENSITY

● DIRECTION and Mirror Image

Description
This command defines the printout direction and mirror image. And this will be memorized in EEPROM.

Syntax
DIRECTION n[,m]

Parameter	Description
n	0 or 1. Please refer to the illustrations below:
m	0: Print normal image. 1: Print mirror image.

DIRECTION 0,0

DIRECTION 1,0

DIRECTION 0,1
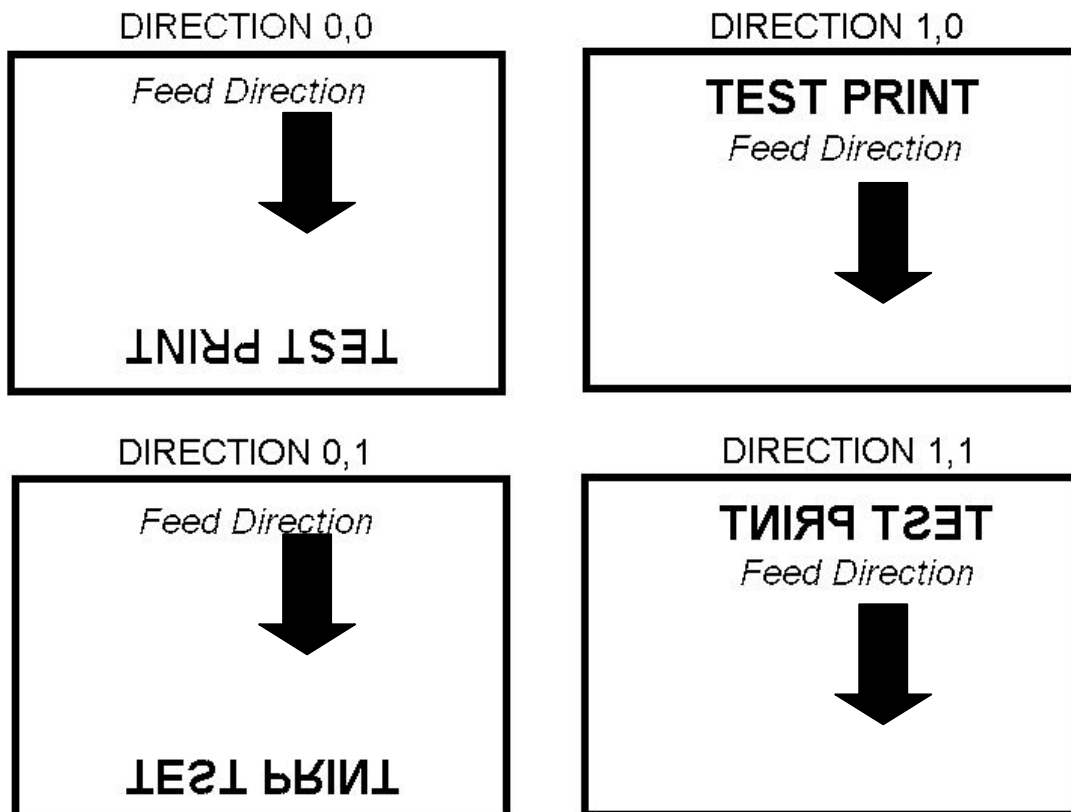
DIRECTION 1,1

Model	Support	
	DIRECTION	MIRROR
TTP-243	X	
TTP-243E	X	
TTP-243 Plus	X	X
TTP-243E Plus	X	X
TTP-244ME	X	
TTP-244ME Plus	X	X
TTP-244	X	X
TTP-245	X	X
TDP-245	X	X
TTP-245G	X	X
TDP-245G	X	X
TTP-246M	X	X
TTP-246G	X	X
TTP-248M	X	
TTP-342	X	
TTP-342 Plus	X	X
TTP-342M	X	
TTP-342M Plus	X	X
TTP-343	X	X
TTP-344M	X	X
TTP-346M	X	X
TDP-643 Plus	X	
TDP-643R Plus	X	X
TTP-2410M	X	X
M23	X	X

Example
DIRECTION 0[,0]

See Also
REFERENCE

● REFERENCE

Description
This command defines the reference point of the label. The reference (origin) point varies with the print direction, as shown:
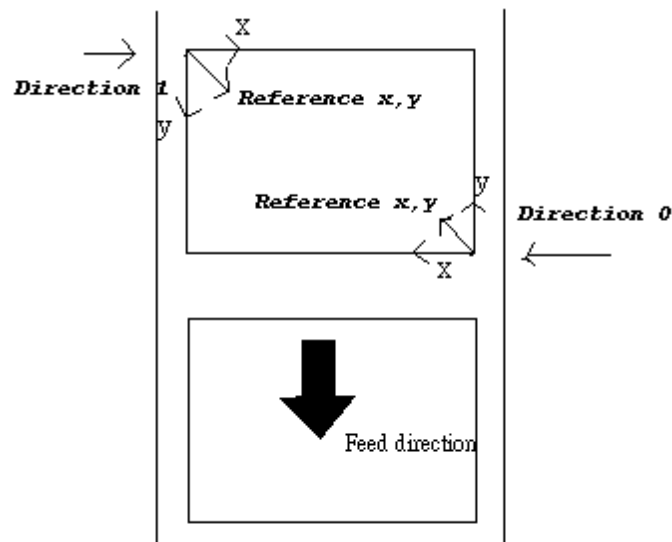
Syntax
REFERENCE x, y

Parameter	Description
x	Horizontal coordinate, with "dot" as the unit.
y	Vertical coordinate, with "dot" as the unit.

Note: 200 DPI: 1 mm = 8 dots
*   300 DPI: 1 mm = 12 dots*

Example
REFERENCE 10,10

See Also
DIRECTION

SHIFT

Description
This command can be used to fine-tune the entire label up or down from its current position. The position relates to the top edge of the label. A negative value moves the entire label away from the top of the label; a positive value moves the entire label to the top of label.

Syntax
SHIFT n

Parameter	Description
n	The maximum value is 1 inch. For 200 dpi printers, the range is −203 to 203; for 300 dpi printers, the range is −300 to 300. The unit is dot.

Model	SHIFT Command Supported
TTP-243	
TTP-243E	
TTP-243 Plus	X
TTP-243E Plus	X
TTP-244ME	
TTP-244ME Plus	X
TTP-244	X
TTP-245	X
TDP-245	X
TTP-245G	X
TDP-245G	X
TTP-246M	X
TTP-246G	X
TTP-248M	
TTP-342	
TTP-342 Plus	X
TTP-342M	
TTP-342M Plus	X
TTP-343	X
TTP-344M	X
TTP-346M	X
TDP-643 Plus	
TDP-643R Plus	X
TTP-2410M	X
M23	

Example
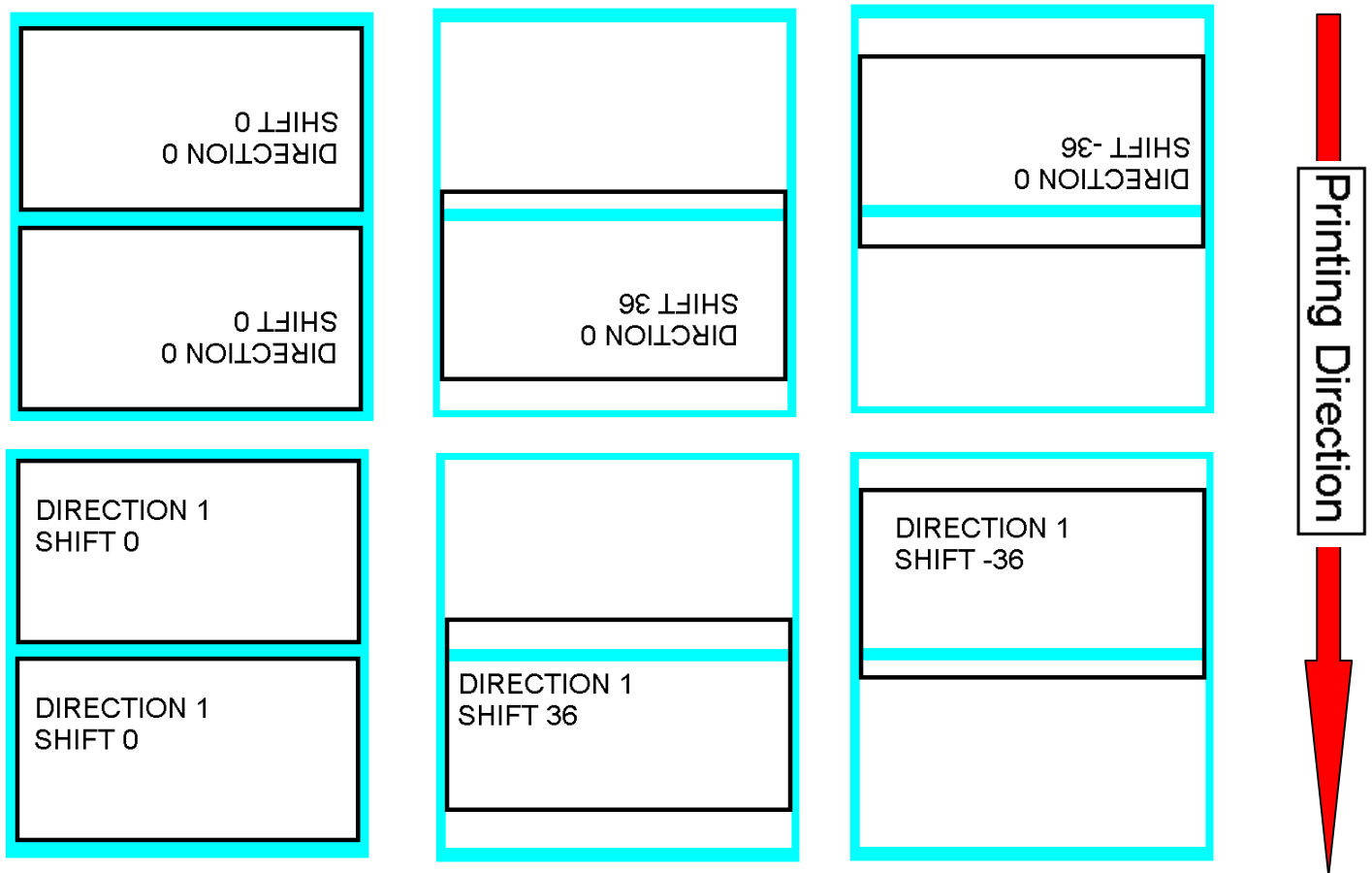

```
SIZE 4,2.5
GAP 2 mm,0
DIRECTION 0
SHIFT 0
OFFSET 0
CLS
TEXT 400,200,"3",0,1,1,"DIRECTION 0"
TEXT 400,250,"3",0,1,1,"SHIFT 0"
BOX 10,0,780,490,8
PRINT 3,1
```

See Also
　　OFFSET, REFERENCE

● COUNTRY

Description
This command defines what special character to have on the KP-200 portable LCD keyboard (option) to orient the keyboard for use in different countries.

Syntax
COUNTRY n

Parameter	Description
n	001: USA
	002: Canadian-French
	003: Spanish (Latin America)
	031: Dutch
	032: Belgian
	033: French (France)
	034: Spanish (Spain)
	036: Hungarian
	038: Yugoslavian
	039: Italian
	041: Switzerland
	042: Slovak
	044: United Kingdom
	045: Danish
	046: Swedish
	047: Norwegian
	048: Polish
	049: German
	055: Brazil
	061: English (International)
	351: Portuguese
	358: Finnish

Example
COUNTRY 001

See Also
CODEPAGE, ~!I

● **CODEPAGE**

Description
This command defines the code page of international character set.

Syntax
CODEPAGE n

Parameter	Description
n	name or number of code page, which can be divided into 7-bit code page and 8-bit code page further.

<u>7-bit code page name</u>
USA: USA
BRI: British
GER: German
FRE: French
DAN: Danish
ITA: Italian
SPA: Spanish
SWE: Swedish
SWI: Swiss

<u>8-bit code page number</u>
437: United States
850: Multilingual
852: Slavic
860: Portuguese
863: Canadian/French
865: Nordic
857: Turkish (TSPL2 printers only)

<u>Windows code page</u>
1250: Central Europe (TSPL2 printers only)
1252: Latin I (TSPL2 printers only)
1253: Greek (TSPL2 printers only)
1254: Turkish (TSPL2 printers only)

Note: Whether to use 7-bit or 8-bit code page is determined by the communication parameter of DATA LENGTH

.

Model	7-bit Codepage									8-bit Codepage							Windows Codepage			
	USA	BRI	GER	FRE	DAN	ITA	SPA	SWE	SWI	437	850	852	860	863	865	857	1250	1252	1253	1254
TTP-243	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x					
TTP-243E	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x					
TTP-243 Plus	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x					
TTP-243E Plus	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x					
TTP-244ME	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x					
TTP-244ME Plus	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x					
TTP-244	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
TTP-245	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
TDP-245	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
TTP-245G	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
TDP-245G	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
TTP-246M	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
TTP-246G	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
TTP-248M	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
TTP-342	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x					
TTP-342 Plus	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x					
TTP-342M	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x					
TTP-342M Plus	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x					
TTP-343	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
TTP-344M	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
TTP-346M	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
TDP-643 Plus	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x					
TDP-643R Plus	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x					
TTP-2410M	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
M23	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x					

Example
CODEPAGE 437

See Also
COUNTRY, SET COM1, ~!I

● CLS

Description
This command clears the image buffer.

Syntax
CLS

Parameter	Description
None	N/A

Note: This command must be placed after SIZE command.

Example
CLS

See Also
SIZE, GAP, BLINE

● **FEED**

Description
This command feeds label with the specified length.
The length is specified by dot.

Syntax
FEED n

Parameter	Description
n	unit: dot
	$1 \leq n \leq 9999$

Example
FEED 40

Note: 200 DPI: 1 mm = 8 dots
300 DPI: 1 mm = 12 dots

See Also
BACKFEED, SIZE, GAP, BLINE, HOME, FORMFEED

⚫ BACKFEED & BACKUP

Description
To back feed label with the specified length. The length is specified by dot.

Syntax
BACKUP n   (TSPL printers only)
BACKFEED n   (TSPL2 printers only)

Parameter	Description
n	unit: dot
	$1 \leq n \leq 9999$

Model	Support	
	BACKUP	BACKFEED
TTP-243	X	
TTP-243E	X	
TTP-243 Plus	X	X
TTP-243E Plus	X	X
TTP-244ME	X	
TTP-244ME Plus	X	X
TTP-244	X	X
TTP-245		X
TDP-245		X
TTP-245G		X
TDP-245G		X
TTP-246M		X
TTP-246G		X
TTP-248M		X
TTP-342	X	
TTP-342 Plus	X	X
TTP-342M	X	
TTP-342M Plus	X	X
TTP-343		X
TTP-344M		X
TTP-346M	X	X
TDP-643 Plus	X	
TDP-643R Plus	X	X
TTP-2410M	X	X
M23		X

Example
BACKUP 40
BACKFEED 40

CAUTION: Impropriety back feed value may cause paper jam or wrinkle.

Note: ***200 DPI: 1 mm = 8 dots***
            300 DPI: 1 mm = 12 dots

See Also

FEED, SIZE, GAP, BLINE, HOME, FORMFEED

● FORMFEED

Description
This command feeds label to the beginning of next label.

Syntax
FORMFEED

Parameter	Description
None	N/A

Example
SIZE 4,2.5
GAP 0 mm,0
SPEED 4
DENSITY 7
DIRECTION 0
OFFSET 0.00
REFERENCE 0,0
SET PEEL OFF
SET CUTTER OFF
SET COUNTER @0 +1
@0="000001"
FORMFEED
CLS
BOX 1,1,360,65,12
TEXT 25,25,"3",0,1,1,"FORMFEED COMMAND TEST"
TEXT 25,80,"3",0,1,1,@0
PRINT 3,1

See Also
FEED, SIZE, GAP, BLINE, HOME, BACKFEED

⚫ HOME

Description

It is not expected the first label will be printed on the right position when the printer power is turned on. This command will feed label to the beginning of next label (TSPL2) or back label to the beginning of current label (TSPL). The size and gap of the label should be setup in advance.

Syntax

HOME

Parameter	Description
None	N/A

Model	HOME	
	Back Label	Feed Label
TTP-243	X	
TTP-243E	X	
TTP-243 Plus		X
TTP-243E Plus		X
TTP-244ME	X	
TTP-244ME Plus		X
TTP-244		X
TTP-245		X
TDP-245		X
TTP-245G		X
TDP-245G		X
TTP-246M		X
TTP-246G		X
TTP-248M		X
TTP-342	X	
TTP-342 Plus		X
TTP-342M	X	
TTP-342M Plus		X
TTP-343		X
TTP-344M		X
TTP-346M		X
TDP-643 Plus	X	
TDP-643R Plus		X
TTP-2410M		X
M23		X

Example

```
SIZE 4,2.5
GAP 2 mm,0
SPEED 4
DENSITY 7
DIRECTION 0
OFFSET 0.00
REFERENCE 0,0
SET PEEL OFF
SET CUTTER OFF
SET COUNTER @0 +1
@0="000001"
HOME
CLS
BOX 1,1,360,65,12
TEXT 25,25,"3",0,1,1,"HOME COMMAND TEST"
TEXT 25,80,"3",0,1,1,@0
PRINT 3,1
```

See Also

FEED, SIZE, GAP, BLINE, FORMFEED

● **PRINT**

Description
This command prints the label format stored in the image buffer.

Syntax
PRINT m [,n]

Parameter	Description
m	Specifies how many sets of labels will be printed. $1 \leq m \leq 999999999$
	If m=-1, printer will print the last label content for n copies.
n	Specifies how many copies should be printed for each set of label. $1 \leq n \leq 999999999$

Example

SIZE 60 mm, 20 mm
SET COUNTER @1 1
@1="0001"
CLS
TEXT 10,10,"3",0,1,1,@1
PRINT 3,2
PRINT –1,2
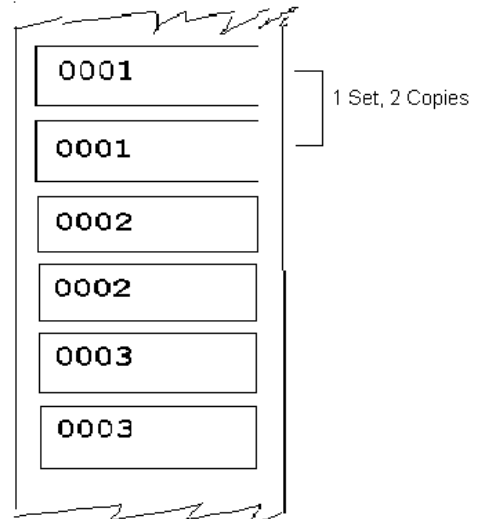
See Also
SET COUNTER, INPUT, DOWNLOAD

● SOUND

Description

This command is used to control the sound frequency of the beeper. There are 10 levels of sounds. The timing control the sound can be set by the "interval" parameter.

Syntax

SOUND level,interval

Parameter	Description
level	Sound level: 0~9
interval	Sound interval: 1~4095

Example

SOUND 5,200
SOUND 3,200
SOUND 3,200
SOUND 4,200
SOUND 2,200
SOUND 2,200
SOUND 1,200
SOUND 2,200
SOUND 3,200
SOUND 4,200
SOUND 5,200

● CUT

Description
At this command, the printer will activate the cutter to cut the labels immediately without back feeding the label.

Syntax
CUT

Parameter	Description
None	N/A

Example
SIZE 3,3
GAP 0 mm,0
CLS
DIRECTION 0
REFERENCE 0,0
OFFSET 0.00 mm
SET CUTTER OFF
SET TEAR OFF
BOX 0,0,866,866,5
TEXT 100,100,"5",0,1,1,"FEED & CUT"
TEXT 100,200,"5",0,1,1,"300 DPI"
PRINT 1,1
FEED 260
CUT

See Also
SET CUTTER, SET BACK, SET PARTITAL_CUTTER

● LIMITFEED

Description
When feeding labels, if the gap sensor is not set to a suitable sensitivity, the printer will not be able to locate the correct position of the gap. This command is used stop label feeding and make the red LED flash if the printer does not locate gap after feeding the length of one label plus one preset value.

Syntax
LIMITFEED n (inch, the English system)
LIMITFEED n mm (mm, the metric system)

Parameter	Description
n	inch or mm

Remark
The setting will remain resident in memory.
The default value is 10 inches when printer initializes.
For metric system, there must be a space between parameter n and mm.

● SELFTEST

Description
At this command, the printer will print out the printer information on the label.

Model	Support
TTP-243	
TTP-243E	
TTP-243 Plus	X
TTP-243E Plus	X
TTP-244ME	
TTP-244ME Plus	X
TTP-244	X
TTP-245	X
TDP-245	X
TTP-245G	X
TDP-245G	X
TTP-246M	X
TTP-246G	X
TTP-248M	
TTP-342	
TTP-342 Plus	X
TTP-342M	
TTP-342M Plus	X
TTP-343	X
TTP-344M	X
TTP-346M	X
TDP-643 Plus	
TDP-643R Plus	X
TTP-2410M	X
M23	X

Syntax
SELFTEST

Example
SELFTEST

Label Formatting Commands
● BAR

Description
This command is used to draw a line or a bar on the label format.

Syntax
BAR x, y, width, height

Parameter	Description
x	The upper left corner x-coordinate in dot
y	The upper left corner y-coordinate in dot
width	The width of bar in dot
height	The height of bar in dot

Note: 200 DPI: 1 mm = 8 dots
300 DPI: 1 mm = 12 dots
Recommended max. bar height is 12mm at 4" width. Bar height over than 12 mm may damage the power supply and affect the print quality.
Max. print ratio is different for each printer model. Desktop and industrial printer print ratio is limited to 20% and 30% respectively.

Example
SIZE 4,2.5
GAP 0,0
SPEED 6
DENSITY 8
DIRECTION 0
CLS
BAR 100, 100, 300, 200
PRINT 1,1

See Also
BOX

● BARCODE
Description
This command is used to print 1D barcodes on label form.
The available bar codes are listed below:

- Code 128 (switching code subset automatically)
- Code 128M (switching code subset manually)
- EAN 128 (switching code subset automatically)
- Interleaved 2 of 5
- Interleaved 2 of 5 with check digit
- Code 39 standard
- Code 39 full ASCII
- Code 39 full ASCII with check digit
- Code 93
- EAN 13
- EAN 13 with 2 digits add-on
- EAN 13 with 5 digits add-on
- EAN 8
- EAN 8 with 2 digits add-on
- EAN 8 with 5 digits add-on
- Codabar
- Postnet
- UPC-A
- UPC-A with 2 digits add-on
- UPC-A with 5 digits add-on
- UPC-E
- UPC-E with 2 digits add-on
- UPC-E with 5 digits add-on
- MSI
- PLESSEY
- China POST
- ITF14
- EAN14

Syntax

BARCODE X, Y, "code type", height, human readable, rotation, narrow, wide, "code"

Parameter	Description
X	Specify the x-coordinate of the bar code on label
Y	Specify the y-coordinate of the bar code on label
code type	
128	Code 128, switching code subset A, B, C automatically
128M	Code 128, switching code subset A, B, C manually.

Control code	A	B	C
096	FNC3	FNC3	NONE
097	FNC2	FNC2	NONE
098	SHIFT	SHIFT	NONE
099	CODE C	CODE C	NONE
100	CODE B	FNC4	CODE B
101	FNC4	CODE A	CODE A
102	FNC1	FNC1	FNC1
103	Start (CODE A)		
104	Start (CODE B)		
105	Start (CODE C)		

Use "!" as a starting character for the control code followed by three control codes.

If the start subset is not set, the default starting subset is B.

EAN128	Code 128, switching code subset A, B, C automatically
25	Interleaved 2 of 5
25C	Interleaved 2 of 5 with check digits
39	Code 39 full ASCII for TSPL2 printers
	Code 39 standard for TSPL printers
	Auto switch full ASCII and standard code 39 for *PLUS* models.
39C	Code 39 full ASCII with check digit for TSPL2 printers
	Code 39 standard with check digit for TSPL printers
	Auto switch full ASCII and standard code 39 for *PLUS* models.
39S	Code 39 standard for TSPL2 printers
93	Code 93
EAN13	EAN 13
EAN13+2	EAN 13 with 2 digits add-on
EAN13+5	EAN 13 with 5 digits add-on
EAN8	EAN 8

	EAN8+2	EAN 8 with 2 digits add-on
EAN8+5	EAN 8 with 5 digits add-on
CODA	Codabar
POST	Postnet
UPCA	UPC-A
UPCA+2	UPC-A with 2 digits add-on
UPCA+5	UPC-A with 5 digits add-on
UPCE	UPC-E
UPCE+2	UPC-E with 2 digits add-on
UPCE+5	UPC-E with 5 digits add-on
CPOST	China post code
MSI	MSI code
MSIC	
PLESSEY	PLESSEY code
ITF14	ITF 14 code
EAN14	EAN 14 code

height	bar code height expressed by dot
human readable	0: human not readable
	1: human readable
rotation	Rotate bar code clockwise
	in degrees
0	non rotation
90	rotate 90 degrees clockwise
180	rotate 180 degrees clockwise
270	rotate 270 degrees clockwise
narrow	width of narrow element in dot
wide	width of wide element in dot

	narrow : wide 1:1	narrow : wide 1:2	narrow : wide 1:3	narrow : wide 2:5	narrow : wide 3:7
128	10x	-	-	-	-
EAN128	10x	-	-	-	-
25	-	10x	10x	5x	-
25C	-	10x	10x	5x	-
39	-	10x	10x	5x	-
39C	-	10x	10x	5x	-
93	-	-	10x	-	-
EAN13	8x	-	-	-	-
EAN13+2	8x	-	-	-	-
EAN13+5	8x	-	-	-	-
EAN 8	8x	-	-	-	-
EAN 8+2	8x	-	-	-	-
EAN 8+5	8x	-	-	-	-
CODA	-	10x	10x	5x	-
POST	1x	-	-	-	-
UPCA	8x	-	-	-	-
UPCA+2	8x	-	-	-	-

UPCA+5	8x	-	-	-	-
UPCE	8x	-	-	-	-
UPCE+2	8x	-	-	-	-
UPCE+5	8x	-	-	-	-
CPOST	-	-	-	-	1x
MSI	-	-	10x	-	-
MSIC			10x		-
PLESSY	-	-	10x	-	-
ITF14	-	10x	10x	5x	-
EAN14	-	-	-	-	-

code number   the maximum number of digits of bar code content

Barcode type	Maximum bar code length
128	-
EAN128	-
25	-
25C	-
39	-
39C	-
93	-
EAN13	12
EAN13+2	14
EAN13+5	17
EAN 8	7
EAN 8+2	9
EAN 8+5	12
CODA	-
POST	5,9,11
UPCA	11
UPCA+2	13
UPCA+5	16
UPCE	6
UPCE+2	8
UPCE+5	11
CPOST	-
MSI	-
MSIC	
PLESSY	-
ITF14	13
EAN14	13

Example
    BARCODE 100,100,"39",96,1,0,2,4,"1000"
    BARCODE 10,10,"128M",48,1,0,2,2,"!104!096ABCD!101EFGH"

(The above example of code 128M encoded with CODE B start character. The next character will be the code 128 function character FNC3 which is then followed by the ABCD characters and EFGH characters encoded as CODE A subset.)

Barcode Type / Model	128	EAN128	25	25C	39 for TSPL2	39 for TSPL	39 for PLUS	39C for TSPL2	39C for TSPL	39C for PLUS	39S	93	EAN13	EAN13+2	EAN13+5	EAN 8	EAN 8+2	EAN 8+5	CODA	POST	UPCA	UPCA+2	UPCA+5	UPCE	UPCE+2	UPCE+5	CPOST	MSI	MSIC	PLESSY	ITF14	EAN14
TTP-243	X	X	X	X		X			X			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X					
TTP-243E	X	X	X	X		X			X			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X					
TTP-243 Plus	X	X	X	X			X			X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
TTP-243E Plus	X	X	X	X			X			X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
TTP-244ME	X	X	X	X		X			X			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X					
TTP-244ME Plus	X	X	X	X			X			X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
TTP-244	X	X	X	X			X			X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
TTP-245	X	X	X	X	X			X				X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
TDP-245	X	X	X	X	X			X				X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
TTP-245G	X	X	X	X	X			X				X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
TDP-245G	X	X	X	X	X			X				X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
TTP-246M	X	X	X	X	X			X				X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
TTP-246G	X	X	X	X	X			X				X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
TTP-248M	X	X	X	X	X			X				X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X	X
TTP-342	X	X	X	X		X			X			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X					
TTP-342 Plus	X	X	X	X			X			X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
TTP-342M	X	X	X	X		X			X			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X					
TTP-342M Plus	X	X	X	X			X			X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
TTP-343	X	X	X	X	X			X				X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
TTP-344M	X	X	X	X	X			X				X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
TTP-346M	X	X	X	X			X			X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
TDP-643 Plus	X	X	X	X		X			X			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X					
TDP-643R Plus	X	X	X	X			X			X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
TTP-2410M	X	X	X	X			X			X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
M23	X	X	X	X	X			X				X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X

## ● BITMAP

Description
This command is used to draw bitmap images (Not BMP graphic file).

Syntax
BITMAP X, Y, width, height, mode, bitmap data…

Parameter	Description
X	Specify the x-coordinate of the bitmap image
Y	Specify the y-coordinate of the bitmap image
width	The width of the image in bytes
height	The height of the image in dot
mode	Graphic mode is listed below:
0	OVERWRITE
1	OR
2	XOR
bitmap data	The bitmap data

Example
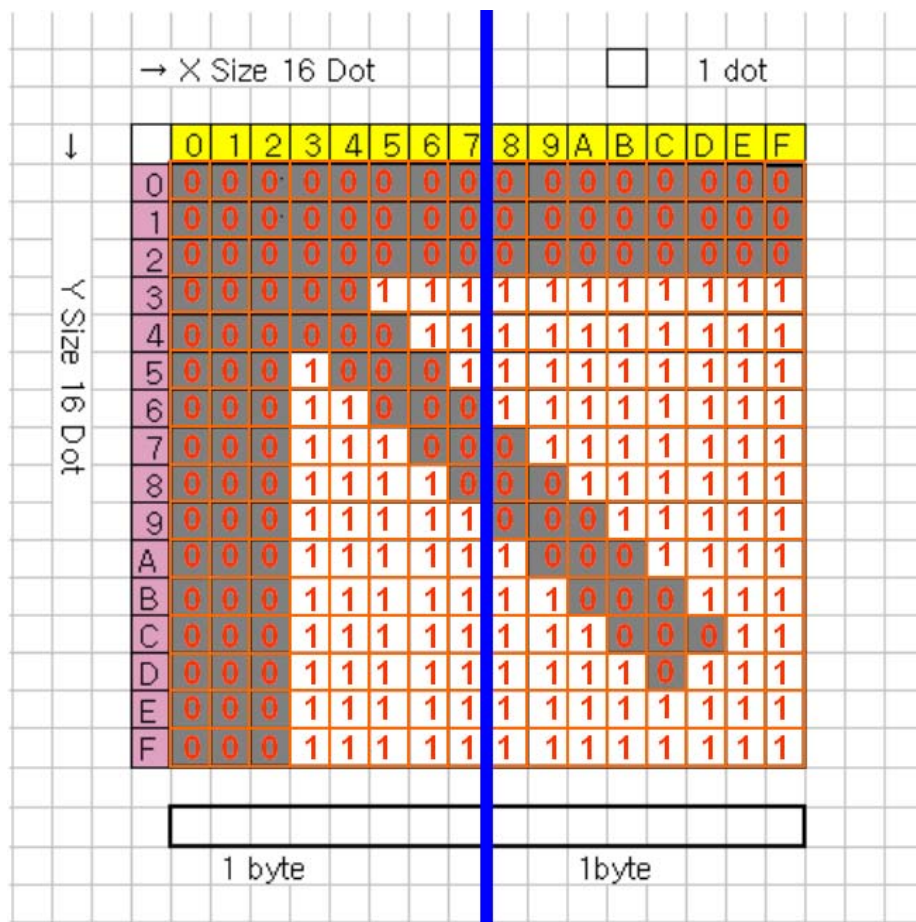
ROW (Y- axis)	L-Byte		R-Byte	
	Binary	Hexadecimal	Binary	Hexadecimal
0	00000000	00	00000000	00
1	00000000	00	00000000	00
2	00000000	00	00000000	00
3	00000111	07	11111111	FF
4	00000011	03	11111111	FF
5	00010001	11	11111111	FF
6	00011000	18	11111111	FF
7	00011100	1C	01111111	7F
8	00011110	1E	00111111	3F
9	00011111	1F	00011111	1F
A	00011111	1F	10001111	8F
B	00011111	1F	11000111	C7
C	00011111	1F	11100011	E3
D	00011111	1F	11110111	F7
E	00011111	1F	11111111	FF
F	00011111	1F	11111111	FF

Ex:
SIZE 4,2
GAP 0,0
CLS
BITMAP 200,200,2,16,0,   **-?????**
PRINT 1,1

Hexadecimal	ASCII
53 49 5A 45 20 34 2C 32 0D 0A 47 41 50 20 30 2C 30 0D 0A 43 4C 53 0D 0A 42 49 54 4D 41 50 20 32 30 30 2C 32 30 30 2C 32 2C 31 36 2C 30 2C 00 00 00 00 00 00 07 FF 03 FF 11 FF 18 FF 1C 7F 1E 3F 1F 1F 1F 8F 1F C7 1F E3 1F E7 1F FF 1F FF 0D 0A 50 52 49 4E 54 20 31 2C 31 0D 0A	SIZE 4,2 GAP 0,0 CLS BITMAP 200,200,2,16,0, -????? PRINT 1,1

See Also
PUTBMP, PUTPCX

● BOX

Description
This command is used to draw rectangles on the label.

Syntax
BOX X_start, Y_start, X_end, Y_end, line thickness

Parameter	Description
X_start	Specify x-coordinate of upper left corner in dot
Y_start	Specify y-coordinate of upper left corner in dot
X_end	Specify x-coordinate of lower right corner in dot
Y_end	Specify y-coordinate of lower right corner in dot
line thickness	Line thickness of the box in dot

Note: *200 DPI: 1 mm = 8 dots*
300 DPI: 1 mm = 12 dots
Recommended max. thickness of box is 12mm at 4" width. Thickness of box that is larger than 12 mm may damage the power supply and affect the print quality.
Max. print ratio is different for each printer model. Desktop and industrial printer print ratio is limited to 20% and 30% respectively.

Example
```
SIZE 4,2.5
GAP 0,0
SPEED 6
DENSITY 8
DIRECTION 0
CLS
BOX 100,100,200,200,5
PRINT 1,1
```


(100,100)

(200,200)
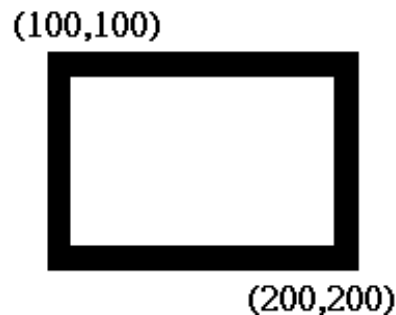
See Also
BAR

● DMATRIX

Description
This command is used to define the DataMatrix 2D bar code. Currently, it supports ECC200 error correction only.

Syntax
DMATRIX x, y, width, height, [xm,row,col], expression

Parameter	Description
x	Horizontal start position in dot
y	Vertical start position in dot
width	The expected width of barcode area in dot
height	The expected height of barcode area in dot
xm	Module size in dot
row	Symbol size of row ,10 to 144
col	Symbol size of col,10 to 144

Example
```
SIZE 3,3
GAP 0,0
SPEED 4
DENSITY 8
DIRECTION 0
REFERENCE 0,0
OFFSET 0.00
SET CUTTER OFF
SET TEAR ON
CLS
DMATRIX 10,110,400,400,"DMATRIX EXAMPLE 1"
DMATRIX 310,110,400,400,x6,"DMATRIX EXAMPLE 2"
DMATRIX 10,310,400,400,x8,18,18,"DMATRIX EXAMPLE 3"
PRINT 1,1
```

● ERASE

Description
This command is used to clear a specified region in image buffer.

Syntax
ERASE X_start, Y_start, X_width, Y_height

Parameter	Description
X_start	The x-coordinate of the starting point in dot
Y_start	The y-coordinate of the starting point in dot
X_width	The region width in x-axis direction in dot
Y_height	The region height in y-axis direction in dot

Example
SIZE 4,2.5
GAP 0,0
SPEED 6
DENSITY 8
DIRECTION 0
CLS
BAR 100, 100, 300, 300
ERASE 150,150,200,200
PRINT 1,1
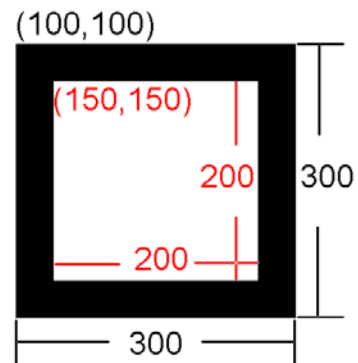
See Also
CLS

● MAXICODE

Description
This command is used to define a 2D Maxicode.

Syntax
MAXICODE x, y, mode, [class, country, post, Lm,] "message"

For mode 2 or 3:
MAXICODE x, y, mode, class, country, postal code, "low priority message"
    If country is 840, the postal code is in 99999,9999 format.
    For other countries, the code is up to 6 alphanumeric characters.

For mode 4,5,6
MAXICODE x, y, mode, [Lm], "message"

 * AIM special format is supported, see page 23 in the spec.

Note: Mode 6 is not supported in TSPL2 printers firmware.

Parameter	Description
x	X-coordinate of the staring point in dot
y	Y-coordinate of the starting point in dot
mode	2,3,4,5
class	Class of service, 3-digit number (for mode 2,3)
country	Country code, 3-digit number (for mode 2,3)
post	Post code (for mode 2,3)
	Mode 2: (USA) 5-digit+ 4-digit number
	Mode3: (Canada) 6 alphanumeric post code included by double quotes.
Lm	Expression length (double quote is ignored) , 1≤m≤138, (this parameter is just for mode 4 and 5.)
message	Barcode content

Example
    SIZE 4,2
    GAP 0,0
    CLS
    SPEED 4
    DENSITY 8
    OFFSET 0.00
    REFERENCE 0,0
    SET CUTTER OFF
    SET TEAR ON

    REM *****Mode 2 For USA*****

```
MAXICODE 110,100,2,300,840,06810,7317,"DEMO 2 FOR USA
MAXICODE"
TEXT 100,520,"3",0,2,2,"Mode 2 For USA"
PRINT 1,1

REM *****Mode 3 For Canada*****
CLS
MAXICODE 110,100,3,300,863,"107317","DEMO 3 FOR CANADA
MAXICODE"
TEXT 100,520,"3",0,2,2,"Mode 3 For CANADA"
PRINT 1,1

REM *****MODE4*****
CLS
MAXICODE 110,100,4,"DEMO 4 FOR MAXICODE"
MAXICODE 600,100,4,19,DEMO 4 FOR MAXICODE
TEXT 100,520,"3",0,2,2,"Mode 4 FOR MAXICODE"
PRINT 1,1

REM *****MODE 5*****
CLS
MAXICODE 110,100,5,"DEMO 5 FOR MAXICODE"
MAXICODE 600,100,5,19,DEMO 5 FOR MAXICODE
TEXT 100,520,"3",0,2,2,"DEMO 5 FOR MAXICODE"
PRINT 1
```

● **PDF417**

Description
This command is used to define a PDF417 2D barcode.

Syntax
PDF417 x, y, width, height, rotate, [option], expression

Parameter	Description
x	X-coordinate of the starting point in dot
y	Y-coordinate of the starting point in dot
width	The expected width of barcode in dot
height	The expected height of barcode in dot
rotate	Rotation counterclockwise.
0:	0 degree
90:	90 degrees
180:	180 degrees
270:	270 degrees
expression	Barcode text or string expression to be printed on label.

[option]	
P	Data compression method
	0: Auto encoding
	1: Binary mode
E	Error correction level
	Range: 0~8
M	Center pattern in barcode area
	0: The pattern will print upper left justified the area
	1: The pattern is printed middle of area
Ux,y,c	Human readable
	x: Human readable characters in the specified x-coordinate
	y: Human readable characters in the specified y-coordinate
	c: Maximum characters of human readable character per line
W	Module width in dot
	Range: 2~9
H	Bar height in dot
	Range: 4~99
R	Maximum number of rows
C	Maximum number of columns
T	Truncation.
	0: Not truncated
	1: Truncated
Lm	Expression length (without double quote), $1 \leq m \leq 2048$

Example

```
SIZE 3,3
GAP 0.12,0
CLS
SPEED 6
DENSITY 8
DIRECTION 1
REFERENCE 0,0

REM *****WITHOUR OPTIONS*****
CLS
PDF417 50,50,400,200,0,"Without Options"
PRINT 1,1

REM *****OPTION:E4*****
CLS
PDF417 50,50,400,200,0,E4,"Error correction level:4"
PRINT 1,1

REM *****OPTION:E4 W4*****
CLS
PDF417 50,50,600,600,0,E4,W4,"Error correction level:4
module width 4 dots"
PRINT 1,1


REM *****OPTION:E4 W4 H4*****
CLS
PDF417 50,50,600,600,0,E4,W4,H4,"Error correction level:4
module width 4 dots
bar height 4 dots"
PRINT 1,1


REM *****OPTION:E4 W4 H4 R25*****
CLS
PDF417 50,50,600,600,0,E4,W4,H4,R25,"Error correction level:4
Module Width 4 dots
Bar Height 4 dots
Maximum Number of Rows: 25 Rows
"
PRINT 1,1

REM *****OPTION:E4 W4 H4 R40 C3*****
CLS
PDF417 50,50,600,600,0,E4,W4,H4,R40,C3,"Error correction level:4
Module Width 4 dots
Bar Height 4 dots
Maximum Number of Rows: 40 Rows
```

Maximum number of columns: 3 Cols
"
PRINT 1,1

REM *****OPTION:E4 W4 H4 R40 C4 T0*****
CLS
PDF417 50,50,600,600,0,E4,W4,H4,R40,C4,T0,"Error correction level:4
Module Width 4 dots
Bar Height 4 dots
Maximum Number of Rows: 40 Rows
Maximum number of columns: 4 Cols
Truncation:0
"
PRINT 1,1

REM *****OPTION:E4 W4 H4 R40 C4 T1*****
CLS
PDF417 50,50,900,900,0,E4,W4,H4,R40,C4,T1,"Error correction level:4
Module Width 4 dots
Bar Height 4 dots
Maximum Number of Rows:5 Rows
Maximum number of columns:90 Cols
Truncation:1
"
PRINT 1,1

REM *****OPTION:E4 W4 H4 R40 C4 T0 L169*****
CLS
PDF417 50,50,900,900,0,E4,W4,H4,R40,C4,T0,L169,Error correction
level:4
Module Width 4 dots
Bar Height 4 dots
Maximum Number of Rows: 40 Rows
Maximum number of columns: 4 Cols
Truncation:0
Expression length:167
PRINT 1,1

REM *****OPTION:E4 W4 H4 R40 C4 T1 L169*****
CLS
PDF417 50,50,900,900,0,E4,W4,H4,R40,C4,T1,L169,Error correction
level:4
Module Width 4 dots
Bar Height 4 dots
Maximum Number of Rows: 40 Rows
Maximum number of columns: 4 Cols
Truncation:1
Expression length:169
PRINT 1,1

REM *****OPTION:P0 E4 W4 H4 R40 C4 T1 L169*****
CLS
PDF417 50,50,900,900,0,P0,E4,W4,H4,R40,C4,T1,L169,Error correction
level:4
Module Width 4 dots
Bar Height 4 dots
Maximum Number of Rows: 40 Rows
Maximum number of columns: 4 Cols
Truncation:1
Expression length:169
PRINT 1,1

REM *****OPTION:P0 E4 M0 W6 H6 R60 C4 T0 L283*****
SIZE 3,2
CLS
PDF417 50,50,900,600,0,P0,E4,M0,W6,H6,R60,C4,T0,L283,Data
compression method: P0
Error correction level: E4
Center pattern in barcode area: M0
Human Readable: No
Module Width 6 dots: W6
Bar Height 6 dots: H6
Maximum Number of Rows: 60 Rows: R60
Maximum number of columns: 4 Cols: C4
Truncation:0: T0
Expression length:283: L283
PRINT 1,1

REM *****OPTION:P1 E4 M1 U100,500,10 W4 H4 R60 C4 T1 L297*****
CLS
PDF417
50,50,900,600,0,P1,E4,M1,U100,500,10,W6,H6,R60,C4,T1,L297,Data
compression method: P1
Error correction level: E4
Center pattern in barcode area: M1
Human Readable: Yes: U100,300,10
Module Width 6 dots: W6
Bar Height 6 dots: H6
Maximum Number of Rows: 60 Rows: R60
Maximum number of columns: 4 Cols: C4
Truncation:1: T1
Expression length:297: L297
PRINT 1,1

● **PUTBMP**

Description
This command is used to print BMP format image.

Syntax
PUTBMP X, Y, "filename"

Parameter	Description
X	The x-coordinate of the BMP format image
Y	The y-coordinate of the BMP format image
filename	The downloaded BMP filename.

Model	PUTBMP
TTP-243	
TTP-243E	
TTP-243 Plus	X
TTP-243E Plus	X
TTP-244ME	
TTP-244ME Plus	X
TTP-244	X
TTP-245	X
TDP-245	X
TTP-245G	X
TDP-245G	X
TTP-246M	X
TTP-246G	X
TTP-248M	X
TTP-342	
TTP-342 Plus	X
TTP-342M	
TTP-342M Plus	X
TTP-343	X
TTP-344M	X
TTP-346M	X
TDP-643 Plus	
TDP-643R Plus	X
TTP-2410M	X
M23	X

Example

```
C:\BMP-PCX>DIR
 Volume in drive C is WIN98
 Volume Serial Number is 4140-4735

 Directory of C:\BMP-PCX

01/03/2005  01:06 PM    <DIR>          .
01/03/2005  01:06 PM    <DIR>          ..
01/03/2005  01:52 PM            12,430 TSC.bmp
01/03/2005  01:10 PM             1,181 TSC.pcx
               2 File(s)        13,611 bytes
               2 Dir(s)   8,802,189,312 bytes free

C:\BMP-PCX>COPY CON LPT1
DOWNLOAD "TSC.BMP",12430,^Z
        1 file(s) copied.

C:\BMP-PCX>COPY TSC.BMP/B LPT1
        1 file(s) copied.

C:\BMP-PCX>COPY CON LPT1
SIZE 4,2.5
GAP 0,0
CLS
PUTBMP 100,100,"TSC.BMP"
PRINT 1,1
^Z
        1 file(s) copied.

C:\BMP-PCX>_
```

See Also
  DOWNLOAD, BITMAP, PUTPCX

● PUTPCX

Description
This command is used to print PCX format image.
TSPL language supports 2-color PCX format graphics.
TSPL2 language supports 256-color PCX format graphics.

Model	PUTPCX	
	2 – color PCX	256 – color PCX
TTP-243	X	
TTP-243E	X	
TTP-243 Plus	X	X
TTP-243E Plus	X	X
TTP-244ME	X	
TTP-244ME Plus	X	X
TTP-244	X	X
TTP-245	X	X
TDP-245	X	X
TTP-245G	X	X
TDP-245G	X	X
TTP-246M	X	X
TTP-246G	X	X
TTP-248M	X	X
TTP-342	X	
TTP-342 Plus	X	X
TTP-342M	X	
TTP-342M Plus	X	X
TTP-343	X	X
TTP-344M	X	X
TTP-346M	X	X
TDP-643 Plus	X	
TDP-643R Plus	X	X
TTP-2410M	X	X
M23	X	X

Syntax
PUTPCX X, Y, "filename"

Parameter	Description
X	The x-coordinate of the PCX image
Y	The y-coordinate of the PCX image
filename	The downloaded PCX filename. Case sensitive

Example

```
C:\BMP-PCX>DIR
 Volume in drive C is WIN98
 Volume Serial Number is 4140-4735

 Directory of C:\BMP-PCX

01/03/2005  01:06 PM    <DIR>          .
01/03/2005  01:06 PM    <DIR>          ..
01/03/2005  01:52 PM            12,430 TSC.bmp
01/03/2005  01:10 PM             1,181 TSC.pcx
               2 File(s)         13,611 bytes
               2 Dir(s)   8,802,189,312 bytes free

C:\BMP-PCX>COPY CON LPT1
DOWNLOAD "TSC.PCX",1181,^Z
        1 file(s) copied.

C:\BMP-PCX>COPY TSC.PCX/B LPT1
        1 file(s) copied.

C:\BMP-PCX>COPY CON LPT1
SIZE 4,2.5
GAP 0,0
CLS
PUTPCX 100,100,"TSC.PCX"
PRINT 1,1
^Z
        1 file(s) copied.

C:\BMP-PCX>_
```

See Also

DOWNLOAD, BITMAP, PUTPCX

● **QRCODE**

Description
This command is used to print QR code

Model	QR Code
TTP-243	
TTP-243E	
TTP-243 Plus	X
TTP-243E Plus	X
TTP-244ME	
TTP-244ME Plus	X
TTP-244	X
TTP-245	X
TDP-245	X
TTP-245G	X
TDP-245G	X
TTP-246M	X
TTP-246G	X
TTP-248M	
TTP-342	
TTP-342 Plus	X
TTP-342M	
TTP-342M Plus	X
TTP-343	X
TTP-344M	X
TTP-346M	X
TDP-643 Plus	
TDP-643R Plus	X
TTP-2410M	X
M23	X

Syntax
QRCODE X, Y, ECC Level, cell width, mode, rotation, [model, mask,]"Data string"

Parameter	Description
X	The upper left corner x-coordinate of the QR code
Y	The upper left corner y-coordinate of the QR code
ECC level	Error correction recovery level
L	7%
M	15%
Q	25%
H	30%
cell width	1~10

---

mode	Auto / manual encode	
A	Auto	
M	Manual	
rotation		
0	0 degree	
90	90 degree	
180	180 degree	
270	270 degree	
model		
1	(default), original version	
2	enhanced version	
mask	0~8, default is 7	
Data string	The encodable character set is described as below	

Encodable character set:
1). Numeric data: (digits 0~9)
2). Alphanumeric data (digits 0-9; upper case letters A-Z; nine other characters: space, $ % * + - . / :);
3). 8-bit byte data (JIS 8-bit character set (Latin and Kana) in accordance with JIS X 0201);
4). Kanji characters (Shift JIS values 8140_{HEX} –$9FFC_{HEX}$ and $E040_{HEX}$ –$EAA4_{HEX}$. These are values shifted from those of JIS X 0208. Refer to JIS X 0208 Annex 1 Shift Coded Representation for detail.).

Data characters per symbol (for maximum symbol size):

	Model 1 (Version 14-L)	Model 2 (Version 40-L)
1). Numeric data:	1,167 characters	7,089 characters
2). Alphanumeric data:	707 characters	4,296 characters
3). 8-bit byte data:	486 characters	2,953 characters
4). Kanji data:	299 characters	1,817 characters

*If "A" is the first character in the data string, then the following data after "A" are Alphanumeric data.
*If "N" is the first character in the data string, then the following data after "N" are numeric data.
*If "B" is the first character in the data string, then the following 4 digits after "B" is used to specify numbers of data. After the 4 digits are the number of bytes of binary data to be encoded.
*If "K" is the first character in the data string , then the following data after "K" is Kanji data.
*If "!" is in the data string and follows by "N", "A", "B", "K" then it will be switched to specified encodable character set.

Example

Manual mode example:
QRCODE 100,10,L,7,M,0,M1,S1,"ATHE FIRMWARE HAS BEEN UPDATED"
(Where A: Alphanumeric data)
QRCODE 100,10,M,7,M,0,M1,S2,"N123456"
(Where N: Numeric data)
QRCODE 100,10,Q,7,M,0,M1,S3,"N123456!ATHE FIRMWARE HAS BEEN UPDATED"
(Where N: Numeric data ; !:Transfer char ; A: Alphanumeric data)
QRCODE 100,10,H,7,M,0,M1,S3,"B0012Product name"
(where B: Binary data   ;   0012: 12 bytes)
QRCODE 100,10,M,7,M,0,M1,S3,"K"
(Where K: Kanji data)

Auto mode example:
QRCODE 100,10,M,7,A,0,"THE FIRMWARE HAS BEEN UPDATED"

(1) Auto mode example
  a. General data string
      SIZE 4,2.5
      GAP 0.12,0
      CLS
      QRCODE 10,10,H,4,A,0,"ABCabc123"
      QRCODE 160,160,H,4,A,0,"123ABCabc"
      QRCODE 310,310,H,4,A,0,"印表機 ABCabc123"
      PRINT 1,1

  b. Data string including <Enter> character (0Dh, 0Ah)
      SIZE 4,2.5
      GAP 0.12,0
      CLS
      QRCODE 10,10,H,4,A,0,"ABC<Enter>
      abc<Enter>
      123"
      QRCODE 160,160,H,4,A,0,"123<Enter>
      ABC<Enter>
      abc"
      QRCODE 310,310,H,4,A,0,"印表機<Enter>
      ABC<Enter>
      abc<Enter>
      123"
      PRINT 1,1

  c. Data string concatenation (Must be used with DOWNLOAD ... EOP command)
      DOWNLOAD "DEMO.BAS"
      SIZE 4,2.5
      CAP 0.12,0
      CLS

QRCODE 10,10,H,4,A,0,"ABCabc123"+STR$(1234)
QRCODE 160,160,H,4,A,0,"123ABCabc"+"1234"
QRCODE 310,310,H,4,A,0,"印表機 ABCabc123"+"1234"+"abcd"
PRINT 1,1
EOP
DEMO

d. Data string including double quote (") character, please use \["] instead of
SIZE 4,2.5
CAP 0.12,0
CLS
QRCODE 10,10,H,4,A,0,"ABC\["]abc\["]123"
QRCODE 160,160,H,4,A,0,"123\["]ABC\["]abc"
QRCODE 310,310,H,4,A,0,"\["]印表機\["]ABCabc123"
PRINT 1,1

(3) Manual mode
a. General data string：
SIZE 4,2.5
CAP 0.12,0
CLS
QRCODE 10,10,H,4,M,0,"AABC!B0003abc!N123"
QRCODE 160,160,H,4,M,0,"N123!AABC!B0003abc"
QRCODE 310,310,H,4,M,0,"K 印表機!AABC!B0006abc123"
PRINT 1,1

b. Data string including <Enter> character, <Enter> is an 8-bit byte data
SIZE 4,2.5
CAP 0.12,0
CLS
QRCODE 10,10,H,4,M,0,"AABC!B0007<Enter>
abc<Enter>
!N123"
QRCODE 160,160,H,4,M,0,"N123!B0002<Enter>
!AABC!B0005<Enter>
abc"
QRCODE 310,310,H,4,M,0,"K 印表機!B0002<Enter>
!AABC!B0010<Enter>
abc<Enter>
123"
PRINT 1,1

c. Data string concatenation (Must be used with DOWNLOAD ... EOP command)
DOWNLOAD "A.BAS"
SIZE 4,2.5
CAP 0.12,0
CLS
QRCODE 10,10,H,4,M,0,"AABC!B0006abc123!N"+STR$(1234)
QRCODE 160,160,H,4,M,0,"N123!AABC!B0007abc"+"1234"

QRCODE 310,310,H,4,M,0,"K 印表
機!AABC!B0014abc123"+"1234"+"abcd"
PRINT 1,1
EOP
A

d. Data string including double quote (") character, please use \["] instead
of
SIZE 4,2.5
CAP 0.12,0
CLS
QRCODE 10,10,H,4,M,0,"AABC!B0005\["]abc\["]!N123"
QRCODE 160,160,H,4,M,0,"N123!B0001\["]!AABC!B0004\["]abc"
QRCODE 310,310,H,4,M,0,"B0001\["]!K 印表機!B0010\["]ABCabc123"
PRINT 1,1

● REVERSE

Description
This command is used to reverse a region in image buffer.

Syntax
REVERSE X_start, Y_start, X_width, Y_height

Parameter	Description
X_start	The x-coordinate of the starting point in dot
Y_start	The y-coordinate of the starting point in dot
X_width	The region width in x-axis direction in dot
Y_height	The region height in y-axis direction in dot

Note: *200 DPI: 1 mm = 8 dots*
300 DPI: 1 mm = 12 dots
Recommended max. height of reversed black area is 12mm at 4"
width. Height of reversed area that is larger than 12 mm may
damage the power supply and affect the print quality.
Max. print ratio is different for each printer model. Desktop and
industrial printer print ratio is limited to 20% and 30%
respectively.

Example
```
SIZE 4,2.5
GAP 0,0
SPEED 6
DENSITY 8
DIRECTION 0
CLS
TEXT 100,100,"3",0,1,1,"REVERSE"
REVERSE 90,90,128,40
PRINT 1,1
```

REVERSE

● **TEXT**

Description
This command is used to print text on label

Note:
    (1). The internal font (font #1~#5) pitch between TSPL and TSPL2 is different.
    (2). Font "0" and "ROMAN.TTF" internal True Type Fonts are available in TSPL2 language printers. It is not available in TSPL language printers.

Syntax
TEXT X, Y, "font", rotation, x-multiplication, y-multiplication, "content"

Parameter	Description
X	The x-coordinate of the text
Y	The y-coordinate of the text
font	Font name
0	Monotye CG Triumvirate Bold Condensed, font width and height is stretchable
1	8 x 12 fixed pitch dot font
2	12 x 20 fixed pitch dot font
3	16 x 24 fixed pitch dot font
4	24 x 32 fixed pitch dot font
5	32 x 48 dot fixed pitch font
6	14 x 19 dot fixed pitch font OCR-B
7	21 x 27 dot fixed pitch font OCR-B
8	14 x25 dot fixed pitch font OCR-A
ROMAN.TTF	Monotye CG Triumvirate Bold Condensed, font width and height proportion is fixed
Rotation	The rotation angle of text
0	0 degree
90	90 degrees, in clockwise direction
180	180 degrees, in clockwise direction
270	270 degrees, in clockwise direction
X-multiplication:	Horizontal multiplication, up to 10x. Available factors: 1~10 For "ROMAN.TTF" true type font, this parameter is ignored. For font "0", this parameter is used to specify the width (point) of true type font. 1 point=1/72 inch.
Y-multiplication:	Vertical multiplication, up to 10x. Available factors: 1~10

For true type font, this parameter is used to specify the height (point) of true type font.
1 point=1/72 inch.

Note:
1. **If there is any double quote (") within the text, please change it to \["].**
2. **Font "0" and "ROMAN.TTF" internal True Type Fonts are available in TSPL2 language printers.**
3. **If font "0" is used, the font width and font height is stretchable by x-multiplication and y-multiplication parameter. It is expressed by pt (point). 1 point=1/72inch.**

MODEL	Font Type									
	0	1	2	3	4	5	6	7	8	ROMAN.TTF
TTP-243		X	X	X	X	X				
TTP-243E		X	X	X	X	X				
TTP-243 Plus		X	X	X	X	X				
TTP-243E Plus		X	X	X	X	X				
TTP-244ME		X	X	X	X	X				
TTP-244ME Plus		X	X	X	X	X				
TTP-244	X	X	X	X	X	X	X	X	X	X
TTP-245	X	X	X	X	X	X	X	X	X	X
TDP-245	X	X	X	X	X	X	X	X	X	X
TTP-245G	X	X	X	X	X	X	X	X	X	X
TDP-245G	X	X	X	X	X	X	X	X	X	X
TTP-246M	X	X	X	X	X	X	X	X	X	X
TTP-246G	X	X	X	X	X	X	X	X	X	X
TTP-248M		X	X	X	X	X	X	X		X
TTP-342		X	X	X	X	X				
TTP-342 Plus		X	X	X	X	X				
TTP-342M		X	X	X	X	X				
TTP-342M Plus		X	X	X	X	X				
TTP-343	X	X	X	X	X	X	X	X	X	X
TTP-344M	X	X	X	X	X	X	X	X	X	X
TTP-346M	X	X	X	X	X	X	X	X	X	X
TDP-643 Plus		X	X	X	X	X				
TDP-643R Plus		X	X	X	X	X				
TTP-2410M	X	X	X	X	X	X	X	X	X	X
M23	X	X	X	X	X	X	X	X	X	X

Example
SIZE 3,2
GAP 0,0
CLS
TEXT 100,100,"5",0,1,1,"\["]DEMO FOR TEXT\["]"
TEXT 100,200,"ROMAN.TTF",0,1,20,"\["]True Type Font Test Print\["]"
PRINT 1,1

Status Polling Commands (RS-232)

● <ESC>!?

Description

This command is used to obtain the printer status. An inquiry request is solicited by sending an <ESC> (ASCII 27, escape character) as the beginning control character to the printer. It can be sent any time, even in the event of printer error. One byte character is returned, of which one bit is used to flag the printer's current readiness status. If 0 is returned, the printer is ready to print labels.

Bit	Status
0	Head opened
1	Paper jam
2	Out of paper
3	Out of ribbon
4	Pause
5	Printing
6	Cover opened (option)
7	Environment Temperature over range (option)

Hex Receive	Printer Status
00	Normal
01	Head opened
02	Paper Jam
03	Paper Jam and head opened
04	Out of paper
05	Out of paper and head opened
08	Out of ribbon
09	Out of ribbon and head opened
0A	Out of ribbon and paper jam
0B	Out of ribbon, paper jam and head opened
0C	Out of ribbon and out of paper
0D	Out of ribbon, out of paper and head opened
10	Pause
20	Printing

Syntax

<ESC>!?

See Also

<ESC>!R

● **<ESC>!R**

Description

This command is used to reset the printer. It can be sent at any time as long as the printer is powered on and not in the dump mode. The beginning of the command is an ESCAPE character (ASCII 27). The files downloaded in memory will be deleted.

Syntax

<ESC>!R

Parameter	**Description**
N/A	N/A

See Also

<ESC>!?

● ~!@

Description

This command is used to inquire the mileage of the printer. The integer part of mileage is returned (the decimal part of mileage is not return). It is returned to PC in ASCII characters. The ending character of mileage is 0x0D.

Syntax

~!@

Parameter	Description
None	N/A

Example

~!@

● ~!A

Description

This command is used to inquire about the free memory of the printer. The number of bytes of free memory is returned in decimal digits, with 0x0d as ending code of PC.

Syntax

~!A

Parameter	Description
None	N/A

Example

~!A

See Also

FILES

● ~!C

Description
This command is used to inquire the presence of Real Time Clock. One byte is return from the printer, indicating whether or not the RTC is installed.

Return value	Description
7	RTC is not installed.
7	RTC is installed.

Syntax
~!C

Parameter	Description
None	N/A

Example
~!C

See Also
YEAR, MONTH, DATE, WEEK, HOUR, MINUTE, SECOND, @YEAR, @MONTH, @DATE, @DAY, @HOUR, @MINUTE, @SECOND

● ~!D

Description
This command is used to enter DUMP mode.

Syntax
~!D

Parameter	Description
None	N/A

Example
~!D

● **~!F**

Description

This command is used to inquire about files resident in the printer memory and fonts installed in the memory module.

The filename is returned in ASCII characters. Each file name ends with 0x0D. The ending character is 0x1A.

Syntax

~!F

Parameter	Description
None	N/A

Example

~!F

See Also

FILES

● ~!I

Description

The command is used to inquire the code page and country setting of the printer.
The returned information is given in the following format
code page, country code
ex: 8 bit: 437, 001
    7 bit: USA, 001
Regarding the code pages and country codes supported by the printer, please refer to the **CODEPAGE** and **COUNTRY** command respectively.

Syntax

~!I

Parameter	Description
None	N/A

Example

~!I

See Also

COUNTRY, CODEPAGE

● ~!T

Description

This command is used to inquire the model name and number of the printer. They are returned in ASCII characters.

Printer Type	Returned String
TTP-243	TTP/TDP 243
TTP-243E	TTP/TDP 243E
TTP-243 Plus	TTP243P
TTP-243E Plus	TTP243EP
TTP-244ME	TTP/TDP 244ME
TTP-244ME Plus	TTP244MEP
TTP-342	TTP/TDP 342
TTP-342 Plus	TP342MP
TTP-342M	TTP/TDP 342M
TTP-342M Plus	TTP342MP
TTP-643 Plus	TDP 643
TTP-643R Plus	TDP643P
TTP-2410M	TTP2410M
TTP-346M	TTP346M
TTP-248M	TTP248M
TTP-246M	TTP246M
TTP-246G	TTP246G
TTP-344M	TTP344M
TTP-245	TTP245
TDP-245	TDP245
TTP-245G	TTP245G
TDP-245G	TDP245G
TTP-343	TTP343
TTP-244	TTP244
M23	M23

Syntax

~!T

Parameter	Description
None	N/A

Example

~!T

See Also

~!I, ~!F

Message Translation Protocols
● ~#

Description
The beginning identifier (~#) of the prompt message is sent from the printer to the KP-200 portable keyboard. The ending identifier is ~&.

@0 following the ending identifier ~& is used to instruct keyboard to display the prompt in the first line of LCD display.

@1 following the ending identifier ~& is used to instruct keyboard to display the prompt in the first line of LCD display.

If @0 or @1 is ignored, prompt string will be displayed in first line of LCD and input data will be displayed in second line of LCD.

Syntax
~#Prompt~&[@0]
~#Prompt~&[@1]

Parameter	Description
None	N/A

Example

DOWNLOAD "A.BAS"
OUT "~#KP-200~&@0"
OUT "~#Testing~&@1"
EOP
 A

See Also
INPUT, OUT

Commands for Windows Driver
● !B

Description
This command is used to store bitmap image data in the memory. Behind the nnn is the bitmap data.

Syntax
!Bnnn

Parameter	Description
nnn	The number of bytes of image data sent from PC to printer,expressed in 3 decimal digits.

Example
!B100

See Also
BITMAP

● !J

Description

This command is used to print the bitmap data at the specified position (in y-direction).

Syntax

!Jnnnn

Parameter	Description
nnnn	Print image at the specified position in y-direction. The position is expressed in 4 decimal digits.

Example

!J0100

See Also

FEED

● !N

Description
This command is used to print specified number of labels.

Syntax
!Nnnn

Parameter	Description
nnn	Specifies the number of copies to be printed.

Example
!N001

File Management Commands
● DOWNLOAD

Description
"DOWNLOAD" is a header of the file that is to be saved in the printer's memory.

The downloaded files can be divided to two categories: program file and data file (including text data file, PCX graphic files and bitmap font file)

The detailed descriptions regarding the download syntax for different files are shown below:

Maximum numbers of file saved in DRAM:
　　50 files for TSPL/TSPL2 language printers.
Maximum numbers of file saved in Flash memory:
　　50 files for TSPL language printers
　　256 files for TSPL2 language desktop printers (TTP/TDP-245 / TTP-343 / TTP-244)
　　256 files for TSPL2 language industrial printers (TTP-246M/344M)

Model	Maximum numbers of file saved in		
	DRAM	FLASH	Ext. FLASH
TTP-243	50	50	--
TTP-243E	50	50	--
TTP-243 Plus	50	256	--
TTP-243E Plus	50	256	--
TTP-244ME	50	50	--
TTP-244ME Plus	50	256	256
TTP-244	50	256	256
TTP-245	50	256	256
TDP-245	50	256	256
TTP-245G	50	256	256
TDP-245G	50	256	256
TTP-246M	50	256	256
TTP-246G	50	256	256
TTP-248M	50	256	256
TTP-342	50	50	--
TTP-342 Plus	50	256	--
TTP-342M	50	50	--
TTP-342M Plus	50	256	--
TTP-343	50	256	256
TTP-344M	50	256	256
TTP-346M	50	256	256
TDP-643 Plus	50	50	--
TDP-643R Plus	50	256	--
TTP-2410M	50	256	256
M23	50	256	256

Printers will execute the program automatically when turning on power, if one of the downloaded programs is named "AUTO.BAS". To disable the auto execution function, please follow the procedures below.

For TTP-245/TTP-343/TDP-245
Hold the FEED key and power on the switch. The LED color will be changed as following pattern.

Orange → red (5 blinks) → orange (5 blinks) → green (5 blinks) → solid green (for firmware version before V3.37)

Orange → red (5 blinks) → orange (5 blinks) → green (5 blinks) → green and orange (5 blinks) → red and orange (5 blinks) → solid green (V3.37)

Release the FEED key while LED becomes solid green then printer will not run "AUTO.BAS".

For TTP-246M/TTP-344M series
Hold the FEED key and power on the switch. The ERROR LED will be on. And then, release the FEED key; "AUTO.BAS" will not be executed. Printer is ready to use.

Syntax

1. Download a program file
   DOWNLOAD [n,]"FILENAME.BAS"

Parameter	Description
n	Specify the memory which is used to save the download files.
n is ignored	Download files to DRAM only. If you would like to save the files from DRAM to Flash memory before turning off power, you can issue MOVE command to printer to move the files from DRAM to Flash memory. F: Download files to main board flash memory. E: Download files to expansion memory module.

   FILENAME.BAS   The filename resident in printer memory.

   Note:
   (1). The filename is case sensitive.
   (2). The extension of the program file must be ".BAS"
   (3). Filename format must be in 8.3 format.
   (4). If memory is not specified, all files will be downloaded to DRAM.
   No Battery is used to backup DRAM. The downloaded files in DRAM will be lost in case turns off printer power.

2. Download a data file
   DOWNLOAD [n,]"FILENAME", DATA SIZE, DATA CONTENT…where

Parameter	Description
n	Specify the memory location to save the download files.
n is ignored	Download files to DRAM only. If you would like to save the files from DRAM to Flash memory before turning off power, you can issue MOVE command to printer to move the files from DRAM to Flash memory. F: Download files to main board flash memory. E: Download files to expansion memory module.
FILENAME	The name of data file that will remain resident in the printer memory. It is case sensitive.
DATA SIZE	The actual size (numbers of byte) of the data file without header.

Note:
   (1). For text data file, CR (carriage return) 0x0D and LF (Line Feed) 0x0A is the separator of data.
   (2). If memory is not specified, all files will be downloaded to DRAM.
   No Battery is used to backup DRAM. The downloaded files in DRAM will be lost in case turns off printer power.

Model	Support			
	DOWNLOAD "filename"	MOVE	DOWNLOAD F,"filename"	DOWNLOAD E,"filename"
TTP-243	X	X		
TTP-243E	X	X		
TTP-243 Plus	X	X	X	
TTP-243E Plus	X	X	X	
TTP-244ME	X	X		
TTP-244ME Plus	X	X	X	
TTP-244	X	X	X	
TTP-245	X	X	X	X
TDP-245	X	X	X	X
TTP-245G	X	X	X	X
TDP-245G	X	X	X	X
TTP-246M	X	X	X	X
TTP-246G	X	X	X	X
TTP-248M	X		X	X
TTP-342	X	X		
TTP-342 Plus	X	X	X	
TTP-342M	X	X		
TTP-342M Plus	X	X	X	
TTP-343	X	X	X	X

TTP-344M	X	X	X	X
TTP-346M	X	X	X	X
TDP-643 Plus	X	X		
TDP-643R Plus	X	X	X	
TTP-2410M	X	X	X	X
M23	X	X	X	X

Example

The program listed below will download to printer SDRAM.
DOWNLOAD "EXAMPLE.BAS"
SIZE 4,4
GAP 0,0
DENSITY 8
SPEED 6
DIRECTION 0
REFERENCE 0,0
SET CUTTER OFF
SET PEEL OFF
CLS
TEXT 100,100,"3",0,1,1,"EXAMPLE PROGRAM"
PRINT 1
EOP

Note: When writing a download program, "DOWNLOAD" header must be placed in the beginning of file, and "EOP" must be placed at the end of program.
To run the program, you can call the main filename without BAS extension or use RUN command to start the download program.
Example:
1. Call the main filename
   C:\>COPY CON LPT1<ENTER>
   EXAMPLE<ENTER>
   <CTRL><Z>
   C:\>

2. Use Run command to start the program
   C:\>COPY CON LPT1<ENTER>
   RUN "EXAMPLE.BAS"<ENTER>
   <CTRL><Z>
   C:\>

Below is an example of downloading data file.
DOWNLOAD "DATA",20,COMPUTER<Enter>
2001<Enter>
21<Enter>

Note: <ENTER> stands for keyboard "ENTER" key. In the above example, please press "ENTER" key instead of typing <ENTER> in the above example.

See Also
EOP, RUN, PUTBMP, PUTPCX, INPUT

● EOP

Description
End of program. To declare the start and end of BASIC language commands used in a program, the DOWNLOAD "FILENAME.BAS" must be added in the first line of the program, and "EOP" statement at the last line of program.

Syntax
EOP

Example
```
DOWNLOAD "DEMO.BAS"
SIZE 4,4
GAP 0,0
DENSITY 8
SPEED 6
DIRECTION 0
REFERENCE 0,0
SET CUTTER OFF
SET PEEL OFF
CLS
TEXT 100,100,"3",0,1,1,"DEMO PROGRAM"
PRINT 1
EOP
```

See Also
DOWNLOAD, EOP, INPUT

● FILES

Description

This command prints out the filenames (or lists the files through RS-232) that remained in the printer memory (both FLASH memory and DRAM). The total memory size and available memory size are printed out or lists as well.

Syntax

FILES

Example

Follow the steps below to print out (or lists the files through RS-232) the files that are saved in printer memory in DOS environment through serial port or parallel port connection.

C:\>MODE COM1 96,N,8,1<ENTER>
C:\>COPY CON COM1<ENTER>
    FILES<ENTER>
    <CTRL><Z><ENTER>
C:\>

Or

C:\>COPY CON LPT1<ENTER>
    FILES<ENTER>
    <CTRL><Z><ENTER>

Note: <ENTER> stands for PC keyboard "ENTER" key.
     <CTRL><Z> means to hold PC keyboard "CTRL" key then press the PC keyboard <Z> key.

See Also

~!F, KILL

● KILL

Description
This command deletes a file in the printer memory. The wild card (*) will delete all files resident in specified DRAM or FLASH memory.

Syntax
KILL [n],"FILENAME"

Parameter	Description
n	Specify the memory location that files will be deleted.
n is ignored	Kill files saved in DRAM.
	F: Kill files from main board flash memory.
	E: Kill files from expansion memory module.

Note:
(1). If optional parameter n is not specified, firmware will delete the file in DRAM.

Syntax example
1. KILL "FILENAME"
2. KILL "*.PCX"
3. KILL "*"
4. KILL F,"FILENAME"
5. KILL E,"*.PCX"

(3). For TSPL printers, please send MOVE command to printer after sending KILL command.

Model	Support			
	KILL "*"	KILL "*" MOVE	KILL F,"*"	KILL E,"*"
TTP-243	X	X		
TTP-243E	X	X		
TTP-243 Plus	X		X	
TTP-243E Plus	X		X	
TTP-244ME	X	X		
TTP-244ME Plus	X		X	
TTP-244	X		X	
TTP-245	X		X	X
TDP-245	X		X	X
TTP-245G	X		X	X
TDP-245G	X		X	X
TTP-246M	X		X	X
TTP-246G	X		X	X
TTP-248M	X		X	X
TTP-342	X	X		

TTP-342 Plus	X		X	
TTP-342M	X	X		
TTP-342M Plus	X		X	
TTP-343	X		X	X
TTP-344M	X		X	X
TTP-346M	X		X	X
TDP-643 Plus	X	X		
TDP-643R Plus	X		X	
TTP-2410M	X		X	X
M23	X		X	X

Example

Users can use printer SELFTEST utility to list printer configurations and files saved in the printer memory, or use the FILES command to print the downloaded file list in printer. Follow the steps below to delete files in the printer memory via parallel port connection.

```
C:\>COPY CON LPT1<ENTER>
    FILES<ENTER>
     <CTRL><Z><ENTER>
C:\>COPY CON LPT1<ENTER>
    KILL "DEMO.BAS" <ENTER>
     <CTRL><Z><ENTER>
C:\>COPY CON LPT1<ENTER>
    FILES<ENTER>
     <CTRL><Z><ENTER>
```

Note: <ENTER> stands for PC keyboard "ENTER" key.
<CTRL><Z> means to hold PC keyboard "CTRL" key then press the PC keyboard <Z> key

See Also

~!F, FILES

● MOVE

Description
This command is used to move downloaded files from DRAM to the FLASH memory.

Syntax
MOVE

Parameter	Description
N/A	N/A

See Also
DOWNLOAD, EOP

● RUN

Description
This command is used to execute a program that resident in printer memory
This command is available for TSPL2 language printers only.

MODEL	Support
TTP-243	
TTP-243E	
TTP-243 Plus	X
TTP-243E Plus	X
TTP-244ME	
TTP-244ME Plus	X
TTP-244	X
TTP-245	X
TDP-245	X
TTP-245G	X
TDP-245G	X
TTP-246M	X
TTP-246G	X
TTP-248M	X
TTP-342	
TTP-342 Plus	X
TTP-342M	
TTP-342M Plus	X
TTP-343	X
TTP-344M	X
TTP-346M	X
TDP-643 Plus	
TDP-643R Plus	X
TTP-2410M	X
M23	X

Syntax
RUN "FILENAME.BAS"

Example
C:\>COPY CON LPT1<ENTER>
RUN "DEMO.BAS"<ENTER>
<CTRL><Z><ENTER>
C:\>

Note: <ENTER> stands for PC keyboard "ENTER" key.
<CTRL><Z> means to hold PC keyboard "CTRL" key then press
the PC keyboard <Z> key

See Also
  DOWNLOAD, EOP

BASIC Commands and Functions
● ABS( )

Description
This function returns the absolute value of an integer, floating point or variable.

Syntax
ABS (-100)
ABS (-99.99)
ABS (VARIABLE)

Example
DOWNLOAD "TEST.BAS"
SIZE 4,4
GAP 0,0
DENSITY 8
SPEED 3
DIRECTION 0
REFERENCE 0,0
SET CUTTER OFF
SET PEEL OFF
CLS
A=ABS(-100)
B=ABS(-50.98)
C=-99.99
TEXT 100,100,"3",0,1,1,STR$(A)
TEXT 100,150,"3",0,1,1,STR$(B)
TEXT 100,200,"3",0,1,1,STR$(ABS(C))
PRINT 1
EOP

See Also
DOWNLOAD, EOP

● ASC( )

Description
This function returns the ASCII code of the character.

Syntax
ASC ("A")

Example
DOWNLOAD "TEST.BAS"
SIZE 4,4
GAP 0,0
DENSITY 8
SPEED 3
DIRECTION 0
REFERENCE 0,0
SET CUTTER OFF
SET PEEL OFF
CLS
CODE1=ASC("A")
TEXT 100,100,"3",0,1,1,STR$(CODE1)
PRINT 1
EOP

See Also
DOWNLOAD, EOP, STR$()

● CHR$( )

Description
This function returns the character that has the specified ASCII code.

Syntax
CHR$(n)

Parameter	Description
n	The ASCII code

Example
DOWNLOAD "TEST.BAS"
SIZE 4,4
GAP 0,0
DENSITY 8
SPEED 3
DIRECTION 0
REFERENCE 0,0
SET CUTTER OFF
SET PEEL OFF
CLS
A=65
WORD$=CHR$(A)
TEXT 100,100,"3",0,1,1,WORD$
PRINT 1
EOP

See Also
DOWNLOAD, EOP, STR$(), ASC$()

● END

Description
This command states the ending of program.

Syntax
END

Example
```
DOWNLOAD "DEMO.BAS"
SIZE 4,2
GAP 0,0
DENSITY 8
SPEED 6
DIRECTION 0
REFERENCE 0,0
SET CUTTER OFF
SET PEEL OFF
CLS
TEXT 200,60,"4",0,1,1,"END COMMAND TEST"
X=300
Y=200
X1=500
Y1=400
GOSUB DR_LINE
PRINT 1
END

:DR_LINE
FOR I=1 TO 100 STEP 10
BOX X+I,Y+I,X1-I,Y1-I,5
NEXT
RETURN
EOP
DEMO
```

See Also
DOWNLOAD, EOP

● EOF( )

Description
This function is used to detect an opened download file to see whether it has reached the end of file.

Syntax
EOF (File Handle)

Parameter	Description
File handle	Either 0 or 1.

Return value	Description
None-zero	End of file
0	Not end of file

Example
```
DOWNLOAD "DATA",16,COMPUTER
2000

DOWNLOAD "DEMO.BAS"
SIZE 3,3
GAP 0.0,0
DENSITY 8
SPEED 4
DIRECTION 0
REFERENCE 0,0
SET CUTTER OFF
SET PEEL OFF
CLS
OPEN "DATA",0
SEEK 0,0
Y=110
TEXT 10,10,"3",0,1,1,"*****EOF TEST*****"
:A
Temp$=""
READ 0,ITEM$,P
TEXT 10,Y,"2",0,1,1,ITEM$+"$"+STR$(P)+"[EOF(0)="+STR$(EOF(0))+"]"
BARCODE 10,Y+25,"39",40,1,0,2,4,"PRICE-"+STR$(P)
Y=Y+100
IF EOF(0)=0 THEN GOTO A
PRINT 1
EOP
DEMO
```

See Also
DOWNLOAD, EOP, OPEN, READ, SEEK

● OPEN

Description
This command is used to open a downloaded file and establish the file handle. Up to 2 files can be opened at the same time. The file to be opened should be downloaded prior to using this command.

Syntax
OPEN "Filename", File handle

Parameter	Description
Filename	The file downloaded in the printer memory
File handle	Either 0 or 1.

Example
If a file by the name of "DATA" is to be downloaded,
The file format contains:

```
DOWNLOAD "DATA1",56,COMPUTER
2000
12
MOUSE
500
13
KEYBOARD
300
100

DOWNLOAD "DATA2",56,Computer
3000
32
Mouse
900
93
Keyboard
700
700
```

Saving the above contents of data under the file name of "DATA". Follow the steps below to download data to the printer

C:\>COPY DATA/B LPT1

If a file by name of "DEMO.BAS is to be downloaded, the file format contains:

```
DOWNLOAD "DEMO.BAS"
SIZE 3,1
GAP 0,0
DENSITY 8
SPEED 4
DIRECTION 0
REFERENCE 0,0
SET CUTTER OFF
SET PEEL OFF
I=1
Y=100
GOSUB OpenData
:Start
CLS
TEXT 10,10,"3",0,1,1,"*****OPEN COMMAND TEST*****"
ITEM$=""
READ 0,ITEM$,P,Q
TEXT 10,Y,"2",0,1,1,ITEM$+"$"+STR$(P)+"[EOF(0)="+STR$(EOF(0))+"]"
BARCODE 10,Y+25,"39",40,1,0,2,4,"PRICE*"+STR$(Q)+"="+STR$(P*Q)
Y=Y+100
PRINT 1
Y=100
IF EOF(0)=1 THEN GOSUB OpenData
IF EOF(0)=0 THEN GOTO Start
END
:OpenData
IF I=1 THEN OPEN "DATA1",0
IF I=2 THEN OPEN "DATA2",0
SEEK 0,0
IF I>2 THEN END
I=I+1
RETURN
EOP
DEMO
```

Saving the above contents of data under the file name of **"DEMO"**.
Follow the steps below to download data to the printer
<under MS-DOS mode>:
C:\>COPY DEMO/B LPT1
Execute DEMO.BAS in printer:
C:\>COPY CON LPT1
DEMO
<Ctrl><Z>
The above example instructs the printer to open the file "DATA1" and "DATA2" with same file handle of 0, and read items from the file.

See Also

DOWNLOAD, EOP, READ, EOF, LOF, SEEK, FREAD$()

● READ

Description
This command is used to read data from downloaded data file

Syntax
READ file handle, variables

Parameter	Description
file handle	0 or 1
variables	string, integer or float point variable

Example
```
DOWNLOAD "DATA1",20,COMPUTER
2000
12

DOWNLOAD "DATA2",16,Mouse
900
93

DOWNLOAD "DEMO.BAS"
SIZE 3,1
GAP 0,0
DENSITY 8
SPEED 4
DIRECTION 0
REFERENCE 0,0
SET CUTTER OFF
SET PEEL OFF
I=0
Y=100
OPEN "DATA1",0
OPEN "DATA2",1
SEEK 0,0
SEEK 1,0
:Start
CLS
TEXT 10,10,"3",0,1,1,"*****READ COMMAND TEST*****"
TEXT 10,50,"3",0,1,1,"OPEN-READ DATA"+STR$(I+1)
ITEM$=""
READ I,ITEM$,P,Q
TEXT 10,Y,"2",0,1,1,ITEM$+"$"+STR$(P)
BARCODE 10,Y+25,"39",40,1,0,2,4,"PRICE*"+STR$(Q)+"="+STR$(P*Q)
Y=Y+100
PRINT 1
Y=100
```

```
        IF I<=1 THEN
          IF EOF(I)=1 THEN
            I=I+1
            GOTO Start
          ELSE
            GOTO Start
          ENDIF
        ELSE
          END
        ENDIF
        EOP
        DEMO
```

See Also

DOWNLOAD, EOP, OPEN, EOF, LOF, SEEK, FREAD$()

● SEEK

Description
This command is used to shift the specified file pointer to a certain position.

Syntax
SEEK file handle, offset

Parameter	Description
file handle	0 or 1
offset	the offset characters which are shifted to the beginning of a new position

Example
DOWNLOAD "DATA",12,1234567890

DOWNLOAD "TEST.BAS"
SIZE 3,1
GAP 0,0
DENSITY 8
SPEED 3
DIRECTION 1
REFERENCE 0,0
CLS
OPEN "DATA",0
SEEK 0,4
READ 0,Num$
    TEXT 100,10,"3",0,1,1,"SEEK COMMAND TEST"
BAR 100,40,300,4
    TEXT 100,60,"3",0,1,1,"SHIFT 4 CHARACTERS"
    TEXT 100,110,"3",0,1,1,Num$
BAR 100,140,300,4
SEEK 0,0
READ 0,Num$
    TEXT 100,160,"3",0,1,1,"SHIFT 0 CHARACTERS"
    TEXT 100,210,"3",0,1,1,Num$
PRINT 1
EOP
TEST

See Also
DOWNLOAD, EOP, OPEN, READ, EOF, LOF, FREAD$()

● LOF( )

Description
This function returns the size of the specified file.

Syntax
LOF ("FILENAME")

Parameter	Description
FILENAME	The file downloaded in the printer memory.

Example
```
DOWNLOAD "DATA1",10,1234567890

DOWNLOAD "DATA2",15,ABCDEFGHIJKLMNO

DOWNLOAD "LofTest.BAS"
SIZE 3,3
GAP 0.08,0
DENSITY 8
SPEED 3
DIRECTION 0
REFERENCE 0,0
SET CUTTER OFF
SET PEEL OFF
CLS
  OPEN "DATA1",0
  OPEN "DATA2",1
  TEXT 10,20,"4",0,1,1,"LOF() FUNCTION TEST"
  J=LOF("DATA1")
  K=LOF("DATA2")

  TEXT 10,140,"3",0,1,1,"DATA1 IS: "+STR$(J)+" Bytes"
  TEXT 10,200,"3",0,1,1,"DATA2 IS: "+STR$(K)+" Bytes"
  PRINT 1
EOP
LofTest
```

See Also
DOWNLOAD, EOP, OPEN, READ, EOF, SEEK, FREAD$()

● FREAD$( )

Description
This function reads a specified number of bytes of data from a file.

Syntax
FREAD$ (file handle, byte)

Parameter	Description
file handle	Either 0 or 1
byte	Number of bytes to be read

Example
DOWNLOAD "DATA1",10,1234567890

DOWNLOAD "DATA2",15,ABCDEFGHIJKLMNO

DOWNLOAD "OPEN2.BAS"
SIZE 3,3
GAP 0.08,0
DENSITY 8
SPEED 3
DIRECTION 0
REFERENCE 0,0
SET CUTTER OFF
SET PEEL OFF
CLS
  Y$=""
  Z$=""
  OPEN "DATA1",0
  OPEN "DATA2",1
  SEEK 0,0
  SEEK 1,0
  TEXT 10,260,"3",0,1,1,"FREAD$(0,6) IS: "+Y$
  TEXT 10,320,"3",0,1,1,"FREAD$(1,6) IS: "+Z$
  PRINT 1
EOP

See Also
DOWNLOAD, EOP, OPEN, READ, EOF, LOF(), SEEK

● FOR…NEXT LOOP

Description
Loop is used to execute one or more lines of program repetitively.   Before anything, a value should be assigned the loop counter to specify the execution times. Nested loop is allowed (up to 39 nested loops) in this printer. Jumping out in the middle of the FOR…NEXT loop is prohibited because it is not a good programming skill..

Syntax
For variable = start TO end STEP increment
    statement; start < end
NEXT

Parameter	Description
variable	The variable name is up to 8 characters
start	Can be integer or floating point numbers
end	Can be integer of floating point numbers
increment	Integer or floating point, positive or negative.

Example
```
DOWNLOAD "LOOP.BAS"
SIZE 3,3
GAP 0.08,0
DENSITY 8
SPEED 4
DIRECTION 1
CLS
FOR I=1 TO 10 STEP 1
TEXT 100,10+30*(I-1),"3",0,1,1,STR$(I)
NEXT
FOR I=1 TO 1000 STEP 100
TEXT 200,10+((I-1)/10)*3,"3",0,1,1,STR$(I)
NEXT
FOR I=110 TO 10 STEP -10
TEXT 300,10+(ABS(I-110))*3,"3",0,1,1,STR$(I)
NEXT
FOR I=1 TO 5 STEP 0.5
IF I-INT(I)=0 THEN Y=10+60*(I-1) ELSE Y=Y+30
TEXT 400,Y,"3",0,1,1,STR$(I)
NEXT
PRINT 1
EOP
LOOP
```

See Also
DOWNLOAD, EOP

● IF…THEN…ELSE…ENDIF   LOOP

Description
Use   IF…THEN block to execute one or more statements conditionally.
You can use either a single-line syntax or multiple-line "block" syntax:

Syntax
IF condition THEN statement
Notice that the single-line form of IF …THEN does not use an ENDIF statement.

Or

IF condition THEN   (TSPL2 printers only)
    Statements
ENDIF

Or

IF condition THEN   (TSPL2 printers only)
    Statements
ELSE
    Statements
ENDIF

Or

IF condition 1 THEN   (TSPL2 printers only)
    Statement block 1
ELSEIF condition 2 THEN
    Statement block 2
 . . .
ELSEIF condition n THEN
    Statement block n
ENDIF

The syntax of IF…THEN…ELSE   requires that the command be typed in one single line in less than 255 characters.

MODEL	Support	
	single-line form	multiple-line form
TTP-243	X	
TTP-243E	X	
TTP-243 Plus		X
TTP-243E Plus		X
TTP-244ME	X	
TTP-244ME Plus		X
TTP-244		X
TTP-245		X
TDP-245		X
TTP-245G		X
TDP-245G		X
TTP-246M		X
TTP-246G		X
TTP-248M		X
TTP-342	X	
TTP-342 Plus		X
TTP-342M	X	
TTP-342M Plus		X
TTP-343		X
TTP-344M		X
TTP-346M		X
TDP-643 Plus	X	
TDP-643R Plus		X
TTP-2410M		X
M23		X

Parameter	Description
condition	Available relational operator: <, >, =, <=, >=
statement	Only one statement is available in

Example

```
DOWNLOAD "DEMO.BAS"
SIZE 3,3
GAP 0.12,0
SPEED 4
DENSITY 8
DIRECTION 1
REFERENCE 0,0
OFFSET 0.00
SET CUTTER OFF
SET PEEL OFF
CLS

A=0
B=0
```

```
C=0
D=0
E=0
F=0
G=0
H=0
J=0
K=0
L=0

FOR I=1 TO 100
  IF I-INT(I/1)*1=0 THEN A=A+I
  IF I-INT(I/2)*2=1 THEN B=B+I ELSE C=C+I
  IF I-INT(I/3)*3=0 THEN
    D=D+I
  ENDIF
  IF I-INT(I/5)*5=0 THEN
    E=E+I
  ELSE
    F=F+I
  ENDIF
  IF I-INT(I/7)*7=0 THEN
    G=G+I
  ELSEIF I-INT(I/17)*17=0 THEN
    H=H+I
  ELSEIF I-INT(I/27)*27=0 THEN
    J=J+I
  ELSEIF I-INT(I/37)*37=0 THEN
    K=K+I
  ELSE
    L=L+I
  ENDIF
NEXT
TEXT 100,110,"3",0,1,1,"(1) 1+2+3+...+100="+STR$(A)
TEXT 100,160,"3",0,1,1,"(2) 1+3+5+...+99="+STR$(B)
TEXT 100,210,"3",0,1,1,"(3) 2+4+6+...+100="+STR$(C)
TEXT 100,260,"3",0,1,1,"(4) 3+6+9+...+99="+STR$(D)
TEXT 100,310,"3",0,1,1,"(5) 5+10+15+...+100="+STR$(E)
TEXT 100,360,"3",0,1,1,"    (1)-(5)="+STR$(F)
TEXT 100,410,"3",0,1,1,"(6) 7+14+21+...+98="+STR$(G)
TEXT 100,460,"3",0,1,1,"(7) 17+34+51+...+85="+STR$(H)
TEXT 100,510,"3",0,1,1,"(8) 27+54+...+81="+STR$(J)
TEXT 100,560,"3",0,1,1,"(9) 37+74="+STR$(K)
TEXT 100,610,"3",0,1,1,"    (1)-(6)-(7)-(8)-(9)="+STR$(L)
PRINT 1,1
EOP

DOWNLOAD "IFTHEN.BAS"
SIZE 4,4
```

```
GAP 0,0
DENSITY 8
SPEED 3
DIRECTION 0
REFERENCE 0,0
SET CUTTER OFF
SET PEEL OFF
CLS
A=50
B=5
C$=""
D$=""

:L1
IF A>100 THEN GOTO L1 ELSE A=A+10
C$=STR$(A)+" IS SMALLER THAN 100"
TEXT 100,10,"4",0,1,1,C$
PRINT 1
END

:L2
A=A+B
D$=STR$(A)+" IS LARGER THAN 100"
TEXT 100,100,"4",0,1,1,D$
PRINT 1
GOTO L1
EOP
```

Note

If the result of the expression is nonzero, the statement following THEN will be executed. If the result of the expression is zero, and the statement following the ELSE present, it will be executed. Otherwise the next line of statement is executed.
If there are block of statements in IF…THEN …ELSE, ENDIF must be used at the end of the IF…THEN …ELSE statement.
Limitations:
The total numbers of nested IF …THEN …ELSE statement in a program can not exceed than 40.
The total numbers of nested IF …THEN …ELSE, FOR…NEXT, GOSUB RETURN in a program can not exceed than 40 loops.

See Also

DOWNLOAD, EOP

● GOSUB…RETURN

Description
Branch to and return from a subroutine. Branch to the specified label and execute subroutines until "RETURN" is reached and then go back to the statement following the GOSUB statement.

Syntax
GOSUB LABEL
    statement
END
:LABEL
    statement
RETURN

Parameter	Description
LABEL	Beginning of the subroutine. The maximum length of the label is 8 characters.

Example
DOWNLOAD "GOSUB1.BAS"

SIZE 3,3

GAP 0,0

DENSITY 8

SPEED 4

DIRECTION 0

CLS

TEXT 10,10,"3",0,1,1,"GOSUB & RETURN COMMAND TEST"

GOSUB DR_BOX

PRINT 1

END

:DR_BOX

  FOR I=21 TO 81 STEP 10

     BOX 80+I,80+I,80+300-I,80+300-I,5

  NEXT

RETURN

EOP

GOSUB1

See Also
DOWNLOAD, EOP, END, GOTO

● **GOTO**

Description
This command is used to branch to a specified label. The label cannot exceed 8 characters in length.

Syntax
GOTO LABEL

:LABEL

Parameter	Description
None	N/A

Example
```
DOWNLOAD "GOTO1.BAS"
SIZE 3,3
GAP 0.08,0
DENSITY 8
SPEED 4
DIRECTION 1
REFERENCE 0,0
SET CUTTER OFF
SET PEEL OFF
CLS
A=0
TOTAL=0
:START
  IF A<100 THEN
    GOTO SUM
  ELSE
    GOTO PRTOUT
  ENDIF
:SUM
  A=A+1
  TOTAL=TOTAL+A
  GOTO START
:PRTOUT
  B$="THE SUMMATION OF 1..100 IS "+STR$(TOTAL)
  TEXT 10,100,"3",0,1,1,B$
  PRINT 1
END
EOP
```

See Also
DOWNLOAD, EOP, END, GOSUB…RETURN

● INP$( )

Description
One byte is received from a serial port through this function.

Syntax
INP$(n)

Parameter	Description
n	1: com1 port in printer

Example
```
DOWNLOAD "DEMO.BAS"
SIZE 3,3
GAP 0,0
DENSITY 8
SPEED 3
DIRECTION 0
REFERENCE 0,0
SET CUTTER OFF
SET PEEL OFF
CLS
T$=""
FOR I=1 TO 5
   T$=T$+INP$(1)
NEXT
TEXT 100,100,"4",0,1,1,"INP$(1)="+T$
PRINT 1
EOP
DEMO
12345
```

See Also
DOWNLOAD, EOP, END, INPUT, GOSUB…RETURN, GOTO

● INPUT

Description
This command is used to receive data through serial port. This command is used with portable keyboard KP-200.

Syntax
INPUT ["Prompt string", number of digits], variables
The comma also can be replaced by semicolon. Such as:
INPUT ["Prompt string"; number of digits]; variables

Parameter	Description
Prompt string	The prompt string is shown on keyboard LCD screen. The maximum length of prompt string is 20 characters.
Number of digits	Maximum number of character is 255.
Variables	The variable to receive input data.

Example
```
DOWNLOAD "INPUT1.BAS"
SIZE 3,3
GAP 0.08,0
DENSITY 8
SPEED 4
DIRECTION 0
REFERENCE 0,0
SET CUTTER OFF
SET PEEL OFF

:START
  CLS
  A$=""
  TEXT 20,50,"3",0,1,1,"INPUT and KP-200 Test"
  INPUT "CODE 39 :",C39$
  INPUT "EAN 13:",12,E13$

  BARCODE 20,100,"39",48,1,0,2,5,C39$
  BARCODE 20,200,"EAN13",48,1,0,4,4,E13$

  PRINT 1
GOTO START
EOP
```

See Also
DOWNLOAD, EOP, END, GOTO

● REM

Description
Comment. Prefix is "REM" that will be ignored by the printer.

Syntax
REM

Example
REM ******************************
REM This is a demonstration program*
REM ******************************
DOWNLOAD "REMARK.BAS"
SIZE 3,3
GAP 0.08,0
DENSITY 8
SPEED 4
DIRECTION 1
REFERENCE 0,0
SET CUTTER OFF
SET PEEL OFF
CLS
TEXT 50,50,"3",0,1,1,"REMARK DEMO PROGRAM"
REM TEXT 50,100,"3",0,1,1,"REMARK DEMO PROGRAM"
PRINT 1,1
EOP

See Also
DOWNLOAD, EOP, END

● OUT

Description
This command is used to send data through printer serial port.

Syntax
OUT "prompt", variable

Parameter	Description
prompt	Prompt which is shown on LCD screen.
Variable	The output message

Example
DOWNLOAD "DEMO.BAS"
SIZE 3,3
GAP 0.08,0
DENSITY 8
SPEED 4
DIRECTION 0
REFERENCE 0,0
SET CUTTER OFF
SET PEEL OFF
CLS
PRICE$="123456"
OUT "PRICE:",PRICE$
EOP

See Also
DOWNLOAD, EOP, END, ~#…~&

● GETKEY( )

Description
This command is used to get the status of PAUSE key and FEED key. This command waits until either key is pressed. 0 is returned if PAUSE key is pressed and 1 is returned if FEED key is pressed.

Model	PAUSE	FEED
TTP-2410M/TTP-248M/ TTP246M/344M/ TTP-244 TTP-243/TTP-342 TTP-342M/TTP-244ME TDP-643 PLUS TTP-243 PLUS/TTP-342 PLUS TTP-342M PLUS/TTP-244ME PLUS TDP-643R PLUS	0	1
TTP-245/343/TDP-245	X	1

Syntax
GETKEY()

Example
DOWNLOAD "DEMO4.BAS"
SIZE 4,4
GAP 0,0
DENSITY 8
SPEED 3
DIRECTION 0
REFERENCE 0,0
SET CUTTER OFF
SET PEEL OFF
CLS
:START
A=GETKEY()
IF A=0 THEN GOTO PAUSEB
IF A=1 THEN GOTO FEEDB
:PAUSEB
CLS
TEXT 50,10,"4",0,1,1,"PAUSE key is pressed !"
PRINT 1
GOTO START
:FEEDB
CLS

```
TEXT 50,10,"4",0,1,1,"FEED key is pressed !"
PRINT 1
EOP
```

See Also
DOWNLOAD, EOP, END, GOTO

● INT( )

Description
This function is used to truncate a floating point number.

Syntax
INT (n)

Parameter	Description
n	n can be positive or negative integer, floating point number or mathematical expression.

Example
```
DOWNLOAD "DEMO.BAS"
SIZE 4,2
GAP 0,0
DENSITY 8
SPEED 3
DIRECTION 0
REFERENCE 0,0
SET CUTTER OFF
SET PEEL OFF
CLS
REM **** To round up or down****
INPUT "Number:",Num
N=INT(Num+0.5)
IF N>Num THEN
   TEXT 50,100,"3",0,1,1,"To round up= "+STR$(N)
ELSE
   TEXT 50,100,"3",0,1,1,"To round down= "+STR$(N)
ENDIF
PRINT 1
EOP
```

See Also
DOWNLOAD, EOP, END, ABS(), ASC(), STR$()

● LEFT$( )

Description
This function returns the specified number of characters down from the initial character of a string.

Syntax
LEFT$ (X$, n)

Parameter	Description
X$	The string to be processed
n	The number of characters to be returned

Example
DOWNLOAD "STR1.BAS"
SIZE 3.00,3.00
GAP 0.08,0.00
SPEED 4.0
DENSITY 8
SET CUTTER OFF
DIRECTION 0
REFERENCE 0,0
CLS
A$="BARCODE PRINTER DEMO PRINTING"
C$=LEFT$(A$,10)
TEXT 10,10,"3",0,1,1,A$
TEXT 10,100,"3",0,1,1,"10 LEFT 10 CHARS: "+C$
PRINT 1
EOP

See Also
DOWNLOAD, EOP, END, RIGHT$(), MID$(), LEN(), STR$()

● LEN( )

Description
This function returns the length of a string.

Syntax
LEN (string)

Parameter	Description
string	The string whose length is to be measured. .

Example
DOWNLOAD "DEMO.BAS"
SIZE 3.00,3.00
GAP 0.08,0.00
SPEED 4.0
DENSITY 8
SET CUTTER OFF
DIRECTION 0
REFERENCE 0,0
CLS
A$="TAIWAN SEMICONDUCTOR CO., LTD"
B=LEN(A$)
TEXT 10,10,"3",0,1,1,A$
TEXT 10,50,"3",0,1,1,"STRING LENGTH="+STR$(B)
PRINT 1
EOP

See Also
DOWNLOAD, EOP, END, LEFT$(), LEN(), RIGHT$(), MID$(), STR$(), VAL()

● MID$( )

Description
This function is used to get the specified number of characters down from the mth character of a string.

Syntax
MID$(string, m, n)

Parameter	Description
string	The string to be processed.
m	The beginning of mth characters in the string. 1 <= m <= string length
n	The number of characters to return.

Example
DOWNLOAD "DEMO.BAS"
SIZE 3.00,3.00
GAP 0.08,0.00
SPEED 4.0
DENSITY 8
SET CUTTER OFF
DIRECTION 0
REFERENCE 0,0

CLS
A$="TAIWAN SEMICONDUCTOR CO., LTD"
E$=MID$(A$,11,10)
TEXT 10,10,"3",0,1,1,A$
TEXT 10,200,"3",0,1,1,"10 MIDDLE CHARS: "+E$
PRINT 1
EOP

See Also
DOWNLOAD, EOP, END, LEFT$(), LEN(), RIGHT$(), STR$(), VAL()

● RIGHT$( )

Description
This function returns the specified number of characters up from the end of a string.

Syntax
RIGHT$ (X$, n)

Parameter	Description
X$	The string to be processed
n	The number of characters to be returned from the right side (end) of the string

Example
DOWNLOAD "DEMO.BAS"
SIZE 3.00,3.00
GAP 0.08,0.00
SPEED 4.0
DENSITY 8
SET CUTTER OFF
DIRECTION 0
REFERENCE 0,0

CLS
A$="TAIWAN SEMICONDUCTOR CO., LTD"
D$=RIGHT$(A$,10)
TEXT 10,10,"3",0,1,1,A$
TEXT 10,150,"3",0,1,1,"10 RIGHT CHARS: "+D$
PRINT 1
EOP

See Also
DOWNLOAD, EOP, END, LEFT$(), LEN(), MID$(), STR$(), VAL()

● STR$( )

Description
This function converts a specified value or expression into corresponding string of characters.

Syntax
STR$ (n)

Parameter	Description
n	An integer, floating point number or mathematical expression

Example
```
DOWNLOAD "DEMO.BAS"
SIZE 3.00,3.00
GAP 0,0.00
SPEED 4.0
DENSITY 8
SET CUTTER OFF
DIRECTION 0
REFERENCE 0,0
CLS
A$="TAIWAN SEMICONDUCTOR CO., LTD"
F=100
G=500
H$=STR$(F+G)
TEXT 10,10,"3",0,1,1,A$
TEXT 10,60,"3",0,1,1,"F="+STR$(F)
TEXT 10,110,"3",0,1,1,"G="+STR$(G)
TEXT 10,160,"3",0,1,1,"F+G="+H$
PRINT 1
EOP
DEMO
```

See Also
DOWNLOAD, EOP, END, LEFT$(), LEN(), RIGHT$(), MID$(), VAL()

● VAL( )

Description
This function is used to convert numeric character into corresponding integer or floating point number.

Syntax
VAL ("numeric character")

Parameter	Description
numeric character	"0~9", "."

Example
```
DOWNLOAD "DEMO.BAS"
SIZE 3.00,3.00
GAP 0.00,0.00
SPEED 4.0
DENSITY 8
SET CUTTER OFF
DIRECTION 0
REFERENCE 0,0
CLS
 A$="TAIWAN SEMICONDUCTOR CO., LTD"
 F$="100"
 G$="500"
 H=VAL(F$)+VAL(G$)
 I$=STR$(H)
 TEXT 10,10,"3",0,1,1,A$
 TEXT 10,60,"3",0,1,1,"F="+F$
 TEXT 10,110,"3",0,1,1,"G="+G$
 TEXT 10,160,"3",0,1,1,"F+G="+I$
 PRINT 1
EOP
DEMO
```

See Also
DOWNLOAD, EOP, END, LEFT$(), LEN(), RIGHT$(), MID$(), STR$()

● BEEP

Description
This command is used to issue a beep sound on portable keyboard. Printer sends 0x07 to KP-200 portable keyboard.

Syntax
BEEP

Parameter	Description
None	N/A

Example

DOWNLOAD "DEMO.BAS"
SIZE 4,4
GAP 0,0
DENSITY 8
SPEED 6
DIRECTION 0
REFERENCE 0,0
SET CUTTER OFF
SET PEEL OFF
CLS
BEEP
INPUT "Text1 =",TEXT1$
TEXT 100,100,"3",0,1,1,TEXT1$
PRINT 1
EOP

Device Reconfiguration Commands
● SET COUNTER

Description
Counter can be a real counter or a variable.
This setting sets the counter number in program and their increments.
There are three different kind of counters: digit (0~9~0), lower case letter (a~z~a) and upper case letter (A~Z~A).

Syntax
SET COUNTER @n step
@n = "Expression"

Parameter	Description
@n	n: counter number. There are 51 counters available (@0~@50) in the printer.
step	The increment of the counter, can be positive or negative. -999999999<= step <=999999999 If the counter is used as a fixed variable, please set the increment to 0.
Expression	Initial string. String length is 101 bytes

Example
SIZE 3,3
GAP 0,0
DENSITY 8
SPEED 6
DIRECTION 0
REFERENCE 0,0
SET COUNTER @1 1
@1="00001"
SET COUNTER @2 5
@2="AB000001"
CLS
TEXT 50,50,"3",0,1,1,@1
BARCODE 50,100,"39",48,1,0,2,4,@2
PRINT 2,1

See Also
PRINT, TEXT, BARCODE

● SET CUTTER

Description
This setting is used to activate/deactivate the cutter and define how many printed labels to be cut at one time.
This setting will be saved in printer memory when turning off the power.

Syntax
SET CUTTER OFF/BATCH/pieces

Parameter	Description
OFF	Disable cutter function.
BATCH	Set printer to cut label at the end of printing job.
Pieces	Set number of printing labels per cut. 0<= pieces <=65535

Example
```
REM ***SET CUTTER FUNCTION OFF EXAMPLE PROGRAM***
SIZE 3,3
GAP 0,0
DENSITY 8
SPEED 6
DIRECTION 0
REFERENCE 0,0
SET CUTTER OFF
SET PEEL OFF
CLS
TEXT 50,50,"3",0,1,1,"SET CUTTER OFF"
PRINT 3
REM ***This program cuts once at the batch***
SET CUTTER BATCH
CLS
TEXT 50,50,"3",0,1,1,"SET CUTTER BATCH"
PRINT 3,2
REM ***This program cuts every label***
SET CUTTER 1
CLS
TEXT 50,50,"3",0,1,1,"SET CUTTER 1"
PRINT 3,2
REM ***This program cuts 2 label***
SET CUTTER 2
CLS
TEXT 50,50,"3",0,1,1,"SET CUTTER 2"
PRINT 3,2
```

See Also
OFFSET, PRINT, SET PARTIAL_CUTTER

● SET PARTIAL_CUTTER

Description

This setting is used to activate/deactivate the cutter and define how many printed labels to be cut at one time.

This setting will be saved in printer memory when turning off the power.

With this function, the label won't back feed when it is cut off.

MODEL	SUPPORT
TTP-243	
TTP-243E	
TTP-243 Plus	X
TTP-243E Plus	X
TTP-244ME	
TTP-244ME Plus	X
TTP-244	
TTP-245	X
TDP-245	X
TTP-245G	X
TDP-245G	X
TTP-246M	X
TTP-246G	X
TTP-248M	
TTP-342	
TTP-342 Plus	X
TTP-342M	
TTP-342M Plus	X
TTP-343	X
TTP-344M	X
TTP-346M	X
TDP-643 Plus	
TDP-643R Plus	X
TTP-2410M	X
M23	

Syntax

SET PARTIAL_CUTTER OFF/BATCH/pieces

Parameter	Description
OFF	Disable cutter function.
BATCH	Set printer to cut label at the end of printing job.
Pieces	Set number of printing labels per cut.
	0<= pieces <=65535

Example

REM **SET PARTIAL_CUTTER FUNCTION OFF EXAMPLE PROGRAM**

```
SIZE 3,1
GAP 0,0
DENSITY 8
SPEED 6
DIRECTION 0
REFERENCE 0,0
SET PARTIAL_CUTTER OFF
CLS
TEXT 50,50,"3",0,1,1,"SET PARTIAL_CUTTER OFF"
PRINT 3
REM ***This program cuts once at the batch***
SET PARTIAL_CUTTER BATCH
CLS
TEXT 50,50,"3",0,1,1,"SET PARTIAL_CUTTER BATCH"
PRINT 3,2
REM ***This program cuts every label***
SET PARTIAL_CUTTER 1
CLS
TEXT 50,50,"3",0,1,1,"SET PARTIAL_CUTTER 1"
PRINT 3,2
REM ***This program cuts 2 label***
SET PARTIAL_CUTTER 2
CLS
TEXT 50,50,"3",0,1,1,"SET PARTIAL_CUTTER 2"
PRINT 3,2
```

See Also

OFFSET, PRINT, SET CUTTER

● SET BACK

Description
This setting is used after SET CUTTER function.
With this function, the label won't be back feed when it is cut off.

MODEL	SUPPORT
TTP-243	
TTP-243E	
TTP-243 Plus	X
TTP-243E Plus	X
TTP-244ME	
TTP-244ME Plus	X
TTP-244	
TTP-245	X
TDP-245	X
TTP-245G	X
TDP-245G	X
TTP-246M	X
TTP-246G	X
TTP-248M	
TTP-342	
TTP-342 Plus	X
TTP-342M	
TTP-342M Plus	X
TTP-343	X
TTP-344M	X
TTP-346M	X
TDP-643 Plus	
TDP-643R Plus	X
TTP-2410M	X
M23	

Syntax
SET BACK OFF/ON

Parameter	Description
OFF	Disable back function.
ON	Enable back function.

Example
REM **SET BACK FUNCTION OFF EXAMPLE PROGRAM**
SIZE 3,1
GAP 0,0
DENSITY 8

```
SPEED 6
DIRECTION 1
REFERENCE 0,0
SET CUTTER 1
SET BACK OFF
CLS
TEXT 50,50,"3",0,1,1,"SET BACK OFF"
PRINT 3

CLS
SET CUTTER 1
SET BACK ON
TEXT 50,50,"3",0,1,1,"SET BACK ON"
PRINT 3
```

See Also

OFFSET, PRINT, SET CUTTER

● SET KEY1, SET KEY2, SET KEY3

Description

This setting is used to enable/disable the KEY1/KEY2/KEY3 function. The default function of KEY1 is "MENU" key, KEY2 is "PAUSE" key and KEY3 is "FEED" key. Before setting KEY1/KEY2/KEY3 function otherwise, please disable KEY1/KEY2/KEY3 first. The setting will remain resident in the printer even when the printer is power off.

Model	KEY1	KEY2	KEY3
TTP-2410M/TTP-346M TTP-248M/TTP246M/ TTP-344M/ M23	V	V	V
TTP-245/TTP-343/TDP-245 TDP-643 PLUS/ TDP-643R PLUS	V	N/A	N/A
TTP-244/TTP-243/TTP-243E TTP-243Plus/ TTP-243E Plus TTP-244ME /TTP-244ME Plus TTP-342/TTP-342 Plus TTP-342M/ TTP-342M Plus	V	V	N/A

Syntax

SET KEY1 ON/OFF
SET KEY2 ON/OFF
SET KEY3 ON/OFF

Parameter	Description
ON	Enable KEY1 as MENU function
	Enable KEY2 as PAUSE function
	Enable KEY3 as FEED function
OFF	Disable KEY1 as MENU function
	Disable KEY2 as PAUSE function
	Disable KEY3 as FEED function

Note: The setting will remain in the printer even if the printer is power off.

Example

DOWNLOAD "DEMO.BAS"
SIZE 3,1
GAP 0,0
DENSITY 8
SPEED 3
DIRECTION 0
REFERENCE 0,0

```
SET CUTTER OFF
SET KEY1 OFF
SET KEY2 OFF
SET KEY3 OFF
KEY1=0
KEY2=0
KEY3=0

CLS
:START

IF KEY1=1 THEN
  CLS
  TEXT 100,10,"3",0,1,1,"KEY1 (MENU key) is pressed!!"
  PRINT 1,1
ELSEIF KEY2=1 THEN
  CLS
  TEXT 100,10,"3",0,1,1,"KEY2 (PAUSE key) is pressed!!"
  PRINT 1,1
ELSEIF KEY3=1 THEN
  CLS
  TEXT 100,10,"3",0,1,1,"KEY3 (FEED key) is pressed!!"
  TEXT 100,60,"3",0,1,1,"End of test"
  PRINT 1,1
  SET KEY1 ON
  SET KEY2 ON
  SET KEY3 ON
  END
ENDIF
GOTO START
EOP
DEMO
```

See Also

OFFEST, PRINT

● SET LED1, SET LED2, SET LED3

Description

This setting is used to control LED on/off function.
The default function of LED1, LED2 and LED3 id as listed below:

Model	LED1	LED2	LED3	LED2 & LED3
TTP-2410M/TTP-346M TTP-248M/TTP246M/TTP-344M TTP-244/TTP-243/TTP-243E TTP-243 Plus/ TTP-243E Plus TTP-244ME/ TTP-244ME Plus TTP-342/ TTP-342 Plus TTP-342M/ TTP-342M Plus	V	V	V	N/A
TTP-245/TTP343/TDP-245	Green	Green	Red	Orange
TDP-643 PLUS/TDP-643R PLUS	V	V	N/A	N/A

Note: For TTP-245/343/TDP-245 where the LED1=LED2.

LED no.	Default Function
LDE1	Power on/off
LED2	Printer on-line/off-line
LED3	Erroe/normal

Syntax

SET LED1 ON/OFF
SET LED2 ON/OFF
SET LED3 ON/OFF

Example

```
DOWNLOAD "DEMO4.BAS"
SET LED1 OFF
SET LED2 OFF
SET LED3 OFF
FOR I=1 TO 100
LED1=0
LED2=0
LED3=0
  IF I-INT(I/2)*2=0 THEN
    LED1=1
  ELSEIF I-INT(I/3)*3=0 THEN
    LED2=1
```

```
    ELSE
       LED3=1
    ENDIF
NEXT
LED1=1
LED2=1
LED3=0
SET LED1 ON
SET LED2 ON
SET LED3 ON
EOP
DEMO4
```

● SET PEEL

Description
This setting is used to enable/disable the self-peeling function.
The default setting for this function is off. When this function is set on, the printer stops after each label printing, and does not print the next label until the peeled label is taken away.
This setting will be saved in printer memory when turning off the power.

Syntax
SET PEEL ON/OFF

Parameter	Description
ON	Enable the self-peeling function
OFF	Disable the self-peeing function

Example
REM ***SELF-PEELING FUNCTION ON***
SIZE 4,4
GAP 0,0
DENSITY 8
SPEED 6
DIRECTION 0
REFERENCE 0,0
SET CUTTER OFF
SET PEEL ON
CLS
TEXT 50,100,"3",0,1,1,"SELF-PEELING FUNCTION TEST"
PRINT 5

See Also
OFFEST, PRINT

● SET TEAR & SET STRIPPER

Description
This command is used to enable/disable feeding label to gap/black mark position for tearing off.
This setting will be saved in printer memory when turning off the power.

MODEL	SUPPORT	
	SET TEAR	SET STRIPER
TTP-243		X
TTP-243E		X
TTP-243 Plus	X	X
TTP-243E Plus	X	X
TTP-244ME		X
TTP-244ME Plus	X	X
TTP-244	X	X
TTP-245	X	
TDP-245	X	
TTP-245G	X	
TDP-245G	X	
TTP-246M	X	
TTP-246G	X	
TTP-248M	X	
TTP-342		X
TTP-342 Plus	X	X
TTP-342M		X
TTP-342M Plus	X	X
TTP-343	X	
TTP-344M	X	
TTP-346M	X	
TDP-643 Plus		X
TDP-643R Plus	X	X
TTP-2410M	X	X
M23	X	

Syntax
SET TEAR ON/OFF   (TSPL2 language printers only)
SET STRIPPER ON/OFF   (TSPL language printers only)

Parameter	Description
ON	The label gap will stop at the tear off position after print.
OFF	The label gap will NOT stop at the tear off position after print. The beginning of label will be aligned to print head.

Example

```
REM ***TEAR FUNCTION ON***
SIZE 3,3
GAP 0.08,0
DENSITY 8
SPEED 4
DIRECTION 0
REFERENCE 0,0
SET CUTTER OFF
SET PEEL OFF
SET TEAR ON
CLS
TEXT 50,100,"3",0,1,1,"TEAR FUNCTION TEST"
PRINT 1
```

See Also

SET PEEL, SET CUTTER

● SET GAP

Description

This setting is used to set the gap sensor emission sensitivity. The printer initiates automatic gap sensor calibration as you hold down the PAUSE key and then turn on the printer power. But this function may cease to work if the thickness of the backing paper and that of label with backing paper are not of appreciable difference to the sensor, or when there are pre-printed marks or patterns on the label. In such case, users have to calibrate the gap sensor manually by this command. This is a trial-and-error method to attain the proper setting.

This setting will be saved in printer memory when turning off the power.

Syntax

SET GAP n/AUTO/OFF/0,/REVERSE/OBVERSE

Parameter	Description
n	The gap sensor light emission strength. Available range is listed as below. 0 is the lowest sensitivity
AUTO	The printer will feed 2 or 3 labels to calibrate the gap. If the label is continuous, the printer will feed label to limit 10~20 inches to confirm if the label is continuous.
OFF	Disable the SET GAP AUTO function.
0,	The printer will auto to calibrate the gap size.
REVERSE	This function is using when the Black Mark is the separation in front of the label and which can't be detected by Black Mark sensor. The parts of the media where can be passed through by GAP sensor are defined to be the printable area, otherwise there will be defined to the GAP of the media.
OBVERSE	Disable the "SET GAP REVERSE" function.

Printer model	Range	SET GAP REVERSE SET GAP OBVERSE SET GAP AUTO
TTP-243	0~15	X
TTP-243E	0~15	X
TTP-244ME	0~15	X
TTP-243 Plus	0~255	X
TTP-243E Plus	0~255	X
TTP-244ME Plus	0~255	X
TTP-342	0~15	X
TTP-342M	0~15	X
TTP-342 Plus	0~255	X

TDP-643 Plus	0~15	X
TDP-643R Plus	0~255	X
TTP-2410M	0~255	X
TTP-248M	0~255	X
TTP-346M	0~255	X
TTP-246M/344M series (non usb)	0~63	X
TTP-246M/344M series (usb)	0~31	X
TTP-245/343 series	0~63	V
TDP-245	0~63	V
TTP-244	0~255	X
M23	0~255	X

Note: When in "SET HEAD OFF" mode, the function "SET GAP AUTO" doesn't work even the printer head is opened and closed, but it can work when power on the printer.

Example

The example below is operated in DOS environment via the parallel port connection to setup the label size, gap distance and sensor sensitivity.

```
C:\>COPY CON LPT1<ENTER>
    SIZE 4,2.5<ENTER>
    GAP 0.12,0<ENTER>
    SET GAP 1<ENTER>
    <CTRL><Z><ENTER>
C:\>
```

Note: <ENTER> stands for keyboard "ENTER" key. In the above example, please press "ENTER" key instead of typing <ENTER> in the above example.
<CTRL> stands for keyboard "Ctrl" key.

Press the FEED key to test. Does printer stop at the same position on each label without the error light blinking? If not, please adjust the setting to a larger number again.
When trying with this setting, please begin from 0 and then on to higher values gradually.

See Also

SIZE, GAP, BLINE

● SET HEAD

Description

This setting is used to enable/disable head open sensor. If head open sensor is closed then when printer head is opened there isn't any message returned. This setting will be saved in printer memory.
This command is only available for BPL2 printers.

TSPL2 language printer	TTP-2410M, TTP-346M, TTP-248M, TTP-246G, TTP-344M, TTP-245, TTP-245G, TDP-245G, TTP-343, TTP-244, M23

Syntax

SET HEAD ON /OFF

Parameter	Description
ON	Turn on the "HEAD OPEN" sensor
OFF	Turn off the "HEAD OPEN" sensor

Example

SET HEAD ON
SET HEAD OFF

● SET RIBBON

Description
This setting is used to enable/disable ribbon sensor detection. (Thermal Transfer Printing/Thermal Direct Printing)
Printer will detect if there is ribbon or without ribbon installed in ribbon mechanism at the instance of turning on printer power to determine direct thermal or thermal transfer printing.
This setting will not be saved in printer memory.

Syntax
SET RIBBON ON /OFF

Parameter	Description
ON	Thermal transfer printing
OFF	Thermal direct printing

Example
REM ***Direct printing****
SIZE 4,4
GAP 0,0
DENSITY 8
SPEED 6
DIRECTION 0
REFERENCE 0,0
SET CUTTER OFF
SET PEEL OFF
SET RIBBON OFF
CLS
BARCODE 100,100,"39",48,1,0,2,5,"CODE 39"
PRINT 1

● SET COM1

Description
This setting defines communication parameters for printer serial port.

Syntax
SET COM1 baud, parity, data, stop

Parameter	Description
baud	Baud rate, available baud rates are as listed :
	24: 2400 bps
	48: 4800 bps
	96: 9600 bps
	19: 19200 bps
parity	Parity check
	N: None parity check
	E: Even parity check
	O: Odd parity check
data	Data bit
	8: 8 bits data
	7: 7 bits data
stop	Stop bit
	1: 1 stop bit
	2: 2 stop bits

Example

The parallel port is used to setup the printer serial port in this example by MS-DOS mode.

```
C:\>COPY CON LPT1<ENTER>
SET COM1 19,N,8,1<ENTER>
<CTRL><Z><ENTER>
C:\>
```

Note: <ENTER> stands for PC keyboard "ENTER" key.
*   <CTRL><Z> means to hold PC keyboard "CTRL" key then press*
*   the PC keyboard <Z> key.*

● SET PRINTKEY

Description
This command will print one label and feed label gap to tear bar position for tearing away. Press FEED button to print the next label or batch of labels. If label content includes serial text or barcode, it will change the serial number accordingly. This setting will be saved in printer memory.
This command is only available for TSPL2 printers.

TSPL2 language printer	TTP-2410M, TTP-346M, TTP-248M, TTP-246G, TTP-344M, TTP-245, TTP-245G, TDP-245G, TTP-343, TTP-244, M23

Syntax
SET PRINTEKY OFF/ON/AUTO/<num>

Parameter	Description
OFF	Disable this function
ON	Enable this function
AUTO	Enable this function
<num>	Numbers of labels will be printed if FEED button is pressed.

Example
Execute:
```
SIZE 4,2.5
GAP 0.12,0
SET PRINTKEY ON
SET COUNTER @0 1
@0="0001"
CLS
TEXT 10,10,"5",0,1,1,@0
PRINT 1
```

Execute:

Syntax	Receive "PRINT m"	Print Out
SET PRINTKEY ON or SET PRINTKEY AUTO	1.) PRINT 2	Label 1~2
	2.) Press FEED key	Label 3~4

Syntax	Receive "PRINT m,n"	Print Out
SET PRINTKEY ON or SET PRINTKEY AUTO	1.) PRINT 1,2	Label 1, Label 1
	2.) Press FEED key	Label 2, Label 2

Syntax	Receive "PRINT -1,n"	Print Out
SET PRINTKEY ON or SET PRINTKEY AUTO	1.) PRINT -1,2	Label 1, Label 1
	2.) Press FEED key	Label 1, Label 1

Syntax	Receive "PRINT m"	Print Out
SET PRINTKEY 5	1.) PRINT 2	Label 1~2
	2.) Press FEED key	Label 3~7
Syntax	Receive "PRINT m,n"	Print Out
SET PRINTKEY 5	1.) PRINT 1,2	Label 1, Label 1
	2.) Press FEED key	Label 2~6

Syntax	Receive "PRINT –1,n"	Print Out
SET PRINTKEY 5	1.) PRINT -1,2	Label 1, Label 1
	2.) Press FEED key	Label 1, Label 1

● SET REPRINT

Description

This command will disable/enable reprint the label when the "no paper" or "no ribbon" or "carriage open" error is occurred.

MODEL	SUPPORT
TTP-243	
TTP-243E	
TTP-243 Plus	X
TTP-243E Plus	X
TTP-244ME	
TTP-244ME Plus	X
TTP-244	
TTP-245	X
TDP-245	X
TTP-245G	X
TDP-245G	X
TTP-246M	X
TTP-246G	X
TTP-248M	
TTP-342	
TTP-342 Plus	X
TTP-342M	
TTP-342M Plus	X
TTP-343	X
TTP-344M	X
TTP-346M	X
TDP-643 Plus	
TDP-643R Plus	X
TTP-2410M	X
M23	X

Syntax

SET REPRINT OFF/ON

Parameter	Description
OFF	Disable this function
ON	Enable this function

Example

SET REPRINT ON

● PEEL

Description
This command is used to obtain status of the peel-off sensor. Its attribute is read only.

Syntax
PEEL

Return Value	Description
0	Paper is not on top of peel sensor
1	Paper is on top of peel sensor

Example
```
DOWNLOAD "DEMO.BAS"
SIZE 4,1
GAP 0,0
SPEED 4
DENSITY 8
SET PEEL OFF
SET KEY1 OFF
SET LED1 OFF
SET LED3 OFF
:START
LED1=0
LED3=0
  IF KEY1=1 THEN GOTO A
GOTO START
:A
LED1=1
CLS
TEXT 10,10,"3",0,1,1,"PEEL Function Test!!"
PRINT 1,1

:B
LED1=0
IF PEEL=1 THEN
  LED3=1
  GOTO B
ELSE
  CLS
  TEXT 10,10,"3",0,1,1,"The label is removed from the PEEL sensor!!"
  PRINT 1,1
  GOTO START
ENDIF
EOP
```

DEMO

● LED1, LED2, LED3

Description

This command is used to control LED on/off. Its attribute is write only. Specify 1 to light on LED and 0 to turn off LED. Before using this command, be sure to cancel the default LED functions. Please refer to the SET LED command.

Model	LED1	LED2	LED3	LED2 & LED3
TTP-2410M/TTP-346M TTP-248M/TTP246M/TTP-344M TTP-244/TTP-243/TTP-243E TTP-243 Plus/ TTP-243E Plus TTP-244ME/ TTP-244ME Plus TTP-342/ TTP-342 Plus TTP-342M/ TTP-342M Plus	V	V	V	N/A
TTP245/343/TDP245	Green	Green	Red	Orange
TDP-643 PLUS/TDP-643R PLUS	V	V	N/A	N/A

Note: For TTP-245/343/TDP-245 where the LED1=LED2.

Syntax

LEDm=n

Parameter	Description
m	m=1, LED1
	m=2, LED2
	m=3, LED3
n	0: turn off LED
	1: light on LED

Example

DOWNLOAD "DEMO.BAS"
SIZE 3,3
GAP 0.12,0
SPEED 4
DENSITY 8
DIRECTION 1
REFERENCE 0,0
SET CUTTER OFF
SET PEEL OFF
SET LED1 OFF

```
SET LED2 OFF
SET LED3 OFF
LED1=0
LED2=1
LED3=0
EOP
```

● **KEY1, KEY2, KEY3**

Description
   This command is used to read the status of KEY1 ,KEY2 and KEY3.

Model	KEY1	KEY2	KEY3
TTP-2410M/TTP-346M TTP-248M/TTP246M TTP-344M/ M23	V	V	V
TTP-245/343 TDP-245	V	X	X
TTP-244/TTP-243/TTP-243E TTP-243 Plus/ TTP-243E Plus TTP-244ME/TTP-244ME Plus TTP-342/ TTP-342 Plus TTP-342M/TTP-342M Plus TDP-643 PLUS/TDP-643R PLUS	V	V	X

Syntax
   KEYm=n

Key	**Return Value**
KEY1 (MENU)	0: released
	1: pressed
KEY2 (PAUDE)	0: released
	1: pressed
KEY3 (FEED)	0: released
	1: pressed

Example
   DOWNLOAD "DEMO.BAS"
   SIZE 3,1
   GAP 0,0
   SPEED 4
   DENSITY 8
   DIRECTION 1
   REFERENCE 0,0
   SET LED1 OFF
   SET KEY1 OFF
   LED1=0
   :START
   IF KEY1=1 THEN
    LED1=1
    CLS
    TEXT 100,10,"3",0,1,1,"KEY FUNCTION TEST"
    PRINT 1,1

```
    ELSE
     LED1=0
    ENDIF
    GOTO START
    EOP
    DEMO
```

Printer Global Variables

● @LABEL

Description

This variable is used to count how many pieces of labels have been printed. It can't be initialized if the printer is reset. It will be memorized if the printer power is turned off.

Syntax

Write attribute: @LABEL=n or @LABEL="n"
Read attribute: A=LABEL or A$=STR$(LABEL)

Parameter	Description
n	Number of labels printed. 0<=n<=999999999

Example

```
DOWNLOAD "DEMO.BAS"
SIZE 4,2.5
GAP 2 mm,0
SPEED 6
DENSITY 12
CLS
TEXT 10,50,"3",0,1,1,@LABEL
TEXT 10,100,"3",0,1,1,"@LABEL="+STR$(LABEL)
TEXT 10,150,"3",0,1,1,"*****Statement 1*****"
  IF LABEL>1000 THEN
    TEXT 10,200,"3",0,1,1,"LABEL>1000"
  ELSE
    TEXT 10,200,"3",0,1,1,"LABEL<1000"
  ENDIF
TEXT 10,250,"3",0,1,1,"*****Statement 1*****"
  A=LABEL
  IF A>1000 THEN
     TEXT 10,300,"3",0,1,1,"A>1000"
  ELSE
    TEXT 10,300,"3",0,1,1,"A<1000"
  ENDIF
TEXT 10,350,"3",0,1,1,"*****Statement 3*****"
  A$=STR$(LABEL)
  IF VAL(A$)>1000 THEN
    TEXT 10,400,"3",0,1,1,"VAL(A$)>1000"
  ELSE
    TEXT 10,400,"3",0,1,1,"VAL(A$)<1000"
  ENDIF
PRINT 1,1
EOP
```

● YEAR

Description
This variable is used to read from/write to RTC the year data. Four-digit year format is supported by RTC.

Syntax
Write attribute: YEAR=02
Read attribute: A=YEAR
Range: 00~50=2000~2050 ; 51~99=1951~1999

Example
```
DOWNLOAD "SetYear.BAS"
REM *****Set Year Parameter to RTC*****
YEAR=05
EOP
SetYear

DOWNLOAD "DEMO.BAS"
SIZE 3,3
GAP 0.08,0
DENSITY 8
SPEED 4
DIRECTION 0
REFERENCE 0,0
SET CUTTER OFF
SET PEEL OFF
CLS

REM *****Read YEAR parameter form RTC*****
YEAR$=STR$(YEAR)
Y=YEAR

REM *****Print*****
TEXT 10,10,"5",0,1,1,"YEAR1="+YEAR$
TEXT 10,110,"5",0,1,1,"YEAR2="+STR$(Y)
TEXT 10,210,"5",0,1,1,"YEAR3="+STR$(YEAR)
PRINT 1
EOP
DEMO
```

See Also
~!C, MONTH, DATE, DAY, HOUR, MINUTE, SECOND

● MONTH

Description
This variable is used to read from/write to RTC the month data. Two-digits (01~12) month format is supported by RTC.

Syntax
Write attribute: MONTH=01
Read attribute: A=MONTH
Range: 01~12

Example
```
DOWNLOAD "SetMonth.BAS"
REM *****Set Month Parameter to RTC*****
MONTH=05
EOP
SetMonth

DOWNLOAD "DEMO.BAS"
SIZE 3,3
GAP 0.08,0
DENSITY 8
SPEED 4
DIRECTION 0
REFERENCE 0,0
SET CUTTER OFF
SET PEEL OFF
CLS

REM *****Read Month parameter form RTC*****
MONTH$=STR$(MONTH)
M=MONTH

REM *****Print*****
TEXT 10,10,"5",0,1,1,"MONTH1="+MONTH$
TEXT 10,110,"5",0,1,1,"MONTH2="+STR$(M)
TEXT 10,210,"5",0,1,1,"MONTH3="+STR$(MONTH)
PRINT 1
EOP
DEMO
```

See Also
~!C, MONTH, DATE, DAY, HOUR, MINUTE, SECOND

● **DATE**

Description
This variable is used to read from/write to RTC the date data. Two-digits (01~31) date format is supported by RTC.

Syntax
Write attribute: DATE=12
Read attribute: A=DATE
Range: 01~31

Example
DOWNLOAD "SetDate.BAS"
REM *****Set Date Parameter to RTC*****
DATE=30
EOP
SetDate

DOWNLOAD "DEMO.BAS"
SIZE 3,3
GAP 0.08,0
DENSITY 8
SPEED 4
DIRECTION 0
REFERENCE 0,0
SET CUTTER OFF
SET PEEL OFF
CLS

REM *****Read Date parameter form RTC*****
DATE$=STR$(DATE)
D=DATE

REM *****Print*****
TEXT 10,10,"5",0,1,1,"DATE1="+DATE$
TEXT 10,110,"5",0,1,1,"DATE2="+STR$(D)
TEXT 10,210,"5",0,1,1,"DATE3="+STR$(DATE)
PRINT 1
EOP
DEMO

See Also
~!C, MONTH, DATE, DAY, HOUR, MINUTE, SECOND

● WEEK

Description
This variable is used to read from/write to RTC the week data, which is represented by one single digit (1~7).. .

Syntax
Write attribute: WEEK=3
Read attribute: A=WEEK
Range: 1(Sunday)~7(Saturday)

Example
DOWNLOAD "SetWeek.BAS"
REM *****Set Week Parameter to RTC*****
WEEK=6
EOP
SetWeek

DOWNLOAD "DEMO.BAS"
SIZE 3,3
GAP 0.08,0
DENSITY 8
SPEED 4
DIRECTION 0
REFERENCE 0,0
SET CUTTER OFF
SET PEEL OFF
CLS

REM *****Read Week parameter form RTC*****
WEEK$=STR$(WEEK)
W=WEEK

REM *****Print*****
TEXT 10,10,"5",0,1,1,"WEEK1="+WEEK$
TEXT 10,110,"5",0,1,1,"WEEK2="+STR$(W)
TEXT 10,210,"5",0,1,1,"WEEK3="+STR$(WEEK)
PRINT 1
EOP
DEMO

See Also
~!C, MONTH, DATE, DAY, HOUR, MINUTE, SECOND

● HOUR

Description
This variable is used to read from/write to RTC the hour data. The 24-hour-day system (00~23) is supported by RTC.

Syntax
Write attribute: HOUR=12
Read attribute: A=HOUR
Range: 00~23

Example
DOWNLOAD "SetHour.BAS"
REM *****Set Hour Parameter to RTC*****
HOUR=11
EOP
SetHour

DOWNLOAD "DEMO.BAS"
SIZE 3,3
GAP 0.08,0
DENSITY 8
SPEED 4
DIRECTION 0
REFERENCE 0,0
SET CUTTER OFF
SET PEEL OFF
CLS

REM *****Read Hour parameter form RTC*****
HOUR$=STR$(HOUR)
H=HOUR

REM *****Print*****
TEXT 10,10,"5",0,1,1,"HOUR1="+HOUR$
TEXT 10,110,"5",0,1,1,"HOUR2="+STR$(H)
TEXT 10,210,"5",0,1,1,"HOUR3="+STR$(HOUR)
PRINT 1
EOP
DEMO

See Also
~!C, MONTH, DATE, DAY, HOUR, MINUTE, SECOND

● MINUTE

Description

This variable is used to read from/write to RTC the minute data. Two-digits (00~59) minute format is supported by RTC.

Syntax

Write attribute: MINUTE=12
Read attribute: A=MINUTE
Range: 00~59

Example

DOWNLOAD "SetMinute.BAS"
REM *****Set Minute Parameter to RTC*****
MINUTE=59
EOP
SetMinute

DOWNLOAD "DEMO.BAS"
SIZE 3,3
GAP 0.08,0
DENSITY 8
SPEED 4
DIRECTION 0
REFERENCE 0,0
SET CUTTER OFF
SET PEEL OFF
CLS

REM *****Read Minute parameter form RTC*****
MINUTE$=STR$(MINUTE)
MIN=MINUTE

REM *****Print*****
TEXT 10,10,"5",0,1,1,"MINUTE1="+MINUTE$
TEXT 10,110,"5",0,1,1,"MINUTE2="+STR$(MIN)
TEXT 10,210,"5",0,1,1,"MINUTE3="+STR$(MINUTE)
PRINT 1
EOP
DEMO

See Also

~!C, MONTH, DATE, DAY, HOUR, MINUTE, SECOND

● SECOND

Description
This variable is used to read from/write to RTC the second data. Two-digits (00~59) second format is supported by RTC.

Syntax
Write attribute: SECOND=12
Read attribute: A=SECOND
Range: 00~59

Example
DOWNLOAD "SetSecond.BAS"
REM *****Set Second Parameter to RTC*****
SECOND=59
EOP
SetSecond

DOWNLOAD "DEMO.BAS"
SIZE 3,3
GAP 0.08,0
DENSITY 8
SPEED 4
DIRECTION 0
REFERENCE 0,0
SET CUTTER OFF
SET PEEL OFF
CLS

REM *****Read Second parameter form RTC*****
SECOND$=STR$(SECOND)
SEC=SECOND

REM *****Print*****
TEXT 10,10,"5",0,1,1,"SECOND1="+SECOND$
TEXT 10,110,"5",0,1,1,"SECOND2="+STR$(SEC)
TEXT 10,210,"5",0,1,1,"SECOND3="+STR$(SECOND)
PRINT 1
EOP
DEMO

See Also
~!C, MONTH, DATE, DAY, HOUR, MINUTE, SECOND

● @YEAR

Description
This variable is used to read from/write to RTC the year data. Two-digit year format is supported by RTC.

@YEAR global variable can be accessed directly without using BASIC language functions.

MODEL	SUPPORT
TTP-243	
TTP-243E	
TTP-243 Plus	X
TTP-243E Plus	X
TTP-244ME	
TTP-244ME Plus	X
TTP-244	
TTP-245	X
TDP-245	X
TTP-245G	X
TDP-245G	X
TTP-246M	X
TTP-246G	X
TTP-248M	X
TTP-342	
TTP-342 Plus	X
TTP-342M	
TTP-342M Plus	X
TTP-343	X
TTP-344M	X
TTP-346M	X
TDP-643 Plus	
TDP-643R Plus	X
TTP-2410M	X
M23	X

Syntax
Write attribute: @YEAR="01"
Read attribute: @YEAR
Range: 00~99

Example
REM *****Set @YEAR*****
@YEAR="05"

REM *****Print*****

```
SIZE 3,3
GAP 0.08,0
DENSITY 8
SPEED 6
DIRECTION 0
REFERENCE 0,0
SET CUTTER OFF
SET PEEL OFF
CLS
TEXT 10,10,"5",0,1,1,"@YEAR"
TEXT 310,10,"5",0,1,1,@YEAR
PRINT 1
```

See Also

~!C, @MONTH, @DATE, @DAY, @HOUR, @MINUTE, @SECOND

● **@MONTH**

Description
This variable is used to read from/write to RTC the month data. Two-digits (01~12) month format is supported by RTC.
@MONTH global variable can be accessed directly without using BASIC language functions.

MODEL	SUPPORT
TTP-243	
TTP-243E	
TTP-243 Plus	X
TTP-243E Plus	X
TTP-244ME	
TTP-244ME Plus	X
TTP-244	
TTP-245	X
TDP-245	X
TTP-245G	X
TDP-245G	X
TTP-246M	X
TTP-246G	X
TTP-248M	X
TTP-342	
TTP-342 Plus	X
TTP-342M	
TTP-342M Plus	X
TTP-343	X
TTP-344M	X
TTP-346M	X
TDP-643 Plus	
TDP-643R Plus	X
TTP-2410M	X
M23	X

Syntax
Write attribute: @MONTH="01"
Read attribute: @MONTH
Range: 01~12

Example
REM *****Set @MONTH*****
@MONTH="12"

REM *****Print*****
SIZE 3,3

```
GAP 0.08,0
DENSITY 8
SPEED 6
DIRECTION 0
REFERENCE 0,0
SET CUTTER OFF
SET PEEL OFF
CLS
TEXT 10,10,"5",0,1,1,"@MONTH"
TEXT 310,10,"5",0,1,1,@MONTH
PRINT 1
```

See Also

~!C, @YEAR, @DATE, @DAY, @HOUR, @MINUTE, @SECOND

● @DATE

Description
This variable is used to read from/write to RTC the date data. Two-digits (01~31) date format is supported by RTC.

@DATE global variable can be accessed directly without using BASIC language functions.

MODEL	SUPPORT
TTP-243	
TTP-243E	
TTP-243 Plus	X
TTP-243E Plus	X
TTP-244ME	
TTP-244ME Plus	X
TTP-244	
TTP-245	X
TDP-245	X
TTP-245G	X
TDP-245G	X
TTP-246M	X
TTP-246G	X
TTP-248M	X
TTP-342	
TTP-342 Plus	X
TTP-342M	
TTP-342M Plus	X
TTP-343	X
TTP-344M	X
TTP-346M	X
TDP-643 Plus	
TDP-643R Plus	X
TTP-2410M	X
M23	X

Syntax
Write attribute: @DATE="12"
Read attribute: @DATE
Range: 01~31

Example
REM *****Set @DATE*****
@DATE="31"

REM *****Print*****
SIZE 3,3

```
GAP 0.08,0
DENSITY 8
SPEED 6
DIRECTION 0
REFERENCE 0,0
SET CUTTER OFF
SET PEEL OFF
CLS
TEXT 10,10,"5",0,1,1,"@DATE"
TEXT 310,10,"5",0,1,1,@DATE
PRINT 1
```

See Also

~!C, @YEAR, @MONTH, @DAY, @HOUR, @MINUTE, @SECOND

● @DAY

Description
This variable is used to read from/write to RTC the week data, which is represented by one single digit (1~7).. .
@DAY global variable can be accessed directly without using BASIC language functions.

MODEL	SUPPORT
TTP-243	
TTP-243E	
TTP-243 Plus	X
TTP-243E Plus	X
TTP-244ME	
TTP-244ME Plus	X
TTP-244	
TTP-245	X
TDP-245	X
TTP-245G	X
TDP-245G	X
TTP-246M	X
TTP-246G	X
TTP-248M	X
TTP-342	
TTP-342 Plus	X
TTP-342M	
TTP-342M Plus	X
TTP-343	X
TTP-344M	X
TTP-346M	X
TDP-643 Plus	
TDP-643R Plus	X
TTP-2410M	X
M23	X

Syntax
Write attribute: @DAY="3"
Read attribute: @DAY
Range: 1(Sunday)~7(Saturday)

Example
REM *****Set @DAY*****
@DAY="5"

REM *****Print*****

```
SIZE 3,3
GAP 0.08,0
DENSITY 8
SPEED 6
DIRECTION 0
REFERENCE 0,0
SET CUTTER OFF
SET PEEL OFF
CLS
TEXT 10,10,"5",0,1,1,"@DAY"
TEXT 310,10,"5",0,1,1,@DAY
PRINT 1
```

See Also

~!C, @YEAR, @MONTH, @DATE, @HOUR, @MINUTE, @SECOND

● @HOUR

Description
This variable is used to read from/write to RTC the hour data. The 24-hour-day system (00~23) is supported by RTC.
@HOUR global variable can be accessed directly without using BASIC language functions.

MODEL	SUPPORT
TTP-243	
TTP-243E	
TTP-243 Plus	X
TTP-243E Plus	X
TTP-244ME	
TTP-244ME Plus	X
TTP-244	
TTP-245	X
TDP-245	X
TTP-245G	X
TDP-245G	X
TTP-246M	X
TTP-246G	X
TTP-248M	X
TTP-342	
TTP-342 Plus	X
TTP-342M	
TTP-342M Plus	X
TTP-343	X
TTP-344M	X
TTP-346M	X
TDP-643 Plus	
TDP-643R Plus	X
TTP-2410M	X
M23	X

Syntax
Write attribute: @HOUR ="12"
Read attribute: @HOUR
Range: 00~23

Example
REM *****Set @HOUR*****
@HOUR="23"

REM *****Print*****
SIZE 3,3

```
GAP 0.08,0
DENSITY 8
SPEED 6
DIRECTION 0
REFERENCE 0,0
SET CUTTER OFF
SET PEEL OFF
CLS
TEXT 10,10,"5",0,1,1,"@HOUR"
TEXT 310,10,"5",0,1,1,@HOUR
PRINT 1
```

See Also

~!C, @YEAR, @MONTH, @DATE, @DAY, @MINUTE, @SECOND

● @MINUTE

Description
This variable is used to read from/write to RTC the minute data. Two-digits (00~59) minute format is supported by RTC.

@MINUTE global variable can be accessed directly without using BASIC language functions.

MODEL	SUPPORT
TTP-243	
TTP-243E	
TTP-243 Plus	X
TTP-243E Plus	X
TTP-244ME	
TTP-244ME Plus	X
TTP-244	
TTP-245	X
TDP-245	X
TTP-245G	X
TDP-245G	X
TTP-246M	X
TTP-246G	X
TTP-248M	X
TTP-342	
TTP-342 Plus	X
TTP-342M	
TTP-342M Plus	X
TTP-343	X
TTP-344M	X
TTP-346M	X
TDP-643 Plus	
TDP-643R Plus	X
TTP-2410M	X
M23	X

Syntax
Write attribute: @MINUTE ="12"
Read attribute: @MINUTE
Range: 00~59

Example
REM *****Set @MINUTE*****
@MINUTE="59"

REM *****Print*****

```
SIZE 3,3
GAP 0.08,0
DENSITY 8
SPEED 6
DIRECTION 0
REFERENCE 0,0
SET CUTTER OFF
SET PEEL OFF
CLS
TEXT 10,10,"5",0,1,1,"@MINUTE"
TEXT 310,10,"5",0,1,1,@MINUTE
PRINT 1
```

See Also

~!C, @YEAR, @MONTH, @DATE, @DAY, @HOUR, @SECOND

● @SECOND

Description

This variable is used to read from/write to RTC the second data. Two-digits (00~59) second format is supported by RTC.

@SECOND global variable can be accessed directly without using BASIC language functions.

MODEL	SUPPORT
TTP-243	
TTP-243E	
TTP-243 Plus	X
TTP-243E Plus	X
TTP-244ME	
TTP-244ME Plus	X
TTP-244	
TTP-245	X
TDP-245	X
TTP-245G	X
TDP-245G	X
TTP-246M	X
TTP-246G	X
TTP-248M	X
TTP-342	
TTP-342 Plus	X
TTP-342M	
TTP-342M Plus	X
TTP-343	X
TTP-344M	X
TTP-346M	X
TDP-643 Plus	
TDP-643R Plus	X
TTP-2410M	X
M23	X

Syntax

Write attribute: @SECOND="12"
Read attribute: @SECOND
Range: 00~59

Example

REM *****Set @SECOND*****
@SECOND="59"

REM *****Print*****

```
SIZE 3,3
GAP 0,0
DENSITY 8
SPEED 6
DIRECTION 0
REFERENCE 0,0
SET CUTTER OFF
SET PEEL OFF
CLS
TEXT 10,10,"5",0,1,1,"@SECOND"
TEXT 310,10,"5",0,1,1,@SECOND
PRINT 1
```

See Also

~!C, @YEAR, @MONTH, @DATE, @DAY, @HOUR, @MINUTE

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