BIRCH®

User's Manual

BPT3

let your printing Easy and Magic

80MM Thermal Receipt printer

1.Safety Notice:

* Don't touch the cutter blade.
* Don't let water or other foreign objects into the printer.
* Don't bend the power cord excessively or place any heavy objects onto it.
* Don't use the printer when it is out of order. This can cause a fire or and electrocution.
* When connecting or disconnecting the plug, always hold the plug but not the cord.
* Keep the desiccant out of children's reach.
* Don't touch the Head of printer with anything.
* Use only approved accessories and do not try to disassemble, repair or remodel it by yourself.
* Install the printer on the stable surface. Choose firm, level surface where avoid vibration.
* Don't connect a telephone line into the peripheral drive connector.
* We recommend that you unplug the printer from the power outlet if no use it for a long period.

2. Applications:

* EFT POS system Receipts
* Inquiry, Service system Receipts
* Instrument test Receipts
* Tax, Tab Receipts
* POS system Receipts
* Gym, post, hospital, civil aviation system Receipts

3. Unpacking

Printer&Standard equipment:

Printer	**one unit**
Power adaptor(24V)	**one unit**
Power cable	**one unit**
Drive, user manual	**one set**
Date cable(serial/USB)	**one unit**
Paper roll	**one unit**

4. Features

* 260mm/s printing speed
* Support kitchen printing, network printing
* Printing image and character with high speed, high quality and reliable
* Support GB18030 simplified Chinese and traditional Chinese, buyer's languages
* Support printer states monitor function, control printer's states at any time
* Adding avoid lost order function, avoid losing orders, guarantee the customer's interests
* Support printer prompt and error alarm
* Driving high speed download printing mode, support Linux system
* Support black mark and overtype function
* Support 256k bytes NV logo download store and print
* Support Serial, USB, 100M Ethernet interface
* Printing QR CODE
* Support configuration printer through the WEB
* USB interface using virtual serial interface technology
* Rich interface can be used

Support Windows 7

QR Code

Linux driver

Multiple Connection Printing

OPOS Driver

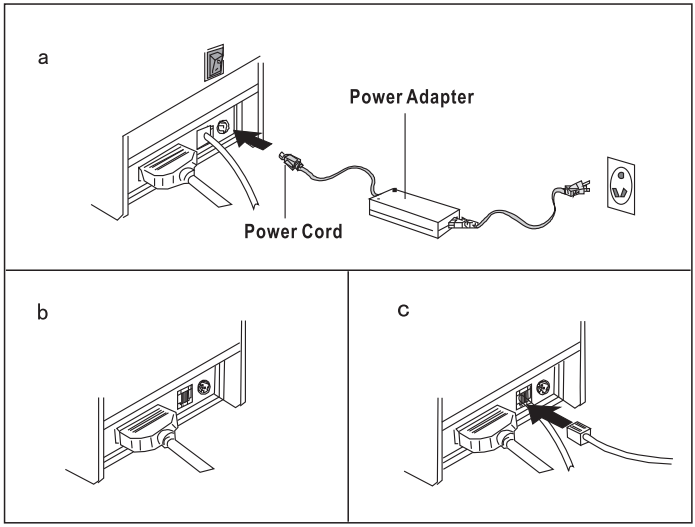
Various Character Sets

5. Specifications

Printing method	Line thermal	
Printing speed	260mm/sec	
Print width	79.5±0.5mm	
Paper thickness	0.06~0.08mm	
Print columns	576 dots per line or 512 dots per line	
Resolution	203X203 dpi(Maximum)	
Character size	ANK,Font A: 1.5x3.0mm(12x24dots) Font B: 1.1x2.1mm(9x17dots) Simplified/traditional Chinese: 24x24 dots	
Command	Compatible with ESC/POS	
Interface	Serial+USB+LAN	
Bar code	UPC-A/UPC-E/JAN13(EAN13)/JAN8(EAN8)/CODABAR/ITF/ CODE39/CODE93/CODE128	
2D Bar code	QR CODE	
Reliability	Printing head	100 kilemeters
	cutter	1000,000 times
Powersupply	Input	AC100～220V （50/60HZ）
	Out put	DC 24V ⎓ 2.5A
Cash drawer	DC 24V ⎓ 1A	
Print beeper	Support	
Language	Buyer language	
Black mark	Support	
Kitchen print	Support	
Working environment	Temperature(0-45℃), humidity(10-80%)	
Storage environment	Temperature(-10~60℃), humidity(10~90%)	
NV Flash buffer	256K Bytes	
Data receive buffer	1024K Bytes	
Driver	Win9X/WinME/Win2000/WinNT/WinXP,WinVista,Win7 ,Win8, Linux	

6. Printer Connection

a. Plug the DC cord connector into the printer's power connector.
b. Plug the data cable connector into the printer's interface connector.
c. Plug the drawer cable into the drawer kick-out connector on the back of the printer next to the interface connector.

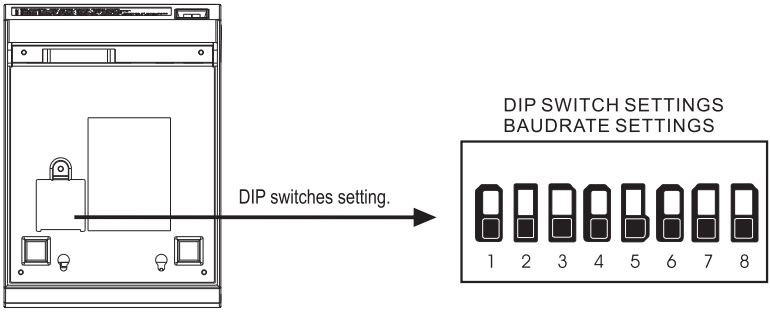


7. Installing the roll paper

a. Open the printer cover.
b. Install the roller in the roll paper, and put them into the printer.
c. Pull out some paper outside the printer and then close the printer cover.
d. Close the top cover. Press the printer cover to avoid error position of roll paper.
e. Tear-off the paper correctly.

8. Setting the Printing Mode (DIP switches)

The DIP switches are used to set the printer to perform various functions, such as cutter mode, character set, speed, beeper, print density and etc.



9. DIP-8 Function

Interface	DIP Function				
	No.	Function		ON	OFF
	SW-1	Select cutter		No	Yes
	SW-2	Select beeper		Yes	No
	SW-3	Select Print density		Dark	Light
	SW-4	Two-byte character code		No	Yes
	SW-5	Character per line		42	48
	SW-6	Cutter with cash drawer		Yes	No
Baudrate	SW-7	ON	OFF	ON	OFF
	SW-8	ON	ON	OFF	OFF
	Baudrate	38400	115200	9600	19200

10. Functions of buttons and indicators

(1) **FEED button:**
Press to feed paper manually.

(2) **Paper indicator:**
Both of paper indicator and error indicator are on, means paper end-user, both of paper indicator and error indicator are off, means have paper.

(3) **Power indicator:**
Turn on/off the printer

(4) **Error indicator:**
When the printer is out of paper, the cutter error occurs or printer head overheats, the ALARM indicator flashes.

11. QR CODE function

1、QR Code： set unit size

【Command Code】
ASCII ：GS (0 g n
Decimal ：29 40 107 48 103 n
Hexadecimal：1D 28 6B 30 67 n

Function Description set the unit size of QR Code into "n"
Parameter Range 1 ≤ n ≤ 16
Default n = 3

N dot = Unit width = Unit height
When the ESC @, printer reset, power off, this command setting failure

12. QR Code： How to set up error correcting level.

【Command Code】
ASCII ：GS (0 i n
Decimal ：29 40 107 48 105 n
Hexadecimal：1D 28 6B 30 69 n

Function Description: set up error correcting level, the meaning of parameter n is as below:

n	Level	（%）Correcting percentage
48	L Level L	7
49	M Level M	15
50	Q Level Q	25
51	H Level H	30

Parameter Range 48 ≤ n ≤ 51
Default n = 48
Note: QR Code
QR Code use RS algorithm generating error correcting Code
When printer reset, power off, this command setting failure

13. QR Code : Data transmission to coding cache

【Command Code 】
ASCII : GS (0 € nL nH d1...dk
Decimal : 29 40 107 48 128 nL nH d1...dk
Hexadecimal : 1D 28 6B 30 80 nL nH d1...dk

Function Description: QR Code data transmission to coding cache
Parameter Range: 4 ≤ (nL + nH×256) ≤ 2710
32 ≤ d ≤ 255
Default: None
Note: After receiving, the data will be hold until the next reset
k byte d1…dk Be regarded as coded data
d1…dk can not include extra data except below data

Character Set	Including below character
Figure	“0”~“9”
Letter and figure	“0”~“9”, “A”~“Z”,SP, $, %, *, +, −, 。, 、, :
Chinese Character	GB18030-2000, Shift-JIS （JISX0208 Standard)
8 bits data	00H~FFH

When the ESC @, printer reset, power off, this command setting failure

14. QR Code : Data transmission to coding cache

【Command Code 】

ASCII : GS (0 € nL nH d1...dk
Decimal : 29 40 107 48 128 nL nH d1...dk
Hexadecimal : 1D 28 6B 30 80 nL nH d1...dk

Function Description: QR Code data transmission to coding cache
Parameter Range: 4 ≤ (nL + nH×256) ≤ 2710
32 ≤ d ≤ 255
Default: None
Note: After receiving, the data will be hold until the next reset
k byte d1…dk Be regarded as coded data
d1…dk can not include extra data except below data

15. QR Code : How to print the data which is stored in coding cache

【Command Code】

ASCII : GS (0 ?
Decimal : 29 40 107 48 129
Hexadecimal : 1D 28 6B 30 81

Function Description: Printing the code data which is stored in coding cache
Parameter Range None
Default None
Note:
If the QR code size beyond print area, printing will be cancelled
If the code cache data is empty, printing will be cancelled

16. Driver

The thermal series printer have two way for drive, one is install the drive directly under the WIN9X/2K/IT/XP; another is use parallel or serial directly

(1) Install the drive under the WINDOWS

Add the printer under the windows, and appointed drive document to windows, you can print with transfer print command in the program. Under this way, It is actually transfer the character to dot matrix to print

(2) Serial drive directly

in this way, don't use the drive program , just need to direct character output to the port . and achieve transforming by printer internal hard character ; the drive way is use port directly. The print mode is change from page print to row print, so that print control is more convenience If you use direct drive port, you need to use the print command collect to control the printing, and 80mm series printer has been integrated within the ESC / POS command set.

17. Clearance

When the printer occurs one of the followings, clean the printer head.

(1) the printer is not clear
(2) vertical page in a column is not clear
(3) Feed noise

The printer head cleaning steps:

(1)Turn off the printer and unplug the power cord. open the upper cover, if have a paper, please clean out
(2) Until the printer head cooling you can cleaning
(3) Wipe the damp cloth with alcohol (without water) cleaning the printer head surface if have dust, spot
(4)Waiting the alcohol completely volatilize, please close the upper cover, try again to print

Notice :

(1) You must make sure the power cord is close when you maintenance the printer
(2) Don't touch the printer head surface with your finger or metal goods, don't use the forceps etc tools avoid to scratch the printer head, print roller sensor surface
(3) Don't use oil, acetone Ect organic impregnant
(4) Waiting the alcohol completely volatilize, open the power again and continue print turn off the power, cover the top, if there is paper, remove it

⚠ WARNING:

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The power adaptor cable is off device and near to printer, easily touch.