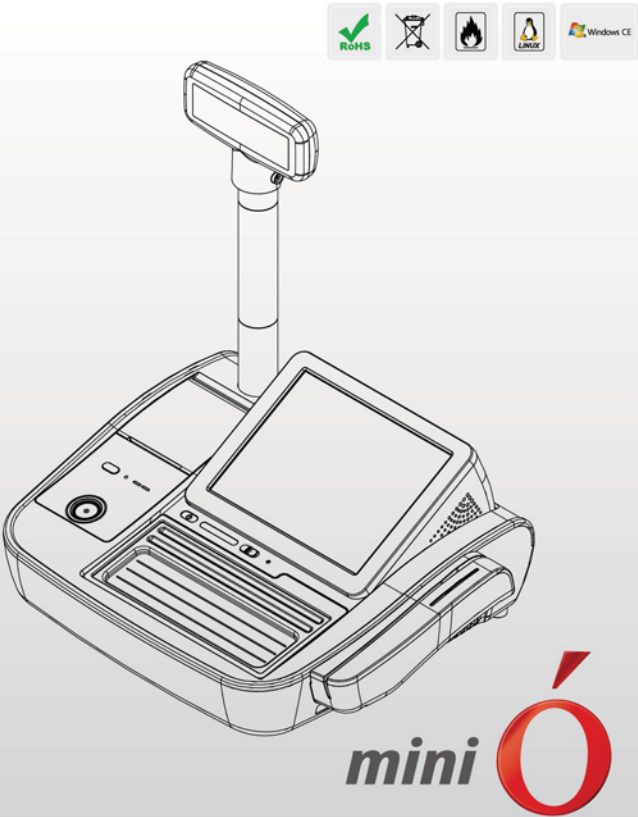# Installation Guide

RoHS · Windows CE

mini Ó

Precaution

● Warranty

We guarantee our POS terminal product and its parts against defects in materials and workmanship under proper use for a standard period of 2 years from the date of original purchase.

During this period, we will repair or replace defected and/or faulty products or parts without imposing a charge for spare and labor to the purchaser.

The 1st year includes servicing and new or refurbished replacement parts free of charge, with one-way shipping cost born by the seller; the customer shall be responsible for return delivery charge.

The 2nd year also includes free of charge servicing and parts, but a limited warranty requires the entire shipping cost be borne by the customer.
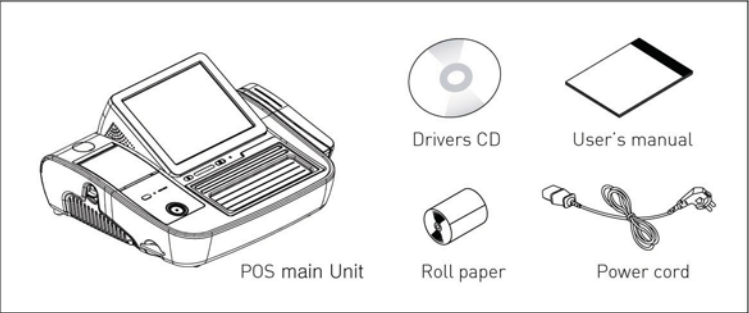
Products out of the warranty period or scope shall be diagnosed at customer's expense. We will charge for repair and delivery in the case of damage as a result of the customer's mistake, abnormal usage, carelessness or natural disasters.

● Notice for safety

1. We recommend using proper power voltage as a precaution against fire and electrical shock.
2. Avoid exposing the product to direct sunlight and do not use the product near areas of high moisture ; this may cause low reliability and/or operational malfunction.
3. Be aware of electro-static on PCB of system with anti-static appliance; This is a possible cause of low reliability and short life term.
4. Place a product away from highly static areas; this may lead to low performance and a reduced life cycle.
5. Do not disturb metal material or obstacle in product in danger of fire and electric shock.
6. Use product in simple power cord plug-in circumstance in caution of fire, electric shock and system disorder on electricity.
7. Be careful of other electronics with possible high frequency, electronic and magnetic affects (Ex. Audio, Electronic-range, etc); there is a strong possibility this will lead to the product becoming out-of-order or system error.
8. Risk of explosion if battery is replaced incorrectly; dispose of used batteries according to the instructions.
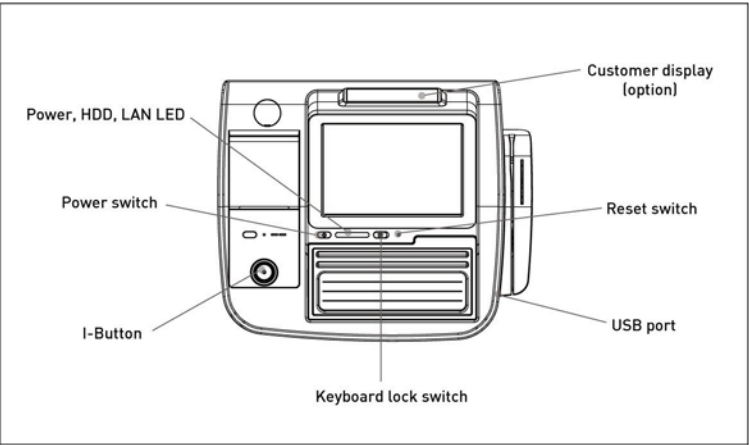
1. Package contents

The following items are included when you purchase this product. If any of these items are damaged or missing, contact your dealer for assistance.
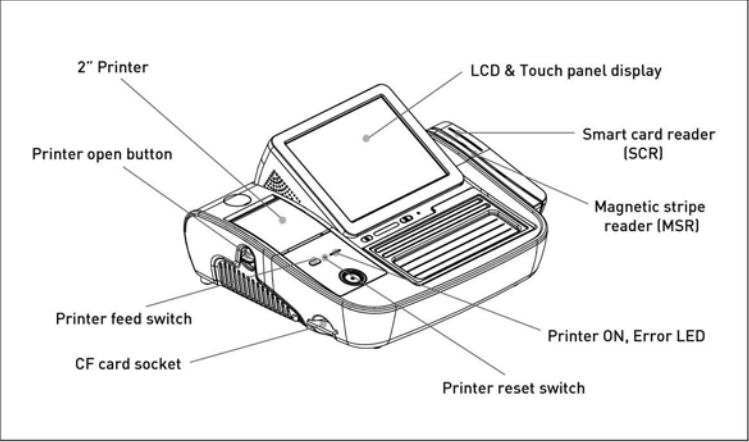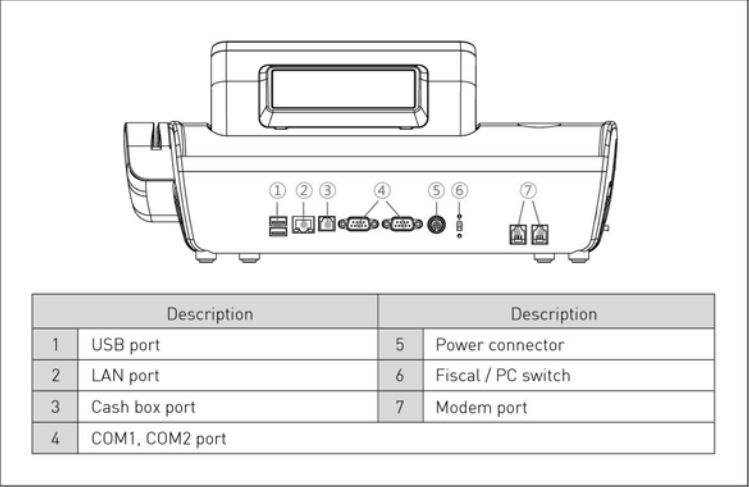

POS main Unit · Drivers CD · User's manual · Roll paper · Power cord

2. Configuration

[Front View]

- Power, HDD, LAN LED
- Power switch
- I-Button
- Keyboard lock switch
- Customer display (option)
- Reset switch
- USB port

[Side View]

- 2" Printer
- Printer open button
- Printer feed switch
- CF card socket
- LCD & Touch panel display
- Smart card reader (SCR)
- Magnetic stripe reader (MSR)
- Printer ON, Error LED
- Printer reset switch

[I/O View]

	Description		Description
1	USB port	5	Power connector
2	LAN port	6	Fiscal / PC switch
3	Cash box port	7	Modem port
4	COM1, COM2 port		

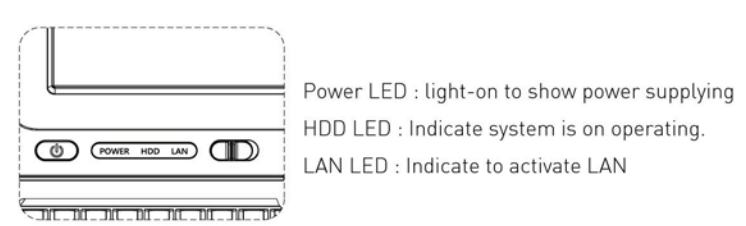## 3. Power on

Power switch is located on left down side of main LCD monitor. When power is on, automatically it is lighten in power LED. As following operating status, each LED is activated for own indication.
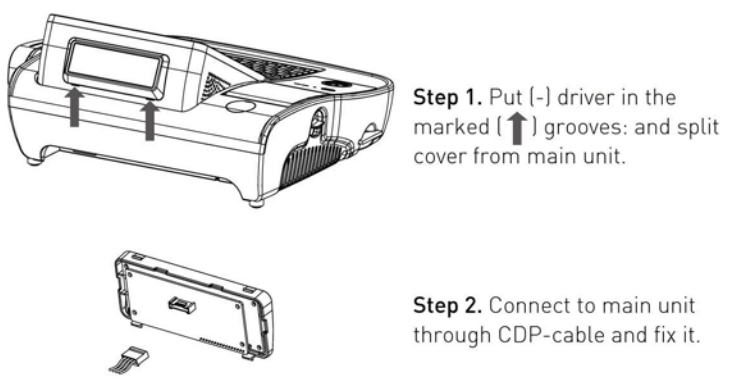

Power LED : light-on to show power supplying
HDD LED : Indicate system is on operating.
LAN LED : Indicate to activate LAN
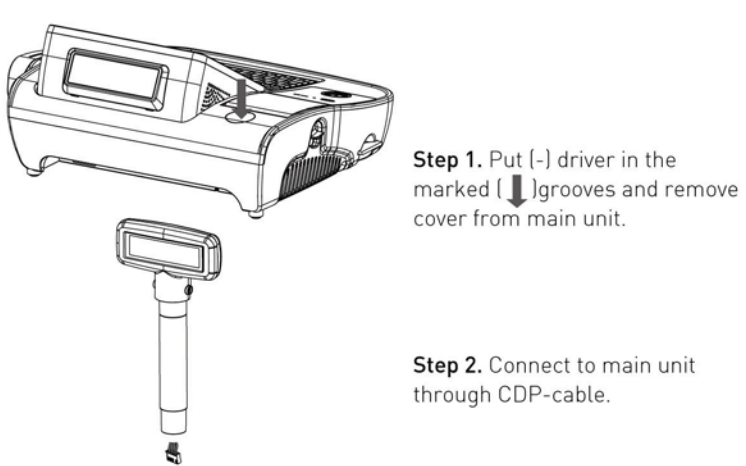
4. Setup optional item

CDP should be connected after connecting cable with main unit. Ensure normal booting status with power on/off.

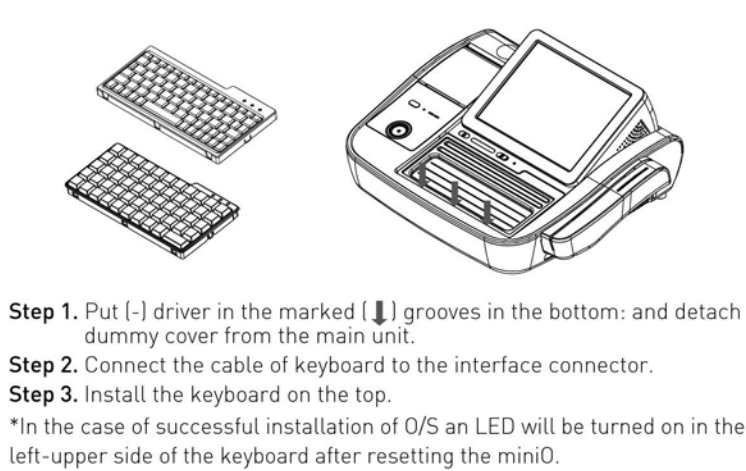**Caution;** Be aware of power(AC) off status when option item removal or replacement.
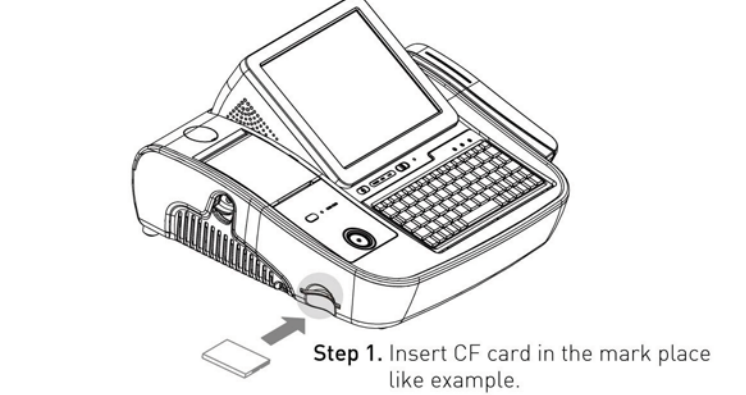
[Customer display]

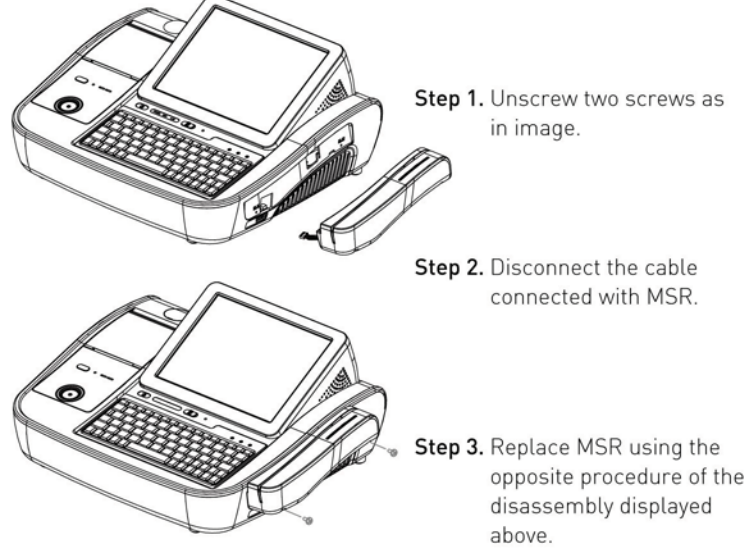**Step 1.** Put (-) driver in the marked (↑) grooves; and split cover from main unit.

Step 2. Connect to main unit through CDP-cable and fix it.

[Customer display : Pole type]

Step 1. Put (-) driver in the marked (↓)grooves and remove cover from main unit.

Step 2. Connect to main unit through CDP-cable.

[Mini keyboard/PLU keyboard]

Step 1. Put (-) driver in the marked (↓) grooves in the bottom; and detach dummy cover from the main unit.
Step 2. Connect the cable of keyboard to the interface connector.
Step 3. Install the keyboard on the top.
*In the case of successful installation of O/S an LED will be turned on in the left-upper side of the keyboard after resetting the miniO.

[CF CARD]

Step 1. Insert CF card in the mark place like example.

[MSR]

Step 1. Unscrew two screws as in image.

Step 2. Disconnect the cable connected with MSR.

Step 3. Replace MSR using the opposite procedure of the disassembly displayed above.
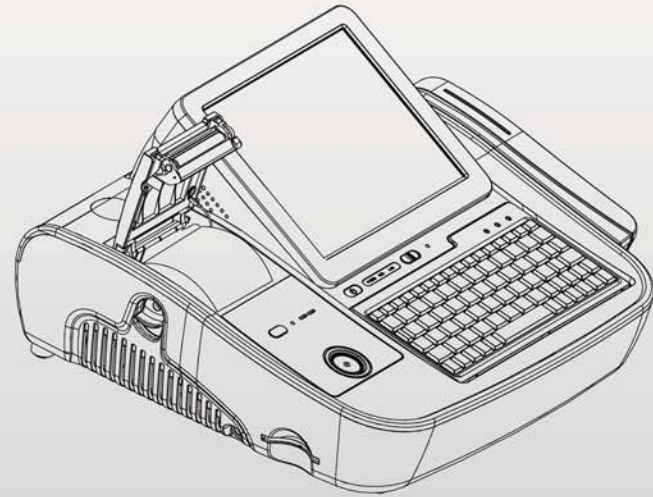
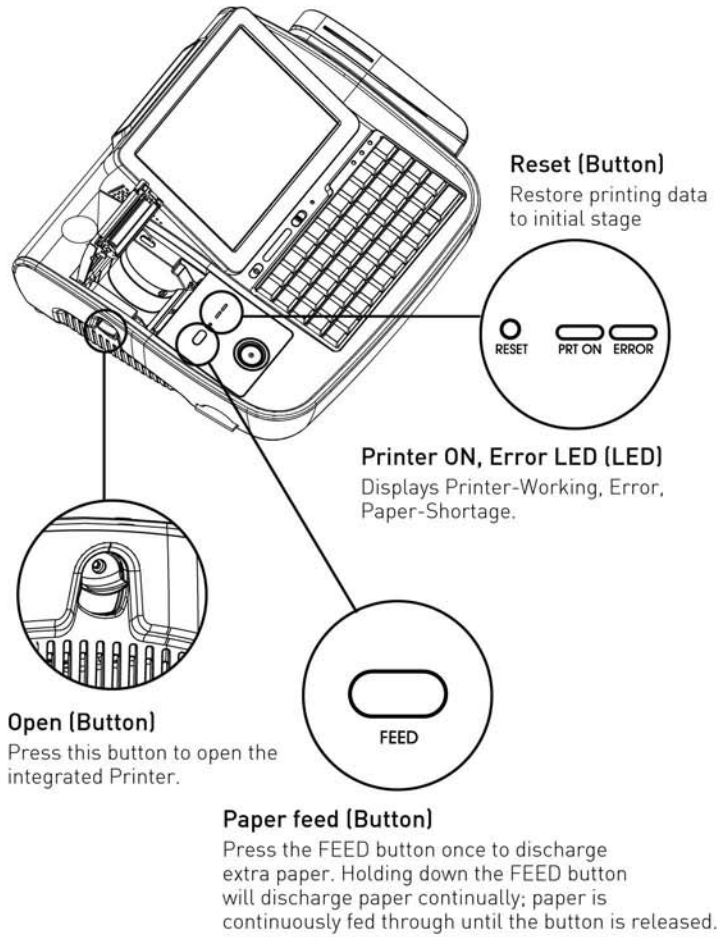| miniO	
CPU	Intel Atom N270 1.6GHz processor
Chipset	Intel 945GSE+ICH7M
HDD	1GB SSD (HDD option)
Memory	DDR2 SODIMM x 1slot (Default 1GB up to 2GB)
VGA	Intel 945GSE GMA950 Engine
Printer	2" thermal printer (24V) 200mm/sec max (Auto cutter)
Display	8.4" (800 x 600)
Internal I/O	
Parallel	1 Port (reserved for internal printer)
USB	1 x touch screen, 1 x keyboard, 1 x MSR, 1 x I-Button reserved, 1 x SCR
RS-232	COM 4 reserved for VFD or 2nd display / COM 3 reserved for 2" mini printer
LVDS	Main display use
Mini PCIe	1 slot support
External I/O	
USB	Side 1, Rear 2
RS-232	COM 1 ~ 2 with + 5 / 12V power output on 9pin
LAN	GbE LAN
Cash drawer	1 x RJ11 , Cash drawer port
Options	
MSR	Comply with ISO 7811, Support 1 & 2 & 3 track
SCR	IC card reader
Dallas	Dallas I-button reader
Keyboard	Mini standard keyboard or Programmable keyboard : 55 Key
VFD	Customer display LCD type (16 x 2) or VFD type (20 x 2) / pole type customer display
CF CARD	CF card reader
DVR	DVR Card : 4 channels support
Qualification	CE, FCC, KCC
Power Supply	AC 110 or 220V (Max.230 watt) or DC 24V
OS Support	Windows CE 6.0 on SSD, Windows XP/XPE, POS Ready (WEPOS) on HDD, Linux

*Specifications are subject to change without prior notice

mini Ó

Integrated Thermal Receipt Printer

1. Control panel

Reset (Button)
Restore printing data to initial stage

RESET PRT ON ERROR

Printer ON, Error LED (LED)
Displays Printer-Working, Error, Paper-Shortage.

Open (Button)
Press this button to open the integrated Printer.

FEED

Paper feed (Button)
Press the FEED button once to discharge extra paper. Holding down the FEED button will discharge paper continually; paper is continuously fed through until the button is released.

2. Paper-roll change

Open button

Step 1. Push the open-button on the printer cover to open the cover.

Step 2. Install new roll of paper in right way.
Step 3. Draw out the paper slightly and close the printer cover.
When you close the printer cover, please press the middle of the cover to ensure paper contact to the roller.
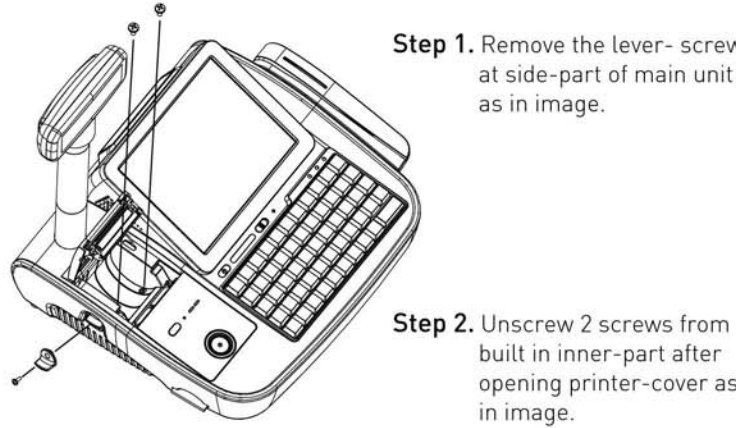
3. Self test

1. Make sure the paper roll is installed properly.
2. The self-test prints out the current firmware version and DIP switch settings.
3. Self-test 1 (When miniO is powered Off) While holding down the FEED button, turn on the power to begin the Self- test.
4. Self-test 2 (When miniO is powered On) During press printer Reset button and then feed button, if it is off reset button then, self-test will be started.
5. Self-test is showed up with 2 printing pages : One is for printer HW status, and the other is for font display.
6. The printer is ready to receive data as soon as it completes the Self-test.

※Reference
In pressing FEED button, wait until present setting status and character/font status printing with power on. Confirm all 2 pages for self test printing and then start other handling/setting. Self test makes printer review and check about proper operating status. It is possible to confirm printing quality, firmware version and dip switch setting in self test.

4. Replace built-in printer

Step 1. Remove the lever- screw at side-part of main unit as in image.

Step 2. Unscrew 2 screws from built in inner-part after opening printer-cover as in image.

Step 3. Pull up on the printer to unlock and detach from main unit.

5. DIP Switch setting

1. Detach POS built-in printer.
2. Check DIP SW on the reverse side of the built-in printer detached from the main-unit.

※Notice
Make sure that the power is off when changing the dip switch setting.
Make sure the setting is set to "Normal" for Density in printing "B" Font.

SW2 SW1

Specifications

Printing	
Method	2" Jam-free Thermal line dot printing
Number of dots/line	432
Resolution (dots/mm)	8
Paper width (mm)	58 $^{+0\ -1}$
Printing width (mm)	54
Speed (mm/sec)max	200
Paper path	Curved

Detection	
Head temperature	By thermistor
Platen position	By mechanical switch
Out of paper	By photo interrupter
Cutter home position	By photo interrupter

Power Supply(V)	
Operation voltage (Vdd)	2.7 to 3.6 / 4.75 to 5.25
Operation voltage (Vp)	21.6 to 26.4

Peak current(A)	
Head	2.61 (26.4V/144dots) 5.23 (26.4V/288dots)
Motor	0.44
Cutter	0.64

Auto cutter	
Method	Slide type
Paper thickness (µm)	54 to 80 ^{*1}
Cutting type	Full cut/Partial cut (Leave center point)
Operating time (sec/cycle)max	Approx. 0.5
Cutting pitch (mm)min	10
Cut frequency(cut/min)max	30

Service life	
Pulse activation	100 million
Abrasion resistance (km)	100 ^{*1}
Life (cut)	700,000 ^{*1}
Operating temperature(℃)	-10 to 50

* Use recommended thermal papers   * Excluding mounting part
* Printing speed may be slower depending on the data transmission speed and the control commands.
* The above values are calculated under printing low with recommended paper at normal temperature.
The values may vary with environment temperature, printing level, etc.

DIP Switch setting table

NO	Function	Setting			Default
		SW1-1	SW1-2	SW1-3	
1	RS232-C (Transmission speed)				9600 BPS
	2400 BPS	OFF	OFF	OFF	
	4800 BPS	ON	OFF	OFF	
	9600 BPS	OFF	ON	OFF	
	19200 BPS	ON	ON	OFF	
	38400 BPS	OFF	OFF	ON	
	57600 BPS	ON	OFF	ON	
	115200 BPS	OFF	ON	ON	
2	RS232-C (Handshaking)	SW1-4			DTR/DSR
	DTR/DSR	OFF			
	XON/XOFF	ON			
3	Auto cutter	SW2-7			Enable
	Enable	OFF			
	Disable	ON			
4	Sound	SW1-5	SW1-6		No Sound
	No Sound	OFF	OFF		
	Internal buzzer	ON	OFF		
	External buzzer	OFF	ON		
	Voice	ON	ON		
5	Print density	SW1-7	SW1-8		Low
	Low power	OFF	OFF		
	Normal	ON	OFF		
	Slightly	OFF	ON		
	Dark	ON	ON		
6	Auto cutter function	SW2-8			Partial cut
	Partial cut	OFF			
	Full cut	ON			

[Language setting]
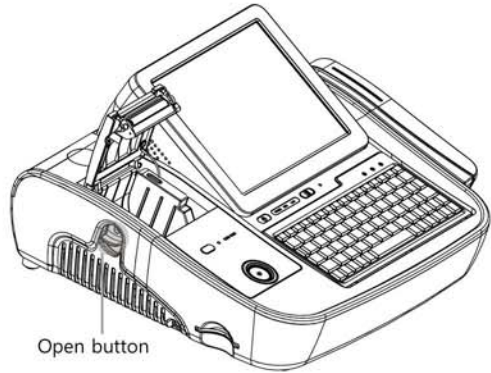
No	Code page	Language	SW2-1	SW2-2	SW2-3	SW2-4	SW2-5	SW2-6
1	CP-437	USA Standard Europe	OFF	OFF	OFF	OFF	OFF	OFF
2	Katakana	Japanese	ON	OFF	OFF	OFF	OFF	OFF
3	CP-850	Multilingual	OFF	ON	OFF	OFF	OFF	OFF
4	CP-860	Portuguese	ON	ON	OFF	OFF	OFF	OFF
5	CP 863	Canadian-French	OFF	OFF	ON	OFF	OFF	OFF
6	CP-865	Nordic	ON	OFF	ON	OFF	OFF	OFF
7	CP-1252	Latin I	OFF	ON	ON	OFF	OFF	OFF
8	CP-866	Cyrillic Russian	ON	ON	ON	OFF	OFF	OFF
9	CP-852	Latin II	OFF	OFF	OFF	ON	OFF	OFF
10	CP-858	Euro	ON	OFF	OFF	ON	OFF	OFF
11	Thai-42	Thailand character	OFF	ON	OFF	ON	OFF	OFF
12	Thai-11		ON	ON	OFF	ON	OFF	OFF
13	Thai-14	Thailand character	OFF	OFF	ON	ON	OFF	OFF
14	Thai-16		ON	OFF	ON	ON	OFF	OFF
15	Thai-18		OFF	ON	ON	ON	OFF	OFF
16	CP-874		ON	ON	ON	ON	OFF	OFF
17	CP-737	Greek	OFF	OFF	OFF	OFF	ON	OFF
18	CP-775	Baltic	ON	OFF	OFF	OFF	ON	OFF
19	CP-855	Cyrillic	OFF	ON	OFF	OFF	ON	OFF
20	CP-857	Turkish	ON	ON	OFF	OFF	ON	OFF
21	CP-861	Icelandic	OFF	OFF	ON	OFF	ON	OFF
22	CP-862	Hebrew	ON	OFF	ON	OFF	ON	OFF
23	CP-864	Arabic	OFF	ON	ON	OFF	ON	OFF
24	CP-869	Greek II	ON	ON	ON	OFF	ON	OFF
25	CP-1251	Cyrillic	OFF	OFF	OFF	ON	ON	OFF
26	CP-1253	Greek	ON	OFF	OFF	ON	ON	OFF
27	CP-1254	Turkish	OFF	ON	OFF	ON	ON	OFF
28	CP-1255	Hebrew	ON	ON	OFF	ON	ON	OFF
29	CP-1256	Arabic	OFF	OFF	ON	ON	ON	OFF
30	CP-1257	Baltic	ON	OFF	ON	ON	ON	OFF
31	CP-1258	Vietnam	OFF	ON	ON	ON	ON	OFF
32	CP-950	Traditional Chinese Big5	OFF	OFF	ON	ON	ON	ON
33	CP-936	Simplified Chinese GBK	ON	OFF	ON	ON	ON	ON
34	CP-932	Japanese Shift-JIS	OFF	ON	ON	ON	ON	ON
35	CP-949	Korean	ON	ON	ON	ON	ON	ON