

POS-58M Mini Thermal Receipt Printer

USER'S MANUAL

Our honorific customers,

Thank for your choosing our POS-58M series thermal receipt printer. Please read the manual carefully before use it!

POS-58M series mini printers including: POS-58MU (USB interface), POS-58MB (Bluetooth interface).

POS-58M series mini thermal printer could be used in mobile office site such as traffic, post, transportation and commercial receipt printer such as supermarket, tobacco, clothing and so on.

This product has the following characteristics: easy paper loading, lightweight, attractive appearance, easy maintenance. Low power consumption, low running costs. High printing speed, high quality, low noise and so on. You can choose Bluetooth or USB communication mode freely. Bluetooth mode should be used together with handheld POS terminals, Android phones, table PC, etc. This printer has a paper source sensor, could detects the paper loaded status automatically.

Please keep this manual well for future reference!

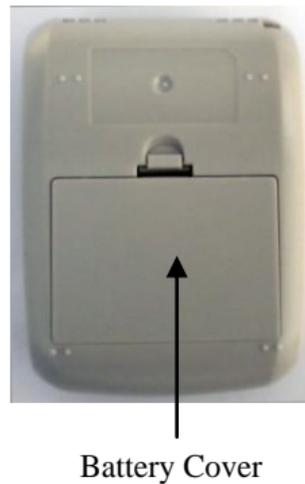
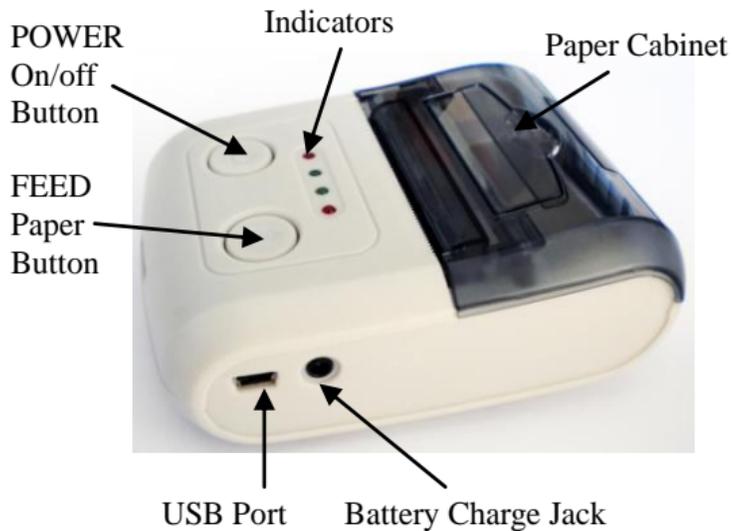
Packing list

name	quantity
Printer	1PC
Power adaptor	1PC
User's manual	1PC
Drivers CD (only for POS-58MU)	1PC
Communicate Cable (only for POS-58MU)	1PC
Thermal paper roll	1PC

1. Specification

- Easy paper loading
- Printing method: Thermal dot line printing
- Printing speed(max): 80mm/s
- Printing width: 48mm (paper width: 58mm)
- Characters/line: 16PCS Chinese/line, 32PCS Western letters symbols/line
- Support Characters: Chinese GB2312 and Western letters symbols (total:8178PCS)
- Characters Size: Western letters symbols: 12×24 dots; Chinese: 24×24 dots.
- Control command: Support ESC/POS printing command set. Support Western letters symbols and Chinese characters. Support Negative, Mirror Image, Upper line and Underline, row distance and word distance adjustment function and so on.
- Communication: USB / Bluetooth
- Driver: Support WINDOWS XP/VISTA/Win7 OS.
- Power adapter: DC9V/1A
- Dimension: 115mm×84mm×46mm
- Working environment: temperature 0-50°C, humidity:10-90% RH

2. Parts illustration



3. Driver

To POS-58MU (USB Communication Port), before using this printer, you need to install the driver for USB to PL2303 first. The driver support Windows XP/VISTA/Win7 OS.

4. Thermal paper loading

Open the printer's paper cabinet, put the thermal paper into it and close the paper cabinet cover. Press the POWER on/off button to power on the printer, if the sensor detects paper less, the red indicator will light on, and waiting for loading paper. During the process of loading paper, while the paper sensor detects the paper again, the red indicator light will turn off.

After paper installed correctly, if feed paper does not reach ideal effect, you can press "FEED" button to adjust manually.

This printer is easy paper loading structure. Put one paper roll into the paper cabinet and makes sure the smooth side of thermal paper face to the print head, then covered with printer paper deck lid.

Attention: Do not use the paper roll which stick to core roll, otherwise, the printer cannot detect the correct end of the paper, it will damage the printer!

5. Indicators and keys functions description

1) Indicators

There are four indicators in the printer, from left to right it is: Power (red), Bluetooth (green), Battery Charge (green), Paper less (red).

a) **Power indicator:**

Full battery (4 cells): power indicator long bright

3 cells: flash every 2 seconds

2 cells: flash every second

1 cells: flash every 0.5 second

b) **Bluetooth indicator:**

Search status: flash quickly, every 0.1 second

Standby status: flash slowly, every 2 second

Connected status: long bright

c) **Battery charge indicator:**

Light on: charging

Light off: charge over or does not connected with adaptor

d) Paper less indicator:

Light on: paper less; Light off: paper installed

2) Buttons:

There are two buttons in the printer, from left to right it is: Power on/off button and Feed paper button.

- a) Power on: Press the “POWER” button and hold on till the power indicator light on or flash.
- b) Power off: Press the “POWER” button.
- c) Feed Paper: Press the “FEED” button. It will feed paper 20mm every time.

6. Self-inspecting

Self-inspecting could detect whether the printer is in a normal state or not. If can print configuration list correctly, it means the printer work normal, otherwise needs to repair.

Self-inspecting operation method: In the Power off state, Press down and hold on the “POWER” and “FEED” buttons at the same time, until the printer starts printing an inspecting page.

7. Printing by Bluetooth

POS-58MB Mini Bluetooth thermal printer supports Android and WINCE operating system for mobile phones, MID and other handheld devices, methods of operation are as following:

Connect the printer to terminal device via Bluetooth. Bluetooth name of the printer is: POS58MB, pairing code is: 0000. After connected normally, you can execute printing work by the terminal device Print function.

Tips:

If something happened as following, please deals with it follow the instructions:

1) Cannot find the printer by Bluetooth?

Power off the printer, then power on it and search again, if found the printer then operating following above items.

2) Found and connected to the printer by Bluetooth but could not print normally?

Following above items to Power on and connect to printer again, if still cannot print normally, please check the application software which running on terminal device is work normally.

8. Printing by USB (Just for POS-58MU)

Connect the communication cable between the printer (USB interface) and the computer or other device (USB interface), then power on the printer to execute printing work. (Before using the printer to execute printing work, you need to install the special driver first. (The driver and illustration of install operation in attached CD).

9. FQA(frequently question answer)

If the printer can't work normally, please inspect it as following first. If the fault still, please contact to your seller or customer service center.

- a) All the indicators on the panel are not lit?

Please check the battery is installed correctly or not and then press the POWER button try to power on the printer.

- b) Press the "FEED" key does not feed the paper, the printer dose not print?

Power off the printer and check if there is paper jam or the print head is overheated. After confirmed that do not exist these phenomena, power on the printer and try again. If still not print, please contact to your seller or customer service center.

c) Indicator work normal, but the printer does not print?

Restart the printer and do Self-inspecting operation, if the Self-inspecting runs normal, check following items:

- Check the communication cable between printer and computer meets the specifications.(POS-58MU)
- Check the both interfaces that connect with cable are well or not. (POS-58MU)
- Check the connection between printer and device is normal by Bluetooth. (POS-58MB)

d) The printer has a print action, but did not print the data?

Check the thermal paper installed correctly or not, makes sure the smooth side of thermal paper face to the print head.

10. Precaution

- 1) The printer should be installed in a stable place to avoid vibration and impact printer.
- 2) Do not use or store the printer in heat, humidity and polluted circumstance.
- 3) Connect the printer's power adapter to a properly grounded outlet, avoid to use

together with large motors or other devices that could lead to power supply voltage fluctuations.

- 4) Avoiding water or conductive materials into the inside of the printer, in the event, turn off the power immediately.
- 5) If long time does not use the printer, please disconnect the power adaptor.
- 6) Users are not allowed to disassemble the printer for repairing or modifying.
- 7) Use the power adapter that matched with the printer.
- 8) To ensure print quality and life, it is recommended to use high quality thermal paper.
- 9) When plug cable, make sure the power is turned off. Do not pull the soft part of the cable directly when pulling the cable.

11. Part ESC/POS printing command illustration

1) Command set

Type	Command	Name
Print Command	LF	Print and line feed
	ESC J	Print and Feed n dots paper
Line spacing Command	ESC 2	Select default line spacing
	ESC 3 n	Set line spacing
	ESC a n	Select justification
Character Command	ESC ! n	Select print mode(s)
	ESC { n	Turn upside-down printing mode on/off
	ESC B n	Turn inverting printing mode on/off
	ESC R n	Select and internation character set
Bit Image Command	ESC t n	Select character code table
	ESC *	Select bit-image mode
	GS *	Define downloaded bit image
Init Command	GS /	Print downloaded bit image
	ESC @	Initialize printer
Status Command	ESC v	Transmit paper sensor status
	ESC u	Transmit peripheral device status

	GS a	Enable/Disable Automatic Status Back(ASB)
Bar Code Command	GS H	Select printing position of human readable characters
	GS h	Set bar code height
	GS w	Set bar code width
	GS k	Print bar code

2) Command detail

POS-58 printer use ESC/POS command set.

The printing command is described as followed format:

CMD	Function
Format	ASCII List by ASCII characters
	Decimal List by decimal characters
	Hexadecimal List by hexadecimal characters
Description	Command function description
Example	Command use example

1. Print Commands

LF			Print and line feed
Format	ASCII	LF	
	Decimal	10	
	Hexadecimal	0A	
Description	LF prints the data in the print buffer and feeds one line. When the print buffer is empty, LF feeds one line.		
ESC J n			Print and feed paper
Format	ASCII	ESC J n	
	Decimal	27 74 n	
	Hexadecimal	1B 4A n	
Description	n = 0-255。 ESC J prints the data in the print buffer and feeds n dots. The command will not change the setting set by command ESC 2, ESC 3.		

2. Line spacing setting command

ESC 2			Select default line spacing
Format	ASCII	ESC 2	
	Decimal	27 50	

	Hexadecimal	1B 32
Description	ESC 2 sets the line space to default value (30dots)	
ESC 3 n	Set line spacing	
Format	ASCII	ESC 3 n
	Decimal	27 51 n
	Hexadecimal	1B 33 n
Description	n = 0-255 ESC 3 n sets the line spacing to n dots. The default value is 30	
ESC a n	Select align mode	
Format	ASCII	ESC a n
	Decimal	27 97 n
	Hexadecimal	1B 61 n
Description	The command is only used in the standard mode. $0 \leq m \leq 2$ or $48 \leq m \leq 50$ Align left: n=0,48 Align middle: n=1,49 Align right: n=2,50	

3. Character command

ESC ! n		Select print mode
Format	ASCII	ESC ! n
	Decimal	27 33 n
	Hexadecimal	1B 21 n

Description

The default value is 0. This command is effective for all characters.

BIT0: 0: Character font 12x24 selected

1: Character font 8x16 selected

BIT1:

BIT2:

BIT3: 1: Emphasized mode selected

0: Emphasized mode not selected

BIT4: 1: Double Height mode selected

0: Double Height mode not selected

BIT5: 1: Double Width mode selected

0: Double Width mode not selected

BIT6:

BIT7: 1: Underline mode selected

0: Underline mode not selected

ESC { n		Set/Cancel Character Up down mode
Format	ASCII	ESC { n
	Decimal	27 123 n
	Hexadecimal	1B 7B n
Description	n=1:Enable Updown mode n=0:Disable Updown Mode Default value is 0	
ESC B n		Turn white/black reverse printing mode on/off
Format	ASCII	ESC B n
	Decimal	27 66 n
	Hexadecimal	1B 42 n
Description	n=1:Enable white/black reverse mode n=0:Disable white/black reverse mode Default value is 0	
ESC R n		Select an internal character set
Format	ASCII	ESC R n
	Decimal	27 82 n
	Hexadecimal	1B 52 n

Description

Select an internal character set n as follows:

0:USA	5:Sweden	10:Denmark II
1:France	6:Italy	11:Spain II
2:Germany	7:Spain1	12:Latin America
3:U.K.	8:Japan	13:Korea
4:Denmark 1	9:Norway	

ESC t n

Select character code table

Format	ASCII	ESC t n
	Decimal	27 116 n
	Hexadecimal	1B 74 n

Description

Select a page n from the character code table as follows: :

0:437	4:860	8:862
1:850	5:861	256.Chinese
2:852	6:863	
3:857	7:858	
POS-58 Support only 0, 1, 256		

4. Bit Image Command

ESC * m nL nH d1 d2...dk		Select bit-image mode
Format	ASCII	ESC * m nL nH d1 d2 ... dk
	Decimal	27 42 m nL nH d1 d2 ... dk
	Hexadecimal	1B 2A m nL nH d1 d2 ... dk

Description

This command selects a bit image mode using m for the number of dots specified by $(nL+nH*256)$

$m = 0, 1, 32, 33$ 。

$nL = 0-255$

$nH = 0-3$

$dx = 0-255$

$k = nL + 256 * nH$ ($m = 0, 1$)

$k = (nL + 256 * nH) * 3$ ($m = 32, 33$)

The modes selected by m are as follows:

0: 8dots single density, 102dpi

1: 8dots double density, 203dpi

31:24 dots single density,102dpi

32:24 dots double density,203dpi

The bit image format is the same as user-defined character.

GS / n

Print downloaded bit image

Format	ASCII	GS / n
	Decimal	29 47 n
	Hexadecimal	1D 2F n

Description

This command prints a downloaded bit image using the mode specified by n as specified in the chart. In standard mode, this command is effective only when there is no data in the print buffer. This command is ignored if a downloaded bit image has not been defined.

n=0-3、48-51: Specify bit image mode

n	Bit Image Mode	Vertical DPI	Horizontal DPI
0,48	Normal	203DPI	203DPI
1,49	Double width	203DPI	101DPI
2,50	Double height	101DPI	203DPI
3,51	Quadruple	101DPI	101DPI

n=65-68: Print logo 1-4

GS * x y d1...dk

Define downloaded bit image

Format	ASCII	GS * x y d1 ... dk
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Decimal	29 42 x y d1 ... dk
Hexadecimal	1D 2A x y d1 ... dk

Description	<p>This command defines a downloaded bit image by using $x \times 8$ dots in the horizontal direction and $y \times 8$ dots in the vertical direction. Once a downloaded bit image has been define, it is available until</p> <ul style="list-style-type: none"> ➤ Another definition is made ➤ ESC & or ESC @ is executed ➤ The power is turned off ➤ The printer is reset <p>$x=1 \sim 48(\text{width}), y=1 \sim 255(\text{height}), x \times y < 2304, k=x \times y \times 8$</p>
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5. Init command

ESC @	Initialize the printer
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Format	<table> <tr> <td>ASCII</td> <td>ESC @</td> </tr> <tr> <td>Decimal</td> <td>27 64</td> </tr> <tr> <td>Hexadecimal</td> <td>1B 40</td> </tr> </table>	ASCII	ESC @	Decimal	27 64	Hexadecimal	1B 40
ASCII	ESC @						
Decimal	27 64						
Hexadecimal	1B 40						

Description	<p>Initializes the printer.</p> <ul style="list-style-type: none"> ➤ The print buffer is cleared. ➤ Reset the param to default value. ➤ return to standard mode ➤ Delete user-defined characters
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6. Status Command

ESC v	Transmit paper sensor status	
Format	ASCII	ESC v n
	Decimal	27 118 n
	Hexadecimal	1B 76 n

Description Transmits the status of the paper sensor as 1 byte of data.
POS-58P not supports this command.
The status byte definition(n=1):

Bit	Function	Value
0		
1		
2	NO PAPER	1
3	MECHANISM ERROR	1
4	0	0
5		
6	PRINTER TEMPORARY OVER	1
7		

GS a n	Enable/Disable Automatic Status Back(ASB)	
Format	ASCII	GS a n
	Decimal	29 97 n

Hexadecimal 1D 61 n

Description POS-58P don't support this command
n definition as follows:

Bit	Function	Value	
		0	1
0	0		
1			
2	Disable/Enable ASB	Disable	Enable
3-4			
5	Disable/Enable set busy when in ERROR status RTS=BUSY	Disable	Enable
6-7			

When ASB is enabled, the printer will send the changed status to PC automatically.

ESC u

Transmit peripheral devices status

Format

ASCII ESC u
Decimal 27 117
Hexadecimal 1B 75

GS h n Set bar code height

Format ASCII GS h n
 Decimal 29 104 n
 Hexadecimal 1D 68 n

Description This command selects the height of a barcode. n specifies the number of dots in the vertical direction. The default value is 50
 $1 \leq n \leq 255$

GS w n Set bar code width

Format ASCII GS w n
 Decimal 29 119 n
 Hexadecimal 1D 77 n

Description This command selects the horizontal size of a barcode.
 $n = 2,3$
The default value is 3

GS k m d1 d2 ... dk NUL Print barcode symbology

GS k m n d1 d2 ... dn

Format 1 ASCII GS k m d1 d2 ... dk NUL
 Decimal 29 107 m d1 d2 ... dk 0

Format 2	Hexadecimal	1D 6B	m		d1 d2 ... dk 00
	ASCII	GS k	m n		d1 d2 ... dn
	Decimal	29 107	m n		d1 d2 ... dn
	Hexadecimal	1D 6B	m n		d1 d2 ... dn

Description m: barcode type
 Format 1: $0 \leq m \leq 10$
 Format 2: $65 \leq m \leq 75$
 n: barcode length

m	Barcode system	Number of characters	Remarks
0,65	UPC-A	11,12	48-57
1,66	UPC-E	11,12	48-57
2,67	EAN13	12,13	48-57
3,68	EAN8	7,8	48-57
4,69	CODE39	>1	32,36,37,43,45-57,65-90
5,70	I25	>1 even number	48-57
6,71	CODEBAR	>1	36,43,45-58,65-68
7,72	CODE93	>1	0-127
8,73	CODE128	>1	0-127
9,74	CODE11	>1	48-57
10,75	MSI	>1	48-57