Manual de Programação
TT042

ELGIN

TABLE OF CONTENTS

How to Read **8**

Document Conventions **9**

Object Position Calculation **10**

Setup and System Commands **13**

- SIZE 13
- GAP 15
- GAPDETECT 18
- BLINEDETECT 19
- AUTODETECT 20
- BLINE 21
- OFFSET 23
- SPEED 25
- DENSITY 26
- DIRECTION AND MIRROR IMAGE 27
- REFERENCE 28
- SHIFT 30
- COUNTRY 32
- CODEPAGE 34
- CLS 38
- FEED 39
- BACKFEED & BACKUP 40
- FORMFEED 42
- HOME 44
- PRINT 46
- SOUND 48
- CUT 49
- LIMITFEED 51
- SELFTEST 52
- EOJ 55

- DELAY 57
- DISPLAY 59
- INITIALPRINTER 60

Label Formatting Commands 61

- BAR 61
- BARCODE 63
- TLC39 76
- BITMAP 78
- BOX 81
- CIRCLE 83
- ELLIPSE 85
- CODABLOCK F MODE 87
- DMATRIX 89
- ERASE 91
- MAXICODE 93
- PDF417 96
- AZTEC 102
- MPDF417 104
- PUTBMP 106
- PUTPCX 109
- QRCODE 112
- RSS 120
- REVERSE 126
- TEXT 128
- BLOCK 133

Status Polling and Immediate Commands 137

- <ESC>!? 137
- <ESC>!C 138
- <ESC>!D 139
- <ESC>!O 140

- <ESC>!P 141
- <ESC>!Q 142
- <ESC>!R 143
- <ESC>!S 144
- <ESC>!F 148
- <ESC>!. 149
- ~!@ 150
- ~!A 151
- ~!C 152
- ~!D 153
- ~!E 154
- ~!F 155
- ~!I 156
- ~!T 157
- <ESC> Y 158
- <ESC> Z 159

Message Translation Protocols 160

- ~# 160

Commands for Windows Driver 161

- !B 161
- !J 162
- !N 163

File Management Commands 164

- DOWNLOAD 164
- EOP 167
- FILES 169
- KILL 170
- RUN 173

BASIC Commands and Functions 175

- ABS( ) 175

- ASC( ) 176
- CHR$( ) 177
- XOR$( ) 178
- END 180
- EOF( ) 182
- OPEN 184
- CLOSE 187
- WRITE 188
- READ 189
- SEEK 191
- LOF( ) 193
- LOC( ) 195
- FREAD$( ) 197
- PUT 199
- GET 202
- COPY 204
- FOR…NEXT LOOP 206
- WHILE…WEND 208
- DO…LOOP 210
- IF…THEN…ELSE…ENDIF LOOP 215
- GOSUB…RETURN 221
- GOTO 223
- INP$( ) 225
- INP( ) 227
- LOB( ) 229
- INPUT 231
- PREINPUT 233
- POSTINPUT 234
- SET FILTER ON/OFF 235
- REM 237

- OUT 239
- OUTR 240
- GETKEY( ) 242
- INT( ) 244
- LEFT$( ) 246
- LEN( ) 248
- MID$( ) 250
- RIGHT$( ) 252
- STR$( ) 254
- STRCOMP( ) 256
- INSTR ( ) 258
- TRIM$( ) 260
- LTRIM$( ) 262
- RTRIM$( ) 264
- TEXTPIXEL( ) 266
- BARCODEPIXEL( ) 268
- VAL( ) 270
- BEEP 272
- NOW$( ) 273
- NOW 274
- FORMAT$( ) 275
- DATEADD() 280

Device Reconfiguration Commands 283

- SET COUNTER 283
- SET CUTTER 285
- SET PARTIAL_CUTTER 287
- SET BACK 289
- SET KEY1, SET KEY2, SET KEY3 291
- SET LED1, SET LED2, SET LED3 294
- SET PEEL 296

- SET TEAR & SET STRIPER 298
- SET GAP 300
- SET BLINE 303
- SET HEAD 304
- SET RIBBON 305
- SET ENCODER 307
- SET RIBBONEND 308
- SET COM1 309
- SET PRINTKEY 311
- SET REPRINT 313
- SET FEED_LEN 314
- GETSENSOR() 315
- GETSETTING$() 319
- SET USBHOST KEYBOARD/SCANNER 324
- SET AUTORUN 325
- PEEL 327
- LED1, LED2, LED3 329
- KEY1, KEY2, KEY3 331

Printer Global Variables 333

- @LABEL 333
- YEAR 335
- MONTH 337
- DATE 339
- WEEK 341
- HOUR 343
- MINUTE 345
- SECOND 347
- @MONTH 350
- @DATE 351
- @DAY 352

- @HOUR 353
- @MINUTE 354
- @SECOND 355
- _MODEL$ 356
- _SERIAL$ 357
- _VERSION$ 358

External Wi-Fi Module Setting Commands 359

- WLAN OFF 359
- WLAN SSID 360
- WLAN WPA 361
- WLAN WEP 362
- WLAN DHCP 363
- WLAN IP 364
- WLAN PORT 365
- WLAN MODE 366

Internal Ethernet Setting Commands 368

- NET DHCP 368
- NET IP 369
- NET PORT 371
- NET NAME 372

How to Read

The command name

MPDF417

Description

This command defines a Micro PDF 417 bar code.

Description of this command

Syntax

MPDF417 x, y, rotate, [Wn,][Hn,][Cn],"content"

Syntax of this command

Parameter	Description
x	Horizontal start position (in dots)
y	Vertical start position (in dots)
rotate	Rotation 0 : No rotation 90 : Rotate 90 degrees 180 : Rotate 180 degrees 270 : Rotate 270 degrees
Wn	Optional. Module width in dot. Default is 1.
Hn	Optional. Module height in dot. Default is 10.
Cn	Optional. Number of columns. Once the parameter is set, the printer will calculate the proper rows for the barcode base on the content automatically. 0: Auto mode. 1: Column is 1 and the calculated suitable rows will be 11, 14, 17, 20, 24, and 28. 2: Column is 2 and the calculated suitable rows will be 8, 11, 14, 17, 20, 23 and 26. 3: Column is 3 and the calculated suitable rows will be 6, 8, 10, 12, 15, 20, 26, 32, 38 and 44. 4: Column is 4 and the calculated suitable rows will be 4, 6, 8, 10, 12, 15, 20, 26, 32, 38 and 44.
"content"	Content of Micro PDF 417 bar code

Note:
This command has been supported since V6.61 EZ and later firmware.

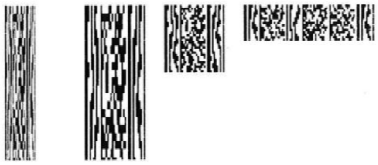
The detail description of each parameter

Example

Sample Code

```
SIZE 4,1
GAP 0,0
CLS
MPDF417 10,10,0,"ABCDEFGHIJKLMNOPQRSTUVWXYZ0123456789"
MPDF417 110,10,0,W2,"ABCDEFGHIJKLMNOPQRSTUVWXYZ0123456789"
MPDF417 210,10,0,W2,H3,"ABCDEFGHIJKLMNOPQRSTUVWXYZ0123456789"
MPDF417 310,10,0,W2,H3,C3,"ABCDEFGHIJKLMNOPQRSTUVWXYZ0123456789"
PRINT 1
```

Result



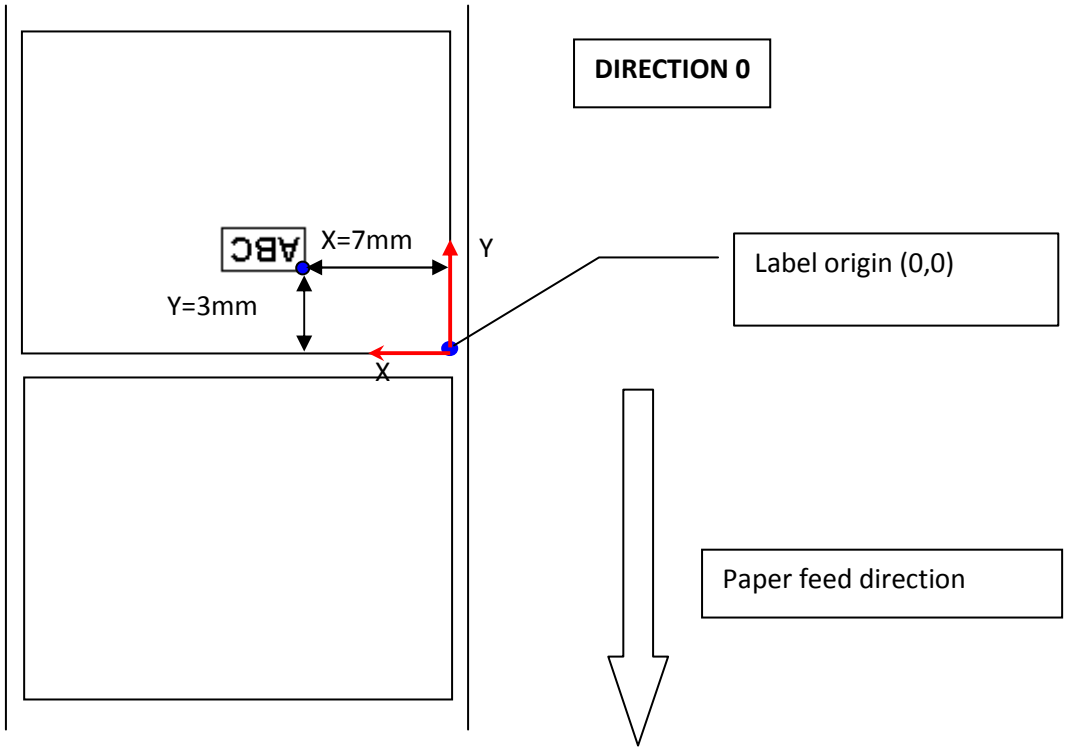
The example and printout for reference

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>	ASCII 27, control code of status polling command returns/runs the printer status immediately.
~	ASCII 126, control code of status polling command 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, denotes end of command line.
NULL	ASCII 0, supported in the expression.
Note: ***203 DPI: 1 mm = 8 dots***	The font in bold and italic type is used for note.

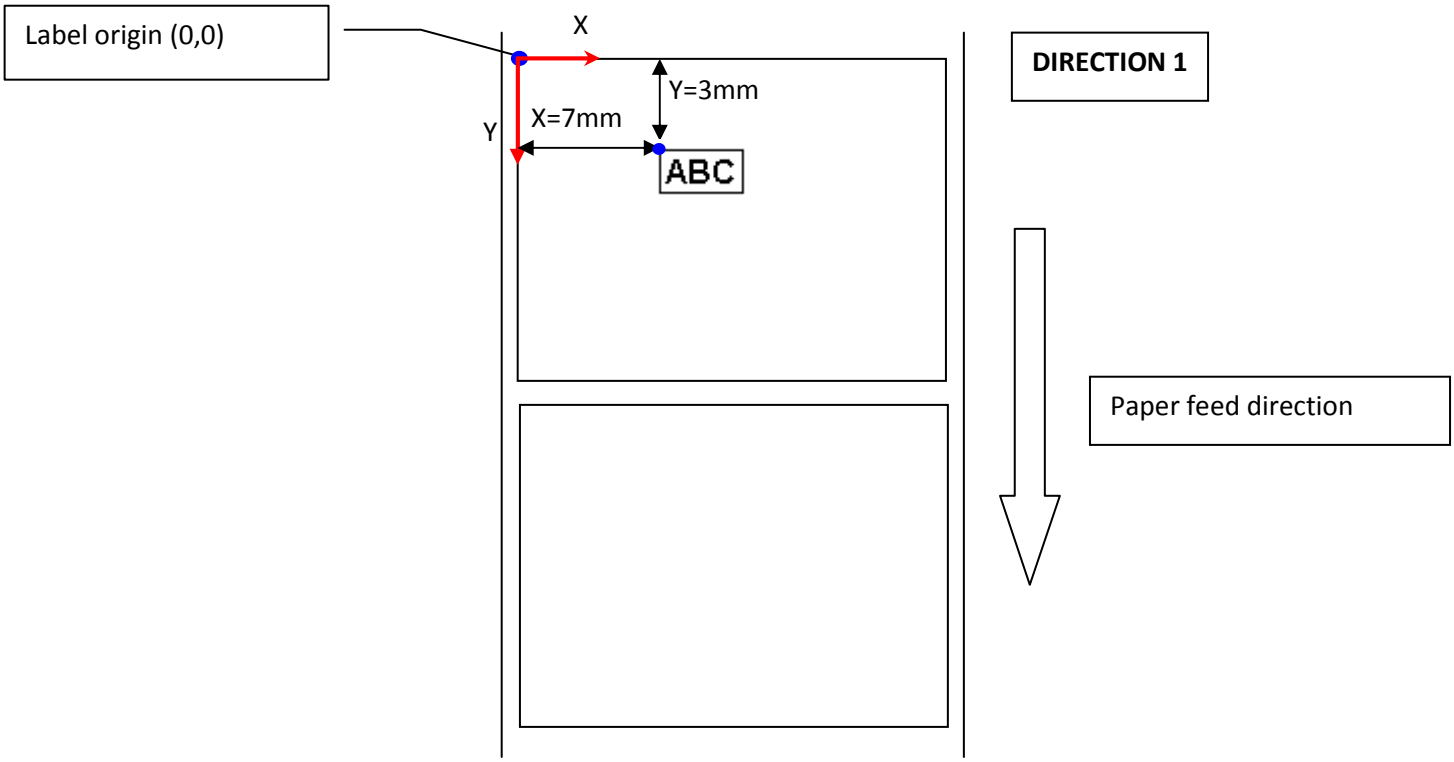
Object Position Calculation




```
DIRECTION 0

CLS

TEXT 56,24,"3",0,1,1,"ABC"
```

Note :

1. ***203 DPI, 1mm=8 dots ; 300 DPI, 1mm=11.8 dots***
2. ***Only integer portion will be used. Ex. 2 mm = 23.6 dots then 23 dots will be used.***




```
DIRECTION 1

CLS

TEXT 56,24,"3",0,1,1,"ABC"
```

Setup and System Commands

● SIZE

Description

This command defines the label width and length.

Syntax

SIZE m,n	English system (inch)
SIZE m mm,n mm	Metric system (mm)
SIZE m dot,n dot	Dot measurement ***This command has been supported since V6.27 EZ and later firmware.***

Parameter	**Description**
M	Label width (inch/ mm/ dot)
N	Label length (inch/ mm/ dot)

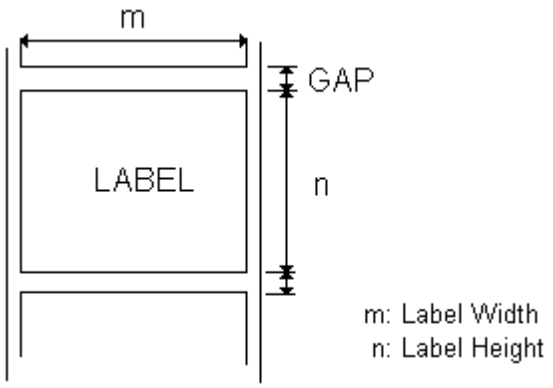
Note :

- ***200 DPI : 1 mm = 8 dots***

  300 DPI : 1mm = 12 dots

- ***For metric and dot systems, there must be a space between parameter and "mm" or "dot".***

Example

Sample Code	Result
▪ English system (inch): **SIZE 3.5,3.00** ▪ Metric system (mm): **SIZE 100 mm,100 mm**	

See Also

GAP, BLINE

● GAP

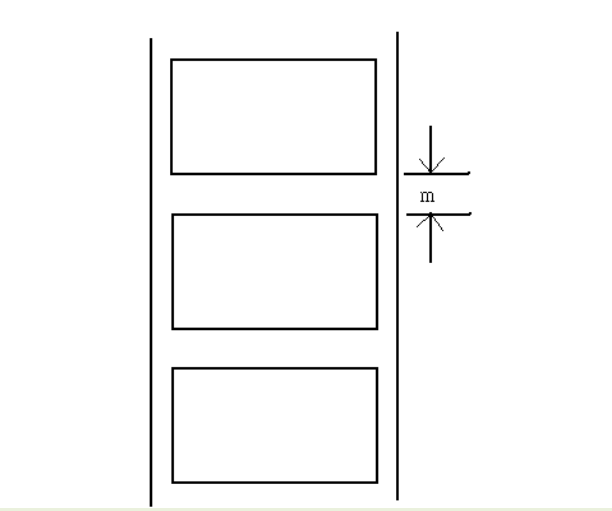
Description

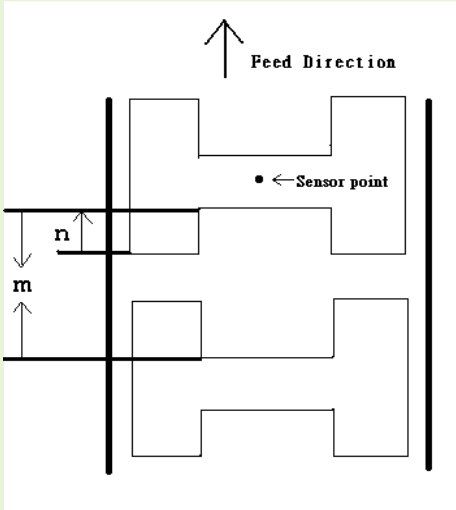
Defines the gap distance between two labels.

Syntax

GAP m,n	English system (inch)
GAP m mm,n mm	Metric system (mm)
GAP m dot,n dot	Dot measurement ***This command has been supported since V6.27 EZ and later firmware.***

Parameter	**Description**
M	The gap distance between two labels
	0 ≤ m ≤1 (inch), 0 ≤ m ≤ 25.4 (mm)
	0 ≤ m ≤5 (inch), 0 ≤ m ≤ 127 (mm) / ***since V6.21 EZ and later firmware***
N	The offset distance of the gap
	n ≤ label length (inch or mm)
0, 0	Continuous label





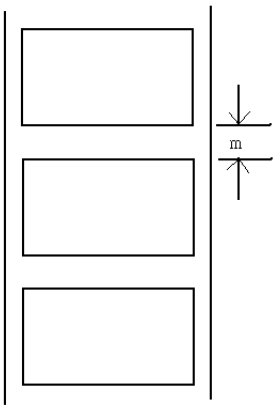
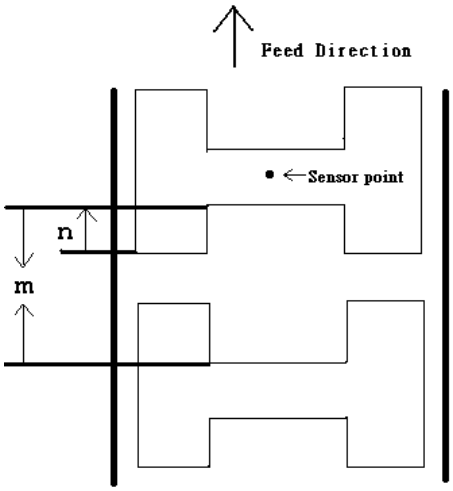
Note :

- ***200 DPI : 1 mm = 8 dots***

  300 DPI : 1mm = 12 dots

- ***For metric and dot systems, 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.***

Example

Sample Code	Result
Normal gap ▪ English system (inch): **GAP 0.12,0** ▪ Metric system (mm): **GAP 3 mm,0 mm** ▪ Continuous label: **GAP 0,0**	**Normal gap** 
Special gap ▪ English system (inch) **GAP 0.30,0.10** ▪ Metric system (mm) **GAP 7.62 mm,2.54 mm**	**Special gap** 

See Also

SIZE, BLINE

● GAPDETECT

Description

This command feeds the paper through the gap sensor in an effort to determine the paper and gap sizes, respectively. This command references the user's approximate measurements. If the measurements conflict with the actual size, the GAPDETECT command will not work properly. This calibration method can be applied to the labels with pre-printed logos or texts.

Syntax

GAPDETECT [x,y]

Parameter	**Description**
X	Paper length (in dots)
Y	Gap length (in dots)

Note:

If the x, y parameters are ignored then the printer will calibrate and determine the paper length and gap size automatically.

See Also

GAP, SIZE, BLINEDETECT, AUTODETECT

● BLINEDETECT

Description

This command feeds the paper through the black mark sensor in an effort to determine the paper and black mark sizes, respectively. This command references the user's approximate measurements. If the measurements conflict with the actual size, the BLINEDETECT command will not work properly. This calibration method can be applied to the labels with pre-printed logos or texts.

Syntax

BLINEDETECT [x,y]

Parameter	Description
x	Paper length (in dots)
y	Gap length (in dots)

Note:

If the x, y parameters are ignored then the printer will calibrate and determine the paper length and gap size automatically.

See Also

GAP, SIZE, GAPDETECT, AUTODETECT

AUTODETECT

Description

This command feeds the paper through the gap/black mark sensor in an effort to determine the paper and gap/black mark sizes, respectively. This command references the user's approximate measurements. If the measurements conflict with the actual size, the AUTODETECT command will not work properly. This calibration method can be applied to the labels with pre-printed logos or texts.

Syntax

AUTODETECT [x,y]

Parameter	Description
x	Paper length (in dots)
y	Gap length (in dots)

Note:

- ***If the x, y parameters are ignored then the printer will calibrate and determine the paper length and gap/black mark size automatically.***
- ***When using this command, the printer will detect the label by the proper sensor type so please don't set the command GAP or BLINE in your program.***
- ***It is supported in firmware V6.86 EZ or later.***

See Also

GAP, SIZE, GAPDETECT, BLINEDETECT

● BLINE

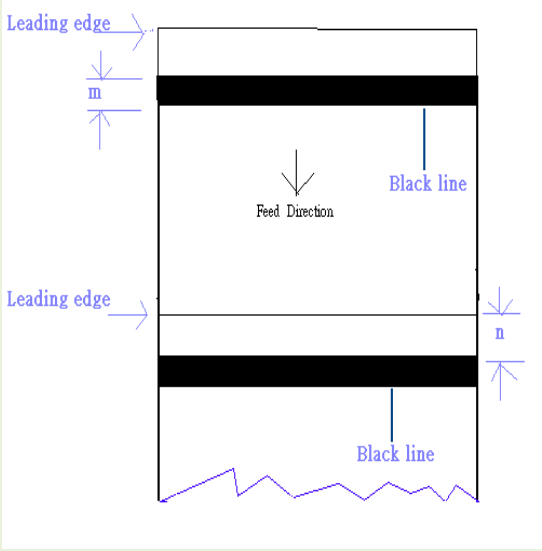
Description

This command sets the height of the black line and the user-defined extra label feeding length each form feed takes.

Syntax

BLINE m,n	English system (inch)
BLINE m mm,n mm	Metric system (mm)
BLINE m dot,n dot	Dot measurement ***This command has been supported since V6.27 EZ and later firmware.***

Parameter	**Description**
m	The height of black line either in inch or mm
	0 ≤ m ≤ 1 (inch), 0 ≤ m ≤ 25.4 (mm)
	0 ≤ m ≤5 (inch), 0 ≤ m ≤ 127 (mm) / ***since V6.21 EZ and later firmware***
n	The extra label feeding length
	0 ≤ n ≤ 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.***
- ***200 DPI : 1 mm = 8 dots***

  300 DPI : 1mm = 12 dots

Example

Sample Code

- English system (inch):

  BLINE 0.20,0.50

- Metric system (mm):

  BLINE 5.08 mm,12.7 mm

See Also

SIZE, GAP

OFFSET

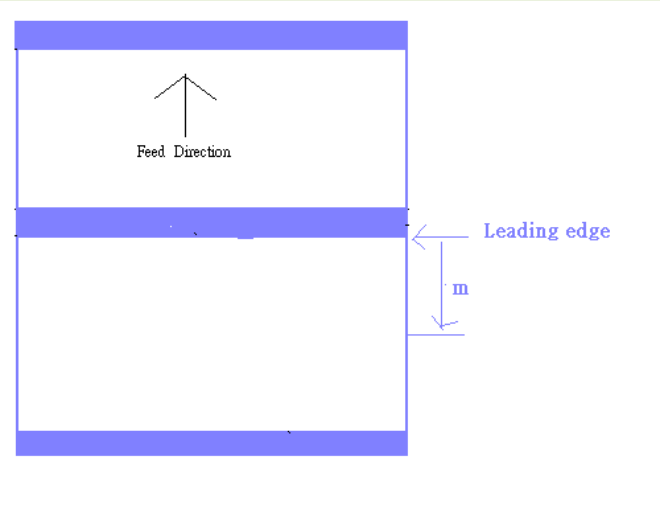
Description

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 back tracks the extra feeding length before the next run of printing.

Syntax

OFFSET m	English system (inch)
OFFSET m mm	Metric system (mm)
OFFSET m dot,n dot	Dot measurement ***This command has been supported since V6.27 EZ and later firmware.***

Parameter	**Description**
m	The offset distance (inch or mm) -1 ≤ m ≤ 1 (inch)



CAUTION:

- ***Impropriety offset value may cause paper jam.***
- ***For metric system, there must be a space between parameter and mm.***
- ***200 DPI : 1 mm = 8 dots***

  300 DPI : 1mm = 12 dots

Example

Sample Code

- English system (inch):

  OFFSET 0.5

- Metric system (mm):

  OFFSET 12.7 mm

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	7	8	9	10	11	12	13	14
TT042-50 (203 dpi)series			V		V		V	V	V								
TT042-60 (300 dpi)series		V	V		V		V										

Example

Sample code

SPEED 6

See Also

DENSITY

Description

This command sets the printing darkness.

Syntax

DENSITY n

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

Note:

Default DENSITY setting is 8.

Example

Sample code

```
DENSITY 7
```

● DIRECTION and Mirror Image

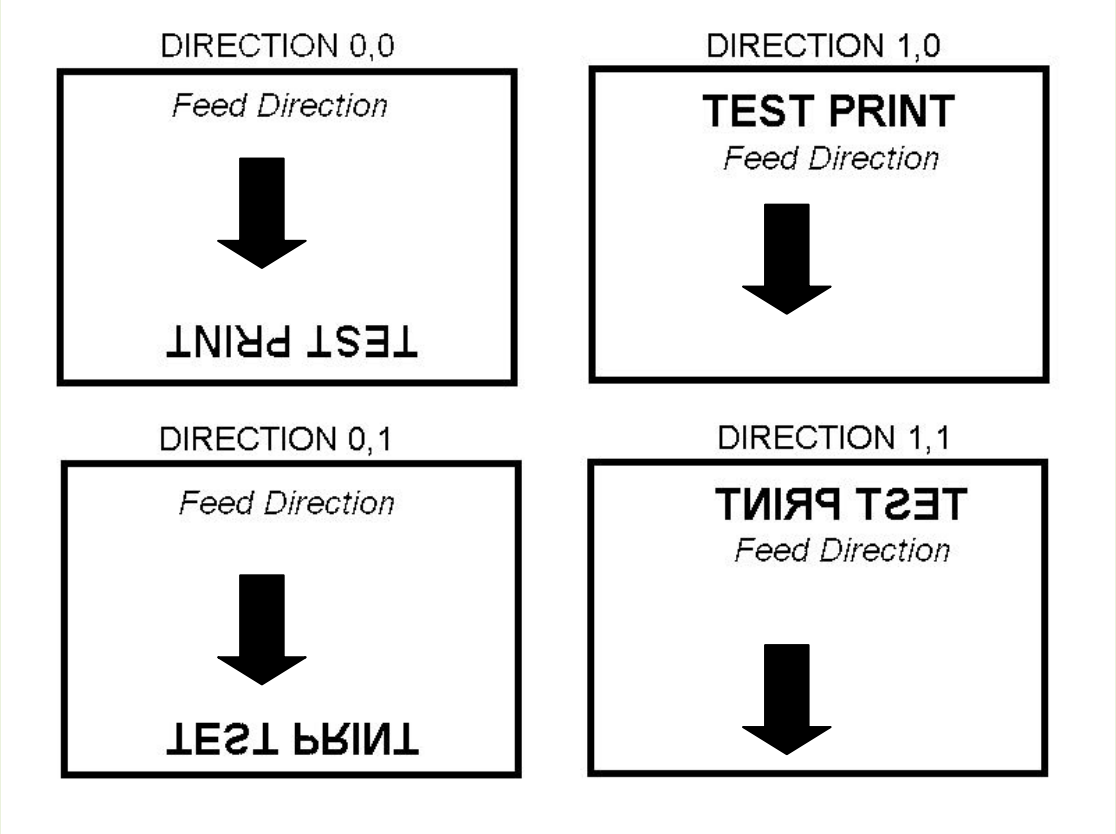
Description

This command defines the printout direction and mirror image. This will be stored in the printer memory.

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



Example

Sample code

- **DIRECTION 0**

- **DIRECTION 0,1**

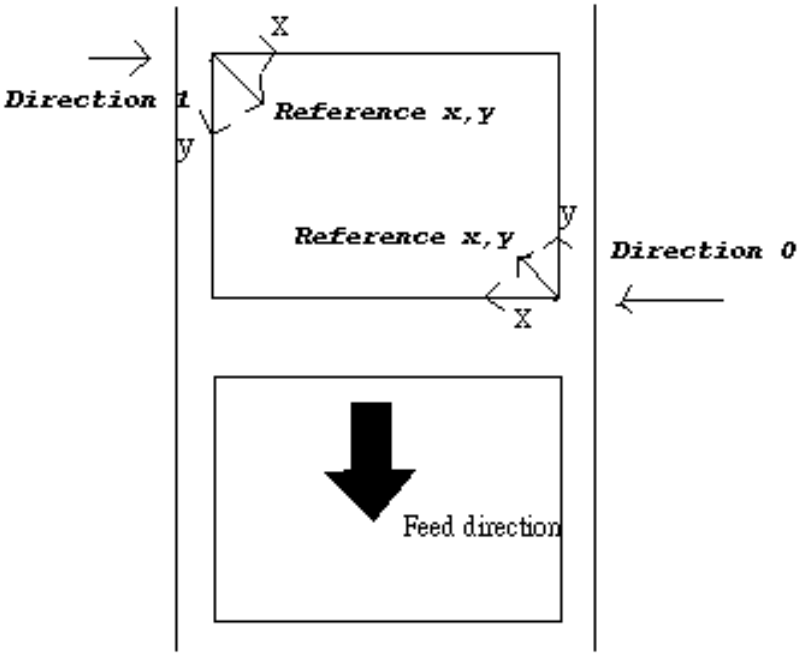
See Also

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 (in dots)
y	Vertical coordinate (in dots)

Note:

200 DPI: 1 mm = 8 dots

300 DPI: 1 mm = 12 dots

Example

Sample code

```
REFERENCE 10,10
```

See Also

DIRECTION

● SHIFT

Description

This command moves the label's vertical position. A positive value moves the label further from the printing direction; a negative value moves the label towards the printing direction. For a visual representation, see next page.

Syntax

SHIFT n

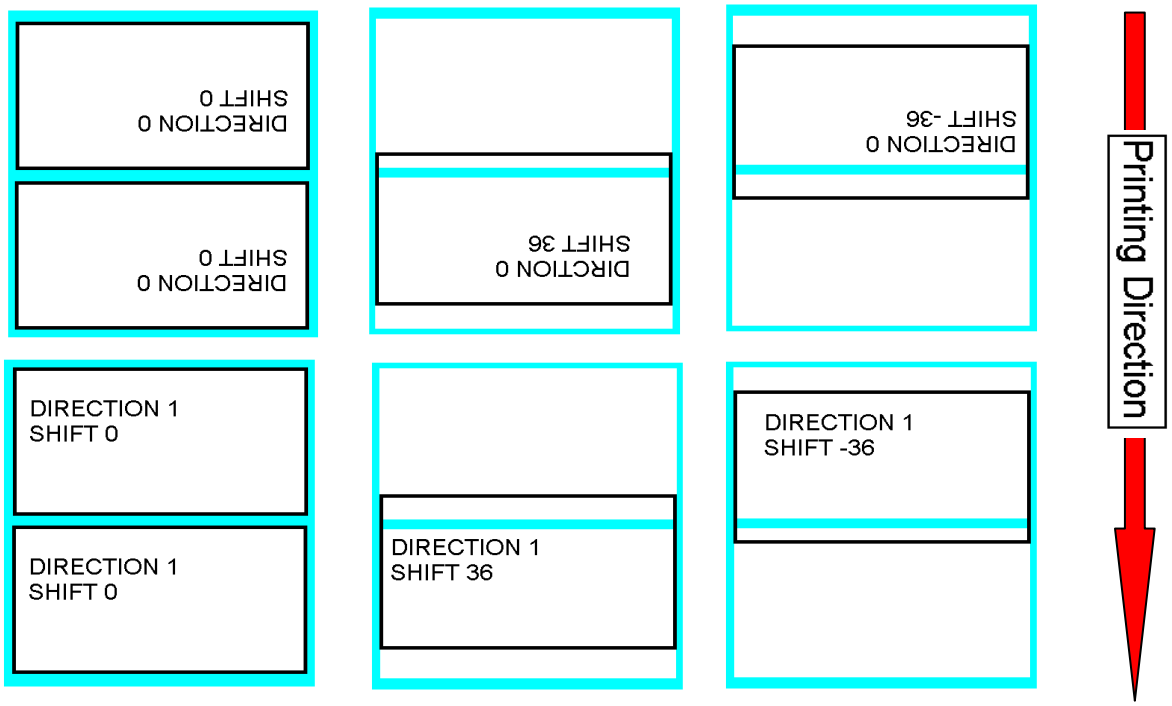
Parameter	Description
n	The maximum value is 1 inch. For 200 dpi printers, the range is –203 to 203; for 300 dpi printers, the range is –300 to 300. The unit is dot.

Example

Sample Code

```
SIZE 4,2.5
GAP 2 mm,0
DIRECTION 0
SHIFT 36
OFFSET 0
CLS
TEXT 400,200,"3",0,1,1,"DIRECTION 0"
TEXT 400,250,"3",0,1,1,"SHIFT 36"
BOX 10,0,780,490,8
PRINT 3,1
```

Result



See Also

OFFSET, REFERENCE

● COUNTRY

Description

This command orients the keyboard for use in different countries via defining special characters on the KP-200 series portable LCD keyboard (option).

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

Sample Code

```
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.

7-bit code page		8-bit code page		Windows code page		ISO code page	
n	Name	n	Name	n	Name	n	Name
USA	USA	**437**	United States	**1250**	Central Europe	**8859-1**	Latin 1
BRI	British	**737**	Greek	**1251**	Cyrillic	**8859-2**	Latin 2
GER	German	**850**	Multilingual	**1252**	Latin I	**8859-3**	Latin 3
FRE	French	**851**	Greek 1	**1253**	Greek	**8859-4**	Baltic
DAN	Danish	**852**	Slavic	**1254**	Turkish	**8859-5**	Cyrillic
ITA	Italian	**855**	Cyrillic	**1255**	Hebrew	**8859-6**	Arabic
SPA	Spanish	**857**	Turkish	**1256**	Arabic	**8859-7**	Greek
SWE	Swedish	**860**	Portuguese	**1257**	Baltic	**8859-8**	Hebrew
SWI	Swiss	**861**	Icelandic	**1258**	Vietnam	**8859-9**	Turkish
		862	Hebrew	**932**	Japanese Shift-JIS	**8859-10**	Latin 6
		863	Canadian/French	**936**	Simplified Chinese GBK	**8859-15**	Latin 9
		864	Arabic	**949**	Korean		
		865	Nordic	**950**	Traditional Chinese Big5		
		866	Russian	**UTF-8**	UTF 8		

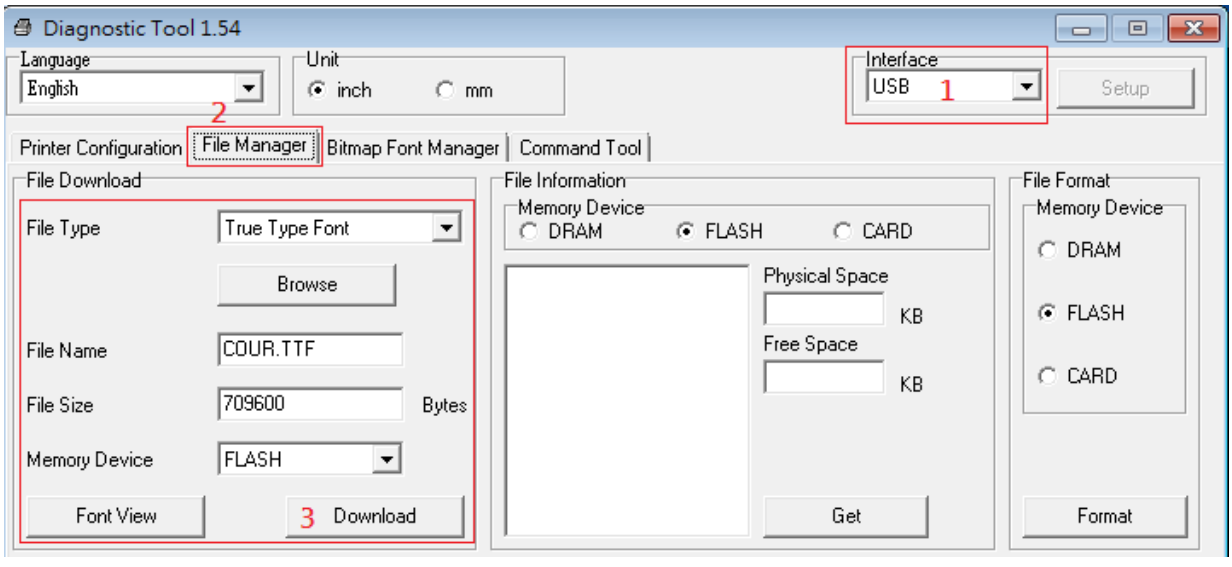
		869	Greek 2				

Note:

DATA LENGTH determines 7-bit or 8-bit communications parameter.

Example

Download the COUR.TTF into printer by DiagTool



Sample Code

```
DOWNLOAD "TEST.BAS"


str1$ = ""

J = 0

y = 50


CODEPAGE 1252

SIZE 4,3

GAP 0,0

DIRECTION 1

CLS

TEXT 10,10,"COUR.TTF",0,12,12,"CODEPAGE 1252"

FOR I=32 TO 255

str1$=str1$+CHR$(I) + " "

J=J+1

IF J=16 THEN GOSUB drawTEXT

NEXT


PRINT 1

END


drawTEXT:

TEXT 10,y,"COUR.TTF",0,12,12,str1$

str1$=""

J=0

y=y+40
```

Result

CODEPAGE 1252

```
  ! " # $ % & ' ( ) * + , - . /
0 1 2 3 4 5 6 7 8 9 : ; < = > ?
@ A B C D E F G H I J K L M N O
P Q R S T U V W X Y Z [ \ ] ^ _
` a b c d e f g h i j k l m n o
p q r s t u v w x y z { | } ~
€   ‚ ƒ „ … † ‡ ˆ ‰ Š ‹ Œ   Ž
  ‘ ’ “ ” • – — ˜ ™ š › œ   ž Ÿ
  ¡ ¢ £ ¤ ¥ ¦ § ¨ © ª « ¬ - ® ¯
° ± ² ³ ´ µ ¶ · ¸ ¹ º » ¼ ½ ¾ ¿
À Á Â Ã Ä Å Æ Ç È É Ê Ë Ì Í Î Ï
Ð Ñ Ò Ó Ô Õ Ö × Ø Ù Ú Û Ü Ý Þ ß
à á â ã ä å æ ç è é ê ë ì í î ï
ð ñ ò ó ô õ ö ÷ ø ù ú û ü ý þ ÿ
```

RETURN **EOP** **TEST**	

See Also

COUNTRY, ~!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

Sample code

```
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 ≤ n ≤ 9999

Note:

200 DPI: 1 mm = 8 dots

300 DPI: 1 mm = 12 dots

Example

Sample code

```
FEED 40
```

See Also

BACKFEED, SIZE, GAP, BLINE, HOME, FORMFEED

● BACKFEED & BACKUP

Description

This command feeds the label in reverse. The length is specified by dot.

Syntax

BACKUP n	TSPL printers only
BACKFEED n	TSPL2 printers only

Note: Please refer to printer model list for checking TSPL or TSPL2.

Parameter	**Description**
n	unit: dot 1 ≤ n ≤ 9999

Note:

200 DPI: 1 mm = 8 dots

300 DPI: 1 mm = 12 dots

CAUTION:

Impropriety back feed value may cause paper jam or wrinkle.

Example

Sample code

- TSPL printers

  BACKUP 40

- TSPL2 printers

BACKFEED 40

See Also

FEED, SIZE, GAP, BLINE, HOME, FORMFEED

● FORMFEED

Description

This command feeds label to the beginning of next label.

Syntax

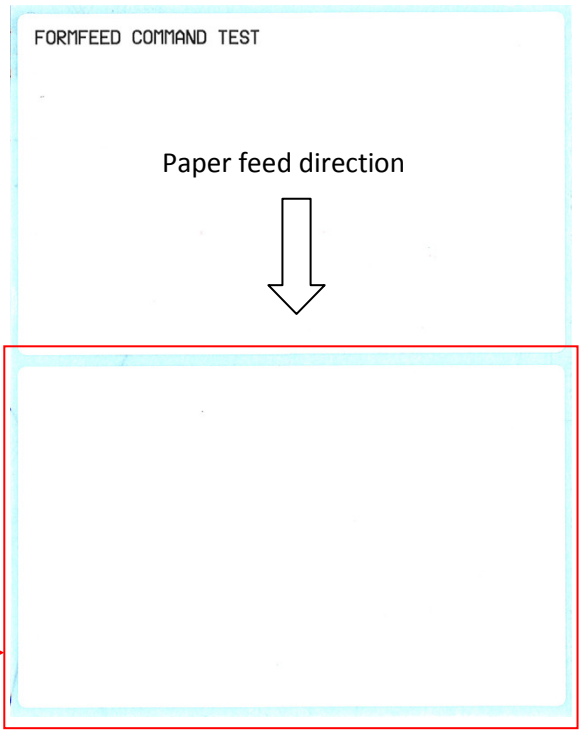
FORMFEED

Parameter	Description
None	N/A

Note:

This command must be placed after SIZE command.

Example

Sample code	Result
SIZE 4,2.5 GAP 2 mm,0 DIRECTION 1 FORMFEED CLS TEXT 25,25,"3",0,1,1,"FORMFEED COMMAND TEST" PRINT 1,1	

See Also

FEED, SIZE, GAP, BLINE, HOME, BACKFEED

HOME

Description

This command will feed label until the internal sensor has determined the origin. Size and gap of the label should be defined before using this command.

Syntax

HOME

Parameter	Description
None	N/A

For TSPL programming printer: Back label to origin position

For TSPL2 programming printer: Feed label to origin position

Note: Please refer to printer model list for checking TSPL or TSPL2.

Example

Sample code

```
SIZE 4,2.5
GAP 2 mm,0
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 currently stored in the image buffer.

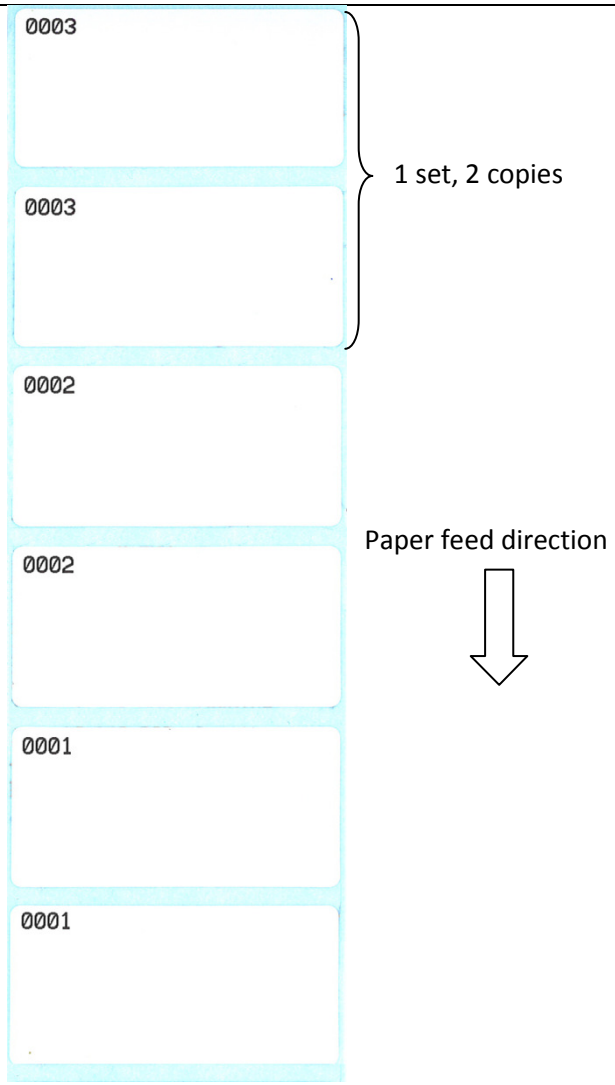
Syntax

PRINT m[,n]

Parameter	Description
m	Specifies how many sets of labels will be printed. 1 ≤ m ≤ 999999999
n	Specifies how many copies should be printed for each particular label set. 1 ≤ n ≤ 999999999

Example

Sample code	Result
SIZE 50 mm,25 mm GAP 3 mm,0 DIRECTION 1 SET COUNTER @1 1 @1="0001" CLS TEXT 10,10,"3",0,1,1,@1 PRINT 3,2	



See Also

SET COUNTER, INPUT, DOWNLOAD

● SOUND

Description

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

Syntax

SOUND level,interval

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

Example

Sample code

```
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

This command activates the cutter to immediately cut the labels without back feeding the label.

Syntax

CUT

Parameter	Description
None	N/A

Example

Sample code

```
SIZE 3,3
GAP 0,0
CLS
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

If the gap sensor is not set to a suitable sensitivity while feeding labels, the printer will not be able to locate the correct position of the gap. This command stops label feeding and makes 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[,minpaper,maxgap]	English system (inch)
LIMITFEED n mm[,minpaper mm,maxgap mm]	Metric system (mm)
LIMITFEED n dot[,minpaper dot,maxgap dot]	Dot measurement ***This command has been supported since V6.34 EZ.***

Parameter	**Description**
N	The maximum length for sensor detecting
Minpaper	The minimum length of paper
Maxgap	The maximum length of gap

Note:

- ***The setting will remain resident in memory.***
- ***For metric system, there must be a space between parameter n and mm.***
- ***The default value is 10 inches when printer initializes.***
- ***The setting of parameters "mimpaper" and "maxgap" are using for calibrating the preprinted label. This parameter has been supported since V6.98.7 EZ.***

Example

Sample code

- English system (inch)

```
LIMITFEED 12
```

● SELFTEST

Description

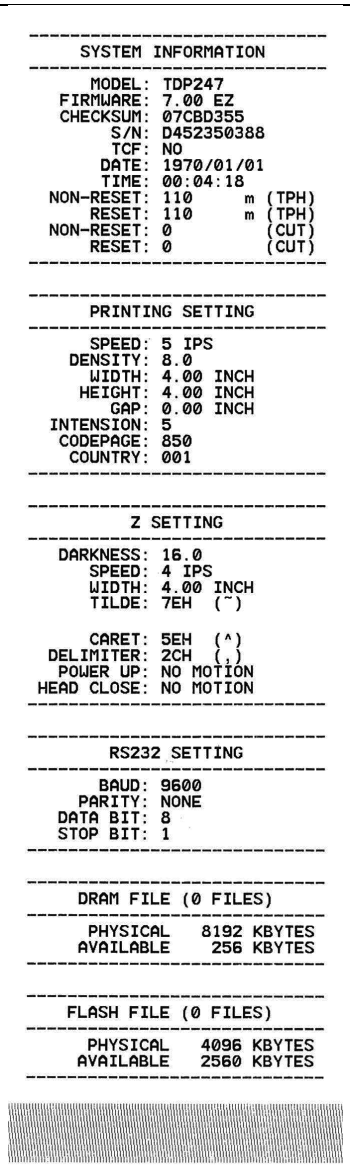
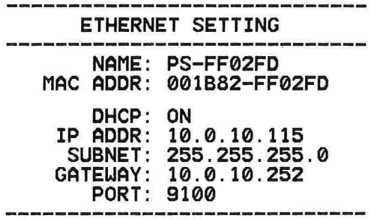
At this command, the printer will print out the printer information.

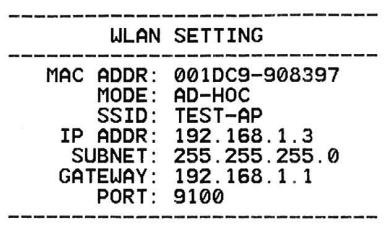
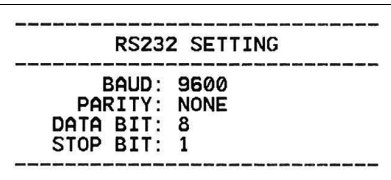
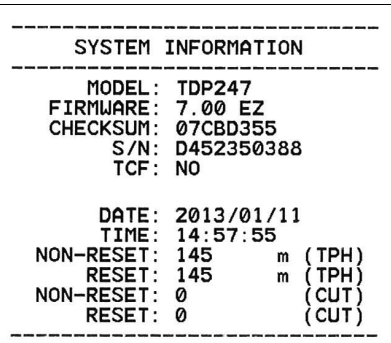
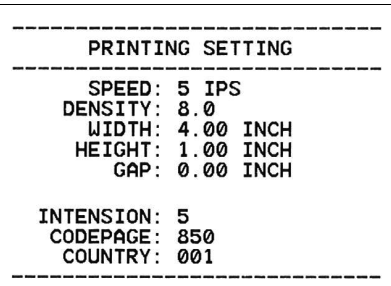
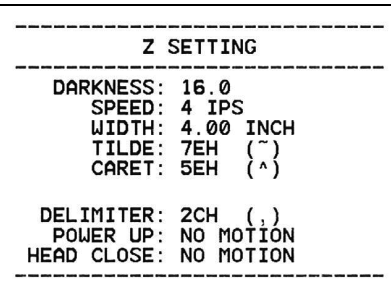
Syntax

SELFTEST [page]

Parameter	Description
page	**omitted**: Print a self-test page with whole printer information.
	PATTERN: Print a pattern to check the status of print head heat line.
	ETHERNET: Print a self-test page with Ethernet settings.
	WLAN: Print a self-test page with Wi-Fi settings.
	RS232: Print a self-test page with RS-232 settings.
	SYSTEM: Print a self-test page with printer settings.
	Z: Print a self-test page with emulated language settings.

Example

Sample code	Result
SELFTEST	
SELFTEST PATTERN	
SELFTEST ETHERNET	

SELFTEST WLAN	
SELFTEST RS232	
SELFTEST SYSTEM	
SELFTEST PRINTER	
SELFTEST Z	

● EOJ

Description

Let the printer wait until process of commands (before EOJ) be finished then go on the next command.

Syntax

EOJ

Note:

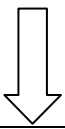
This command has been supported since V6.39 EZ and later firmware.

Example

Sample Code

```
SIZE 4,0.2
GAP 0,0
DIRECTION 1
CLS
TEXT 10,10,"3",0,1,1,"Two labels are printed without stop."
PRINT 1
PRINT 1

SIZE 4,0.2
GAP 0,0
CLS
TEXT 10,10,"3",0,1,1,"Printer stops before next printing."
PRINT 1
EOJ
PRINT 1
```

Paper feed direction



Result

Printer stops before next printing.
Printer stops before next printing.
Two labels are printed without stop.
Two labels are printed without stop.

} without stop

● DELAY

Description

Let the printer wait specific period of time then go on next command.

Syntax

DELAY ms

Parameter	Description
ms	The specific period of time. Unit is millisecond. 1000 ms = 1 second.

Note:

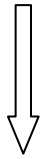
This command has been supported since V6.34 EZ and later firmware.

Example

Sample Code

```
SIZE 4,0.7
GAP 0,0
DIRECTION 1
CLS
TEXT 10,10,"3",0,1,1,"The delay time between two labels is 3 seconds."
TEXT 10,60,"3",0,1,1,"Now second:"+@SECOND
PRINT 1
DELAY 3000
PRINT 1
```

Result



```
The delay time between two labels is 3 seconds.
Now second:9

The delay time between two labels is 3 seconds.
Now second:6
```

● DISPLAY

Description

This command can show the image, which is in printer's image buffer, on LCD panel.

Syntax

DISPLAY IMAGE/OFF

Parameter	Description
IMAGE	Show the image in printer's image buffer on LCD panel.
OFF	Disable this function.

Note:

- ***This command has been supported since V6.39 EZ and later firmware.***
- ***This command only can be performed on the printer with LCD display.***

Example

Sample code	Result
CLS **TEXT 1,10,"1",0,1,1,"Image on LCD"** **TEXT 1,30,"1",0,1,1,"1234567890"** **DISPLAY IMAGE** **DELAY 5000** **DISPLAY OFF**	

● INITIALPRINTER

Description

This command can restore printer settings to defaults.

Syntax

INITIALPRINTER

Parameter	Description
None	N/A

Example

Sample code

```
INITIALPRINTER
```

Label Formatting Commands

● BAR

Description

This command draws a bar on the label format.

Syntax

BAR x,y,width,height

Parameter	Description
x	The upper left corner x-coordinate (in dots)
y	The upper left corner y-coordinate (in dots)
width	Bar width (in dots)
height	Bar height (in dots)

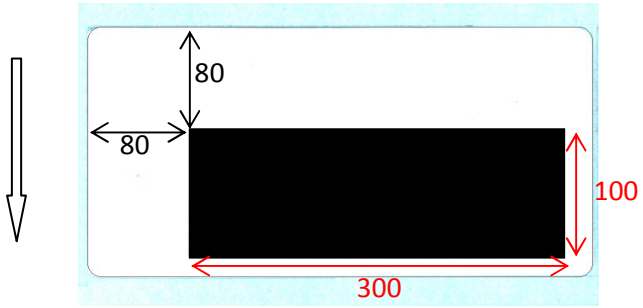
Note:

- ***200 DPI: 1 mm = 8 dots***

  300 DPI: 1 mm = 12 dots

- ***Recommended max. bar height is 12 mm at 4" width. Bar height over 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

Sample code	Result
SIZE 50 mm,25 mm GAP 3 mm,0 DIRECTION 1 CLS BAR 80,80,300,100 PRINT 1,1	

See Also

BOX

BARCODE

Description

This command prints 1D barcodes. The available barcodes are listed below:

Code Type	Description	Narrow : Width					Max. data length
		1:1	1:2	1:3	2:5	3:7	
128	Code 128, switching code subset automatically.	V					
128M	Code 128, switching code subset manually.	V					
EAN128	EAN128, switching code subset automatically.	V					
25	Interleaved 2 of 5.		V	V	V		Length is even
25C	Interleaved 2 of 5 with check digit.		V	V	V		Length is odd
39	Code 39, switching standard and full ASCII mode automatically.		V	V	V		
39C	Code 39 with check digit.		V	V	V		
93	Code 93.			V			
EAN13	EAN 13.	V					12
EAN13+2	EAN 13 with 2 digits add-on.	V					14
EAN13+5	EAN 13 with 5 digits add-on.	V					17
EAN8	EAN 8.	V					7
EAN8+2	EAN 8 with 2 digits add-on.	V					9
EAN8+5	EAN 8 with 5 digits add-on.	V					12
CODA	Codabar.		V	V	V		
POST	Postnet.	V					5, 9, 11
UPCA	UPC-A.	V					11
UPCA+2	UPC-A with 2 digits add-on.	V					13
UPA+5	UPC-A with 5 digits add-on.	V					16
UPCE	UPC-E.	V					6
UPCE+2	UPC-E with 2 digits add-on.	V					8
UPE+5	UPC-E with 5 digits add-on.	V					11
MSI	MSI.		V	V	V		
MSIC	MSI with check digit.		V	V	V		

PLESSEY	PLESSEY.		V	V	V		
CPOST	China post.					V	
ITF14	ITF14.		V	V	V		13
EAN14	EAN14.	V					13
11	Code 11.		V	V	V		
TELEPEN	Telepen. ***Since V6.89EZ.***		V	V	V		
TELEPENN	Telepen number. ***Since V6.89EZ.***		V	V	V		
PLANET	Planet. ***Since V6.89EZ.***	V					
CODE49	Code 49. ***Since V6.89EZ.***	V					
DPI	Deutsche Post Identcode. ***Since V6.91EZ.***		V	V	V		11
DPL	Deutsche Post Leitcode. ***Since V6.91EZ.***		V	V	V		13
LOGMARS	A special use of Code 39. ***Since V6.88EZ.***		V	V	V		

Syntax

BARCODE X,Y,"code type",height,human readable,rotation,narrow,wide,[alignment,]"content "

<table>
<tr><td><u>Parameter</u></td><td></td><td><u>Description</u></td></tr>
<tr><td>X</td><td></td><td>Specify the x-coordinate bar code on the label</td></tr>
<tr><td>Y</td><td></td><td>Specify the y-coordinate bar code on the label</td></tr>
<tr><td>code type</td><td></td><td></td></tr>
<tr><td></td><td>128</td><td>Code 128, switching code subset A, B, C automatically</td></tr>
<tr><td></td><td>128M</td><td>Code 128, switching code subset A, B, C manually
<table>
<tr><td>Control code</td><td>A</td><td>B</td><td>C</td></tr>
<tr><td>096</td><td>FNC3</td><td>FNC3</td><td>NONE</td></tr>
<tr><td>097</td><td>FNC2</td><td>FNC2</td><td>NONE</td></tr>
<tr><td>098</td><td>SHIFT</td><td>SHIFT</td><td>NONE</td></tr>
<tr><td>099</td><td>CODE C</td><td>CODE C</td><td>NONE</td></tr>
<tr><td>100</td><td>CODE B</td><td>FNC4</td><td>CODE B</td></tr>
<tr><td>101</td><td>FNC4</td><td>CODE A</td><td>CODE A</td></tr>
<tr><td>102</td><td>FNC1</td><td>FNC1</td><td>FNC1</td></tr>
<tr><td>103</td><td colspan="3">Start (CODE A)</td></tr>
<tr><td>104</td><td colspan="3">Start (CODE B)</td></tr>
<tr><td>105</td><td colspan="3">Start (CODE C)</td></tr>
</table>
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.</td></tr>
<tr><td></td><td>EAN128</td><td>Code 128, switching code subset A, B, C automatically</td></tr>
<tr><td></td><td>25</td><td>Interleaved 2 of 5</td></tr>
<tr><td></td><td>25C</td><td>Interleaved 2 of 5 with check digits</td></tr>
<tr><td></td><td>39</td><td>Code 39 full ASCII for TSPL2 printers

Code 39 standard for TSPL printers

Auto switch full ASCII and standard code 39 for PLUS models</td></tr>
</table>

	Note: Please refer to printer model list for detail.
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 *Note: Please refer to printer model list for detail.*
39S	Code 39 standard for TSPL2 printers *Note: Please refer to printer model list for detail.*
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	MSI with check digit
PLESSEY	PLESSEY code
ITF14	ITF 14 code
EAN14	EAN 14 code
11	Code 11

	TELEPEN	Telepen code
	TELEPENN	Telepen code. Number only
	PLANET	Planet code
	CODE49	Code 49
	DPI	Deutsche Post Identcode
	DPL	Deutsche Post Leitcode

height	Bar code height (in dots)
human readable	0: not readable
	1: human readable aligns to left
	2: human readable aligns to center
	3: human readable aligns to right
rotation	0 : No rotation
	90 : Rotate 90 degrees clockwise
	180 : Rotate 180 degrees clockwise
	270 : Rotate 270 degrees clockwise
narrow	Width of narrow element (in dots)

wide Width of wide element (in dots)

	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	8x	-	-	-	-
11	-	10x	10x	5x	-

alignment	Specify the alignment of barcode 0 : default (Left) 1 : Left 2 : Center 3 : Right
content	Content of barcode ***Please note that the maximum number of digits of bar code content.***

Code Type	Character sets	Max. data length
128	See Character set for CODE128.	-
128M	See Character set for CODE128.	-
EAN128	0123456789	-
25	0123456789	Length is even.
25C	0123456789	Length is odd.
39 (C)	0123456789[Space]ABCDEFGHIJKLMNOPQRSTUVWXYZ -.$/+%	-
39 (C) Full ASCII	0123456789[Space]ABCDEFGHIJKLMNOPQRSTUVWXYZ !#$%&'()*+,-./:;<=>?@[\]^_`abcdefghijklmnopqrstuvwx yz{|}~	-
93	0123456789[Space]ABCDEFGHIJKLMNOPQRSTUVWXYZ !#$%&'()*+,-./:;<=>?@[\]^_`abcdefghijklmnopqrstuvwx yz{|}~	-
EAN13	0123456789	12
EAN13+2	0123456789	14
EAN13+5	0123456789	17
EAN8	0123456789	7
EAN8+2	0123456789	9
EAN8+5	0123456789	12
CODA	0123456789-$:/.+	-
POST	0123456789	5, 9, 11
UPCA	0123456789	11
UPCA+2	0123456789	13
UPA+5	0123456789	16
UPCE	0123456789	6
UPCE+2	0123456789	8
UPE+5	0123456789	11
MSI	0123456789	-
MSIC	0123456789	-
PLESSEY	0123456789	-
CPOST	0123456789	-
ITF14	0123456789	13

EAN14	0123456789	13
11	0123456789-	-
TELEPEN	ASCII 0 to 127	30
TELEPENN	0123456789	60
PLANET	0123456789	38
CODE49	ASCII 0 to 127	81
DPI	0123456789	11
DPL	0123456789	13
LOGMARS	0123456789[Space]ABCDEFGHIJKLMNOPQRSTUVWXYZ -.$/+%	-

Note:

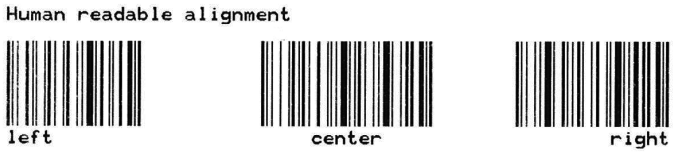
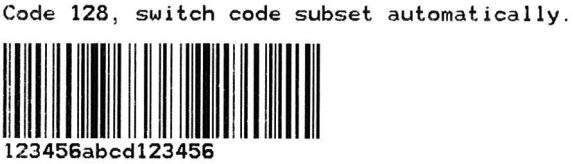
Since V5.10EZ, \[R] means carriage return character 0x0D and \[L] means line feed character 0x0A.

Character set for CODE 128

Value	128A	128B	128C	Value	128A	128B	128C	Value	128A	128B	128C
0	space	space	00	36	D	D	36	72	BS	h	72
1	!	!	01	37	E	E	37	73	HT	i	73
2	"	"	02	38	F	F	38	74	LF	j	74
3	#	#	03	39	G	G	39	75	VT	k	75
4	$	$	04	40	H	H	40	76	FF	l	76
5	%	%	05	41	I	I	41	77	CR	m	77
6	&	&	06	42	J	J	42	78	SO	n	78
7	'	'	07	43	K	K	43	79	SI	o	79
8	(	(	08	44	L	L	44	80	DLE	p	80
9	)	)	09	45	M	M	45	81	DC1	q	81
10	*	*	10	46	N	N	46	82	DC2	r	82
11	+	+	11	47	O	O	47	83	DC3	s	83
12	,	,	12	48	P	P	48	84	DC4	t	84
13	-	-	13	49	Q	Q	49	85	NAK	u	85
14	.	.	14	50	R	R	50	86	SYN	v	86
15	/	/	15	51	S	S	51	87	ETB	w	87
16	0	0	16	52	T	T	52	88	CAN	x	88
17	1	1	17	53	U	U	53	89	EM	y	89
18	2	2	18	54	V	V	54	90	SUB	z	90
19	3	3	19	55	W	W	55	91	ESC	{	91
20	4	4	20	56	X	X	56	92	FS	|	92
21	5	5	21	57	Y	Y	57	93	GS	}	93
22	6	6	22	58	Z	Z	58	94	RS	~	94
23	7	7	23	59	[	[	59	95	US	DEL	95
24	8	8	24	60	\	\	60	96	FNC 3	FNC 3	96
25	9	9	25	61	]	]	61	97	FNC 2	FNC 2	97
26	:	:	26	62	^	^	62	98	Shift B	Shift A	98
27	;	;	27	63	_	_	63	99	Code C	Code C	99
28	<	<	28	64	NUL	`	64	100	Code B	FNC4	Code B
29	=	=	29	65	SOH	a	65	101	FNC 4	Code A	Code A

30	>	>	30	66	STX	b	66	102	FNC 1	FNC 1	FNC 1
31	?	?	31	67	ETX	c	67	103	Start Code A		
32	@	@	32	68	EOT	d	68	104	Start Code B		
33	A	A	33	69	ENQ	e	69	105	Start Code C		
34	B	B	34	70	ACK	f	70				
35	C	C	35	71	BEL	g	71				

Example

Sample Code	Result
SIZE 4,1 GAP 0,0 DIRECTION 1 CLS TEXT 10,10,"2",0,1,1,"Human readable alignment" BARCODE 10,50,"128",100,1,0,2,2,"left" BARCODE 310,50,"128",100,2,0,2,2,"center" BARCODE 610,50,"128",100,3,0,2,2,"right" PRINT 1	
SIZE 4,1 GAP 0,0 DIRECTION 1 CLS TEXT 10,10,"2",0,1,1,"Code 128, switch code subset automatically." BARCODE 10,50,"128",100,1,0,2,2,"123456abcd123456" PRINT 1	

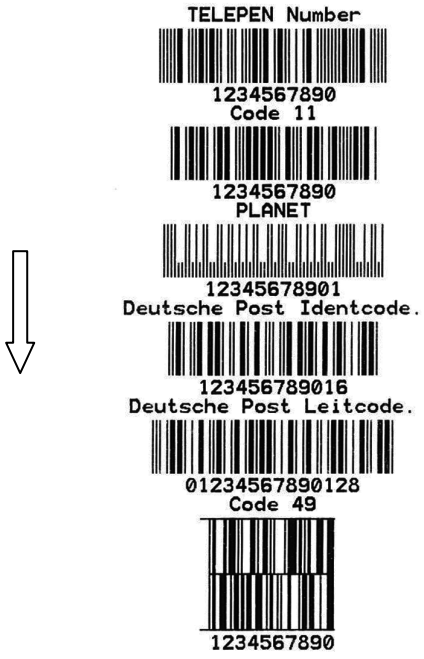
```
SIZE 4,1

GAP 0,0

DIRECTION 1

CLS

TEXT 10,10,"2",0,1,1,"Code 128, switch code subset manually."

BARCODE 10,50,"128M",100,1,0,2,2,"!104!096ABCD!101EFGH"

PRINT 1
```

Note:

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.

```
SIZE 4,1

GAP 0,0

DIRECTION 1

CLS

TEXT 10,10,"2",0,1,1,"TELEPEN"

BARCODE 10,50,"TELEPEN",100,1,0,2,6,"abcd1234ABCD"

PRINT 1
```

```
SIZE 4,4

GAP 0,0

DIRECTION 1

CLS

TEXT 400,26,"2",0,1,1,2,"TELEPEN Number"

BARCODE 400,50,"TELEPENN",60,2,0,2,6,2,"1234567890"

TEXT 400,136,"2",0,1,1,2,"Code 11"

BARCODE 400,160,"11",60,2,0,2,6,2,"1234567890"

TEXT 400,246,"2",0,1,1,2,"PLANET"

BARCODE 400,270,"PLANET",60,2,0,2,2,2,"12345678901"

TEXT 400,356,"2",0,1,1,2,"Deutsche Post Identcode."
```



BARCODE 400,380,"DPI",60,2,0,2,6,2,"12345678901" **TEXT 400,466,"2",0,1,1,2,"Deutsche Post Leitcode."** **BARCODE 400,490,"DPL",60,2,0,2,6,2,"123456789012"** **TEXT 400,576,"2",0,1,1,2,"Code 49"** **BARCODE 400,600,"CODE49",60,2,0,2,2,2,"1234567890"** **PRINT 1**	

● TLC39

Description

This command draws TLC39, TCIF Linked Bar Code 3 of 9, barcode.

Syntax

TLC39 x,y,rotation,[height,]narrow,]wide,]cellwidth,]cellheight,]"ECI number,Serial number & additional data"

Parameter	**Description**
x	Specify the x-coordinate
y	Specify the y-coordinate
rotation	0 : No rotation
	90 : Rotate 90 degrees clockwise
	180 : Rotate 180 degrees clockwise
	270 : Rotate 270 degrees clockwise
height	Height of Code39 in dots (Default is 40)
narrow	Width of narrow element of Code39 in dots (Default is 2)
wide	Width of wide element of Code39 in dots (Default is 4)
cellwidth	Width of cell of MicroPDF417 in dots (Default is 2)
cellheight	Height of cell of MicroPDF417 in dots (Default is 4)
ECI number	Must be 6 digits which is used to generate Code39
Serial number & additional data	Alphanumeric is for Micro-PDF417

Note:

- ***Comma (") is necessary between ECI number and Serial number & additional data.***
- ***This command has been supported since V6.89 EZ and later firmware.***

Example

Sample Code

```
SIZE 4,1.2
GAP 0,0
DIRECTION 1
CLS
TEXT 10,10,"3",0,1,1,"TLC39 code"
TLC39 10,50,0,"123456,SN00000001,00601,01501"
TLC39 310,50,0,80,3,6,3,4,"123456,SN00000001,00601,01501"
PRINT 1
```

Result

BITMAP

Description

This command draws bitmap images (as opposed to BMP graphic files).

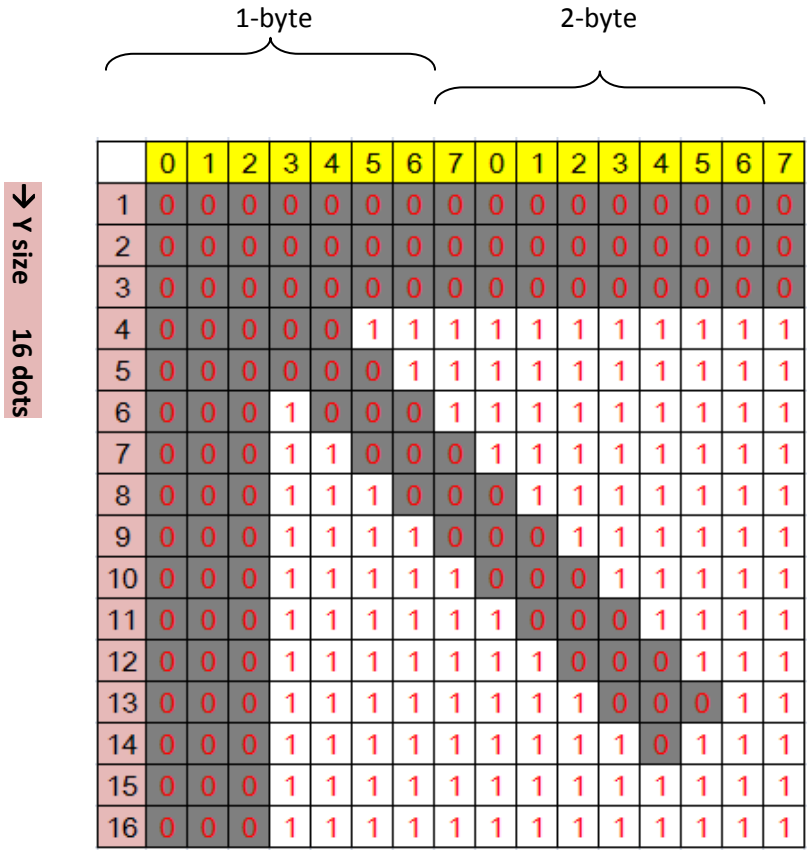
Syntax

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

Parameter	Description
X	Specify the x-coordinate
Y	Specify the y-coordinate
width	Image width (in bytes)
height	Image height (in dots)
mode	Graphic modes listed below:
	0: OVERWRITE
	1: OR
	2: XOR
bitmap data	Bitmap data

Example

→ X size 2 bytes



	0	1	2	3	4	5	6	7	0	1	2	3	4	5	6	7
1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1
5	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1
6	0	0	0	1	0	0	0	1	1	1	1	1	1	1	1	1
7	0	0	0	1	1	0	0	0	1	1	1	1	1	1	1	1
8	0	0	0	1	1	1	0	0	0	1	1	1	1	1	1	1
9	0	0	0	1	1	1	1	0	0	0	1	1	1	1	1	1
10	0	0	0	1	1	1	1	1	0	0	0	1	1	1	1	1
11	0	0	0	1	1	1	1	1	1	0	0	0	1	1	1	1
12	0	0	0	1	1	1	1	1	1	1	0	0	0	1	1	1
13	0	0	0	1	1	1	1	1	1	1	1	0	0	0	1	1
14	0	0	0	1	1	1	1	1	1	1	1	1	0	1	1	1
15	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1
16	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1

	X - axis			
Y- axis	1-byte		2-byte	
	Binary	Hexadecimal	Binary	Hexadecimal
1	00000000	00	00000000	00
2	00000000	00	00000000	00
3	00000000	00	00000000	00
4	00000111	07	11111111	FF
5	00000011	03	11111111	FF

6	00010001	11	11111111	FF
7	00011000	18	11111111	FF
8	00011100	1C	01111111	7F
9	00011110	1E	00111111	3F
10	00011111	1F	00011111	1F
11	00011111	1F	10001111	8F
12	00011111	1F	11000111	C7
13	00011111	1F	11100011	E3
14	00011111	1F	11110111	F7
15	00011111	1F	11111111	FF
16	00011111	1F	11111111	FF

Sample Code (ASCII)	Hexadecimal	Result
SIZE 4,2 GAP 0,0 CLS BITMAP 200,200,2,16,0, ?—————————————??? -?- ????▪ PRINT 1,1	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	

See Also

PUTBMP, PUTPCX

● BOX

Description

This command draws rectangles on the label.

Syntax

BOX x,y,x_end,y_end,line thickness[,radius]

Parameter	**Description**
x	Specify x-coordinate of upper left corner (in dots)
y	Specify y-coordinate of upper left corner (in dots)
x_end	Specify x-coordinate of lower right corner (in dots)
y_end	Specify y-coordinate of lower right corner (in dots)
line thickness	Line thickness (in dots)
radius	Optional. Specify the round corner. Default is 0. ***Since V5.28 EZ***

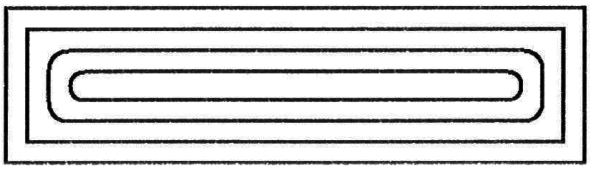
Note:

- ***200 DPI: 1 mm = 8 dots***

  300 DPI: 1 mm = 12 dots

- ***Recommended max. thickness of box is 12 mm at 4" width. Thickness of box 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

Sample code	Result
SIZE 4,1.1 CLS BOX 60,60,610,210,4 BOX 80,80,590,190,4 BOX 100,100,570,170,4,20 BOX 120,120,550,150,4,20 PRINT 1	

See Also

BAR

CIRCLE

Description

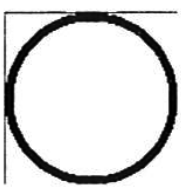
This command draws a circle on the label.

Syntax

CIRCLE X_start,Y_start,diameter,thickness

Parameter	Description
X_start	Specify x-coordinate of upper left corner (in dots)
Y_start	Specify y-coordinate of upper left corner (in dots)
diameter	Specify the diameter of the circle (in dots)
thickness	Thickness of the circle (in dots)

Example

Sample code	Result
SIZE 80 mm,30 mm **GAP 0,0** **DIRECTION 1** **CLS** **BAR 250,20,100,1**	

BAR 250,20,1,100 **CIRCLE 250,20,100,5** **PRINT 1**	

● ELLIPSE

Description

This command draws an ellipse on the label.

Syntax

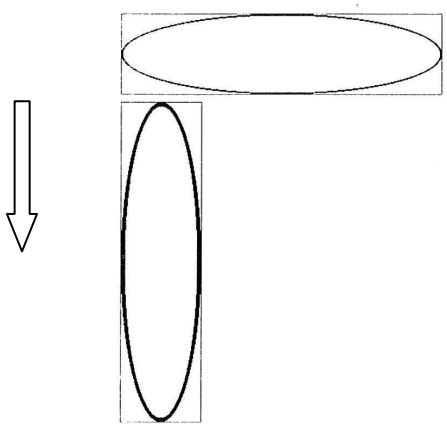
ELLIPSE x,y,width,height,thickness

Parameter	Description
x	Specify x-coordinate of upper left corner (in dots)
y	Specify y-coordinate of upper left corner (in dots)
width	Specify the width of the ellipse (in dots)
height	Specify the height of the ellipse (in dots)
thickness	Thickness of the ellipse (in dots)

Note:

This command has been supported since V6.91 EZ and later firmware.

Example

Sample code	Result
SIZE 4,3 GAP 0,0 DIRECTION 1 CLS BOX 10,10,410,110,1 ELLIPSE 10,10,400,100,2 BOX 10,120,110,520,1 ELLIPSE 10,120,100,400,5 PRINT 1	

● CODABLOCK F mode

Description

This command draws CODABLOCK F mode barcode.

Syntax

CODABLOCK x,y,rotation,[row height,]module width,]"content"

Parameter	Description
x	Specify the x-coordinate
y	Specify the y-coordinate
rotation	0 : No rotation
	90 : Rotate 90 degrees clockwise
	180 : Rotate 180 degrees clockwise
	270 : Rotate 270 degrees clockwise
row height	The height of individual row equals to row height x module width (Default is 8)
module width	Width of narrow element of CODABLOCK in dots (Default is 2)
content	content of CODABLOCK bar code

Note:

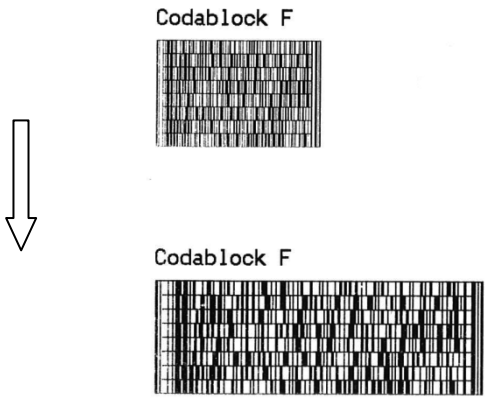
This command has been supported since V6.89 EZ and later firmware.

Example

Sample Code

```
SIZE 4,1.5

GAP 0,0

DIRECTION 1

CLS

TEXT 10,10,"3",0,1,1,"Codablock F"

CODABLOCK 10,50,0,"We stand behind our products with one of the most comprehensive support programs in the Auto-ID industry."

PRINT 1

CLS

TEXT 10,10,"3",0,1,1,"Codablock F"

CODABLOCK 10,50,0,16,1,"We stand behind our products with one of the most comprehensive support programs in the Auto-ID industry."

PRINT 1
```

Result



● DMATRIX

Description

This command defines a DataMatrix 2D bar code. Currently, only ECC200 error correction is supported.

Syntax

DMATRIX x,y,width,height,[c#,x#,r#,row,col,]"content"

Parameter	**Description**
x	Horizontal start position (in dots)
y	Vertical start position (in dots)
width	The expected width of barcode area (in dots)
height	The expected height of barcode area (in dots)
c#	Escape sequence control character (decimal digit) Ex. c126 means ~ (1) ~X is shift character for control characters.

~X	Hex	ASCII	~X	HEX	ASCII	~X	HEX	ASCII	~X	HEX	ASCII
~@	00	NUL	~H	08	BS	~P	10	DLE	~X	18	CAN
~A	01	SOH	~I	09	HT	~Q	11	DC1	~Y	19	EM
~B	02	STX	~J	0A	LF	~R	12	DC2	~Z	1A	SUB
~C	03	ETX	~K	0B	VT	~S	13	DC3	~[	1B	ESC
~D	04	EOT	~L	0C	FF	~T	14	DC4	~\	1C	FS
~E	05	ENQ	~M	0D	CR	~U	15	NAK	~]	1D	GS
~F	06	ACK	~N	0E	SO	~V	16	SYN	~^	1E	RS
~G	07	BEL	~O	0F	SI	~W	17	ETB	~_	1F	US

(2) ~1 means FNC1.
(3) ~dNNN creates ASCII decimal value NNN for a codeword. Must be 3 digits. 000 ~ 255.
(4) ~ in data is encoded by ~~.

x#	Module size (in dots)
r#	Rotation

	0 : No rotation 90 : Rotate 90 degrees clockwise 180 : Rotate 180 degrees clockwise 270 : Rotate 270 degrees clockwise
row	Symbol size of row: 10 to 144
col	Symbol size of col: 10 to 144
content	Content of DataMatrix 2D bar code

Note:

This command has been supported since V6.89 EZ and later firmware.

Example

Sample code	Result
SIZE 4,3 **GAP 0,0** **DIRECTION 1** **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

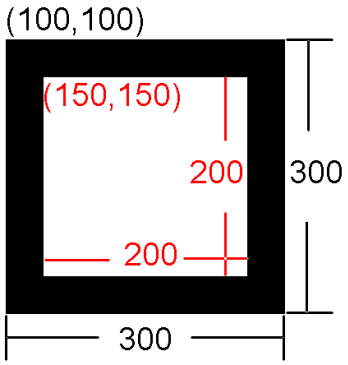
This command clears a specified region in the image buffer.

Syntax

ERASE x,y,x_width,y_height

Parameter	Description
x	The x-coordinate of the starting point (in dots)
y	The y-coordinate of the starting point (in dots)
x_width	The region width in x-axis direction (in dots)
y_height	The region height in y-axis direction (in dots)

Example

Sample code	Result
SIZE 4,2.5 GAP 0,0 DIRECTION 1 CLS BAR 100,100,300,300 ERASE 150,150,200,200 PRINT 1,1	

See Also

CLS

MAXICODE

Description

This command defines a 2D Maxicode.

Syntax

MAXICODE x,y,mode,[class,country,post,Lm,]"content"	
MAXICODE x,y,mode,class,country,postal code,"content"	For mode 2 or 3, If country is 840, the postal code is in 99999,9999 format. For other countries, the code is up to 6 alphanumeric characters.
MAXICODE x,y,mode,[Lm,]"content"	For mode 4,5,6, AIM special format is supported, see page 23 in the spec. ***Mode 6 is not supported in TSPL2 printer firmware.***

Parameter	**Description**
x	X-coordinate of the starting 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 Mode 3(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)
content	Content of 2D Maxicode ***Note:*** ***If parameter Lm is used, double quotes (") are unnecessary.***

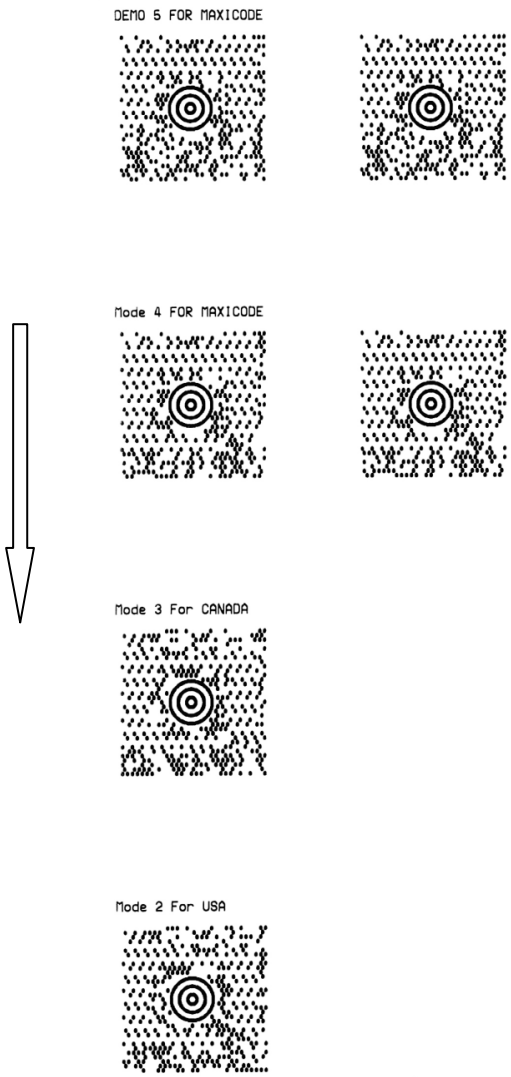
Example

Sample code

```
SIZE 4,2
GAP 0,0
DIRECTION 1
CLS

REM *****Mode 2 For USA*****
MAXICODE 110,100,2,300,840,06810,7317,"DEMO 2 FOR USA MAXICODE"
TEXT 100,50,"3",0,1,1,"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 100,50,"3",0,1,1,"Mode 3 For CANADA"
PRINT 1,1

REM *****MODE4*****
```

```
CLS

MAXICODE 110,100,4,"DEMO 4 FOR MAXICODE"

MAXICODE 600,100,4,L19,DEMO 4 FOR MAXICODE

TEXT 100,50,"3",0,1,1,"Mode 4 FOR MAXICODE"

PRINT 1,1


REM *****MODE 5*****

CLS

MAXICODE 110,100,5,"DEMO 5 FOR MAXICODE"

MAXICODE 600,100,5,L19,DEMO 5 FOR MAXICODE

TEXT 100,50,"3",0,1,1,"DEMO 5 FOR MAXICODE"

PRINT 1
```

Result



● PDF417

Description

This command defines a PDF417 2D bar code.

Syntax

PDF417 x,y,width,height,rotate,[option],"content"

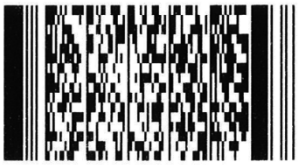
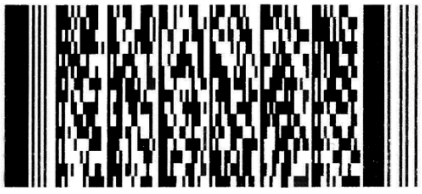
Parameter	Description
x	X-coordinate of starting point (in dot)

y		Y-coordinate of starting point (in dot)
width		Expected width (in dots)
height		Expected height (in dots)
rotate		Rotation counterclockwise 0 : No rotation 90 : Rotate 90 degrees 180 : Rotate 180 degrees 270 : Rotate 270 degrees
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, 1≤m≤2048 (without " for content)

content	Content of PDF417 2D bar code ***Note:*** ***If parameter Lm is used, double quotes (") are unnecessary for content.***

Example

Sample code	Result
SIZE 4,1 **GAP 0,0** **DIRECTION 1** **REM *****WITHOUR OPTIONS******* **CLS** **PDF417 50,50,400,200,0,"Without Options"** **PRINT 1,1**	

SIZE 4,1.5 GAP 0,0 DIRECTION 1 REM *****OPTION:E3***** CLS PDF417 50,50,400,200,0,E3,"Error correction level:3" PRINT 1,1 REM *****OPTION:E4***** CLS PDF417 50,50,400,200,0,E4,"Error correction level:4" PRINT 1,1	
SIZE 4,1.5 GAP 0,0 DIRECTION 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	 

SIZE 4,1.5 **GAP 0,0** **DIRECTION 1** **REM *****OPTION:E4 W4 H4 R40 C4 T1******* **CLS** **PDF417 50,50,800,800,0,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**	

SIZE 4,2.5 **GAP 0,0** **DIRECTION 1** **REM *****OPTION:P1 E4 M1 U50,300,50,W4,H4,R60,C4,T0,L297******* **CLS** **PDF417 50,50,900,600,0,P1,E4,M1,U50,300,50,W4,H4,R60,C4,T0,L297,Data compression method: P1** **Error correction level: E4** **Center pattern in barcode area: M1**	 Data compression method: P1 Error correction leve l: E4 Center pattern in barcode area: M1 Human R eadable: Yes: U50,300,50 Module Width 4 dots: W4 Bar Height 4 dots: H4 Maximum Number of Rows: 60 Rows: R60 Maximum number of columns: 4 Cols: C4 Truncation:1: T0 Expression length:297: L297

Human Readable: Yes: U50,300,50 **Module Width 4 dots: W4** **Bar Height 4 dots: H4** **Maximum Number of Rows: 60 Rows: R60** **Maximum number of columns: 4 Cols: C4** **Truncation:1: T0** **Expression length:297: L297** **PRINT 1,1**	

● AZTEC

Description

This command defines a AZTEC 2D bar code.

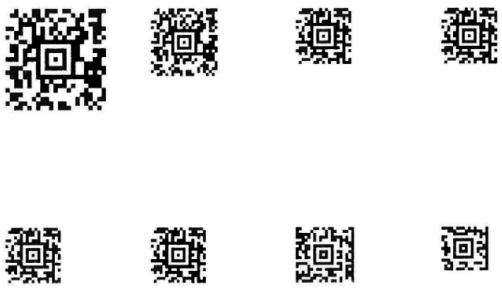
Syntax

AZTEC x,y,rotate,[size,]ecp,]flg,]menu,]multi,]rev,]"content"	Since V6.60EZ
AZTEC x,y,rotate,size,ecp,flg,menu,multi,rev,bytes,content	Since V6.91EZ

Parameter	**Description**
x	Horizontal start position (in dots)
y	Vertical start position (in dots)
rotate	Rotation
	0 : No rotation
	90 : Rotate 90 degrees
	180 : Rotate 180 degrees
	270 : Rotate 270 degrees
size	Element module size (1 to 20), default is 6
ecp	Error control (& symbol size/type) parameter
	0 : default error correction level
	1 to 99 : minimum error correction percentage
	101 to 104 : 1 to 4-layer Compact symbol
	201 to 232 : 1 to 32-layer Full-Range symbol
	300 : a simple Aztec "Rune"
flg	0 : input message is straight bytes
	1 : input uses "<Esc>n" for FLG(n), "<Esc><Esc>" for "<Esc>"
menu	Menu symbol (0 : no, 1 : yes), default is 0
multi	Number of symbols (1 to 26), default is 6

rev	Output to be reversed (0 : no, 1 : yes), default is 0
bytes	Length of content
content	Content of AZTEC 2D bar code
	Note:
	If parameter bytes is used, double quotes (") are unnecessary.

Example

Sample Code	Result
SIZE 4,2 GAP 0,0 CLS AZTEC 10,10,0,"ABCDEFGHIJKLMNOPQRSTUVWXYZ0123456789" AZTEC 210,10,0,4,"ABCDEFGHIJKLMNOPQRSTUVWXYZ0123456789" AZTEC 410,10,0,4,1,"ABCDEFGHIJKLMNOPQRSTUVWXYZ0123456789" AZTEC 610,10,0,4,1,0,"ABCDEFGHIJKLMNOPQRSTUVWXYZ0123456789" AZTEC 10,310,0,4,1,0,0,"ABCDEFGHIJKLMNOPQRSTUVWXYZ0123456789" AZTEC 210,310,0,4,1,0,0,1,"ABCDEFGHIJKLMNOPQRSTUVWXYZ0123456789" AZTEC 410,310,0,4,1,0,0,1,1,"ABCDEFGHIJKLMNOPQRSTUVWXYZ0123456789" AZTEC 610,310,0,4,1,0,0,1,1,10,1234567890 PRINT 1	

● MPDF417

Description

This command defines a Micro PDF 417 bar code.

Syntax

MPDF417 x,y,rotate,[Wn,][Hn,][Cn,]"content"

Parameter	Description
x	Horizontal start position (in dots)
y	Vertical start position (in dots)
rotate	Rotation 0 : No rotation 90 : Rotate 90 degrees 180 : Rotate 180 degrees 270 : Rotate 270 degrees
Wn	Optional. Module width in dot. Default is 1.
Hn	Optional. Module height in dot. Default is 10.
Cn	Optional. Number of columns. Once the parameter is set, the printer will calculate the proper rows for the barcode base on the content automatically. 0: Auto mode. 1: Column is 1 and the calculated suitable rows will be 11, 14, 17, 20, 24, and 28. 2: Column is 2 and the calculated suitable rows will be 8, 11, 14, 17, 20, 23 and 26. 3: Column is 3 and the calculated suitable rows will be 6, 8, 10, 12, 15, 20, 26, 32, 38 and 44. 4: Column is 4 and the calculated suitable rows will be 4, 6, 8, 10, 12, 15, 20, 26, 32, 38 and 44.
content	Content of Micro PDF 417 bar code

Note:

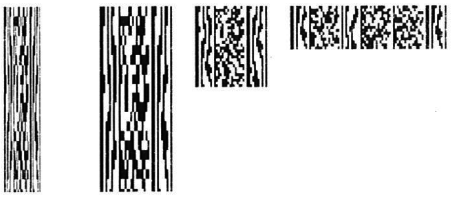
This command has been supported since V6.61 EZ and later firmware.

Example

Sample Code

```
SIZE 4,1
GAP 0,0
CLS
MPDF417 10,10,0,"ABCDEFGHIJKLMNOPQRSTUVWXYZ0123456789"
MPDF417 110,10,0,W2,"ABCDEFGHIJKLMNOPQRSTUVWXYZ0123456789"
MPDF417 210,10,0,W2,H3,"ABCDEFGHIJKLMNOPQRSTUVWXYZ0123456789"
MPDF417 310,10,0,W2,H3,C3,"ABCDEFGHIJKLMNOPQRSTUVWXYZ0123456789"
PRINT 1
```

Result



● PUTBMP

Description

This command prints BMP format images. The grayscale printing is for direct thermal mode only. Support 1-bit (monochrome) and 8-bit (256-color) BMP graphic only.

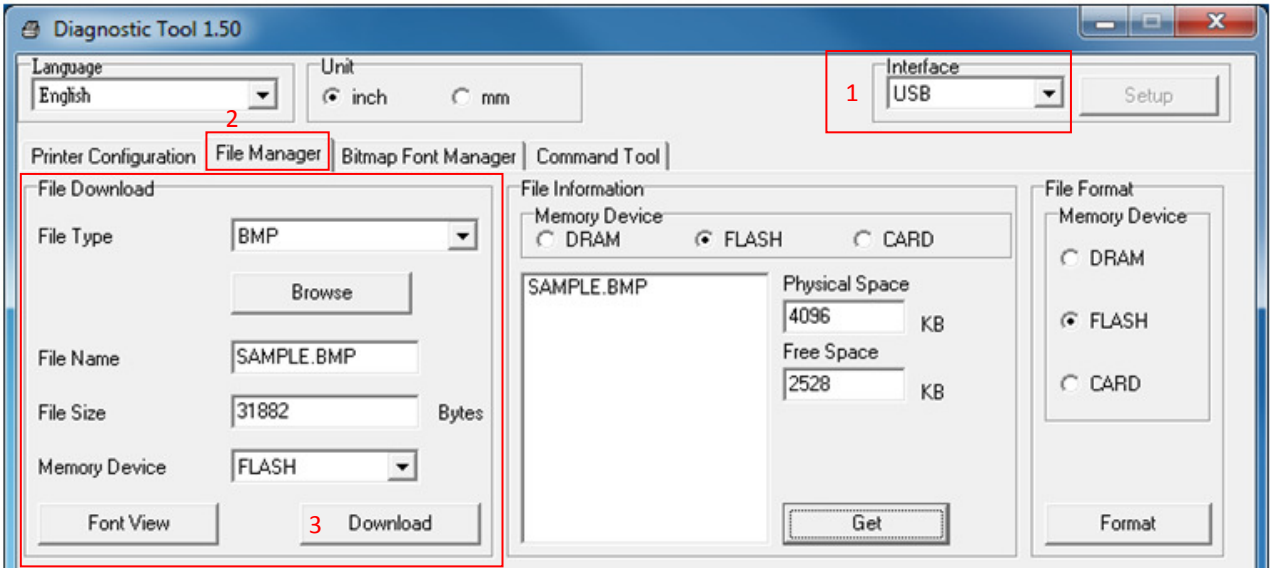
Syntax

PUTBMP x,y,"filename"[, bpp][, contract]

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
bpp	Optional. Bits per pixel of grayscale graphic. Default is 1. ***Since V6.91EZ.***
	1: 1-bit (monochrome) graphic
	8: 8-bit (256-color) graphic
contrast	Optional. Contrast of grayscale graphic. Default is 80. Suggested range is from 60 to 100. ***Since V6.91EZ.***

Example

Downloading BMP file into printer by DiagTool



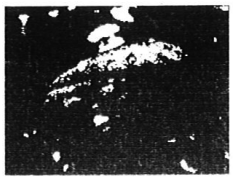
Sample Code

```
SPEED 2

DENSITY 3

SIZE 4,1.5

GAP 0,0

DIRECTION 1

CLS

PUTBMP 10,10,"SAMPLE.BMP"

BLOCK 10,180,240,100,"2",0,1,1,"bpp and contrast are omitted."

PUTBMP 300,10," SAMPLE.BMP",1,80

BLOCK 300,180,240,100,"2",0,1,1,"bpp = 1

contrast = 80"
```

```
PUTBMP 590,10," SAMPLE.BMP",8,80

BLOCK 590,180,240,100,"2",0,1,1,"bpp = 8

contrast = 80"

PRINT 1
```

Result

bpp and contrast
are omitted.



bpp = 1
contrast = 80

bpp = 8
contrast = 80

See Also

DOWNLOAD, BITMAP, PUTPCX

● PUTPCX

Description

This command prints PCX format images. TSPL language supports 2-color PCX format graphics. TSPL2 language supports 256-color PCX format graphics.

Note: Please refer to printer model list for checking TSPL or TSPL2.

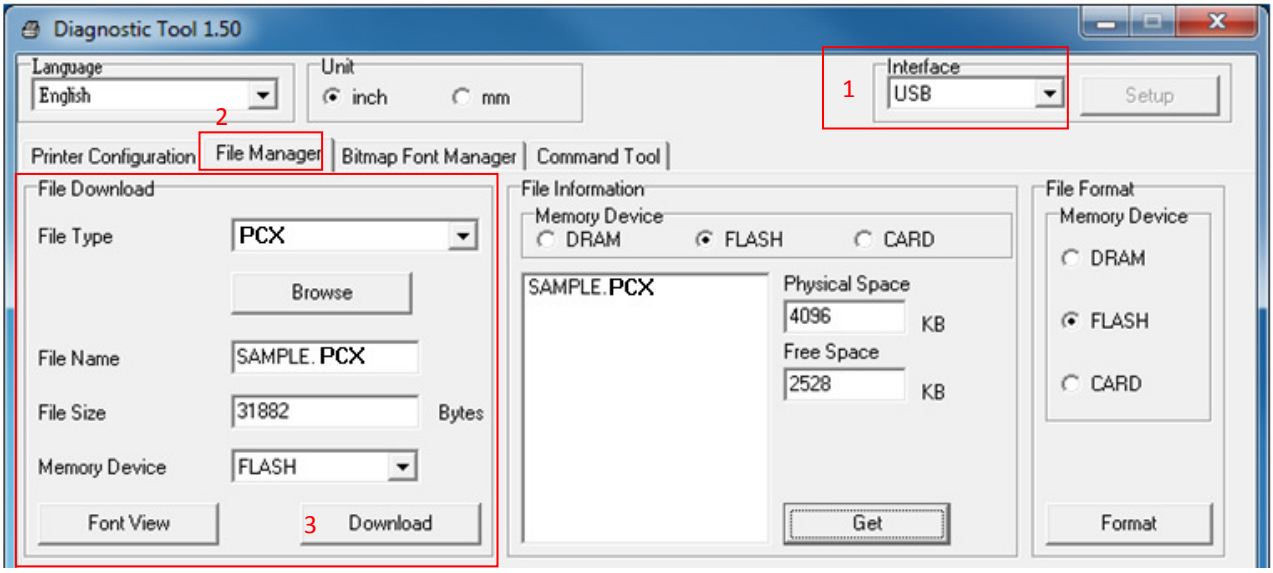
Syntax

PUTPCX x,y,"filename"

Parameter	Description
x	The X-coordinate of the PCX format image
y	The Y-coordinate of the PCX format image
filename	The downloaded PCX file name ***(Case sensitive)***

Example

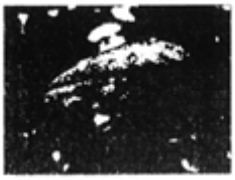
Downloading PCX file into printer by DiagTool



Sample Code

```
SPEED 2

DENSITY 3

SIZE 4,1.5

GAP 0,0

DIRECTION 1

CLS

PUTBMP 10,10,"SAMPLE.PCX"

PRINT 1
```

Result



See Also

DOWNLOAD, BITMAP, PUTPCX

● QRCODE

Description

This command prints QR code.

Syntax

QRCODE x,y,ECC Level,cell width,mode,rotation,[model,mask,]"content"

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	M1: (default), original version
	M2: enhanced version (Almost smart phone is supported by this version.)
mask	S0~S8, default is S7

content

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)
Numeric data	1,167 characters	7,089 characters
Alphanumeric data	707 characters	4,296 characters
8-bit byte data	486 characters	2,953 characters
Kanji data	299 characters	1,817 characters

* If "A" is the first character in the data string, then the following data after "A" is alphanumeric data.

*If "N" is the first character in the data string, then the following data after "N" is 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 is 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.

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:

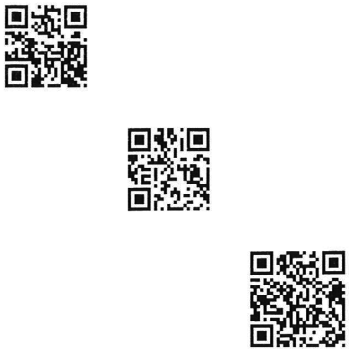
QRCODE 100,10,M,7,A,0,"THE FIRMWARE HAS BEEN UPDATED"

Example

Sample code	**Result**
Auto mode example	

General data string

```
SIZE 4,2.5
GAP 0,0
DIRECTION 1
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
```



Data string including <Enter> character (0Dh, 0Ah)

```
SIZE 4,2.5
GAP 0,0
DIRECTION 1
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
```

Data string concatenation (Must be used with DOWNLOAD ... EOP command) **DOWNLOAD “DEMO.BAS”** **SIZE 4,2.5** **GAP 0,0** **DIRECTION 1** **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**	

Data string including double quote (“) character, please use \["] instead of **SIZE 4,2.5** **GAP 0,0** **DIRECTION 1** **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**	
Manual mode	
General data string **SIZE 4,2.5** **GAP 0,0** **DIRECTION 1** **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**	

Data string including <Enter> character, <Enter> is an 8-bit byte data **SIZE 4,2.5** **GAP 0,0** **DIRECTION 1** **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**	
Data string concatenation (Must be used with DOWNLOAD ... EOP command) **DOWNLOAD "A.BAS"** **SIZE 4,2.5** **GAP 0,0** **DIRECTION 1** **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**	
Data string including double quote (“) character, please use \["] instead of **SIZE 4,2.5** **GAP 0,0** **DIRECTION 1** **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**	

● RSS

Description

This command is used to draw a RSS bar code on the label format.

Syntax

RSS x,y,"sym",rotate,pixMult,sepHt,"content"
RSS x,y,"RSSEXP",rotate,pixMult,sepHt,segWidth,"content"
RSS x,y,"UCC128CCA",rotate,pixMult,sepHt,linHeight,"content"
RSS x,y,"UCC128CCC",rotate,pixMult,sepHt,linHeight,"content"

<table>
<tr><th>Parameter</th><th>Description</th></tr>
<tr><td>x</td><td>X-coordinate</td></tr>
<tr><td>y</td><td>Y-coordinate</td></tr>
<tr><td>sym</td><td>Symbology type:
<table>
<tr><td>RSS14</td><td>RSS14</td></tr>
<tr><td>RSS14T</td><td>RSS14 Truncated</td></tr>
<tr><td>RSS14S</td><td>RSS14 Stacked</td></tr>
<tr><td>RSS14SO</td><td>RSS14 Stacked Omnidirectional</td></tr>
<tr><td>RSSLIM</td><td>RSS Limited</td></tr>
<tr><td>RSSEXP</td><td>RSS Expanded</td></tr>
<tr><td>UPCA</td><td>UPC-A</td></tr>
<tr><td>UPCE</td><td>UPC-E</td></tr>
<tr><td>EAN13</td><td>EAN-13</td></tr>
<tr><td>EAN8</td><td>EAN-8</td></tr>
<tr><td>UCC128CCA</td><td>UCC/EAN-128 & CC-A/B</td></tr>
<tr><td>UCC128CCC</td><td>UCC/EAN-128 & CC-C</td></tr>
</table></td></tr>
<tr><td>rotate</td><td>Rotation (0, 90, 180, and 270 valid)</td></tr>
</table>

pixMult	Module width in dot (1 to 10 valid) The following barcode height is calculated by printer.

RSS14	33 × pixMult
RSS14T	13 × pixMult.
RSS14S	13 × pixMult.
RSS14SO	33 × pixMult.
RSSLIM	13 × pixMult.
RSSEXP	33 × pixMult.
EAN8	60 × pixMult.
EAN13	74 × pixMult.
UPCA	74 × pixMult.
UPCE	74 × pixMult.

sepHt	Separator row height (1 and 2 valid) pixMult times sepHt is the real separator row height. It is calculated by printer.
segWidth	Segment width of RSS expanded (even 2 to 22 valid)
linHeight	UCC/EAN-128 height in dot (1 to 500 valid)
content	Barcode content or string expression Content of UPCE must be: *00abc0000hij = abhijc, where c = 0-2 *00abc00000ij = abcij3 *00abcd00000j = abcdj4 *00abcde0000j = abcdej where j = 5-9

Note:

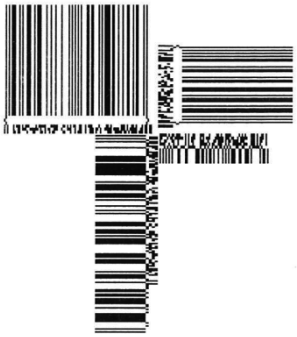
- ***200 DPI: 1 mm = 8 dots***

  300 DPI: 1 mm = 12 dots

- ***Recommended max. height of reversed black area is 12 mm 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.***

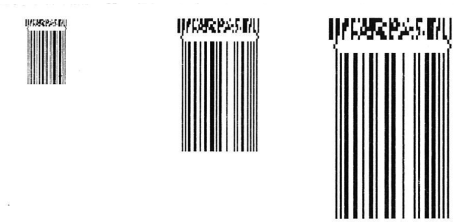
- *This command has been supported since V6.56 EZ and later firmware.*

Example

Sample code	Result
SIZE 100 mm,100 mm GAP 0,0 DIRECTION 1 CLS RSS 300,300,"RSS14",0,2,2,"1234567890|ABCDEFG" RSS 300,300,"RSS14T",90,2,2,"1234567890|ABCDEFG" RSS 300,300,"RSS14S",180,2,2,"1234567890|ABCDEFG" RSS 300,300,"RSS14SO",270,2,2,"1234567890|ABCDEFG" PRINT 1,1	
SIZE 100 mm,100 mm GAP 0,0 DIRECTION 1 CLS RSS 300,300,"RSSLIM",0,2,2,"1234567890|ABCDEFG" RSS 300,300,"RSSEXP",90,2,2,22,"1234567890|ABCDEFG" RSS 300,300,"UPCA",180,2,2,"1234567890|ABCDEFG" RSS 300,300,"UPCE",270,2,2,"000|ABCDEFG" PRINT 1,1	
SIZE 100 mm,100 mm GAP 0,0 DIRECTION 1 CLS RSS 300,300,"EAN13",0,2,2,"123456789012|ABCDEFG" RSS 300,300,"EAN8",90,2,2,"1234567|ABCDEFG" RSS 300,300,"UCC128CCA",180,2,2,25,"1234567890|ABCDEFG" RSS 300,300,"UCC128CCC",270,2,2,25,"1234567890|ABCDEFG" PRINT 1,1	

Example of UPCE mode	
SIZE 4,1 **GAP 0,0** **DIRECTION 1** **CLS** **REM UPCE Rule 1: *00abc0000hij* = abhijc, where c = 0-2** **RSS 10,10,"UPCE",0,2,2,"001200000456|ABCDEFG"** **RSS 210,10,"UPCE",0,2,2,"001210000456|ABCDEFG"** **RSS 410,10,"UPCE",0,2,2,"001220000456|ABCDEFG"** **PRINT 1**	
SIZE 4,1 **GAP 0,0** **DIRECTION 1** **CLS** **REM UPCE Rule 2: *00abc00000ij* = abcij3** **RSS 10,10,"UPCE",0,2,2,"001230000045|ABCDEFG"** **PRINT 1** **SIZE 4,1** **CLS** **REM UPCE Rule 3: *00abcd00000j* = abcdj4** **RSS 10,10,"UPCE",0,2,2,"001234000005|ABCDEFG"** **PRINT 1**	
SIZE 4,1 **GAP 0,0** **DIRECTION 1**	

CLS REM UPCE Rule 4: *00abcde0000j* = abcdej where j = 5-9 RSS 10,10,"UPCE",0,2,2,"001234500005|ABCDEFG" RSS 160,10,"UPCE",0,2,2,"001234500006|ABCDEFG" RSS 310,10,"UPCE",0,2,2,"001234500007|ABCDEFG" RSS 460,10,"UPCE",0,2,2,"001234500008|ABCDEFG" RSS 610,10,"UPCE",0,2,2,"001234500009|ABCDEFG" PRINT 1	
Example of barcode height of EAN8 EAN13 UPCA and UPCE.	
SIZE 4,2 GAP 0,0 DIRECTION 1 CLS RSS 10,10,"EAN8",0,1,1,"1234567|ABCDEFG" RSS 210,10,"EAN8",0,2,1,"1234567|ABCDEFG" RSS 410,10,"EAN8",0,3,1,"1234567|ABCDEFG" PRINT 1	
SIZE 4,2 GAP 0,0 DIRECTION 1 CLS RSS 10,10,"EAN13",0,1,1,"123456789012|ABCDEFG" RSS 210,10,"EAN13",0,2,1,"123456789012|ABCDEFG" RSS 410,10,"EAN13",0,3,1,"123456789012|ABCDEFG" PRINT 1	

SIZE 4,2 **GAP 0,0** **DIRECTION 1** **CLS** **RSS 10,10,"UPCA",0,1,1,"12345678901|ABCDEFG"** **RSS 210,10,"UPCA",0,2,1,"12345678901|ABCDEFG"** **RSS 410,10,"UPCA",0,3,1,"12345678901|ABCDEFG"** **PRINT 1**	
SIZE 4,2 **GAP 0,0** **DIRECTION 1** **CLS** **RSS 10,10,"UPCE",0,1,1,"001200000456|ABCDEFG"** **RSS 210,10,"UPCE",0,2,1,"001210000456|ABCDEFG"** **RSS 410,10,"UPCE",0,3,1,"001220000456|ABCDEFG"** **PRINT 1**	

● REVERSE

Description

This command reverses 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 dots)
y_start	The y-coordinate of the starting point (in dots)
x_width	X-axis region width (in dots)
y_height	Y-axis region height (in dots)

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

Sample code	Result
SIZE 4,2.5 GAP 0,0 DIRECTION 1 CLS TEXT 100,100,"3",0,1,1,"REVERSE" REVERSE 90,90,128,40 PRINT 1,1	

TEXT

Description

This command prints text on label.

Syntax

TEXT x,y,"font",rotation,x-multiplication,y-multiplication,[alignment,]"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.
Following fonts were supported since V6.80 EZ.	
1.EFT	EPL2 font 1
2.EFT	EPL2 font 2
3.EFT	EPL2 font 3

4.EFT	EPL2 font 4
5.EFT	EPL2 font 5
A.FNT	ZPL2 font A
B.FNT	ZPL2 font B
D.FNT	ZPL2 font D
E8.FNT	ZPL2 font E8
F.FNT	ZPL2 font F
G.FNT	ZPL2 font G
H8.FNT	ZPL2 font H8
GS.FNT	ZPL2 font GS

rotation

The rotation angle of text

0 : No rotation

90: degrees, in clockwise direction

180 : degrees, in clockwise direction

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. For *.TTF font, x-multiplication and y-multiplication support floating value. (V6.91 EZ)
alignment	Optional. Specify the alignment of text. (V6.73 EZ) 0 : Default (Left) 1 : Left 2 : Center 3 : Right
content	Content of text string

Note:

- ***The internal font (font #1~#5) pitch between TSPL and TSPL2 is different.***
- ***Font "0" and "ROMAN.TTF" internal True Type Fonts are available in TSPL2 language printers, but not TSPL language printers.***
- ***Please refer to printer model list for checking TSPL or TSPL2.***
- ***If there is any double quote (") within the text, please change it to \["].***
- ***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.***
- ***EPL2 and ZPL2 are emulating for Eltron® and Zebra® languages.***

MODEL	Font Type									
	0	1	2	3	4	5	6	7	8	ROMAN.TTF
TSPL language printers		V	V	V	V	V				
TSPL2 language printers	V	V	V	V	V	V	V	V	V	V

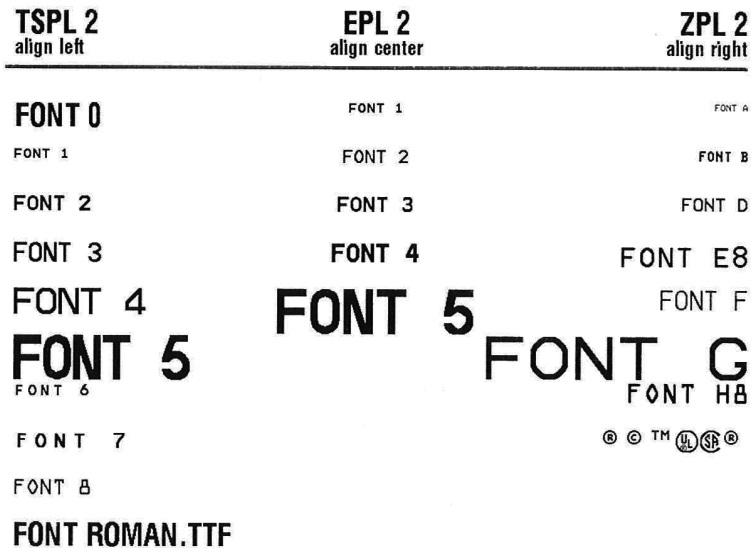
Example

Sample Code

```
SIZE 4,3
GAP 0,0
DIRECTION 1
CLS
TEXT 10,10,"0",0,12,12,"TSPL 2"
TEXT 10,40,"0",0,8,8,"align left"
BAR 0,70,800,4
TEXT 10,110,"0",0,12,12,"FONT 0"
TEXT 10,160,"1",0,1,1,"FONT 1"
TEXT 10,210,"2",0,1,1,"FONT 2"
TEXT 10,260,"3",0,1,1,0,"FONT 3"
TEXT 10,310,"4",0,1,1,0,"FONT 4"
TEXT 10,360,"5",0,1,1,0,"FONT 5"
TEXT 10,410,"6",0,1,1,1,"FONT 6"
TEXT 10,460,"7",0,1,1,1,"FONT 7"
TEXT 10,510,"8",0,1,1,1,"FONT 8"
TEXT 10,560,"ROMAN.TTF",0,12,12,"FONT ROMAN.TTF"

TEXT 400,10,"0",0,12,12,2,"EPL 2"
TEXT 400,40,"0",0,8,8,2,"align center"
TEXT 400,110,"1.EFT",0,1,1,2,"FONT 1"
TEXT 400,160,"2.EFT",0,1,1,2,"FONT 2"
TEXT 400,210,"3.EFT",0,1,1,2,"FONT 3"
TEXT 400,260,"4.EFT",0,1,1,2,"FONT 4"
TEXT 400,310,"5.EFT",0,1,1,2,"FONT 5"
```

```
TEXT 800,10,"0",0,12,12,3,"ZPL 2"

TEXT 800,40,"0",0,8,8,3,"align right"

TEXT 800,110,"A.FNT",0,1,1,3,"FONT A"

TEXT 800,160,"B.FNT",0,1,1,3,"FONT B"

TEXT 800,210,"D.FNT",0,1,1,3,"FONT D"

TEXT 800,260,"E8.FNT",0,1,1,3,"FONT E8"

TEXT 800,310,"F.FNT",0,1,1,3,"FONT F"

TEXT 800,360,"G.FNT",0,1,1,3,"FONT G"

TEXT 800,410,"H8.FNT",0,1,1,3,"FONT H8"

TEXT 800,460,"GS.FNT",0,1,1,3,"ABCDEF"

PRINT 1
```

Result



BLOCK

Description

This command prints paragraph on label.

Syntax

BLOCK x,y,width,height,"font",rotation,x-multiplication,y-multiplication,[space,]alignment,]

"content"

Parameter	Description
x	The x-coordinate of the text
y	The y-coordinate of the text
width	The width of block for the paragraph in dots
height	The height of block for the paragraph in dots

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.
Following fonts were supported since V6.80 EZ.	
1.EFT	EPL2 font 1
2.EFT	EPL2 font 2
3.EFT	EPL2 font 3
4.EFT	EPL2 font 4
5.EFT	EPL2 font 5
A.FNT	ZPL2 font A
B.FNT	ZPL2 font B
D.FNT	ZPL2 font D
E8.FNT	ZPL2 font E8
F.FNT	ZPL2 font F
G.FNT	ZPL2 font G
H8.FNT	ZPL2 font H8
GS.FNT	ZPL2 font GS

rotation	The rotation angle of text

	0 : No rotation 90 : degrees, in clockwise direction 180 : degrees, in clockwise direction 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. For *.TTF font, x-multiplication and y-multiplication support floating value. (V6.91 EZ)
space	Add or delete the space between lines in dot.
alignment	Text alignment. (V6.73 EZ) 0 : default (Left) 1 : Left 2 : Center 3 : Right
content	Data in block. The maximum data length is 4092 bytes.

Note:

- ***The internal font (font #1~#5) pitch between TSPL and TSPL2 is different.***
- ***Font "0" and "ROMAN.TTF" internal True Type Fonts are available in TSPL2 language printers, but not TSPL language printers.***
- ***If there is any double quote (") within the text, please change it to \["].***
- ***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.***

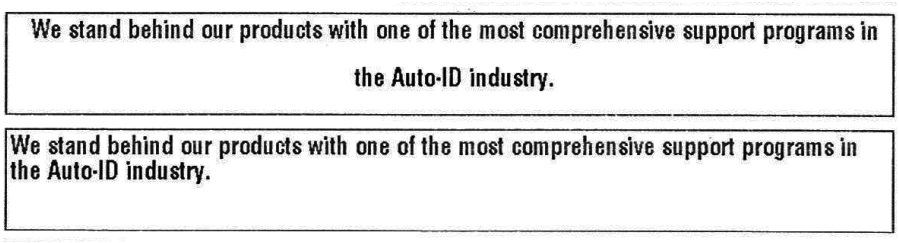
- *\[R] means carriage return character 0x0D.*
- *\[L] means line feed character 0x0A.*
- *This command has been supported since V6.91 EZ and later firmware.*
- *EPL2 and ZPL2 are for emulating Eltron® and Zebra® languages.*

Example

Sample Code

```
SIZE 4,0.5

GAP 0,0

DIRECTION 1

CLS

BOX 10,10,800,100,2

BLOCK 15,15,790,90,"0",0,8,8,"We stand behind our products with one of the most comprehensive support programs in the Auto-ID industry."

PRINT 1

CLS

BOX 10,10,800,100,2

BLOCK 15,15,790,90,"0",0,8,8,20,2,"We stand behind our products with one of the most comprehensive support programs in the Auto-ID industry."

PRINT 1
```

Result



Status Polling and Immediate Commands

These commands support RS-232, USB and Ethernet.

● <ESC>!?

Description

This command obtains the printer status at any time, even in the event of printer error. An inquiry request is solicited by sending an <ESC> (ASCII 27, escape character) as the beginning control character to the printer. A one byte character is returned, flagging the printer status. A 0 signifies the printer is ready to print labels.

Syntax

<ESC>!?

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
80	Other error

See Also <ESC>!S

● <ESC>!C

Description

This command restarts the printer and omits to run AUTO.BAS. The beginning of the command is an ESCAPE character (ASCII 27).

Syntax

<ESC>!C

Note:

- ***When printer receives this command, printer will restart itself no matter AUTO.BAS exists or not.***
- ***This command has been supported since V5.23 EZ and later firmware.***

See Also

<ESC>!Q

● <ESC>!D

Description

This command is used to disable immediate command, ex. *<ESC>!R <RSC>!?* <ESC>!C and so on, which is starting by <ESC>!. The beginning of the command is an ESCAPE character (ASCII 27).

Syntax

<ESC>!D

Note:

This command has been supported since V6.61 EZ and later firmware.

See Also

~!D

● <ESC>!O

Description

This command is using to cancel the PAUSE status of printer. The beginning of the command is an ESCAPE character (ASCII 27).

Syntax

<ESC>!O

Note:

This command has been supported since V6.93 EZ and later firmware.

See Also

<ESC>!P

● <ESC>!P

Description

This command is using to PAUSE the printer. The beginning of the command is an ESCAPE character (ASCII 27).

Syntax

<ESC>!P

Note:

This command has been supported since V6.93 EZ and later firmware.

See Also

<ESC>!O

● <ESC>!Q

Description

This command restarts the printer and omits to run AUTO.BAS. The beginning of the command is an ESCAPE character (ASCII 27).

Syntax

<ESC>!Q

Note:

- ***If there is no AUTO.BAS inside the printer, the printer will not restart itself.***
- ***This command has been supported since V6.72 EZ and later firmware.***

See Also

<ESC>!C

● <ESC>!R

Description

This command resets the printer. The beginning of the command is an ESCAPE character (ASCII 27). The files downloaded in memory will be deleted. This command cannot be sent in dump mode.

Syntax

<ESC>!R

See Also

<ESC>!?

● <ESC>!S

Description

This command obtains the printer status at any time, even in the event of printer error. An inquiry request is solicited by sending an <ESC> (ASCII 27, escape character) as the beginning control character to the printer. 8 bytes will be returned, flagging the printer status.

Syntax

<ESC>!S

Note:

This command has been supported since V6.29 EZ and later firmware.

Response Format

<STX>[4-byte status]<ETX><CR><LF>

Status Byte #1: message											
Bit 7	Bit 6	Bit 5	Bit 4	Bit 3	Bit 2	Bit 1	Bit 0	Hex	ASCII	Char	Meaning
0	1	0	0	0	0	0	0	40	64	@	Normal
0	1	1	0	0	0	0	0	60	96	`	Pause
0	1	0	0	0	0	1	0	42	66	B	Backing label
0	1	0	0	0	0	1	1	43	67	C	Cutting
0	1	0	0	0	1	0	1	45	69	E	Printer error
0	1	0	0	0	1	1	0	46	70	F	Form feed
0	1	0	0	1	0	1	1	4B	75	K	Waiting to press print key
0	1	0	0	1	1	0	0	4C	76	L	Waiting to take label
0	1	0	1	0	0	0	0	50	80	P	Printing batch
0	1	0	1	0	1	1	1	57	87	W	Imaging

Status Byte #2: warning

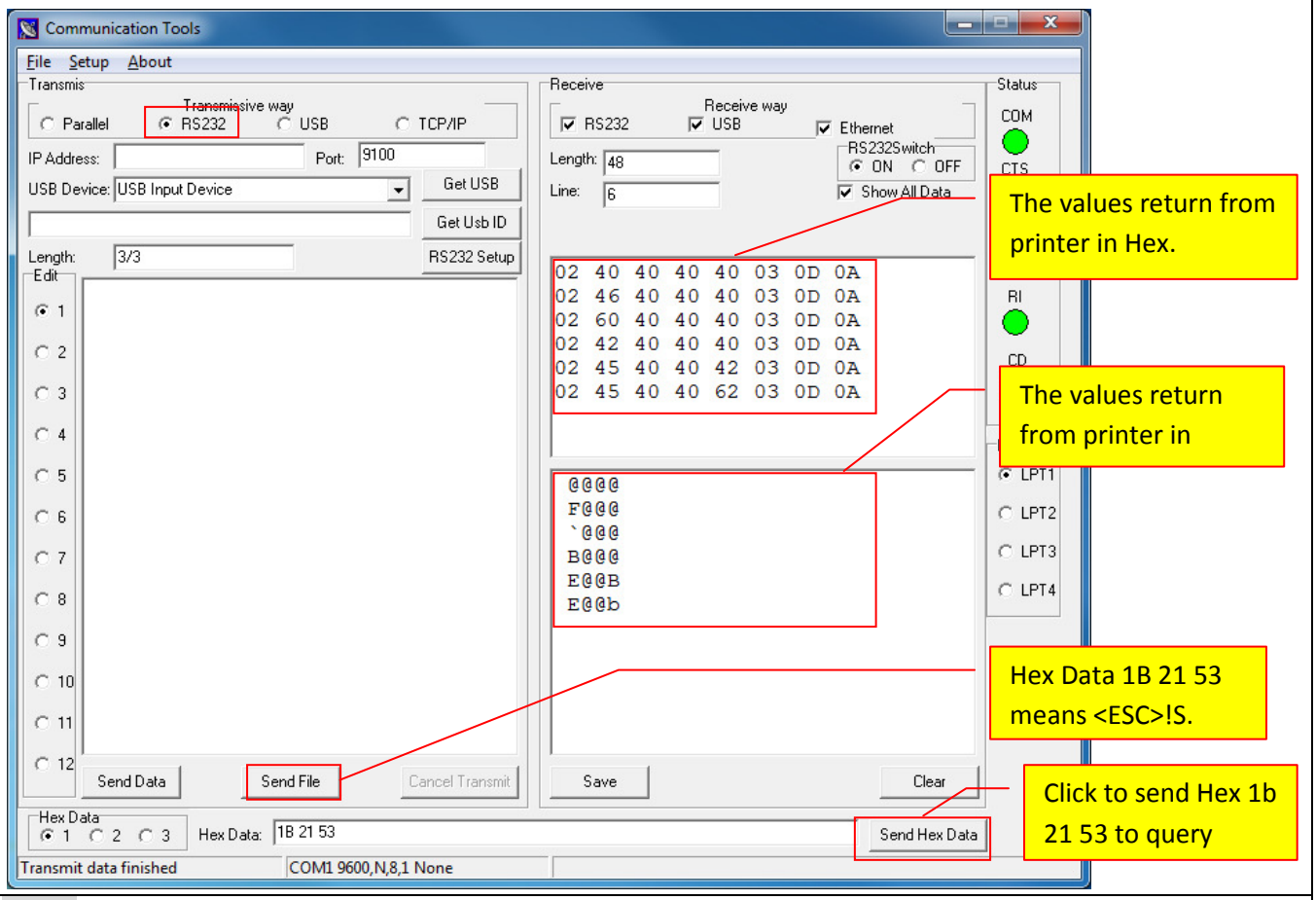
Bit 7	Bit 6	Bit 5	Bit 4	Bit 3	Bit 2	Bit 1	Bit 0	Hex	ASCII	Char	Meaning
0	1	0	0	0	0	0	0	40	64	@	Normal
0	1	0	0	0	0	0	1	41	65	A	Reversed
0	1	0	0	0	0	1	0	42	66	B	Reversed
0	1	0	0	0	1	0	0	44	68	D	Reversed
0	1	0	0	1	0	0	0	48	72	H	Receive buffer bull
0	1	1	0	0	0	0	0	60	96	`	Reversed

Status Byte #3: error											
Bit 7	Bit 6	Bit 5	Bit 4	Bit 3	Bit 2	Bit 1	Bit 0	Hex	ASCII	Char	Meaning
0	1	0	0	0	0	0	0	40	64	@	Normal
0	1	0	0	0	0	0	1	41	65	A	Print head overheat
0	1	0	0	0	0	1	0	42	66	B	Stepping motor overheat
0	1	0	0	1	0	0	0	48	72	H	Cutter jam
0	1	0	1	0	0	0	0	50	80	P	Insufficient memory

Status Byte #4: error											
Bit 7	Bit 6	Bit 5	Bit 4	Bit 3	Bit 2	Bit 1	Bit 0	Hex	ASCII	Char	Meaning
0	1	0	0	0	0	0	0	40	64	@	Normal
0	1	0	0	0	0	0	1	41	65	A	Paper empty
0	1	0	0	0	0	1	0	42	66	B	Paper jam
0	1	0	0	0	1	0	0	44	68	D	Ribbon empty
0	1	0	0	1	0	0	0	48	72	H	Ribbon jam
0	1	1	0	0	0	0	0	60	96	`	Print head open

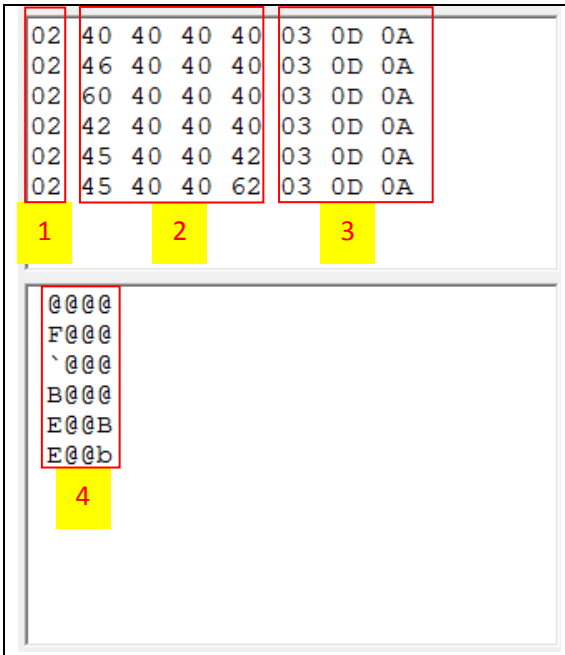
Example

Test <ESC>!S by CommTool via RS-232 port.



Result

Item	Meaning
1	The start character of returned value.
2	The 4-byte status in Hex.
3	The end characters of returned value.
4	4-byte status in characters. `@@@@`: The printer is normal for use. `F@@@`: The printer is feeding label. `` `@@@ ``: Printer is in PAUSE mode. `B@@@`: The printer is backing label. `E@@B`: Printer is in error “Paper Jam”. `E@@b`: Printer is in error “Paper Jam” & “Head



	open”.

See Also

<ESC>!?

● <ESC>!F

Description

This command is using to feed a label. This function is the same as to press the FEED button. The beginning of the command is an ESCAPE character (ASCII 27).

Syntax

<ESC>!F

Note:

This command has been supported since V7.00 EZ and later firmware.

● <ESC>!.

Description

This command can cancel all printing files. The beginning of the command is an ESCAPE character (ASCII 27).

Syntax

<ESC>!.

Note:

This command has been supported since V7.00 EZ and later firmware.

● ~!@

Description

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

Syntax

~!@

Example

~!@

● ~!A

Description

This command inquires 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

Example

~!A

See Also

FILES

● ~!C

Description

This command inquires the presence of Real Time Clock. One byte is return from the printer, indicating whether or not the RTC is installed. This command is only for the firmware before V6.xx.

Syntax

~!C

Return value	Description
0	RTC is not installed.
1	RTC is installed.

Example

~!C

● ~!D

Description

This command enters the printer into DUMP mode. In DUMP mode, the printer outputs code directly without interpretation.

Syntax

~!D

Example

~!D

● ~!E

Description

This command is used to enable immediate command, ex. *<ESC>!R <RSC>!?* <ESC>!C and so on, which is starting by <ESC>!.

Syntax

~!E

Note:

This command has been supported since V6.61 EZ and later firmware.

Example

~!E

See also

<ESC>!D

● ~!F

Description

This command inquires all about files resident in the printer memory, and fonts installed in the memory module. The filename are returned in ASCII characters. Each file name ends with 0x0D. The ending character is 0x1A. Entering this command multiple times will cycle through the files resident on memory.

Syntax

~!F

Example

~!F

See Also

FILES

● ~!I

Description

The command inquires the code page and country setting of the printer.

Syntax

~!I

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.

Example

~!I

See Also

COUNTRY, CODEPAGE

● ~!T

Description

This command inquires the model name and number of the printer. This information is returned in ASCII characters.

Syntax

~!T

Example

~!T

● <ESC> Y

Description

This command is used to enable line mode (from EZPL to CPCL) for EZC printer.

Syntax

<ESC> Y

Example

<ESC> Y

See Also

<ESC> Z

● <ESC> Z

Description

This command is used to disable line mode (from CPCL to EZPL) for EZC printer.

Syntax

<ESC> Z

Example

<ESC> Z

See Also

<ESC> Y

Message Translation Protocols

● ~#

Description

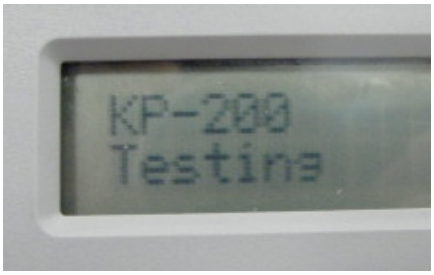
The beginning identifier (~#) of the prompt message is sent from the printer to the KP-200 portable keyboard. The ending identifier is ~&. @0 following the ending identifier ~& is used to instruct keyboard to display the prompt in the first line of LCD display. @1 following the ending identifier ~& is used to instruct keyboard to display the prompt in the first line of LCD display. If @0 or @1 are not present, 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]

Example

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

See Also

INPUT, OUT

Commands for Windows Driver

● !B

Description

This command stores 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 prints bitmap data at the specified position (in y-direction).

Syntax

!Jnnnn

Parameter	Description
nnn	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 prints a 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 into two categories: program files and data files (including text data files, PCX graphic files and bitmap font files) The detailed descriptions regarding the download syntax for different files are as follows:

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 printers

Please refer to printer model list for checking TSPL or TSPL2.

If "AUTO.BAS" exists in the printer memory, it will be automatically executed upon printer startup. To disable the auto execution function, please follow the procedures below.

Ignore AUTO.BAS
For two buttons desktop printer series Hold down the **PAUSE** and **FEED** buttons and turn on the printer power. Do not release the buttons until the three LEDs flash in turn. Printer will Ignore AUTO.BAS and initialize the printer.
For one button desktop printer series Hold the FEED key and power on the switch. Release the FEED key while LED becomes solid green to prevent the printer from running “AUTO.BAS”.

The LED color will be changed as following pattern:

***For firmware version before V3.37 printer:**

Orange → red (5 blinks) → orange (5 blinks) → green (5 blinks) → solid green

***For firmware version after V3.37:**

Orange → red (5 blinks) → orange (5 blinks) → green (5 blinks) → green and orange (5 blinks) → red and orange (5 blinks) → solid green

For three buttons industrial printer series

Hold the FEED key and power on the switch. The ERROR LED will be on. Printer is now ready to use.

For six or two buttons industrial printer series

Hold the PAUSE and FEED keys and power on the switch. "AUTO.BAS" will not be executed after printer initialization, and will now be ready for use.

Alternatively, hold the PAUSE key and power on the switch. After sensor calibration, the "AUTO.BAS" will not be executed. Printer is now ready for use.

Syntax

1. Download a program file:

DOWNLOAD [n,]"FILENAME.BAS"

Parameter	Description
n	Specify memory used to save downloaded 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, issue the MOVE command to printer. ***F***: Download files to main board flash memory.

	E: Download files to expansion memory module.
FILENAME.BAS	The filename resident in printer memory.

Note:

- ***Filenames are case sensitive.***
- ***File extensions must be ".BAS"***
- ***Filenames must be in 8.3 format.***
- ***It should use with EOP command.***
- ***If memory is not specified, all files will be downloaded to DRAM.***
- ***The priority of AUTO.BAS in each memory device:***
  A. DRAM > FLASH > CARD (Ext. FLASH) if firmware is before V6.80EZ.
  B. DRAM > CARD (Ext. FLASH) > FLASH if firmware is after V6.80EZ (include).
- ***No Battery is used to back up files in DRAM. which will be lost in the event printer power is lost.***

2. Download a data file:

DOWNLOAD [n,]"FILENAME",DATA SIZE,DATA CONTENT…

Parameter	**Description**
n	Specify the memory location to save downloaded 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, issue the MOVE command to printer.
	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 (case sensitive).
DATA SIZE	The actual size in bytes of the data file (without header)
DATA CONTENT	The data which will be downloaded into printer.

Note:

- ***For text data files, CR (carriage return) 0x0D and LF (Line Feed) 0x0A is the separator of data.***
- ***If memory is not specified, all files will be downloaded to DRAM.***
- ***No Battery is used to back up files in DRAM. which will be lost in the event printer power is lost.***
- ***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, call the main filename without BAS extension or use RUN command to start the download program.***

Example

Sample code (The example program listed below will download to printer SDRAM.)

```
DOWNLOAD "EXAMPLE.BAS"
SIZE 4,4
GAP 0,0
DIRECTION 1
SET TEAR ON
CLS
TEXT 100,100,"3",0,1,1,"EXAMPLE PROGRAM"
PRINT 1
EOP
```

See Also

EOP, RUN, PUTBMP, PUTPCX, INPUT, FILES, ~!F

● EOP

Description

End of program. To declare the start and end of BASIC language commands used in a program, 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

Sample code (The example program listed below will download to printer SDRAM.)

```
DOWNLOAD "DEMO.BAS"
SIZE 4,4
GAP 0,0
DIRECTION 1
SET TEAR ON
CLS
TEXT 100,100,"3",0,1,1,"DEMO PROGRAM"
PRINT 1
EOP
```

See Also

DOWNLOAD, INPUT, FILES, ~!F

● FILES

Description

This command prints out the total memory size, available memory size and files lists (or lists the files through RS-232) in the printer memory (both FLASH memory and DRAM).

Syntax

FILES

Example

Sample code	Result
FILES	---------- DRAM FILE (0 FILES) ---------- PHYSICAL 8192 KBYTES AVAILABLE 256 KBYTES ---------- ---------- FLASH FILE (0 FILES) ---------- PHYSICAL 4096 KBYTES AVAILABLE 2560 KBYTES ----------

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.
FILENAME	The name of data file that will delete in the printer memory (case sensitive)

Note:

- ***If optional parameter n is not specified, firmware will delete the file in DRAM.***
- ***Syntax example***

  KILL "FILENAME " : Delete the specify file in DRAM.

  KILL "*.PCX " : Delete all PCX files in DRAM.

  KILL "* " : Delete all files in DRAM.

  KILL F, "FILENAME " : Delete the specify file in FLASH.

  KILL E, "*.PCX " : Delete all PCX file in extension memory card.

- ***For TSPL printers, please send MOVE command to printer after sending KILL command.***
- ***Please refer to printer model list for checking TSPL or TSPL2.***

Model	Support		
	KILL "*"	KILL "*" MOVE	KILL F,"*"
TSPL programming printer	**V**	**V**	
TSPL2 programming printer	**V**		**V**

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

Description

This command moves downloaded files from DRAM to FLASH memory.

Syntax

MOVE

See Also

DOWNLOAD, EOP

● RUN

Description

This command executes a program resident in the printer memory. It is available for TSPL2 language printers only.

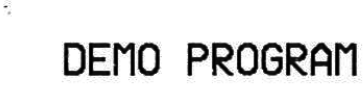
Syntax

RUN "FILENAME.BAS"

Note:

** This command can be replaced to filename that without typing ".BAS".*

Example

Sample code	Result
DOWNLOAD "DEMO.BAS" **SIZE 4,4** **GAP 0,0** **DIRECTION 1** **SET TEAR ON** **CLS** **TEXT 100,100,"3",0,1,1,"DEMO PROGRAM"** **PRINT 1** **EOP** **RUN "DEMO.BAS"**	
DOWNLOAD "DEMO.BAS"	

SIZE 4,4 **GAP 0,0** **DIRECTION 1** **SET TEAR ON** **CLS** **TEXT 100,100,"3",0,1,1,"DEMO PROGRAM"** **PRINT 1** **EOP** **DEMO**	

See Also

DOWNLOAD, EOP

BASIC Commands and Functions

● ABS( )

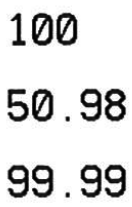
Description

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

Syntax

ABS (VARIABLE)

Example

Sample code	Result
DOWNLOAD "TEST.BAS" SIZE 4,4 GAP 0,0 DIRECTION 1 SET TEAR ON 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 RUN "TEST.BAS"	

See Also

DOWNLOAD, EOP

● ASC( )

Description

This function returns the ASCII code of the character.

Syntax

ASC ("A")

Example

Sample code	Result
DOWNLOAD "TEST.BAS" **SIZE 4,4** **GAP 0,0** **DIRECTION 1** **SET TEAR ON** **CLS** **CODE1=ASC("A")** **TEXT 100,100,"3",0,1,1,STR$(CODE1)** **PRINT 1** **EOP** **RUN "TEST.BAS"**	65

See Also

DOWNLOAD, EOP, STR$()

● CHR$( )

Description

This function returns the character with the specified ASCII code.

Syntax

CHR$(n)

Parameter	Description
n	The ASCII code

Example

Sample code	Result
DOWNLOAD "TEST.BAS" SIZE 4,4 GAP 0,0 DIRECTION 1 SET TEAR ON CLS A=75 WORD$=CHR$(A) TEXT 100,100,"3",0,1,1,WORD$ PRINT 1 EOP RUN "TEST.BAS"	K

See Also

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

● XOR$( )

Description

This command can encode the original data to a new data by logic XOR.

Syntax

XOR$(data$,password$)

Parameter	Description
data$	The original data needs to be encoded by password$.
password$	This parameter will be used to create the new data.

Note:

This command has been supported since V6.38 EZ and later firmware.

Example

Sample code	Result
data$="1234"** **password$="ABCD" **encoded$=XOR$(data$,password$)** **deconded$=XOR$(encoded$,password$)** **SIZE 4,0.5**	Encoded data: pppp Decoded data: 1234

GAP 0,0 **CLS** **TEXT 10,10,"3",0,1,1,"Encoded data: "+encoded$** **TEXT 10,60,"3",0,1,1,"Decoded data: "+deconded$** **PRINT 1**	

● END

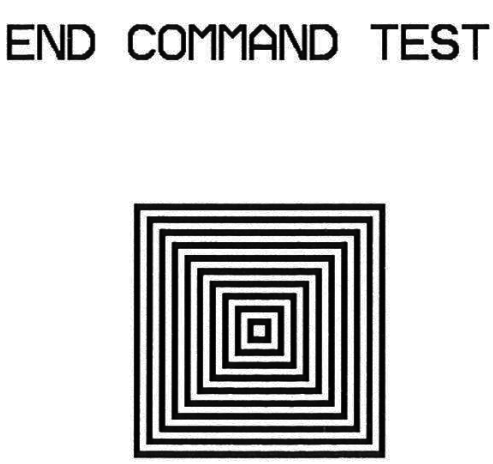
Description

This command states the end of program.

Syntax

END

Example

Sample code	Result
DOWNLOAD "DEMO.BAS" **SIZE 4,2** **GAP 0,0** **DIRECTION 1** **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, GOSUB

● 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

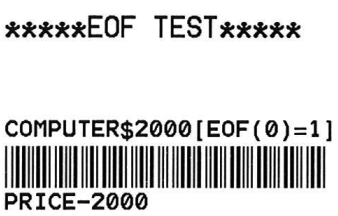
Example

Sample code

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

DOWNLOAD "DEMO.BAS"
SIZE 3,3
GAP 0.0,0
DIRECTION 1
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
```

Result



See Also

DOWNLOAD, EOP, OPEN, READ, SEEK

● OPEN

Description

This command opens a downloaded file and establishes the file handle. Up to two file handles are supported, thus only up to two files can be opened simultaneously. The file to be opened should be downloaded prior to using this command. When opening a file, the firmware will search automatically to see if the file exists in the on board flash memory or extended memory card. ***Since V6.37 EZ, if the file doesn't exist, the printer will create this file in the onboard FLASH.***

Syntax

OPEN [memory ID,]"filename",file handle

<table>
<tr><th><u>Parameter</u></th><th><u>Description</u></th></tr>
<tr><td>[memory ID]</td><td>Optional. Open the file in specific memory device. *Since V6.68 EZ.
<table>
<tr><th>ID</th><th>Memory device</th></tr>
<tr><td>Omitted</td><td>DRAM</td></tr>
<tr><td>F</td><td>FLASH</td></tr>
<tr><td>E</td><td>CARD</td></tr>
</table>
</td></tr>
<tr><td>filename</td><td>The file downloaded in the printer memory</td></tr>
<tr><td>file handle</td><td>Either 0 or 1</td></tr>
</table>

Example

Sample code	Result
DOWNLOAD "DATA.DAT",18,Open file in DRAM. DOWNLOAD F,"DATA.DAT",19,Open file in FLASH. DOWNLOAD "TEST.BAS" data1$="" data2$="" data3$="" OPEN "DATA.DAT",0 READ 0,data1$ CLOSE 0 OPEN F,"DATA.DAT",0 READ 0,data2$ CLOSE 0 KILL F,"*" OPEN "NEW.DAT",0 SEEK 0,0 WRITE 0,"Auto create a new file in FLASH." SEEK 0,0 READ 0,data3$ CLOSE 0 SIZE 4,1 GAP 0,0 CLS TEXT 10,10,"3",0,1,1,data1$ TEXT 10,60,"3",0,1,1,data2$ TEXT 10,110,"3",0,1,1,data3$ PRINT 1 EOP	Open file in DRAM. Open file in FLASH. Auto create a new file in FLASH.

TEST	

See Also

DOWNLOAD, EOP, READ, WRITE, SEEK, CLOSE

CLOSE

Description

Close the file handle which is open by command OPEN.

Syntax

CLODE file handle

Parameter	Description
file handle	Either 0 or 1

Example

See the example in command OPEN.

WRITE

Description

This command writes data to a downloaded data file. Two files can be open simultaneously, by virtue of printer support for two file handles.

Syntax

WRITE file handle,variables

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

See Also

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

READ

Description

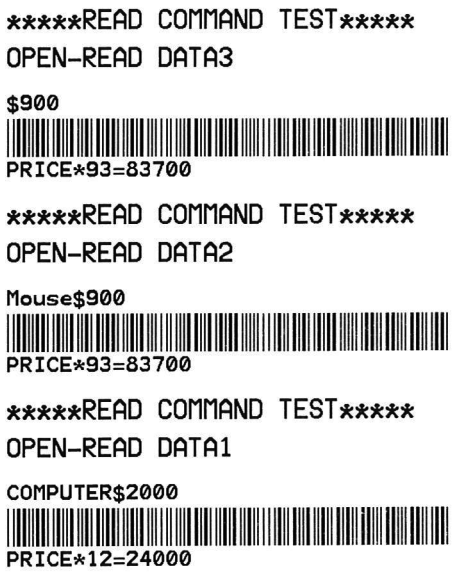
This command reads data from downloaded data file.

Syntax

READ file handle,variables

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

Example

Sample code	Result
DOWNLOAD "DATA1",20,COMPUTER 2000 12 DOWNLOAD "DATA2",16,Mouse 900 93 DOWNLOAD "DEMO.BAS" SIZE 3,1 GAP 0,0 DIRECTION 1 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

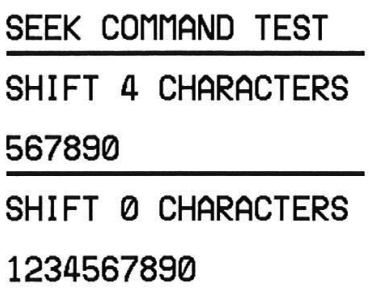
This command shifts the specified file pointer to a certain position.

Syntax

SEEK file handle,offset

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

Example

Sample code	Result
DOWNLOAD "DATA",12,1234567890 **DOWNLOAD "TEST.BAS"** **SIZE 4,1.5** **GAP 0,0** **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

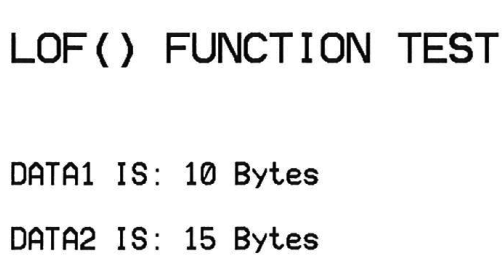
This function returns the size of the specified file.

Syntax

LOF("FILENAME")

Parameter	Description
FILENAME	The file downloaded in the printer memory.

Example

Sample code	Result
DOWNLOAD "DATA1",10,1234567890 **DOWNLOAD "DATA2",15,ABCDEFGHIJKLMNO** **DOWNLOAD "LofTest.BAS"** **SIZE 4,1.5** **GAP 0,0** **DIRECTION 1** **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$()

● LOC( )

Description

This function returns the current read/write position within an open file.

Syntax

LOC(file handle)

Parameter	Description
file handle	0 or 1

Note:

This command has been supported since V6.86 EZ and later firmware.

Example

Sample code

```
DOWNLOAD "DATA.DAT",30,12345678
12345678
12345678

DOWNLOAD "TEST.BAS"
str1$ = ""
location = 0
OPEN "DATA.DAT",0
```

Result

```
str1$:    12345678
Location:10
```

```
READ 0,str1$

location = LOC(0)

CLOSE 0

SIZE 4,1

GAP 0,0

CLS

TEXT 10,10,"3",0,1,1,"str1$:      "+str1$

TEXT 10,60,"3",0,1,1,"Location:"+STR$(location)

PRINT 1

EOP

TEST
```

● FREAD$( )

Description

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

Syntax

FREAD$ (file handle,byte)

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

Example

Sample code	Result
DOWNLOAD "DATA1",10,1234567890 **DOWNLOAD "DATA2",15,ABCDEFGHIJKLMNO** **DOWNLOAD "OPEN2.BAS"** **SIZE 4,1** **GAP 0,0** **DIRECTION 1** **CLS** **OPEN "DATA1",0** **OPEN "DATA2",1**	FREAD$(0,6) IS: 123456 FREAD$(1,6) IS: ABCDEF

```
SEEK 0,0

SEEK 1,0

Y$=FREAD$(0,6)

Z$=FREAD$(1,6)

TEXT 10,100,"3",0,1,1,"FREAD$(0,6) IS: "+Y$

TEXT 10,150,"3",0,1,1,"FREAD$(1,6) IS: "+Z$

PRINT 1

EOP

OPEN2
```

See Also

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

● PUT

Description

One byte is appended into file.

Syntax

PUT file handle,var1$[, var2$][,var3$][, …]

PUT file handle,var1[, var2][,var3][, …]

PUT file handle,var1$[, var2$][,var3][, …]

Parameter	Description
file handle	0 or 1
var$	Data is a character
var	Data is ASCII value

Note:

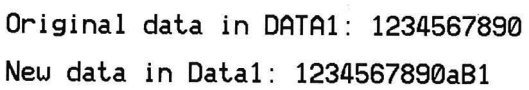
This command has been supported since V6.91 EZ and later firmware.

Example

Sample code

```
DOWNLOAD "DATA1",10,1234567890
DOWNLOAD "TEST.BAS"
str1$ = ""
str2$ = ""
OPEN "DATA1",0
SEEK 0,0
READ 0,str1$
PUT 0,"a","B",49
SEEK 0,0
READ 0,str2$
CLOSE 0

SIZE 4,0.5
GAP 0,0
CLS
TEXT 10, 10,"3",0,1,1,"Original data in DATA1: "+str1$
TEXT 10, 60,"3",0,1,1,"New data in Data1: "+str2$
PRINT 1
EOP
TEST
```

Result



See Also

DOWNLOAD, EOP, OPEN, READ, EOF, LOF(), SEEK, GET

● GET

Description

Get one byte from file.

Syntax

GET file handle,var1$[,var2$][,var3$][, …]

GET file handle,var1[,var2][,var3][, …]

GET file handle,var1$[,var2$][,var3][, …]

Parameter	Description
file handle	0 or 1
var$	Get a character
var	Get ASCII value

Note:

This command has been supported since V6.91 EZ and later firmware.

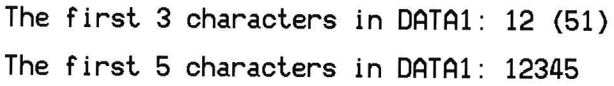
Example

Sample code

```
DOWNLOAD "DATA1",10,1234567890
DOWNLOAD "TEST.BAS"
a$=""
b$=""
c=0
d$=""
e$=""
```

```
OPEN "DATA1",0

SEEK 0,0

GET 0,a$,b$,c

SEEK 0,0

FOR I=1 TO 5

GET 0,d$

e$=e$+d$

NEXT


SIZE 4,0.5

GAP 0,0

CLS

TEXT 10,10,"3",0,1,1,"The first 3 characters in DATA1: "+ a$+b$+" ("+STR$(c)+")"

TEXT 10,60,"3",0,1,1,"The first 5 characters in DATA1: "+e$

PRINT 1

EOP

TEST
```

Result



See Also

DOWNLOAD, EOP, OPEN, READ, EOF, LOF(), SEEK, PUT

● COPY

Description

Copy the existed file from CARD to FLASH.

Syntax

COPY [memory ID of source,]"filename of source",[memory ID of new file,]"new filename"

Parameter	Description
memory ID of source	Optional. ID: Omitted — Memory device: DRAM ID: F — Memory device: FLASH ID: E — Memory device: CARD
source filename	The file in CARD which you want to copy to on board FLASH.
memory ID of new file	Optional. ID: Omitted — Memory device: DRAM ID: F — Memory device: FLASH
new filename	The new filename you want to use in the on board FLASH.

Note: This command has been supported since V6.78 EZ and later firmware.

Example

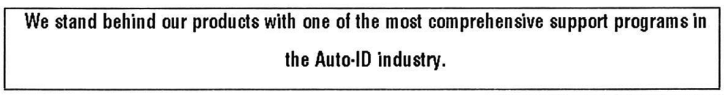
Sample Code

```
DOWNLOAD "DATA_D.DAT",105,We stand behind our products with one of the most comprehensive support programs in the Auto-ID industry.

DOWNLOAD "TEST.BAS"
```

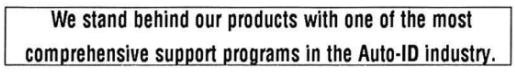
```
KILL F,"*"

COPY "DATA_D.DAT",F,"DATA_F.DAT"

OPEN "DATA_F.DAT",0

SEEK 0,0

data$=FREAD$(0,LOF("DATA_F.DAT"))

CLOSE 0

SIZE 4,0.5

GAP 0,0

CLS

BOX 10,10,800,100,2

BLOCK 15,15,790,90,"0",0,8,8,20,2,data$

PRINT 1

EOP

TEST
```

Result

203 dpi



300 dpi



See Also

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

● FOR…NEXT LOOP

Description

Loop is used to execute one or more lines of program repetitively. A loop counter value specifies the number of executions. Nested loops are allowed (up to 39 nested loops) in this printer. Jumping out in the middle of the FOR…NEXT loop is prohibited.

Syntax

```
FOR variable = start TO end STEP increment
    statement; start < end
    [EXITFOR]
NEXT
```

Parameter	Description
variable	The variable name ~~is~~ (up to 8 characters)
start	Integer or floating point numbers
end	Integer of floating point numbers
increment	Integer or floating point, positive or negative
EXITFOR	Exit for loop

Example

Sample code	Result
DOWNLOAD "TEST.BAS" SIZE 4,2.5 GAP 0,0 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

TEST
```

```
 1      1      110    1
 2      101    100    1.5
 3      201    90     2
 4      301    80     2.5
 5      401    70     3
 6      501    60     3.5
 7      601    50     4
 8      701    40     4.5
 9      801    30     5
 10     901    20
               10
```

See Also

DOWNLOAD, EOP

● WHILE…WEND

Description

Executes a series of statements as long as a given condition is True. Nested loops are allowed (up to 39 nested loops) in this printer.

Syntax

WHILE *condition*

[*statement*]

WEND

Parameter	Description
condition	Available relational operator: <, >, =, <=, >=, <> ***Relational operator <>, not equal, was supported since V5.10 EZ.***
statement	One or more statements executed while condition is True.

Note:

This command has been supported since V5.10 EZ and later firmware.

Example

Sample Code	Result
DOWNLOAD "TEST.BAS" **I=0** **TOTAL=0** **WHILE I<100** **I=I+1** **TOTAL=TOTAL+I** **WEND** **SIZE 4,0.5**	1+2+3+ . . . + 100 = 5050

```
GAP 0,0

CLS

TEXT 10,10,"3",0,1,1,"1+2+3+ ... + 100 = " +STR$(TOTAL)

PRINT 1

EOP

TEST
```

```
DOWNLOAD "TEST.BAS"

data$ =""

SIZE 4,0.3

GAP 0,0

DIRECTION 1

INPUT "Data:",data$

WHILE data$ <> "Quit"

CLS

TEXT 10,10,"3",0,1,1,"Data: "+data$

PRINT 1

INPUT "Data:",data$

WEND

CLS

TEXT 10,10,"3",0,1,1,"Quit BAS"

PRINT 1

EOP

TEST

12345

67890

quit

Quit
```