PDT-2A-E Wired Barcode Data Terminal

User Manual

I. Product Description

1、Function Characteristics

Welcome to use PDT-2A-E, which is a new generation of wired barcode scanning product, which combines the function of wired barcode scanner and all kinds of common wired barcode data terminal, user can use this product without any programming. The keyboard and screen enables the PDT-2A-E achieve the functions that other wired barcode scanners gun can't do. When barcodes damaged, you can input via the keyboard; also, it displays the current the number of barcodes, battery level, etc. Besides that, it transfers data via USB port, can be used in WINDOWS without any driver.

PDT-2A-E wired barcode terminals use the laser barcode scanning engine, which increase the scanning speed and enlarge the scan depth, to meet the needs of most industries.

PDT-2A-E wired barcode terminals have simple barcode data collecting and inventory functions. They support offline batch scan mode, can scan and save maximum 50,000 barcode data at once time. After collection, users can transmit barcode data via USB port to a computer. For the purpose of simple barcode capture applications, it is an alternative to the original expensive and complicated inventory machines, thus reduce user's cost.

2. Technical Parameter

1)   32-bit high-speed ARM series CPU

2) FLASH memory 4MB, can save about 50,000 barcodes..

3) With enhanced barcode collect and inventory functions, support a single library or multiple libraries, libraries are independent and could be with its own customized name as required.

4) Power supply: two 5 AA batteries (1600-2400mah of NiMH rechargeable battery is suggested), support USB port charging.

5) Display: 2.2 "TFT screen, resolution 220 x 176.

6) Size: 140 x 60 x 33 mm, about 160 grams

8) 22 keys high quality silicone keyboard

9) Standby time: more than 6 months

10) Continuous working hours: 50-100hrs, scan 10,000 times at least

11) Power off protection, switch on and off whenever needed, featuring automatic power off function.

12) Barcode scanning mode: 650ns laser

▪ Scan Depth: 3-30cm (with 13mil EAN13 barcode)

▪ Scan the barcode width: 20cm or less

Barcode types: EAN13, EAN8, 39 code, 93 code, 128 code, interleave 25 codes (IT25), Code bar, UPCA, UPCE etc.

13) The USB communication adopts MCU integrated with USB protocol chip, and the data transmission has high reliability.

14) The 2A-E support USB port, USB emulation serial port, or USB keyboard, with which the drive is not needed.

3. Appearance & Accessories

PDT-2A-E wired barcode terminal contains one handheld terminal and one USB data cable.

Handheld barcode terminal

4. Application

PDT-2A-E Wired barcode terminal is for big parcels barcode scanning, and barcode scanning in small or medium-sized supermarkets, express services, logistics, and warehouses. The transmission distance reaches 50-100 meters; it is an ideal choice for inventory in these places.

II. Using

1. Battery and Charging

PDT-2A-E Wired Barcode terminal uses two AA batteries, disposable battery or rechargeable battery. The disposable battery is better to be alkaline battery, but not the dry battery, which would possibly cause leakage when it stays on the shelf for a long time. The rechargeable NIMH battery is with capacity of 1600-2400mAH, ensuring the long time use of the device.

PDT-2A-E wired barcode terminal comes with charge function. You can charge the NIMH battery through the USB port what is at the bottom of the PDT-2A-E. Charging voltage is 5V, you can also use the computer's USB port for charging, or use an external 5V power supply. The PDT-2A-E will monitor the charging status automatically. Automatic shutdown when fully charged. The general time to charge a pair of 2000mAH NIMH rechargeable batteries is about 12-15 hours.

Note: only the rechargeable battery can be charged, it is unsafe to charge the disposable battery. If you don't use the equipment for a long time,

please take the batteries out (otherwise will cause the batteries leak liquid and damage the PCB-board.).

2. Power on & Power off

Put in the batteries, the PDT-2A-E can be turned on and display the main menu. The middle red button at the bottom is the power button, for switching on & off. Turn off the PDT-2A-E, PDT-2A-E can retain the current state, when rebooting, it will display the same state before shutdown.

3. Keyboard Using

PDT-2A-E totally holds 22 buttons, is divided into 4 parts:

(1) Start from the top row: the middle yellow button is 【SCAN】 key, the left key is 【ENT】 key, often as the 【OK】 button, the right key is 【ESC】,often as the 【CANCEL】or 【EXIT】 button.

(2) The second row are 【←】【→】【↑】【↓】 arrow keys, sometimes can be used as 【F1】【F2】【F3】【F4】 key.

(3) Row 3-5 are 【NUMBER】 keys and. When switching the input method, these【NUMBER】keys can also be used to input letters. 【DEL】is delete key,

(4) The last row is function keys: 【SW】is switch language key, 【POWER】key to switch power,【☀】is a button for switching back-light.

5. Anomalies and Reset

If there is no response to the situation of the PDT-2A-E keypad or unexpected failures occur suddenly. There are two solutions:

▪ Poke the reset hole at the back of the device, the PDT-2A-E will be

forced to reset.

▪ Take out the batteries for 10 seconds before loading. Wait 10 seconds to make sure the internal fully discharged.

III. Operation Details

Following will combine the PDT-2A-E operate interface to describe the using of PDT-2A-E wired barcode terminal.

🔋 shows battery's power status, more black parts means more power.

1. USB Scanner Mode (Real-time transmission mode)

Wired scanner mode function is as same as the traditional wired scanners, which can scan the barcode and immediately transfer to the computer. Right picture shows the screen into the feature. Blow the status bar, it displays the scanned barcode, the maximum allowable value to display is 2 lines of 40 characters.

2. Barcode Collecting Mode (Batch scan and bulk transmission)

This mode is a non-real-time transfer data mode, and close to the traditional inventories which send the barcode after the end of mass collection, users can choose to export directly. All of the scanned barcode are stored in scan order in FLASH memory; even power-down won't cause data loss. The first picture on the right shows the barcode capture mode screen. Barcode capture mode suitable for those large scanning range or a number of bar code applications. Many applications do not
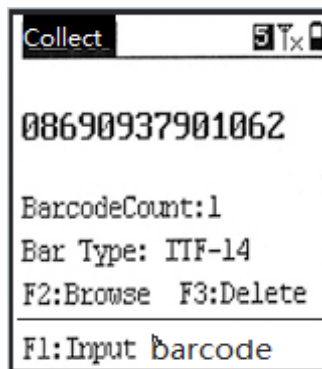
require the actual real-time barcode data transmission. All the scans were done, once send all the barcode data to the computer.

(1) Scan barcode: screen show as the right picture,

(2) Browse: check collect bar code list,

(3) USB send: select this, the collected barcodes will be sent automatically by USB port. They format can be customized, such as barcode + new line, or barcode + two new lines etc. And the format will be set in parameter setting of export format. Please prepare all the receiving programs at the computer terminal before sending.

Common receiving application is EXCEL or NOTEPAD. Open notepad program in WINDOWS, select 【start】-【all program】-【enclosure】, also can create an empty text file on the desktop and double-click open.

**(4) Clear data:** empty the collected data before a new collection.

(5) Settings:

1. <u>Same barcode mode</u>

(1)、Skip when barcode repeat,

(2)、Prompt to save or skip when scanning the repeat barcode value.

(3)、forbid to scan repeat barcode.

2. <u>Basic Config</u>

Users can be configured to select a single library or multi-library. PDT-2A-E maximum support 32 libraries, and can define the library-names under multi-library mode. "Max bar len" is setting the scan barcode max length, default value is 30. General should set the length value bigger 2 than actual collect barcode, like the longest barcode is 33 bit and record length should be set to 35 bit, the smaller record length, the
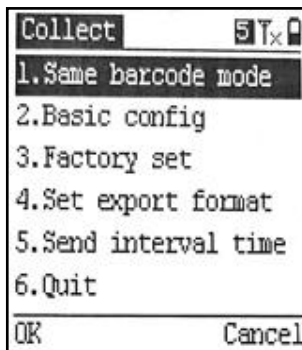
more barcodes will be saved in to device. **(The default access password is '13579')**

3. <u>Restore factory settings</u>
Select this will empty all the users' data in this device, and reload system in a few second.

4. <u>Set export format</u>
Set the format of transmission and export to data function. Under normal conditions, the default format of wired transmission to computer is barcode + 'return'. But some special applications may be required 2 'return' or add all kinds of special characters, this complicated output format can set by barcode export format. Setting format examples as follows: 'B' means barcode , 'A' means the device number (device address, set in settings), 'N' means quantity (quantity only valid for inventory mode), dot char is separator, '1-127' are characters' value of ASCII. Such as the default setting: **B.13.10** means output is 'barcode + Enter new line', **B.13.13** means add 2 'return' after barcode; **A.58.B.13.10** means output is device number +':' +bar code + Enter new line, 58 is ASCII code value of ':'; **126.B.126.13** means output ~barcode~ + carriage return, 126 is ASCII code value of '~'. Common ASCII code value show as above picture (in the help menu of barcode setting can find these common use ASCII code value)

5. <u>Set interval time</u>
The time interval of wired transmit barcode can be modified. For adapt to the requests of some applications, if input interval time value 9999, device

will only send one barcode each time after user press one key, and the whole uploading process will completely enter manual control.

3. Inventory (no names) **Mode**

Inventory mode is a simple inventory mode, only collect barcodes and quantities, without the items' name. The maximum number of saving is 10,000 records in each library.

```
┌─────────────────────────┐
│ Lib001          5Tx▯    │
│ Total:  36              │
│                         │
│                         │
│ Number:                 │
│ Input :  ............   │
│ BarNum: 8               │
│ F1:Barcode      ENT:Lib │
└─────────────────────────┘
```

(1) Inventory
After users had finished scan one barcode, the corresponding number (quantity value) of barcodes will auto plus one or you can modify it by press digit key to input new number value manual.
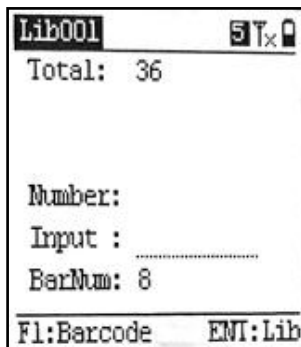
(2) Browse
You can see a list of all libraries, select one library by up/down key and press'M1'key, there are barcodes in current library.

(3) USB send
Send the collect barcodes and quantities to computer by USB port. The sending format can set in export data format.

(4) Clear data
Clear inventory data, before start a new inventory, please clear the original inventory data stored.

(5) Setting

Most parameter settings is same as the 'Barcode Capture Mode' (**default password is '13579').**

The default export format of inventory is 'B.44.N.13.10': expression barcode + comma + Enter new line. 'N' is quantity, '44' is ASCII value of comma. Like the middle separator is TAB, the set as B.9.N.13.10, '9' is ASCII value of TAB.

① **Multiple library**

Configuration can choose single library mode or multi-library mode, when choose multi-library mode, last one of inventory main menu will increase a (manager library) menu item.

② **Max bar length**

The default scan barcode max length is 30. In general, it should set the length value large 2 than actual collect barcode.

```
Config              🔋Tx🔋
     Basic config
1.Multible library
2.Max bar length:30
3.Decimal:0
4.Auto add 1:Yes
5.Export num=0:No

1-5:Select    ESC:Quit
```
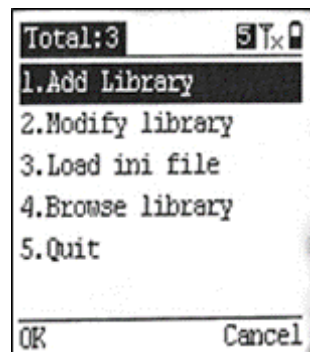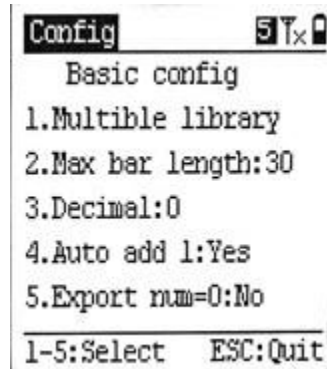
③ **Decimal**

Decimal digits for quantities value, it can be choose among 0-4, maximum support 4 decimals.

④ **Auto Add 1**

When scan barcode, quantity auto add 1.

Manager Library

When choose multi–library mode, then multi–library menu item would be showed. Users can add and input library name manually, check library information. Inventory mode maximum support 32 libraries, when not loaded name or manually

```
Total:3             🔋Tx🔋
1.Add Library
2.Modify library
3.Load ini file
4.Browse library
5.Quit


OK                   Cancel
```

enter the library name, the default digital value is 32 for the library, the library name number 1-32, each library name occupation one line, the library name should better control within 12 characters.

4. System Configuration

Attention: enter into some important setting items need to input password, default password is '13579'.

(1). System settings

Include barcode setting etc. (it will be described in the following paragraphs)

(2). Charge

If you use NiMH rechargeable battery, you can charge it by the function.
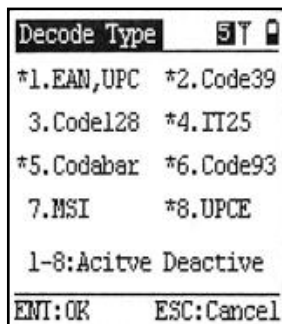
(3). Update application

Users could update its application program through USB, and special PC port and USB driver is needed.

Introduction of System Setting:

(1) Barcode setting: include 'Decode type' setting, 'Decode option' setting, 'RF-Gun Export' format setting, 'Collect Export' format setting,

'Inventory export' format setting, 'Barcode length setting' and 'ASCII help' menu, please reference Setting export data format of barcode capture mode for the export format setting .

```
Decode Type        5T ▯
*1.EAN,UPC   *2.Code39
 3.Code128   *4.IT25
*5.Codabar   *6.Code93
 7.MSI       *8.UPCE
 1-8:Acitve Deactive
ENT:OK      ESC:Cancel
```

● **Decode type setting**

Decode type setting is used for setting need support barcode type of terminal. Barcodes used in many industries are fixed, for scanner, decode type less need, decode speed more quick, veracity higher. Right picture is screen of barcode type settings, the barcode

type with '*' in the picture express these type decodes are activated, barcode type without '*' expresses decodes are forbidden. As shown in the right picture, MSI without '*' in front, expresses these barcodes cannot be decoded , press corresponding number key can switch decode ON/OFF, after completing setting, press **ENT** key to save.

● **Barcode length setting**

Effective barcode length allow output barcode length: default is **1-50**, show any length (PDT-2A-E wired scanning mode maximum support 50 place barcodes) user can set single, multi or multi-group range effective barcode length, such as inputting **13** means only allow the barcode whose length value 13 output, **8.13.15** expresses only allow 8, 13 and 15 barcode length output, **15–18** means allowed barcode length are '15, 16, 17, 18'. **8.10.13-16** expresses only '8, 10, 13, 14, 15, 16' barcode length can be output.

Auto off time: Set auto power-off time**,** default is 180 seconds, this means auto shutdown in operation in 3 minutes, user can set the range within 10-600 seconds.

Volume set: Set buzzer volume, range is 1-5, none means mute.

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