

Software Developer's Manual

FBPL Command Reference

TD-4420TN/4520TN

TD-4650TNWB/4750TNWB/4650TNWBR/4750TNWBR

RJ-2035B/2055WB/3035B/3055WB

TJ-4005DN/4010TN

TJ-4020TN/4021TN/4021TNR/4120TN/4121TN/4121TNR

TJ-4420TN/4520TN/4620TN/4422TN/4522TN

Version 13

Copyright

©2019 Brother Industries, Ltd. All rights reserved.

Information in this document is subject to change without notice. The software described in this document is furnished under a license agreement. The software may be used or copied only in accordance with the terms of those agreements. No part of this publication can be reproduced in any form or by any means without prior written permission of Brother Industries, Ltd.

Trademarks

Any trade names and product names of companies appearing on Brother products, related documents and any other materials are all trademarks or registered trademarks of those respective companies.

Important Note

This document provides information for the label printer (See [4. Supported Printers](#)) and is available for use only if you agree to the following conditions:

No Warranty

- a. The contents of this document are subject to change without notice.
- b. Regarding this document, Brother will not guarantee that there are no defects or if the purpose matches the specific purpose, regardless of whether it is explicit or implied.
- c. Brother assumes no responsibility for damages, actions of third parties, the user's intentional or negligent operation, misuse, or operation under other special conditions.

TABLE OF CONTENTS

1	Example of Command Reference	1
2	Document Conventions	2
3	Object Position Calculation	3
4	Supported Printers	4
5	Setup and System Commands	5
5.1	SIZE	5
5.2	GAP	6
5.3	GAPDETECT	8
5.4	BLINEDETECT	9
5.5	AUTODETECT	10
5.6	BLINE	11
5.7	OFFSET	12
5.8	SPEED	13
5.9	DENSITY	14
5.10	DIRECTION	15
5.11	REFERENCE	16
5.12	SHIFT	17
5.13	COUNTRY	19
5.14	CODEPAGE	20
5.15	CLS	22
5.16	FEED	23
5.17	BACKFEED	24
5.18	FORMFEED	25
5.19	HOME	26
5.20	PRINT	27
5.21	SOUND	28
5.22	CUT	29
5.23	LIMITFEED	30
5.24	SELFTTEST	31
5.25	EOJ	34
5.26	DELAY	35
5.27	DISPLAY	36
5.28	INITIALPRINTER	38
5.29	MENU	39
6	Label Formatting Commands	42
6.1	BAR	42
6.2	BARCODE	43
6.3	TLC39	50
6.4	BITMAP	51
6.5	BOX	53
6.6	CIRCLE	54
6.7	ELLIPSE	55
6.8	CODABLOCK F MODE	56
6.9	DMATRIX	57
6.10	ERASE	59
6.11	MAXICODE	60
6.12	PDF417	62
6.13	AZTEC	65
6.14	MPDF417	66
6.15	PUTBMP	67
6.16	PUTPCX	70
6.17	QRCODE	72
6.18	RSS	78
6.19	REVERSE	83
6.20	DIAGONAL	84
6.21	TEXT	85
6.22	BLOCK	89

6.23	FONT_REDIRECT	92
7	Status Polling and Immediate Commands	93
7.1	<ESC>!?	93
7.2	<ESC>!C	94
7.3	<ESC>!D	95
7.4	<ESC>!O	96
7.5	<ESC>!P	97
7.6	<ESC>!Q	98
7.7	<ESC>!R	99
7.8	<ESC>!S	100
7.9	<ESC>!F	102
7.10	<ESC>!	103
7.11	~!@	104
7.12	~!A	105
7.13	~!D	106
7.14	~!E	107
7.15	~!F	108
7.16	~!I	109
7.17	~!T	110
7.18	<ESC>Y	111
7.19	<ESC>Z	112
8	Commands for Windows Driver	113
8.1	IB	113
8.2	IJ	114
8.3	IN	115
9	File Management Commands	116
9.1	DOWNLOAD	116
9.2	EOP	119
9.3	FILES	120
9.4	KILL	121
9.5	MOVE	122
9.6	RUN	123
10	BASIC Commands and Functions	125
10.1	ABS()	125
10.2	ASC()	126
10.3	CHR\$()	127
10.4	XOR\$()	128
10.5	END	129
10.6	EOF()	130
10.7	OPEN	131
10.8	CLOSE	133
10.9	WRITE	134
10.10	READ	135
10.11	SEEK	136
10.12	LOF()	137
10.13	LOC()	138
10.14	FREAD\$()	139
10.15	PUT	140
10.16	GET	141
10.17	COPY	142
10.18	FOR...NEXT LOOP	143
10.19	WHILE...WEND	144
10.20	DO...LOOP	145
10.21	IF...THEN...ELSE...ENDIF LOOP	148
10.22	GOSUB...RETURN	151
10.23	GOTO	152
10.24	INP\$()	153
10.25	INP()	154
10.26	LOB()	155

10.27	INPUT	156
10.28	PREINPUT.....	157
10.29	POSTINPUT.....	158
10.30	SET FILTER.....	159
10.31	REM	160
10.32	OUT.....	161
10.33	OUTR.....	162
10.34	GETKEY().....	163
10.35	INT().....	164
10.36	LEFT\$().....	165
10.37	LEN().....	166
10.38	MID\$().....	167
10.39	RIGHT\$().....	168
10.40	STR\$().....	169
10.41	STRCOMP().....	170
10.42	INSTR().....	171
10.43	TRIM\$().....	172
10.44	LTRIM\$().....	173
10.45	RTRIM\$().....	174
10.46	TEXTPIXEL().....	175
10.47	BARCODEPIXEL().....	176
10.48	VAL().....	177
10.49	NOW\$().....	178
10.50	NOW	179
10.51	FORMAT\$()	180
10.52	DATEADD()	184
10.53	FSEARCH().....	186
10.54	TOUCHPRESS().....	187
10.55	RECORDSET\$().....	188
10.56	REPLACE\$()	190
11	Device Reconfiguration Commands	191
11.1	SET COUNTER.....	191
11.2	SET CUTTER.....	192
11.3	SET PARTIAL_CUTTER.....	193
11.4	SET BACK	194
11.5	SET BACK_BEFORE_PRINT	195
11.6	SET KEY _N	196
11.7	SET LED _N	198
11.8	SET PEEL.....	199
11.9	SET REWIND	200
11.10	SET TEAR	201
11.11	SET GAP/SET BLINE	202
11.1	2 SET BLINE REVERSE / SET BLINE OBVERSE.....	204
11.2	SET BLINE PRINTSIDE / SET BLINE BACKSIDE.....	205
11.3	SET HEAD.....	206
11.4	SET RIBBON.....	207
11.5	SET ENCODER.....	208
11.6	SET RIBBONEND	209
11.7	SET COM1.....	210
11.8	SET PRINTKEY.....	211
11.9	SET REPRINT.....	213
11.10	SET FEED_LEN	214
11.11	GETSENSOR()	215
11.12	GETSETTING\$().....	218
11.13	SET USBHOST	221
11.14	SET AUTORUN.....	222
11.15	SET RESPONSE	223
11.16	SET DAYLIGHT_SAVE.....	225
11.17	SET REGISTRATION	226

11.18	PEEL.....	227
11.19	LED1, LED2, LED3.....	228
11.20	KEY1, KEY2, KEY3.....	229
11.21	SET SENSOR_REF.....	230
12	Printer Global Variables.....	237
12.1	@LABEL.....	237
12.2	YEAR.....	238
12.3	MONTH.....	239
12.4	DATE.....	240
12.5	WEEK.....	241
12.6	HOUR.....	242
12.7	MINUTE.....	243
12.8	SECOND.....	244
12.9	@YEAR.....	245
12.10	@MONTH.....	246
12.11	@DATE.....	247
12.12	@DAY.....	248
12.13	@HOUR3.....	249
12.14	@MINUTE.....	250
12.15	@SECOND.....	251
12.16	_MODEL\$.....	252
12.17	_SERIAL\$.....	253
12.18	_VERSION\$.....	254
13	Bluetooth Module Setting Commands.....	255
13.1	BT NAME.....	255
13.2	BT PINCODE.....	256
13.3	BT MODE.....	257
13.4	SET BTLINKBACK.....	259
14	Wi-Fi Module Setting Commands.....	260
14.1	WLAN SSID.....	260
14.2	WLAN WPA.....	261
14.3	WLAN WEP.....	262
14.4	WLAN DHCP.....	263
14.5	WLAN IP.....	264
14.6	WLAN PORT.....	265
14.7	WLAN THROUGH.....	266
15	Internal Ethernet Setting Commands.....	267
15.1	NET DHCP.....	267
15.2	NET IP.....	268
15.3	NET PORT.....	269
15.4	NET NAME.....	270
15.5	NET THROUGH.....	271
16	Setting Commands for RJ-2035B/2055WB/3035B/3055WB.....	272
16.1	SET PRINTQUALITY.....	272
16.2	SET STANDBYTIME.....	273
16.3	SET SLEEPTIME.....	274
17	RFID.....	275
17.1	RFID READ / RFID WRITE.....	275
17.2	RFIDDETECT.....	281
18	General purpose input output (GPIO) Setting Commands.....	282
18.1	BEFORE USING GPIO.....	282
18.2	SET GPO.....	283
18.3	SET GPI.....	286
18.4	GPIO APPLICATION NOTE.....	289
Appendix A: Command List by Model.....		291
Appendix B: Download your Fonts.....		302

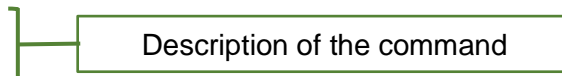
1 Example of Command Reference

1.1 Print



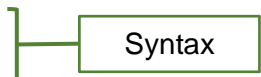
Description

Print the label format currently stored in the image buffer.

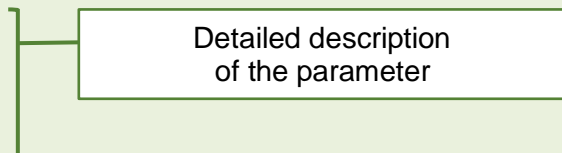


Syntax

PRINT m[,n]



Parameter	Description
m	Number of label set $1 \leq m \leq 999999999$
n	Number of label copies $1 \leq n \leq 999999999$

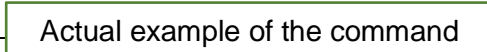
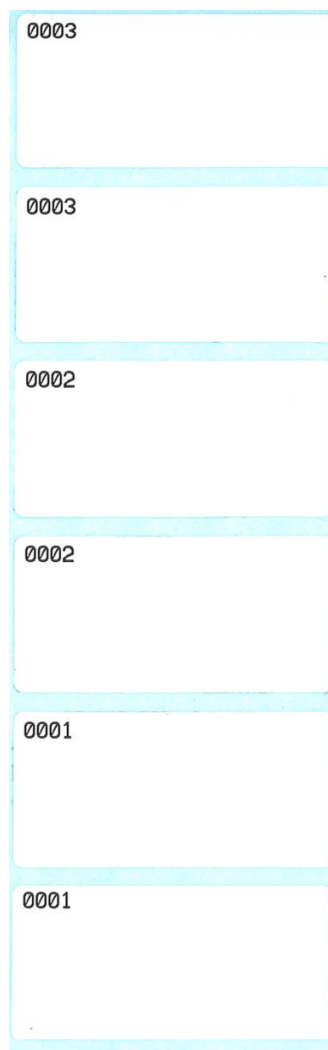


Example

Sample code

```
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
```

Result



See Also

SET COUNTER, INPUT, DOWNLOAD

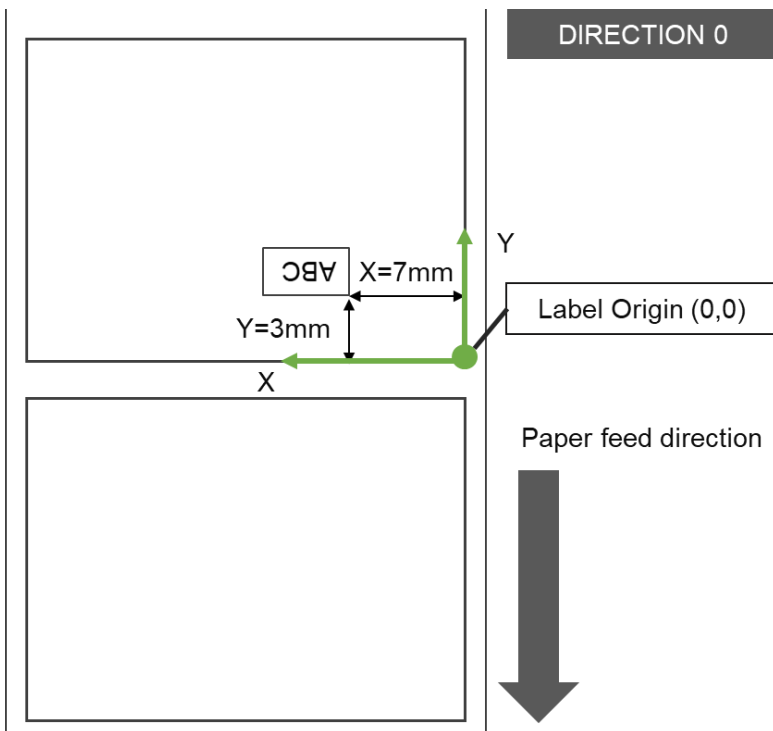


2 Document Conventions

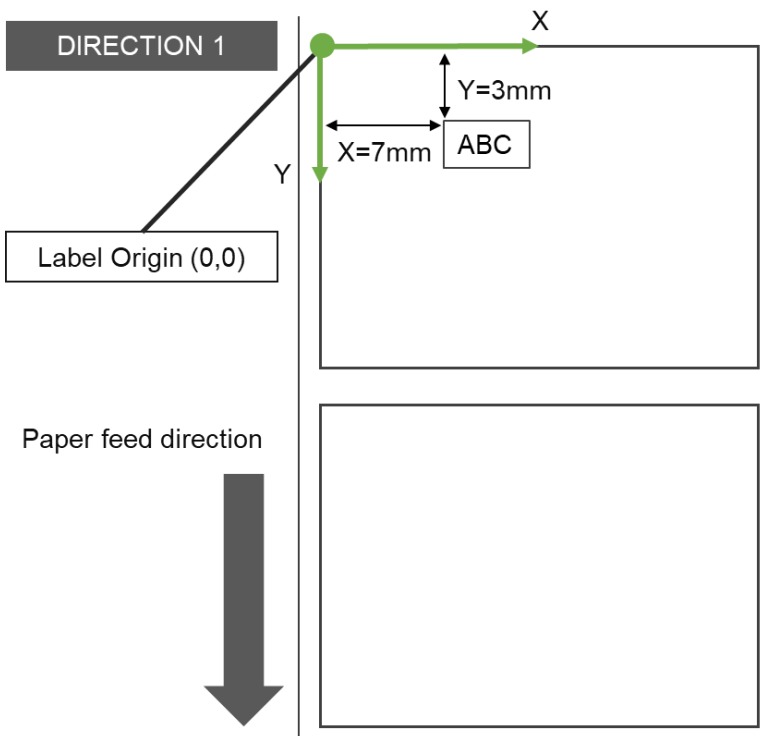
This manual uses the following typographic conventions.

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	Note

3 Object Position Calculation



```
DIRECTION 0
CLS
TEXT 56,24,"3",0,1,1,"ABC"
PRINT 1
```



```
DIRECTION 1
CLS
TEXT 56,24,"3",0,1,1,"ABC"
PRINT 1
```

Note :

1. 203 dpi, 1 mm=8 dots ; 300 dpi, 1 mm=12 dots ; 600 dpi, 1mm=24 dots
2. Only integer portion will be used. Ex. 2 mm = 23.6 dots then 23 dots will be used.

4 Supported Printers

Series	Models
TD-4T series	TD-4420TN/4520TN
	TD-4650TNWB/4750TNWB/4650TNWBR/4750TNWBR
RJ series	RJ-2035B/2055WB/3035B/3055WB
TJ series	TJ-4005DN/4010TN/4020TN/4021TN/4021TNR/4120TN/4121TN/4121TNR, TJ-4420TN/4520TN/4620TN/4422TN/4522TN

For more information, see [Appendix A: Command List by Model](#).

5 Setup and System Commands

5.1 SIZE

Description

Define the label width and length.

Syntax

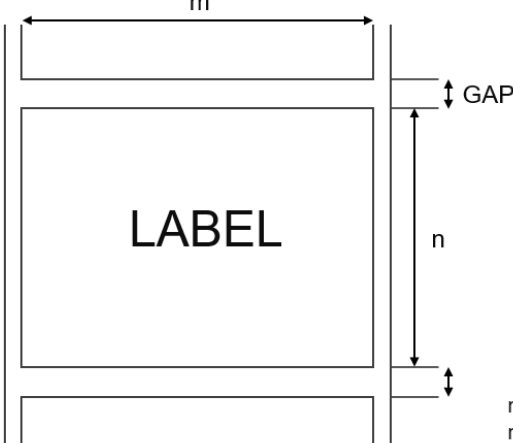
<code>SIZE m[,n]</code>	in inches
<code>SIZE m mm[,n mm]</code>	in mm
<code>SIZE m dot[,n dot]</code>	in dots

<u>Parameter</u>	<u>Description</u>
M	Label width (inch/ mm/ dot)
[N]	Label length (inch/ mm/ dot), Optional

Note :

- 203 dpi : 1 mm = 8 dots
- 300 dpi : 1 mm = 12 dots
- 600 dpi : 1 mm = 24 dots
- For metric and dot systems, there must be a space between parameter and “mm” or “dot”.

Example

<u>Sample Code</u>	<u>Result</u>
In inches: <code>SIZE 3.5,3.00</code>	 <p>m: Label Width n: Label Height</p>
In mm: <code>SIZE 100 mm,100 mm</code>	

See Also

GAP, BLINE

5.2 GAP

Description

Define the gap distance between two labels.

Syntax

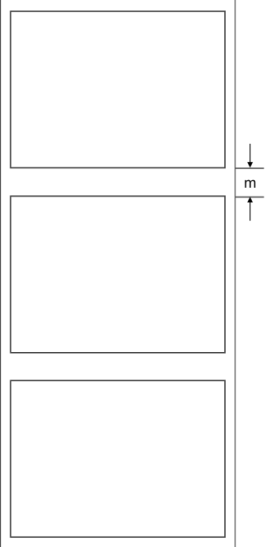
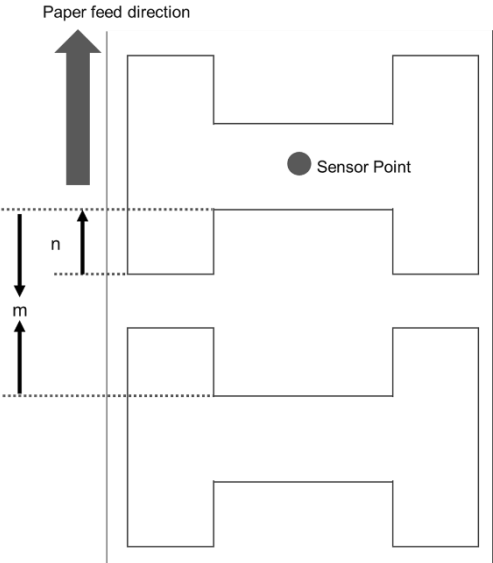
GAP m,n	in inches
GAP m mm,n mm	in mm
GAP m dot,n dot	in dots

Parameter	Description
M	The gap distance between two labels $0 \leq m \leq 1$ (inch), $0 \leq m \leq 25.4$ (mm) $0 \leq m \leq 5$ (inch), $0 \leq m \leq 127$ (mm)
N	The offset distance of the gap $n \leq \text{label length}$ (inch or mm)
0, 0	Continuous label

Note :

- 203 dpi : 1 mm = 8 dots
- 300 dpi : 1 mm = 12 dots
- 600 dpi : 1 mm = 24 dots
- For metric and dot systems, make sure you add a space between parameter and mm/dot.
- When the sensor type is changed from "Black Mark" to "GAP", make sure you send the **GAP** command to the printer first.

Example

Sample Code	Result
<p>Normal gap</p> <p>In inches: GAP 0.12, 0</p> <p>In mm: GAP 3 mm, 0 mm</p> <p>Continuous label: GAP 0, 0</p>	<p>Normal gap</p>  <p>The diagram shows three identical rectangular labels stacked vertically. A vertical dimension line on the right side indicates the gap between the bottom of one label and the top of the next, labeled with the letter 'm'.</p>
<p>Special gap</p> <p>In inches GAP 0.30, 0.10</p> <p>In mm GAP 7.62 mm, 2.54 mm</p>	<p>Special gap</p>  <p>The diagram shows a continuous label with a complex, stepped profile. A vertical arrow on the left indicates the 'Paper feed direction'. A 'Sensor Point' is marked with a black dot on the label. Two vertical dimension lines on the left indicate distances: 'n' is the distance from the top of the label to the sensor point, and 'm' is the distance from the bottom of the label to the sensor point.</p>

See Also
SIZE, BLINE

5.3 GAPDETECT

Description

Feed the paper through the gap sensor 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]

<u>Parameter</u>	<u>Description</u>
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, BLINEDTECT, AUTODETECT

5.4 BLINEDETECT

Description

Feed the paper through the black mark sensor 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]`

<u>Parameter</u>	<u>Description</u>
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

5.5 AUTODETECT

Description

Feed the paper through the gap/black mark sensor 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]`

<u>Parameter</u>	<u>Description</u>
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.
- The printer will detect the label by the proper sensor type. When using this command, make sure **GAP** or **BLINE** command are not used in your program.

See Also

GAP, SIZE, GAPDETECT, BLINEDETECT

5.6 BLINE

Description

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

Syntax

BLINE m,n	in inches
BLINE m mm,n mm	in mm
BLINE m dot,n dot	in dots

Parameter	Description
m	The height of black line either in inch or mm $0 \leq m \leq 1$ (inch), $0 \leq m \leq 25.4$ (mm) $0 \leq m \leq 5$ (inch), $0 \leq m \leq 127$ (mm)
n	The extra label feeding length $0 \leq n \leq \text{label length}$
0,0	Continuous label

Note:

- For metric system, make sure you add a space between parameter and mm.
- When the sensor type is changed from "GAP" to "Black Mark", make sure you send the **GAP** command to the printer first.
- 203 dpi : 1 mm = 8 dots
 300 dpi : 1 mm = 12 dots
 600 dpi : 1 mm = 24 dots

Example

Sample Code
In inches: BLINE 0.20,0.50
In mm: BLINE 5.08 mm,12.7 mm

See Also

SIZE, GAP

5.7 OFFSET

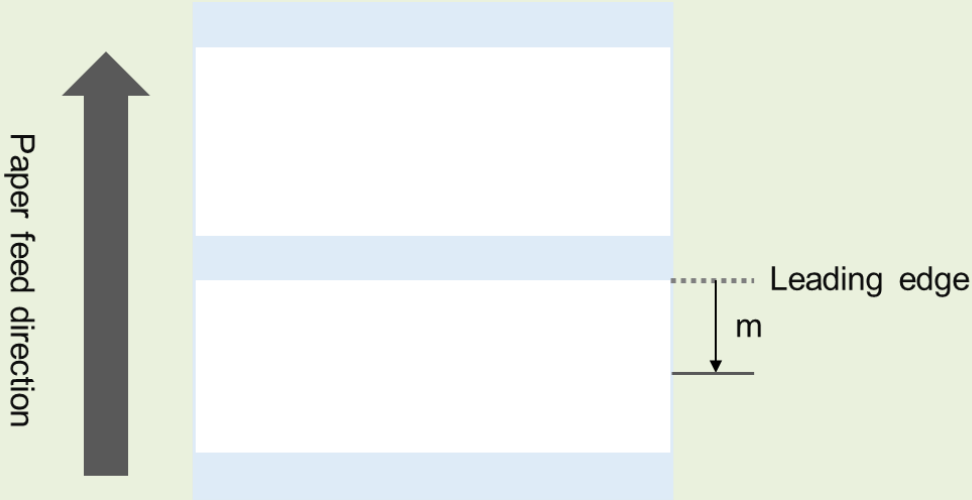
Description

Fine-tune the media stop location especially in the peel-off mode and cutter mode. The printer backfeeds the label before printing the next job.

Syntax

OFFSET m	In inches
OFFSET m mm	In mm
OFFSET m dot	In dots

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



Note:

- If the offset value is incorrect, it may create a paper jam.
- For metric system, make sure you add a space between parameter and mm.
- 203 dpi : 1 mm = 8 dots
300 dpi : 1 mm = 12 dots
600 dpi : 1 mm = 24 dots

Example

<u>Sample Code</u>
In inches: OFFSET 0.5
In mm: OFFSET 12.7 mm

See Also

SIZE, GAP, SET PEEL, SET CUTTER

5.8 SPEED

Description

Define the print speed.

Syntax

SPEED n

<u>Parameter</u>	<u>Description</u>																				
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	15	16	17	18
TD-4420TN		V	V		V		V	V	V												
TD-4520TN		V	V		V		V	V													
TD-4650TNWB, TD-4650TNWBR		V	V		V		V	V	V	V	V										
TD-4750TNWB, TD-4750TNWBR		V	V		V		V	V	V												
RJ-2035B, RJ-2055WB	V	V	V		V		V														
RJ-3035B, RJ-3055WB	V	V	V		V		V														
TJ-4005DN, TJ-4010TN	V	V	V		V		V	V	V												
TJ-4020TN, TJ-4021TN, TJ-4021TNR	V	V	V		V		V	V	V	V	V	V	V								
TJ-4120TN, TJ-4121TN, TJ-4121TNR	V	V	V		V		V	V	V	V											
TJ-4420TN, TJ-4422TN			V		V		V	V	V	V	V	V	V	V	V	V	V				
TJ-4520TN, TJ-4522TN			V		V		V	V	V	V	V	V	V	V	V						
TJ-4620TN		V	V		V		V	V	V												

Example

Sample code

```
SPEED 10
```

See Also

DENSITY

5.9 DENSITY

Description

Set the print darkness.

Syntax

```
DENSITY n
```

<u>Parameter</u>	<u>Description</u>
n	0~15 0: the lightest level 15: the darkest level

Note:

Default **DENSITY** setting is 8.

Example

Sample code

```
DENSITY 7
```

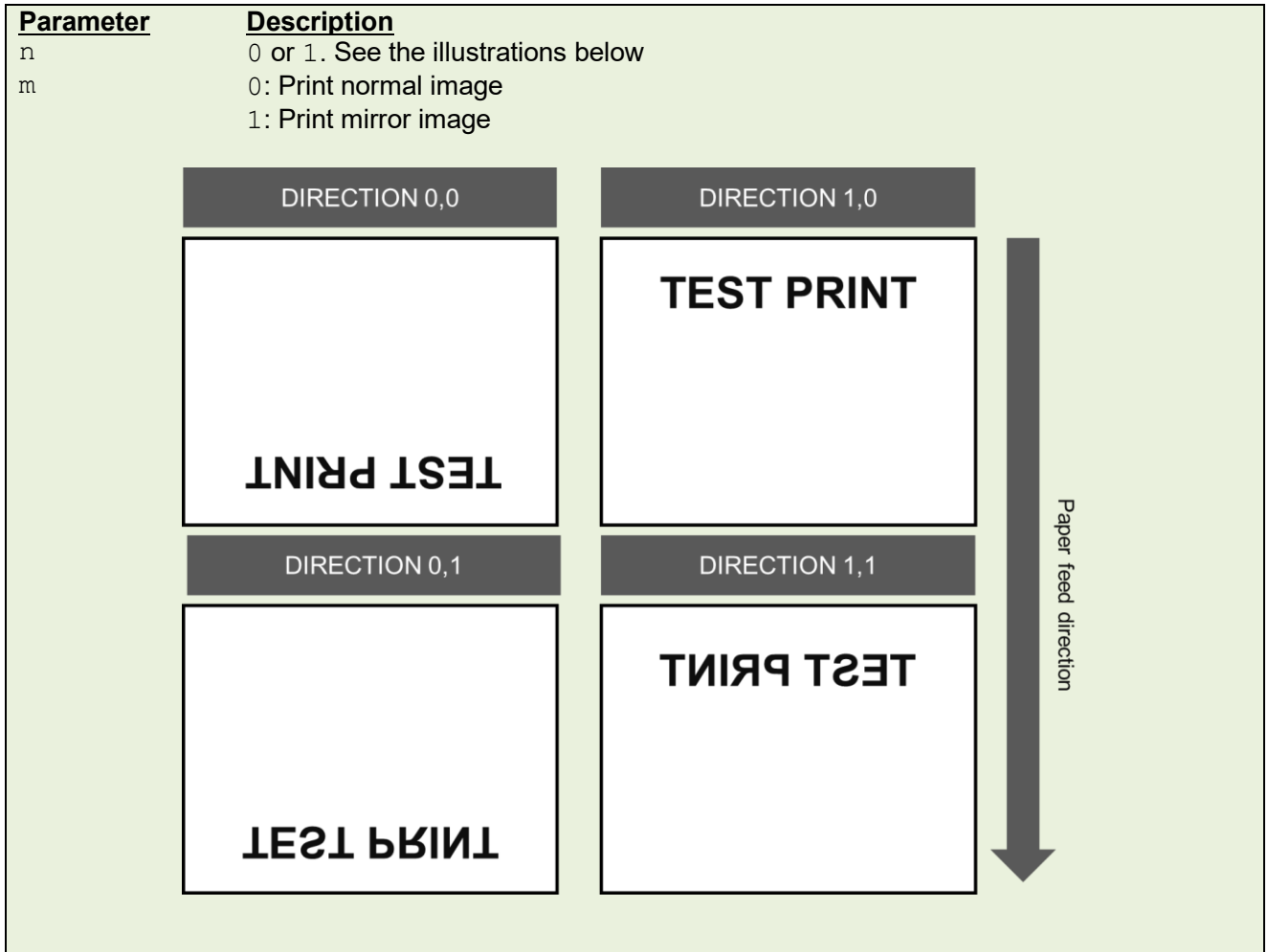

5.10 DIRECTION

Description

Define the print direction and mirror image. This will be stored in the printer memory.

Syntax

`DIRECTION n[,m]`



Example

Sample code

- `DIRECTION 0`
- `DIRECTION 0,1`

See Also

REFERENCE

5.11 REFERENCE

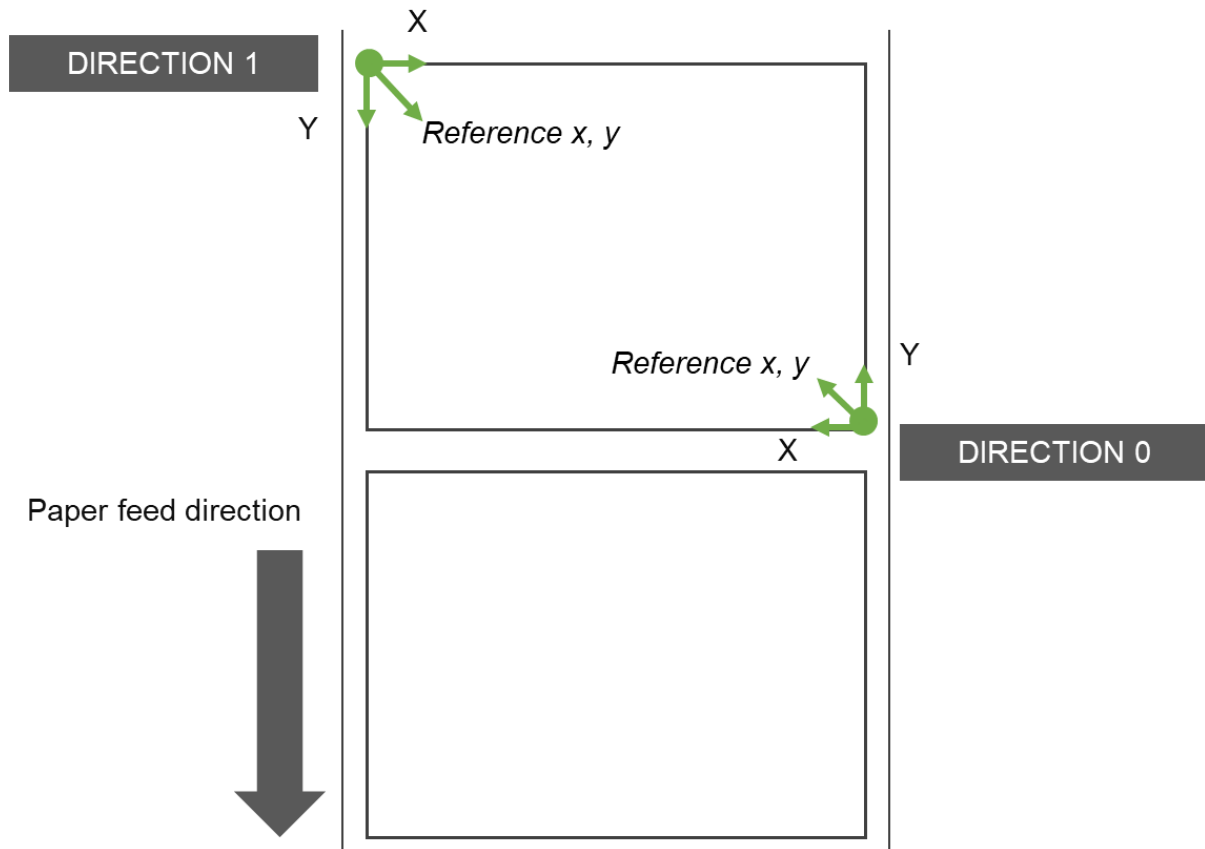
Description

Set the origin of the printer coordinate system vertically and horizontally. The reference point varies depending on the print direction.

Syntax

REFERENCE x, y

<u>Parameter</u>	<u>Description</u>
x	Horizontal coordinate (in dots)
y	Vertical coordinate (in dots)
Note:	
	▪ 203 dpi : 1 mm = 8 dots
	300 dpi : 1 mm = 12 dots
	600 dpi : 1 mm = 24 dots



Example

Sample code

```
REFERENCE 10,10
```

See Also

DIRECTION

5.12 SHIFT

Description

Fine-tune the print position. A positive value moves the label further from the printing direction; a negative value moves the label towards the printing direction.

Syntax

SHIFT [x,] y

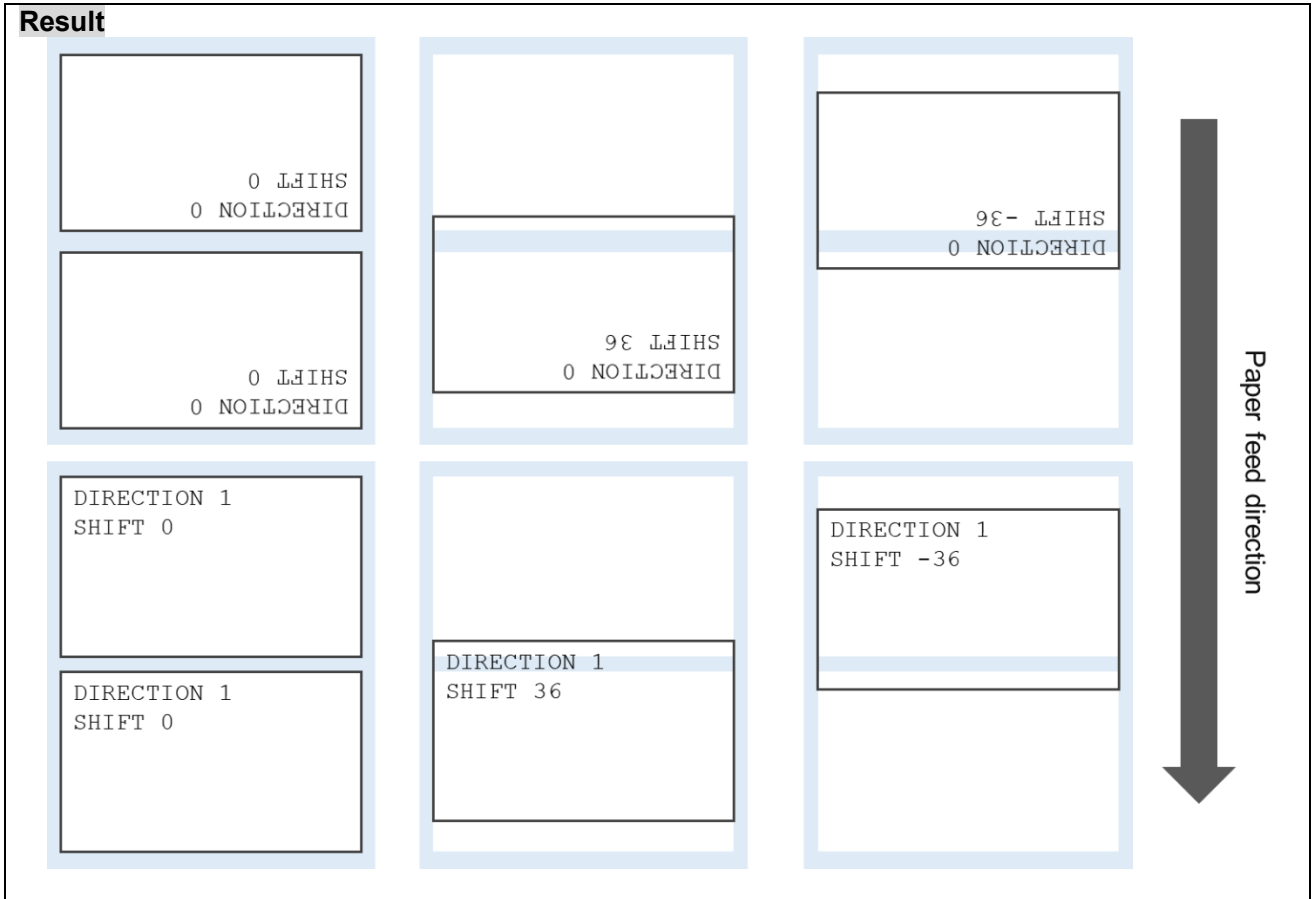
<u>Parameter</u>	<u>Description</u>
x	Optional. The maximum value is 1 inch. <ul style="list-style-type: none">• 200 dpi: -203 to 203 (in dots)• 300 dpi: -300 to 300 (in dots)
Y	The maximum value is 1 inch. <ul style="list-style-type: none">• 200 dpi: -203 to 203 (in dots)• 300 dpi: -300 to 300 (in dots)

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

5.13 COUNTRY

Description

Specify a language for an external USB keyboard.

Syntax

COUNTRY n

<u>Parameter</u>	<u>Description</u>
n	001 USA
	003 Spanish (Latin America)
	007 Russia
	031 Dutch
	033 French (France)
	034 Spanish
	061 English (international)

Example

Sample code

```
COUNTRY 001
```

See Also

CODEPAGE, ~!l

5.14 CODEPAGE

Description

Define 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		8-bit		Windows		ISO	
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:

- The data length determines 7-bit or 8-bit communications parameter.
- The mismatched encoding might result in garbled printing or missing text.
 - Check if the printer's **CODEPAGE** setting matches the print data encoding.
 - Check if the font is compatible with the current printer's **CODEPAGE** setting. Change the printer's **CODEPAGE** setting or the font if needed.

Sample Code	Result
<pre> 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 RETURN EOP TEST </pre>	<pre> 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 { | } ~ € , f " " ... † ‡ ^ % Š < Œ Ž \ / " " • - — ~ ™ š > œ ž Ÿ ; ç £ ¤ ¥ ¦ § ¨ © 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 õ ñ ò ó ô õ ö ÷ ø ù ú û ü ý þ ÿ </pre>

See Also
COUNTRY, ~!l

5.15 CLS

Description

Clear the image buffer.

Syntax

CLS

<u>Parameter</u>	<u>Description</u>
None	N/A

Note:

Make sure you use this command after **SIZE** command.

Example

Sample code

```
CLS
```

See Also

SIZE, GAP, BLINE

5.16 FEED

Description

Feed the label for the specified distance. The length is specified in dots.

Syntax

FEED n

<u>Parameter</u>	<u>Description</u>
n	unit: dot $1 \leq n \leq 9999$
Note:	<ul style="list-style-type: none">203 dpi : 1 mm = 8 dots300 dpi : 1 mm = 12 dots600 dpi : 1 mm = 24 dots

Example

Sample code

```
FEED 40
```

See Also

BACKFEED, SIZE, GAP, BLINE, HOME, FORMFEED

5.17 BACKFEED

Description

Backfeed the label for the specified distance. The length is specified in dots.

Syntax

BACKFEED n

<u>Parameter</u>	<u>Description</u>
n	unit: dot $1 \leq n \leq 9999$
Note:	
<ul style="list-style-type: none">• 203 dpi: 1 mm = 8 dots 300 dpi : 1 mm = 12 dots 600 dpi : 1 mm = 24 dots• If the parameter is incorrect, it may create paper jam or wrinkle.	

Example

<u>Sample code</u>
BACKFEED 40

See Also

FEED, SIZE, GAP, BLINE, HOME, FORMFEED

5.18 FORMFEED

Description

Feed the label to the beginning of the next label.

Syntax

FORMFEED

<u>Parameter</u>	<u>Description</u>
None	N/A

Note:
Make sure you use this command after **SIZE** command.

Example

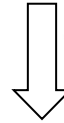
Sample code

```
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
```

Result

FORMFEED COMMAND TEST

Paper feed direction



See Also

FEED, SIZE, GAP, BLINE, HOME, BACKFEED

5.19 HOME

Description

Feed the label until the internal sensor has determined the origin.

Syntax

HOME

<u>Parameter</u>	<u>Description</u>
None	N/A

Note:

Make sure you define the size and gap of the label before using this command.

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

5.20 PRINT

Description

Print the label format currently stored in the image buffer.

Syntax

PRINT m[,n]

Parameter	Description
m	Number of label sets $1 \leq m \leq 999999999$
n	Number of label copies $1 \leq n \leq 999999999$

Example

Sample code	Result
<pre>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</pre>	<p>0003</p> <p>0003</p> <p>0002</p> <p>0002</p> <p>0001</p> <p>0001</p> <p>1 set, 2 copies</p> <p>Paper feed direction</p>

See Also

SET COUNTER, INPUT, DOWNLOAD

5.21 SOUND

Description

Create a beep sound.

Syntax

```
SOUND level, interval
```

<u>Parameter</u>	<u>Description</u>
level	Sound level: 0~9
interval	Sound interval: 1~4095 (in milliseconds)

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
```

5.22 CUT

Description

Activate the cutter to immediately cut the labels without backfeeding the label.

Syntax

CUT

<u>Parameter</u>	<u>Description</u>
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 PARTIAL_CUTTER

5.23 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]	inch
LIMITFEED n mm[,minpaper mm,maxgap mm]	mm
LIMITFEED n dot[,minpaper dot,maxgap dot]	dot

<u>Parameter</u>	<u>Description</u>
n	The maximum length for the sensor detection
Minpaper	The minimum length of paper
Maxgap	The maximum length of gap
Note:	
<ul style="list-style-type: none">▪ The setting will remain resident in memory.▪ For metric system, make sure you add a space between parameter n and mm.▪ The setting will return to the default value (10 inches) when the printer is initialized.▪ If the printer cannot calibrate the pre-printed media or media with hole, type the <code>Minpaper</code> or <code>Maxgap</code>.	

Example

Sample code

```
LIMITFEED 12
LIMITFEED 10, 2.36, 0.12
LIMITFEED 250 mm, 60 mm, 3 mm
LIMITFEED 2000 dot, 480 dot, 24 dot
```


5.24 SELFTEST

Description



Print the printer information.

Syntax

SELFTEST [page]

<u>Parameter</u>	<u>Description</u>
page	None: Print the whole printer information. PATTERN: Print a pattern to check the print head status. ETHERNET: Print the Ethernet configuration. WLAN: Print the Wi-Fi configuration. RS232: Print the RS-232C serial port configuration. SYSTEM: Print the printer configuration. Z: Print the emulated language settings. BT: Print the Bluetooth configuration.

Example

Sample code	Result
SELFTEST	<pre> ----- SYSTEM INFORMATION ----- MODEL: XXXXXX FIRMWARE: XXXXXX CHECKSUM: XXXXXX S/N: XXXXXX TCF: NO DATE: 1970/01/01 TIME: 00:04:18 NON-RESET: 110 m (TPH) RESET: 110 m (TPH) NON-RESET: 0 (CUT) RESET: 0 (CUT) ----- PRINTING SETTING ----- SPEED: 5 IPS DENSITY: 8.0 WIDTH: 4.00 INCH HEIGHT: 4.00 INCH GAP: 0.00 INCH INTENSION: 5 CODEPAGE: 850 COUNTRY: 001 ----- Z SETTING ----- DARKNESS: 16.0 SPEED: 4 IPS WIDTH: 4.00 INCH TILDE: 7EH (^) CARET: 5EH (^) DELIMITER: 2CH (,) POWER UP: NO MOTION HEAD CLOSE: NO MOTION ----- RS232 SETTING ----- BAUD: 9600 PARITY: NONE DATA BIT: 8 STOP BIT: 1 ----- DRAM FILE (0 FILES) ----- PHYSICAL 8192 KBYTES AVAILABLE 256 KBYTES ----- FLASH FILE (0 FILES) ----- PHYSICAL 4096 KBYTES AVAILABLE 2560 KBYTES ----- </pre> 
SELFTEST PATTERN	
SELFTEST ETHERNET	<pre> ----- ETHERNET SETTING ----- NAME: XXXXXX MAC ADDR: XXXXXX DHCP: ON IP ADDR: XXXXXX SUBNET: XXXXXX GATEWAY: XXXXXX PORT: 9100 ----- </pre>

SELFTEST WLAN	<pre> ----- WLAN SETTING ----- MAC ADDR: XXXX-XXXX SSID: TEST-AP DHCP: OFF IP ADDR: 10.0.10.138 SUBNET: 255.255.255.0 GATEWAY: 10.0.10.252 PORT: 9100 ----- </pre>
SELFTEST RS232	<pre> ----- RS232 SETTING ----- BAUD: 9600 PARITY: NONE DATA BIT: 8 STOP BIT: 1 ----- </pre>
SELFTEST SYSTEM	<pre> ----- SYSTEM INFORMATION ----- MODEL: XXXXXX FIRMWARE: XXXXXX CHECKSUM: XXXXXX S/N: XXXXXX TCF: NO DATE: 2013/01/11 TIME: 14:57:55 NON-RESET: 145 m (TPH) RESET: 145 m (TPH) NON-RESET: 0 (CUT) RESET: 0 (CUT) ----- </pre>
SELFTEST PRINTER	<pre> ----- PRINTING SETTING ----- SPEED: 5 IPS DENSITY: 8.0 WIDTH: 4.00 INCH HEIGHT: 1.00 INCH GAP: 0.00 INCH INTENSION: 5 CODEPAGE: 850 COUNTRY: 001 ----- </pre>
SELFTEST Z	<pre> ----- Z SETTING ----- DARKNESS: 16.0 SPEED: 4 IPS WIDTH: 4.00 INCH TILDE: 7EH (~) CARET: 5EH (^) DELIMITER: 2CH (,) POWER UP: NO MOTION HEAD CLOSE: NO MOTION ----- </pre>
SELFTEST BT	<pre> ----- BT SETTING ----- MAC ADDR: XXXXXX111111 NAME: BROTHER01 PIN CODE: 0000 PRINTER NAME: PAIR MODE: LEGACY MODULE: XXXX XXX MFi SUPPORTED: YES ----- </pre>

5.25 EOJ

Description

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

Syntax

EOJ

Example

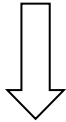
Sample Code

```
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
```

Result

Paper feed direction



Printer stops before next printing.

Printer stops before next printing.

Two labels are printed without stop.

Two labels are printed without stop.

} without stop

5.26 DELAY

Description

Define the period of time for the printer to wait before processing the next command.

Syntax

DELAY ms

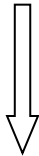
<u>Parameter</u>	<u>Description</u>
ms	Set the print delay time in milliseconds. 1000 ms = 1 second.

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

5.27 DISPLAY

Description

Display the image, which is in the printer's image buffer, on the LCD panel.

Syntax

DISPLAY IMAGE/OFF/CLS/.....

Parameter	Description
IMAGE	Display the image in printer's image buffer on the LCD panel.
OFF	Disable this function.
CLS	Display the background color and clear the items in the printer's image buffer on the LCD panel.
forecolor,backcolor	Set the color (decimal) for item and background in the printer's image buffer on the LCD panel
x,y,width,height	
x,y,width,height, thick	Draw the bar in the printer's image buffer on the LCD panel
x,y,width,height, thick, radius	
x,y,"bmpfile"	Display the .bmp in the printer's image buffer on the LCD panel
x,y,"font","content"	
x,y,"font",rotate,"content"	
x,y,"font",rotate,multi,"content"	Display the text in printer's image buffer on the LCD panel
x,y,"font",rotate,x-multi,y-multi,"content"	
x,y,"font",rotate,x-multi,y-multi,align,"content"	

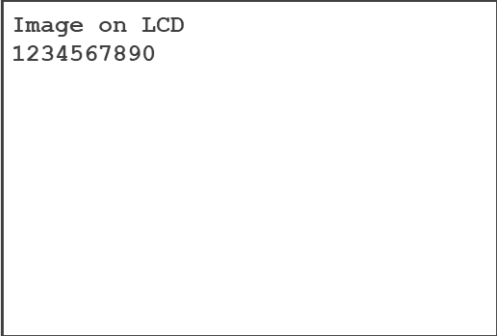

forecolor	RGB color code for text or bar (decimal)
backcolor	RGB color code for background (decimal)
x	Horizontal multiplication
y	Vertical multiplication
width	Frame width
height	Frame height
thick	Frame thickness
radius	Frame radius
bmpfile	.bmp file name
font	Font name
rotate	Rotation (0, 90, 180, and 270 valid)
x-multi	Horizontal multiplication
y-multi	Vertical multiplication

align	Text justification (1:left, 2:center, 3:right)
content	Content of text string

Note:

This command only can be performed on the printer with LCD display.
 For more information, see [Appendix A: Command List by Model](#).

Example

Sample code	Result
<pre>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</pre>	
<pre>CLS DISPLAY 15128749,16711680 DISPLAY CLS DISPLAY 10,30, "1","1234567890" DELAY 5000 DISPLAY OFF</pre> <p>Note : Convert hexadecimal number (FF0000) to its decimal value (16711680).</p>	

5.28 INITIALPRINTER

Description

Restore printer settings to defaults.

Syntax

```
INITIALPRINTER
```

<u>Parameter</u>	<u>Description</u>
None	N/A

Example

Sample code

```
INITIALPRINTER
```


5.29 MENU

Description

Design user's own menu with a database resident on the printer.

Syntax

```
MENU title$, list$, selected
```

<u>Parameter</u>	<u>Description</u>
title\$	The title string is shown on LCD screen.
list\$	List of items, separated by CRLF.
selected	It must be a variable to get the result of selection. When selected is 0, the operator has hit ESC (USB keyboard) or MENU button.

Note:

This command only can be performed on the printer with LCD display.
For more information, see [Appendix A: Command List by Model](#).

Example

Sample code

```
DOWNLOAD F,"FBPL"  
Speed  
Density  
Print Mode  
Offset  
Country  
EOP  
  
DOWNLOAD F,"Speed"  
4  
5  
6  
EOP  
  
DOWNLOAD F,"Density"  
6  
7  
8  
9  
10  
11  
12  
EOP  
  
DOWNLOAD F,"Print Mode"  
NONE  
TEAR OFF  
PEEL OFF  
CUT OFF  
EOP  
  
DOWNLOAD F,"Country"
```

```

007
031
033
034
045
EOP

DOWNLOAD F,"DEMO.BAS"

DPI = VAL(GETSETTING$("SYSTEM","INFORMATION","DPI"))

:MAINLOOP
OPEN "FBPL",0
LIST$ = FREAD$(0, LOF("FBPL"))
CLOSE 0
MENU "FBPL", LIST$, OPTION$

IF LEN(OPTION$) = 0 THEN END

IF OPTION$ = "Speed" THEN SETTING$ =
GETSETTING$("CONFIG","FBPL","SPEED")
IF OPTION$ = "Density" THEN SETTING$ =
GETSETTING$("CONFIG","FBPL","DENSITY")
IF OPTION$ = "Print Mode" THEN SETTING$ =
GETSETTING$("CONFIG","FBPL","PRINT MODE")
IF OPTION$ = "Offset" THEN SETTING$ =
GETSETTING$("CONFIG","FBPL","OFFSET")
IF OPTION$ = "Country" THEN SETTING$ =
GETSETTING$("CONFIG","FBPL","COUNTRY CODE")

IF LOF(OPTION$) <> 0 THEN
    OPEN OPTION$,0
    LIST$ = FREAD$(0, LOF(OPTION$))
    CLOSE 0
    MENU OPTION$, LIST$, SETTING$
ELSE
    IF OPTION$ = "Offset" THEN INPUT "Offset", SETTING$
ENDIF

IF LEN(SETTING$) <> 0 THEN
    IF OPTION$ = "Speed" THEN SPEED VAL(SETTING$)
    IF OPTION$ = "Density" THEN DENSITY VAL(SETTING$)
    IF OPTION$ = "Print Mode" THEN GOSUB SET_PRINT_MODE
    IF OPTION$ = "Offset" THEN OFFSET VAL(SETTING$) / DPI
    IF OPTION$ = "Country" THEN GOSUB SET_COUNTRY
ENDIF

GOTO MAINLOOP

:SET_PRINT_MODE
IF SETTING$ = "NONE" THEN SET TEAR OFF
IF SETTING$ = "TEAR OFF" THEN SET TEAR ON
IF SETTING$ = "PEEL OFF" THEN SET PEEL ON
IF SETTING$ = "CUT OFF" THEN SET CUTTER ON
RETURN

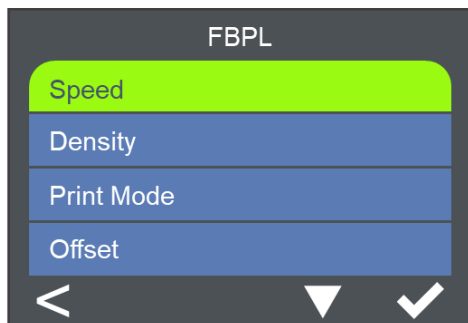
```

```
:SET_COUNTRY  
IF SETTING$ = "007" THEN COUNTRY 007  
IF SETTING$ = "031" THEN COUNTRY 031  
IF SETTING$ = "033" THEN COUNTRY 033  
IF SETTING$ = "034" THEN COUNTRY 034  
IF SETTING$ = "045" THEN COUNTRY 045  
RETURN
```

EOP

RUN "DEMO.BAS"

Result



6 Label Formatting Commands

6.1 BAR

Description

Draw a bar.

Syntax

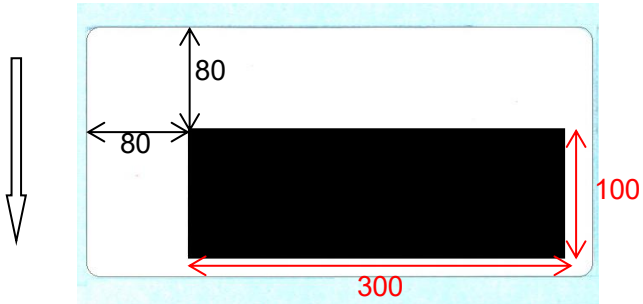
BAR *x,y,width,height*

<u>Parameter</u>	<u>Description</u>
<i>x</i>	X-coordinate of the upper left corner (in dots)
<i>y</i>	Y-coordinate of the upper left corner (in dots)
<i>width</i>	Bar width (in dots)
<i>height</i>	Bar height (in dots)

Note:

- 203 dpi : 1 mm = 8 dots
300 dpi : 1 mm = 12 dots
600 dpi : 1 mm = 24 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

<u>Sample code</u>	<u>Result</u>
<pre>SIZE 50 mm,25 mm GAP 3 mm,0 DIRECTION 1 CLS BAR 80,80,300,100 PRINT 1,1</pre>	

See Also

BOX

6.2 BARCODE

Description

Define a barcode. 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	EAN-128, switching code subset automatically	V					
EAN128M	EAN-128M(GS1-128), switching code subset manually	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
25S	Standard 2-of-5		V	V	V		
25I	Industrial 2-of-5		V	V	V		
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 (NW-7)		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	Datalogic 2-of-5 (China post)					V	
ITF14	ITF-14		V	V	V		13
EAN14	EAN-14	V					13
11	Code 11 (USD-8)		V	V	V		
TELEPEN	Telepen		V	V	V		
TELEPENN	Telepen number		V	V	V		
PLANET	Planet	V					
CODE49	Code 49	V					
DPI	Deutsche Post Identcode		V	V	V		11
DPL	Deutsche Post Leitcode		V	V	V		13
LOGMARS	A special use of Code 39		V	V	V		

Syntax

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

Parameter	Description																																												
X	Starting point of the barcode in the X direction (dots)																																												
Y	Starting point of the barcode in the Y direction (dots)																																												
code type																																													
128	Code 128, switching code subset A, B, C automatically																																												
128M	Code 128, switching code subset A, B, C manually																																												
	<table border="1"> <thead> <tr> <th>Control code</th> <th>A</th> <th>B</th> <th>C</th> </tr> </thead> <tbody> <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> </tbody> </table> <p>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.</p>	Control code	A	B	C	096	FNC3	FNC3	NONE	097	FNC2	FNC2	NONE	098	SHIFT	SHIFT	NONE	099	CODE C	CODE C	NONE	100	CODE B	FNC4	CODE B	101	FNC4	CODE A	CODE A	102	FNC1	FNC1	FNC1	103	Start (CODE A)			104	Start (CODE B)			105	Start (CODE C)		
Control code	A	B	C																																										
096	FNC3	FNC3	NONE																																										
097	FNC2	FNC2	NONE																																										
098	SHIFT	SHIFT	NONE																																										
099	CODE C	CODE C	NONE																																										
100	CODE B	FNC4	CODE B																																										
101	FNC4	CODE A	CODE A																																										
102	FNC1	FNC1	FNC1																																										
103	Start (CODE A)																																												
104	Start (CODE B)																																												
105	Start (CODE C)																																												
EAN128	EAN-128: Code 128, switching code subset A, B, C automatically																																												
EAN128M	EAN-128(GS1-128): Code 128, switching code subset A, B, C manually																																												
25	Interleaved 2 of 5																																												
25C	Interleaved 2 of 5 with check digits																																												
25S	Standard 2 of 5																																												
25I	Industrial 2 of 5																																												
39	Code 39 full ASCII																																												
39C	Code 39 full ASCII with check digit																																												
39S	Code 39 standard																																												
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(NW-7)																																												
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	Datalogic 2-of-5 (China post)																																												
MSI	MSI code																																												
MSIC	MSI with check digit																																												
PLESSEY	Plessey																																												
ITF14	ITF-14 code																																												
EAN14	EAN-14 code																																												
11	Code 11 (USD-8)																																												
TELEPEN	Telepen code																																												

TELEPEN N	Telepen code. Number only				
PLANET	Planet				
CODE49	Code 49				
DPI	Deutsche Post Identcode				
DPL	Deutsche Post Leitcode				
Height human readable	Barcode height (in dots) 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 : Rotated 90 degrees clockwise 180 : Rotated 180 degrees clockwise 270 : Rotated 270 degrees clockwise				
narrow wide	Width of narrow element (in dots) 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	-	-	-	-
EAN128M	10x				
25	-	10x	10x	5x	-
25C	-	10x	10x	5x	-
25S		10x	10x	5x	
25I		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	Barcode content				

Note:



Check the maximum number of digits in the barcodes.

Code Type	Character sets	Max. data length
128	See Character set for CODE128.	-
128M	See Character set for CODE128.	-
EAN128	See Character set for CODE128.	-
EAN128M	See Character set for CODE128.	-
25	0123456789	Length is even.
25C	0123456789	Length is odd.
25S	0123456789	
25I	0123456789	
39 I	0123456789[Space]ABCDEFGHIJKLMNQRST UVWXYZ-.\$/+%	-
39 I Full ASCII	0123456789[Space]ABCDEFGHIJKLMNQRST UVWXYZ!#\$%&'()*+,-./:;<=>?@[\\]^_` abcdefghijklmnopqrstuvwxyz{|}~	-
93	0123456789[Space]ABCDEFGHIJKLMNQRST UVWXYZ!#\$%&'()*+,-./:;<=>?@[\\]^_` abcdefghijklmnopqrstuvwxyz{|}~	-
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]ABCDEFGHIJKLMNQRST UVWXYZ-.\$/+%	-

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
<pre> 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 </pre>	<p>Human readable alignment</p>  <p>left center right</p>
<pre> 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 </pre>	<p>Code 128, switch code subset automatically.</p>  <p>123456abcd123456</p>

<pre> 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 </pre> <p>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.</p>	<p>Code 128, switch code subset manually.</p> 
<pre> SIZE 4,1 GAP 0,0 DIRECTION 1 CLS TEXT 100,10, "2",0,1,1, "EAN-128M(GS1- 128)" BARCODE 100,50, "EAN128M",100,1,0,2,4, "011458901 2345673"+"!102"+"17161231"+"!102"+"3010 "+"!102"+"10ABC" PRINT 1 </pre>	<p>EAN-128M(GS1-128)</p> 
<pre> 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 </pre>	<p>TELEPEN</p> 

```

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

```



6.3 TLC39

Description

Define a TLC39 (TCIF Linked Barcode 3 of 9) barcode.

Syntax

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

Parameter	Description
x	Starting point of the barcode in the X direction (dots)
y	Starting point of the barcode in the Y direction (dots)
rotation	0 : No rotation 90 : Rotated 90 degrees clockwise 180 : Rotated 180 degrees clockwise 270 : Rotated 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.	

Example

Sample Code
<pre> 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 </pre>
Result
<p style="text-align: center;">TLC39 code</p>

6.4 BITMAP

Description

Draw a bitmap image (as opposed to BMP graphic files).

Syntax

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

Parameter	Description
X	Starting point of the image in the X direction (dots)
Y	Starting point of the image in the Y direction (dots)
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

	1-byte							2-byte								
	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	0	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

→ Y size 16 dots

Y- axis	X – 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	53 49 5A 45 20 34 2C 32 0D 0A	↖
GAP 0,0	47 41 50 20 30 2C 30 0D 0A 43	
CLS	4C 53 0D 0A 42 49 54 4D 41 50	
BITMAP 200,200,2,16,0,	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	
PRINT 1,1	50 52 49 4E 54 20 31 2C 31 0D	
	0A	

See Also

PUTBMP, PUTPCX

6.5 BOX

Description

Draw a rectangle.

Syntax

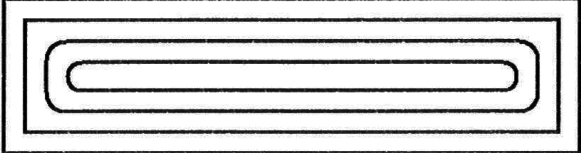
```
BOX x,y,x_end,y_end,line thickness[,radius]
```

<u>Parameter</u>	<u>Description</u>
x	X-coordinate of upper left corner (in dots)
y	Y-coordinate of upper left corner (in dots)
x_end	X-coordinate of lower right corner (in dots)
y_end	Y-coordinate of lower right corner (in dots)
line thickness	Line thickness (in dots)
radius	Optional. Specify the round corner. Default is 0.

Note:

- 203 dpi : 1 mm = 8 dots
300 dpi : 1 mm = 12 dots
600 dpi : 1 mm = 24 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

<u>Sample code</u>	<u>Result</u>
<pre>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</pre>	

See Also

BAR

6.6 CIRCLE

Description

Draw a circle.

Syntax

```
CIRCLE X_start,Y_start,diameter,thickness
```

<u>Parameter</u>	<u>Description</u>
X_start	X-coordinate of upper left corner (in dots)
Y_start	Y-coordinate of upper left corner (in dots)
diameter	Diameter of the circle (in dots)
thickness	Thickness of the circle (in dots)

Example

<u>Sample code</u>	<u>Result</u>
<pre>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</pre>	

6.7 ELLIPSE

Description

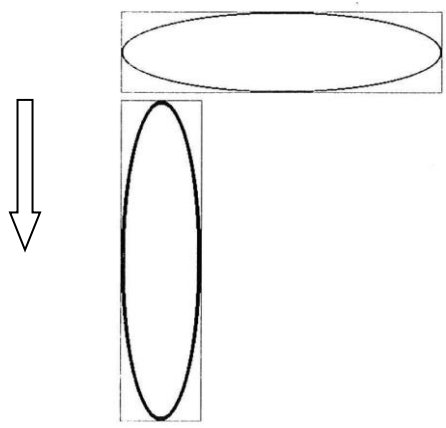
Draw an ellipse.

Syntax

```
ELLIPSE x,y,width,height,thickness
```

<u>Parameter</u>	<u>Description</u>
x	X-coordinate of upper left corner (in dots)
y	Y-coordinate of upper left corner (in dots)
width	Width of the ellipse (in dots)
height	Height of the ellipse (in dots)
thickness	Thickness of the ellipse (in dots)

Example

<u>Sample code</u>	<u>Result</u>
<pre>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</pre>	

6.8 CODABLOCK F mode

Description

Draw a CODABLOCK F mode barcode.

Syntax

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

Parameter	Description
x	Starting point of the barcode in the X direction (dots)
y	Starting point of the barcode in the Y direction (dots)
rotation	0 : No rotation 90 : Rotated 90 degrees clockwise 180 : Rotated 180 degrees clockwise 270 : Rotated 270 degrees clockwise
row height	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	Barcode content

Example

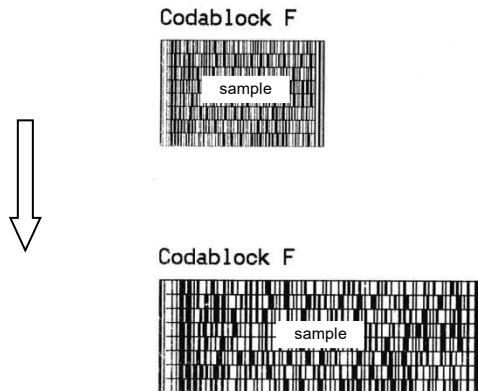
Sample Code

```

SIZE 4,1.5
GAP 0,0
DIRECTION 1
CLS
TEXT 10,10, "3",0,1,1, "Codablock F"
CODABLOCK 10,50,0, "With the "At your side." spirit in mind. the Brother
Group aims to continually create value."
PRINT 1
CLS
TEXT 10,10, "3",0,1,1, "Codablock F"
CODABLOCK 10,50,0,16,1, "With the "At your side." spirit in mind. the
Brother Group aims to continually create value."
PRINT 1

```

Result



6.9 DMATRIX

Description

Define a DataMatrix 2D barcode. Only ECC200 error correction is supported.

Syntax

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




Parameter	Description																																																																																																												
<i>x</i>	Starting point of the barcode in the X direction (dots)																																																																																																												
<i>y</i>	Starting point of the barcode in the Y direction (dots)																																																																																																												
<i>width</i>	Expected width of barcode area (in dots)																																																																																																												
<i>height</i>	Expected height of barcode area (in dots)																																																																																																												
<i>c#</i>	Escape sequence control character (decimal digit) Ex. C126 means ~																																																																																																												
	(1) ~X is shift character for control characters.																																																																																																												
	<table border="1"> <thead> <tr> <th>~X</th> <th>Hex</th> <th>ASCII</th> <th>~X</th> <th>HEX</th> <th>ASCII</th> <th>~X</th> <th>HEX</th> <th>ASCII</th> <th>~X</th> <th>HEX</th> <th>ASCII</th> </tr> </thead> <tbody> <tr> <td>~@</td> <td>00</td> <td>NUL</td> <td>~H</td> <td>08</td> <td>BS</td> <td>~P</td> <td>10</td> <td>DLE</td> <td>~X</td> <td>18</td> <td>CAN</td> </tr> <tr> <td>~A</td> <td>01</td> <td>SOH</td> <td>~I</td> <td>09</td> <td>HT</td> <td>~Q</td> <td>11</td> <td>DC1</td> <td>~Y</td> <td>19</td> <td>EM</td> </tr> <tr> <td>~B</td> <td>02</td> <td>STX</td> <td>~J</td> <td>0A</td> <td>LF</td> <td>~R</td> <td>12</td> <td>DC2</td> <td>~Z</td> <td>1A</td> <td>SUB</td> </tr> <tr> <td>~C</td> <td>03</td> <td>ETX</td> <td>~K</td> <td>0B</td> <td>VT</td> <td>~S</td> <td>13</td> <td>DC3</td> <td>~[</td> <td>1B</td> <td>ESC</td> </tr> <tr> <td>~D</td> <td>04</td> <td>EOT</td> <td>~L</td> <td>0C</td> <td>FF</td> <td>~T</td> <td>14</td> <td>DC4</td> <td>~\</td> <td>1C</td> <td>FS</td> </tr> <tr> <td>~E</td> <td>05</td> <td>ENQ</td> <td>~M</td> <td>0D</td> <td>CR</td> <td>~U</td> <td>15</td> <td>NAK</td> <td>~]</td> <td>1D</td> <td>GS</td> </tr> <tr> <td>~F</td> <td>06</td> <td>ACK</td> <td>~N</td> <td>0E</td> <td>SO</td> <td>~V</td> <td>16</td> <td>SYN</td> <td>~^</td> <td>1E</td> <td>RS</td> </tr> <tr> <td>~G</td> <td>07</td> <td>BEL</td> <td>~O</td> <td>0F</td> <td>SI</td> <td>~W</td> <td>17</td> <td>ETB</td> <td>~_</td> <td>1F</td> <td>US</td> </tr> </tbody> </table>	~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
~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 ~~.																																																																																																												
<i>X#</i>	Module size (in dots)																																																																																																												
<i>r#</i>	0 : No rotation 90 : Rotated 90 degrees clockwise 180 : Rotated 180 degrees clockwise 270 : Rotated 270 degrees clockwise																																																																																																												
<i>a#</i>	0 : Square (default) 1 : Rectangle																																																																																																												
<i>row</i>	Symbol size of row: 10 to 144																																																																																																												
<i>col</i>	Symbol size of col: 10 to 144																																																																																																												
<i>content</i>	Barcode content																																																																																																												

Note:

For standard symbol sizes for DataMatrix 2D barcode, see the list below.

Square			Rectangle
10 x 10	26 x 26	72 x 72	8 x 18
12 x 12	32 x 32	80 x 80	8 x 32
14 x 14	36 x 36	88 x 88	12 x 26
16 x 16	40 x 40	96 x 96	12 x 36
18 x 18	44 x 44	104 x 104	16 x 36
20 x 20	48 x 48	120 x 120	16 x 48
22 x 22	52 x 52	132 x 132	
24 x 24	64 x 64	144 x 144	

Example

Sample code	Result
<pre> 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 </pre>	
<p>Sample code for FNC</p> <pre> SIZE 4,1 GAP 0,0 CLS DIRECTION 1 DMATRIX 100,50,100,100,c126,x6,18,18, "~1241sPn~110sLot~130sQ ty " PRINT 1 </pre>	
<p>Sample code in rectangular shape</p> <pre> SIZE 4,1 GAP 0,0 DIRECTION 1 CLS DMATRIX 100,110,600,600,a1,"DMATRIX EXAMPLE 1" PRINT 1,1 </pre>	

6.10 ERASE

Description

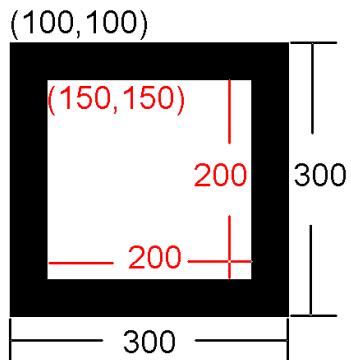
Clear a specified region in the image buffer.

Syntax

```
ERASE x,y,x_width,y_height
```

<u>Parameter</u>	<u>Description</u>
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

<u>Sample code</u>	<u>Result</u>
<pre>SIZE 4,2.5 GAP 0,0 DIRECTION 1 CLS BAR 100,100,300,300 ERASE 150,150,200,200 PRINT 1,1</pre>	

See Also

CLS

6.11 MAXICODE

Description

Define a 2D Maxicode.

Syntax

<code>MAXICODE x,y,mode,[class,country,post,Lm,] "content"</code>	
<code>MAXICODE x,y,mode,class,country,postal code, "content"</code>	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.
<code>MAXICODE x,y,mode,[Lm,] "content"</code>	For mode 4 or 5, AIM special format is supported.

<u>Parameter</u>	<u>Description</u>
x	Starting point of the barcode in the X direction (dots)
y	Starting point of the barcode in the Y direction (dots)
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) , $1 \leq m \leq 138$, (this parameter is just for mode 4 and 5)
content	Barcode content Note: If parameter Lm is used, double quotes (") are unnecessary.

Example

<u>Sample code</u>
<pre> 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" </pre>

```
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"
```

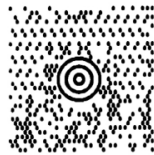
```
MAXICODE 600,100,5,L19,DEMO 5 FOR MAXICODE
```

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

```
PRINT 1
```

Result

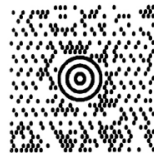
DEMO 5 FOR MAXICODE



Mode 4 FOR MAXICODE



Mode 3 For CANADA



Mode 2 For USA



6.12 PDF417

Description

Define a PDF417 2D barcode.

Syntax

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

Parameter	Description
<i>x</i>	Starting point of the barcode in the X direction (dots)
<i>y</i>	Starting point of the barcode in the Y direction (dots)
<i>width</i>	Expected width (in dots)
<i>height</i>	Expected height (in dots)
<i>rotate</i>	0 : No rotation 90 : Rotated 90 degrees counter-clockwise 180 : Rotated 180 degrees counter-clockwise 270 : Rotated 270 degrees counter-clockwise
<i>option</i>	
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
U <i>x,y</i> , <i>c</i>	Human readable <i>x</i> : Human readable characters in the specified x-coordinate <i>y</i> : Human readable characters in the specified y-coordinate <i>c</i> : 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
L <i>m</i>	Expression length, $1 \leq m \leq 2048$ (without " for content)
<i>content</i>	Barcode content Note: If parameter L <i>m</i> is used, double quotes (") are unnecessary for content.

Example

Sample code	Result
<pre> SIZE 4,1 GAP 0,0 DIRECTION 1 REM *****WITHOUTR OPTIONS***** CLS PDF417 50,50,400,200,0, "Without Options" PRINT 1,1 </pre>	
<pre> 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 </pre>	
<pre> 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 </pre>	

```

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,U50,300,5
0,W4,H4,R60,C4,T0,L297,Data
compression method: P1
Error correction level: E4
Center pattern in barcode area: M1
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

```



Data compression method: P1 Error correction level: E4 Center pattern in barcode area: M1 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

6.13 AZTEC

Description

Define an AZTEC 2D barcode.

Syntax

```
AZTEC x,y,rotate,[size,]ecp,]flg,]menu,]multi,]rev,] "content"
```

```
AZTEC x,y,rotate,size,ecp,flg,menu,multi,rev,bytes,content
```

Parameter	Description
x	Starting point of the barcode in the X direction (dots)
y	Starting point of the barcode in the Y direction (dots)
rotate	0 : No rotation 90 : Rotated 90 degrees 180 : Rotated 180 degrees 270 : Rotated 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	Barcode content
	Note: If parameter bytes is used, double quotes (") are unnecessary.

Example

Sample Code	Result
<pre>SIZE 4,2 GAP 0,0 CLS AZTEC 10,10,0,"ABCDEFGHJKLMNOPQRSTUVWXYZ0123456789" AZTEC 210,10,0,4,"ABCDEFGHJKLMNOPQRSTUVWXYZ0123456789" AZTEC 410,10,0,4,1,"ABCDEFGHJKLMNOPQRSTUVWXYZ0123456789" AZTEC 610,10,0,4,1,0,"ABCDEFGHJKLMNOPQRSTUVWXYZ0123456789" AZTEC 10,310,0,4,1,0,0,"ABCDEFGHJKLMNOPQRSTUVWXYZ0123456789" AZTEC 210,310,0,4,1,0,0,1,"ABCDEFGHJKLMNOPQRSTUVWXYZ0123456789" AZTEC 410,310,0,4,1,0,0,1,1,"ABCDEFGHJKLMNOPQRSTUVWXYZ0123456789" " AZTEC 610,310,0,4,1,0,0,1,1,10,1234567890 PRINT 1</pre>	

6.14 MPDF417

Description

Define a Micro PDF 417 barcode.

Syntax

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

Parameter	Description
x	Starting point of the barcode in the X direction (dots)
y	Starting point of the barcode in the Y direction (dots)
rotate	0 : No rotation 90 : Rotated 90 degrees 180 : Rotated 180 degrees 270 : Rotated 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	Barcode content

Example

Sample Code
<pre>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</pre>
Result


6.15 PUTBMP

Description

Print a downloaded a 1-bit (monochrome) or 8-bit (256-color) BMP graphic file in monochrome or grayscale. The direct thermal mode supports both monochrome printing and grayscale printing. The thermal transfer mode supports monochrome printing only.

Syntax

```
PUTBMP x,y, "filename" [, bpp][, contrast]
```

Parameter	Description
x	Starting point of the image in the X direction (dots)
y	Starting point of the image in the Y direction (dots)
filename	Downloaded BMP filename
bpp	Optional. Bits per pixel. Default is 1. 1: 1-bit graphic (monochrome) 8: 8-bit graphic (256-color)
contrast	Optional. Contrast of grayscale graphic. Default is 80. Suggested range is from 60 to 100.

Note

- The grayscale printing (8 bit) is available only in the direct thermal mode.
- RJ-2035/RJ-2055WB/RJ-3035B/RJ-3055WB printers support only monochrome printing (1 bit).
- Make sure the file name is in uppercase letters (FILENAME.BMP).

Example

Continued on next page

Download a BMP graphic file to the printer using the Brother Printer Management Tool (BPM).

1. Connect your computer and the printer, and then turn on the printer.
2. Start the BPM and click the **File Manager** button.
3. Select **BMP** for **File Type**. Click **Browse** to select a BMP file and click **Open**.
Make sure that the file name and its extension are in uppercase letters (FILENAME.BMP).
4. Select **Memory Device** and click the **Download** button to start downloading.

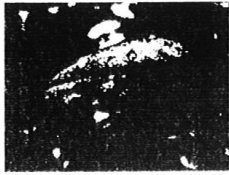
The screenshot shows the 'File Manager' dialog box. In the 'File Download' section, the 'File Type' is set to 'BMP', the 'File Name' is 'SAMPLE.BMP', the 'File Size' is '2,506 Bytes', and the 'Memory Device' is 'FLASH'. The 'Download' button is highlighted with a red box. In the 'File Information' section, the 'Printer' is 'Brother HL-1110', the 'Memory Device' is 'FLASH', and the 'Physical Space' is '131072 KB' and 'Free Space' is '80768 KB'.



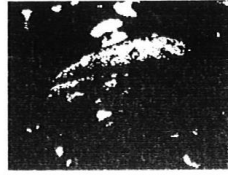
Sample Code

```
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

Sample Code

```
SIZE 2,2  
GAP 0,0  
CLS  
PUTBMP 10,10, "SAMPLE.GRF"  
PRINT 1
```

See Also

DOWNLOAD, BITMAP, PUTPCX

6.16 PUTPCX

Description

Print a downloaded 1-bit (2-color) or 8-bit (256-color) PCX graphic file in monochrome.

Syntax

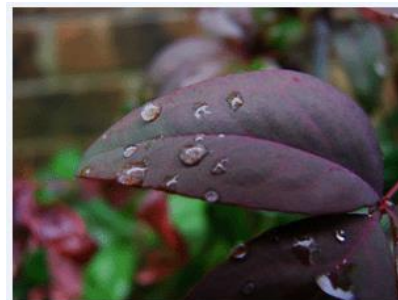
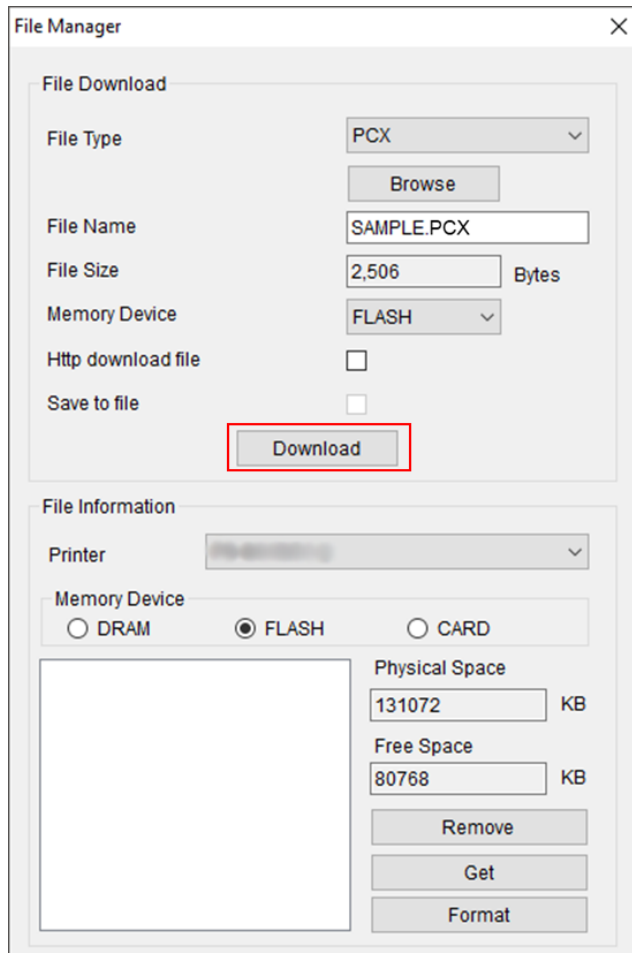
```
PUTPCX x,y, "filename"
```

Parameter	Description
x	Starting point of the image in the X direction (dots)
y	Starting point of the image in the Y direction (dots)
filename	Downloaded PCX file name Make sure the file name is in uppercase letters (FILENAME.PCX).

Example

Download a PCX graphic file to the printer using the Brother Printer Management Tool (BPM).

1. Connect your computer and the printer, and then turn on the printer.
2. Start the BPM and click the **File Manager** button.
3. Select **PCX** for **File Type**. Click **Browse** to select a PCX file and click **Open**.
Make sure that the file name and its extension are in uppercase letters (FILENAME.PCX).
4. Select **Memory Device** and click the **Download** button to start downloading.



Sample Code


```
SPEED 2  
DENSITY 3  
SIZE 4,1.5  
GAP 0,0  
DIRECTION 1  
CLS  
PUTPCX 10,10, "SAMPLE.PCX"  
PRINT 1
```

Result



See Also

DOWNLOAD, BITMAP, PUTPCX

6.17 QR CODE

Description

Define a QR code.

Syntax

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

Parameter	Description															
x	Starting point of the barcode in the X direction (dots)															
y	Starting point of the barcode in the Y direction (dots)															
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															
[justification]	Barcode justification (J1 to J9 valid; See the Sample Code below)															
[model]	M1: (default), original version M2: enhanced version (Almost all smartphone support this version.)															
[mask]	S0~S8, default is S7															
[area]	Maximum size of barcode area (Xdots; e.g. X100)															
content	The encodable character set is described as below: Encodable character set: 1) Numeric data: (digits 0~9) 2) Alphanumeric data Digits 0-9 Uppercase 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):															
	<table border="1"> <thead> <tr> <th></th> <th>Model 1 (Version 14-L)</th> <th>Model 2 (Version 40-L)</th> </tr> </thead> <tbody> <tr> <td>Numeric data</td> <td>1,167 characters</td> <td>7,089 characters</td> </tr> <tr> <td>Alphanumeric data</td> <td>707 characters</td> <td>4,296 characters</td> </tr> <tr> <td>8-bit byte data</td> <td>486 characters</td> <td>2,953 characters</td> </tr> <tr> <td>Kanji data</td> <td>299 characters</td> <td>1,817 characters</td> </tr> </tbody> </table>		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
	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"

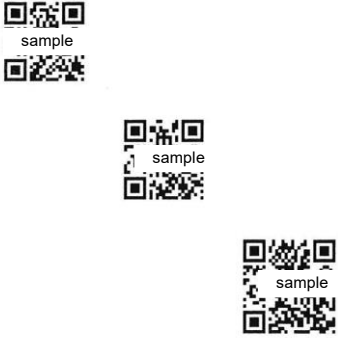
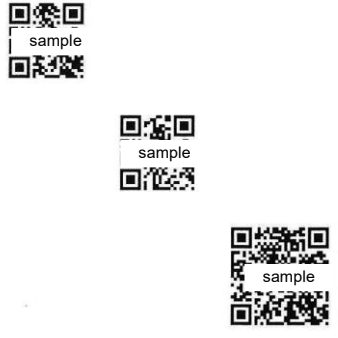
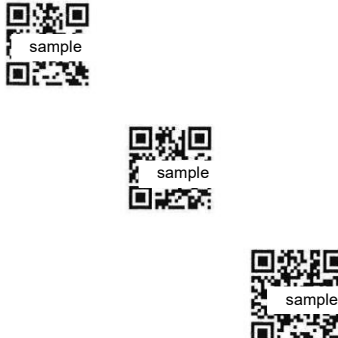
(Where K: Kanji data)

Auto mode example:

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

Example

Sample code	Result
Auto mode example	
<p><u>General data string</u></p> <pre> 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,M,4,A,0,M2, "Printer ABCabc123" PRINT 1,1 </pre>	

<p><u>Data string including <Enter> character (0Dh, 0Ah)</u></p> <pre> 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, "Printer<Enter> ABC<Enter> abc<Enter> 123" PRINT 1,1 </pre>	
<p><u>Data string concatenation</u> <u>(Must be used with DOWNLOAD ... EOP command)</u></p> <pre> 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, "PrinterABCabc123"+"1234"+"abcd" PRINT 1,1 EOP DEMO </pre>	
<p><u>Data string including double quote (") character</u> <u>Make sure you use \" instead of (")</u></p> <pre> 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, "\"Printer\"ABCabc123" PRINT 1,1 </pre>	

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
Printer!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
Printer!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
Printer!AABC!B0014abc123"+" 1234"+"abcd"
PRINT 1,1
EOP
A
```



Data string including double quote (") character
Make sure you 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
Printer!B0010\["]ABCabc123"
PRINT 1,1
```



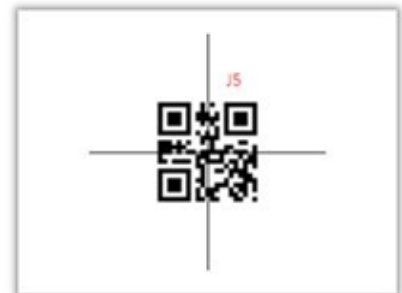
Smart phone data string

```
DOWNLOAD "A.BAS"
SIZE 3,3
GAP 0,0
DIRECTION 1
CLS
QRCODE 10,10,H,7,M,0,M2,S7,"Aabcd"
QRCODE 170,170,H,4,M,0, M2,"B0008 日本語"
QRCODE 300,300, L, 8, M, 0,
M2,"B0026http://www.brother.com"
PRINT 1,1
EOP
A
```

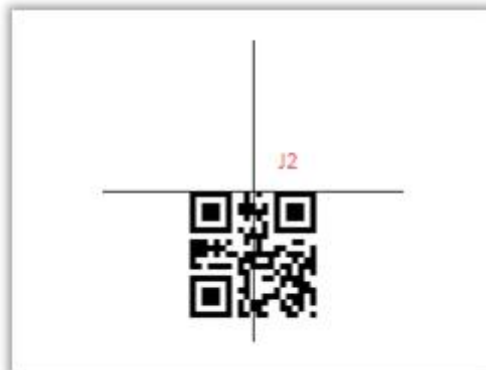
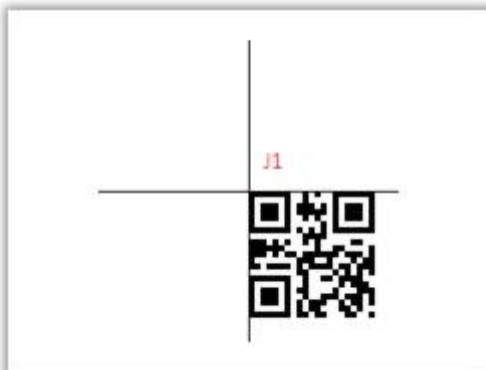


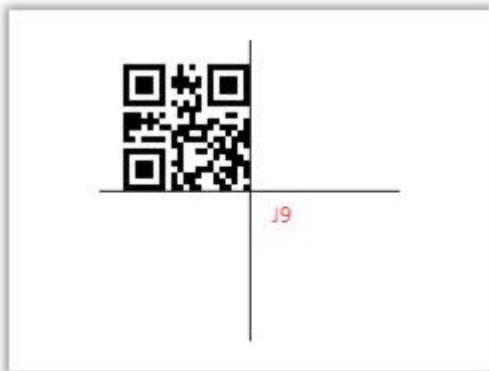
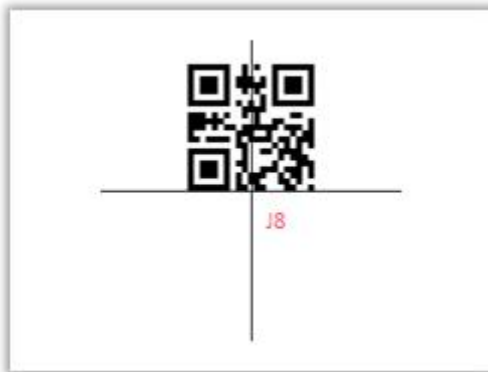
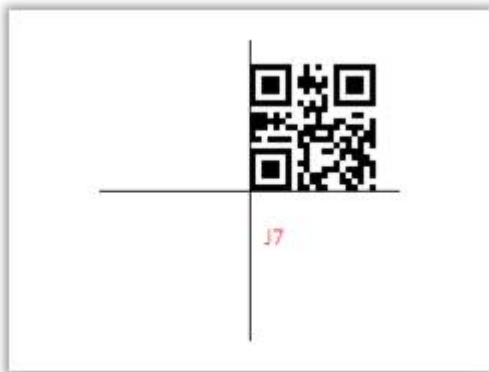
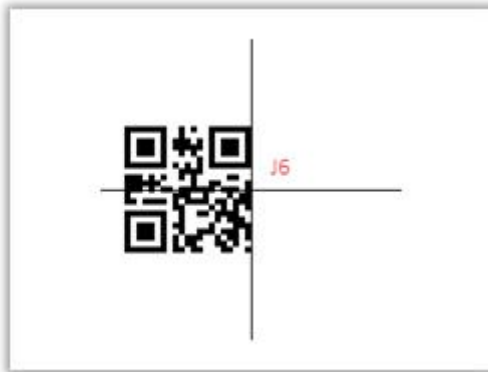
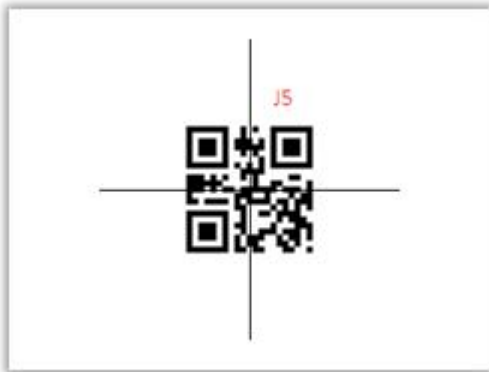
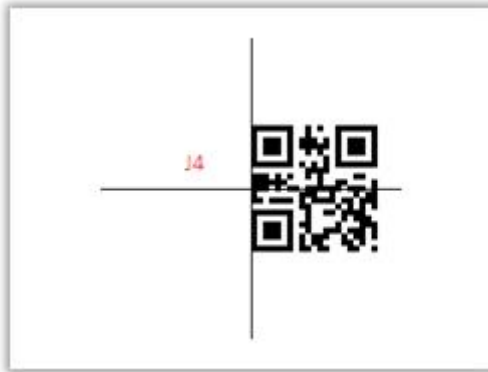
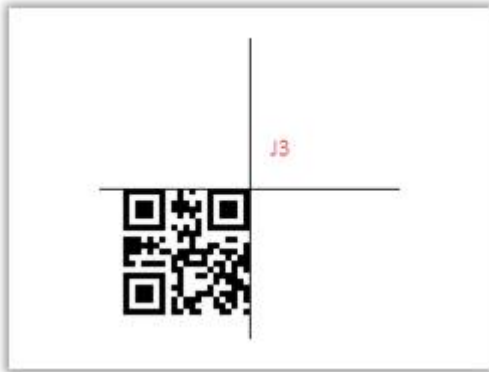
Data string for parameter [justification] & [area]

```
SIZE 4,2.5
GAP 0,0
DIRECTION 1
CLS
BAR 60,120,200,1
BAR 160,20,1,200
QRCODE 160,120,H,10,A,0,X100,J5,"123456789"
PRINT 1,1
```



For other [justification] results (J1~J9)





6.18 RSS

Description

Define a GS1 Databar (RSS) barcode.

Syntax


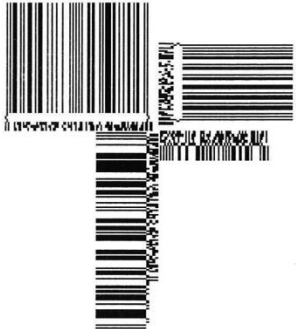
```
RSS x,y, "sym", rotate, pixMult, sepHt, "content"
RSS x,y, "RSSEXP", rotate, pixMult, sepHt, segWidth, "content"
RSS x,y, "UCC128CCA", rotate, pixMult, sepHt, linHeight, "content"
RSS x,y, "UCC128CCC", rotate, pixMult, sepHt, linHeight, "content"
```




Parameter	Description																								
x	Starting point of the barcode in the X direction (dots)																								
y	Starting point of the barcode in the Y direction (dots)																								
sym	Symbology type: <table border="1" data-bbox="507 685 1157 1099"> <tbody> <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> </tbody> </table>	RSS14	RSS14	RSS14T	RSS14 Truncated	RSS14S	RSS14 Stacked	RSS14SO	RSS14 Stacked Omnidirectional	RSSLIM	RSS Limited	RSSEXP	RSS Expanded	UPCA	UPC-A	UPCE	UPC-E	EAN13	EAN-13	EAN8	EAN-8	UCC128CCA	UCC/EAN-128 & CC-A/B	UCC128CCC	UCC/EAN-128 & CC-C
RSS14	RSS14																								
RSS14T	RSS14 Truncated																								
RSS14S	RSS14 Stacked																								
RSS14SO	RSS14 Stacked Omnidirectional																								
RSSLIM	RSS Limited																								
RSSEXP	RSS Expanded																								
UPCA	UPC-A																								
UPCE	UPC-E																								
EAN13	EAN-13																								
EAN8	EAN-8																								
UCC128CCA	UCC/EAN-128 & CC-A/B																								
UCC128CCC	UCC/EAN-128 & CC-C																								
rotate	Rotation (0, 90, 180, and 270 valid)																								
pixMult	Module width in dot (1 to 10 valid) The following barcode height is calculated by printer. <table border="1" data-bbox="507 1294 1157 1615"> <tbody> <tr><td>RSS14</td><td>33 x pixMult</td></tr> <tr><td>RSS14T</td><td>13 x pixMult.</td></tr> <tr><td>RSS14S</td><td>13 x pixMult.</td></tr> <tr><td>RSS14SO</td><td>33 x pixMult.</td></tr> <tr><td>RSSLIM</td><td>13 x pixMult.</td></tr> <tr><td>RSSEXP</td><td>33 x pixMult.</td></tr> <tr><td>EAN8</td><td>60 x pixMult.</td></tr> <tr><td>EAN13</td><td>74 x pixMult.</td></tr> <tr><td>UPCA</td><td>74 x pixMult.</td></tr> <tr><td>UPCE</td><td>74 x pixMult.</td></tr> </tbody> </table>	RSS14	33 x pixMult	RSS14T	13 x pixMult.	RSS14S	13 x pixMult.	RSS14SO	33 x pixMult.	RSSLIM	13 x pixMult.	RSSEXP	33 x pixMult.	EAN8	60 x pixMult.	EAN13	74 x pixMult.	UPCA	74 x pixMult.	UPCE	74 x pixMult.				
RSS14	33 x pixMult																								
RSS14T	13 x pixMult.																								
RSS14S	13 x pixMult.																								
RSS14SO	33 x pixMult.																								
RSSLIM	13 x pixMult.																								
RSSEXP	33 x pixMult.																								
EAN8	60 x pixMult.																								
EAN13	74 x pixMult.																								
UPCA	74 x pixMult.																								
UPCE	74 x 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:




- 203 dpi : 1 mm = 8 dots
300 dpi : 1 mm = 12 dots
600 dpi : 1 mm = 24 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.

Example

Sample code	Result
<pre> SIZE 100 mm,100 mm GAP 0,0 DIRECTION 1 CLS RSS 300,300, "RSS14",0,2,2, "1234567890|ABCDEFGF" RSS 300,300, "RSS14T",90,2,2, "1234567890|ABCDE FG" RSS 300,300, "RSS14S",180,2,2, "1234567890|ABCD EFG" RSS 300,300, "RSS14SO",270,2,2, "1234567890|ABCDEFGF" PRINT 1,1 </pre>	
<pre> SIZE 100 mm,100 mm GAP 0,0 DIRECTION 1 CLS RSS 300,300, "RSSLIM",0,2,2, "1234567890|ABCDEFGF" RSS 300,300, "RSSEXP",90,2,2,22, "1234567890|ABCDEFGF" RSS 300,300, "UPCA",180,2,2, "1234567890|ABCDEFGF" RSS 300,300, "UPCE",270,2,2, "000|ABCDEFGF" PRINT 1,1 </pre>	

<pre> SIZE 100 mm,100 mm GAP 0,0 DIRECTION 1 CLS RSS 300,300,"EAN13",0,2,2,"123456789012|ABCDE FG" RSS 300,300,"EAN8",90,2,2,"1234567|ABCDEFG" RSS 300,300,"UCC128CCA",180,2,2,25,"123456789 0|ABCDEFG" RSS 300,300,"UCC128CCC",270,2,2,25,"123456789 0|ABCDEFG" PRINT 1,1 </pre>	
<pre> SIZE 100 mm, 100 mm GAP 0,0 DIRECTION 1 CLS RSS 300,10, "RSSEXP",90,2,2,12, "8110106141411234562891101201212085010048 000214025610048000310123191000" PRINT 1 </pre>	
<p>Example of UPCE mode</p>	
<pre> SIZE 4,1 GAP 0,0 DIRECTION 1 CLS REM UPCE Rule 1: 00abc000hij = 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 </pre>	

<pre> SIZE 4,1 GAP 0,0 DIRECTION 1 CLS REM UPCE Rule 2: 00abc00000ij = abcij3 RSS 10,10,"UPCE",0,2,2,"001230000045|ABCDEFGF" PRINT 1 SIZE 4,1 CLS REM UPCE Rule 3: 00abcd00000j = abcdj4 RSS 10,10,"UPCE",0,2,2,"001234000005|ABCDEFGF" PRINT 1 </pre>	
<pre> 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|ABCDEFGF" RSS 160,10,"UPCE",0,2,2,"001234500006|ABCDEFGF" " RSS 310,10,"UPCE",0,2,2,"001234500007|ABCDEFGF" " RSS 460,10,"UPCE",0,2,2,"001234500008|ABCDEFGF" " RSS 610,10,"UPCE",0,2,2,"001234500009|ABCDEFGF" " PRINT 1 </pre>	
<p>Example of barcode height of EAN8 EAN13 UPCA and UPCE</p>	
<pre> SIZE 4,2 GAP 0,0 DIRECTION 1 CLS RSS 10,10,"EAN8",0,1,1,"1234567|ABCDEFGF" RSS 210,10, "EAN8",0,2,1,"1234567|ABCDEFGF" RSS 410,10, "EAN8",0,3,1,"1234567|ABCDEFGF" PRINT 1 </pre>	

<pre> 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|ABCDEF G" RSS 410,10,"EAN13",0,3,1,"123456789012|ABCDEF G" PRINT 1 </pre>	
<pre> 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 </pre>	
<pre> 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 </pre>	

6.19 REVERSE

Description

Reverse a region in image buffer.

Syntax


```
REVERSE x_start,y_start,x_width,y_height
```

<u>Parameter</u>	<u>Description</u>
x_start	Starting point of the barcode in the X direction (dots)
y_start	Starting point of the barcode in the Y direction (dots)
x_width	X-axis region width (in dots)
y_height	Y-axis region height (in dots)

Note:

- 203 dpi : 1 mm = 8 dots
300 dpi : 1 mm = 12 dots
600 dpi : 1 mm = 24 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 ratios are limited to 20% and 30% respectively.

Example

Sample code	Result
<pre>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</pre>	

6.20 DIAGONAL

Description

Draw a diagonal.

Syntax


```
DIAGONAL x1, y1, x2, y2, thickness
```

<u>Parameter</u>	<u>Description</u>
x1	X1-coordinate of the starting point (in dots)
y1	Y1-coordinate of the starting point (in dots)
x2	X2-coordinate of the ending point (in dots)
y2	T2-coordinate of the ending point (in dots)
thickness	Thickness of diagonal

Note:

- 203 dpi : 1 mm = 8 dots
- 300 dpi : 1 mm = 12 dots
- 600 dpi : 1 mm = 24 dots

Example

<u>Sample code</u>	<u>Result</u>
<pre>SIZE 4,2.5 GAP 0,0 DIRECTION 1 CLS DIAGONAL 50, 200, 200, 50, 16 DIAGONAL 50, 500, 500, 50, 8 PRINT 1,1</pre>	 The result shows two diagonal lines on a white background. The first line is thick and starts at a higher y-coordinate than the second line. The second line is thin and starts at a lower y-coordinate. Both lines are parallel and have a positive slope.

6.21 TEXT

Description

Define a text object.

Syntax

TEXT x,y, "font", rotation, x-multiplication, y-multiplication, [alignment,]
"content"

Parameter	Description
x	x-coordinate of the text (dots)
y	y-coordinate of the text (dots)
font	Font name
	Built-in fonts
	0 Monotype CG Triumvirate Bold Condensed scalable font
	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 Monotype CG Triumvirate Bold Condensed, font width and height proportion is fixed.
	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
	Downloaded font
	To use the downloaded fonts, download your fonts to the printer using the Brother Printer Management Tool (BPM). For more information, see Appendix B: Download your Fonts .
rotation	Rotation degree of the text 0 : No rotation 90 : Rotate 90 degrees clockwise 180 : Rotate 180 degrees clockwise 270 : Rotate 270 degrees clockwise
x-multiplication	Character height magnification Recommended range: 1~10 <ul style="list-style-type: none"> Font "ROMAN.TTF" ignores the parameter. Specify the width in point size for Font "0" or other True Type fonts (1 point

y-multiplication	<p>= 1/72 inch).</p> <ul style="list-style-type: none"> • Floating point is supported for *.TTF fonts only. <p>Character width magnification Recommended range: 1~10</p> <ul style="list-style-type: none"> • Specify the height in point size for Font "0" or other true type fonts (1 point = 1/72 inch). • Floating point is supported for *.TTF fonts only.
alignment	<p>Optional. Specify the alignment of text.</p> <p>0: Default (Left) 1: Left 2: Center 3: Right</p>
content	<p>Characters to be printed</p>

Note:

- If the `content` itself includes double quotes ("), use \["] instead of (").
Example: "Brother \["]At your side\["]"
- \[R] means carriage return character 0x0D.
- \[L] means line feed character 0x0A.
- The mismatched encoding might result in garbled printing or missing text.
 - Check if the printer's **CODEPAGE** setting matches the print data encoding.
 - Check if the font is compatible with the current printer's **CODEPAGE** setting. Change the printer's **CODEPAGE** setting or the font if needed.

Example

Continued on next page

Sample Code

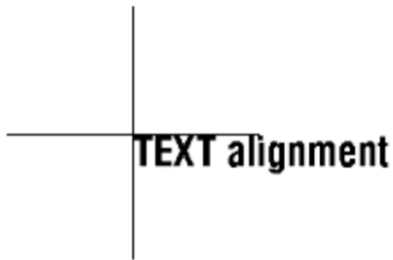
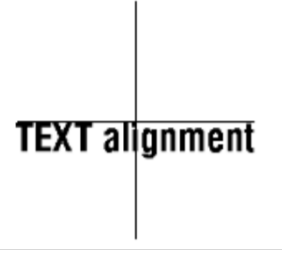

```
SIZE 4,3
GAP 0,0
DIRECTION 1
CLS
TEXT 10,10,"0",0,12,12,"FBPL"
TEXT 10,40,"0",0,8,8,"align left"
BAR 0,70,800,4
TEXT 10,110,"0",0,12,12,"FONT 0"
TEXT 10,160,"1",0,1,1,"FONT 1"
TEXT 10,210,"2",0,1,1,"FONT 2"
TEXT 10,260,"3",0,1,1,0,"FONT 3"
TEXT 10,310,"4",0,1,1,0,"FONT 4"
TEXT 10,360,"5",0,1,1,0,"FONT 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

FBPL align left	EPL 2 align center	ZPL 2 align right
FONT 0	FONT 1	FONT A
FONT 1	FONT 2	FONT B
FONT 2	FONT 3	FONT D
FONT 3	FONT 4	FONT E8
FONT 4	FONT 5	FONT F
FONT 5		FONT G
FONT 6		FONT H8
FONT 7		© © TH 88 ©
FONT 8		
FONT ROMAN.TTF		

<p>Sample Code</p> <pre> SIZE 4,2 GAP 0,0 DIRECTION 1 CLS BAR 60,120,200,1 BAR 160,20,1,200 TEXT 160,120,"0",0,12,12,1,"TEXT alignment" PRINT 1,1 </pre>	<p>Result</p> 
<p>Sample Code</p> <pre> SIZE 4,2 GAP 0,0 DIRECTION 1 CLS BAR 60,120,200,1 BAR 160,20,1,200 TEXT 160,120,"0",0,12,12,2,"TEXT alignment" PRINT 1,1 </pre>	<p>Result</p> 
<p>Sample Code</p> <pre> SIZE 4,2 GAP 0,0 DIRECTION 1 CLS BAR 160,120,200,1 BAR 260,20,1,200 TEXT 260,120,"0",0,12,12,3,"TEXT alignment" PRINT 1,1 </pre>	<p>Result</p> 

6.22 BLOCK

Description

Define a paragraph.

Syntax

BLOCK x,y,width,height,"font",rotation,x-multiplication,y-multiplication,
[space,]align,]fit,]"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	<p>Font name</p> <table border="1"> <thead> <tr> <th colspan="2">Built-in fonts</th> </tr> </thead> <tbody> <tr> <td>0</td> <td>Monotype CG Triumvirate Bold Condensed scalable font</td> </tr> <tr> <td>1</td> <td>8 x 12 fixed pitch dot font</td> </tr> <tr> <td>2</td> <td>12 x 20 fixed pitch dot font</td> </tr> <tr> <td>3</td> <td>16 x 24 fixed pitch dot font</td> </tr> <tr> <td>4</td> <td>24 x 32 fixed pitch dot font</td> </tr> <tr> <td>5</td> <td>32 x 48 dot fixed pitch font</td> </tr> <tr> <td>6</td> <td>14 x 19 dot fixed pitch font OCR-B</td> </tr> <tr> <td>7</td> <td>21 x 27 dot fixed pitch font OCR-B</td> </tr> <tr> <td>8</td> <td>14 x25 dot fixed pitch font OCR-A</td> </tr> <tr> <td>ROMAN.TTF</td> <td>Monotype CG Triumvirate Bold Condensed, font width and height proportion is fixed.</td> </tr> <tr> <td>1.EFT</td> <td>EPL2 font 1</td> </tr> <tr> <td>2.EFT</td> <td>EPL2 font 2</td> </tr> <tr> <td>3.EFT</td> <td>EPL2 font 3</td> </tr> <tr> <td>4.EFT</td> <td>EPL2 font 4</td> </tr> <tr> <td>5.EFT</td> <td>EPL2 font 5</td> </tr> <tr> <td>A.FNT</td> <td>ZPL2 font A</td> </tr> <tr> <td>B.FNT</td> <td>ZPL2 font B</td> </tr> <tr> <td>D.FNT</td> <td>ZPL2 font D</td> </tr> <tr> <td>E8.FNT</td> <td>ZPL2 font E8</td> </tr> <tr> <td>F.FNT</td> <td>ZPL2 font F</td> </tr> <tr> <td>G.FNT</td> <td>ZPL2 font G</td> </tr> <tr> <td>H8.FNT</td> <td>ZPL2 font H8</td> </tr> <tr> <td>GS.FNT</td> <td>ZPL2 font GS</td> </tr> </tbody> </table> <p>Downloaded font To use the downloaded fonts, download your fonts to the printer using the Brother Printer Management Tool (BPM). For more information, see Appendix B: Download your Fonts.</p>	Built-in fonts		0	Monotype CG Triumvirate Bold Condensed scalable font	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	Monotype CG Triumvirate Bold Condensed, font width and height proportion is fixed.	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
Built-in fonts																																																	
0	Monotype CG Triumvirate Bold Condensed scalable font																																																
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	Monotype CG Triumvirate Bold Condensed, font width and height proportion is fixed.																																																
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	<p>Rotation degree of the text</p> <p>0 : No rotation 90 : Rotate 90 degrees clockwise 180 : Rotate 180 degrees clockwise 270 : Rotate 270 degrees clockwise</p>																																																
x-multiplication	<p>Character height magnification</p> <p>Recommended range: 1~10</p>																																																

	<ul style="list-style-type: none"> • Font "ROMAN.TTF" ignores the parameter. • Specify the width in point size for Font "0" or other True Type fonts (1 point = 1/72 inch). • Floating point is supported for *.TTF fonts only.
y-multiplication	<p>Character width magnification Recommended range: 1~10</p> <ul style="list-style-type: none"> • Specify the height in point size for Font "0" or other true type fonts (1 point = 1/72 inch). • Floating point is supported for *.TTF fonts only.
[space]	Add or delete the space between lines (in dots)
[align]	<p>Text alignment.</p> <p>0: Default (Left) 1: Left 2: Center 3: Right</p>
[fit]	<p>Shrink the text so that it fits in the block</p> <p>0 : No shrink (default) 1: Shrink</p>
content	Data in block. The maximum data length is 4092 bytes.
Note:	
<ul style="list-style-type: none"> • If the <code>content</code> itself includes double quotes ("), use \["] instead of ("). Example: "Brother \["]At your side\["]" • \[R] means carriage return character 0x0D. • \[L] means line feed character 0x0A. • The mismatched encoding might result in garbled printing or missing text. <ul style="list-style-type: none"> · Check if the printer's CODEPAGE setting matches the print data encoding. · Check if the font is compatible with the current printer's CODEPAGE setting. Change the printer's CODEPAGE setting or the font if needed. 	

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,"
With the At your side. spirit
in mind. the Brother Group aims
to continually create value."
PRINT 1
CLS
BOX 10,10,800,100,2
BLOCK
15,15,790,90,"0",0,8,8,20,2,"
With the At your side. spirit
in mind. the Brother Group aims
to continually create value."
PRINT 1

```

Result

With the At your side. spirit in mind. the Brother Group aims to continually create value.

With the At your side. spirit in mind. the Brother Group aims to continually create value.

Sample Code for [fit] Parameter

```

DATA$ = "With the \["]At your
side\[\" spirit in mind, the
Brother Group aims to
continually create value.With
the \["]At your side\[\" spirit
in mind, the Brother Group aims
to continually create value."
SIZE 4,1.5
GAP 0,0
DIRECTION 1
CLS
BLOCK
20,20,500,170,"0",0,10,10,0,0,1
,DATA$
BOX 20,20,500+20,170+20,2
PRINT 1

SIZE 4,1.5
GAP 0,0
DIRECTION 1
CLS
BLOCK
20,20,500,170,"0",0,10,10,0,0,0
,DATA$
BOX 20,20,500+20,170+20,2
PRINT 1

```

Result

With the "At your side" spirit in mind, the Brother Group aims to continually create value. With the "At your side" spirit in mind, the Brother Group aims to continually create value.

With the "At your side" spirit in mind, the Brother Group aims to continually create value.

6.23 FONT_REDIRECT

Description

Replace the current font with a different font.

Syntax

```
FONT_REDIRECT "current font","replacement font"
```

<u>Parameter</u>	<u>Description</u>
Current font	The name of the font which is currently used for print jobs.
Replacement font	The name of the font which replaces the current font.

Note:

- Supported font type is TTF.
- Download additional fonts to the printer using the Brother Printer Management Tool (BPM). For more information, see [Appendix B: Download your Fonts](#).
- To enable this function:
 - use the latest firmware version;
 - send the command to the printer before sending the FBPL print job.
- This function remains enabled until you do one of the following:
 - update your printer's firmware;
 - change the settings back to the factory default.

Example

Sample Code

```
FONT_REDIRECT "ROMAN.TTF", "ARIAL.TTF"
```

7 Status Polling and Immediate Commands

7.1 <ESC>!?

Description

Obtain the printer status at any time. 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. 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, ~!E

7.2 <ESC>!C

Description

Restart the printer and skip the AUTO.BAS program. The beginning of the command is an ESCAPE character (ASCII 27).

Syntax

<ESC>!C

Note:

When the printer receives this command, the printer will restart itself no matter AUTO.BAS exists or not.

See Also

<ESC>!Q, ~!E

7.3 <ESC>!D

Description

Disable all immediate commands regardless of the emulation.
The beginning of the command is an ESCAPE character (ASCII 27).

Syntax

<ESC>!D

See Also

~!E

7.4 <ESC>!O

Description

Cancel the PAUSE status of printer. The beginning of the command is an ESCAPE character (ASCII 27).

Syntax

<ESC>!O

See Also

<ESC>!P, ~!E

7.5 <ESC>!P

Description

Pause the printer. The beginning of the command is an ESCAPE character (ASCII 27).

Syntax

<ESC>!P

See Also

<ESC>!O, ~!E

7.6 <ESC>!Q

Description

Restart the printer and skip the AUTO.BAS program. 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.

See Also

<ESC>!C, ~!E

7.7 <ESC>!R

Description

Restart 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 when the printer enters the Dump Mode.

Syntax

<ESC>!R

See Also

<ESC>!?, ~!E

7.8 <ESC>!S

Description

Obtain the printer status at any time. 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

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	Decimal	ASCII	Status
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

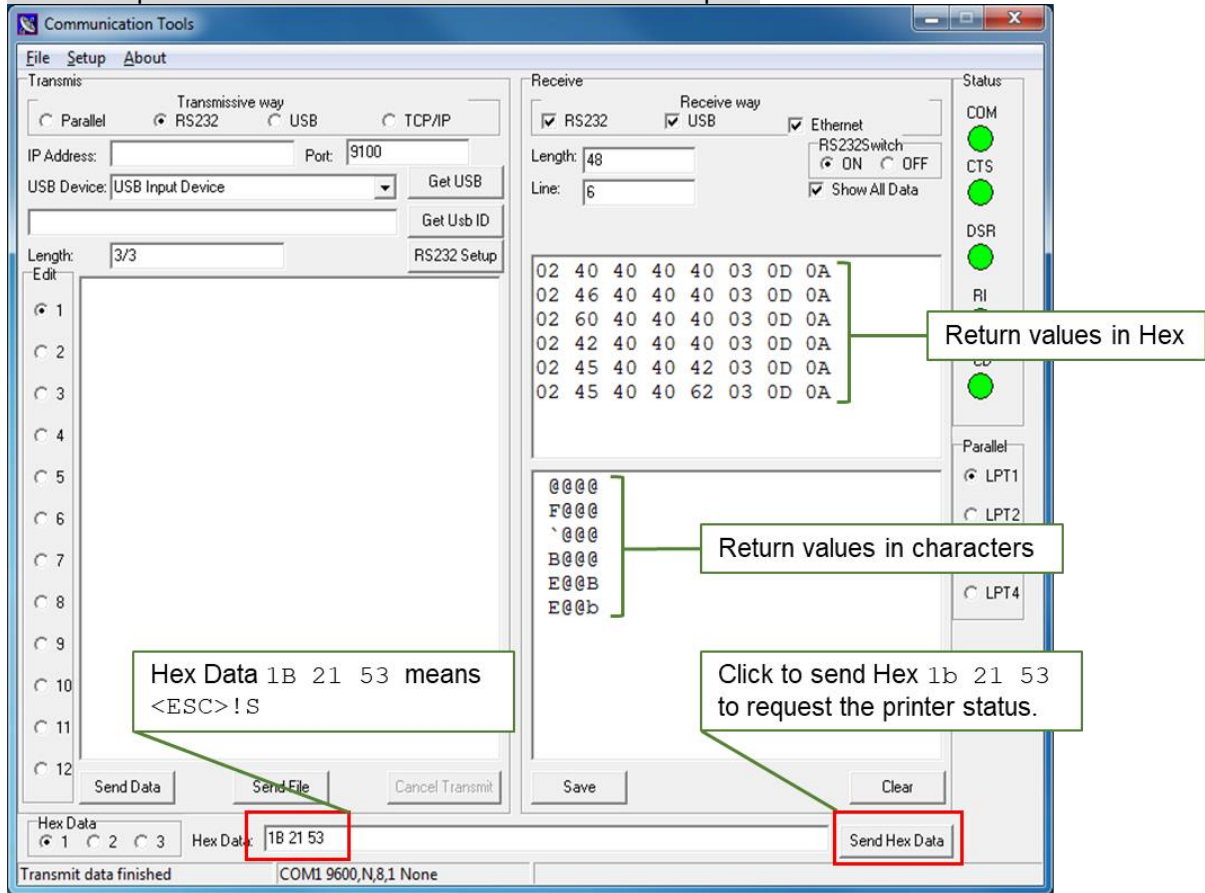
Status Byte #2: warning											
Bit 7	Bit 6	Bit 5	Bit 4	Bit 3	Bit 2	Bit 1	Bit 0	Hex	Decimal	ASCII	Status
0	1	0	0	0	0	0	0	40	64	@	Normal
0	1	0	0	0	0	0	1	41	65	A	Paper low
0	1	0	0	0	0	1	0	42	66	B	Ribbon low
0	1	0	0	0	1	0	0	44	68	D	(Reserved)
0	1	0	0	1	0	0	0	48	72	H	Receive buffer full (RS-232)
0	1	1	0	0	0	0	0	60	96	`	unhealthy dots

Status Byte #3: error											
Bit 7	Bit 6	Bit 5	Bit 4	Bit 3	Bit 2	Bit 1	Bit 0	Hex	Decimal	ASCII	Status
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	0	1	0	0	44	68	D	Print head error
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	Decimal	ASCII	Status
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

This example uses the Brother CommTool via RS-232C port.



Result

1: Start character, 2: 4-byte status in Hex, 3: End characters, 4: 4-byte status in characters

Item	1	2	3	4
Normal	0 2	4 0 4 0 4 0 4 0	0 3 0 D 0 A	@ @ @ @
Feed label	0 2	4 6 4 0 4 0 4 0	0 3 0 D 0 A	F @ @ @
Pause	0 2	6 0 4 0 4 0 4 0	0 3 0 D 0 A	^ @ @ @
Back feed label	0 2	4 2 4 0 4 0 4 0	0 3 0 D 0 A	B @ @ @
Error: Paper Jam	0 2	4 5 4 0 4 0 4 2	0 3 0 D 0 A	E @ @ B
Error: Paper jam and Head open	0 2	4 5 4 0 4 0 6 2	0 3 0 D 0 A	E @ @ b

Note:

Paper Jam <Hex 42>
 Head Open <Hex 60>
 0x42 | 0x60 = 62 <Hex b>

See Also

<ESC>!?, ~!E

7.9 <ESC>!F

Description

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

See Also

~!E

7.10 <ESC>!

Description

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

Syntax

<ESC>! .

See Also

~!E

7.11 ~!@

Description

Inquire the mileage of the printer. The integer part of mileage is returned (the decimal part of mileage is not return) in ASCII characters. The ending character of mileage is 0x0D.

Syntax

~!@

Example

~!@

See Also

~!E

7.12 ~!A

Description

Inquire the free memory of the printer. The number of bytes of free memory is returned in decimal digits with 0x0d as ending code.

Syntax

~!A

Example

~!A

See Also

FILES, ~!E

7.13 ~!D

Description

Enter the Dump Mode. The printer will print all characters that it has received from the system in the Dump Mode.

Syntax

~!D

Example

~!D

See Also

~!E, DUMP_TEXT SAVE

7.14 ~!E

Description

Enable an immediate command.

Syntax

~!E

Example

~!E

See also

<ESC>!D

7.15 ~!F

Description

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

Syntax

~!F

Example

Sample code
This example uses the Brother CommTool to test ~!F.

The screenshot shows the Brother CommTool interface. The 'Transmit' section on the left has 'USB' selected, 'Port' set to '9100', and 'USB Device' set to 'USB Printing Support'. The 'Length' is '9/9'. The command '~!F' is entered in the transmit area. The 'Receive' section on the right shows 'RS232', 'USB', and 'Ethernet' checked. The 'Length' is '10' and 'Line' is '0'. The received data is displayed as '54 45 53 54 2E 42 41 53 0D 1A'. Below this, the file name 'TEST.BAS' is shown. The 'Status' panel on the right shows 'COM' (red), 'CTS' (green), 'DSR' (green), 'RI' (green), and 'CD' (green). The 'Parallel' section shows 'LPT1' selected. The 'Hex' section at the bottom shows 'Hex 3' selected and 'Hex Data' is empty. The status bar at the bottom indicates 'Transmit data finied'.

See Also

FILES, ~!E,

7.16 ~!I

Description

Inquire the code page and country setting of the printer.

Syntax

~!I

The returned information is given in the following format:

code page, country code

e.g. 8 bit: 437, 001

7 bit: USA, 001

For more information, see **CODEPAGE** command.

Example

~!I

See Also

CODEPAGE, ~!E

7.17 ~!T

Description

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

Syntax

~ !T

Example

~ !T

See Also

~!E

7.18 <ESC>Y

Description

Enable the Line Mode for EZC (CPCL) or EZP (ESC/POS) printer.

Syntax

<ESC>Y

Example

<ESC>Y

See Also

<ESC>Z, ~!E

7.19 <ESC>Z

Description

Disable the Line Mode for EZC (CPCL) or EZP (ESC/POS) printer.

Syntax

<ESC>Z

Example

<ESC>Z

See Also

<ESC>Y, ~!E

8 Commands for Windows Driver

8.1 !B

Description

Store bitmap image data in the memory. Behind the `nnn` is the bitmap data.

Syntax

`!Bnnn`

<u>Parameter</u>	<u>Description</u>
<code>nnn</code>	Number of bytes of image data sent to the printer, expressed in 3 decimal digits

Example

`!B100`

See Also

BITMAP

8.2 !J

Description

Print bitmap data at the specified position (in y-direction).

Syntax

!Jnnnn

<u>Parameter</u>	<u>Description</u>
nnn	Print image at the specified position in y-direction. The position is expressed in 4 decimal digits.

Example

!J0100

See Also

FEED

8.3 !N

Description

Print a specified number of labels.

Syntax

!Nnnn

<u>Parameter</u>	<u>Description</u>
nnn	Number of copies to be printed

Example

!N001

9 File Management Commands

9.1 DOWNLOAD

Description

Transfer data files (including text data files, BMP/PCX graphic files and bitmap font files) and your frequently used print programs or templates to the printer.

Maximum numbers of files that can be saved in the printer:

DRAM : 50 files
FLASH : 256 files

Syntax

- Download a data file:

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

Parameter	Description										
n	Location where the file is to be saved										
	<table border="1"><thead><tr><th>ID</th><th>Memory device</th></tr></thead><tbody><tr><td>none</td><td>DRAM Use Move command to move the file from DRAM to FLASH before turning off the printer.</td></tr><tr><td>F</td><td>FLASH</td></tr><tr><td>E</td><td>SD CARD</td></tr><tr><td>U</td><td>USB</td></tr></tbody></table>	ID	Memory device	none	DRAM Use Move command to move the file from DRAM to FLASH before turning off the printer.	F	FLASH	E	SD CARD	U	USB
ID	Memory device										
none	DRAM Use Move command to move the file from DRAM to FLASH before turning off the printer.										
F	FLASH										
E	SD CARD										
U	USB										
FILENAME	File name to be saved (case sensitive)										
DATA SIZE	Actual size in bytes of the data file (without header)										
DATA CONTENT	Data to be downloaded into printer										

Note:

- For text data files, CR LF (0x0D 0x0A) is the separator of data.
- All data in DRAM is lost when the printer is turned off.

Note:

You can also download a data file into your printer using the BPM (Brother Printer Management Tool).

- Connect your computer and the printer, and then turn on the printer.
- Start the BPM and click the **File Manager** button.
- Select **File Type**. Click **Browse** to select a file and click **Open**.
Make sure that the file name and its extension are in uppercase letters (for example: FILENAME.BMP, FILENAME.PCX)
- Select **Memory Device** and click the **Download** button to start downloading.

- Download a program file:

DOWNLOAD [n,] "FILENAME.BAS"

Parameter	Description						
n	Location where the file is to be saved.						
	<table border="1"><thead><tr><th>ID</th><th>Memory device</th></tr></thead><tbody><tr><td>none</td><td>DRAM Use Move command to move the file from DRAM to FLASH before turning off the printer.</td></tr><tr><td>F</td><td>FLASH</td></tr></tbody></table>	ID	Memory device	none	DRAM Use Move command to move the file from DRAM to FLASH before turning off the printer.	F	FLASH
ID	Memory device						
none	DRAM Use Move command to move the file from DRAM to FLASH before turning off the printer.						
F	FLASH						

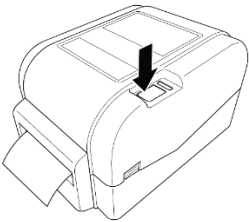
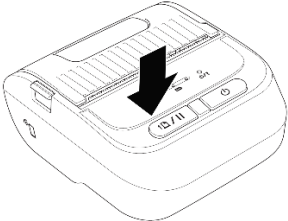

	E	SD CARD
	U	USB
FILENAME .BAS	File name to be saved	

Note:

- Filenames are case sensitive.
- Specify the template/program name ending with .BAS for the second parameter (for example: DOWNLOAD F, "TEST.BAS, DOWNLOAD F, "DEMO.BAS").
- Make sure you use the **EOP** command.
- All data in DRAM is lost when the printer is turned off.
- Send the main filename without BAS extension (for example: TEST, DEMO) or use the **RUN** command to start the program (for example: RUN "TEST.BAS", RUN "DEMO.BAS").
- The priority of AUTO.BAS in each memory device:
DRAM > CARD (Ext. FLASH) > FLASH

Note:
If "AUTO.BAS" exists in the printer memory, it runs automatically at startup. To disable the auto execution function, follow these steps:

1. Turn off the printer.
2. Press the following button, and then turn on the printer.

TD-4420TN/4520TN	RJ Printers	TD-4650TNWB/4750TNWB TJ Printers
Feed/Pause button	Feed/Pause button	Right Selection button
		

3. Release the button when the LED is lit in green.
The LED color will change in the following order:
TD-4420TN/4520TN
Amber (lit) → red (5 times) → amber (5 times) → green (5 times) → green/amber (5 times) → red/amber (5 times) → **green (lit)**
TD-4650TNWB/4750TNWB/4650TNWBR/4750TNWBR
Amber (lit) → red/amber (5 times) → amber (5 times) → green/red (5 times) → green (5 times) → red (5 times) → **green (lit)**
RJ-2035B/2055WB/3035B/3055WB
Amber (lit) → right/green (5 times) → center/green (5 times) → left/green (5 times) → **green (lit)**
TJ-4005DN/4010TN/4021TN/4021TNR/4121TN/4121TNR,
TJ-4420TN/4520TN/4620TN/4422TN/4522TN
Amber (lit) → red (5 times) → amber (5 times) → green (5 times) → green/amber (5 times) → red/amber (5 times) → **green (lit)**

Example

Sample code Transfer the file to the printer 's DRAM memory

```
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
```

Sample code Transfer the file to the printer's FLASH memory

```
DOWNLOAD F, "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

9.2 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 the printer's DRAM.)

```
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

9.3 FILES

Description

Print the total memory size, available memory size and files lists (or lists the files through RS-232C) in the printer memory (both FLASH memory and DRAM).

Syntax

FILES

Example

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

See Also

~!F, KILL

9.4 KILL

Description

Delete 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	File location											
	<table border="1"> <thead> <tr> <th>ID</th> <th>Memory device</th> </tr> </thead> <tbody> <tr> <td>none</td> <td>DRAM</td> </tr> <tr> <td>F</td> <td>FLASH</td> </tr> <tr> <td>E</td> <td>SD CARD</td> </tr> <tr> <td>U</td> <td>USB</td> </tr> </tbody> </table>	ID	Memory device	none	DRAM	F	FLASH	E	SD CARD	U	USB	
ID	Memory device											
none	DRAM											
F	FLASH											
E	SD CARD											
U	USB											
FILENAME	File name to be deleted from the printer's memory (case sensitive)											
Note:												
<ul style="list-style-type: none"> If optional parameter n is not specified, firmware will delete the file in DRAM. Syntax example <ul style="list-style-type: none"> 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. Make sure you send MOVE command to the printer after sending KILL command. 												
	<table border="1"> <thead> <tr> <th rowspan="2">Model</th> <th colspan="3">Support</th> </tr> <tr> <th>KILL "***"</th> <th>KILL "*** MOVE</th> <th>KILL F, "***"</th> </tr> </thead> <tbody> <tr> <td>FBPL programming printer</td> <td>V</td> <td></td> <td>V</td> </tr> </tbody> </table>	Model	Support			KILL "***"	KILL "*** MOVE	KILL F, "***"	FBPL programming printer	V		V
Model	Support											
	KILL "***"	KILL "*** MOVE	KILL F, "***"									
FBPL programming printer	V		V									

Example

Send the **SELFTEST** or **FILES** command to print the downloaded file list in the 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

9.5 MOVE

Description

Move the downloaded files from DRAM to FLASH memory.

Syntax

MOVE

See Also

DOWNLOAD, EOP

9.6 RUN

Description

Execute a program resident in the printer memory. It is available for FBPL programs only.

Syntax

```
RUN "FILENAME.BAS"
```

Example

Sample code	Result
<pre>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"</pre>	DEMO PROGRAM
<pre>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</pre> <p>Note: This command is equivalent to typing the filename (Example: RUN "DEMO.BAS" = DEMO)</p>	

See Also

DOWNLOAD, EOP

9.7 DUMP_TEXT SAVE

Description

Enter Dump Mode.

Syntax

```
DUMP_TEXT SAVE time,storage,"XXXX.txt",
```

<u>Parameter</u>	<u>Description</u>						
time	Dump mode duration (ms)						
storage	Dump file destination folder						
	<table border="1"><thead><tr><th>storage</th><th>Memory *</th></tr></thead><tbody><tr><td>U</td><td>USB</td></tr><tr><td>E</td><td>SD CARD</td></tr></tbody></table>	storage	Memory *	U	USB	E	SD CARD
storage	Memory *						
U	USB						
E	SD CARD						
"XXXX.txt"	* External memory source inserted into printer Dump file name, where X = any alphanumeric character						
Note:	<ul style="list-style-type: none">▪ The last comma "," in the command line after the file name is required.▪ When the duration specified in the "time" parameter ends, the printer automatically exits Dump mode. All print data sent to the printer during Dump mode is saved as a single file in the specified destination folder.▪ You can exit Dump mode at any time by pressing any button on the printer. All print data sent to the printer during Dump mode is saved as a single file in the specified destination folder.						

Example

Sample code

```
DUMP_TEXT SAVE 5000,U,"Dump.txt",
```

See Also

~!D

10 BASIC Commands and Functions

Description

The commands in this section work as part of a downloaded program. You can use these commands only after downloading the program using the `DOWNLOAD` command or BPM. If you send these commands without downloading the program first, they may not work correctly.

10.1 ABS()

Description

Return the absolute value of an integer, floating point or variable.

Syntax

`ABS (VARIABLE)`

Example

Sample code	Result
<pre>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\$(ABSI) PRINT 1 EOP RUN "TEST.BAS"</pre>	<p style="text-align: center;">100</p> <p style="text-align: center;">50.98</p> <p style="text-align: center;">99.99</p>

See Also

`DOWNLOAD`, `EOP`

10.2 ASC()

Description

Return the ASCII code of the character.

Syntax

```
ASC (" A ")
```

Example

Sample code	Result
<pre>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"</pre>	<p style="text-align: center;">65</p>

See Also

DOWNLOAD, EOP, STR\$()

10.3 CHR\$()

Description

Return the character with the specified ASCII code.

Syntax

CHR\$(n)

<u>Parameter</u>	<u>Description</u>
n	ASCII code

Example

Sample code	Result
<pre>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"</pre>	<p>K</p>

See Also

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

10.4 XOR\$()

Description

Encode the original data to new data by logic XOR.

Syntax

XOR\$(data\$,password\$)

<u>Parameter</u>	<u>Description</u>
data\$	The original data needs to be encoded by Password\$.
Password\$	This parameter will be used to create the new data.

Example

Sample code	Result
<pre>data\$="1234" password\$="ABCD" encoded\$=XOR\$(data\$,password\$) deconded\$=XOR\$(encoded\$,password\$) SIZE 4,0.5 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</pre>	<pre>Encoded data: pppp Decoded data: 1234</pre>

10.5 END

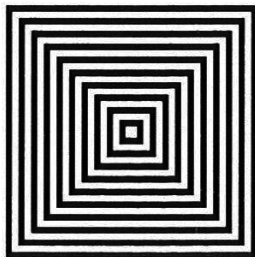
Description

State the end of program.

Syntax

END

Example

Sample code	Result
<pre>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</pre>	<p data-bbox="922 645 1414 689">END COMMAND TEST</p> 

See Also

DOWNLOAD, EOP, GOSUB

10.6 EOF()

Description

Detect an opened download file to see whether it has reached the end of file.

Syntax

EOF(File Handle)

<u>Parameter</u>	<u>Description</u>
File handle	Either 0 or 1
<u>Return value</u>	<u>Description</u>
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

*****EOF TEST*****

COMPUTER\$2000 [EOF(0)=1]



PRICE-2000

See Also

DOWNLOAD, EOP, OPEN, READ, SEEK

10.7 OPEN

Description

Open a downloaded file and establish the file handle. 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.

Note:

If the file doesn't exist, the printer will create this file in the on-board FLASH.

Syntax

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

<u>Parameter</u>	<u>Description</u>										
[memory ID]	Optional. Open the file in specific memory device.										
	<table border="1"><thead><tr><th>ID</th><th>Memory device</th></tr></thead><tbody><tr><td>none</td><td>DRAM</td></tr><tr><td>F</td><td>FLASH</td></tr><tr><td>E</td><td>SD CARD</td></tr><tr><td>U</td><td>USB</td></tr></tbody></table>	ID	Memory device	none	DRAM	F	FLASH	E	SD CARD	U	USB
ID	Memory device										
none	DRAM										
F	FLASH										
E	SD CARD										
U	USB										
filename	File name										
file handle	Either 0 or 1										

Example

<u>Sample code</u>	<u>Result</u>
<pre>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\$</pre>	<pre>Open file in DRAM. Open file in FLASH. Auto create a new file in FLASH.</pre>

PRINT 1 EOP TEST	
------------------------	--

See Also

DOWNLOAD, EOP, READ, WRITE, SEEK, CLOSE

10.8 CLOSE

Description

Close the file handle which is opened by **OPEN** command.

Syntax

```
CLOSE file handle
```

<u>Parameter</u>	<u>Description</u>
file handle	Either 0 or 1

Example

See the example in **OPEN** command.

10.9 WRITE

Description

Write data to a downloaded data file. Two files can be open simultaneously.

Syntax

```
WRITE file handle, variables
```

<u>Parameter</u>	<u>Description</u>
file handle	0 or 1
variables	string, integer or float point variable

See Also

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

10.10 READ

Description




Read data from a 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
<pre> 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 </pre>	<pre> *****READ COMMAND TEST***** OPEN-READ DATA3 \$900  PRICE*93=83700 *****READ COMMAND TEST***** OPEN-READ DATA2 Mouse\$900  PRICE*93=83700 *****READ COMMAND TEST***** OPEN-READ DATA1 COMPUTER\$2000  PRICE*12=24000 </pre>

See Also

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

10.11 SEEK

Description

Shift the specified file pointer to a certain position.

Syntax

```
SEEK file handle,offset
```

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

Example

<u>Sample code</u>	<u>Result</u>
<pre>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</pre>	<pre>SEEK COMMAND TEST ----- SHIFT 4 CHARACTERS 567890 ----- SHIFT 0 CHARACTERS 1234567890</pre>

See Also

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

10.12 LOF()

Description

Return the size of the specified file.

Syntax

```
LOF("FILENAME")
```

<u>Parameter</u>	<u>Description</u>
FILENAME	The file downloaded in the printer memory.

Example

<u>Sample code</u>	<u>Result</u>
<pre>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</pre>	<pre>LOF() FUNCTION TEST DATA1 IS: 10 Bytes DATA2 IS: 15 Bytes</pre>

See Also

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

10.13 LOC()

Description

Return the current read/write position within an open file.

Syntax

LOC(file handle)

<u>Parameter</u>	<u>Description</u>
file handle	0 or 1

Example

Sample code	Result
<pre>DOWNLOAD "DATA.DAT", 30, 12345678 12345678 12345678 DOWNLOAD "TEST.BAS" str1\$ = "" location = 0 OPEN "DATA.DAT", 0 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</pre>	<pre>str1\$: 12345678 Location:10</pre>

10.14 FREAD\$()

Description

Read a specified number of bytes of data from a file.

Syntax

FREAD\$ (file handle,byte)

<u>Parameter</u>	<u>Description</u>
file handle	0 or 1
byte	Number of bytes to be read

Example

<u>Sample code</u>	<u>Result</u>
<pre>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 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</pre>	<pre>FREAD\$(0,6) IS: 123456 FREAD\$(1,6) IS: ABCDEF</pre>

See Also

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

10.15 PUT

Description

One byte is appended into a file.

Syntax

```
PUT file handle, var1$[, var2$][, var3$][, ...]
PUT file handle, var1[, var2][, var3][, ...]
PUT file handle, var1$[, var2$][, var3$][, ...]
```

<u>Parameter</u>	<u>Description</u>
file handle	0 or 1
var\$	Data is a character
var	Data is ASCII value

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

```
Original data in DATA1: 1234567890
New data in Data1: 1234567890aB1
```

See Also

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

10.16 GET

Description

Get one byte from a file.

Syntax

```
GET file handle, var1$[, var2$][, var3$][, ...]
GET file handle, var1[, var2][, var3][, ...]
GET file handle, var1$[, var2$][, var3][, ...]
```

<u>Parameter</u>	<u>Description</u>
file handle	0 or 1
var\$	Get a character
var	Get ASCII value

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

```
The first 3 characters in DATA1: 12 (51)
The first 5 characters in DATA1: 12345
```

See Also

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

10.17 COPY

Description

Copy the existing file to another location.

Syntax

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

Parameter	Description										
memory ID of source	Optional <table border="1"> <thead> <tr> <th>ID</th> <th>Memory device</th> </tr> </thead> <tbody> <tr> <td>none</td> <td>DRAM</td> </tr> <tr> <td>F</td> <td>FLASH</td> </tr> <tr> <td>E</td> <td>SD CARD</td> </tr> <tr> <td>U</td> <td>USB</td> </tr> </tbody> </table>	ID	Memory device	none	DRAM	F	FLASH	E	SD CARD	U	USB
ID	Memory device										
none	DRAM										
F	FLASH										
E	SD CARD										
U	USB										
source filename	Original file name										
Memory ID of new file	Optional <table border="1"> <thead> <tr> <th>ID</th> <th>Memory device</th> </tr> </thead> <tbody> <tr> <td>none</td> <td>DRAM</td> </tr> <tr> <td>F</td> <td>FLASH</td> </tr> </tbody> </table>	ID	Memory device	none	DRAM	F	FLASH				
ID	Memory device										
none	DRAM										
F	FLASH										
new filename	New file name										

Example

Sample Code

```

DOWNLOAD "DATA_D.DAT",105, With the "At your side." spirit in mind. the Brother
Group aims to continually create value.
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

With the "At your side." spirit in mind, the Brother Group aims to continually create value.

300 dpi

With the "At your side." spirit in mind, the Brother Group
aims to continually create value.

See Also

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

10.18 FOR...NEXT LOOP

Description

Repeat one or more lines of program a specified number of times. 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
```

<u>Parameter</u>	<u>Description</u>
variable	Variable name (up to 8 characters)
start	Integer or floating point numbers
end	Integer or floating point numbers
increment	Integer or floating point, positive or negative
EXITFOR	Exit for loop

Example

<u>Sample code</u>	<u>Result</u>
<pre>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</pre>	<pre> 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 10 901 20</pre>

See Also

DOWNLOAD, EOP

10.19 WHILE...WEND

Description

Execute a series of statements if a given condition is True. Nested loops are allowed (up to 39 nested loops) in the printer.

Syntax

```
WHILE condition
[statement]
WEND
```

<u>Parameter</u>	<u>Description</u>
condition	Available relational operator: <, >, =, <=, >=, <> *Relational operator <>, not equal, was supported.
Statement	One or more statements executed while condition is True.

Example

Sample Code	Result
<pre>DOWNLOAD "TEST.BAS" I=0 TOTAL=0 WHILE I<100 I=I+1 TOTAL=TOTAL+I WEND SIZE 4,0.5 GAP 0,0 CLS TEXT 10,10, "3",0,1,1, "1+2+3+ ... + 100 = " +STR\$(TOTAL) PRINT 1 EOP TEST</pre>	<pre>1+2+3+ ... + 100 = 5050</pre>
<pre>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</pre>	<pre>Quit BAS Data: quit Data: 67890 Data: 12345</pre>

10.20 DO...LOOP

Description

Repeat a block of statement while a condition is True.

Syntax

```
DO
    [statement]
    [EXITDO]
    [statement]
LOOP

DO WHILE condition
    [statement]
    [EXITDO]
    [statement]
LOOP

DO UNTIL condition
    [statement]
    [EXITDO]
    [statement]
LOOP

DO
    [statement]
    [EXITDO]
    [statement]
LOOP WHILE condition

DO
    [statement]
    [EXITDO]
    [statement]
LOOP UNTIL condition
```

Parameter	Description
condition	Available relational operator: <, >, =, <=, >=, <> *Relational operator <>, not equal.
Statement	One or more statements executed while condition is True.
EXITDO	Exit loop

Example

Sample Code	Result
<pre> DOWNLOAD "TEST.BAS" I=0 TOTAL=0 DO I=I+1 TOTAL=TOTAL+I IF I=100 THEN EXITDO LOOP SIZE 4,0.5 GAP 0,0 CLS TEXT 10,10, "3",0,1,1, "1+2+3+ ... + 100 = " + STR\$(TOTAL) PRINT 1 EOP TEST </pre>	<p>1+2+3+ ... + 100 = 5050</p>
<pre> DOWNLOAD "TEST.BAS" I=0 TOTAL=0 DO WHILE I<=100 TOTAL=TOTAL+I I=I+1 LOOP SIZE 4,0.5 GAP 0,0 CLS TEXT 10,10, "3",0,1,1, "1+2+3+ ... + 100 = " + STR\$(TOTAL) PRINT 1 EOP TEST </pre>	<p>1+2+3+ ... + 100 = 5050</p>
<pre> DOWNLOAD "TEST.BAS" I=0 TOTAL=0 DO UNTIL I>100 TOTAL=TOTAL+I I=I+1 LOOP SIZE 4,0.5 GAP 0,0 CLS TEXT 10,10, "3",0,1,1, "1+2+3+ ... + 100"= " + STR\$(TOTAL) PRINT 1 EOP TEST </pre>	<p>1+2+3+ ... + 100 = 5050</p>

<pre> DOWNLOAD "TEST.BAS" I=0 TOTAL=0 DO TOTAL=TOTAL+I I=I+1 LOOP WHILE I<101 SIZE 4,0.5 GAP 0,0 CLS TEXT 10,10, "3",0,1,1, "1+2+3+ ... + 100 =" + STR\$(TOTAL) PRINT 1 EOP TEST </pre>	<p>1+2+3+ ... + 100 = 5050</p>
<pre> DOWNLOAD "TEST.BAS" I=0 TOTAL = 0 DO TOTAL = TOTAL + I I=I+1 LOOP UNTIL I>100 SIZE 4,0.5 GAP 0,0 CLS TEXT 10,10, "3",0,1,1, "1+2+3+ ... + 100 = " + STR\$(TOTAL) PRINT 1 EOP TEST </pre>	<p>1+2+3+ ... + 100 = 5050</p>

10.21 IF...THEN...ELSE...ENDIF LOOP

Description

Execute one or more statements conditionally. Either a single-line syntax or multiple-line “block” syntax can be used.

Syntax

```
IF condition THEN statement
```

Note the single-line form of IF ...THEN does not use an ENDIF statement.

Or

```
IF condition THEN  
    Statements  
ENDIF
```

Or

```
IF condition THEN  
    Statements  
ELSE  
    Statements  
ENDIF
```

Or

```
IF condition 1 THEN  
    Statement block 1  
ELSEIF condition 2 THEN  
    Statement block 2  
...  
ELSEIF condition n THEN  
    Statement block n  
ENDIF
```

Note:

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

<u>Parameter</u>	<u>Description</u>
condition	Available relational operator: <, >, =, <=, >=, <>
Statement	*Relational operator <>, not equal. Only one statement is available in

Example

Sample Code	Result
<pre> DOWNLOAD "DEMO.BAS" SIZE 4,4 GAP 0,0 DIRECTION 1 CLS A=0 B=0 C=0 D=0 E=0 F=0 G=0 H=0 J=0 K=0 L=0 FOR I=1 TO 100 IF I-INT(I/1)*1=0 THEN A=A+I IF I-INT(I/2)*2=1 THEN B=B+I ELSE C=C+I IF I-INT(I/3)*3=0 THEN D=D+I ENDIF IF I-INT(I/5)*5=0 THEN E=E+I ELSE F=F+I ENDIF IF I-INT(I/7)*7=0 THEN G=G+I ELSEIF I-INT(I/17)*17=0 THEN H=H+I ELSEIF I-INT(I/27)*27=0 THEN J=J+I ELSEIF I-INT(I/37)*37=0 THEN K=K+I ELSE L=L+I ENDIF NEXT TEXT 100,110,"3",0,1,1,"(1) 1+2+3+...+100="+STR\$(A) TEXT 100,160,"3",0,1,1,"(2) 1+3+5+...+99="+STR\$(B) TEXT 100,210,"3",0,1,1,"(3) 2+4+6+...+100="+STR\$(C) TEXT 100,260,"3",0,1,1,"(4) 3+6+9+...+99="+STR\$(D) TEXT 100,310,"3",0,1,1,"(5) 5+10+15+...+100="+STR\$(E) TEXT 100,360,"3",0,1,1,"(1)-(5)= "+STR\$(F) TEXT 100,410,"3",0,1,1,"(6) 7+14+21+...+98="+STR\$(G) </pre>	<p>(1) $1+2+3+\dots+100=5050$</p> <p>(2) $1+3+5+\dots+99=2500$</p> <p>(3) $2+4+6+\dots+100=2550$</p> <p>(4) $3+6+9+\dots+99=1683$</p> <p>(5) $5+10+15+\dots+100=1050$</p> <p>(1)-(5)=4000</p> <p>(6) $7+14+21+\dots+98=735$</p> <p>(7) $17+34+51+\dots+85=255$</p> <p>(8) $27+54+\dots+81=162$</p> <p>(9) $37+74=111$</p> <p>(1)-(6)-(7)-(8)-(9)=3787</p>

<pre> TEXT 100,460,"3",0,1,1,"(7) 17+34+51+...+85=" +STR\$(H) TEXT 100,510,"3",0,1,1,"(8) 27+54+...+81=" +STR\$(J) TEXT 100,560,"3",0,1,1,"(9) 37+74=" +STR\$(K) TEXT 100,610,"3",0,1,1," (1)-(6)-((7)-(8)-(9)=" +STR\$(L) PRINT 1,1 EOP </pre>	
<pre> DOWNLOAD F, "TEST.BAS" SIZE 4,1 GAP 0,0 DIRECTION 1 CLS A=85 B=10 :START IF A<100 THEN GOTO L1 ELSE GOTO L2 :L1 CLS TEXT 100,10,"3",0,1,1,STR\$(A) + " IS SMALLER THEN 100" PRINT 1 A=A+B GOTO START ENDIF :L2 CLS TEXT 100,10,"3",0,1,1,STR\$(A) + " IS LAGER THEN 100" PRINT 1 EOP TEST </pre>	<p style="text-align: center;">105 IS LAGER THEN 100</p> <p style="text-align: center;">95 IS SMALLER THEN 100</p> <p style="text-align: center;">85 IS SMALLER THEN 100</p>

Note:

If the result of the expression is nonzero, the statement following THEN will be executed. If the result of the expression is zero, and the statement following the ELSE is present, it will be executed. Otherwise the next line of statement is executed.

If there are block of statements in IF...THEN ...ELSE, ENDIF must be used at the end of the IF...THEN ...ELSE statement.

Limitations:

The total numbers of nested IF ...THEN ...ELSE statement in a program cannot exceed 40.

The total numbers of nested IF ...THEN ...ELSE, FOR...NEXT, GOSUB RETURN in a program cannot exceed 40 loops.

See Also

DOWNLOAD, EOP

10.22 GOSUB...RETURN

Description

Branch to a subroutine, executing statements until RETURN is reached.

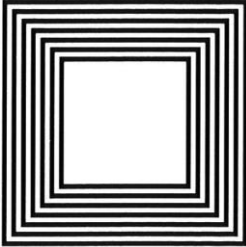
Syntax

```
GOSUB LABEL
      statement
END

:LABEL
      statement
RETURN
```

<u>Parameter</u>	<u>Description</u>
LABEL	Beginning of the subroutine. The maximum length of the label is 8 characters.

Example

<u>Sample code</u>	<u>Result</u>
<pre>DOWNLOAD "GOSUB1.BAS" SIZE 4,3 GAP 0,0 DIRECTION 1 CLS TEXT 10,10,"3",0,1,1,"GOSUB & RETURN COMMAND TEST" GOSUB DR_BOX PRINT 1 END :DR_BOX FOR I=21 TO 81 STEP 10 BOX 80+I,80+I,80+300-I,80+300-I,5 NEXT RETURN EOP GOSUB1</pre>	<p>GOSUB & RETURN COMMAND TEST</p> 

See Also

DOWNLOAD, EOP, END, GOTO

10.23 GOTO

Description

Branch to a specified label. The label cannot exceed 8 characters in length.

Syntax

```
GOTO LABEL
```

```
:LABEL
```

<u>Parameter</u>	<u>Description</u>
LABEL	Beginning of the point. The maximum length of the label is 8 characters.

Example

Sample code	Result
<pre>DOWNLOAD "GOTO1.BAS" SIZE 4,3 GAP 0,0 DIRECTION 1 CLS A=0 TOTAL=0 :START IF A<100 THEN GOTO SUM ELSE GOTO PRTOUT ENDIF :SUM A=A+1 TOTAL=TOTAL+A GOTO START :PRTOUT B\$="THE SUMMATION OF 1..100 IS "+STR\$(TOTAL) TEXT 10,100, "3",0,1,1,B\$ PRINT 1 END EOP</pre>	<pre>THE SUMMATION OF 1..100 IS 5050</pre>

See Also

DOWNLOAD, EOP, END, GOSUB...RETURN

10.24 INP\$()

Description

One byte is received from the communication port.

Syntax

INP\$(n)

<u>Parameter</u>	<u>Description</u>
n	1 : com1 port in printer

Example

Sample code

```
DOWNLOAD "TEST.BAS"

T$=""
FOR I=1 TO 5
T$=T$+INP$(1)
NEXT

SIZE 4,0.5
GAP 0,0
CLS
TEXT 10,10, "3",0,1,1, "The received data is: "+T$
PRINT 1
EOP
TEST
12345
```

Result

The received data is: 12345

See Also

INP()

10.25 INP()

Description

One byte (ASCII value) is received from the communication port.

Syntax

INP (n)

<u>Parameter</u>	<u>Description</u>
n	1 : com1 port in printer

Example

Sample code

```
DOWNLOAD "TEST.BAS"

154sci=0
str$=""

FOR I=1 TO 5
154sci=INP(1)
str$=str$+" " +STR$(154sci)
OUT 154sci
NEXT

SIZE 4,0.5
GAP 0,0
CLS
TEXT 10,10, "3",0,1,1, "The received data is: "+str$
PRINT 1
EOP
TEST
12345
```

Result

The received data is: 49 50 51 52 53

See Also

INP\$()

10.26 LOB()

Description

Return the size of data in receiving buffer.

Syntax

LOB ()

Example

Sample Code

```
DOWNLOAD "TEST.BAS"

DATA$=""

WHILE LOB (<>0
DATA$=DATA$+INP$ (1)
WEND

SIZE 4,0.5
GAP 0,0
CLS
BOX 10,10,800,100,2
BLOCK 15,15,790,90, "0",0,8,8,DATA$
PRINT 1
EOP
TEST
With the "At your side." spirit in mind. the Brother Group aims to
continually create value.
```

Result

203 dpi:

With the "At your side." spirit in mind, the Brother Group aims to continually create value.

300 dpi:

With the "At your side." spirit in mind, the Brother Group
aims to continually create value.

See Also

INP\$(), WHILE ... WEND

10.27 INPUT

Description

Define a variable area and insert a text you want using an external input device (for example, a barcode reader).

Syntax

```
INPUT ["Prompt string", number of digits], variables
```

The comma also can be replaced by semicolon, such as:

```
INPUT ["Prompt string"; number of digits]; variables
```

<u>Parameter</u>	<u>Description</u>
Prompt string	Maximum 20 characters
Number of digits	Maximum 255 characters
Variables	Variable name

Example

Sample template

```
DOWNLOAD F, "TEST.BAS"  
SIZE 4,3  
GAP 0,0  
DIRECTION 1  
:START  
INPUT "CODE 39: ",C39$  
INPUT "EAN 13: ",12,E13$  
CLS  
TEXT 20,50,"3",0,1,1,"PLC or Barcode Scanner Test"  
BARCODE 20,100, "39",48,1,0,2,5,C39$  
BARCODE 20,200, "EAN13",48,1,0,4,4,E13$  
PRINT 1  
GOTO START  
EOP
```

Sample input data from PLC or barcode scanner

```
TEXT  
123456  
123456789012
```

Result

PLC or Barcode Scanner Test



See Also

DOWNLOAD, EOP, END, GOTO

10.28 PREINPUT

Description

Define the start character for **INPUT** command.

Syntax

```
PREINPUT var$  
PREINPUT CHR$(n)
```

<u>Parameter</u>	<u>Description</u>
var\$	The specific character or string in front of data.
N	n = 1 ~ 255

Example

```
PREINPUT "<"  
PREINPUT CHR$(2)
```

See also

POSTINPUT, INPUT, SET FILTER

10.29 POSTINPUT

Description

Define the end character for **INPUT** command.

Syntax

```
POSTINPUT var$  
POSTINPUT CHR$(n)
```

<u>Parameter</u>	<u>Description</u>
var\$	The specific character or string in end of data.
N	n = 1 ~ 255

Example

```
POSTINPUT ">"  
POSTINPUT CHR$(3)
```

See also

PREINPUT, INPUT, SET FILTER

10.30 SET FILTER

Description

Enable/disable **PREINPUT** and **POSTINPUT** commands.

Syntax

```
SET FILTER ON/OFF
```

<u>Parameter</u>	<u>Description</u>
ON	Enable PREINPUT and POSTINPUT
OFF	Disable PREINPUT and POSTINPUT

Note:

For the models with LCD, make sure you send **SET USBHOST** command when using **INPUT** and **SET FILTER** command with USB Host devices (for example: USB keyboard, USB scanner).

Example

<u>Sample Code</u>	<u>Result</u>
<pre>DOWNLOAD "TEST.BAS" PREINPUT "<=" POSTINPUT "=>" SET FILTER ON START: INPUT "DATA",data1\$ SIZE 4,0.25 GAP 0,0 DIRECTION 1 CLS TEXT 10,10, "3",0,1,1, "DATA = "+data1\$ PRINT 1 GOTO START EOP TEST <=1234=><=5678=><=9012=></pre>	<pre>DATA = 9012 DATA = 5678 DATA = 1234</pre>

See also

PREINPUT, POSTINPUT, INPUT, SET USBHOST

10.31 REM

Description

Comment. Prefix is "REM", which will be ignored by the printer.

Syntax

REM

Example

Sample code

```
REM *****  
REM This is a demonstration program*  
REM *****  
DOWNLOAD "REMARK.BAS"  
SIZE 4,3  
GAP 0,0  
DIRECTION 1  
CLS  
TEXT 50,50, "3",0,1,1, "REMARK DEMO PROGRAM"  
REM TEXT 50,100, "3",0,1,1, "REMARK DEMO PROGRAM"  
PRINT 1,1  
EOP  
REMARK
```

Result

REMARK DEMO PROGRAM

See Also

DOWNLOAD, EOP, END

10.32 OUT

Description

Return data through the specific port.

Syntax

OUT [port] "prompt",variable

OUT [port] "prompt";variable

Parameter	Description
port	Optional. Specified the port for returning data/string. Default is returning the data/string from the port which is sending data to printer. COM: Returning data/string from COM port. USB: Returning data/string from USB port. NET: Returning data/string from LAN port.
Prompt	Prompt string.
Variable	The output message.
,	The "prompt" and "variable" are separated by <0x0D><0x0A>.
;	The "variable" comes behind "prompt" directly.

Example

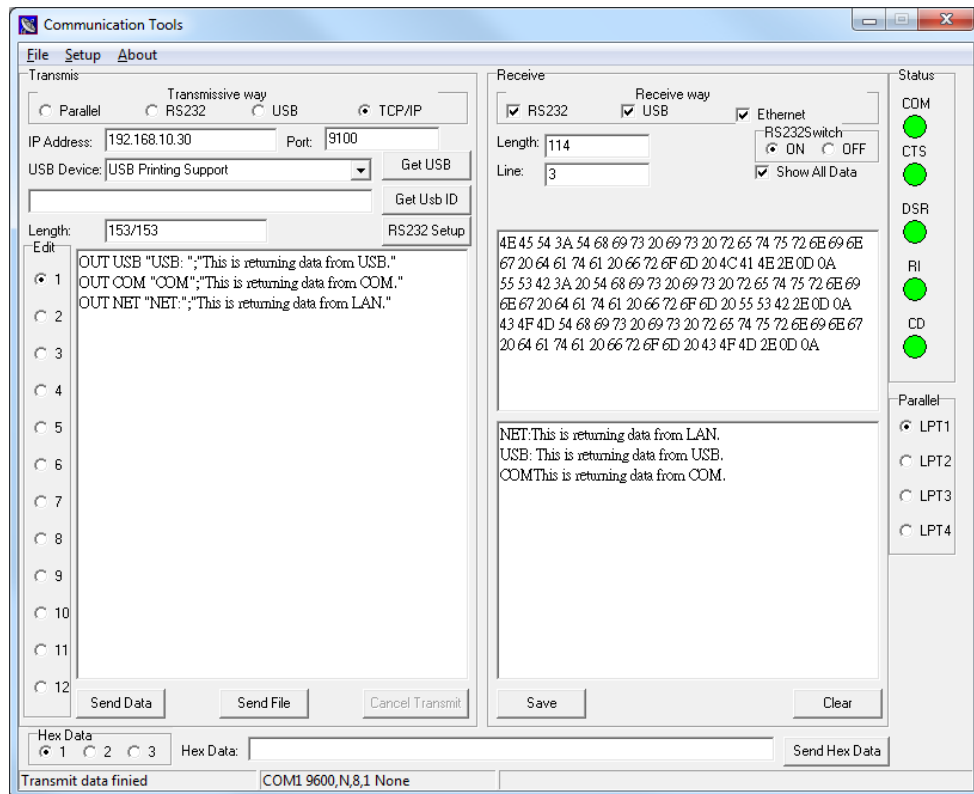
Sample Code

```
OUT USB "USB: "; "This is returning data from USB. "
```

```
OUT COM "COM"; "This is returning data from COM. "
```

```
OUT NET "NET: "; "This is returning data from LAN. "
```

Result



10.33 OUTR

Description

Send data through RS-232C port only.

Syntax

```
OUTR "prompt",variable
```

```
OUTR "prompt";variable
```

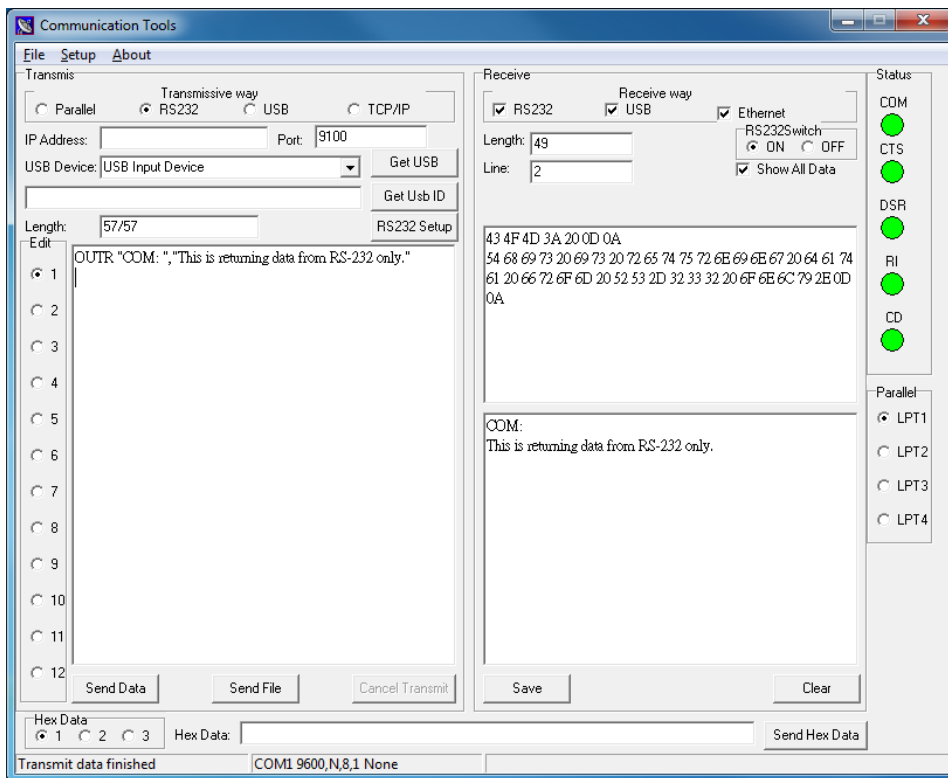
Parameter	Description
prompt	Prompt string.
Variable	The output message.
,	The "prompt" and "variable" are separated by <0x0D><0x0A>.
;	The "variable" comes behinds "prompt" directly.

Example

Sample Code

```
OUTR "COM: ", " This is returning data from RS-232 only."
```

Result



10.34 GETKEY()

Description

Get the status of the **PAUSE** and **FEED** keys. This command waits until either key is pressed, whereupon 0 is returned if **PAUSE** key is pressed and 1 is returned if **FEED** key is pressed.

Syntax

GETKEY ()

PAUSE	FEED
0	1

Example

Sample code

```
DOWNLOAD "DEMO4.BAS"
SIZE 4,3
GAP 0,0
CLS
:START
A=GETKEY()
IF A=0 THEN GOTO PAUSEB
IF A=1 THEN GOTO FEEDB
:PAUSEB
CLS
TEXT 50,10, "4",0,1,1, "PAUSE key is pressed !"
PRINT 1
GOTO START
:FEEDB
CLS
TEXT 50,10, "4",0,1,1, "FEED key is pressed !"
PRINT 1
EOP
```

See Also

DOWNLOAD, EOP, END, GOTO

10.35 INT()

Description

Truncate a floating point number.

Syntax

INT (n)

<u>Parameter</u>	<u>Description</u>
n	Positive or negative integer, floating point number or mathematical expression

Example

<u>Sample code</u>	<u>Result</u>
<pre>DOWNLOAD "DEMO.BAS" SIZE 4,1 GAP 0,0 DIRECTION 1 INPUT "Number: ",Num CLS REM **** To round up or down**** N=INT(Num+0.5) IF N>Num THEN TEXT 50,100, "3",0,1,1, "To round up= " +STR\$(N) ELSE TEXT 50,100, "3",0,1,1, "To round down= " +STR\$(N) ENDIF PRINT 1 EOP 56.2</pre>	<p>To round down= 56</p>

See Also

DOWNLOAD, EOP, END, ABS(), ASC(), STR\$()

10.36 LEFT\$()

Description

Return the specified number of characters down from the initial character of a string.

Syntax

LEFT\$(X\$, n)

<u>Parameter</u>	<u>Description</u>
X\$	The string to be processed
n	The number of characters to be returned

Example

<u>Sample code</u>	<u>Result</u>
<pre>DOWNLOAD "TEST.BAS" SIZE 4,1 GAP 0,0 DIRECTION 1 A\$="BARCODE PRINTER DEMO PRINTING" C\$=LEFT\$(A\$,10) CLS TEXT 10,10,"3",0,1,1,A\$ TEXT 10,100,"3",0,1,1, "10 LEFT 10 CHARS: " +C\$ PRINT 1 EOP TEST</pre>	<pre>BARCODE PRINTER DEMO PRINTING 10 LEFT 10 CHARS: BARCODE PR</pre>

See Also

DOWNLOAD, EOP, END, RIGHT\$(), MID\$(), LEN(), STR\$()

10.37 LEN()

Description

Return the length of a string.

Syntax

LEN(string)

<u>Parameter</u>	<u>Description</u>
string	The string whose length is to be measured.

Example

<u>Sample Code</u>	<u>Result</u>
<pre>DOWNLOAD "DEMO.BAS" SIZE 4,1 GAP 0,0 DIRECTION 1 A\$="ABCDEFGHIJKLMNOPQRSTUVWXYZ" B=LEN(A\$) CLS TEXT 10,10, "3",0,1,1,A\$ TEXT 10,50, "3",0,1,1,"STRING LENGTH=" +STR\$(B) PRINT 1 EOP DEMO</pre>	<pre>ABCDEFGHIJKLMNOPQRSTUVWXYZ STRING LENGTH=26</pre>

See Also

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

10.38 MID\$()

Description

Retrieve the specified number of characters down from the m th character of a string.

Syntax

MID\$(string,m,n)

<u>Parameter</u>	<u>Description</u>
string	The string to be processed
m	The beginning of m^{th} characters in the string $1 \leq m \leq$ string length
n	The number of characters to return

Example

<u>Sample code</u>	<u>Result</u>
<pre>DOWNLOAD "DEMO.BAS" SIZE 4,1 GAP 0,0 DIRECTION 1 A\$="ABCDEFGHIJKLMNPOQRSTUVWXYZ" E\$=MID\$(A\$,11,10) CLS TEXT 10,10, "3",0,1,1,A\$ TEXT 10,200, "3",0,1,1,"10 MIDDLE CHARS: "+E\$ PRINT 1 EOP DEMO</pre>	<pre>ABCDEFGHIJKLMNPOQRSTUVWXYZ 10 MIDDLE CHARS: KLMNOPQRST</pre>

See Also

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

10.39 RIGHT\$()

Description

Return a specified number of characters up from the end of a string.

Syntax

RIGHT\$(X\$, n)

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

Example

<u>Sample code</u>	<u>Result</u>
<pre>DOWNLOAD "DEMO.BAS" SIZE 4,1 GAP 0,0 DIRECTION 1 A\$="ABCDEFGHIJKLMNOPQRSTUVWXYZ" D\$=RIGHT\$(A\$,10) CLS TEXT 10,10,"3",0,1,1,A\$ TEXT 10,150,"3",0,1,1, "10 RIGHT CHARS: "+D\$ PRINT 1 EOP DEMO</pre>	<pre>ABCDEFGHIJKLMNOPQRSTUVWXYZ 10 RIGHT CHARS: QRSTUVWXYZ</pre>

See Also

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

10.40 STR\$()

Description

Convert a specified value or expression into corresponding string of characters.

Syntax

STR\$(n)

<u>Parameter</u>	<u>Description</u>
n	An integer, floating point number or mathematical expression

Example

Sample code	Result
<pre>DOWNLOAD "DEMO.BAS" SIZE 4,1 GAP 0,0 DIRECTION 1 A\$="ABCDEFGHIJKLMNOPQRSTUVWXYZ" F=100 G=500 H\$=STR\$(F+G) CLS TEXT 10,10, "3",0,1,1,A\$ TEXT 10,60, "3",0,1,1, "F=" +STR\$(F) TEXT 10,110, "3",0,1,1, "G=" +STR\$(G) TEXT 10,160, "3",0,1,1, "F+G=" +H\$ PRINT 1 EOP DEMO</pre>	<pre>ABCDEFGHIJKLMNOPQRSTUVWXYZ F=100 G=500 F+G=600</pre>

See Also

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

10.41 STRCOMP()

Description

Returns -1, 0, or 1, based on the result of a string comparison.

Syntax

STRCOMP(str1\$,str2\$[,comp])

Parameter	Description
str1\$	Required. Any valid string expression.
str2\$	Required. Any valid string expression.
Comp	Optional. Specifies the type of string comparison. 0: Binary comparison. Default. 1: Textual comparison. The comparison is case-insensitive .

Condition	Return value
str1\$ sorts ahead of str2\$	-1
str1\$ is equal to str2\$	0
str1\$ sorts after str2\$	1

Example

Sample Code

```
DOWNLOAD "TEST.BAS"
STR1$ = "ABCD"
STR2$ = "abcd"

result1 = STRCOMP(STR1$,STR2$)
result2 = STRCOMP(STR1$,STR2$,1)
result3 = STRCOMP(STR2$,STR1$)

SIZE 4,1
GAP 0,0
DIRECTION 1
CLS
TEXT 100,10,"3",0,1,1,STR$(result1)+": \[" +STR1$+"\[" sorts ahead of
\[" +STR2$+" \["
TEXT 100,60,"3",0,1,1," "+STR$(result2)+": \[" +STR1$+"\[" is equal to
\[" +STR2$+" \["
TEXT 100,110,"3",0,1,1," "+STR$(result3)+": \[" +STR2$+"\[" sorts after
\[" +STR1$+" \["
PRINT 1
EOP
TEST
```

Result

```
-1: "ABCD" sorts ahead of "abcd"
0: "ABCD" is equal to "abcd"
1: "abcd" sorts after "ABCD"
```

See Also

INSTR()

10.42 INSTR()

Description

Return an integer specifying the start position of the first occurrence of one string within another.

Syntax

```
INSTR([start,]str1$,str2$)
```

<u>Parameter</u>	<u>Description</u>
start	Optional. Numeric expression that sets the starting position for each search. If omitted, search begins at the first character position. The start index is 1 – based.
str1\$	Required. String expression being searched.
str2\$	Required. String expression sought.

Example

Sample code

```
DOWNLOAD "DEMO.BAS"
string$="ABC123ABC123"
searchfor$="123"
starpos=8

temp1=INSTR(string$,searchfor$)
temp2=INSTR(starpos,string$,searchfor$)

str1$=searchfor$+"in "+string$+"is "+STR$(temp1)
str2$=searchfor$+"in "+string$+"after"+STR$(starpos)+ " is "+STR$(temp2)

SIZE 4,1
GAP 0,0
DIRECTION 1
CLS
TEXT 10,10, "3",0,1,1,str1$
TEXT 10,60, "3",0,1,1,str2$
PRINT 1
EOP
DEMO
```

Result

```
123 in ABC123ABC123 is 4
123 in ABC123ABC123 after 8 is 10
```

See Also

STRCOMP()

10.43 TRIM\$()

Description

Remove both leading and trailing blank spaces or specific characters from a string.

Syntax

```
TRIM$(str$[,list$])
```

Parameter	Description
str\$	String from which you want to remove spaces
List\$	Optional. The specific characters in list\$ will be removed.

Example

Sample Code	Result
<pre>DOWNLOAD "DEMO.BAS" data1\$="1234567" data2\$="a1234567a" data3\$="[<12345>]" SIZE 4,1.5 GAP 0,0 DIRECTION 1 CLS TEXT 50,020,"3",0,1,1,"LTRIM\$(\"[\" +data1\$+\" \") = \" +LTRIM\$(data1\$) TEXT 50,050,\"3\",0,1,1,\"TRIM\$(\"[\" +data1\$+\" \") = \" +TRIM\$(data1\$) TEXT 50,080,\"3\",0,1,1,\"RTRIM\$(\"[\" +data1\$+\" \") = \" +RTRIM\$(data1\$) TEXT 50,110,\"3\",0,1,1,\"LTRIM\$(\"[\" +data2\$+ \" \", \"[\"a\"]) = \" +LTRIM\$(data2\$,\"a\") TEXT 50,140,\"3\",0,1,1,\"TRIM\$(\"[\" +data2\$+ \" \", \"[\"a\"]) = \" +TRIM\$(data2\$,\"a\") TEXT 50,170,\"3\",0,1,1,\"RTRIM\$(\"[\" +data2\$+ \" \", \"[\"a\"]) = \" +RTRIM\$(data2\$,\"a\") TEXT 50,200,\"3\",0,1,1,\"LTRIM\$(\"[\" +data3\$+ \" \", \"[\"[<>]\") = \" +LTRIM\$(data3\$,\"[<>]\") TEXT 50,230,\"3\",0,1,1,\"TRIM\$(\"[\" +data3\$+ \" \", \"[\"[<>]\") = \" +TRIM\$(data3\$,\"[<>]\") TEXT 50,260,\"3\",0,1,1,\"RTRIM\$(\"[\" +data3\$+ \" \", \"[\"[<>]\") = \" +RTRIM\$(data3\$,\"[<>]\") PRINT 1 EOP DEMO</pre>	<pre>LTRIM\$(\" 1234567 \") = 1234567 TRIM\$(\" 1234567 \") = 1234567 RTRIM\$(\" 1234567 \") = 1234567 LTRIM\$(\"a1234567a\", \"a\") = 1234567a TRIM\$(\"a1234567a\", \"a\") = 1234567 RTRIM\$(\"a1234567a\", \"a\") = a1234567 LTRIM\$(\" [<12345>\", \"[<>]\") = 12345>] TRIM\$(\" [<12345>\", \"[<>]\") = 12345 RTRIM\$(\" [<12345>\", \"[<>]\") = [<12345</pre>

See Also

LTRIM\$(), RTRIM\$()

10.44 LTRIM\$()

Description

Remove leading blank space from a string.

Syntax

```
LTRIM$(str$[,list$])
```

Parameter	Description
str\$	String from which you want to remove spaces
List\$	Optional. The specific characters in list\$ will be removed.

Example

Sample Code	Result
<pre>DOWNLOAD "DEMO.BAS" data1\$="1234567" data2\$="a1234567a" data3\$=" [<12345>]" SIZE 4,1.5 GAP 0,0 DIRECTION 1 CLS TEXT 50,020,"3",0,1,1,"LTRIM\$(\"[" +data1\$+" \["]) =" +LTRIM\$(data1\$) TEXT 50,050,"3",0,1,1,"TRIM\$(\"[" +data1\$+" \["]) =" +TRIM\$(data1\$) TEXT 50,080,"3",0,1,1,"RTRIM\$(\"[" +data1\$+" \["]) =" +RTRIM\$(data1\$) TEXT 50,110,"3",0,1,1,"LTRIM\$(\"[" +data2\$+" \["],\"["a\["]) =" +LTRIM\$(data2\$,"a") TEXT 50,140,"3",0,1,1,"TRIM\$(\"[" +data2\$+" \["],\"["a\["]) =" +TRIM\$(data2\$,"a") TEXT 50,170,"3",0,1,1,"RTRIM\$(\"[" +data2\$+" \["],\"["a\["]) =" +RTRIM\$(data2\$,"a") TEXT 50,200,"3",0,1,1,"LTRIM\$(\"[" +data3\$+" \["],\"[" [<>]\["]) =" +LTRIM\$(data3\$," [<>]") TEXT 50,230,"3",0,1,1,"TRIM\$(\"[" +data3\$+" \["],\"[" [<>]\["]) =" +TRIM\$(data3\$," [<>]") TEXT 50,260,"3",0,1,1,"RTRIM\$(\"[" +data3\$+" \["],\"[" [<>]\["]) =" +RTRIM\$(data3\$," [<>]") PRINT 1 EOP DEMO</pre>	<pre>LTRIM\$(" 1234567 ") = 1234567 TRIM\$(" 1234567 ") = 1234567 RTRIM\$(" 1234567 ") = 1234567 LTRIM\$("a1234567a", "a") = 1234567a TRIM\$("a1234567a", "a") = 1234567 RTRIM\$("a1234567a", "a") = a1234567 LTRIM\$(" [<12345>]", " [<>]") = 12345> TRIM\$(" [<12345>]", " [<>]") = 12345 RTRIM\$(" [<12345>]", " [<>]") = [<12345</pre>

See Also

TRIM\$(), RTRIM\$()

10.45 RTRIM\$()

Description

Remove trailing blank space from a string.

Syntax

```
RTRIM$(str$ [, list$])
```

Parameter	Description
str\$	String from which you want to remove spaces
List\$	Optional. The specific characters in list\$ will be removed.

Example

Sample Code	Result
<pre>DOWNLOAD "DEMO.BAS" data1\$="1234567" data2\$="a1234567a" data3\$=" [<12345>]" SIZE 4,1.5 GAP 0,0 DIRECTION 1 CLS TEXT 50,020,"3",0,1,1, "LTRIM\$(\"[\" +data1\$+\" \") = " +LTRIM\$(data1\$) TEXT 50,050,"3",0,1,1, "TRIM\$(\"[\" +data1\$+\" \") = " +TRIM\$(data1\$) TEXT 50,080,"3",0,1,1, "RTRIM\$(\"[\" +data1\$+\" \") = " +RTRIM\$(data1\$) TEXT 50,110,"3",0,1,1, "LTRIM\$(\"[\" +data2\$+\" \", \"]a\"]) = " +LTRIM\$(data2\$, "a") TEXT 50,140,"3",0,1,1, "TRIM\$(\"[\" +data2\$+\" \", \"]a\"]) = " +TRIM\$(data2\$, "a") TEXT 50,170,"3",0,1,1, "RTRIM\$(\"[\" +data2\$+\" \", \"]a\"]) = " +RTRIM\$(data2\$, "a") TEXT 50,200,"3",0,1,1, "LTRIM\$(\"[\" +data3\$+\" \", \"] [<>]\") = " +LTRIM\$(data3\$, "[<>]") TEXT 50,230,"3",0,1,1, "TRIM\$(\"[\" +data3\$+\" \", \"] [<>]\") = " +TRIM\$(data3\$, "[<>]") TEXT 50,260,"3",0,1,1, "RTRIM\$(\"[\" +data3\$+\" \", \"] [<>]\") = " +RTRIM\$(data3\$, "[<>]") PRINT 1 EOP DEMO</pre>	<pre>LTRIM\$(" 1234567 ") = 1234567 TRIM\$(" 1234567 ") = 1234567 RTRIM\$(" 1234567 ") = 1234567 LTRIM\$("a1234567a", "a") = 1234567a TRIM\$("a1234567a", "a") = 1234567 RTRIM\$("a1234567a", "a") = a1234567 LTRIM\$(" [<12345>]", "[<>]") = 12345> TRIM\$(" [<12345>]", "[<>]") = 12345 RTRIM\$(" [<12345>]", "[<>]") = [<12345</pre>

See Also

TRIM\$(), LTRIM\$()

10.46 TEXTPIXEL()

Description


Return the width of the text string in dots.

Syntax

TEXTPIXEL(cont\$, font\$, size)

<u>Parameter</u>	<u>Description</u>
cont\$	Content of text string.
Font \$	Font type. See the font parameter in TEXT command.
Size	Font size. See the x-multiplication parameter in TEXT command.

Example

<u>Sample code</u>	<u>Result</u>
<pre>DOWNLOAD "TEST.BAS" str\$="ABCDEFGG" font\$="3" fontsize=3 strwidth=TEXTPIXEL(str\$, font\$, fontsize) SIZE 4,1 GAP 0,0 DIRECTION 1 CLS TEXT 10,10,font\$,0,fontsize,fontsize,str\$ REVERSE 8,8,strwidth,72 PRINT 1 EOP TEST</pre>	

See Also

TEXT, BARCODEPIXEL()

10.47 BARCODEPIXEL()

Description

Return the width of the barcode in dots.

Syntax

```
BARCODEPIXEL(cont$, sym$, narrow, wide)
```

Parameter	Description
cont\$	Barcode content.
Sym \$	Barcode type. See the <code>code type</code> parameter in BARCODE command.
Narrow	Width of narrow bar. See the <code>narrow</code> parameter in BARCODE command.
Wide	Width of wide bar. See the <code>wide</code> parameter in BARCODE command.

Example

Sample code	Result
<pre>DOWNLOAD "TEST.BAS" cont\$="ABCDEFGH" sym\$="39" narrow=2 wide=6 codewidth=BARCODEPIXEL(cont\$,sym\$,narrow,wide) SIZE 4,1.5 GAP 0,0 DIRECTION 1 CLS BARCODE 10,10,sym\$,100,1,0,narrow,wide,cont\$ REVERSE 8,8,codewidth+8,132 BARCODE 10,160,sym\$,100,1,0,narrow,wide,cont\$ PRINT 1 EOP TEST</pre>	

See Also

BARCODE, TEXTPIXEL()

10.48 VAL()

Description

Convert numeric characters into corresponding integer or floating point number.

Syntax

```
VAL("numeric character")
```

<u>Parameter</u>	<u>Description</u>
numeric character	" 0~9","."

Example

Sample code	Result
<pre>DOWNLOAD "DEMO.BAS" SIZE 4,1 GAP 0,0 DIRECTION 1 A\$="ABCDEFGHIJKLMNPOQRSTUVWXYZ" F\$="100" G\$="500" CLS H=VAL(F\$)+VAL(G\$) I\$=STR\$(H) TEXT 10,10, "3",0,1,1,A\$ TEXT 10,60, "3",0,1,1, "F=" +F\$ TEXT 10,110, "3",0,1,1, "G=" +G\$ TEXT 10,160, "3",0,1,1, "F+G=" +I\$ PRINT 1 EOP DEMO</pre>	<pre>ABCDEFGHIJKLMNPOQRSTUVWXYZ F=100 G=500 F+G=600</pre>

See Also

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

10.49 NOW\$()

Description

Return the current date and time according to the printer setting. The returned value always uses with **FORMAT\$()** commands.

Syntax

NOW\$ ()

Example

Sample code

```
SIZE 4,1
GAP 0,0
DIRECTION 1
CLS
TEXT 10,10, "3",0,1,1, "Now is " +NOW$( )
TEXT 10,60, "3",0,1,1,FORMAT$(NOW$( ),"Long Date")
PRINT 1
```

Result

```
Now is 1/9/2013 2:19:27 PM
Tuesday, January 09 2013
```

See Also

FORMAT\$()

10.50 NOW

Description

Return the total days since A.D. 1900. This global variable always uses with **FORMAT\$()** and **DATEADD()** commands.

Syntax

NOW

Example

Sample Code

```
SIZE 4,1
GAP 0,0
DIRECTION 1
CLS
TEXT 10,10, "3",0,1,1, "Total days since a.d. 1900: " +STR$(NOW)+ " days"
TEXT 10,50, "3",0,1,1, "Date Info in RTC: " +FORMAT$(NOW, "General Date")
TEXT 10,90, "3",0,1,1, "Date after a year: "
+FORMAT$(DATEADD("yyyy",1,NOW), "General Date")
PRINT 1
```

Result

```
Total days since a.d. 1900: 41283.597176 days
Date Info in RTC: 1/9/2013 2:19:56 PM
Date after a year: 1/9/2014 2:19:56 PM
```

See Also

FORMAT\$(), DATEADD(), NOW

10.51 FORMAT\$()

Description

Return the current date, time, number and number value according to the printer setting.

Syntax

FORMAT\$(expression[,style\$])

Parameter	Description
expression	Required. Any valid expression.
Style\$	Optional. A valid named or user-defined format string expression.

Predefined date/time	Description
General Date	Date and time
Long Date	Long Date format
Medium Date	dd-mmm-yy format
Short Date	Short Date format
Long Time	Hour, minute, second, and "AM" or "PM" (h:mm:ss format)
Medium Time	Hour, minute, and "AM" or "PM" (hh:mm AM/PM format)
Short Time	Hour and minute (hh:mm format)

User-defined date/time	Description
c	Date (dddd) and time as (tttt)
d	Day as a number without a leading zero (1 – 31).
dd	Day as a number with a leading zero (01 – 31).
ddd	Day as an abbreviation (Sun – Sat).
dddd	Day as a full name (Sunday – Saturday).
dddddd	Date serial number as a complete date (including day, month, and year), formatted according to your system's short date format setting. The default short date format is m/d/yyyy.
ddddddd	Day as a complete date (including day, month, and year), formatted according to the long date setting recognized by your system. The default long date format is dddd, mmmm dd, yyyy.
w	Day of the week as a number (1 for Sunday through 7 for Saturday).
ww	Week of the year as a number (1 – 53).
m	Month as a number without a leading zero (1 – 12). If m immediately follows h or hh, the minute rather than the month is displayed.
mm	Month as a number with a leading zero (01 – 12). If mm immediately follows h or hh, the minute rather than the month is displayed.
mmm	Month as an abbreviation (Jan – Dec).
mmmm	Month as a full month name (January – December).
q	Quarter of the year as a number (1 – 4).
y	Day of the year as a number (1 – 366).
yy	Year as a 2-digit number (00 – 99).
yyyy	Year as a 4-digit number (100 – 9999).
h	Hour as a number without leading zeros (0 – 23).
hh	Hour as a number with leading zeros (00 – 23).
n	Minute as a number without leading zeros (0 – 59).
nn	Minute as a number with leading zeros (00 – 59).
s	Second as a number without leading zeros (0 – 59).
ss	Second as a number with leading zeros (00 – 59).

ttttt	Time as a complete time (including hour, minute, and second). The default time format is h:mm:ss AM/PM.
AM/PM	Uppercase AM with any hour before noon; display an uppercase PM with any hour between noon and 11:59 P.M.
am/pm	Lowercase AM with any hour before noon; display a lowercase PM with any hour between noon and 11:59 P.M.
A/P	Uppercase A with any hour before noon; display an uppercase P with any hour between noon and 11:59 P.M.
a/p	Lowercase A with any hour before noon; display a lowercase P with any hour between noon and 11:59 P.M.
AMPM	AMPM can be either uppercase or lowercase, but the case of the string displayed matches the string as defined by your system settings.
\	Next character in the format string.
"string"	String inside the double quotation marks.

Number	Description
General Number	Number as entered, with no rounding and no commas.
Currency	Number with a dollar sign, comma (if appropriate), and two digits to the right of the decimal point. Shows negative numbers inside parentheses.
Fixed	Number with at least one digit to the left of the decimal separator and two digits to the right. Does not show comma.
Standard	Number with at least one digit to the left of the decimal separator and two digits to the right and commas (if appropriate).
Percent	Multiplies the value by 100 and displays the result with two digits to the right of the decimal point and a percent sign at the end.
Scientific	Standard scientific notation.
Yes/No	Any nonzero numeric value is Yes. Zero is No.
True/False	Any nonzero numeric value is True. Zero is False.
On/Off	Any nonzero numeric value is On. Zero is Off.

User-defined number	Description
0	Digit placeholder. Displays a digit or a zero.
#	Digit placeholder. Displays a digit or nothing.
.	Decimal placeholder.
%	Percent placeholder. Multiplies the expression by 100.
,	Thousand separator.
E- E+ e- e+	Scientific format.
\	Next character in the format string.
"ABC"	String inside the double quotation marks.

Different formats for different number values	Description
One section only	The format expression applies to all values.
Two section	The first section applies to positive values and zeros; the second applies to negative values.
Three sections	The first section applies to positive values, the second applies to negative values, and the third applies to zeros.

Example

Sample Code	Result
<pre> SIZE 800 dot,1900 dot GAP 0,0 DIRECTION 1 CLS TEXT 15,10, "3",0,1,1, "General Date: "+FORMAT\$(NOW,"General Date") TEXT 15,60, "3",0,1,1, "Long Date: "+FORMAT\$(NOW,"Long Date") TEXT 15,110, "3",0,1,1, "Medium Date: "+FORMAT\$(NOW,"Medium Date") TEXT 15,160, "3",0,1,1, "Short Date: "+FORMAT\$(NOW,"Short Date") TEXT 15,210, "3",0,1,1, "Long Time: "+FORMAT\$(NOW,"Long Time") TEXT 15,260, "3",0,1,1, "Medium Time: "+FORMAT\$(NOW,"Medium Time") TEXT 15,310, "3",0,1,1, "Short Time: "+FORMAT\$(NOW,"Short Time") TEXT 15,360, "3",0,1,1, "c: "+FORMAT\$(NOW,"c") TEXT 15,410, "3",0,1,1, "d: "+FORMAT\$(NOW,"d") TEXT 15,460, "3",0,1,1, "dd: " +FORMAT\$(NOW,"dd") TEXT 15,510, "3",0,1,1, "ddd: " +FORMAT\$(NOW,"ddd") TEXT 15,560, "3",0,1,1, "dddd: " +FORMAT\$(NOW,"dddd") TEXT 15,610, "3",0,1,1, "ddddd: " +FORMAT\$(NOW,"ddddd") TEXT 15,660, "3",0,1,1, "dddddd: " +FORMAT\$(NOW,"dddddd") TEXT 15,710, "3",0,1,1, "w: " +FORMAT\$(NOW,"w") TEXT 15,760, "3",0,1,1, "ww: " +FORMAT\$(NOW,"ww") TEXT 15,810, "3",0,1,1, "m: " +FORMAT\$(NOW,"m") TEXT 15,860, "3",0,1,1, "mm: " +FORMAT\$(NOW,"mm") TEXT 15,910, "3",0,1,1, "mmm: " +FORMAT\$(NOW,"mmm") TEXT 15,960, "3",0,1,1, "mmmm: " +FORMAT\$(NOW,"mmmm") TEXT 15,1010, "3",0,1,1, "q: " +FORMAT\$(NOW,"q") TEXT 15,1060, "3",0,1,1, "y: " +FORMAT\$(NOW,"y") TEXT 15,1110, "3",0,1,1, "yy: " +FORMAT\$(NOW,"yy") TEXT 15,1160, "3",0,1,1, "yyyy: " +FORMAT\$(NOW,"yyyy") TEXT 15,1210, "3",0,1,1, "h: " +FORMAT\$(NOW,"h") TEXT 15,1260, "3",0,1,1, "hh: " +FORMAT\$(NOW,"hh") TEXT 15,1310, "3",0,1,1, "n: " +FORMAT\$(NOW,"n") TEXT 15,1360, "3",0,1,1, "nn: " +FORMAT\$(NOW,"nn") TEXT 15,1410, "3",0,1,1, "s: " +FORMAT\$(NOW,"s") TEXT 15,1460, "3",0,1,1, "ss: " +FORMAT\$(NOW,"ss") TEXT 15,1510, "3",0,1,1, "ttttt: " +FORMAT\$(NOW,"ttttt") TEXT 15,1560, "3",0,1,1, "AM/PM: " +FORMAT\$(NOW,"AM/PM") TEXT 15,1610, "3",0,1,1, "am/pm: " +FORMAT\$(NOW,"am/pm") TEXT 15,1660, "3",0,1,1, "A/P: " +FORMAT\$(NOW,"A/P") TEXT 15,1710, "3",0,1,1, "a/p: " +FORMAT\$(NOW,"a/p") TEXT 15,1760, "3",0,1,1, "AMPM: " +FORMAT\$(NOW,"AMPM") TEXT 15,1810, "3",0,1,1, "\:" +FORMAT\$(NOW,"To\da\y i\s ddddd") TEXT 15,1860, "3",0,1,1, "string: " +FORMAT\$(NOW,"To\da\y i\s dddd") PRINT 1 </pre>	<pre> General Date:1/9/2013 2:46:18 PM Long Date:Tuesday, January 09 2013 Medium Date:09-Jan-13 Short Date:1/9/2013 Long Time:2:46:18 PM Medium Time:02:46 PM Short Time:14:46 c:1/9/2013 2:46:18 PM d:9 dd:09 ddd:Tue dddd:Tuesday ddddd:1/9/2013 dddddd:Tuesday, January 09 2013 w:3 ww:2 m:1 mm:01 mmm:Jan mmmm:January q:1 y:9 yy:13 yyyy:2013 h:14 hh:14 n:46 nn:46 s:18 ss:18 tttt:2:46:18 PM AM/PM:PM am/pm:pm A/P:P a/p:p AMPM:PM \ :Today is 1/9/2013 string:Today is 1/9/2013 </pre>

Sample Code	Result
<pre> SIZE 800 dot,850 dot GAP 0,0 DIRECTION 1 CLS TEXT 15,10, "3",0,1,1, "General Number: "+FORMAT\$(1234.5,"General Number") TEXT 15,60, "3",0,1,1, "Currency: "+FORMAT\$(1234.5,"Currency") TEXT 15,110, "3",0,1,1, "Fixed: "+FORMAT\$(1234.5,"Fixed") TEXT 15,160, "3",0,1,1, "Standard: "+FORMAT\$(1234.5,"Standard") TEXT 15,210, "3",0,1,1, "Percent: "+FORMAT\$(1234.5,"Percent") TEXT 15,260, "3",0,1,1, "Scientific: "+FORMAT\$(1234.5,"Scientific") TEXT 15,310, "3",0,1,1, "Yes/No: "+FORMAT\$(1234.5,"Yes/No") TEXT 15,360, "3",0,1,1, "Yes/No: "+FORMAT\$(0,"Yes/No") TEXT 15,410, "3",0,1,1, "True/False: "+FORMAT\$(0,"True/False") TEXT 15,460, "3",0,1,1, "On/Off: "+FORMAT\$(0,"On/Off") TEXT 15,510, "3",0,1,1, "00000.00: "+FORMAT\$(1234.5,"00000.00") TEXT 15,560, "3",0,1,1, "#####.##: "+FORMAT\$(1234.5,"#####.##") TEXT 15,610, "3",0,1,1, "##,##0.00: "+FORMAT\$(1234.5,"##,##0.00") TEXT 15,660, "3",0,1,1, "\$##0.00: "+FORMAT\$(1234.5,"\$##0.00") TEXT 15,710, "3",0,1,1, "\$0.00%: "+FORMAT\$(1234.5,"0.00%") TEXT 15,760, "3",0,1,1, "Yes/No: "+FORMAT\$(-12.3,"Yes/No") TEXT 15,810, "3",0,1,1, "0.00;(0.00): "+FORMAT\$(- 12.3,"0.00;(0.00)") PRINT 1 </pre>	<pre> General Number: 1234.5 Currency: \$1,234.50 Fixed: 1234.50 Standard: 1,234.50 Percent: 123450.00% Scientific: 1.23E+03 Yes/No: Yes Yes/No: No True/False: False On/Off: Off 00000.00: 01234.50 #####.##: 1234.5 ##,##0.00: 1,234.50 \$##0.00: \$1234.50 \$0.00%: 123450.00% Yes/No: Yes 0.00;(0.00): (12.30) </pre>

See Also

NOW\$(), DATEADD(), NOW

10.52 DATEADD()

Description

Return a date after which a specified time/date interval has been added. The returned value always uses with **FORMAT\$()** command.

Syntax

`DATEADD(interval$, number, date)`

<u>Parameter</u>	<u>Description</u>																						
interval\$,	Time/date interval for adding. It can be one of following values.																						
	<table border="1"> <thead> <tr> <th>Interval\$</th> <th>The interval unit of parameter interval\$</th> </tr> </thead> <tbody> <tr> <td>"yyyy"</td> <td>Year.</td> </tr> <tr> <td>"q"</td> <td>Quarter.</td> </tr> <tr> <td>"m"</td> <td>Month.</td> </tr> <tr> <td>"y"</td> <td>Day of year.</td> </tr> <tr> <td>"d"</td> <td>Day.</td> </tr> <tr> <td>"w"</td> <td>Weekday.</td> </tr> <tr> <td>"ww"</td> <td>Week of year.</td> </tr> <tr> <td>"h"</td> <td>Hour.</td> </tr> <tr> <td>"n"</td> <td>Minute.</td> </tr> <tr> <td>"s"</td> <td>Second.</td> </tr> </tbody> </table>	Interval\$	The interval unit of parameter interval\$	"yyyy"	Year.	"q"	Quarter.	"m"	Month.	"y"	Day of year.	"d"	Day.	"w"	Weekday.	"ww"	Week of year.	"h"	Hour.	"n"	Minute.	"s"	Second.
Interval\$	The interval unit of parameter interval\$																						
"yyyy"	Year.																						
"q"	Quarter.																						
"m"	Month.																						
"y"	Day of year.																						
"d"	Day.																						
"w"	Weekday.																						
"ww"	Week of year.																						
"h"	Hour.																						
"n"	Minute.																						
"s"	Second.																						
Number	Number of interval\$ for adding.																						
Date	Date which is used to add the interval\$. Date format: yyyy/mm/dd Time format: hh:nn:ss																						

Example

Sample Code 1

```

SIZE 4,2
GAP 0,0
DIRECTION 1
CLS
TEXT 10,10, "3",0,1,1, "Current RTC info: " +NOW$()
TEXT 10,60, "3",0,1,1, "-1 year: " +FORMAT$(DATEADD("yyyy",-1, " 11/26/2012
10:08:00"), "yyyy/mm/dd hh:nn:ss")
TEXT 10,110, "3",0,1,1, "+9 months: " +FORMAT$(DATEADD("m",9,NOW), "Short Date")
TEXT 10,160, "3",0,1,1, "-8 hours: " +FORMAT$(DATEADD("h",-8,NOW), "Short Time")
TEXT 10,210, "3",0,1,1, "+5 mins: " +FORMAT$(DATEADD("n",5,NOW), "Short Time")
TEXT 10,260, "3",0,1,1, "+00 day: " +FORMAT$(NOW, "Short Date")
TEXT 10,310, "3",0,1,1, "+20 days: " +FORMAT$(DATEADD("d",20,NOW), "Short Date")
TEXT 10,360, "3",0,1,1, "-20 day: " +FORMAT$(DATEADD("d",-20,NOW), "Short Date")
PRINT 1

```

Result 1

Current RTC info: 1/9/2013 3:20:06 PM
-1 year: 2011/11/26 10:08:00
+9 months: 10/9/2013
-8 hours: 07:20
+5 mins: 15:25
+00 day: 1/9/2013
+20 days: 1/29/2013
-20 day: 12/20/2012

Sample Code 2

```
SIZE 4,2
GAP 0,0
DIRECTION 1
CLS
TEXT 10,60,"3",0,1,1,"-1 year: "+FORMAT$(DATEADD("yyyy",-1,"11/26/2012
10:08"),"yyyy/mm/dd hh:nn AM/PM")
TEXT 10,110,"3",0,1,1,"+9 months: "+FORMAT$(DATEADD("m",9,"11/26/2012 10:08"),"yyyy/mm/dd
hh:nn AM/PM")
TEXT 10,160,"3",0,1,1,"+8 hours: "+FORMAT$(DATEADD("h",+8,"11/26/2012
10:08"),"yyyy/mm/dd hh:nn AM/PM")
TEXT 10,210,"3",0,1,1,"+00 day: "+FORMAT$("11/26/2012 10:08:00","yyyy/mm/dd hh:nn
AM/PM")
TEXT 10,260,"3",0,1,1,"+20 days: "+FORMAT$(DATEADD("d",20,"11/26/2012 10:08"),"yyyy/mm/dd
hh:nn AM/PM")
TEXT 10,310,"3",0,1,1,"-20 days: "+FORMAT$(DATEADD("d",-20,"11/26/2012
10:08"),"yyyy/mm/dd hh:nn AM/PM")
PRINT 1
```

Result 2

-1 year: 2011/11/26 10:08 AM
+9 months: 2013/08/26 10:08 AM
+8 hours: 2012/11/26 06:08 PM
+00 day: 2012/11/26 10:08 AM
+20 days: 2012/12/16 10:08 AM
-20 days: 2012/11/06 10:08 AM

10.53 FSEARCH()

Description

Return the position of a string.

Syntax

FSEARCH(file handle, STR\$)

<u>Parameter</u>	<u>Description</u>
file handle	0 or 1
STR\$	Required. Any valid string expression.

Example

<u>Sample Code</u>	<u>Result</u>
<pre>DOWNLOAD "DATA1",10,1234567890 DOWNLOAD "DATA2",15,ABCDEFGHIJKLMNO DOWNLOAD "Test.BAS" SIZE 4,1.5 GAP 0,0 DIRECTION 1 CLS OPEN "DATA1",0 OPEN "DATA2",1 TEXT 10,90,"4",0,1,1,"FSEARCH() FUNCTION TEST" A=FSEARCH(0,"8") B=FSEARCH(1,"J") TEXT 10,140,"3",0,1,1,"8 position is:"+STR\$(A) TEXT 10,180,"3",0,1,1,"J position is:"+STR\$(B) PRINT 1 EOP Test</pre>	<pre>FSEARCH() FUNCTION TEST 8 position is: 7 J position is: 9</pre>

10.54 TOUCHPRESS()

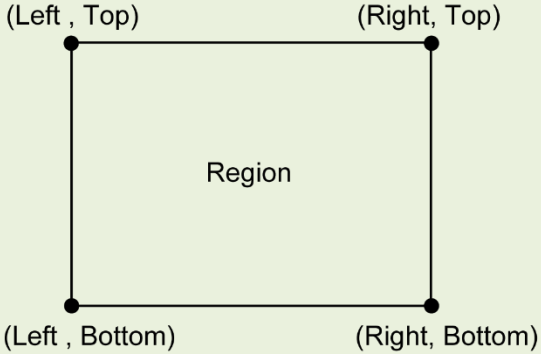
Description

Detect the status of the touch screen. Return 1 if the touch screen for the specified region is pressed, otherwise returns 0.

Syntax

`TOUCHPRESS (left, top, right, bottom)`

<u>Parameter</u>	<u>Description</u>
left	Left side position of region (pixel)
top	Top side position of region (pixel)
right	Right side position of region (pixel)
bottom	Bottom side position of region (pixel)



Note: TJ-4021TN/TJ-4021TNR/TJ-4121TN/TJ-4121TNR/TJ-4422TN/TJ-4522TN only.

Example

Sample Code

```
DOWNLOAD "DEMO.BAS"  
:START  
IF TOUCHPRESS(0,90,272,120) <> 0 THEN GOTO A  
GOTO START  
ENDIF  
:A  
CLS  
SIZE 4,1  
GAP 0,0  
DIRECTION 1  
TEXT 30,30,"3",0,1,1,"TOUCH TEST!!"  
PRINT 1,1  
EOP  
DEMO
```

10.55 RECORDSET\$()

Description

Return a value from a table. Table is represented in a grid format, tabular form in rows and columns. For more information, see the following table format in the **Example**.

Syntax

RECORDSET\$(TABLE\$, ROW, COLUMN [, DELIMITER])

<u>Parameter</u>	<u>Description</u>
TABLE\$	Table name
ROW	Number of row
COLUMN	Number (or name) of column
DELIMITER	Optional. Set the delimiter of table. The default is 09H <Tab>

Note:
ROW is always a number. COLUMN can be a number or name.

Example

Sample Code 1:

```

DOWNLOAD F,"TEST.CSV",75,3
Name,Age,Height,Weight
John,18,180,80
Mary,30,150,50
Mark,65,170,65

DOWNLOAD F,"TEST.BAS"
CLOSE 0
SIZE 4,2
GAP 0,0
DIRECTION 1
CLS
TEXT 100,50,"3",0,1,1,"Row 1 and Column 1 = "
+ RECORDSET$("TEST.CSV", 1, 1, ASC(", "))
TEXT 100,100,"3",0,1,1,"Row 2 and Column 1 = "
+ RECORDSET$("TEST.CSV", 2, 1, ASC(", "))
TEXT 100,150,"3",0,1,1,"John Age = " +
RECORDSET$("TEST.CSV", 1, 2, ASC(", "))
TEXT 100,200,"3",0,1,1,"Mary Age = " +
RECORDSET$("TEST.CSV", 2, 2, ASC(", "))
TEXT 100,250,"3",0,1,1,"John Height = " +
RECORDSET$("TEST.CSV",1,"Height", ASC(", "))
TEXT 100,300,"3",0,1,1,"Mary Height = " +
RECORDSET$("TEST.CSV",2,"Height", ASC(", "))
PRINT 1

EOP
TEST
    
```

Result

```

Row 1 and Column 1 = John
Row 2 and Column 1 = Mary

John Age = 18
Mary Age = 30

John Height = 180
Mary Height = 150
    
```

Table format (TEST.CSV)

Number of rows	3			
Name of column	Name	Age	Height	Weight
Row 1	John	18	180	80
Row 2	Mary	30	150	50
Row 3	Mark	65	170	65
	Column 1	Column 2	Column 3	Column 4

Sample Code 2:

```

DOWNLOAD "TEST.CSV",121,6,
Number,String
1234,ABCD
"12,34","AB,CD"
"12
34","AB
CD"
"12"34","AB"CD"
""1234","""ABCD"
"1234""","ABCD""

```

```

OUT RECORDSET$ ("TEST.CSV", 1, "Number",
ASC(", "))
OUT RECORDSET$ ("TEST.CSV", 2, 1, ASC(", "))
OUT RECORDSET$ ("TEST.CSV", 3, 1, ASC(", "))
OUT RECORDSET$ ("TEST.CSV", 4, 1, ASC(", "))
OUT RECORDSET$ ("TEST.CSV", 5, 1, ASC(", "))
OUT RECORDSET$ ("TEST.CSV", 6, 1, ASC(", "))

```

```

OUT ""

```

```

OUT RECORDSET$ ("TEST.CSV", 1, "String",
ASC(", "))
OUT RECORDSET$ ("TEST.CSV", 2, 2, ASC(", "))
OUT RECORDSET$ ("TEST.CSV", 3, 2, ASC(", "))
OUT RECORDSET$ ("TEST.CSV", 4, 2, ASC(", "))
OUT RECORDSET$ ("TEST.CSV", 5, 2, ASC(", "))
OUT RECORDSET$ ("TEST.CSV", 6, 2, ASC(", "))

```

Table format (TEST.CSV)

Number of rows	6	
Name of column	Number	String
Row 1	1234	ABCD
Row 2	12,34	AB,CD
Row 3	12 34	AB CD
Row 4	12"34	AB"CD
Row 5	"1234	"ABCD
Row 6	1234"	ABCD"

Column 1 Column 2

Return

```

1234
12,34
12
34
12"34
"1234
1234"

```

```

ABCD
AB,CD
AB
CD
AB"CD
"ABCD
ABCD"

```

10.56 REPLACE\$()

Description


Return a string in which a specified substring has been replaced with another substring.

Syntax

```
REPLACE$("str1$","sub1$","sub2$")
```

<u>Parameter</u>	<u>Description</u>
str1\$	Required. Original string being searched for.
sub1\$	Required. Specified substring to be replaced.
sub2\$	Required. New replacement substring.

Example

<u>Sample Code</u>	<u>Result</u>
<pre>DOWNLOAD F,"TEST.BAS" SIZE 3,2 GAP 0,0 DIRECTION 1 INPUT A\$ DATA\$ = REPLACE\$(A\$,"ABC","123") CLS TEXT 100,100,"3",0,1,1,DATA\$ PRINT 1 EOP TEST ABCDEF</pre>	

11 Device Reconfiguration Commands

11.1 SET COUNTER

Description

Counters can be a real counter or a variable. This setting sets the counter number in the program and its increments. There are three different types of counters: digit (0~9~0), lowercase letter (a~z~a) or uppercase letter (A~Z~A).

Syntax

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

Parameter	Description
@n	n: counter number. There are 61 counters available (@0 ~ @60) in the printer. @0 to @50 will be cleared while restarting the printer. @51 to @60 will be stored in the printer until the printer is restored to factory default
step	The increment of the counter can be positive or negative. -999999999 <= step <= 999999999 If the counter is used as a fixed variable, set the increment to 0.
Expression	Initial string. String length is 101 bytes

Example

Sample Code	Result
<pre>SET COUNTER @0 +1 SET COUNTER @1 +0 SET COUNTER @2 -1 SET COUNTER @3 1 @0=" 0001" @1=" 0101" @2=" 000A" @3=" 1" SIZE 4,0.5 GAP 0,0 DIRECTION 1 CLS TEXT 600,10,"3",0,1,1,3,"@0 @1 @2" TEXT 600,30,"3",0,1,1,3, "Label" +@3+ " ----- -----" TEXT 600,50,"3",0,1,1,3,@0+ " " +@1+ " " +@2 PRINT 5</pre>	<pre>Label 5 ---@0-----@1-----@2 0005 0101 999U Label 4 ---@0-----@1-----@2 0004 0101 999X Label 3 ---@0-----@1-----@2 0003 0101 999Y Label 2 ---@0-----@1-----@2 0002 0101 999Z Label 1 ---@0-----@1-----@2 0001 0101 000A</pre>

See Also

PRINT, TEXT, BARCODE

11.2 SET CUTTER

Description

Enable/disable the full cutter and define how many printed labels is to be cut at one time. This setting will be saved in the printer memory after turning off the power.

Syntax

SET CUTTER OFF/BATCH/pieces

<u>Parameter</u>	<u>Description</u>
OFF	Disable cutter function.
BATCH	Set printer to cut label at the end of printing job.
Pieces	Set number of printing labels per cut. $0 \leq \text{pieces} \leq 65535$

Example

Sample code	Result
<pre>SIZE 3,3 GAP 0,0 SET CUTTER OFF SET PEEL OFF CLS TEXT 50,50, "3",0,1,1, "SET CUTTER OFF" PRINT 3</pre>	The cutter function is disabling.
<pre>SET CUTTER BATCH CLS TEXT 50,50, "3",0,1,1, "SET CUTTER BATCH" PRINT 3,2</pre>	The cutter cuts once after 6 labels are printed.
<pre>SET CUTTER 1 CLS TEXT 50,50, "3",0,1,1, "SET CUTTER 1" PRINT 3,2</pre>	The cutter cuts every label.
<pre>CLS TEXT 50,50, "3",0,1,1, "SET CUTTER 2" PRINT 3,2</pre>	The cutter cuts every 2 labels.

See Also

OFFSET, PRINT, SET PARTIAL_CUTTER

11.3 SET PARTIAL_CUTTER

Description

Enable/disable the partial cutter and define how many printed labels is to be cut at one time. This setting will be saved in the printer memory after turning off the power. This command prevents label back feeding after a cut.

Syntax

```
SET PARTIAL_CUTTER OFF/BATCH/Pieces
```

<u>Parameter</u>	<u>Description</u>
OFF	Disable cutter function.
BATCH	Set printer to cut label at the end of printing job.
Pieces	Set number of printing labels per cut. $0 \leq \text{pieces} \leq 65535$

Note: This command is supported for the printer that have cutter module.

Example

```
Sample code

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

See Also

OFFSET, PRINT, SET CUTTER

11.4 SET BACK

Description

Backfeed labels after a cut or not. Make sure you use this command after **SET CUTTER** command.

Syntax

SET BACK OFF/ON

<u>Parameter</u>	<u>Description</u>
OFF	Disable the backfeed function.
ON	Enable the backfeed function.

Example

Sample code

```
REM **SET BACK FUNCTION OFF EXAMPLE PROGRAM**
SIZE 3,1
GAP 0,0
DENSITY 8
SPEED 6
DIRECTION 1
REFERENCE 0,0
SET CUTTER 1
SET BACK OFF
CLS
TEXT 50,50, "3",0,1,1, "SET BACK OFF "
PRINT 3
CLS
SET CUTTER 1
SET BACK ON
TEXT 50,50, "3",0,1,1, "SET BACK ON "
PRINT 3
```

See Also

OFFSET, PRINT, SET CUTTER

11.5 SET BACK_BEFORE_PRINT

Description

Change the backfeed sequence in the cutter mode.

Syntax

```
SET BACK_BEFORE_PRINT ON/OFF
```

<u>Parameter</u>	<u>Description</u>
OFF	Backfeed a label to the print position immediately after a cut (Default)
ON	Backfeed a label to the print position before a print starts

Note:

- A printer reset or restart will not return the setting to the default.
- The setting will remain unchanged until you perform the factory default or firmware update.
- Make sure you use the correct firmware version to use the command.

<u>Model</u>	<u>Firmware Version</u>
TD-4420TN/4520TN	V1.04 S57 or later
TD-4650TNWB/4750TNWB/4650TNWBR/4750TNWBR	V1.04 S53 or later
TJ-4020TN/4021TN/4021TNR/4120TN/4121TN/4121TNR	B2.12.S47 or later
TJ-4420TN/4520TN/4620TN/4422TN/4522TN	B1.17.S32 or later

Example

```
SET BACK_BEFORE_PRINT OFF  
SET BACK_BEFORE_PRINT ON
```

See Also

OFFSET, PRINT, SET CUTTER

11.6 SET KEYn

Description

Enable/disable the **KEYn** function. Before setting **KEYn** function, make sure you disable the default function of **KEYn** first. The setting will remain resident in the printer even when the printer is powered off.

Syntax

```
SET KEYn ON/OFF/DEFAULT/MENU/PAUSE/PRINT m/FEED/BACKFEED/FORMFEED/CUT/INPUT
"string "
```

<u>Parameter</u>	<u>Description</u>
n	0, 1, 2, 3, 4, 5, 6
ON	Enable KEYn function
OFF	Disable KEYn function
DEFAULT	Set KEYn back to default function
MENU	Set to MENU key
PAUSE	Set to PAUSE key
PRINT m	Set to PRINT key m: Set number of printing labels per print. (0 < m < 32000)
FEED	Set to FEED key that can manually control the feeding distance by pressing and holding the key.
BACKFEED	Set to BACKFEED key that can manually control the backfeed distance by pressing and holding the key.
FORMFEED	Set to FORMFEED key that will feed the label under the format. (for example: If format is "size 4,6, it will feed 6")
CUT	Set to CUT key
INPUT "string "	Send the command by PRESS key (for example: SET KEY1 INPUT "CONFIG " + CHR\$(13) + CHR\$(10))

The default function of KEYn is as listed below:

Model	KEY0	KEY1	KEY2	KEY3	KEY4	KEY5	KEY6
TD-4T series		FEED					
RJ series		FEED					
TJ series		FEED	MENU	UP	RIGHT	LEFT	DOWN

Example

Sample code

```
DOWNLOAD "DEMO.BAS"
SIZE 3,1
GAP 0,0
DENSITY 8
SPEED 3
DIRECTION 0
REFERENCE 0,0
SET CUTTER OFF
SET KEY1 OFF
SET KEY2 OFF
SET KEY3 OFF
KEY1=0
KEY2=0
KEY3=0
```

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

See Also

OFFEST, PRINT

11.7 SET LEDn

Description

Control LED on/off function.

Syntax

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

<u>LED no.</u>	<u>Default Function</u>							
LED1	Power on/off							
LED2	Printer on-line/off-line							
LED3	Error/normal							
<u>Parameter</u>	<u>Description</u>							
ON	Enable LEDn function							
OFF	Disable LEDn function							

The default function of LED1, LED2 and LED3 id as listed below:

Model	LED1	LED2	LED3	LED4	LED5	LED6	LED7	LED2 & LED3
TD-4T series Note: For this series, the LED1=LED2	GREEN	GREEN	RED					ORANGE
RJ series	GREEN	GREEN	RED	BAT1	BAT2	BAT3	WIFI/BT	ORANGE
TJ series	GREEN	GREEN	RED					ORANGE

Example

Sample code

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


11.8 SET PEEL

Description

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

Syntax

SET PEEL ON/OFF

<u>Parameter</u>	<u>Description</u>
ON	Enable the self-peeling function
OFF	Disable the self-peeling function

Example

Sample code

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

See Also

OFFEST, PRINT

11.9 SET REWIND

Description

Enable/disable the internal rewind function. The default setting is OFF. When this function is ON, the printer's Media Rewind Spindle will rewind the printed labels. This setting will be saved in the printer memory when turning off the power.

Syntax

SET REWIND ON/OFF/RS232

<u>Parameter</u>	<u>Description</u>
ON	Enable the internal rewind function
OFF	Disable the internal rewind or external rewind module function
RS232	Enable the external rewind module function (via RS-232C port/ pull high signal)

Example

Sample code

```
REM ***REWIND FUNCTION ON***  
SIZE 4,4  
GAP 0.12,0  
DENSITY 8  
SPEED 6  
DIRECTION 0  
REFERENCE 0,0  
SET CUTTER OFF  
SET REWIND ON  
CLS  
TEXT 50,100, "3 ",0,1,1, "REWIND FUNCTION TEST "  
PRINT 500
```

See Also

OFFEST, PRINT

11.10 SET TEAR

Description

Feed the label to the tear-off position. This setting will be saved in the printer memory when turning off the power.

Syntax

SET TEAR ON/OFF

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

Example

Sample code

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

See Also

SET PEEL, SET CUTTER

11.11 SET GAP/SET BLINE

Description

Use these commands to adjust the gap sensor and blackmark sensor emission sensitivity. The printer initiates automatic sensor calibration when the **PAUSE** key is pressed and held while turning the printer on. Use the **SET GAP** and **SET BLINE** commands if the automatic calibration does not work because the thickness of the backing paper and that of the label with backing paper are not within the sensor's detection range or there is pre-printed text or images on the label. The gap sensor and blackmark sensor sensitivity settings will be saved in the printer's memory when the printer is turned off.

Syntax

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

<u>Parameter</u>	<u>Description</u>		
n	Gap sensor/Blackmark sensor light emission strength. Available range is listed as below. 0 is the lowest sensitivity.		
AUTO	Feed 2 or 3 labels to calibrate the gap. If the label is continuous, the printer will feed label to limit 10~20 inches to confirm if the label is continuous.		
OFF	Disable the SET GAP AUTO function.		
0, REVERSE	Automatically calibrate the gap size. This function is used when the black mark, the separation between labels, can't be detected by the black mark sensor. The parts of the media which can be passed through by the gap sensor are defined to be the printable area, otherwise it will be defined to the gap of the media.		
OBVERSE	Disable the SET GAP REVERSE function.		

Printer model	Gap Sensor Range	Black Mark Sensor Range	SET GAP REVERSE SET GAP OBVERSE SET GAP AUTO
TD-4420TN/4520TN	0~15	0~3	V
TD-4650TNWB / TD-4650TNWBR, TD-4750TNWB / TD-4750TNWBR	0~15	0~3	V
RJ-2035B / RJ-2055WB RJ-3035B / RJ-3055WB	0~7	0~7	V
TJ-4005DN / TJ-4010TN / TJ-4020TN / TJ-4021TN / TJ-4021TNR / TJ-4120TN / TJ-4121TN / TJ-4121TNR	0~15	0~3	V
TJ-4420TN / TJ-4520TN / TJ-4620TN / TJ-4422TN / TJ-4522TN	0~15	0~15	V

Note:
 Only parameter **n** is available for the **SET BLINE** command.
 In the **SET HEAD OFF** mode, the **SET GAP AUTO** command will work not when you open and close the printer head but when you power on the printer.

Example

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

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

Note:

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

Troubleshooting:

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

See Also

SIZE, GAP, BLINE

11.12 SET BLINE REVERSE / SET BLINE OBVERSE

Description

Reverse/obverse the sensor function.

Syntax

SET BLINE REVERSE/SET BLINE OBVERSE

<u>Parameter</u>	<u>Description</u>
REVERSE	Reverse the sensor function. Redefine the reflective area is black line and non-reflective part is paper. (Normally, reflective part is paper and non-reflective part is black line.)
OBVERSE	Disable the SET BLINE REVERSE function.

11.2 SET BLINE PRINTSIDE / SET BLINE BACKSIDE

Description

Set the upper black mark sensor or the lower black sensor as the main transmitter.

Syntax

SET BLINE PRINTSIDE / SET BLINE BACKSIDE

Parameter	Description
PRINTSIDE	Black mark on the printing side
BACKSIDE	Black mark on the back side

Note:
This command is supported on RJ-3055WB (Gap-sensor model only) and TJ-4420TN / TJ-4520TN / TJ-4620TN / TJ-4422TN / TJ-4522TN.

11.3 SET HEAD

Description

Enable/disable the head open sensor. If the head open sensor is turned off, an open printhead will not return an error message. This setting will be saved in the printer memory.

Syntax

```
SET HEAD ON /OFF
```

<u>Parameter</u>	<u>Description</u>
ON	Turn on the "HEAD OPEN " sensor
OFF	Turn off the "HEAD OPEN " sensor

Example

```
SET HEAD ON  
SET HEAD OFF
```


11.4 SET RIBBON

Description

Enable/disable the ribbon sensors. The printer will detect the presence of a ribbon to determine using either direct thermal or thermal transfer printing at the printer startup. This setting will NOT be saved in the printer memory.

Syntax

SET RIBBON ON/OFF/INSIDE/OUTSIDE

<u>Parameter</u>	<u>Description</u>
ON	Thermal transfer printing
OFF	Direct thermal printing

Example

Sample Code

```
REM *****Disable ribbon detection sensor for direct thermal printing.
SET RIBBON OFF
SIZE 4,1
GAP 0,0
CLS
TEXT 10,10, " 3 " ,0,1,1, " Direct thermal printing. "
PRINT 1
```

```
REM *****Enable ribbon detection sensor for thermal transfer printing.
SET RIBBON ON
SIZE 4,1
GAP 0,0
CLS
TEXT 10,10, " 3 " ,0,1,1, " Thermal transfer printing. "
PRINT 1
```

11.5 SET ENCODER

Description

Enable/disable the ribbon encoder sensor.

Syntax

```
SET ENCODER ON/OFF
```

<u>Parameter</u>	<u>Description</u>
ON	Enable the ribbon encoder sensor.
OFF	Disable the ribbon encoder sensor.

Example

```
SET ENCODER ON  
SET ENCODER OFF
```

11.6 SET RIBBONEND

Description

Enable/disable ribbon end sensor (TJ series only).

Syntax

```
SET RIBBONEND ON/OFF
```

<u>Parameter</u>	<u>Description</u>
ON	Enable the ribbon end sensor.
OFF	Disable the ribbon end sensor.

Example

```
SET RIBBONEND ON  
SET RIBBONEND OFF
```

11.7 SET COM1

Description

Define communication parameters for printer serial port.

Syntax

```
SET COM1 baud,parity,data,stop
```

<u>Parameter</u>	<u>Description</u>
baud	Baud rate, available baud rates are as listed : 24: 2400 bps 48: 4800 bps 96: 9600 bps 19: 19200 bps 38: 38400 bps 57: 57600 bps 115: 115200 bps
parity	Parity check N: No parity check E: Even parity check O: Odd parity check
Data	Data bit 8: 8 bits data 7: 7 bits data
stop	Stop bit 1: 1 stop bit 2: 2 stop bits

Example

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

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

Note:

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

11.8 SET PRINTKEY

Description

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

Syntax

```
SET PRINTKEY OFF/ON/AUTO/<num>
```

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

Example

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

Execute:

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

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

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

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

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

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

11.9 SET REPRINT

Description

Enable/disable a reprinting attempt subsequent to a “no paper”, “no ribbon” or “carriage open” error.

Syntax

```
SET REPRINT OFF/ON
```

<u>Parameter</u>	<u>Description</u>
OFF	Disable this function
ON	Enable this function

Example

```
SET REPRINT ON
```

11.10 SET FEED_LEN

Description

Set the feeding length when **FEED** key is pressed. This setting will be memorized by the printer. The initialized value is the label length.

Syntax

```
SET FEED_LEN n
```

<u>Parameter</u>	<u>Description</u>
n	Feeding length (in dots)

Example

Sample code

```
SET FEED_LEN 100
```

Result

The feeding length is 100 dots when you press the **FEED** key after this setting.

11.11 GETSENSOR()

Description

Get the sensor status/AD value. You can use it to check the sensor function.

Syntax

GETSENSOR(sensor\$[,intension])

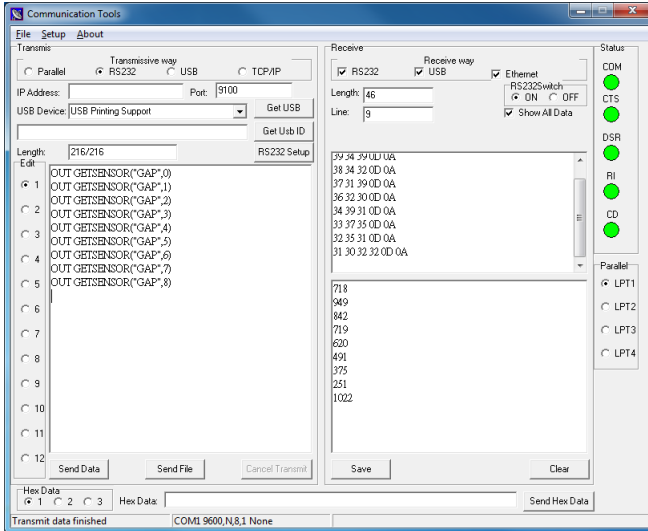
Parameter	Description	
sensor\$	Sensor type	
	GAP	Gap sensor
	BLINE	Black mark sensor
	RIBBON	Ribbon-end sensor
	PEEL	Peeler sensor
	HEAD UP	Thermal print head open sensor
	HEAD TEMP	Temperature of print head
	HEAD VOLT	Voltage of print head
	BATTERY VOLT	Voltage of battery (V)
BATTERY CAP	Capacity of battery (%)	
intension	Sensor intension	
	Gap	Refer to SET GAP for gap sensor range of different model.
	BLINE	Refer to SET GAP for black mark sensor range of different model.
	RIBBON	0 ~ 3
	PEEL sensor	Ignored
	HEAD UP sensor	Ignored
	HEAD TEMP	Ignored
	HEAD VOLT	Ignored
Returned value	Gap	Return the AD value of gap sensor
	BLINE	Return the AD value of black mark sensor
	RIBBON	Return the AD value of ribbon sensor
	PEEL	The return value will be either 0 or 1 0: Paper is not on the sensor 1: Paper is on the sensor
	HEAD UP	The return value will be either 0 or 1 0: Print head module is close 1: Print head module is open
	HEAD TEMP	Return the temperature of thermal print head
	HEAD VOLT	Return the voltage of thermal print head

Example (This example uses the Brother CommTool to get the sensor status via RS-232C.)

Sample code

```
OUT GETSENSOR ("GAP", 0)
OUT GETSENSOR ("GAP", 1)
OUT GETSENSOR ("GAP", 2)
OUT GETSENSOR ("GAP", 3)
OUT GETSENSOR ("GAP", 4)
OUT GETSENSOR ("GAP", 5)
OUT GETSENSOR ("GAP", 6)
OUT GETSENSOR ("GAP", 7)
OUT GETSENSOR ("GAP", 8)
```

Result

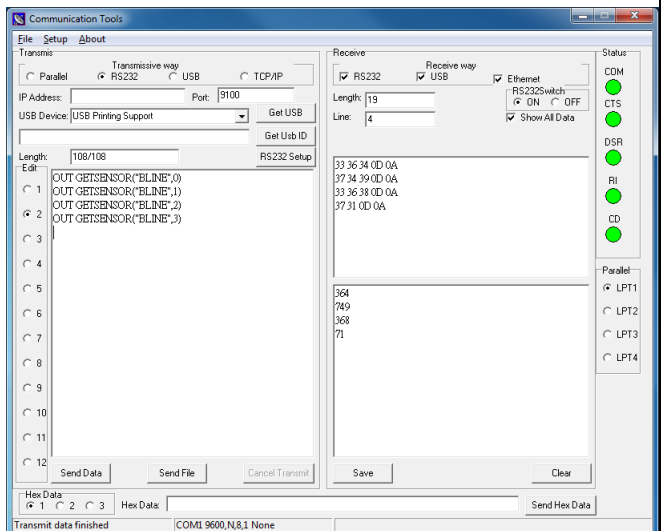


If the returned value is changed in different sensor intension, the sensor is functional.

Sample code

```
OUT GETSENSOR ("BLINE", 0)
OUT GETSENSOR ("BLINE", 1)
OUT GETSENSOR ("BLINE", 2)
OUT GETSENSOR ("BLINE", 3)
```

Result

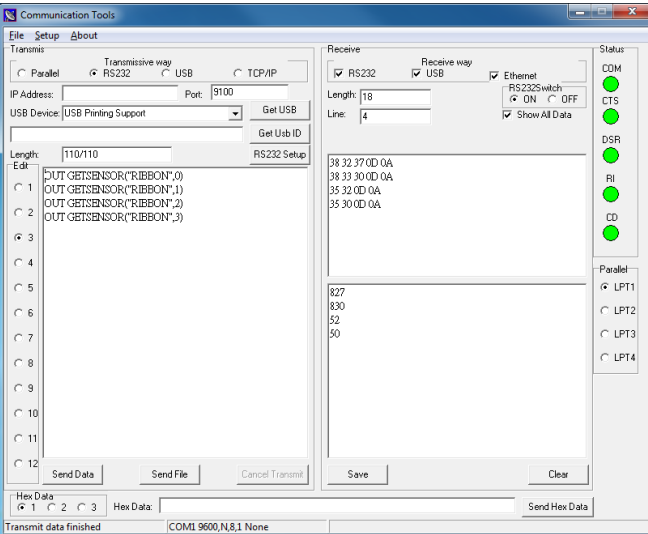


If the returned value is changed in different sensor intension, the sensor is functional.

Sample code

```
OUT GETSENSOR ("RIBBON", 0)
OUT GETSENSOR ("RIBBON", 1)
OUT GETSENSOR ("RIBBON", 2)
OUT GETSENSOR ("RIBBON", 3)
```

Result

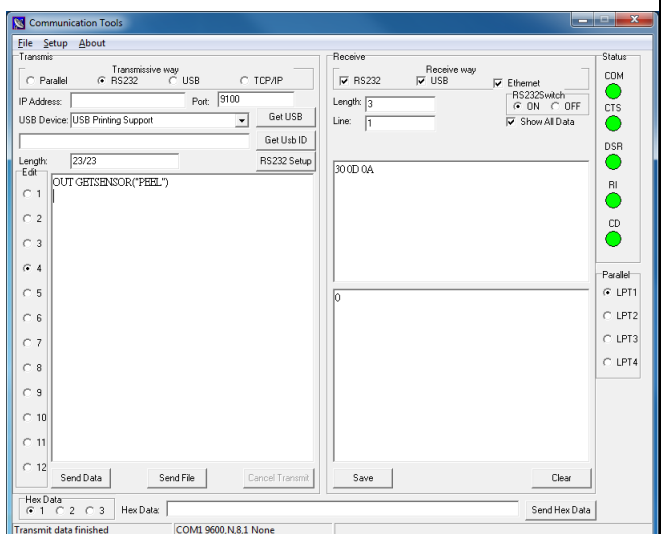


If the returned value is changed in different sensor intension, the sensor is functional.

Sample code

```
OUT GETSENSOR ("PEEL")
```

Result



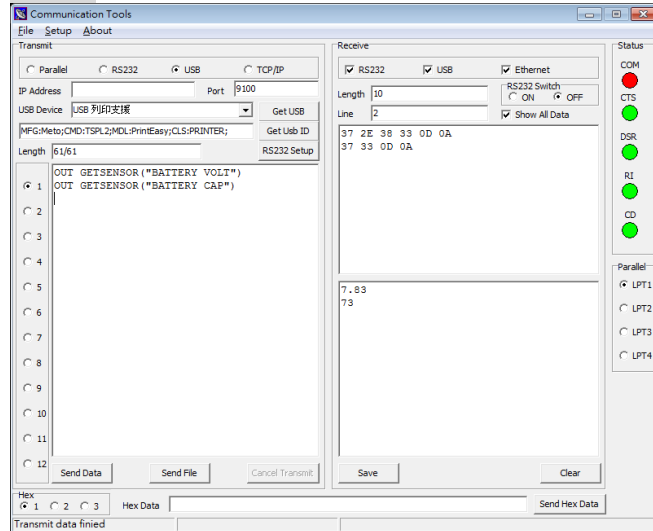
0: Paper is not on the sensor. 1: Paper is on the

sensor.

Sample code

```
OUT GETSENSOR("BATTERY VOLT")  
OUT GETSENSOR("BATTERY CAP")
```

Result



This code is used to detect the battery volatage and battery capacity for RJ printer.

11.12 GETSETTING\$()

Description

Obtain the printer configurations.

Syntax

GETSETTING\$(app\$, sec\$, key\$ [, default\$])

app\$	sec\$	key\$	Comment
SYSTEM	INFORMATION	DPI	Resolution
		MODEL	Model name
		SERIAL	Serial number
		VERSION	Firmware version
		CHECKSUM	Firmware checksum
		PRINTQUALITY	Print mode (DRAFT, STANDARD or OPTIMUM; see SET PRINTQUALITY) For RJ-2035B/2055WB/3035B/3055WB only
		STANDBYTIME	Printer standby time (OFF or number) For RJ-2035B/2055WB/3035B/3055WB only
	SLEEPTIME	Printer sleep time (OFF or number) For RJ-2035B/2055WB/3035B/3055WB only	
	RECORD	MILAGE	Printed mileage (in dots)
LABEL COUNTER		Total number of prints	
CUT COUNTER		Cutting counter	
FILE	DRAM	CAPACITY	Total capacity of DRAM
		AVAILABLE	Available capacity of DRAM
	FLASH	CAPACITY	Total capacity of FLASH
		AVAILABLE	Available capacity of FLASH
	CARD	CAPACITY	Total capacity of CARD
		AVAILABLE	Available capacity of CARD
CONFIG	NET	MAC ADDRESS	MAC address
		IP ADDRESS	IP address
		SUBNET MASK	Subnet Mask
		DEFAULT GATEWAY	Default gateway
		RAW PORT	Raw port
		NAME	Printer name
		PRIMARY DNS	Primary DNS
		SECONDARY DNS	Secondary DNS
	WLAN	MAC ADDRESS	MAC address
		IP ADDRESS	IP address
		SUBNET MASK	Subnet Mask
		DEFAULT GATEWAY	Default gateway
	COM1	RAW PORT	Raw port
		BAUD RATE	Baud rate of COM port
		DATA BIT	Data bit of COM port
		PARITY	Parity of COM port
	SENSOR	STOP BIT	Stop bit of COM port
		SENSOR TYPE	Current sensor type
		CARRIAGE	Status of head open sensor
		GAP INTENSION	Intension of gap sensor
	FBPL	BLINE INTENSION	Intension of black mark sensor
		CONTINUOUS INTENSION	Intension of continuous sensor
		PRINT MODE	Post-print action
		DENSITY	Print density
		PAPER SIZE	Paper size
		GAP SIZE	Gap size
		BLINE SIZE	Black mark size
		DIRECTION	Printing direction
MIRROR	Mirror status		
RIBBON	Ribbon status		
REPRINT	Reprint status		

	PAPER WIDTH	Paper width
	LIMIT FEED	Maximum length for sensor calibration.
	OFFSET	OFFSET value.
	REFERENCE X	REFERENCE X value.
	REFERENCE Y	REFERENCE Y value.
	SHIFT X	SHIFT X value.
	SHIFT Y	SHIFT Y value.
	SPEED	Print speed.
	COUNTRY CODE	COUNTRY code.
	CODEPAGE	CODEPAGE.
Parameter default\$	Description	Optional. Expression containing the value to return if no value is set in the key\$ setting. If omitted, default is assumed to be a zero-length string ("").

Example

Sample code (This example uses the Brother CommTool to get the printer configurations via RS-232C.)

```

OUT "DPI = ";GETSETTING$ ("SYSTEM", "INFORMATION", "DPI")
OUT " MODEL =";GETSETTING$ ("SYSTEM", "INFORMATION", "MODEL")
OUT "SERIAL = ";GETSETTING$ ("SYSTEM", "INFORMATION", "SERIAL")
OUT "VERSION = ";GETSETTING$ ("SYSTEM", "INFORMATION", "VERSION")
OUT "CHECKSUM = ";GETSETTING$ ("SYSTEM", "INFORMATION", "CHECKSUM")
OUT "MILAGE = ";GETSETTING$ ("SYSTEM", "RECORD", "MILAGE")
OUT "CUT COUNTER = ";GETSETTING$ ("SYSTEM", "RECORD", "CUT COUNTER")
OUT "DRAM CAPACITY = ";GETSETTING$ ("FILE", "DRAM", "CAPACITY")
OUT "DRAM AVAILABLE = ";GETSETTING$ ("FILE", "DRAM", "AVAILABLE")
OUT "FLASH CAPACITY = ";GETSETTING$ ("FILE", "FLASH", "CAPACITY")
OUT "FLASH AVAILABLE = ";GETSETTING$ ("FILE", "FLASH", "AVAILABLE")
OUT "CARD CAPACITY = ";GETSETTING$ ("FILE", "CARD", "CAPACITY")
OUT "CARD AVAILABLE = ";GETSETTING$ ("FILE", "CARD", "AVAILABLE")
OUT "CARD INSTALLED = ";GETSETTING$ ("FILE", "CARD", "INSTALLED")
OUT "Ethernet MAC ADDRESS = ";GETSETTING$ ("CONFIG", "NET", "MAC ADDRESS")
OUT "Ethernet IP ADDRESS = ";GETSETTING$ ("CONFIG", "NET", "IP ADDRESS")
OUT "Ethernet SUBNET MASK = ";GETSETTING$ ("CONFIG", "NET", "SUBNET MASK")
OUT "Ethernet DEFAULT GATEWAY = ";GETSETTING$ ("CONFIG", "NET", "DEFAULT GATEWAY")
OUT "Ethernet PRIMARY DNS = ";GETSETTING$ ("CONFIG", "NET", "PRIMARY DNS")
OUT "Ethernet SECONDARY DNS = ";GETSETTING$ ("CONFIG", "NET", "SECONDARY DNS")
OUT "COM1 BAUD RATE = ";GETSETTING$ ("CONFIG", "COM1", "BAUD RATE")
OUT "COM1 DATA BIT = ";GETSETTING$ ("CONFIG", "COM1", "DATA BIT")
OUT "COM1 PARITY = ";GETSETTING$ ("CONFIG", "COM1", "PARITY")
OUT "COM1 STOP BIT = ";GETSETTING$ ("CONFIG", "COM1", "STOP BIT")
OUT "SENSOR TYPE = ";GETSETTING$ ("CONFIG", "SENSOR", "SENSOR TYPE")
OUT "CARRIAGE = ";GETSETTING$ ("CONFIG", "SENSOR", "CARRIAGE")
OUT "GAP INTENSION = ";GETSETTING$ ("CONFIG", "SENSOR", "GAP INTENSION")
OUT "BLINE INTENSION = ";GETSETTING$ ("CONFIG", "SENSOR", "BLINE INTENSION")
OUT "CONTINUOUS INTENSION = ";GETSETTING$ ("CONFIG", "SENSOR", "CONTINUOUS
INTENSION")
OUT "PRINT MODE = ";GETSETTING$ ("CONFIG", "FBPL", "PRINT MODE")
OUT "DENSITY = ";GETSETTING$ ("CONFIG", "FBPL", "DENSITY")
OUT "PAPER SIZE = ";GETSETTING$ ("CONFIG", "FBPL", "PAPER SIZE")
OUT "GAP SIZE = ";GETSETTING$ ("CONFIG", "FBPL", "GAP SIZE")
OUT "BLINE SIZE = ";GETSETTING$ ("CONFIG", "FBPL", "BLINE SIZE")
OUT "DIRECTION = ";GETSETTING$ ("CONFIG", "FBPL", "DIRECTION")
OUT "MIRROR = ";GETSETTING$ ("CONFIG", "FBPL", "MIRROR")
OUT "RIBBON = ";GETSETTING$ ("CONFIG", "FBPL", "RIBBON")
OUT "REPRINT = ";GETSETTING$ ("CONFIG", "FBPL", "REPRINT")
OUT "PAPER WIDTH = ";GETSETTING$ ("CONFIG", "FBPL", "PAPER WIDTH")
OUT "LIMIT FEED = ";GETSETTING$ ("CONFIG", "FBPL", "LIMIT FEED")
OUT "OFFSET = ";GETSETTING$ ("CONFIG", "FBPL", "OFFSET")
OUT "REFERENCE X = ";GETSETTING$ ("CONFIG", "FBPL", "REFERENCE X")

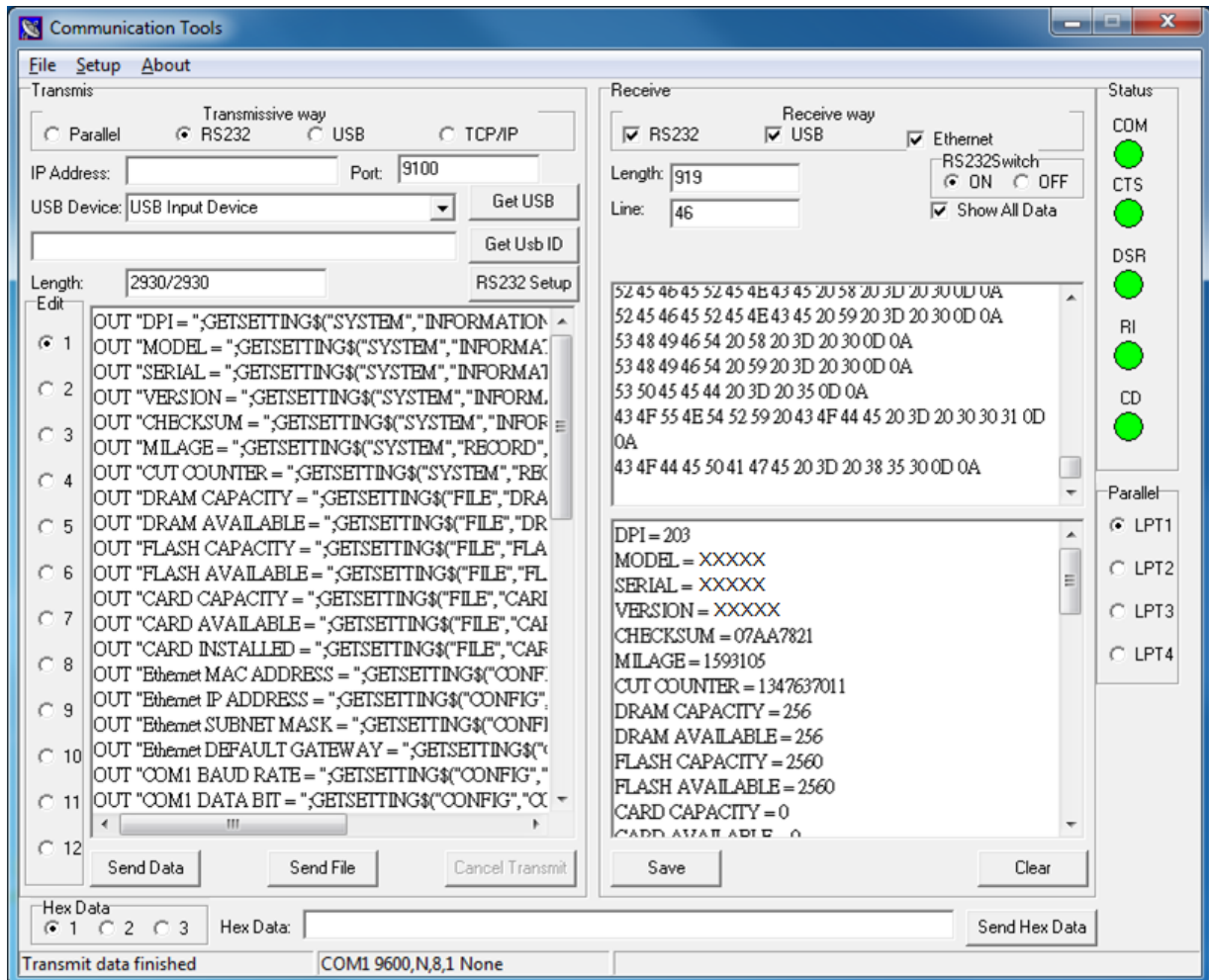
```

```

OUT "REFERENCE Y = ";GETSETTING$("CONFIG","FBPL","REFERENCE Y")
OUT "SHIFT X = ";GETSETTING$("CONFIG","FBPL","SHIFT X")
OUT "SHIFT Y = ";GETSETTING$("CONFIG","FBPL","SHIFT Y")
OUT "SPEED = ";GETSETTING$("CONFIG","FBPL","SPEED")
OUT "COUNTRY CODE = ";GETSETTING$("CONFIG","FBPL","COUNTRY CODE")
OUT "CODEPAGE = ";GETSETTING$("CONFIG","FBPL","CODEPAGE")

```

Result



Sample code(NET, WLAN)

```

OUT "Ethernet DEFAULT RAW PORT = ";GETSETTING$("CONFIG","NET","RAW PORT")

```

```

OUT "WLAN MAC ADDRESS = ";GETSETTING$("CONFIG","WLAN","MAC ADDRESS")
OUT "WLAN IP ADDRESS = ";GETSETTING$("CONFIG","WLAN","IP ADDRESS")
OUT "WLAN SUBNET MASK = ";GETSETTING$("CONFIG","WLAN","SUBNET MASK")
OUT "WLAN DEFAULT GATEWAY = ";GETSETTING$("CONFIG","WLAN","DEFAULT GATEWAY")
OUT "WLAN DEFAULT RAW PORT = ";GETSETTING$("CONFIG","WLAN","RAW PORT")
OUT "NET Name = ";GETSETTING$("CONFIG","NET","NAME")

```

11.13 SET USBHOST

Description

Set the USB host mode for the models with LCD when using **INPUT** command and **SET FILTER** command.

Syntax

```
SET USBHOST KEYBOARD/SCANNER
```

<u>Parameter</u>	<u>Description</u>
KEYBOARD	USB keyboard (Enable the prompt shown on LCD)
SCANNER	USB scanner (Disable the prompt shown on LCD)

Note:

- This command is for the models with USB Host ports and LCD.

Example

Sample code

```
SET USBHOST KEYBOARD
DOWNLOAD "A.BAS"
:LOOP
SIZE 4,2
GAP 0,0
CLS
INPUT A$
TEXT 50,50,"0",0,20,20,A$
PRINT 1
GOTO LOOP
EOP
A.BAS
```

See Also

INPUT, SET FILTER

11.14 SET AUTORUN

Description

Redefine the BAS file which can be run automatically while switching on the printer. Default is AUTO.BAS.

Syntax

```
SET AUTORUN "filename"
```

<u>Parameter</u>	<u>Description</u>
filename	The file will be defined to AUTO-RUN file. Default is AUTO.BAS.

Example

Sample Code

```
REM *****Step1: Send the following command to redefine the auto-run file from
"AUTO.BAS" to "TEST.BAS"
SET AUTORUN "TEST.BAS"

REM *****Step2: Send the following commands to download "TEST.BAS" file into
printer.
DOWNLOAD F, "TEST.BAS"
SIZE 4,1
GAP 0,0
DIRECTION 1
CLS
BLOCK 10,10,600,200, "3",0,1,1,12, "TEST.BAS is running automatically while
turning on the printer. "
PRINT 1
EOP

REM *****Step3: Turn off and on the printer to run "TEST.BAS" automatically.
```

Result

"TEST.BAS" is running automatically
while turning on the printer.

11.15 SET RESPONSE

Description

Respond to an error automatically.

Syntax

```
SET RESPONSE ["Job ID",] ON/OFF/BATCH
```

<u>Parameter</u>	<u>Description</u>
["Job ID"]	Optional. Set job ID. Default is Null.
ON	Enable this function.
OFF	Disable this function. Default is OFF.
BATCH	Respond at the end of the print job.

Response Syntax

```
{Status,#####,ID}
```

<u>Status</u>
[Hex Receive]
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
#####: 00001 ~ 99999

Example

Sample Code

```
SET RESPONSE ON  
SIZE 4,2  
GAP 0,0  
PRINT 3
```

```
{00,00001}{00,00002}{00,00003}
```

Sample Code

```
SET RESPONSE "ID1",ON  
SIZE 4,2  
GAP 0,0  
PRINT 3,2
```

```
{00,00001,ID1}{00,00002,ID1}{00,00003,ID1}{00,00004,ID1}{00,00005,ID1}{00,00006,ID1}
```

Sample Code

```
SET RESPONSE "CCCC ",BATCH  
SIZE 4,2  
GAP 0,0  
PRINT 3,2
```

```
{00,00006,CCCC}
```

11.16 SET DAYLIGHT_SAVE

Description

Set daylight saving time.

Syntax

```
SET DAYLIGHT_SAVE ON/OFF
SET DAYLIGHT_SAVE "Start", "End"
```

<u>Parameter</u>	<u>Description</u>
ON	Enable function
OFF	Disable function (Default)
"Start"	The time will be increased 1 hour from Start time
"End"	The time will be reduced 1 hour (return) from End time
	Month
	"JAN", "FEB", "MAR", "APR", "MAY", "JUN", "JUL", "AUG", "SEP", "OCT", "NOV", "DEC"
	"JANUARY", "FEBRUARY", "MARCH", "APRIL", "MAY", "JUNE", "JULY", "AUGUST", "SEPTEMBER", "OCTOBER", "NOVEMBER", "DECEMBER"
	Week
	"SUN", "MON", "TUE", "WED", "THU", "FRI", "SAT" "SUNDAY", "MONDAY", "TUESDAY", "WEDNESDAY", "THURSDAY", "FRIDAY", "SATURDAY"
	Which Week
	"FIRST", "SECOND", "THIRD", "FOURTH", "LAST" "1 ST ", "2 ND ", "3 RD ", "4 TH ", "LAST"
	Date
	1~31
	Time
	0:00~23:00

Example

Sample Code

```
SET DAYLIGHT_SAVE ON
SET DAYLIGHT_SAVE OFF
SET DAYLIGHT_SAVE "MAR 1 4:00", "NOV 1 5:00"
SET DAYLIGHT_SAVE "MAR FIRST SUN 2:00", "NOV LAST SUN 3:00"
```

11.17 SET REGISTRATION

Description

Set the label position mode for the label roll with a different size of labels.

Syntax

SET REGISTRATION mode

Parameter	Description
mode	BYSIZE: Default ACTUAL: For the label roll with different sizes of labels on the same roll

Example

<p>Sample Code</p> <p>2 jobs on 2 labels:</p> <pre> SET REGISTRATION ACTUAL SIZE 4,1 GAP 0.12,0 CLS TEXT 40,40,"0",0,10,10,"1st Label 4x1" PRINT 1 SIZE 4,5 GAP 0.12,0 CLS TEXT 40,40,"0",0,10,10,"2nd Label 4x5" PRINT 1 </pre>	<p>Paper feed direction</p>
<p>1 job on 2 labels:</p> <pre> SET REGISTRATION ACTUAL SIZE 4,6.12 GAP 0.12,0 CLS TEXT 40,40,"0",0,10,10,"1st Label 4x1" TEXT 40,267,"0",0,10,10,"2nd Label 4x5" PRINT 1 </pre>	

11.18 PEEL

Description

Obtain the status of the peel-off sensor. This attribute is read only.

Syntax

PEEL

<u>Return Value</u>	<u>Description</u>
0	Paper is not on top of peel sensor
1	Paper is on top of peel sensor

Example

Sample code

```
DOWNLOAD "DEMO.BAS"
SIZE 4,1
GAP 0,0
SET PEEL OFF
SET KEY1 OFF
SET LED1 OFF
SET LED3 OFF
:START
LED1=0
LED3=0
IF KEY1=1 THEN GOTO A
GOTO START
:A
LED1=1
CLS
TEXT 10,10, "3",0,1,1, "PEEL Function Test!! "
PRINT 1,1
:B
LED1=0
IF PEEL=1 THEN
LED3=1
GOTO B
ELSE
CLS
TEXT 10,10, "3",0,1,1, "The label is removed from the PEEL sensor!! "
PRINT 1,1
GOTO START
ENDIF
EOP
DEMO
```

11.19 LED1, LED2, LED3

Description

Control LED on/off. This attribute is write-only. Specify 1 to light on LED and 0 to turn off LED. Before using this command, make sure you cancel the default LED functions. See the **SET LED** command.

Syntax

LEDm = n

<u>Return Value</u>	<u>Description</u>
m	m=1, LED1 m=2, LED2 m=3, LED3
n	0: turn off LED 1: light on LED

Model	LED1	LED2	LED3	LED4	LED5	LED6	LED7	LED2 & LED3
TD-4T series Note: For this series, the LED1=LED2	GREEN	GREEN	RED					ORANGE
RJ series	GREEN	GREEN	RED	BAT1	BAT2	BAT3	WIFI/BT	ORANGE
TJ series	GREEN	GREEN	RED					ORANGE

Example

```

Sample code
DOWNLOAD "DEMO.BAS"
SIZE 3,3
GAP 0.12,0
SPEED 4
DENSITY 8
DIRECTION 1
REFERENCE 0,0
SET CUTTER OFF
SET PEEL OFF
SET LED1 OFF
SET LED2 OFF
SET LED3 OFF
LED1=0
LED2=1
LED3=0
EOP
DEMO
    
```

11.20 KEY1, KEY2, KEY3

Description

Read the status of KEY1, KEY2 and KEY3.

Model	KEY0	KEY1	KEY2	KEY3	KEY4	KEY5	KEY6
TD-4T series		FEED					
RJ series		FEED					
TJ series		FEED	MENU	UP	RIGHT	LEFT	DOWN

Syntax

KEYm = n

<u>Key</u>	<u>Return Value</u>
KEY1 (MENU)	0: released 1: pressed
KEY2 (PAUSE)	0: released 1: pressed
KEY3 (FEED)	0: released 1: pressed

Example

Sample code

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

11.21 SET SENSOR_REF

Description

Set the threshold detection of the sensor.

Syntax

```
SET SENSOR_REF AUTO  
SET SENSOR_REF MANUAL
```

<u>Parameter</u>	<u>Description</u>
AUTO	When feeding the media, the media positioning threshold is automatically fine-tuned according to the sensor values (high/low peak); Default
MANUAL	When feeding the media, the media positioning threshold is NOT automatically fine-tuned according to the sensor values (high/low peak), the paper positioning threshold is fixed.

Example

Sample code

```
SET SENSOR_REF AUTO  
  
SET SENSOR_REF MANUAL
```


11.22 SET TIMEFORMAT

Description

Set the LCD time format to either 12 hours or 24 hours.

Syntax

```
SET TIMEFORMAT 12H  
SET TIMEFORMAT 24H
```

<u>Parameter</u>	<u>Description</u>
12H	Display LCD time in 12-hour format (default).
24H	Display LCD time in 24-hour format.

Example

Sample code

```
SET TIMEFORMAT 12H  
  
SET TIMEFORMAT 24H
```

11.23 SET FBPL_IGNORE

Description

Instruct the code to ignore specific FBPL commands.

Syntax

```
SET FBPL_IGNORE "FBPL command"
```

<u>Parameter</u>	<u>Description</u>
FBPL command	Type the FBPL command you want to ignore.
	<ul style="list-style-type: none">• To enable this function:<ul style="list-style-type: none">- use the latest firmware version.- send the command to the printer before sending the print job.• This function remains enabled until you do one of the following:<ul style="list-style-type: none">- Use the SET FBPL_IGNORE CLEAR command.- Update your printer's firmware;- Change the printer's settings back to the factory default.• You can ignore a maximum of 10 FBPL commands.

Example

Sample code

```
SET FBPL_IGNORE "SIZE"  
  
SET FBPL_IGNORE "SHIFT"
```

11.24 SET KEYSOUND

Description

Enable or disable key sounds when pressing buttons or icons on the LCD.

Syntax

```
SET KEYSOUND ON/OFF
```

<u>Parameter</u>	<u>Description</u>
ON	Enable the key sound (default).
OFF	Disable the key sound.

Example

Sample code

```
SET KEYSOUND ON  
  
SET KEYSOUND OFF
```

11.25 SET LANGUAGE

Description

Select the language to display on the LCD.

Syntax

SET LANGUAGE language name

<u>Parameter</u>	<u>Description</u>																										
language name	Choose from these languages: <table border="1"><thead><tr><th>language name</th><th>Language</th></tr></thead><tbody><tr><td>ENGLISH</td><td>English</td></tr><tr><td>TRADITIONAL_CHINESE</td><td>Chinese (Traditional)</td></tr><tr><td>SIMPLE_CHINESE</td><td>Chinese (Simplified)</td></tr><tr><td>JAPANESE</td><td>Japanese</td></tr><tr><td>KOREAN</td><td>Korean</td></tr><tr><td>GERMAN</td><td>German</td></tr><tr><td>FRENCH</td><td>French</td></tr><tr><td>ITALIAN</td><td>Italian</td></tr><tr><td>SPANISH</td><td>Spanish</td></tr><tr><td>POLISH</td><td>Polish</td></tr><tr><td>RUSSIAN</td><td>Russian</td></tr><tr><td>LITHUANIAN</td><td>Lithuanian</td></tr></tbody></table>	language name	Language	ENGLISH	English	TRADITIONAL_CHINESE	Chinese (Traditional)	SIMPLE_CHINESE	Chinese (Simplified)	JAPANESE	Japanese	KOREAN	Korean	GERMAN	German	FRENCH	French	ITALIAN	Italian	SPANISH	Spanish	POLISH	Polish	RUSSIAN	Russian	LITHUANIAN	Lithuanian
language name	Language																										
ENGLISH	English																										
TRADITIONAL_CHINESE	Chinese (Traditional)																										
SIMPLE_CHINESE	Chinese (Simplified)																										
JAPANESE	Japanese																										
KOREAN	Korean																										
GERMAN	German																										
FRENCH	French																										
ITALIAN	Italian																										
SPANISH	Spanish																										
POLISH	Polish																										
RUSSIAN	Russian																										
LITHUANIAN	Lithuanian																										

Example

Sample code

```
SET LANGUAGE JAPANESE
```

11.26 SET DATEFORMAT

Description

Set the LCD date format.

Syntax

```
SET DATEFORMAT format type
```

<u>Parameter</u>	<u>Description</u>
format type	Y/M/D
	Y-M-D
	M/D/Y
	M-D-Y
	D/M/Y
	D-M-Y

Symbol	Description
Y	Year
M	Month
D	Date

Example

Sample code

```
SET DATEFORMAT Y/M/D  
SET DATEFORMAT Y-M-D  
SET DATEFORMAT M/D/Y  
SET DATEFORMAT M-D-Y  
SET DATEFORMAT D/M/Y  
SET DATEFORMAT D-M-Y
```


12 Printer Global Variables

12.1 @LABEL

Description

Count how many pieces of labels have been printed. This attribute cannot be initialized if the printer is reset, but will be retained if the printer is turned off.

Syntax

Write attribute: @LABEL=n or @LABEL= "n"

Read attribute: A=LABEL or A\$=STR\$(LABEL)

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

Example

<u>Sample code</u>	<u>Result</u>
<pre>DOWNLOAD "DEMO.BAS" SIZE 4,2.5 GAP 0,0 DIRECTION 1 CLS TEXT 10,50, "3",0,1,1,@LABEL TEXT 10,100, "3",0,1,1, "@LABEL="+STR\$(LABEL) TEXT 10,150, "3",0,1,1, "*****Statement 1*****" IF LABEL>1000 THEN TEXT 10,200, "3",0,1,1, "LABEL>1000" ELSE TEXT 10,200, "3",0,1,1, "LABEL<1000" ENDIF TEXT 10,250, "3",0,1,1, "*****Statement 1*****" A=LABEL IF A>1000 THEN TEXT 10,300, "3",0,1,1, "A>1000" ELSE TEXT 10,300, "3",0,1,1, "A<1000" ENDIF TEXT 10,350, "3",0,1,1, "*****Statement 3*****" A\$=STR\$(LABEL) IF VAL(A\$)>1000 THEN TEXT 10,400, "3",0,1,1, "VAL(A\$)>1000" ELSE TEXT 10,400, "3",0,1,1, "VAL(A\$)<1000" ENDIF PRINT 1,1 EOP DEMO</pre>	<pre>1661 @LABEL=1661 *****Statement 1***** LABEL>1000 *****Statement 1***** A>1000 *****Statement 3***** VAL(A\$)>1000</pre>

12.2 YEAR

Description

Write/read the year data via the Real Time Clock (RTC). Four-digit year format is supported by RTC.

Syntax

Write attribute: YEAR = 02

Read attribute: A = YEAR

Range: 00~50 = 2000~2050; 51~99 = 1951~1999

Example

Sample code

```
DOWNLOAD "SetYear.BAS"
REM *****Set Year Parameter to RTC*****
YEAR=13
EOP
SetYear
```

Sample code

```
DOWNLOAD "DEMO.BAS"
SIZE 4,1
GAP 0,0
DIRECTION 1
CLS

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

REM *****Print*****
TEXT 10,10, "3",0,1,1, "YEAR1="+YEAR$
TEXT 10,50, "3",0,1,1, "YEAR2="+STR$(Y)
TEXT 10,90, "3",0,1,1, "YEAR3="+STR$(YEAR)
PRINT 1
EOP
DEMO
```

Result

```
YEAR1=2013
YEAR2=2013
YEAR3=2013
```

See Also

MONTH, DATE, DAY, HOUR, MINUTE, SECOND

12.3 MONTH

Description

Write/read the month data via the Real Time Clock (RTC). Two-digit (01~12) month format is supported by RTC.

Syntax

Write attribute: MONTH = 01

Read attribute: A = MONTH

Range: 01~12

Example

Sample code

```
DOWNLOAD "SetMonth.BAS"
REM *****Set Month Parameter to RTC*****
MONTH=01
EOP
SetMonth
```

Sample code

```
DOWNLOAD "DEMO.BAS"
SIZE 4,1
GAP 0,0
DIRECTION 1
CLS

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

REM *****Print*****
TEXT 10,10, "3",0,1,1, "MONTH1="+MONTH$
TEXT 10,50, "3",0,1,1, "MONTH2="+STR$(M)
TEXT 10,90, "3",0,1,1, "MONTH3="+STR$(MONTH)
PRINT 1
EOP
DEMO
```

Result

```
MONTH1=1
MONTH2=1
MONTH3=1
```

See Also

MONTH, DATE, DAY, HOUR, MINUTE, SECOND

12.4 DATE

Description

Write/read the date data via the Real Time Clock (RTC). Two-digit (01~31) date format is supported by RTC.

Syntax

Write attribute: DATE = 12

Read attribute: A = DATE

Range: 01~31

Example

Sample code

```
DOWNLOAD "SetDate.BAS"  
REM *****Set Date Parameter to RTC*****  
DATE=10  
EOP  
SetDate
```

Sample code

```
DOWNLOAD "DEMO.BAS"  
SIZE 4,1  
GAP 0,0  
DIRECTION 1  
CLS  
  
REM *****Read Date parameter form RTC*****  
DATE$=STR$(DATE)  
D=DATE  
  
REM *****Print*****  
TEXT 10,10, "3",0,1,1, "DATE1="+DATE$  
TEXT 10,50, "3",0,1,1, "DATE2="+STR$(D)  
TEXT 10,90, "3",0,1,1, "DATE3="+STR$(DATE)  
PRINT 1  
EOP  
DEMO
```

Result

```
DATE1=10  
DATE2=10  
DATE3=10
```

See Also

MONTH, DATE, DAY, HOUR, MINUTE, SECOND

12.5 WEEK

Description

Read the day of the week data via the Real Time Clock (RTC), which is represented by one single digit (1~7).

Syntax

Read attribute: A = WEEK

Range: 1(Sunday)~7(Saturday)

Example

Sample code

```
DOWNLOAD "DEMO.BAS "  
SIZE 4,1  
GAP 0,0  
DIRECTION 1  
CLS  
  
REM *****Read Week parameter form RTC*****  
WEEK$=STR$(WEEK)  
W=WEEK  
  
REM *****Print*****  
TEXT 10,10, "3",0,1,1, "WEEK1="+WEEK$  
TEXT 10,50, "3",0,1,1, "WEEK2="+STR$(W)  
TEXT 10,90, "3",0,1,1, "WEEK3="+STR$(WEEK)  
PRINT 1  
EOP  
DEMO
```

Result

```
WEEK1=5  
WEEK2=5  
WEEK3=5
```

See Also

MONTH, DATE, DAY, HOUR, MINUTE, SECOND

12.6 HOUR

Description

Write/read the hour data via the Real Time Clock (RTC). The 24-hour-day system (00~23) is supported by RTC.

Syntax

Write attribute: HOUR = 12

Read attribute: A = HOUR

Range: 00~23

Example

Sample code

```
DOWNLOAD "SetHour.BAS"  
REM *****Set Hour Parameter to RTC*****  
HOUR=10  
EOP  
SetHour
```

Sample code

```
DOWNLOAD "DEMO.BAS"  
SIZE 4,1  
GAP 0,0  
DIRECTION 1  
CLS  
  
REM *****Read Hour parameter form RTC*****  
HOUR$=STR$(HOUR)  
H=HOUR  
  
REM *****Print*****  
TEXT 10,10, "3",0,1,1, "HOUR1="+HOUR$  
TEXT 10,50, "3",0,1,1, "HOUR2="+STR$(H)  
TEXT 10,90, "3",0,1,1, "HOUR3="+STR$(HOUR)  
PRINT 1  
EOP  
DEMO
```

Result

```
HOUR1=10  
HOUR2=10  
HOUR3=10
```

See Also

MONTH, DATE, DAY, HOUR, MINUTE, SECOND

12.7 MINUTE

Description

Write/read the minute data via the Real Time Clock (RTC). Two-digit (00~59) minute format is supported by RTC.

Syntax

Write attribute: MINUTE = 12

Read attribute: A = MINUTE

Range: 00~59

Example

Sample code

```
DOWNLOAD "SetMinute.BAS"
REM *****Set Minute Parameter to RTC*****
MINUTE=27
EOP
SetMinute
```

Sample code

```
DOWNLOAD "DEMO.BAS"
SIZE 4,1
GAP 0,0
DIRECTION 1
CLS

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

REM *****Print*****
TEXT 10,10, "3",0,1,1, "MINUTE1="+MINUTE$
TEXT 10,50, "3",0,1,1, "MINUTE2="+STR$(MIN)
TEXT 10,90, "3",0,1,1, "MINUTE3="+STR$(MINUTE)
PRINT 1
EOP
DEMO
```

Result

```
MINUTE1=27
MINUTE2=27
MINUTE3=27
```

See Also

MONTH, DATE, DAY, HOUR, MINUTE, SECOND

12.8 SECOND

Description

Write/read the second data via the Real Time Clock (RTC). Two-digit (00~59) second format is supported by RTC.

Syntax

Write attribute: SECOND = 12

Read attribute: A = SECOND

Range: 00~59

Example

Sample code

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

Sample code

```
DOWNLOAD "DEMO.BAS "
SIZE 4,1
GAP 0,0
DIRECTION 1
CLS

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

REM *****Print*****
TEXT 10,10, "3",0,1,1, "SECOND1="+SECOND$
TEXT 10,50, "3",0,1,1, "SECOND2="+STR$(SEC)
TEXT 10,90, "3",0,1,1, "SECOND3="+STR$(SECOND)
PRINT 1
EOP
DEMO
```

Result

```
SECOND1=59
SECOND2=59
SECOND3=59
```

See Also

MONTH, DATE, DAY, HOUR, MINUTE, SECOND

12.9 @YEAR

Description

Write/read the year data via the Real Time Clock (RTC). Two-digit year format is supported by RTC. @YEAR global variable can be accessed directly without using BASIC language functions.

Syntax

Write attribute: @YEAR = "01"

Read attribute: @YEAR

Range: 00~99

Example

Sample code	Result
<pre>REM *****Set @YEAR***** @YEAR="05" REM *****Print***** SIZE 4,1 GAP 0,0 DIRECTION 1 CLS TEXT 10,10, "3",0,1,1, "@YEAR" TEXT 210,10, "3",0,1,1, @YEAR PRINT 1</pre>	<p>@YEAR 2005</p>

See Also

@MONTH, @DATE, @DAY, @HOUR, @MINUTE, @SECOND

12.10 @MONTH

Description

Write/read the month data via the Real Time Clock (RTC). Two-digit (01~12) month format is supported by RTC. **@MONTH** global variable can be accessed directly without using BASIC language functions.

Syntax

Write attribute: @MONTH = "01"

Read attribute: @MONTH

Range: 01~12

Example

Sample code	Result
<pre>REM *****Set @MONTH***** @MONTH="12" REM *****Print***** SIZE 4,1 GAP 0,0 DIRECTION 1 CLS TEXT 10,10, "3",0,1,1, "@MONTH" TEXT 210,10, "3",0,1,1,@MONTH PRINT 1</pre>	<pre>@MONTH 12</pre>

See Also

@YEAR, @DATE, @DAY, @HOUR, @MINUTE, @SECOND

12.11 @DATE

Description

Write/read the date data via the Real Time Clock (RTC). Two-digit (01~31) date format is supported by RTC. @DATE global variable can be accessed directly without using BASIC language functions.

Syntax

Write attribute: @DATE = "12"

Read attribute: @DATE

Range: 01~31

Example

Sample code	Result
<pre>REM *****Set @DATE***** @DATE="31" REM *****Print***** SIZE 4,1 GAP 0,0 DIRECTION 1 CLS TEXT 10,10, "3",0,1,1, "@DATE" TEXT 210,10, "3",0,1,1,@DATE PRINT 1</pre>	<pre>@DATE 31</pre>

See Also

@YEAR, @MONTH, @DAY, @HOUR, @MINUTE, @SECOND

12.12 @DAY

Description

Write/read the day of the week data via the Real Time Clock (RTC), which is represented by one single digit (1~7). @DAY global variable can be accessed directly without using BASIC language functions.

Syntax

Read attribute: @DAY

Range: 1(Sunday)~7(Saturday)

Example

Sample code	Result
<pre>REM *****Print***** SIZE 4,1 GAP 0,0 DIRECTION 1 CLS TEXT 10,10, "3",0,1,1, "@DAY" TEXT 210,10, "3",0,1,1,@DAY PRINT 1</pre>	<pre>@DAY 7</pre>

See Also

@YEAR, @MONTH, @DATE, @HOUR, @MINUTE, @SECOND

12.13 @HOUR3

Description

Write/read the hour data via the Real Time Clock (RTC). The 24-hour-day system (00~23) is supported by RTC. **@HOUR** global variable can be accessed directly without using BASIC language functions.

Syntax

Write attribute: @HOUR = "12"

Read attribute: @HOUR

Range: 00~23

Example

Sample code	Result
<pre>REM *****Set @HOUR***** @HOUR="23" REM *****Print***** SIZE 4,1 GAP 0,0 DIRECTION 1 CLS TEXT 10,10, "3",0,1,1, "@HOUR" TEXT 210,10, "3",0,1,1,@HOUR PRINT 1</pre>	<p style="text-align: center;">@HOUR 23</p>

See Also

@YEAR, @MONTH, @DATE, @DAY, @MINUTE, @SECOND

12.14 @MINUTE

Description

Write/read the minute data via the Real Time Clock (RTC). The two-digit (00~59) minute format is supported by RTC. **@MINUTE** global variable can be accessed directly without using BASIC language functions.

Syntax

Write attribute: @MINUTE = "12"

Read attribute: @MINUTE

Range: 00~59

Example

Sample code	Result
<pre>REM *****Set @MINUTE***** @MINUTE="59" REM *****Print***** SIZE 4,1 GAP 0,0 DIRECTION 1 CLS TEXT 10,10, "3",0,1,1, "@MINUTE" TEXT 210,10, "3",0,1,1,@MINUTE PRINT 1</pre>	<p style="text-align: center;">@MINUTE 59</p>

See Also

@YEAR, @MONTH, @DATE, @DAY, @HOUR, @SECOND

12.15 @SECOND

Description

Write/read the second data via the Real Time Clock (RTC). The two-digit (00~59) second format is supported by RTC. **@SECOND** global variable can be accessed directly without using BASIC language functions.

Syntax

Write attribute: @SECOND = "12"

Read attribute: @SECOND

Range: 00~59

Example

Sample code	Result
<pre>REM *****Set @SECOND***** @SECOND = "59" REM *****Print***** SIZE 4,1 GAP 0,0 DIRECTION 1 CLS TEXT 10,10, "3",0,1,1, "@SECOND" TEXT 210,10, "3",0,1,1,@SECOND PRINT 1</pre>	<p style="text-align: center;">@SECOND 59</p>

See Also

@YEAR, @MONTH, @DATE, @DAY, @HOUR, @MINUTE

12.16 _MODEL\$

Description

This variable can be read only. It includes the information of printer's model name.

Syntax

_MODEL\$

Example

Sample code

```
SIZE 4,1
GAP 0,0
DIRECTION 1
CLS
TEXT 10,10, "3",0,1,1, "Model: " + _MODEL$
TEXT 10,60, "3",0,1,1, "Serial No.: " + _SERIAL$
TEXT 10,110, "3",0,1,1, "F/W Version: " + _VERSION$
PRINT 1
```

Result

```
Model:*****
Serial No.:*****
F/W Version:*.**
```

See Also

_SERIAL\$, _VERSION\$

12.17 _SERIAL\$

Description

This variable can be read only. It includes the information of the printer's serial number.
The printer's serial number must be programmed into the printer at factory.

Syntax

_SERIAL\$

Example

Sample code

```
SIZE 4,1
GAP 0,0
DIRECTION 1
CLS
TEXT 10,10, "3",0,1,1, "Model: " + _MODEL$
TEXT 10,60, "3",0,1,1, "Serial No.: " + _SERIAL$
TEXT 10,110, "3",0,1,1, "F/W Version: " + _VERSION$
PRINT 1
```

Result

```
Model:*****
Serial No.:*****
F/W Version:*.**
```

See Also

_MODEL\$, _VERSION\$

12.18 _VERSION\$

Description

This variable can be read only. It includes the information of the printer's firmware version.

Syntax

_VERSION\$

Example

Sample code

```
SIZE 4,1
GAP 0,0
DIRECTION 1
CLS
TEXT 10,10, "3",0,1,1, "Model: " + _MODEL$
TEXT 10,60, "3",0,1,1, "Serial No.: " + _SERIAL$
TEXT 10,110, "3",0,1,1, "F/W Version: " + _VERSION$
PRINT 1
```

Result

```
Model:*****
Serial No.:*****
F/W Version:*.**
```

See Also

_MODEL\$, _SERIAL\$

13 Bluetooth Module Setting Commands

13.1 BT NAME

Description

Set the Bluetooth module name (Max.15 byte).

Syntax

```
BT NAME "name"
```

Note:

To check the updated name, send the **SELFTEST BT** command.

Example

Sample code	Result (RJ-2035B)
<pre>BT NAME "BROTHER01" SELFTEST BT</pre>	<pre>----- BT SETTING ----- MAC ADDR: 3481F46CFFD3 NAME: BROTHER01 PIN CODE: 1234 PAIR MODE: SSP_JUSTWORK BT MODULE: BM78 MF1 MFi SUPPORTED: YES LINK BACK: YES -----</pre>

13.2 BT PINCODE

Description

Set the Bluetooth module PIN code (Max.15 byte).

Syntax

```
BT PINCODE "pincode"
```

Note:

To check the updated PIN code, send the **SELFTEST BT** command.

Example

Sample code	Result (RJ-2035B)
<pre>BT PINCODE "1234" SELFTEST BT</pre>	<pre>----- BT SETTING ----- MAC ADDR: 3481F46CFFB3 NAME: BROTHER01 PIN CODE: 1234 PAIR MODE: LEGACY BT MODULE: BM78 MF1 MFi SUPPORTED: YES LINK BACK: YES -----</pre>

13.3 BT MODE

Description

Enable or disable the Bluetooth Low Energy (BLE) mode.

Syntax

- **Enable Bluetooth Low Energy (BLE)**

[TD-4650TNWB/TD-4750TNWB/TD-4650TNWBR/TD-4750TNWBR/RJ-2055WB/RJ-3055WB/TJ-4420TN/TJ-4520TN/TJ-4620TN/TJ-4422TN/TJ-4522TN]

Send the following commands.

```
BT MODE "BT4.0"  
WLAN MODULE SAVECFG  
DELAY 30000  
INITIALPRINTER
```

Wait for about 30 seconds for the printer to restart automatically.

[RJ-2035B/RJ-3035B]

Send the command below.

```
BT MODE BT4.0  
SET BTLINKBACK OFF
```

Wait for about 15 seconds for the printer to restart automatically.

When BLE is enabled, the automatic Bluetooth reconnection between your iOS/Android OS device and the printer will be disabled.

- **Disable Bluetooth Low Energy (BLE)**

[TD-4650TNWB/TD-4750TNWB/TD-4650TNWBR/TD-4750TNWBR/RJ-2055WB/RJ-3055WB/TJ-4420TN/TJ-4520TN/TJ-4620TN/TJ-4422TN/TJ-4522TN]

Send the following commands.

```
BT MODE "BT2.1"  
WLAN MODULE SAVECFG  
DELAY 30000  
INITIALPRINTER
```

Wait for about 30 seconds for the printer to restart automatically.

[RJ-2035B/RJ-3035B]

To enable the automatic Bluetooth reconnection between your iOS/Android OS device and the printer:

```
BT MODE BT2.1  
SET BTLINKBACK ON
```

Wait for about 15 seconds for the printer to restart automatically.

To disable the automatic Bluetooth reconnection between your iOS/Android OS device and the printer:

BT MODE BT2.1

Restart the printer.

Note:

[TD-4650TNWB/TD-4750TNWB/TD-4650TNWBR/TD-4750TNWBR/RJ-2055WB/RJ-3055WB/TJ-4420TN/TJ-4520TN/TJ-4620TN/TJ-4422TN/TJ-4522TN]

- Make sure you use the latest firmware version to enable Bluetooth Low Energy (BLE).
- Check whether the Bluetooth/Wi-Fi modules current firmware supports BLE (5.2.1.0R5 or later).

[RJ-2035B/RJ-3035B]

- When BLE is enabled, the automatic Bluetooth reconnection between your iOS/Android OS device and the printer will be disabled.
- Update the firmware to the latest one to use the automatic Bluetooth reconnection feature.

13.4 SET BTLINKBACK

Description

Enable or disable the automatic Bluetooth reconnection feature of iOS/Android OS device. (MFi-compatible models only) If the reconnection feature is enabled, previously connected iOS/Android OS device will be reconnected automatically.

Syntax

- **Enable the automatic Bluetooth reconnection feature (Default)**

```
SET BTLINKBACK ON
```

- **Disable the automatic Bluetooth reconnection feature**

Disable the automatic Bluetooth reconnection feature to prevent any previously paired iOS/Android OS devices from automatically connecting to the printer:

```
SET BTLINKBACK OFF
```

Note:

- If the printer firmware version is B1.00.Q33 or later, the printer can use the automatic Bluetooth reconnection feature (only available with RJ-2035B or RJ-3035B).
- When BLE is enabled, the automatic Bluetooth reconnection between your iOS/Android OS device and the printer will be disabled (For more information, see **BT MODE** command).

14 Wi-Fi Module Setting Commands

14.1 WLAN SSID

Description

Set the SSID of your wireless network into Wi-Fi module.

Syntax

```
WLAN SSID "ssid"
```

<u>Parameter</u>	<u>Description</u>
ssid	SSID (name of your wireless network)

Note:

SSID is case-sensitive. The maximum length is 32 bytes.

1. Type the **WLAN SSID** command.
2. Type the **DELAY** command to set the wait time to 30 seconds and then type the **SOUND** command to make a beep sound.
3. Send the commands to the printer.

Example:

```
WLAN SSID "TEST-AP"  
DELAY 30000  
SOUND 5,400
```

4. Wait for about 30 seconds for the printer to beep. If you hear the beep, restart the printer.

Note:

To check the setting, print a Wi-Fi configuration page using the **SELFTEST WLAN** command.

<pre>SELFTEST WLAN</pre>	<pre>----- Wi-Fi SETTING ----- APP VERSION: 4.6.1.0R7 MAC ADDRESS: [REDACTED] Region: Japan SSID: TEST-AP DHCP ENABLED: NO IP ADDRESS: 0.0.0.0 SUBNET MASK: 0.0.0.0 GATEWAY: 0.0.0.0 PRINTER NAME: [REDACTED] RAW PORT: 9100 -----</pre>
--------------------------	--

14.2 WLAN WPA

Description

Disable the WPA security mode or set the password (network key).

Syntax

```
WLAN WPA OFF  
WLAN WPA "key"
```

<u>Parameter</u>	<u>Description</u>
OFF	Disable WPA security mode.
Key	Network security key. 8 to 63 characters. Key = Passphrase or Pre-Shared Key (Passphrase is a string containing between 8 and 63 characters) (Pre-Shared Key is a 32-byte key, formatted as hexadecimal number)

Example

1. Type the **WLAN WPA** command.
2. Type the **DELAY** command to set the wait time to 30 seconds and then type the **SOUND** command to make a beep sound.
3. Send the commands to the printer.

Example:

```
WLAN WPA OFF  
WLAN WPA "123456789"  
DELAY 30000  
SOUND 5,400
```

4. Wait for about 30 seconds for the printer to beep. If you hear the beep, restart the printer.

14.3 WLAN WEP

Description

Disable the WEP security mode or set the password (Encryption key).

Syntax

```
WLAN WEP OFF
```

```
WLAN WEP n, "key"
```

<u>Parameter</u>	<u>Description</u>
OFF	Disable WEP security mode.
N	WEP KEY: 1 - 4
Key	Encryption key: 5 or 13 characters or 10 or 26 hexadecimal digits

1. Type the **WLAN WEP** command.
2. Type the **DELAY** command to set the wait time to 30 seconds and then type the **SOUND** command to make a beep sound.
3. Send the commands to the printer.

Example:

```
WLAN WEP OFF
WLAN WEP 1, "ABCDE"
WLAN WEP 2, "ABCDE"
WLAN WEP 3, "ABCDE"
WLAN WEP 4, "4142434445"
DELAY 30000
SOUND 5,400
```

4. Wait for about 30 seconds for the printer to beep. If you hear the beep, restart the printer.

14.4 WLAN DHCP

Description

Set the printer to get the IP address from DHCP server.

Syntax

WLAN DHCP

1. Type the **WLAN DHCP** command.
2. Type the **DELAY** command to set the wait time to 30 seconds and then type the **SOUND** command to make a beep sound.
3. Send the commands to the printer.

Example:

```
WLAN SSID "TEST-AP"  
WLAN WPA "123456789"  
WLAN DHCP  
WLAN PORT 9100  
DELAY 30000  
SOUND 5,400
```

4. Wait for about 30 seconds. If you hear the beep, restart the printer.

Note:

To check the setting, print a Wi-Fi configuration page using the **SELFTEST WLAN** command.

SELFTEST WLAN	<pre>----- Wi-Fi SETTING ----- APP VERSION: 4.6.1.0R7 MAC ADDRESS: [REDACTED] Region: Japan SSID: TEST-AP DHCP ENABLED: YES IP ADDRESS: 10.0.10.138 SUBNET MASK: 255.255.255.0 GATEWAY: 10.0.10.252 PRINTER NAME: [REDACTED] RAW PORT: 9100 -----</pre>
---------------	---

See Also

WLAN IP

14.5 WLAN IP

Description

Set the specific static IP address to the printer.

Syntax

```
WLAN IP "ip", "mask", "gateway"
```

<u>Parameter</u>	<u>Description</u>
ip	IP address
Mask	Subnet mask
Gateway	Default gateway

1. Type the **WLAN IP** command.
2. Type the **DELAY** command to set the wait time to 30 seconds and then type the **SOUND** command to make a beep sound.
3. Send the commands to the printer.

Example:

```
WLAN SSID "TEST-AP"  
WLAN WPA "123456789"  
WLAN IP "10.0.10.138", 255.255.255.0", 10.0.10.252"  
WLAN PORT 9100  
DELAY 30000  
SOUND 5,400
```

4. Wait for about 30 seconds. If you hear the beep, restart the printer.

Note:

To check the setting, print a Wi-Fi configuration page using the **SELFTEST WLAN** command.

<pre>SELFTEST WLAN</pre>	<pre>----- Wi-Fi SETTING ----- APP VERSION: 4.6.1.0R7 MAC ADDRESS: [REDACTED] Region: Japan SSID: TEST-AP DHCP ENABLED: NO IP ADDRESS: 10.0.10.138 SUBNET MASK: 255.255.255.0 GATEWAY: 10.0.10.252 PRINTER NAME: [REDACTED] RAW PORT: 9100 -----</pre>
--------------------------	--

See Also

WLAN DHCP

14.6 WLAN PORT

Description

Specify the PORT number of Wi-Fi module.

Syntax

WLAN PORT number

<u>Parameter</u>	<u>Description</u>
number	Base raw port number. Default is 9100.

1. Type the **WLAN PORT** command.
2. Type the **DELAY** command to set the wait time to 30 seconds and then type the **SOUND** command to make a beep sound.
3. Send the commands to the printer.

Example:

```
WLAN SSID "TEST-AP"  
WLAN WPA "123456789"  
WLAN IP "10.0.10.138", "255.255.255.0", "10.0.10.252"  
WLAN PORT 8000  
DELAY 30000  
SOUND 5,400
```

4. Wait for about 30 seconds for the printer to beep. If you hear the beep, restart the printer.

Note:

To check the setting, print a Wi-Fi configuration page using the **SELFTTEST WLAN** command.

SELFTTEST WLAN	<pre>----- Wi-Fi SETTING ----- APP VERSION: 4.6.1.0R7 MAC ADDRESS: [REDACTED] Region: Japan SSID: TEST-AP DHCP ENABLED: NO IP ADDRESS: 10.0.10.138 SUBNET MASK: 255.255.255.0 GATEWAY: 10.0.10.252 PRINTER NAME: [REDACTED] RAW PORT: 8000 -----</pre>
----------------	--

14.7 WLAN THROUGH

Description

Set the printer's network interface to Wi-Fi/Bluetooth for TJ-4420TN, TJ-4520TN, TJ-4620TN, TJ-4422TN and TJ-4522TN. These printers cannot use a Wired LAN and a Wi-Fi/Bluetooth connection at the same time. Enable the network connection type you want to use.

Syntax

WLAN THROUGH

- **Enable Wi-Fi/Bluetooth and disable Ethernet.**

Send the following commands.

```
WLAN THROUGH
```

The printer restarts automatically.

- **Enable Ethernet and disable Wi-Fi/Bluetooth.**

Send the following commands.

```
NET THROUGH
```

The printer restarts automatically.

See Also

NET THROUGH

15 Internal Ethernet Setting Commands

15.1 NET DHCP

Description

Set the printer to get the IP address from DHCP server. The printer will restart itself while setting this command.

Syntax

NET DHCP

Example

Sample code	Result
<pre>NET DHCP SELFTEST ETHERNET</pre>	<pre>----- ETHERNET SETTING ----- NAME: XXXXXX MAC ADDR: XXXXXX DHCP: ON IP ADDR: 192.168.0.107 SUBNET: 255.255.255.0 GATEWAY: 192.168.0.1 PORT: 9100 -----</pre>

See Also

NET IP

15.2 NET IP

Description

Set the specific IP address to the printer. The printer will restart automatically.

Syntax

```
NET IP "ip","mask","gateway"
```

<u>Parameter</u>	<u>Description</u>
ip	IP address
mask	Subnet mask
gateway	Default gateway

Example

Sample code
<pre>NET IP "192.168.10.40","255.255.255.0","192.168.10.252" SELFTEST ETHERNET</pre>
Result
<pre>----- ETHERNET SETTING ----- NAME : XXXXXX MAC ADDR : XXXXXX DHCP : OFF IP ADDR : 192.168.10.40 SUBNET : 255.255.255.0 GATEWAY : 192.168.10.252 PORT : 9100 -----</pre>

See Also

NET DHCP

15.3 NET PORT

Description

Specify the PORT number of Ethernet. The printer will restart automatically.

Syntax

NET PORT number

<u>Parameter</u>	<u>Description</u>
number	Base raw port number. Default is 9100.

Example

Sample code	Result
<pre>NET PORT 9100 SELFTEST ETHERNET</pre>	<pre>----- ETHERNET SETTING ----- NAME: XXXXXX MAC ADDR: XXXXXX DHCP: OFF IP ADDR: 192.168.10.40 SUBNET: 255.255.255.0 GATEWAY: 192.168.10.252 PORT: 9100 -----</pre>

15.4 NET NAME

Description

Set the printer server name.

Syntax

```
NET NAME "printerserver"
```

<u>Parameter</u>	<u>Description</u>
printerserver	The specific name of printer server.

Example

Sample code	Result
<pre>NET NAME "TEST" SELFTEST ETHERNET</pre>	<pre>----- ETHERNET SETTING ----- NAME: TEST MAC ADDR: XXXXXX DHCP: OFF IP ADDR: 192.168.10.40 SUBNET: 255.255.255.0 GATEWAY: 192.168.10.252 PORT: 9100 -----</pre>

15.5 NET THROUGH

Description

Set the printer's network interface to Ethernet for TJ-4420TN, TJ-4520TN, TJ-4620TN, TJ-4422TN and TJ-4522TN. These printers cannot use an Ethernet and a Wi-Fi/Bluetooth connection at the same time. Enable the network connection type you want to use.

Syntax

NET THROUGH

- **Enable Ethernet and disable Wi-Fi/Bluetooth.**

Send the following commands.

```
NET THROUGH
```

The printer restarts automatically.

- **Enable Wi-Fi/Bluetooth and disable Ethernet.**

Send the following commands.

```
WLAN THROUGH
```

The printer restarts automatically.

See Also

WLAN THROUGH

16 Setting Commands for RJ-2035B/2055WB/3035B/3055WB

16.1 SET PRINTQUALITY

Description

Set the print mode (print quality) for RJ-2035B/2055WB/3035B/3055WB.

Syntax

```
SET PRINTQUALITY DRAFT/STANDARD/OPTIMUM
```

<u>Parameter</u>	<u>Description</u>
DRAFT	High print speed with lower density
STANDARD	Standard print speed and quality
OPTIMUM	According to the label content such as barcode, text, and graphic to lower the print speed for getting higher print quality

Note:

The default value is STANDARD.

Example

Sample code

```
SET PRINTQUALITY DRAFT
SET PRINTQUALITY STANDARD
SET PRINTQUALITY OPTIMUM
```

16.2 SET STANDBYTIME

Description

Set the standby time for RJ-2035B/2055WB/3035B/3055WB. The battery LED indicators will automatically turn off if it is not used for the specified time period.

Syntax

```
SET STANDBYTIME OFF/XXXXX
```

<u>Parameter</u>	<u>Description</u>
OFF	Disable
XXXXX	0 ~ 625534 (seconds)

Note:

The default value is 120.

Example

Sample code

```
SET STANDBYTIME OFF  
SET STANDBYTIME 480
```

16.3 SET SLEEPTIME

Description

Set the sleep time for RJ-2035B/2055WB/3035B/3055WB. The printer will automatically power off if it is not used for the specified time period.

Syntax

```
SET SLEEPTIME OFF/XXXXX
```

<u>Parameter</u>	<u>Description</u>
OFF	Disable
XXXXX	0 ~ 65534 (minutes)

Note:

The default value is 30.

Example

Sample code

```
SET SLEEPTIME OFF  
SET SLEEPTIME 20
```

17 RFID

17.1 RFID READ / RFID WRITE

Description

Read/Write to an RFID tag.

IMPORTANT:

- Always test RFID media on your printer before purchasing large quantities of media.
- Perform Media Calibration before RFID Calibration. Make sure you correctly install the ribbon (Thermal transfer only) and the label roll.
- For more information, see *User's Guide* on your model's **Manual** page at support.brother.com.

Syntax

RFID READ, A, B, C, D, E, "Read Data:"

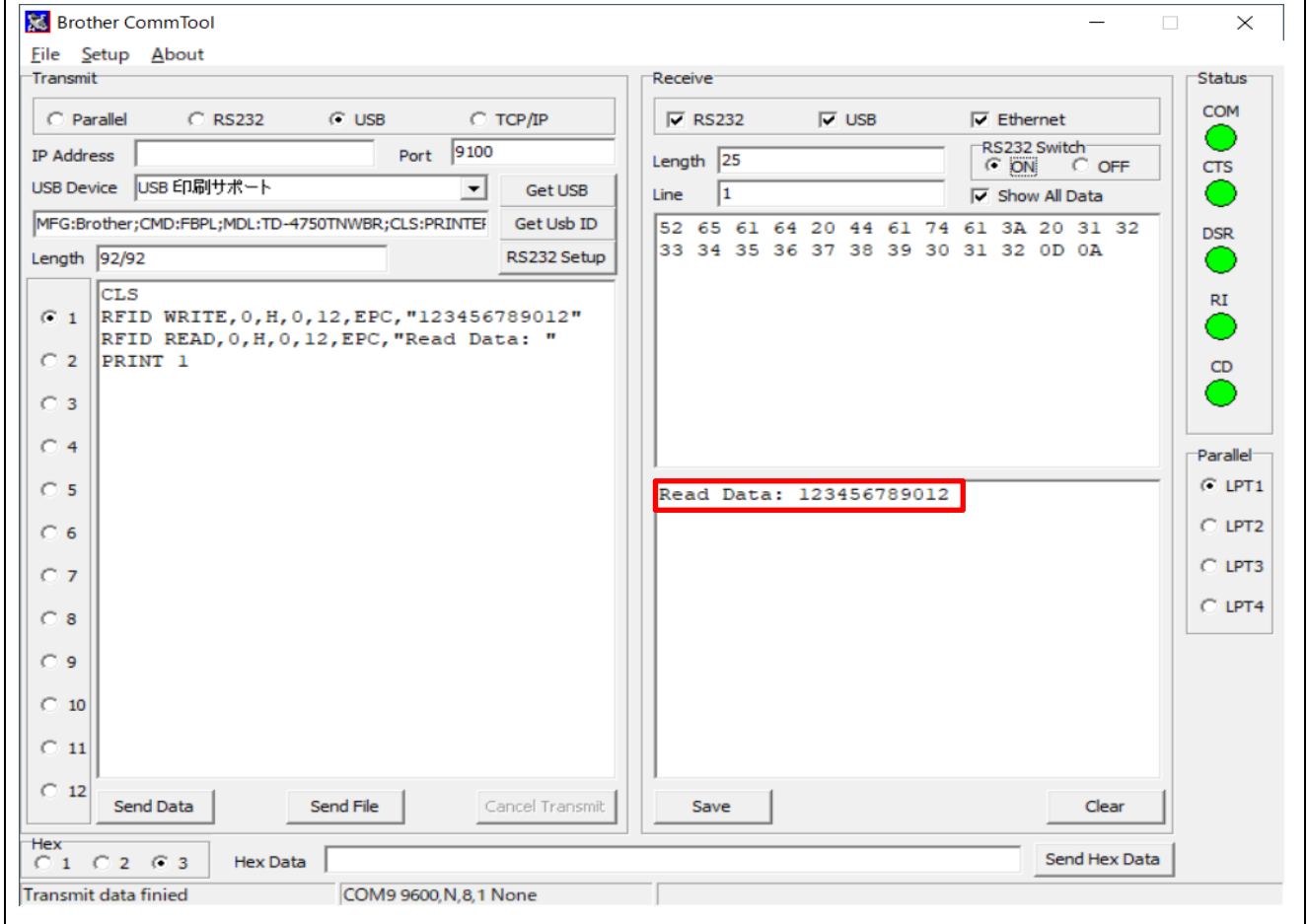
RFID WRITE, A, B, C, D, E, data

Parameter	Description				
RFID READ RFID WRITE	READ = read the tag WRITE = write data to the RFID tag				
A	<table border="1"> <tr> <td>READ only</td> <td>0 = read without unlocking 1 to FFFFFFFF in hex = <u>read and unlock</u> the data block so it can be overwritten later</td> </tr> <tr> <td>WRITE only</td> <td>0 = write without locking 1 to FFFFFFFF in hex = <u>write and lock</u> the data block to prevent it from being overwritten IMPORTANT: Using the letter "P" as the first letter of your password results in a permanent lock that you cannot override. Start the password with "P" only if you want to lock the RFID tag permanently.</td> </tr> </table>	READ only	0 = read without unlocking 1 to FFFFFFFF in hex = <u>read and unlock</u> the data block so it can be overwritten later	WRITE only	0 = write without locking 1 to FFFFFFFF in hex = <u>write and lock</u> the data block to prevent it from being overwritten IMPORTANT: Using the letter "P" as the first letter of your password results in a permanent lock that you cannot override. Start the password with "P" only if you want to lock the RFID tag permanently.
READ only	0 = read without unlocking 1 to FFFFFFFF in hex = <u>read and unlock</u> the data block so it can be overwritten later				
WRITE only	0 = write without locking 1 to FFFFFFFF in hex = <u>write and lock</u> the data block to prevent it from being overwritten IMPORTANT: Using the letter "P" as the first letter of your password results in a permanent lock that you cannot override. Start the password with "P" only if you want to lock the RFID tag permanently.				
B	Format of the field data A = ASCII H = Hex				
C	Specifies 0.				
D Size	Read /Write data size from 1 to n in decimal numbers Note: - When using WRITE , if the "size" is larger than the "data", it will be padded with 0 in front of the data to read. - When using READ , if the "size" is larger than the WRITE "data", it will be padded with 0 in back of the data to read. - Refer to the Sample code (3) .				
E Memory bank	EPC - EPC area TID - Tag Identification area (RFID READ only) USR - User area ACS - Access code area KIL - Kill code area PC - Protocol Control (PC) area - Each memory bank's maximum memory capacity differs, based on the RFID tag.				
"Read Data:" or data	READ = [prompt of data] WRITE = Contents of data string Note: - RFID WRITE supported "string" or basic variable (for example: VAR\$) - [] = Optional parameter				

Example

Sample code (1)

```
CLS  
RFID WRITE,0,H,0,12,EPC,"123456789012"  
RFID READ,0,H,0,12,EPC,"Read Data: "  
PRINT 1
```



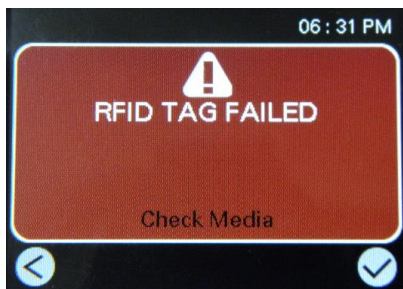
Sample code (2)

This programming example writes a data with lock password into an RFID tag and reads the written data with a prompt.

```
CLS
RFID WRITE,1234,H,0,8,EPC,"20191008"
RFID READ,0,H,0,8,EPC,"Date: "
PRINT 1
```

Note:

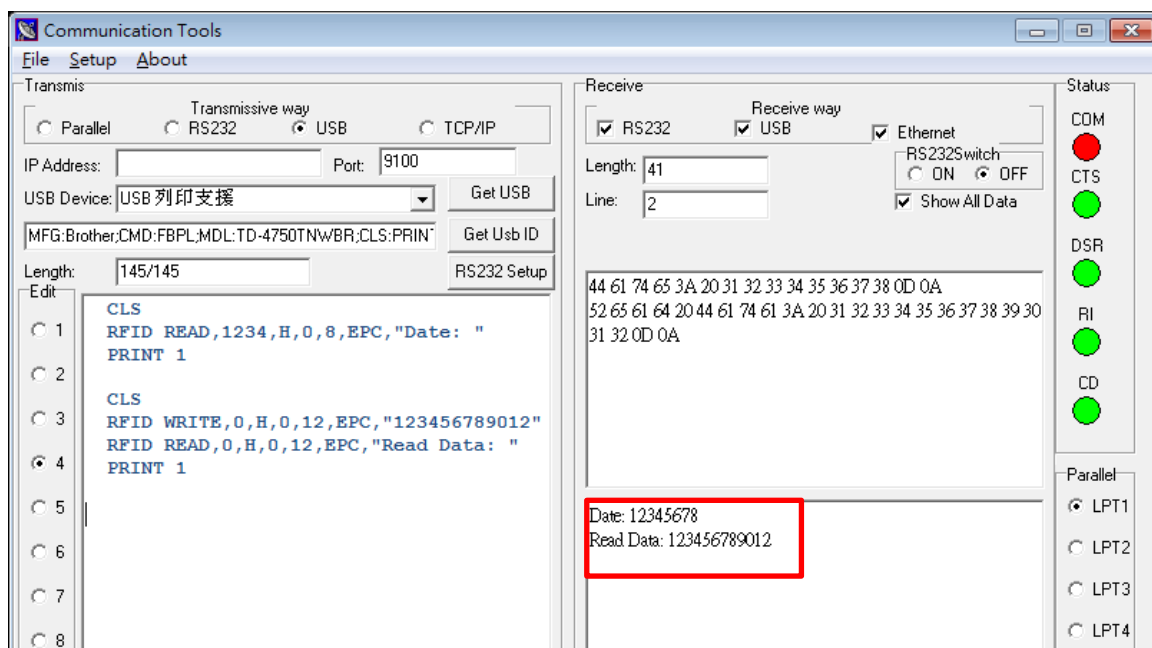
For this locked RFID tag, it cannot be overwritten data without using **RFID READ** unlock password command. If you re-send the **RFID WRITE** command, the printer LCD will be shown as below,



To overwrite this locked tag, use **RFID READ** unlock command as following programming example, to unlock password for the RFID tag so it can be overwritten later.

```
CLS
RFID READ,1234,H,0,8,EPC,"Date: "
PRINT 1
```

```
CLS
RFID WRITE,0,H,0,12,EPC,"123456789012"
RFID READ,0,H,0,12,EPC,"Read Data: "
PRINT 1
```

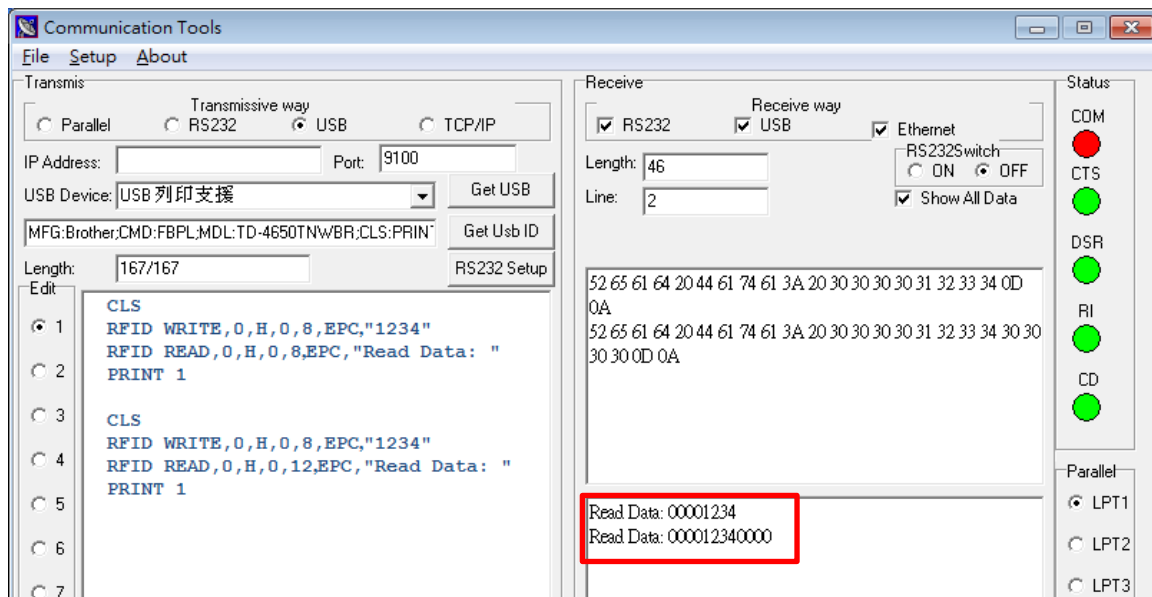


Sample code (3)

When using **WRITE**, if the "size" is larger than the "data", it will be padded with 0 in front of the data to read. When using **READ**, if the "size" is larger than the **WRITE** "data", it will be padded with 0 in back of the data to read.

```
CLS
RFID WRITE,0,H,0,8,EPC,"1234"
RFID READ,0,H,0,8,EPC,"Read Data: "
PRINT 1
```

```
CLS
RFID WRITE,0,H,0,8,EPC,"1234"
RFID READ,0,H,0,12,EPC,"Read Data: "
PRINT 1
```



Sample code (4)

This programming example changes PC (Protocol Control) bits.

Note:

Make sure you use the correct firmware version to set the PC bits.

Model	Firmware Version
TD-4650TNWBR / TD-4750TNWBR	V1.04.S21 or later
TJ-4021TNR / TJ-4121TNR	B2.12.S27 or later

```
CLS
RFID WRITE,0,H,0,4,PC,"15A3"
RFID WRITE,0,H,0,8,EPC,"12345678"
RFID WRITE,0,H,0,4,USR,"FE00"
RFID READ,0,H,0,4,PC,"PC: "
RFID READ,0,H,0,8,EPC,"EPC: "
RFID READ,0,H,0,4,USR,"USR: "
PRINT 1
```

The screenshot shows the Brother CommTool software interface. The 'Transmit' window on the left contains the sample code from the previous block. The 'Receive' window on the right shows the received data in hexadecimal and ASCII. The ASCII data is highlighted with a red box, showing the results of the RFID commands: 'PC: 15A3', 'EPC: 12345678', and 'USR: FE00'. The status panel on the right shows the COM port status (COM, CTS, DSR, RI, CD) and the parallel port status (LPT1, LPT2, LPT3, LPT4).

Brother CommTool

File Setup About

Transmit

Parallel RS232 USB TCP/IP

IP Address Port 9100

USB Device USB 印刷サポ-ト Get USB

MFG:Brother;CMD:FBPL;MDL:TD-4750TNWBR;CLS:PRINTE Get Usb ID

Length 201/201 RS232 Setup

1 CLS
2 RFID WRITE,0,H,0,4,PC,"15A3"
3 RFID WRITE,0,H,0,8,EPC,"12345678"
4 RFID WRITE,0,H,0,4,USR,"FE00"
5 RFID READ,0,H,0,4,PC,"PC: "
6 RFID READ,0,H,0,8,EPC,"EPC: "
7 RFID READ,0,H,0,4,USR,"USR: "
8 PRINT 1

Receive

RS232 USB Ethernet

Length 36 RS232 Switch ON OFF

Line 3 Show All Data

50 43 3A 20 31 35 41 33 0D 0A
45 50 43 3A 20 31 32 33 34 35 36 37 38
0D 0A
55 53 52 3A 20 46 45 30 30 0D 0A

PC: 15A3
EPC: 12345678
USR: FE00

Status

COM
CTS
DSR
RI
CD

Parallel

LPT1
LPT2
LPT3
LPT4

Send Data Send File Cancel Transmit Save Clear

Hex 1 2 3 Hex Data Send Hex Data

Transmit data finied COM9 9600,N,8,1 None

Sample code (5)

This example shows how to apply a permanent lock.

```
CLS  
RFID WRITE,P12345678,H,0,8,EPC,"11111111"  
PRINT 1
```

Note:

Permanent lock for EPC memory is available on these models:

- TD-4650TNWBR, TD-4750TNWBR: firmware version V1.04 S116 or later
- TJ-4021TNR, TJ-4121TNR: firmware version B2.12.S112 or later

17.2 RFIDDETECT

Description

Perform RFID calibration.

18 General purpose input output (GPIO) Setting Commands

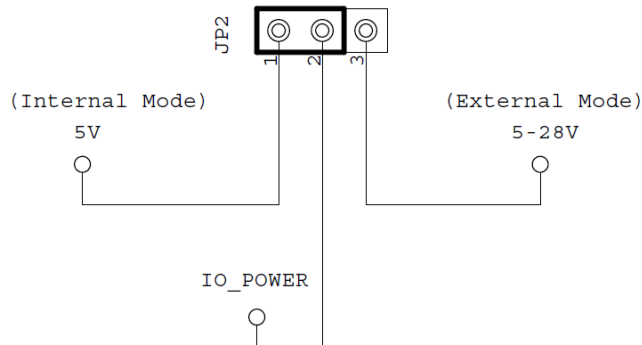
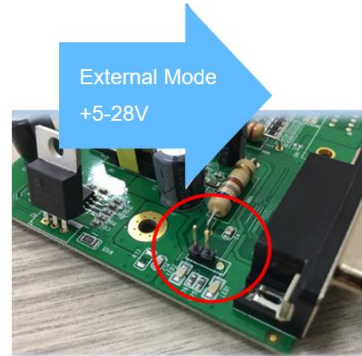
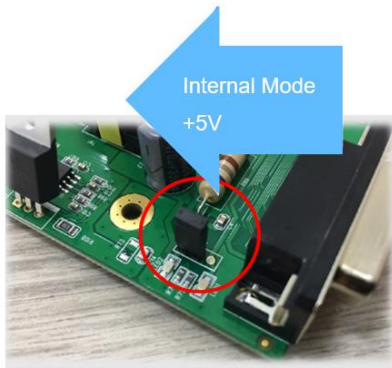
18.1 Before Using GPIO

Internal and External Mode (JP2)

- The default setting is the internal mode. To use the external mode, contact your sales representative before your purchase.
- The voltage level of Pin 2 should be limited to +5V-28V in the external mode to prevent damage to the PCB.

Internal Mode (Default)
IO power is set to 5V.

External Mode
IO power is set to the voltage level you input to Pin 2.



- Make sure you have installed the correct firmware version to use the GPIO function. Use **SET GPO** command and **SET GPI** command to control the GPIO.

Model	Firmware Version
TJ-4420TN/4520TN/4620TN/4422TN/4522TN	B1.17.S54 or later
TJ-4020TN/4021TN/4021TNR/4120TN/4121TN/4121TNR	B2.12.S47 or later

18.2 SET GPO

Description

Send out an electrical signal from the printer when detecting the specified printer status.

Syntax

`SET GPOn signal state, delay0, pulse0, delay1, pulse1, function condition`

<u>Parameter</u>	<u>Description</u>								
n	Pin number ($n = 1 - 7$) Select from the seven GPO pins.								
signal state	<table border="1"> <tbody> <tr> <td>HIGH</td> <td>Output a high-level signal when detecting the function conditions listed below.</td> </tr> <tr> <td>LOW</td> <td>Output a low-level signal when detecting the function conditions listed below.</td> </tr> <tr> <td>POS</td> <td>Output a positive pulse signal when detecting the function conditions listed below.</td> </tr> <tr> <td>NEG</td> <td>Output a negative pulse signal when detecting the function conditions listed below.</td> </tr> </tbody> </table>	HIGH	Output a high-level signal when detecting the function conditions listed below.	LOW	Output a low-level signal when detecting the function conditions listed below.	POS	Output a positive pulse signal when detecting the function conditions listed below.	NEG	Output a negative pulse signal when detecting the function conditions listed below.
HIGH	Output a high-level signal when detecting the function conditions listed below.								
LOW	Output a low-level signal when detecting the function conditions listed below.								
POS	Output a positive pulse signal when detecting the function conditions listed below.								
NEG	Output a negative pulse signal when detecting the function conditions listed below.								
delay0	After detecting one of the function conditions listed below, the printer will wait for this period of time before sending out the "true" output signal. (Unit: millisecond, Maximum: 32000)								
pulse0	Pulse width corresponding to one of the function conditions listed below, becoming "true". (Unit: millisecond, Maximum: 32000)								
delay1	After detecting one of the function conditions listed below, the printer will wait for this period of time before sending out the "false" output signal. (Unit: millisecond, Maximum: 32000)								
pulse1	Pulse width corresponding to one of the function conditions listed below, becoming "false". (Unit: millisecond, Maximum: 32000)								

function
condition
(warning,
error,
control...)

FAULT RIBBON	Ribbon error
FAULT PAPER	Paper jam or no paper
FAULT CARRIAGE	Print head unit is open
FAULT MEMORY	Memory full
FAULT CUTTER	Cutter error
FAULT OVERHEAT	Stepping motor or print head has overheated
TAKELABEL	Label taken
PAUSE	The printer's operations are paused
IDLE	Printer in idle mode
PRINT	Printing in progress
FAULT	Printer errors other than the errors listed above

Example

Sample code (1)

```
SET GPO1 HIGH,100,0,100,0,FAULT RIBBON  
SET GPO2 LOW,100,0,100,0,FAULT PAPER  
SET GPO3 POS,100,100,100,100,PAUSE  
SET GPO4 NEG,100,50,100,50,IDLE
```

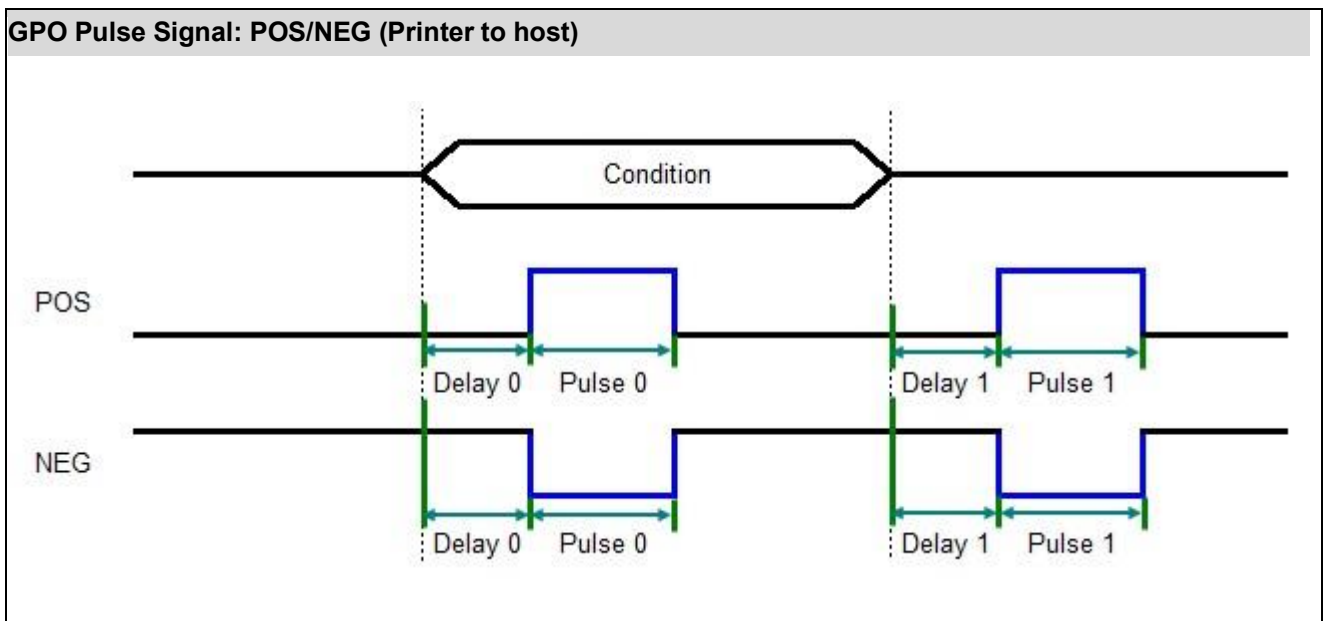
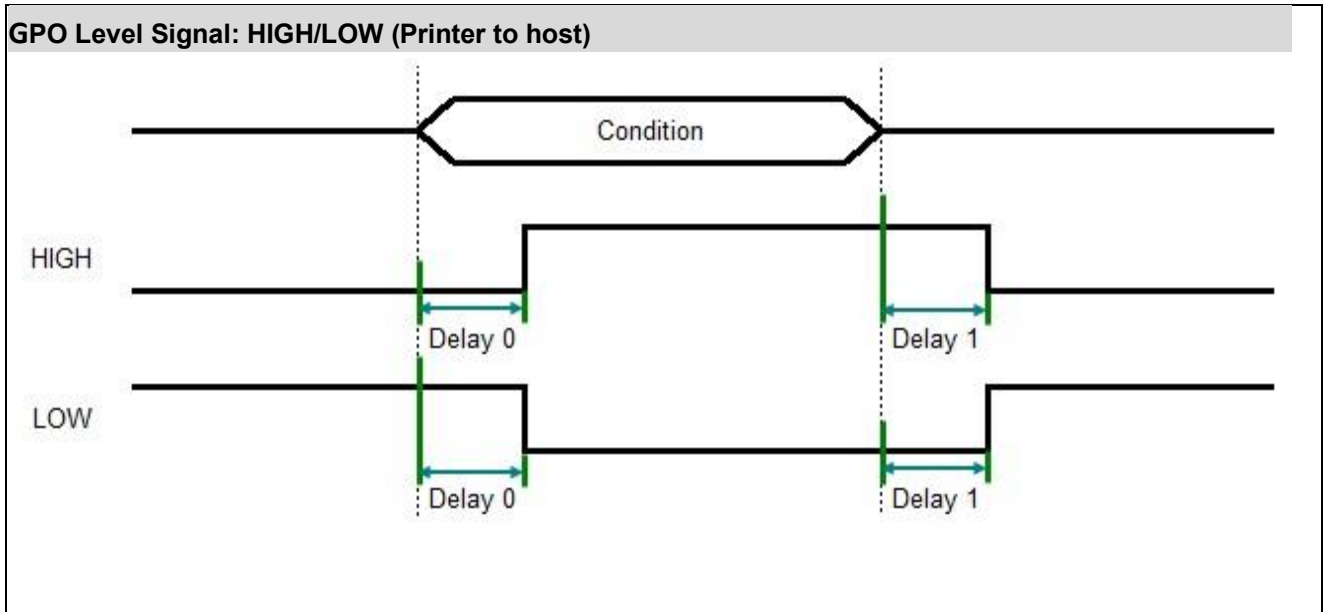
Sample code (2)

```
SET GPO1 HIGH,100,0,100,0,IDLE  
SET GPO2 LOW,100,0,100,0,FAULT CARRIAGE
```

See also

SET GPI

Time Chart



18.3 SET GPI

Description

Control the printer using an electrical signal from an external device.

Syntax

SET GPI n signal, pulse, function

Parameter	Description																						
n	Pin number (n = 1 - 4) Select from the four GPI pins.																						
signal state	<table border="1"> <tbody> <tr> <td>HIGH</td> <td>Activate one of the functions listed below when receiving a high-level signal</td> </tr> <tr> <td>LOW</td> <td>Activate one of the functions listed below when receiving a low-level signal</td> </tr> <tr> <td>POS</td> <td>Activate one of the functions listed below when receiving a positive pulse signal</td> </tr> <tr> <td>NEG</td> <td>Activate one of the functions listed below when receiving a negative pulse signal</td> </tr> </tbody> </table>	HIGH	Activate one of the functions listed below when receiving a high-level signal	LOW	Activate one of the functions listed below when receiving a low-level signal	POS	Activate one of the functions listed below when receiving a positive pulse signal	NEG	Activate one of the functions listed below when receiving a negative pulse signal														
HIGH	Activate one of the functions listed below when receiving a high-level signal																						
LOW	Activate one of the functions listed below when receiving a low-level signal																						
POS	Activate one of the functions listed below when receiving a positive pulse signal																						
NEG	Activate one of the functions listed below when receiving a negative pulse signal																						
pulse	Pulse width threshold. The printer will ignore the signal when the pulse width is less than the specified threshold. (Unit: millisecond, Maximum: 32000)																						
function	<table border="1"> <tbody> <tr> <td>PAUSE</td> <td>Toggle pause</td> </tr> <tr> <td>PAUSE ON</td> <td>Enable pause</td> </tr> <tr> <td>PAUSE OFF</td> <td>Cancel pause</td> </tr> <tr> <td>PRINT</td> <td>Reprint the last label. After turning the power off, the last print job data will be deleted</td> </tr> <tr> <td>PRINT n</td> <td>Reprint a specified number (n) of labels. After turning the power off, the last print job data will be deleted (Maximum: 32000)</td> </tr> <tr> <td>CANCELALL_PAUSE</td> <td>Cancel all remaining jobs. If you cancel all remaining jobs when the printer is paused, the pause, as well as all the jobs, will be cancelled. The LCD will return to the home screen.</td> </tr> <tr> <td>CUT</td> <td>Cut label immediately</td> </tr> <tr> <td>FEED n</td> <td>Feed a specified number (n) of dots (Maximum: 32000)</td> </tr> <tr> <td>BACKFEED n</td> <td>Back-feed a specified number (n) of dots (Maximum: 32000)</td> </tr> <tr> <td>FORMFEED</td> <td>Feed a blank label</td> </tr> <tr> <td>INPUT n</td> <td>Trigger an action by replacing n with a BAS file name and add CHR\$(13)+CHR\$(10) after the file name as a line break</td> </tr> </tbody> </table>	PAUSE	Toggle pause	PAUSE ON	Enable pause	PAUSE OFF	Cancel pause	PRINT	Reprint the last label. After turning the power off, the last print job data will be deleted	PRINT n	Reprint a specified number (n) of labels. After turning the power off, the last print job data will be deleted (Maximum: 32000)	CANCELALL_PAUSE	Cancel all remaining jobs. If you cancel all remaining jobs when the printer is paused, the pause, as well as all the jobs, will be cancelled. The LCD will return to the home screen.	CUT	Cut label immediately	FEED n	Feed a specified number (n) of dots (Maximum: 32000)	BACKFEED n	Back-feed a specified number (n) of dots (Maximum: 32000)	FORMFEED	Feed a blank label	INPUT n	Trigger an action by replacing n with a BAS file name and add CHR\$(13)+CHR\$(10) after the file name as a line break
PAUSE	Toggle pause																						
PAUSE ON	Enable pause																						
PAUSE OFF	Cancel pause																						
PRINT	Reprint the last label. After turning the power off, the last print job data will be deleted																						
PRINT n	Reprint a specified number (n) of labels. After turning the power off, the last print job data will be deleted (Maximum: 32000)																						
CANCELALL_PAUSE	Cancel all remaining jobs. If you cancel all remaining jobs when the printer is paused, the pause, as well as all the jobs, will be cancelled. The LCD will return to the home screen.																						
CUT	Cut label immediately																						
FEED n	Feed a specified number (n) of dots (Maximum: 32000)																						
BACKFEED n	Back-feed a specified number (n) of dots (Maximum: 32000)																						
FORMFEED	Feed a blank label																						
INPUT n	Trigger an action by replacing n with a BAS file name and add CHR\$(13)+CHR\$(10) after the file name as a line break																						

Example

Sample code (1)

```
SET GPI1 HIGH,0,PAUSE
SET GPI2 LOW,0,PAUSE ON
SET GPI3 POS,100,PAUSE OFF
SET GPI4 NEG,100,CUT
```

Sample code (2)

```
SET GPI1 NEG,100,INPUT "TEST.BAS"+CHR$(13)+CHR$(10)
```

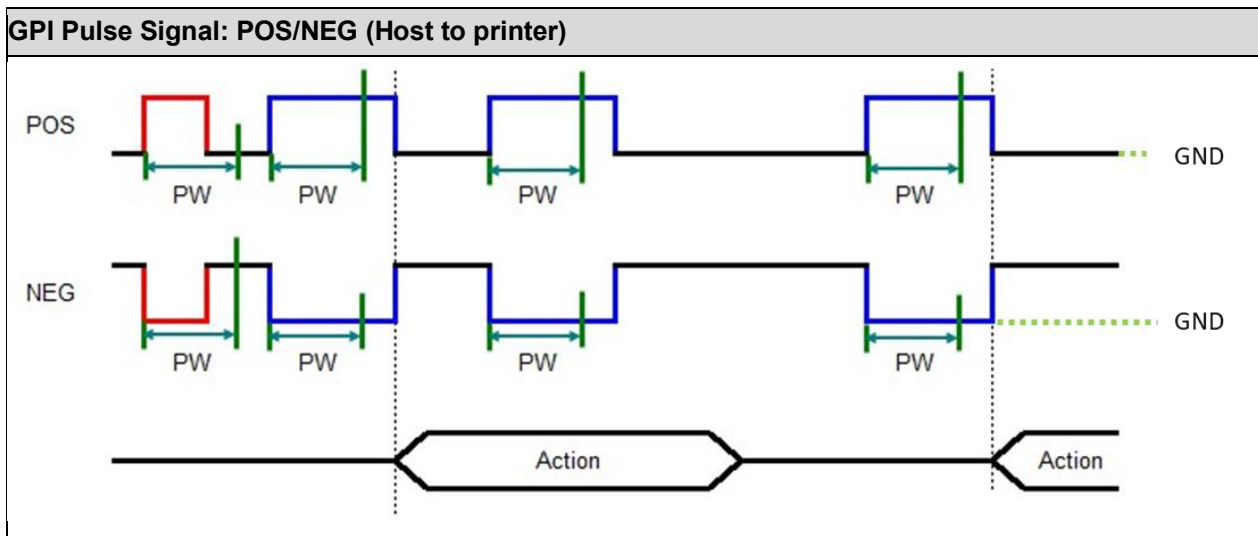
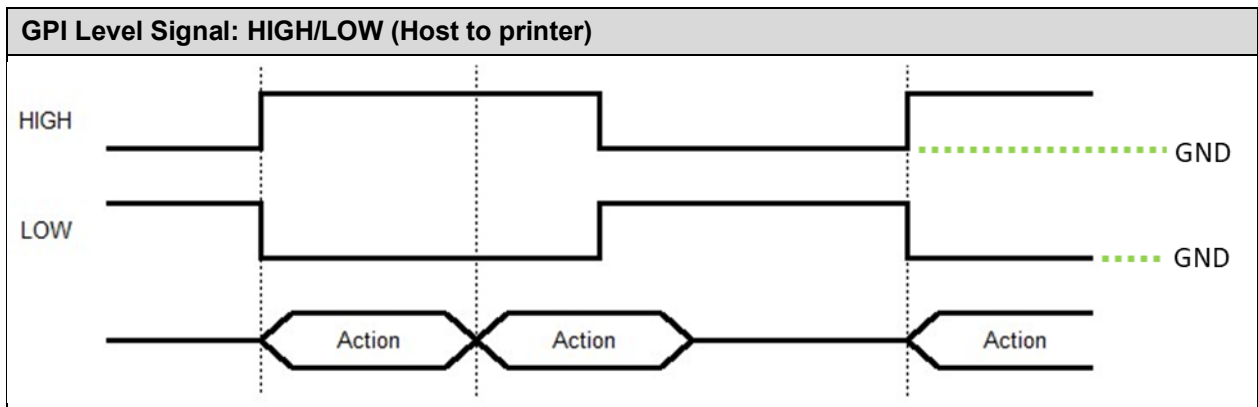
Sample code (3)

```
SET GPI1 POS,100,INPUT "TEST1.BAS" +CHR$(13)+CHR$(10)
SET GPI2 NEG,100,CUT
SET GPI3 POS,100,INPUT "TEST2.BAS" +CHR$(13)+CHR$(10)
```

See also

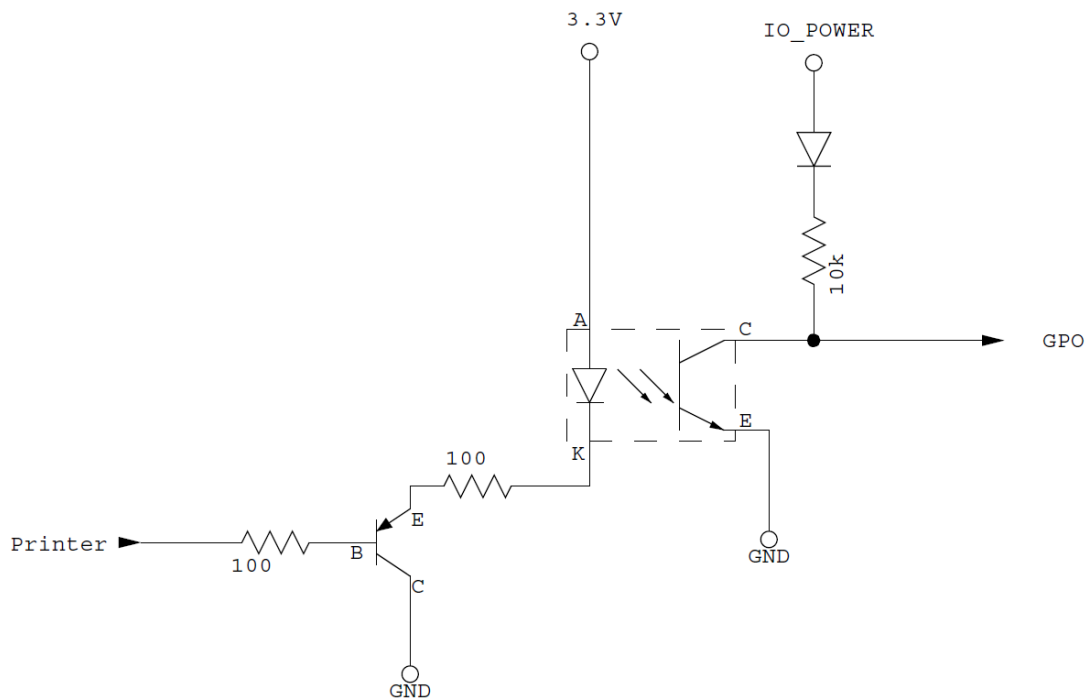
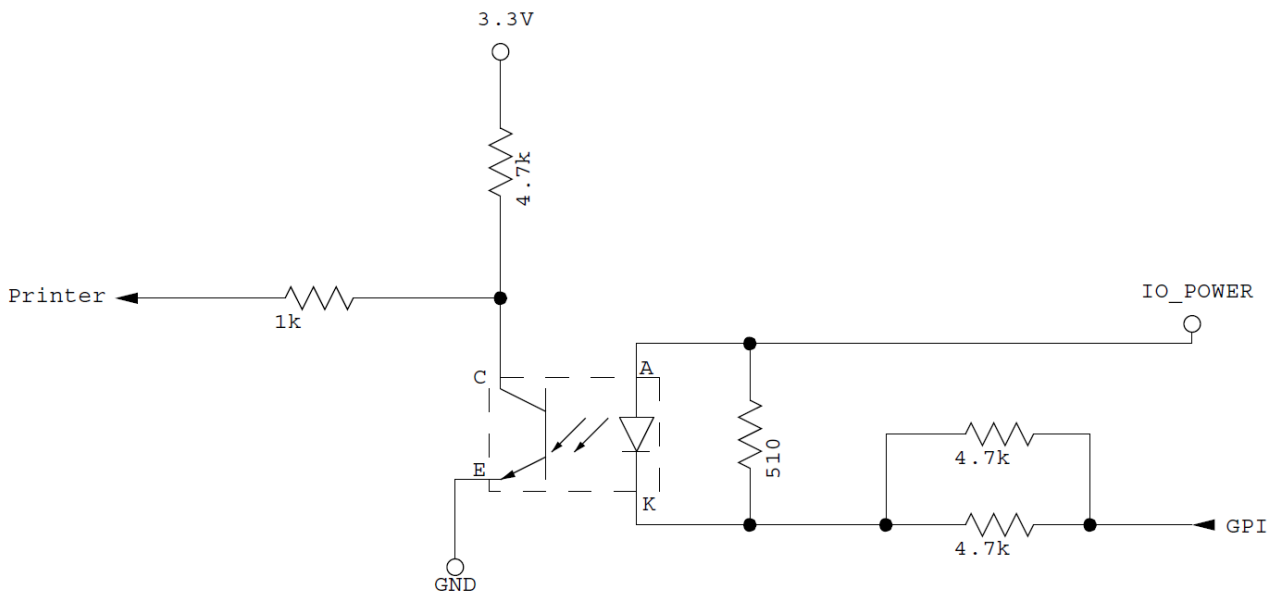
SET GPO

Time Chart



18.4 GPIO Application Note

Circuit Diagram

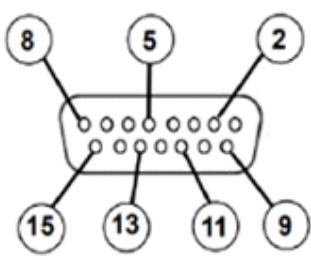


Note:

- Photocouplers: PC357N1TJ000F (PC817) / SMD [IC], PC357NT(PC817) / SMD [IC]
All have the same specifications.
- For more information about IO_power, see the **Internal and External Mode (JP2)**.

GPIO Pin Definition

Pin	Configuration	Signal Type
1	GND	I/O Signal Ground
2	5V(JP2 short)	Power
3	GPI 1	Input
4	GPI 2	Input
5	GPI 3	Input
6	GPI 4	Input
7	24V	Power
8	GND	Power Ground
9	GPO 1	Output
10	GPO 2	Output
11	GPO 3	Output
12	GPO 4	Output
13	GPO 5	Output
14	GPO 6	Output
15	GPO 7	Output



The diagram shows a 15-pin connector with pins labeled 2, 5, 8, 9, 11, 13, and 15. Pin 2 is at the top right, pin 5 is at the top center, pin 8 is at the top left, pin 9 is at the bottom right, pin 11 is at the bottom center-right, pin 13 is at the bottom center-left, and pin 15 is at the bottom left.

Note:

- **DO NOT** input any signal or voltage to Pin 7 to prevent the damage to the PCB. Pin 7 always outputs 24V as a reference voltage level. For normal operation, we do not recommend using Pin 7.
- In the internal mode, **DO NOT** apply any voltage to Pin 2 to prevent the damage to the PCB.
- In the external mode, apply the voltage **+5V-28V** to Pin 2. IO_power voltage is used as input voltage level.

Appendix A: Command List by Model

Command	TD-4420TN TD-4520TN	TD-4650TNWB TD-4750TNWB TD-4650TNWBR TD-4750TNWBR	RJ-2035B RJ-3035B	RJ-2055WB RJ-3055WB	TJ-4005DN	TJ-4010TN TJ-4020TN TJ-4021TN TJ-4120TN TJ-4121TN TJ-4021TNR TJ-4121TNR	TJ-4420TN TJ-4520TN TJ-4620TN TJ-4422TN TJ-4522TN
Setup and System Commands							
SIZE	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
GAP	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
GAPDETECT	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
BLINEDETECT	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
AUTODETECT	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
BLINE	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
OFFSET	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
SPEED	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
DENSITY	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
DIRECTION	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
REFERENCE	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
SHIFT	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
COUNTRY	<input type="radio"/>	<input type="radio"/>			<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
CODEPAGE	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
CLS	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
FEED	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
BACKFEED	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
FORMFEED	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
HOME	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
PRINT	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Command	TD-4420TN TD-4520TN	TD-4650TNWB TD-4750TNWB TD-4650TNWBR TD-4750TNWBR	RJ-2035B RJ-3035B	RJ-2055WB RJ-3055WB	TJ-4005DN	TJ-4010TN TJ-4020TN TJ-4021TN TJ-4120TN TJ-4121TN TJ-4021TNR TJ-4121TNR	TJ-4420TN TJ-4520TN TJ-4620TN TJ-4422TN TJ-4522TN
SOUND	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
CUT	<input type="radio"/>	<input type="radio"/> Except RFID tags			<input type="radio"/>	<input type="radio"/> Except RFID tags	<input type="radio"/>
LIMITFEED	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
SELFTTEST	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
EOJ	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
DELAY	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
DISPLAY		<input type="radio"/>				<input type="radio"/> TJ-4021TN/4121TN/ TJ-4021TNR/4121TNR only	<input type="radio"/>
INITIALPRINTER	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
MENU		<input type="radio"/>			<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Label Formatting Commands							
BAR	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
BARCODE	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
TLC39	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
BITMAP	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
BOX	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
CIRCLE	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
ELLIPSE	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
CODABLOCK F mode	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
DMATRIX	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
ERASE	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
MAXICODE	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Command	TD-4420TN TD-4520TN	TD-4650TNWB TD-4750TNWB TD-4650TNWBR TD-4750TNWBR	RJ-2035B RJ-3035B	RJ-2055WB RJ-3055WB	TJ-4005DN	TJ-4010TN TJ-4020TN TJ-4021TN TJ-4120TN TJ-4121TN TJ-4021TNR TJ-4121TNR	TJ-4420TN TJ-4520TN TJ-4620TN TJ-4422TN TJ-4522TN
PDF417	○	○	○	○	○	○	○
AZTEC	○	○	○	○	○	○	○
MPDF417	○	○	○	○	○	○	○
PUTBMP	○	○	○ (1-bit only)	○ (1-bit only)	○	○	○
PUTPCX	○	○	○	○	○	○	○
QRCODE	○	○	○	○	○	○	○
RSS	○	○	○	○	○	○	○
REVERSE	○	○	○	○	○	○	○
DIAGONAL	○	○	○	○	○	○	○
TEXT	○	○	○	○	○	○	○
BLOCK	○	○	○	○	○	○	○
Status Polling and Immediate Commands							
<ESC>!?	○	○	○	○	○	○	○
<ESC>!C	○	○	○	○	○	○	○
<ESC>!D	○	○	○	○	○	○	○
<ESC>!O	○	○	○	○	○	○	○
<ESC>!P	○	○	○	○	○	○	○
<ESC>!Q	○	○	○	○	○	○	○
<ESC>!R	○	○	○	○	○	○	○
<ESC>!S	○	○	○	○	○	○	○
<ESC>!F	○	○	○	○	○	○	○
<ESC>!.	○	○	○	○	○	○	○

Command	TD-4420TN TD-4520TN	TD-4650TNWB TD-4750TNWB TD-4650TNWBR TD-4750TNWBR	RJ-2035B RJ-3035B	RJ-2055WB RJ-3055WB	TJ-4005DN	TJ-4010TN TJ-4020TN TJ-4021TN TJ-4120TN TJ-4121TN TJ-4021TNR TJ-4121TNR	TJ-4420TN TJ-4520TN TJ-4620TN TJ-4422TN TJ-4522TN
~!@	○	○	○	○	○	○	○
~!A	○	○	○	○	○	○	○
~!D	○	○	○	○	○	○	○
~!E	○	○	○	○	○	○	○
~!F	○	○	○	○	○	○	○
~!I	○	○	○	○	○	○	○
~!T	○	○	○	○	○	○	○
<ESC>Y			○	○			
<ESC>Z			○	○			
Commands for Windows Driver							
!B	○	○	○	○	○	○	○
!J	○	○	○	○	○	○	○
!N	○	○	○	○	○	○	○
File Management Commands							
DOWNLOAD	○	○	○	○	○	○	○
EOP	○	○	○	○	○	○	○
FILES	○	○	○	○	○	○	○
KILL	○	○	○	○	○	○	○
MOVE	○	○	○	○	○	○	○
RUN	○	○	○	○	○	○	○
BASIC Commands and Functions							
ABS()	○	○	○	○	○	○	○
ASC()	○	○	○	○	○	○	○

Command	TD-4420TN TD-4520TN	TD-4650TNWB TD-4750TNWB TD-4650TNWBR TD-4750TNWBR	RJ-2035B RJ-3035B	RJ-2055WB RJ-3055WB	TJ-4005DN	TJ-4010TN TJ-4020TN TJ-4021TN TJ-4120TN TJ-4121TN TJ-4021TNR TJ-4121TNR	TJ-4420TN TJ-4520TN TJ-4620TN TJ-4422TN TJ-4522TN
CHR\$()	○	○	○	○	○	○	○
XOR\$()	○	○	○	○	○	○	○
END	○	○	○	○	○	○	○
EOF()	○	○	○	○	○	○	○
OPEN	○	○	○	○	○	○	○
CLOSE	○	○	○	○	○	○	○
WRITE	○	○	○	○	○	○	○
READ	○	○	○	○	○	○	○
SEEK	○	○	○	○	○	○	○
LOF()	○	○	○	○	○	○	○
LOC()	○	○	○	○	○	○	○
FREAD\$()	○	○	○	○	○	○	○
PUT	○	○	○	○	○	○	○
GET	○	○	○	○	○	○	○
COPY	○	○	○	○	○	○	○
FOR...NEXT LOOP	○	○	○	○	○	○	○
WHILE...WEND	○	○	○	○	○	○	○
DO...LOOP	○	○	○	○	○	○	○
IF...THEN...ELSE...ENDIF LOOP	○	○	○	○	○	○	○
GOSUB...RETURN	○	○	○	○	○	○	○
GOTO	○	○	○	○	○	○	○
INP\$()	○	○	○	○	○	○	○
INP()	○	○	○	○	○	○	○

Command	TD-4420TN TD-4520TN	TD-4650TNWB TD-4750TNWB TD-4650TNWBR TD-4750TNWBR	RJ-2035B RJ-3035B	RJ-2055WB RJ-3055WB	TJ-4005DN	TJ-4010TN TJ-4020TN TJ-4021TN TJ-4120TN TJ-4121TN TJ-4021TNR TJ-4121TNR	TJ-4420TN TJ-4520TN TJ-4620TN TJ-4422TN TJ-4522TN
LOB()	○	○	○	○	○	○	○
PREINPUT	○	○	○	○	○	○	○
POSTINPUT	○	○	○	○	○	○	○
SET FILTER	○	○	○	○	○	○	○
REM	○	○	○	○	○	○	○
OUT	○	○	○	○	○	○	○
OUTR	○	○	○	○	○	○	○
GETKEY()	○	○	○	○	○	○	○
INT()	○	○	○	○	○	○	○
LEFT\$()	○	○	○	○	○	○	○
LEN()	○	○	○	○	○	○	○
MID\$()	○	○	○	○	○	○	○
RIGHT\$()	○	○	○	○	○	○	○
STR\$()	○	○	○	○	○	○	○
STRCOMP()	○	○	○	○	○	○	○
INSTR()	○	○	○	○	○	○	○
TRIM\$()	○	○	○	○	○	○	○
LTRIM\$()	○	○	○	○	○	○	○
RTRIM\$()	○	○	○	○	○	○	○
TEXTPIXEL()	○	○	○	○	○	○	○
BARCODEPIXEL()	○	○	○	○	○	○	○
VAL()	○	○	○	○	○	○	○
NOW\$()	○	○	○	○	○	○	○

Command	TD-4420TN TD-4520TN	TD-4650TNWB TD-4750TNWB TD-4650TNWBR TD-4750TNWBR	RJ-2035B RJ-3035B	RJ-2055WB RJ-3055WB	TJ-4005DN	TJ-4010TN TJ-4020TN TJ-4021TN TJ-4120TN TJ-4121TN TJ-4021TNR TJ-4121TNR	TJ-4420TN TJ-4520TN TJ-4620TN TJ-4422TN TJ-4522TN
NOW	○	○	○	○	○	○	○
FORMAT\$()	○	○	○	○	○	○	○
DATEADD()	○	○	○	○	○	○	○
FSEARCH()	○	○	○	○	○	○	○
TOUCHPRESS()						○ TJ- 4021TN/4121TN/4021TNR/4121TNR only	○ TJ-4422TN/4522TN only
RECORDSET\$()	○	○			○	○	○
REPLACE\$()	○	○			○	○	○
Device Reconfiguration Commands							
SET COUNTER	○	○	○	○	○	○	○
SET CUTTER	○	○ Except RFID tags			○	○ Except RFID tags	○
SET PARTIAL_CUTTER	○	○ Except RFID tags					
SET BACK	○	○			○	○	○
SET BACK_BEFORE_PRINT	○	○			○	○	○
SET KEYn	○	○	○	○	○	○	○
SET LEDn	○	○	○	○	○	○	○
SET PEEL	○	○ Except RFID tags			○	○ Except RFID tags	○
SET REWIND	○	○			○	○	○
SET TEAR & SET STRIPER	○	○	○	○	○	○	○
SET GAP	○	○	○	○	○	○	○

Command	TD-4420TN TD-4520TN	TD-4650TNWB TD-4750TNWB TD-4650TNWBR TD-4750TNWBR	RJ-2035B RJ-3035B	RJ-2055WB RJ-3055WB	TJ-4005DN	TJ-4010TN TJ-4020TN TJ-4021TN TJ-4120TN TJ-4121TN TJ-4021TNR TJ-4121TNR	TJ-4420TN TJ-4520TN TJ-4620TN TJ-4422TN TJ-4522TN
SET BLINE REVERSE / SET OBVERSE	○	○	○	○	○	○	○
SET BLINE PRINTSIDE / SET BLINE BACKSIDE				○ RJ-3055WB gap-sensor model only			○
SET HEAD	○	○	○	○	○	○	○
SET RIBBON	○	○				○	○
SET ENCODER	○	○				○	○
SET RIBBONEND							○
SET COM1	○	○	○	○	○	○	○
SET PRINTKEY	○	○	○	○	○	○	○
SET REPRINT	○	○	○	○	○	○	○
SET FEED_LEN	○	○	○	○	○	○	○
GETSENSOR()	○	○	○	○	○	○	○
GETSETTING\$()	○	○	○	○	○	○	○
SET USBHOST	○	○			○	○	○
SET AUTORUN	○	○	○	○	○	○	○
SET RESPONSE	○	○			○	○	○
SET DAYLIGHT_SAVE	○	○	○	○	○	○	○
SET REGISTRATION	○	○	○	○	○	○	○
PEEL	○	○ Except RFID tags			○	○ Except RFID tags	○
LED1, LED2, LED3	○	○	○	○	○	○	○
KEY1, KEY2, KEY3	○	○	○	○	○	○	○

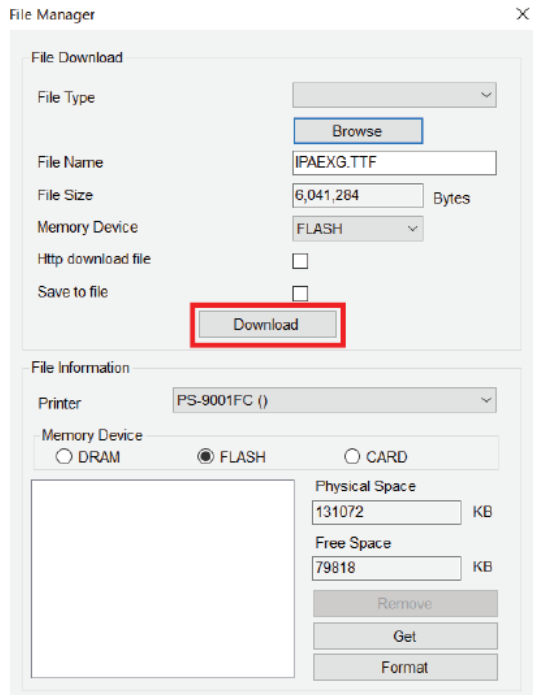
Command	TD-4420TN TD-4520TN	TD-4650TNWB TD-4750TNWB TD-4650TNWBR TD-4750TNWBR	RJ-2035B RJ-3035B	RJ-2055WB RJ-3055WB	TJ-4005DN	TJ-4010TN TJ-4020TN TJ-4021TN TJ-4120TN TJ-4121TN TJ-4021TNR TJ-4121TNR	TJ-4420TN TJ-4520TN TJ-4620TN TJ-4422TN TJ-4522TN
SET SENSOR_REF	○	○	○	○	○	○	○
Printer Global Variables							
@LABEL	○	○	○	○	○	○	○
YEAR	○	○	○	○	○	○	○
MONTH	○	○	○	○	○	○	○
DATE	○	○	○	○	○	○	○
WEEK	○	○	○	○	○	○	○
HOUR	○	○	○	○	○	○	○
MINUTE	○	○	○	○	○	○	○
SECOND	○	○	○	○	○	○	○
@YEAR	○	○	○	○	○	○	○
@MONTH	○	○	○	○	○	○	○
@DATE	○	○	○	○	○	○	○
@DAY	○	○	○	○	○	○	○
@HOUR	○	○	○	○	○	○	○
@MINUTE	○	○	○	○	○	○	○
@SECOND	○	○	○	○	○	○	○
_MODEL\$	○	○	○	○	○	○	○
_SERIAL\$	○	○	○	○	○	○	○
_VERSION\$	○	○	○	○	○	○	○
Bluetooth Module Setting Commands							
BTNAME		○	○	○			○
BTPINCODE			○				

Command	TD-4420TN TD-4520TN	TD-4650TNWB TD-4750TNWB TD-4650TNWBR TD-4750TNWBR	RJ-2035B RJ-3035B	RJ-2055WB RJ-3055WB	TJ-4005DN	TJ-4010TN TJ-4020TN TJ-4021TN TJ-4120TN TJ-4121TN TJ-4021TNR TJ-4121TNR	TJ-4420TN TJ-4520TN TJ-4620TN TJ-4422TN TJ-4522TN
BT MODE		○	○	○			○
SET BTLINKBACK			○				
Wi-Fi Module Setting Commands							
WLAN SSID		○		○	○	○	○
WLAN WPA		○		○	○	○	○
WLAN WEP		○		○	○	○	○
WLAN DHCP		○		○	○	○	○
WLAN IP		○		○	○	○	○
WLAN PORT		○		○	○	○	○
WLAN THROUGH							○
Internal Ethernet Setting Commands							
NET DHCP	○	○			○	○	○
NET IP	○	○			○	○	○
NET PORT	○	○			○	○	○
NET NAME	○	○			○	○	○
NET THROUGH							○
Mobile Printer Setting Commands							
SET PRINTQUALITY			○	○			
SET STANDBYTIME			○	○			
SET SLEEPTIME			○	○			
RFID Commands							
RFID READ		○ TD-4650TNWBR/				○ TJ-4021TNR/4121TNR only	

Command	TD-4420TN TD-4520TN	TD-4650TNWB TD-4750TNWB TD-4650TNWBR TD-4750TNWBR	RJ-2035B RJ-3035B	RJ-2055WB RJ-3055WB	TJ-4005DN	TJ-4010TN TJ-4020TN TJ-4021TN TJ-4120TN TJ-4121TN TJ-4021TNR TJ-4121TNR	TJ-4420TN TJ-4520TN TJ-4620TN TJ-4422TN TJ-4522TN
		4750TNWBR only					
RFID WRITE		○ TD-4650TNWBR/ 4750TNWBR only				○ TJ-4021TNR/4121TNR only	
RFIDDETECT		○ TD-4650TNWBR/ 4750TNWBR only				○ TJ-4021TNR/4121TNR only	
GPIO Commands							
SET GPO					○	○	○
SET GPI					○	○	○

Appendix B: Download your Fonts

- To use the built-in fonts, select the font name from the list of the **TEXT** command.
- To use the downloaded fonts, download your fonts to the printer using the Brother Printer Management Tool (BPM):
 1. Connect your computer and the printer, and then turn on the printer.
 2. Start the BPM and click the **File Manager**.
 3. Click **Browse** to select the font file.
 4. Select **FLASH** from the **Memory Device** drop-down list.
 5. Click **Download** to start downloading the file.



-
- Make sure the file name and its extension are in uppercase letters. (Example: ~~ipaexg.ttf~~ → IPAEXG.TTF)
 - The BPM is a Windows tool and it does not support the Bluetooth® connection. When using the BPM, connect the printer to your computer via USB or Wi-Fi®.
-

brother