

# PS4000 User Manual

| Version Record |          |     |              |                            |
|----------------|----------|-----|--------------|----------------------------|
| Version        | Date     | No. | Compiler/ by | Checker by/<br>Approver by |
| V01            | 2010-6-1 |     | Fan Chungang |                            |
|                |          |     |              |                            |
|                |          |     |              |                            |
|                |          |     |              |                            |
|                |          |     |              |                            |
|                |          |     |              |                            |
|                |          |     |              |                            |

|                                      |    |
|--------------------------------------|----|
| PS4000 User Manual .....             | 1  |
| 1. Introduction.....                 | 3  |
| 2. Technical Parameter .....         | 3  |
| 3. Outside View and Packaging.....   | 5  |
| 4.Function Interface .....           | 6  |
| 4.1 Power Input.....                 | 6  |
| 4.2 Keyboard.....                    | 6  |
| 4.3 LCD & Touch Panel .....          | 7  |
| 4.4 IC Card .....                    | 7  |
| 4.5 SAM Card.....                    | 7  |
| 4.6 Magnetic Card.....               | 8  |
| 4.7 Buzzer .....                     | 8  |
| 4.8 Serial Port.....                 | 8  |
| 4.9 USB.....                         | 9  |
| 4.10 T-Flash .....                   | 9  |
| 4.11 Indicator.....                  | 9  |
| 4.12 Printer.....                    | 10 |
| 4.13 Battery .....                   | 10 |
| 4.14 RTC.....                        | 11 |
| 4.15 Power Switch.....               | 11 |
| 4.16 GPRS .....                      | 11 |
| 5. Installation and adjustment ..... | 12 |
| 5.1 Environmental Requirements.....  | 12 |
| 5.2 Power Requirements.....          | 12 |
| 6. Repairs and maintenance.....      | 12 |
| 6.1 Maintenance matters.....         | 12 |
| 6.2 Maintenance matters.....         | 12 |
| 7. System components.....            | 13 |
| 8. Complete set.....                 | 13 |
| 9. Safety precautions.....           | 13 |
| 10. SAR Info .....                   | 13 |

## 1. Introduction

PS4000 is a handheld POS terminal. It supports bank card, Unionpay card, and electrical currency trade of foreign currency card. It support document print. Mobile charges can be accomplished by communication of GPRS, such as door to door utility fees collecting, taxi fees paying and traffic police issuing fine to drivers, especially applicable to home-delivery center, passenger ticket center, tax authorities, express company, mobile sales point, restaurant, take-out service, and e-commercial transaction, etc.

## 2. Technical Parameter

|                         |  |
|-------------------------|--|
| Processor               | ARM920 CPU （66~266MHz）   |
| Memory                  | 64M NandFlash  |
|                         | 64M SDRAM  |
|                         | TF card interface(support expansion to 4G)   |
| Display                 | 3.5" 240×320 TFT Display screen  |
| Indicator               | 4 Led indicators, power, charge, Tx, Rx<br><br>Tx、 Rx programmable<br><br>Charge indicator, available on power off, only indicating battery charging |
| keyboard                | 11 numeral/letter keys, 4 direction keys, 5 function keys.   |
| Pinter                  | Thermal printer, 58mm(w)×40mm paper roll, print speed changeable   |
| Magnetic track          | 1/2/3 magnetic track   |
| IC card                 | ISO7816 standard （T=0、 T=1）  |
| SAM card                | 3  |
| USB（2 choices）          | USB1.1 Host × 1 support U disk, USB keyboard, mouse, etc.  |
|                         |  |
| Communication interface | Wireless 2G;<br><br>GPRS   |

|                           |  |
|---------------------------|--|
| RTC                       | RTC clock, variable1~2s/Day  |
| Battery                   | RTC battery, inbuilt, last for 2 years                               |
|                           | Main battery: 7.4V 2000mAH lithium battery                           |
| Power input               | DC 9.0V 4A adapter   |
| OS                        | Linux  |
| Second time development   | SAND SDK for Linux   |
|                           | Several download type optional, USB、TF card、serial port, support TMS |
| Support multi-application | Support about 100 applications                                       |
| Size                      | 206×88×68.5mm  |
| Weight                    | 542g(bard code module included)                                      |
| Working environment       | Temperature:0~50 centigrade Humidity:10%~90%;                        |
| Storage environment       | Temperature: -20~70°C; Humidity:5%~95%;                              |

Table 2-1

### 3. Outside View and Packaging



Picture 3-1

## 4.Function Interface



Picture 4-1

### 4.1 Power Input

Input DC, internal positive and outside negative, voltage scope 9-12V  
PS4000 standard power adapter: 9.5V/4A。

### 4.2 Keyboard

PS4000 have 20 keys, 10 numeral keys, 10 numeral function keys.

| Key               | Introduction       |
|-------------------|--------------------|
| 0-9               | Numeral keys       |
| Cancel (CAN)      | Cancel             |
| Clear (CLR)       | Clear or move back |
| Enter (Enter)     | Enter              |
| Paper feed (FEED) | Paper feed         |

|        |   |
|--------|---|
| 00     | double '0' keys   |
| F1-F4  | Multi-function key, normally for direction or page up or down |
| Camera | Photo and scanner   |

Table 4-1

The terminal will give out beep sound if the key press is effect. The keyboard backlight also lights on and will light off 15 seconds after no key press is detected (time can be defined).

Attention: Key pressing for long time will be treated as one time pressing event not several times.

### **4.3 LCD & Touch Panel**

PS4000 LCD is a 240×320 3.5' TFT screen with 24Bit RGB. The touch panel is optional.

### **4.4 IC Card**

IC card slot is below the keyboard of the pos terminal. Insert card to the slot with the contact side upward.

### **4.5 SAM Card**

There are 3 SAM cards under the battery at back of the PS4000 terminal. SAM1,2,3 from the top down.



Picture 4-2

## 4.6 Magnetic Card

The magnetic card reader is on one side of the terminal. Swipe the card with the magnetic strip in by in right or reverse direction.

## 4.7 Buzzer

There is an inbuilt buzzer in the PS4000 terminal. It normally buzzes when key is pressed or to alert.

## 4.8 Serial Port

There is a serial port at the left side of PS4000 terminal. It is standard RS232 serial port, while its structural interface is Mini-USB interface. The terminal can be connected to PC or other device by a special serial line made by SAND.

Attention: Do not insert USB connecting line to this interface by mistake.



## 4.9 USB

The USB port is at one side of the POS terminal near the serial port. This USB Host 1.1 port supports U disk, USB keyboard and mouse, etc.

Attention: Maximum USB power supply is 500mA

## 4.10 T-Flash

T-Flash card slot is at one side of the pos terminal. It supports standard T-Flash card.

## 4.11 Indicator

There are 4 lights at front of the TFT LCD, from right to left they are for power, charge, RX, and TX.

|        |      |  |
|--------|------|--|
| Power  |      | Power indicator of the system, if lights on means work of system.  |
| Charge |      | Charge indicator, if lights on means adapter is inserted and battery is being charged, lights off means adaptor is not inserted or charge finished that the adapter can be pulled out. |
| RX     | GPG8 | Communication receiving indicator  |
| TX     | GPG1 | Communication sending indicator  |

Table 4-2

## 4.12 Printer



Picture 4-3

PS4000 printer adapts mini thermal printer with low power consumption. The paper roller is at front of the terminal with its size is 58mm (W) and 40mm (D).

Please put in the paper roller when use. Lift the small cover in the print paper cover lightly, open the paper container, put in the paper roller, pull out certain length of the paper and press it closely to and at middle of the paper cutter, then press the paper cover tightly and make sure the paper roller stuck in the printer, pull the paper out certain length to check if is installed correctly. (or select paper feed in the main menu and make the printer work for a few seconds).

Attention: There is paper lack detection and over heat protection in the printer, please operation following what the screen tells.

## 4.13 Battery

Main battery locates at the back of the POS terminal, press the clip to open the battery container. Please put out the battery if no use for long time.

Please recharge the battery with standard power adapter provided by SAND if it is running down, When battery recharge, if the terminal is power on, the screen will display charging indicator, if power off, the indicator in the screen will tell if charging is finished. Power indicator lights means it is charging and lights out means charging finished or no power adapter inserted.

#### 4.14 RTC

Built-in RTC clock in PS4000, and furnished with proprietary battery which can work for 2`3 years. Please set the time when first use.

#### 4.15 Power Switch

The power switch is a red button locating in the side edge of the terminal.

Start up by pressing for short time and shut down by pressing for long time(2-3s) only under abnormal situation. Normal shut down process should use the down function of the system in case of data lost.

#### 4.16 GPRS



Picture 4-4

PS4000 GPRS is inbuilt in the cover in front of the terminal. The SIM card locates in the side edge of the terminal, it will come out by pressing the yellow button in the SIM card slot with pinpoint or other pointed object.

Attention: Do not replace the SIM card when power on.

## **5. Installation and adjustment**

### **5.1 Environmental Requirements**

The Product requests ventilation, suitable temperature, to avoid high temperature, humidity, corrosive gases, avoid direct sunlight.

### **5.2 Power Requirements**

Product within the power supply as 9.5V 4A is outside the negative.  
Charger must be used in the security area.

## **6. Repairs and maintenance**

### **6.1 Maintenance matters**

After the boot screen machines were not the main show or not power: ① Check the power adapter is external normal power supply has been inserted in the socket on the external adapter ② External power adapter is bright ③ the power indicator on whether the external adapter plug socket closely with the Cash Register ④ the power switch is good contact, can be repeated several test switch ⑤ Following the above operation, if the POS machine power indicator on the panel were not the main screen display or no display shall promptly contact the factory maintenance, do not open the machine without permission.

### **6.2 Maintenance matters**

Avoid high humidity or sun exposure.

Avoid wet ,corrosive environments, water is strictly prohibited.

Gently, using the drop should be placed on the environment is not easy to use, to prevent the break.

When the machine looks dirty, soft cloth can be used to prohibit the use of chemicals reagents.

In the daily cleaning of the product should be used when a soft damp cloth, not use silk, chemical fiber fabrics easily lead to static electricity.

Prohibited demolition at dangerous places, installing the battery pack.

## **7. System components**

PS4000 for portable electrical equipment, no correlation equipment.

## **8. Complete set**

Supporting the use of the following products:

ADP036-094B Power Supply

Thermal paper (57 × 40mm)

## **9. Safety precautions**

Read carefully before using this manual, the proper use of this product. Please keep this manual to properly check in at any time convenient place.

When using this product should note the following:

Product failure by the manufacturers maintenance, user shall not change the product mix.

Product installation, use manual and maintenance should also comply with product instructions.

In the daily cleaning of the product should be used with a soft damp cloth, not use silk, chemical fiber fabrics easily lead to static electricity.

Product charging must be in safe areas.

## **10. SAR Info**

1. This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

(1) This device may not cause harmful interference.

(2) This device must accept any interference received, including interference that may cause undesired operation.

2. Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

Designed and manufactured not to exceed the emission limits for exposure to radiofrequency (RF) energy set by the Federal Communications Commission of the

U.S. Government. These limits are part of comprehensive guidelines and establish permitted levels of RF energy for the general population. The guidelines are based on standards that were developed by independent scientific organizations through periodic and thorough evaluation of scientific studies. The standards include a substantial safety margin designed to assure the safety of all persons, regardless of age and health. The exposure of measurement known as the Specific Absorption Rate, or SAR. The SAR limit set by the FCC is 1.6W/kg. transmitting at its highest certified power level in all Your POS Terminal is a radio transmitter and receiver. It is at the highest certified power level, the well below the maximum value. This is power levels so as to use only the power required to reach the network. In general, the closer you are to a wireless base station antenna, the available for sale to the public, it must be tested and certified to the FCC that it does not exceed the limit established by the government adopted requirement for safe exposure. The tests are performed in positions and locations (e.g., at the ear and worn on the body) as required by the FCC for each model. The FCC has granted an Equipment Authorization for evaluated as in compliance with the FCC RF exposure guidelines. SAR information on this model the Display Grant section of <http://www.fcc.gov/oet/fccid> after searching on FCC ID: XLHPS4000-1103.