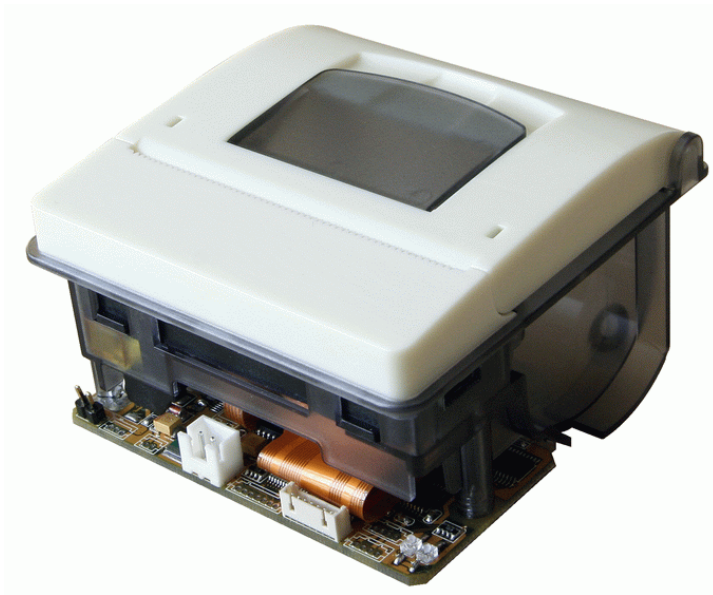


PT158

Panel Mount printer



Operation Manual

Version 1.0

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Technical Data

Printing	
Method	Direct line thermal
Effective area	48 mm
Resolution	8 dots / mm
Speed	50 mm / second (Max.)
Fonts	
Character Set	ASCII International, Traditional or Simplify Chinese
Characters Size	48 (16*8), 32 (16*12) 32 (24*12) H x W Chinese: 24 (16*16), 16 (24*24) H x W
Graphic	Bit addressable graphic command set
Bar codes	CODE39,93,128 / EAN13,8 / UPC-A,E / ITF / CODABAR
Downloadable	Special Fonts, Graphics, Logos and Additional Bar codes
Interface	
RS-232	Baud Rate: 1200 ~ 57600 bps (Default 9600bps) Handshaking: CTS/RTS or XON/XOFF
Bluetooth	BT specification version 2.0 class 2 (Optional)
Paper roll	
“Easy paper loading design”	
Width	57.5 mm
Thickness	2.2 to 3.5 mils
Diameter	40 mm
Length	18 meters (Approx.)
Power supply	
DC Input	6 ~ 9V 3A (Peak 5A) 9~16V 3A (Extension power board)
Dimensions	
Size	76.8 (W) x 77.4 (L) x 47.6 mm (H) (Control board included)
Weight	100g without paper roll (Paper roll 40g)
Environmental	
Operating Temp.	0 to 50°C
Storage Temp.	-20 to 60°C
Humidity	20~85% RH (non-condensing)

Installation

Easy paper loading



Power requirement

JP4: DC Input (refer the position drawing on page 5) **JP6: I/O INTERFACE**

DC6V ~ 9V 3A (Peak 5A)

Pins	Function
1	+6V ~ +9V
2	GND

Pins	Function
1	NC
2	FEED
3	GND
4	N.C
5	LED1
6	LED2
7	N.C



1. Always disconnect the power during installation
2. Recommends keep the length of the line as short as possible to avoid the higher of line resistance

Self Printing

JP15: Paper Feed (refer the position drawing on page 5)

Hold the “Paper Feed” button then release it when Power On.
Self-test receipt will print out immediately.

RS232 Interface

JP2: RS-232 interface (refer the position drawing below)

Pin assignments

Pins	Function
1	NC
2	TXD
3	CTS
4	RXD
5	RTS
6	NC
7	GND

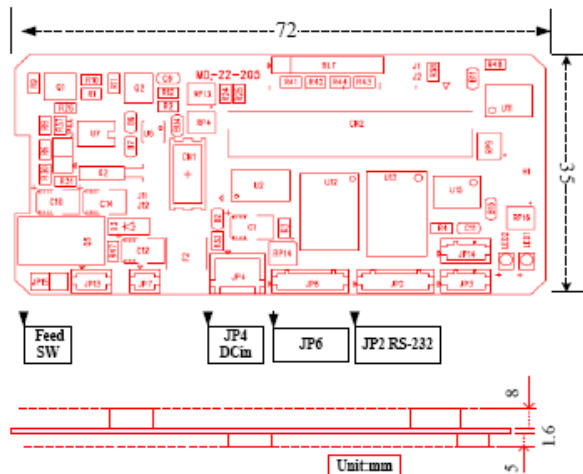
Factory Default

Baud rate	9600bps
Data bit	8
Stop bit	1
Parity check	None
Handshaking	DTR / DSR or XON / XOFF



1. To enable "Start printing" must be sending 0ah, 0dh.
2. Unprintable characters will become 1 data byte, such as ESC (1Bh), 0Ah, 0Dh...etc.
3. We do not check printer status usually, but you can send printer inquiry command when required.

Control Board Drawing



Command Set

Command	Control code	Description
LF	0Ah	Line Feed
CR	0Dh	Carriage return
ESC+SP+n	1Bh+20h+n, 0<n<255	Sets the character spacing
ESC+'-' +n	1Bh+2Dh+n, 0<n<1	Enable/Disable under line mode
ESC+'_' +n	1Bh+5Fh+n, 0<n<1	Enable/Disable upper line mode
ESC+' ' +n+data	1Bh+27h+n+data	Print curving graph lines
ESC+'[' +n+0+data	1Bh+5Bh+n+00h+data	Print the bit image mode
ESC+'*' +m+n1+n2+data	1Bh+2Ah+m+n1+n2+data	Print the bit image mode
ESC+'('+'B'+n+n1+ barcode data	1Bh+28h+42h+n+n1 1 < n < 5	Barcode printing mode. (See Table 4)
ESC+'{' +n	1Bh+7Bh+n, 0<n<1	Enable/Disable upside-down printing mode
ESC+'@'	1Bh+40h	Initialize printer
ESC+'1'+n	1Bh+31h+n, 0<n<255	Set line spacing rate of minimum pitch
ESC+'3'+n	1Bh+33h+n, 0<n<255	Set line spacing (Use in graphic mode)
ESC+'H'+n	1Bh+48h+n, 0<n<6	Select/Cancel n times height
ESC+'K'+n1+n2+data	1Bh+4Bh+n1+n2+data	Print the bit image mode
ESC+'M'+n	1Bh+4Dh+n, 0<n<2	Select ASCII character font (see Table 1) only use in standard mode
ESC+'R'+n	1Bh+52h+n 0 < n < 6 (Chinese version) 0 < n < 10 (Standard version)	Select an international character (see Table 2)
ESC+'W'+n	1Bh+57h+n, 0<n<6	Select/Cancel n times width

ESC+'Z'+n	1Bh+5Ah+n, 0<n<6	Select/Cancel n times height and n times width
ESC+'b'+n	1Bh+62h+n, 0 < n < 7	Communication speed setting. (See Table 3)
ESC+'c'+ '3'+n	1Bh+63h+33h+n, 0<n<1	Enable/disable paper sensor
ESC+'c'+ '5'+n	1Bh+63h+35h+n, 0<n<1	Enable/disable switch
ESC+'c'+ '6'+n	1Bh+63h+36h+n, 0<n<1	Enable/disable Temperature sensor
ESC+'d'+n	1Bh+64h+n, 1 < n < 255	After printing feed n lines
GS+'*' +n1+n2+n3+data	1Dh+2Ah+n1+n2+n3+data	Define the download bit image
GS+'/'	1Dh+2Fh	Printing the download bit image
GS+'B'+n	1Dh+42h+n, 0<n<1	Turn white/black reverse printing mode on/off
GS+V+0	1Dh+56h+00h	Cut paper
GS+'k'+m+n+dn	1Dh+6Bh+m+n+dn 65 <= m <=73	Barcode printing mode (see table 5)
GS+'h'+n	1Dh+68h+n, 0<n<=255 n=16 (default)	Select the height of the Barcode (use in GS k)
GS+'w'+n	1Dh+77h+n, 0<n<=255 n=0 (default)	Select the width of the barcode (use in GS k)
GS+'H'+n	1Dh+48h+n, 0=<n<=2 n=2 (default)	Selecting of Printing Position of HRI Code (use in GS k)
FS+'&'	1Ch+26h	Select Chinese character mode
FS+'.'	1Ch+2Eh	Cancel Chinese character mode

Table 1: Select ASCII character font

n	Character Set
0	ASCII font (16 x 8)
1	ASCII font (16 x 12)
2	ASCII font (24 x 12) default

Table 2: Set up international code

Standard version

n	Character Set
0	U.S.A
1	France
2	Germany
3	English
4	Denmark I
5	Sweden
6	Italy
7	Spain
8	Japan
9	Norway
10	Denmark II
-	Latin-1
-	Latin-2
-	Japan1
-	Russian
-	Thai
-	Turkish

Chinese BIG-5 version 24*12

n	Character Set
0	U.S.A (16 x 8)
1	U.S.A (16 x 12)
2	U.S.A (24 x 12) default
3	France (24 x 12)
4	Germany (24 x 12)
5	U.K. (24 x 12)
6	Denmark I (24 x 12)
7	Sweden (24 x 12)

Chinese BIG-5 version 16*8

n	Character Set
0	U.S.A (16 x 8)
1	U.S.A (16 x 12)
2	U.S.A (24 x 12) default
3	France (16 x 8)
4	Germany (16 x 8)
5	U.K. (16 x 8)
6	Denmark I (16 x 8)
7	Sweden (16 x 8)
8	Italy (16 x 8)
9	Spain (16 x 8)
10	Japan (16 x 8)
11	Norway (16 x 8)
12	Denmark (16 x 8)

Chinese BIG-5 version 16*12

n	Character Set
0	U.S.A (16 x 8)
1	U.S.A (16 x 12)
2	U.S.A (24 x 12) default
3	France (16 x 12)
4	Germany (16 x 12)
5	U.K. (16 x 12)
6	Denmark I (16 x 12)
7	Sweden (16 x 12)
8	Italy (16 x 12)
9	Spain (16 x 12)

Table 3: Communication speed setting (RS-232 only)

n	Communication speed
0	1200 bps
1	2400 bps
2	4800 bps
3	9600 bps (Default)
4	19200 bps
5	38400 bps
6	57600 bps

Table 4: Bar code printing mode

n	Bar code prints mode	Bar code data length (Barcode data)
1	EAN-8 n1=0	Len=8
2	EAN-13 0 < n1 < 9	Len=13
3	UPC-A n1=0	Len=10
4	UPC-E 0 < n1 < 9	Len=6
5	CODE 39 1 < n1 < 15	1 < Len < 14

Table 5: Bar code printing mode

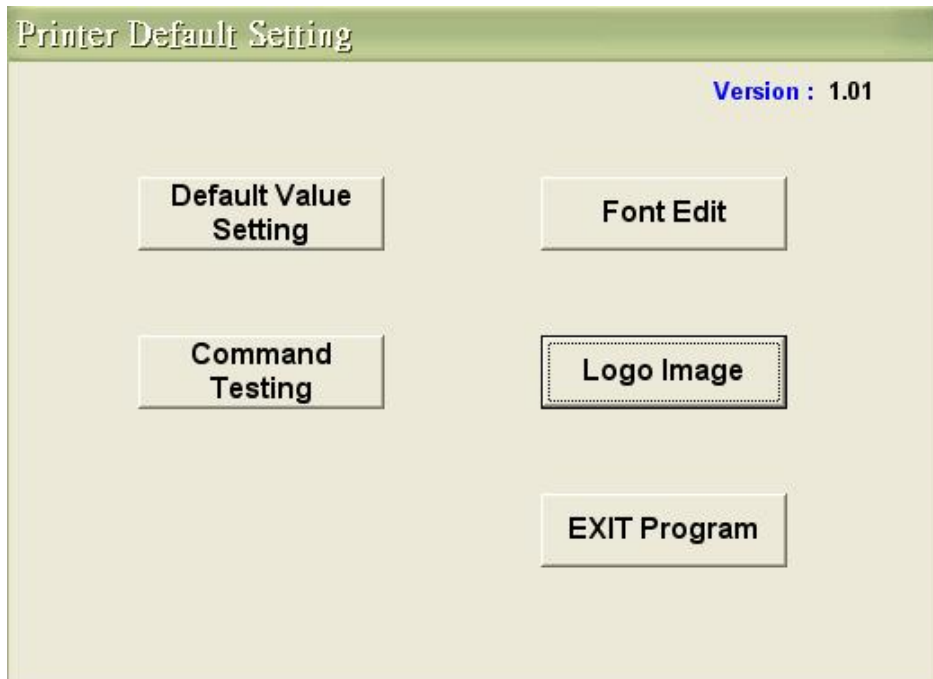
m	Bar code prints mode	Number (n) (Decimal)	Data (dn) (Decimal)
65	UPC-A	n=11	48 <= d <= 57
66	UPC-E	n=11	48 <= d <= 57
67	EAN13	n=12	48 <= d <= 57
68	EAN8	n=7	48 <= d <= 57
69	CODE39	1 <= n <= 255	32,36,37,43,45,46,47,48 <= d <= 57;65 <= d <= 90
70	ITF	1 <= n <= 255 (even number)	48 <= d <= 57
71	CODABAR	1 <= n <= 255	36,43,45,46,47,48 <= d <= 57,58;65 <= d <=68
72	CODE93	1 <= n <= 255	0 <= d <=127
73	CODE128	1 <= n <= 255	0 <= d <=127

Application Software

Choose the correct COM port that you connected then Press the button of "Synchronize" into program.



Press the button that you want to Setting/Testing/Edit or Down load.



Press "Read Status" first then start to change the setting that you want.
Press "Write Status" to finish your setting.

Default Value Setting

Model : Version : 1.01
Serial number :

Country code : Baudrate set :
Character set on/off : Speed set :
Character Reverse : Dotspase :
High set : Linespace :
Width set : Linefeed :



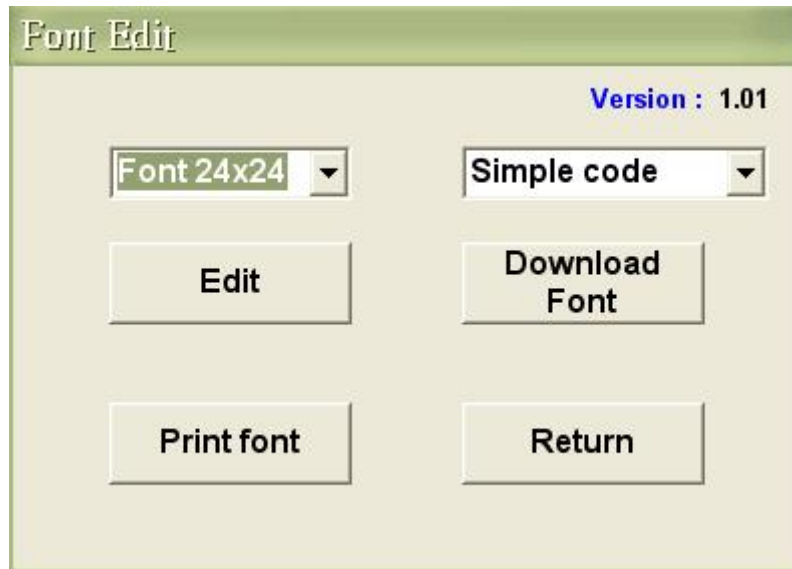
Please Note – Once you press "Write Status", the setting will become Default

Command code function testing

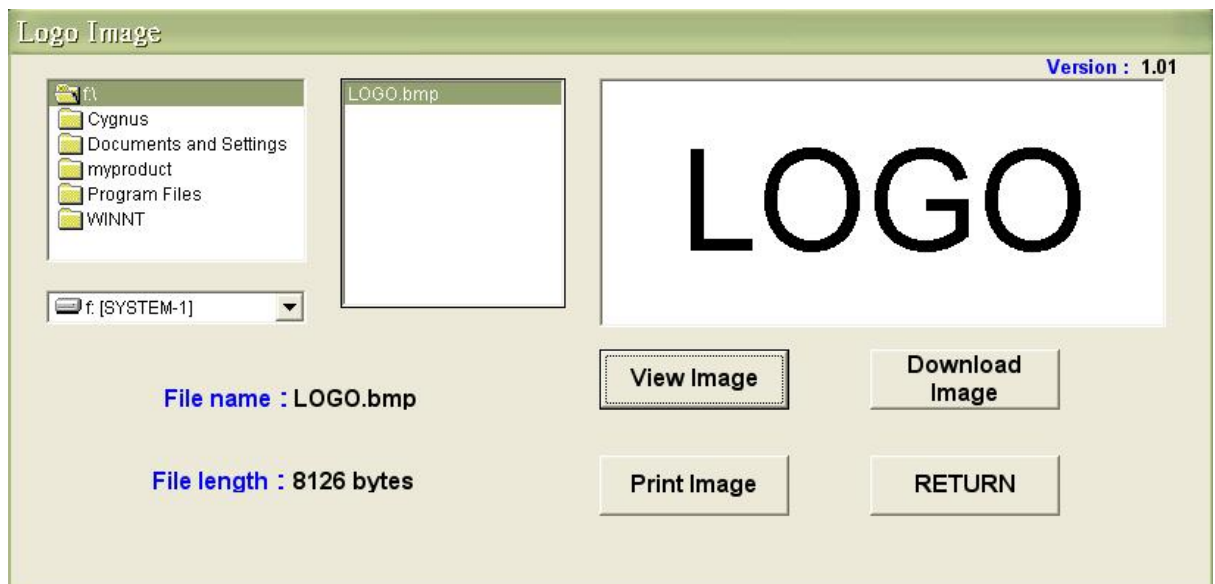
Command Testing Version : 1.01

<input type="button" value="Line Feed"/>	<input type="button" value="Character white/black reverse"/>	<input type="button" value="Simple code printing"/>
<input type="button" value="Dot line feed control"/>	<input type="button" value="A curve printing"/>	<input type="button" value="Traditional code printing"/>
<input type="button" value="Line space control"/>	<input type="button" value="Graphic printing"/>	
<input type="button" value="Double height /Double width"/>	<input type="button" value="Printing reverse control"/>	
<input type="button" value="Under line control"/>	<input type="button" value="Initialize printer"/>	<input type="button" value="Return"/>

Special characters that you can edit by yourself with this application tool.



Down load your Logo in .bmp file from your PC with this application tool



Please note – Must be exactly black and white bmp file.

Optional

Special Fonts

Simplify Chinese / Traditional Chinese / Thailand / Russia / Turkey are available at present.



Please contact with us if require Special Fonts to develop.

BlueTooth module

The PT158 Bluetooth Module meets BT specification version 2.0 class 2, transmission range about 10 to 15 meters.

The PT158 will responds an inquiry scan with name "PT158' S/No." when operated with BT dongle (It comes with a virtual COM port driver). And PIN code "0000" is require for activates the printer.

RTC

Real time clock for specify functional request -- Additional RTC chip on board required.

Wide range power input

+9V to +16V DC to DC Module

Cleaning the thermal head

Wipe it with Isopropyl Alcohol (IPA) on the thermal head to remove blackish dust collected.



The thermal head is easy to damage, so clean it gently with soft cloth. Take sufficient care not to scratch when cleaning it.

Mechanical Dimensions

