

# SAND\_OS operation manual

## Instruction

1. **SAND\_OS operation manual** applies to the download and using of OS software of both POS and Tax control serial products.
2. As per the difference of product model and hardware version, each specified OS version would be a little different from one another, and result to the change of details of some operational interface. Anyhow, basic operations are similar. If there is difference, they would be shown in their correspondent product manual.
3. The ROM and OS version will update unceasingly, content referred in this manual are just for demonstration, the exact version please referred the newly send notice.
4. Difference versions of OS may need to download display/printing word stock as well as resetting the configuration, please pay attention.

## I. OS system management instruction:

**1.0 Power on (left column is the content of host display, right column are the Chinese translation, below are the same)**

04/03/16 13:24	04/03/16 13:24
OS V2.01-040324	OS V2.01-040324 (OS version No.)
SYSTEM SELFTEST...	System self-check
CONFIG TEST...	Check configuration
CONFIG ERROR!!! 02	Configuration error!!! 02

Table1-1

The system would self check after the power on. If there is not any errors it will pop in the main menu directly; if there is error, it would be displayed, press “Enter” and pop in the main menu, one has to input the password when enters into the main menu.

Possible errors and reasons: (for more OS error report please refer to *SAND POS OS error report comparison table* )

- 1, CONFIG ERROR!!! : Configuration error! (Demand system configuring)
- 2, CACHE ERROR!!!: Cache memory test error!
- 3, BATTERY ERROR!!!: Battery voltage error! (Under voltage or over tension of the main board, error would be prompted either lower than 2.8V or higher than 3.7V. )
- 4, ETHERNET ERROR!!!: Ethernet error! (setting incorrect or Ethernet fault )
- 5, ICC ERROR!!!: IC card error! (not found IC card or setting error)
- 6, PRINTER ERROR!!!: Printer error! (printer setting incorrect)
- 7, PRINTE DOT ERROR!!!: No printing word stock! (requires to download printing word stock)
- 8, GB2312 DOT ERROR!!!: No display word stock! (Requires to download display stock)
- 9, SDRAM ERROR!!!: SDRAM test error!
- 10, ERR: KEYBOARD ERROR! : Keyboard test error! (Keyboard fault or else)
- 11, APP BAD SIZE: Application program length error. (Undownload application program or application program cannot run.)

## 2.0 Main menu

Main menu totally one page

04/03/16 13:24	04/03/16 13:24
MAIN MENU	1 Main menu
1. SYSTEM CONFIG	1. System configuration
2. SOFTWARE DOWNLOAD	2. Software download
3. SOFTWARE DEVELOP	3. Software development
4. HARDWARE TEST	4. Hardware test
5. SYSTEM ADMIN	5. System management

## II. ROM and OS operating instruction:

### 1 OS downloading:

1.0 Starting interface introduction:

Power on host LCD display Table2-1

00/00/00 00:00	00/00/00 00:00
ROM H2.7 S1.01-030911	ROM H2.7 S1.01-030911 (ROM version No.)
WAIT OS DOWNLOAD	Waiting for downloading OS
ERR: OS BAD SIZE	Errir: OS length error (not found OS)

1.1 Detailed operation of OS downloading

1.1.1 Start up, ROM check OS exists or not after starting up, if OS not exist, host would display as Table2-1, and waiting for downloading OS.

1.1.2 Use DNW to download software, and select OS file in computer to download, the host would display as follows:

00/00/00 00:00	00/00/00 00:00
ROM H2.7 S1.01-030911	ROM H2.7 S1.01-030911 (ROM version No.)
OS DOWNLOADING...	OS downloading...
.....	.....

Table2-2

1.1.3 The host would prompt DOWNLOAD OK after the downloading succeeds, but the interface just flashes by.

1.1.4 ROM and OS would run OS directly after downloading rather than do other operations.

1.2 Prompt information when errors happen

ERR: DOWNLOAD TIMEOUT

download timeout

ERR: OS BAD SIZE

OS length incorrect

ERR: OS BAD CHECKSUM

OS check code incorrect

 Note! :

1), Press “Clear” at the moment of starting up can enforce to OS downloading, but not run the already downloaded OS.

2) OS downloaded in this condition will be lost after power off, it should be redownload in OS software downloading in the main menu if needs to be saved. (Refer to 2.0)

## 2 Software download menu operation

### 2.0 Software download main menu introduction

Software downloading lies in the second item, SOFTWARE DOWNLOAD, in the MAIN MENU, (refer to table1-2), the main menu interface of software download is as follows:

04/03/16 13:24 DOWNLOAD MENU 1. DOWNLOAD APP 2. DOWNLOAD ROM 3. DOWNLOAD OS 4. DOWNLOAD DISP FONT 5. DOWNLOAD PRINT FONT	04/03/16 13:24 Download menu 1. Download application 2. Download ROM 3. Download OS 4. Download display word stock 5. Download printing word stock
--	--


Table2-3

F1 upper shift

F2 search down

F3 Page up

F4 Page down

 Note! : If chose a wrong item, press “Cancel” to return to the former interface.

### 2.2 ROM download

After enter into download ROM, host will display as follows:

04/03/16 13:24 DOWNLOAD ROM WAIT DOWNLOAD	04/03/16 13:24 Download ROM Waiting for download
---	--

Table2-4

Use DNW download software, selectROM file to download in computer, the hose displays as follows:

04/03/16 13:24 DOWNLOAD ROM WAIT DOWNLOADING... .....	04/03/16 13:24 Download ROM Downloading...1 .....
--	--

Table2-5

After the download completion, system will prompt to save or not, as is:

04/03/16 13:24 DOWNLOAD ROM SAVE? SIZE=63032  DOWNLOAD OK!	04/03/16 13:24 Download ROM Save or not? Length=63032  Download succeed!
---	---

Table2-6

Press “Enter” to save, and prompt “SAVED OK!” after the saving is done, then press any key to return to main menu, press “Cancel” to return to main menu if needs not to save.

2.3 OS download and ROM downloading and installation

2.4 APP download and ROM download and installation

2.5 DISP FONT download and installation

After enters into DOWNLOAD DISP FONT, the host would display as follows:

04/03/16 13:24	04/03/16 13:24
DOWNLOAD DISP FONT	Download display font
WAIT DOWNLOAD	Waiting for downloading

Table2-7

SelectHZK16.BIN file download in computer, then the host will display as follows:

04/03/16 13:24	04/03/16 13:24
DOWNLOAD DISP FONT	Download display font
WAIT DOWNLOADING...	Downloading...
.....	.....

Table2-8

Prompt SIZE=262144 after the download is completed and “SAVED OK!” after the saving is done, then press any key to return to main menu; press “Cancel” to return to main menu if needs not to be saved.

2.6 PRINT FONT download

Detailed operations are the same as that in 2.5

Download of print font program file can be various as per the different types of pixel printers/thermal printers:

Pixel printer: (EPSON M-190/EPSON M110MB/SAMSUNG SMP130): HZK12.BIN

Thermal printer: (APS ELM205/SAMSUNG SMP640): HZK24S.BIN

Note! :

Generally speaking, ROM, OS, display font, and print font need not to be downloaded since PCB board has merged all the program files and programmed in chip before welding.

**III. Hardware test operation instruction**

1 Hardware test main menu introduction

Hardware test lies in the forth item HARDWARE TEST in MAIN MENU (refer to table1-2), there are totally three pages of hardware test main menu, the main menu interface is as follows:

04/03/16 13:24	04/03/16 13:24
TEST MENU 1	Test menu 1
1. MMI	1. Display test
2. PRINTER	2. Print test
3. KEYBOARD	3. Keyboard test
4. MAGNETIC	4. Magnetic card test
5. ICC	5. IC card test
6. SAM	6. SAM card test

Table3-1

04/03/16 13:24	04/03/16 13:24
TEST MENU 2	Test menu 2
1. UART	1. Serial test
2. PINPAD	2. Pinpad test
3. MODEM	3. Modem test
4. GPRS	4. GPRS test
5. ETHERNET	5. Ethernet test
6. MEMORY	6. Memory test

Table3-2

04/03/16 13:24	04/03/16 13:24
TEST MENU 3	Test menu 3
1. BATTERY	1. Battery test

Table3-2

Continuous press F2 (line shift) in the page2 of the test menu to enter into page 3 of the test menu.

## 2 MMI (display test)

Select1. MMI in the hardware test main menu and press “Enter” to enter into MMI test menu as follows:

04/03/16 13:24	04/03/16 13:24
MMI TEST MENU 1	Display test menu 1
1. AUTOMATIC TEST	1. Automatic test
2. MANUAL TEST	2. Manual test
3. CONSUMER LCD TEST	3. Customer display test

### 2.1 AUTOMATIC TEST

Select1. AUTOMATIC TES and press “Enter” to begin to test. LCD will turn off the backlight, refresh test, and the display icons on the sub screen one after another, and it shifts a test item in every 3 seconds. One can also press “Enter” to shift to the next test item quickly, press “Cancel” to exit test directly.

### 2.2 MANUAL TEST

Can only press “Enter” shift to the next test item when it is manual test, similarly, press “Cancel” to exit the test directly.


 Note! :

When display test, backlight turning off should be normal, contrast should be even, there should not be lack of row and column during refresh display, character display should be normal and in order, all items on the sub screen can be displayed, and the screen should not wink or darken.

## 3 Print test

Select2. PRINTER and press “Enter” to begin to test, and display as follows:

04/03/16 13:24	04/03/16 13:24
PRINTER TYPE: SAMSUNG SMP130U	Printer type Samsung SMP130U
PRESS KEY TO CONTINUE	Press any key to begin to test

 Note! : Prompt printer type, since different printer will display its correspondent type, please pay

attention to check it;

Pixel printer: EPSON M190

Thermal printer: APS ELM205-LV

Pixel printer with teeth hole paper printer: SAMSUNG SMP130U

Press any key to begin to print, the host will display as follows after completion:

04/03/16 13:24	04/03/16 13:24
PRINTER TYPE: SAMSUNG SMP130U TEST OK! CHECK PRINTER PAPER	Printer type Samsung SMP130U Test OK! Check printing pater
PRESS KEY TO CONTINUE	Press any key to begin to test

Press any key to return to the hardware test main menu after the test is completed.

Note! :

Pay attention to the printing condition at the moment, printer should work normally, paper printed out should not be lack of rows or columns, the printed characters should be clear and in order, and there should not be system halted and restart etc abnormal phenomena..

#### 4 Keyboard test

Select3. KEYBOARD and press “Enter” to begin to test, the host will display as follows:

04/03/16 13:24	04/03/16 13:24
KEYBOARD TEST 5	Keyboard test
TWO CANCEL TO EXIT	Press “Cancel” twice to exit

The pressing time will display on the screen (like “5” in the above table), press “Cancel” twice to exit.

Note! :

(1) Notice that it should be comfortable when pressing keys, there should not be sort of friction or resistance, and keys should be rebound well, key surface should clean and silk screen should be clear, keys pressing time should correspondent to the pressing silk screen, buzzer should have a prompt sound when pressing.

#### 5 Magnetic card test

Select4. MAGNETIC and press “Enter” to begin to test, and the host will display as follows:

04/03/16 13:24	04/03/16 13:24
SWIPE MAGNETIC CARD	Please swipe the magnetic card
PRESS CANCEL TO EXIT	Press “Cancel” to exit

Host displays information of every track when swipe the card in this condition

04/03/16 13:24	04/03/16 13:24
TRACK 2      0      LEN 37 60142825110350708=00 00220589535000000	Magnetic track 2      0      Length 37 60142825110350708=00 00220589535000000 (Magnetic track information)

PRESS KEY TO CONTINUE	Press any key to continue
-----------------------	---------------------------

TRACK 2 refers to track 2;

0 refers to the condition of track is correct, other No. refer that the condition is incorrect;

LEN 37 refers to the length of track;

601428. . . . refers to information of track

Press any key to display information of track 3, which is basically similar to that of track 2, and then press any key again to display information of track 1.

**Note!** :

- (1) The length and information of track is diversity according to the difference of magnetic card.
- (2) The magnetic head should be 2&3 head or 1&2&3 head according to that of POS.
- (3) When swiping the card, there should not be kind of feeling such as over strain, over loose, or resistance, there should be no abnormal phenomena of not reading the card, not reading track 1, 2, and 3 (there are no figure display in track 1, 2, and 3), or system halted when reading the card.
- (4) When taking the test of swiping card, at least three different bank cards should be tested, and each card should be tested at least three times. The standard of qualification of the test is that the machine should word well during the test of any card whenever. And please do not too prompt or too slowly while swiping the card.

#### 6 IC card test

Select5. IC and press “Enter” to begin to test, the host would display as follows:

04/03/16 13:24 ICC TEST MENU 1 1. ASYNC CARD TEST 2. SYNC CARD TEST	04/03/16 13:24 IC card test menu 1 1 Asynchronous card test 2 Synchronous card test
--	--

#### 6.1 Asynchronous card test

Select1. ASYNC CARD TEST to begin to test and enter into the following interface:

04/03/16 13:24 INSERT PBOC CARD PRESS CANCEL TO EXIT	04/03/16 13:24 Insert PBOC card Press “Cancel” to exit
--	--

Insert PBOC test card and display as follows:

04/03/16 13:24 ANSWER TO RESET: 3B6F0000535441522043 48494E412056313130 PRESS KEY TO CONTINUE	04/03/16 13:24 Resetting response 3B6F0000535441522043 48494E412056313130 Press any key to continue
---	---

Press any key to continue and display as follows:

04/03/16 13:24	04/03/16 13:24
SELECT 1PAY. SYS. DDF01	Select file
6F15840E315041592E53	6F15840E315041592E53
59532E4444463031A503	59532E4444463031A503
8801019000	8801019000
90 00	90 00
REMOVE CARD	Remove card

3B6F000... and 6F15840... are Resetting response and select file data respectively, since there would be diversity as per of difference of cards;

90 00 refers to the card is in correct condition, other figures all mean incorrect.

## 6.2 Synchronous card test

Select 2. SYNC CARD TEST to begin to test the card, and enter into the following interface:

04/03/16 13:24	04/03/16 13:24
INSERT 4442 CARD	Insert 4442 card
PRESS CANCEL TO EXIT	Press "Cancel" to exit

Insert 442 test card and display as follows:

04/03/16 13:24	04/03/16 13:24
FIRST 32 BYTES DATA	Initial 32 byte data
00000000888012000000	00000000888012000000
00113130300301172003	00113130300301172003
011700000000000310000	011700000000000310000
BF65	BF65
REMOVE CARD	Remove card

0000000088... refers to select file data, there would be diversity as per the difference of cards;

 Note! :

When taking these two tests, inserting card should be smooth and without friction and resistance, and read the data in the card correctly, there should not be abnormal phenomena such as no response, system halted, and resetting when reading the card.

## 7 SAM card test

Select 6. SAM and press "Enter" to begin to test, the host would display as follows:

04/03/16 13:24	04/03/16 13:24
SAM NO.:	SAM slot No.
PRESS CANCEL TO EXIT	Press "Cancel" to exit



Insert SAM test card into SAM slot, then input correspondent SAM slot No, host displays as follows:

04/03/16 13:24 SAM NO.: 1  ANSWER TO RESET: 3B690000249987005341 0E141E  PRESS KEY TO CONTINUE	04/03/16 13:24 SAM slot No. 1  Retting response 3B690000249987005341 0E141E  Press any key to continue
---	---

Press any key and display as follows:

04/03/16 13:24 SELECT 1PAY. SYS. DDF01 6F15840E315041592E53 59532E4444463031A503 8801019000  90 00	04/03/16 13:24 Select file 6F15840E315041592E53 59532E4444463031A503 8801019000  90 00
--	--

3B6F000... and 6F15840... are Resetting response and select file data respectively, since there would be diversity as per of difference of cards;

90 00 refers to the card is in correct condition, other figures all mean incorrect.

Press “Cancel” can return to SAM card test menu, then input other SAM wipe No. and begin to test the other two slots.

**Note!** :

(1) If SAM card does not inset into the SAM card slot, machine will give promptness, and display in the bottom of screen as:

ERR: RESET RESULT 02 Resetting error

(2) The touch spot should not be uneven or cracked when inserting the SAM card, and there should be no abnormal phenomona such as system halted or resetting etc when cheking.

## 8 Serial port test

Select the second item 1. UART in the hardware test menu, and display as follows:

04/03/16 13:24 UART TEST MENU 1  1. COM1&2 TEST  2. COM1 TEST 3. COM2 TEST	04/03/16 13:24 Serial port test menu 1  1. COM1 and COM2 test each other mutually 2. COM1 test 3. COM2 test
--	--

**Note!** :

(1) It would be ok to just test 1. COM1&2 TEST here. Connect COM1 and COM2 with a crossed serial port test line, after the test succeed there will display “COM1&2 TEST OK!”, but not “ERR: UART SEND&RECV” in the bottom of the screen.

(2) Test of both COM1 and COM2 should connect with PC serial port, take the test by using DNW software.

## 9 Pinpad test

Select the second item 2. PINPAD in the hardware test menu and press “Enter”, display as follows:

04/03/16 13:24	04/03/16 13:24
PINPAD TEST MENU 1	Pinpad test menu 1
1. PINPAD DISPLAY	1. Pinpad display test
2. PINPAD KEYBOARD	2. Pinpad keyboard test

### 9.1 Pinpad display test

Select 1. PINPAD DISPLAY and press “Enter”, pinpad will test automatically. First of all, it would test buzzer, then followed by tests of turning on and off of backlight, refreshing screen, and Chinese character display of graphics mode.

Note! :

(1) The testing items shift in every 3 seconds, you can also press “Enter” to shift to the next test item quickly, press “Cancel” to exit test directly.

(2) When display test, buzzer should work well, backlight turning off should be normal, contrast should be even, there should not be lack of row and column during refresh display, character display should be normal and in order, all items on the sub screen can be displayed, and the screen should not wink or darken.

### 9.2 Pinpad keyboard test

Select 2. PINPAD KEYBOARD and press “Enter” to begin to test of Pinpad, such as:

04/03/16 13:24	04/03/16 13:24
PINPAD KEYBOARD 5	Pinpad keyboard test
PRESS CANCEL TO EXIT	Press “Cancel” to exit

The pressing time will display on the screen (like “5” in the above table).

Note! :

(1) The pressing time will be displayed on the host screen when testing pinpad keyboard, it is normal if there is not any reaction of pinpad.

(2) Notice that it should be comfortable when pressing keys, there should not be sort of friction or resistance, and keys should be rebound well, key surface should clean and silk screen should be clear, keys pressing time should correspondent to the pressing silk screen, buzzer should have a prompt sound when pressing.

(3) Backlight should be turned on if there is a backlight in keyboard.

## 10 MODEM test

Select 3. MODEM of the second item in the hardware test menu and press “Enter” to begin to test, as is:

04/03/16 13:24 MODEM TEST MENU 1 1. ASYNC MODEM TEST 2. HDLC MODEM TEST	04/03/16 13:24 Modem test menu 1 1 Async modem test 2 HDLC modem test
--	--

#### 10.1 Async modem test

Select 1. ASYNC MODEM TES and press “Enter” to begin to test with the following interface:

04/03/16 13:24 HDLC MODEM TEST INPUT TEST NO.:	04/03/16 13:24 HDLC modem test Input test No. of times
--	--

Input the No. of times and press “Enter”, then display as follows:

04/03/16 13:24 HDLC MODEM TEST INPUT PHONE NO.:	04/03/16 13:24 HDLC modem test Input phone No.:
---	---

Host will begin to dial No. after input phone No. and pressed “Enter”. Notice that whether host works (send and receive) normally.

#### 10.2 HDLC modem test

Operate both HDLC and Async modem test.

 Note! :

(1) Notice the working condition of dial send and receive when testing HDLC and Async modem test, there should be no abnormal phenomena like line is not through, receiving overdue, communication cut off, system halted or resetting etc.

### 11 GSM test

Select the second item and choose 4. GSM in the hardware test menu, then press “Enter” to begin to test, display as follows:

04/03/16 13:24 GSM GPRS DIAL CHECKING... TEST OK!	04/03/16 13:24 GSM GPRS dial checking Test passed!
--	---

There will be a prompt of “PPP open”, “Verify User & Pass”, and “IP: 10.70.12.136” at the beginning of the first test, this will not appear before the next test without being powered off.

 Note! :

(1) GPRS is optional, can test only succeed under the condition that the SIM card is equipped with GPRS module and opened GPRS function as well as has set the parameters of GPRS. (refers to chapter 4 *Parameter setup*)

(2) There will display a signal intensity indication on the top left corner as well as “CHINA MOBILE” at the bottom (this will diversity according to different cell phone SIM supplier).


## 12 Ethernet test

When testing Ethernet, test program send data to the backend platform through line, backend receives and settles it, then return to POS. POS displays the test information on DNW window through COM2.

Connect POS COM2 and PC COM1 as well as line, and start DNW software.

Select the second item and choose 5. ETHERNET in the hardware test menu, then press “Enter” to begin to test, DNW window will display as follows:

Connect Server ok	Connect with server successfully
Receive Data LEN=27	Received data length=27
220 Microsoft FTP Service	220 Microsoft FTP Service

 Note! :

- (1) Notice that the two indicators of POS Ethernet interface work normally, the green light should be always turned on when access into the internet, while the yellow light should flash when sending and receiving data.
- (2) Select 5. ETHERNET and press “Enter” to start the test, if there is no reaction of DNW window, it means that network is blocked up, please check whether all the connections are ok.
- (3) When setting be sure that the machine contains the Ethernet function and the system has been set up correctly. (Refer to chapter four *Parameter setup*)

## 12 Memory test

Select the second item and choose 6. MEMORY in the hardware test menu, and display is as follows:

04/03/16 13:24 MEMORY TEST MENU 1	04/03/16 13:24 Memory test menu 1
1. CACHE TEST	1. Cache test
2. SDRAM TEST	2. SDRAM test
3. SRAM TEST	3. SRAM test
4. FLASH TEST	4. Flash memory test

### 13.1 Cache test

Select 1. CACHE TEST and press “Enter” to begin to test, if succeed it will display as follows:

04/03/16 13:24 CACHE TEST	04/03/16 13:24 Cache test
MEMORY TEST OK !	Memory test OK!

Press “Cancel” and return to its Previous Menu.

### 13.2 SDRAM test

Select 2. SDRAM TEST 按 and press “Enter” to begin to test, if succeed it will display as follows:

04/03/16 13:24 SDRAM TEST	04/03/16 13:24 SDRAM test
MEMORY TEST OK !	Memory test OK!

Press “Cancel” and return to its Previous Menu.

### 13.3 SRAM test

Select 3. SRAM TEST and press “Enter” to begin to test, and it will display as follows:

04/03/16 13:24	04/03/16 13:24
SRAM TEST	SRAM test
CHECK APP. . .	Check application...
MEMORY TEST OK !	Memory test OK!

 Note! :

The first time take SRAM test system would prompt the test failed, if it displays “MEMORY TEST OK! ” during any of the following test, it means that the machine works normal. If the system has downloaded the application program, this function shall not be tested, it is normal to display “ERR: CANNOT DO TEST! ”.

### 13.4 Flash test

Select 4. FLASH TEST 按 and press “Enter” to begin to test, and display as follows:

04/03/16 13:24	04/03/16 13:24
FLASH TEST	Flash memory test
Please Select Flash:	Please select flash that needs to be tested:
1	
Flash Write Test OK !	Flash write test OK!

Since there may be several flashed, we can check them one by one by inputting their correspondent No, like above table, input “1” to check the first flash in the machine.

 Note! :

Have enough knowledge of the configuration of the machine before flash test. Input the No. of flash memory, if its correspondent flash does not exist, system will display “ERR: WRITE FLASH”. Notice there should be no abnormal phenomena like: flash write test failed, No. location does not accord with flash, system halted or resetting etc.

### 14 Battery test

Select 1. BATTERY in page 3 and press “Enter” to begin to test, it displays as follows:

04/03/16 13:24	04/03/16 13:24
BATTERY 1	Battery test 1
1. POWER DETECT	Power detect
2. POWER OFF TEST	Power off test

#### 14.1 Power detect

Select 1. POWER DETECT in the condition that external power is on, press “Enter” to begin to test, it displays as follows:

04/03/16 13:24	04/03/16 13:24
POWER IS ON	Power is on
PRESS KEY TO CONTINUE	Press any key to continue.

Select 1. POWER DETECT in the condition that the external power is off, press “Enter” to begin to test, it displays as follows:

04/03/16 13:24 POWER IS OFF  PRESS KEY TO CONTINUE	04/03/16 13:24 Power is off  Press any key to continue
---	---

**Note!** :

The above test is to check whether the power board and reserved nickel-hydrogen battery work well. The machine can distinguish the external power supply is “on” or “off”. When the external power is “off”, there should not be system halted or resetting within one minute. Different from that of battery voltage.

#### 14.2 Power off test

Select Power off test and press “Enter” to begin to test, it displays as follows:

04/03/16 13:24 PLEASE POWER OFF  PRESS KEY TO CONTINUE	04/03/16 13:24 Please power off  Press any key to continue
---	---

To power off and press any key to stop the machine.

**Note!** :

The above test is to check whether the power board and reserved nickel-hydrogen battery work well. The machine should power off normally and would not reset. The machine should not be shutdown or reset before the external power is off.

### IV System setting:

Finished downloading all ROM/OS/DISP FONT/PRINT FONT, setting the system before using it, system setting is to be done in the first item “System configuration” of the main menu, refer to table1-2.

#### 1 System configuration main menu introduction

Select 1.SYSTEM CONFIG in the main menu and confirm it. There are totally two pages of configuration menu, the display interface is as follows:

04/03/16 13:24 CONFIG MENU 1 1. PRINT SETTING 2. DATE/TIME SETTING 3. HARDWARE SETTING 4. BATTERY SETTING 5. PRINTER SETTING 6. MODEM SETTING	04/03/16 13:24 Configuration menu 1 1. Print setting 2. Date/Time setting 3. Hardware setting 4. Battery setting 5. Printer setting 6. MODEM setting
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Table4-1

04/03/16 13:24 CONFIG MENU 2 1. ETHERNET SETTING 2. ETH IP SETTING 3. GSM SETTING 4. CONTACT SETTING 5. OS SETTING	04/03/16 13:24 Configuration menu 2 1. Ethernet setting 2. Ethernet IP setting 3. GSM setting 4. Contact setting 5. OS setting
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Table4-2

## 1.0 Printing system setting

Select 1.PRINT SETTING and confirm it, host will print configuration information of the system.

The printing list is as follows: (the left column are the content, while the right are instructions)

2003/10/17 11:16	The already set Date and time in host
HARDWARE SETTING MODEL PS100 VER 2.70 MSN 270030802001 PSN 100030802001  ICC EXIST ETHERNET NOT EXIST GPRS NOT EXIST	Hardware configuration Model PS100 Version 2.70 Host serial No. 270030802001 Pinpad serial No. 100030802001  IC card reader exist Ethernet not exist GPRS not exist
EPSON M190	Printer: Epson M190
MODEM SETTING MODEM 73K222	MODEM setting MODEM model 73K222
ETHERNET SETTING MAC 00:50:58:00:00:37	Ethernet setting MAC address 00:50:58:00:00:37
ETH IP SETTING	Ethernet IP setting
DHCP DISABLE IP 172.16.40.77 MASK 255.255.0.0 GATE 172.16.1.1 DNS 172.16.1.1	DHCP invalid IP 172.16.40.77 Network mask 255.255.0.0 Gateway 172.16.1.1 DNS 172.16.1.1
CONTACT SETTING 64836666	Contact setting 64836666(Bank linking calling center phone No.)

Table4-3

### Note! :

Printing system setting may do good to learn the configuration of the host and check all configurations have setting correctly. The above content is just for reference.

## 1.1 Date/Time setting

Select 2.DATE/TIME SETTING and confirms it, then the host prompt to set date, it displays as follows”

YY/MM/DD	04/03/16 13:24	YY/MM/DD	04/03/16 13:24
----------	----------------	----------	----------------

Table4-4

Input the data by way of keyboard; show the year, month, and day with two digits, such as 041316 refers to March 16, 2004. The host will prompt to set the times after the confirmation, it displays as follows:

	04/03/16 13:24	04/03/16 13:24
HH:MM		HH:MM

Table4-5

Input hour and minutes by way of keyboard, such as 1324 refers to 13:24. Return to the system configuration menu after the confirmation.

## 1.2 Hardware setting

### 1.2.1 Model setting

Select 3.HARDWARE SETTING and confirm. the display interface is as follows:

	04/03/16 13:24	04/03/16 13:24
MODEL		Model
1		1
1-PS100	2-PS200	1-PS100 2-PS200
3-PS300	4-PS400	3-PS300 4-PS400

Table4-6

After confirmed the model, input its correspondent numeric key setting model, such as: input “1” refers to PS100.

### 1.2.2 Version No. setting

After the setting and confirmation of the model, the host will prompt to set version No., which is composed of the main version and sub version. When setting, the part before “●” of the version No. should be taken as the main version No. (1 digit), while the part follows as should be the sub version (2 digits), if the sub version is less than two digits, add “0” at the end. Take the version No. 2.7A for example, host display the main version No., the interface would be as follows:

	04/03/16 13:24	04/03/16 13:24
MAIN VER		Main version
2		2 The part before decimal point

Table4-7

The host will display the sub version No. after confirmation, the interface is as follows: (input 71 refers to 7A, hereinafter and so on )

	04/03/16 13:24	04/03/16 13:24
SUB VER		Sub version
71		71 Part follows decimal point, add 0 up to the end if digits are in short.

Table4-8

### 1.2.3 Serial No. setting

After setting of version No., host will prompt to set serial No., which contains host serial No. and Pinpad serial No., the interface is as follows:

	04/03/16 13:24	04/03/16 13:24
SERIAL NO:		Host serial No.
2710403020001		2710403020001

Table4-9



The system would prompt to input Pinpad serial No. after confirmation, the interface is as follows:

04/03/16 13:24		04/03/16 13:24	
PINPAD SERIAL NO:		Pinpad serial No.	
1000403020001		1000403020001	

Table4-10

#### 1.2.4 IC card reader setting

After the completion setting and confirmation of serial No., host will prompt to set IC card reader, the interface is as follows:

04/03/16 13:24		04/03/16 13:24	
ICC READER EXIST?		IC card reader exist?	
1		1	
1-Y 0-N		1-Yes 0-No	

Table4-11

The setting of IC card reader involves only whether the reader exist, if there is a card reader in the host, input “1”, if not, input “0”.

**Note!** :

False setting will lead to the OS error reporting or IC card works abnormally!!

#### 1.2.5 Ethernet setting

After the setting and confirmation of IC card reader, the host will prompt to set the Ethernet, the interface is as follows:

04/03/16 13:24		04/03/16 13:24	
ETHERNET EXIST?		Whether has an Ethernet function?	
1		1	
1-Y 0-N		1-Yes 0-No	

Table4-12

If there is Ethernet, input “1”; if not, input “0”.

**Note!** :

1. The setting of Ethernet here is different from that in the main menu of the configuration menu.

2. False setting will lead to the OS error reporting or Ethernet works abnormally!!

#### 1.2.6 GSM setting

After the complete setting and confirmation of Ethernet, the host will prompt to setting GPRS, the interface is as follows:

04/03/16 13:24		04/03/16 13:24	
GSM EXIST?		GSM exist or not?	
0		0	
1-Y 0-N		1-Yes 0-No	

Table4-13

If the host supports the GSM function, input “1”; if not, input “0”.

**Note!** :

False setting will lead to a GSM setting failure or hardware works abnormals!!

### 1.2.7 Save

After completion of all above setting, host will prompt as the following interface:

04/03/16 13:24	04/03/16 13:24
SAVE?	Save?
270030802001	Serial No.: 270030802001
VER 2.70	Version 2.7
ICC EXIST	IC card reader exist
ETHERNET EXIST	Ethernet exist
GPRS NOT EXIST	GPRS not exist

Table4-14

Check all the displayed items, if true, press “Enter” to save; if not, press “Cancel” and reset it.

### 1.3 Battery setting

Select 4.BATTERY SETTING and confirm, the display interface is as follows: (Table4-15)

04/03/16 13:24	04/03/16 13:24
VOLTAGE 919	Voltage 919 (conversion value)
300	300 (i.e. 3V)

Use 3 digits when inputting battery voltage, decimal point needs not to be input. Lack of 3digits , add “0”, such as: 300 refers to 3V.

 Note! :

When start up system, the voltage is higher than 2.8V or lower than 3.7V, system will report error during self checking.

### 1.4 Printer setting

OS identifies the printer model according to diversity of printing drive plate, different print patterns have different setting content, hereinafter will introduce the setting of pixel printing (EPSON-M190) , thermal printing (APS ELM205) , and Pixel printer with teeth hole paper printing (SAMSUNG 130) respectively.

#### 1.4.1 Pixel printer setting (EPSON M190)

Select 5.PRINTER SETTING and confirm, the display interface is as follows:

04/03/16 13:24	04/03/16 13:24
EPSON M190	Epson M190 (Pixel pattern)
NOT NEED CONFIG	Need not configuration

Table4-16

Pixel printer needs not other setting.

#### 1.4.2 Thermal printer setting (APS ELM205-LV)

Select 5.PRINTER SETTING and confirm, the display interface is as follows:

	04/03/16 13:24		04/03/16 13:24
VOLTAGE (V)		Printing voltage (V)	
70		70	
APS ELM205-LV		APS ELM205-LV (Thermal printer model)	
00		00	
00		00	
00		00	

Table4-17

When setting thermal printer, setting printing voltage at first based on different powers. Using 2 digits to stand for it, such as: 70 refers to 7V; then set the printing speed after confirmation of the previous one, the interface is as follows:

	04/03/16 13:24		04/03/16 13:24
SETP SPEED (us)		Printing speed (us)	
1500		1500	
APS ELM205-LV		APS ELM205-LV (Thermal printer model)	
70		70	
00		00	
00		00	

Table4-18

Set the printing speed between 800 and 4000, after confirmation then set the stroke No., the interface is as follows:

	04/03/16 13:24		04/03/16 13:24
STROBE NO.		Stroke No.	
192		192	
APS ELM205-LV		APS ELM205-LV (Thermal printer model)	
70		70	
1500		1500	
00		00	

Table4-19

The setting of APS ELM205-LV stroke No. should not less than 64, press “Enter” to save after completion.

 Note! :

1. Check the printing effect by way of printing test after the setting completed, adjust the printing voltage, printing speed, and the stroke No. will gain a fast and effective printing.

#### 1.4.3 Pixel printer with teeth hole paper printer setting (SAMSUNG 130-U)

Select 5.PRINTER SETTING and confirm, the display interface is as follows:

	04/03/16 13:24		04/03/16 13:24
SYNC ADJUST		Sync adjust	
3		3	
SAMSUNG SMP130U		SAMSUNG SMP130U (Pixel printer with teeth hole paper printer model)	

Table4-20

This setting is to adjust the tidiness of printing fonts; the value is capable form 0 to 9, press “Enter” to save after completion.

**Note!** :

Better take a printing test before this setting, and then set the value as per the deviation of printing fonts. One more printing test is required after the setting of one value to ensure a tidy effect of the printing fonts.

#### 1.5 Modem setting

Select 6.MODEM SETTING and confirm, the display interface is as follows:

	04/03/16 13:24		04/03/16 13:24
MODEM MODEL		Modem model	
1		1	
0-NONE	1-73K222	0-None	1-73K222
2-73K224	3-73M2901	2-73K224	3-73M2901
4-CMX868	5-CMX866	4-CMX868	5-CMX866

Table4-21

After confirmed the model, input its correspondent numeric key setting model, such as: input “1” refers to the model of 73K222.

#### 1.6 Ethernet setting

Select 1.ETHERNET SETTING of the second item in the system setting menu and confirm it, the display interface is as follows:

	04/03/16 13:24		04/03/16 13:24
MAC		MAC address	
005058000038		005058000038	

Tabel4-22

Input the MAV address of the machine and save it after confirmation.

**Note!** :

The MAC address of each Ethernet POS is excusive, there should be no mistake during inputting, and there is a tag of MAC in the inner top of the paper store of host.

#### 1.7 Ethernet IP setting

Select 2.ETH IP SETTING of the second item in system setting menu and confirm it, the display interface is as follows:

	04/03/16 13:24	04/03/16 13:24
DHCP ENABLE?		DHCP activated?
0		0
1-Y 0-N		1-Yes 0-No

Table4-23

Generally, it need not to be activated, so input “0”, after confirmation begin to set IP, the interface is as follows:

	04/03/16 13:24	04/03/16 13:24
IP ADDRESS		IP
172. 16. 40. 77		172. 16. 40. 77

Table4-24

Input the IP without decimal point if digits are three, input the decimal point if less three, such as: input “17216.40.77” refers to 172.16.40.77. Then set network mask after confirmation of the previous one, the interface is as follows:

	04/03/16 13:24	04/03/16 13:24
NETWORK MASK		Network mask
255. 255. 0. 0		255. 255. 0. 0

Tasble4-25

Input network mask in the same way as inputting IP and confirm, then set gateway address, the interface is as follows:

	04/03/16 13:24	04/03/16 13:24
GATEWAY ADDRESS		Gateway address
172. 16. 1. 1		172. 16. 1. 1

Tablr4-26

Input gateway address in the same way as inputting IP and confirm, then set DNS address, the interface is as follows:

	04/03/16 13:24	04/03/16 13:24
DNS ADDRESS		DNS address
172. 16. 1. 1		172. 16. 1. 1

Table4-27

Input DNS address in the same way as inputting IP and confirm, then check each setting and save them.

**Note!** : If the system prompt “ETH NOT EXIST”, it means that this machine does not has an Ethernet function or the “Ethernet setting” under the item “Hardware setting” in section 1.2 of this chapter.

## 1.8 GSM SETTING

Option system setup menu in page 2: GSM SETTING and confirm

	04/03/16 13:24	04/03/16 13:24
DEBUG OPTION	Debug option	
11001111	11001111 ( Represent open or close relevant setting)	

Table 4-28

Input according to above data, and then press ENTER to set module speed:

	04/03/16 13:24	04/03/16 13:24
MODULE SPEED	Module speed	
115200	115200 (The communication speed is 115200)	

Table 4-29

Set the communication speed as 115200 and confirm, then set GPRS ALWAYS ONLINE

	04/03/16 13:24	04/03/16 13:24
GPRS ALWAYS ONLINE	GPRS always online?	
1	1 (Always online)	
1-Y 0-N	1-Yes 2-No	

图 4-30

Genetally, set as always online, i.e. input “1”, after confirmation set APN:

	04/03/16 13:24	04/03/16 13:24
APN	APN	
M-POS.CUPSH.SH	M-POS.CUPSH.SH (APN address)	

Table 4-31

After input APN address (APN address is different as per their different application scale, cash card directly use “M-POS.CUPSH.SH”, while membership card system use “CMNET”) according to above, set user name and password, here user name and password are contemporarily empty, and need not input, just press ENTER is ok, after confirmation host will run AT command automatically to initial set GPRS module, it will prompt “SAVED OK!” after completion.

Note! :

1. If there is error during the host use AT command to initiate the module, it can be reset, but can GPRS work normally when there comes out “SAVED OK!”
2. If it prompts “GSM NOT EXIST” , it means that this machine do not have the Ethernet function or the “GSM setting” under “hardware setting” in part 1.2 in this chapter;
3. the GSM card of GPRS function must be inserted and opened in GSM swipe before this setting;

## 1.9 Contact setting

Select 4. CONTACT SETTING of the second item in the system setting menu, the display interface is as follows:

	04/03/16 13:24	04/03/16 13:24
HELP TELEPHONE:	Help line	
64836666	64836666 ( Calling center phone No.)	

Table4-32

Input the calling center help line of our company, this phone No. will be prompted to offer help when system checking out a mistake.

## 2.0 OS setting

Select 5. OS SETTING of the second item in system setting menu, the display interface is as follows:

04/03/16 13:24		04/03/16 13:24	
OS DEBUG ENABLE?		OS system debug enables?	
0		0 (No)	
1-Y 0-N		1-Yes 0-No	

Table4-33

Input “0” to disenable, and display the following interface after confirmation:

04/03/16 13:24		04/03/16 13:24	
APP DEBUG ENABLE?		Application system debug enables?	
0		0 (No)	
1-Y 0-N		1-Yes 0-No	

Table4-34

Input “0” to disenable, then confirm and save, the setting is completed.