Compact Value Counter

User Manual

Contents

Prepared by	Reviewed by	Approved by

1. Safety Instructions

To avoid damage to the machine and personal injury, please read all warnings and cautions carefully before first use!

|	
⚠	❖ When cleaning the device, do not use the inflammable gases. ❖ If the machine is exposed to cold for a long time. It is necessary to sustain it at room temperature about two hours before use. ❖ Foreign Materials should be taken care so that metal objects or flammable materials fall inside the unit.
⚡	❖ To prevent electric shock, don't cut off the plug of the AC/DC adapter when hands are wet. ❖ To prevent fire or short circuit, unplug the unit before moving it to another position. ❖ When disconnect the unit from the power socket, don't pull the cable so that it may be damaged. ❖ Keep the AC/DC cable from damage. Avoid placing heavy objects on it. Don't recommend loading of the power supply. ❖ The unit should be connected to a power supply through the AC/DC adapter.
⚠	❖ The battery shall be stored in the clean and dry ventilation room at the temperature of -5～35℃ and shall be keep away from fire or heat, and avoid touching corrosion elements. ❖ When the battery is unused for a long period, please take out the battery from the machine, and need to be recharged every 6 months. ❖ When the power is no power, it will take 15 hours to be fully charged.

2. Introduction

Thank you for purchasing this compact value counter, it is the latest developed high-performance intelligent counterfeit counter applying digital fuzzy processing technology. The structure design and performance are more scientific and the counterfeit detection ability is more outstanding.

In order to make the best use of the accurate banknote counting capability and outstanding counterfeit detection function of the unit, please read this manual carefully before using and operate as per the procedures stipulated in the manual.

2.1 Features

❖ Detects magnetic ink, infrared ink, image, spectrum, length, thickness, UV etc.

❖ Detects at least 8 types of currencies: USD, EUR and local currencies etc.

❖ Discriminates value, reporting and printing available.

❖ Easy operate setting function menu, user friendly.

❖ Adopts auto adjustable technology.

❖ Easy software upgraded via Micro-SD card or USB interface.

❖ Configurable USB interface, printer interface, external display interface.

❖ Easy access to banknote transport path for better maintenance and jam removing.

❖ Optional built-in rechargeable battery.

❖ Battery works up to 150 minutes after full charged.

❖ Compact & portable.

2.2 List of Accessories
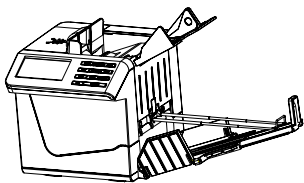
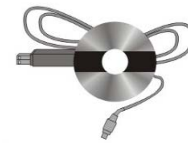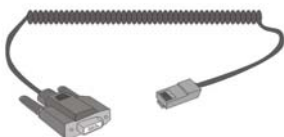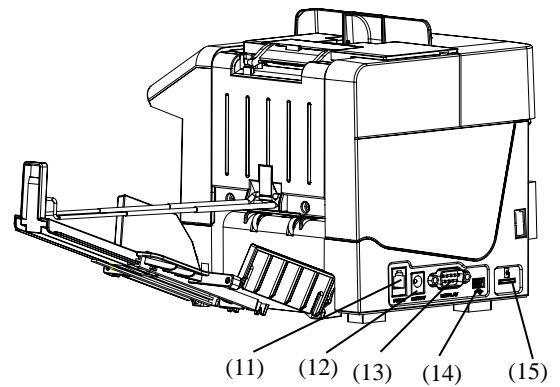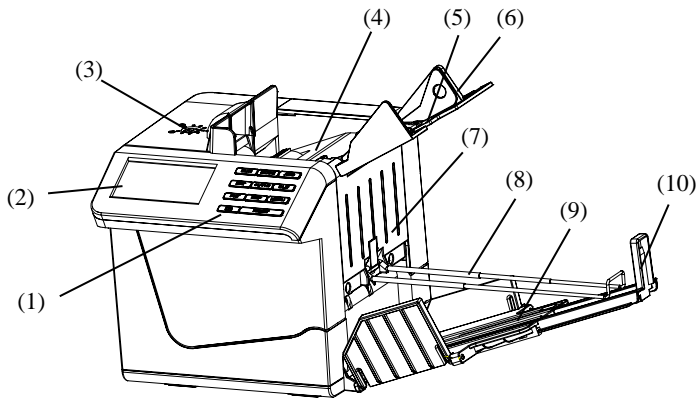|		
Counter	AC/DC power adapter	User manual
Cleaning brush	Rechargeable battery (optional)	USB download cable (optional)
Print transfer cable (optional)	Micro-printer (optional)	External LCD display (optional)

Micro-SD card
(optional)

2.3 Illustration

1、Control panel

2、LCD display screen

3、Adjusting screw

4、Main body

5、Hopper

6、Hopper guide

7、Front housing

8、Banknote adjustable pressing frame

9、Stacker

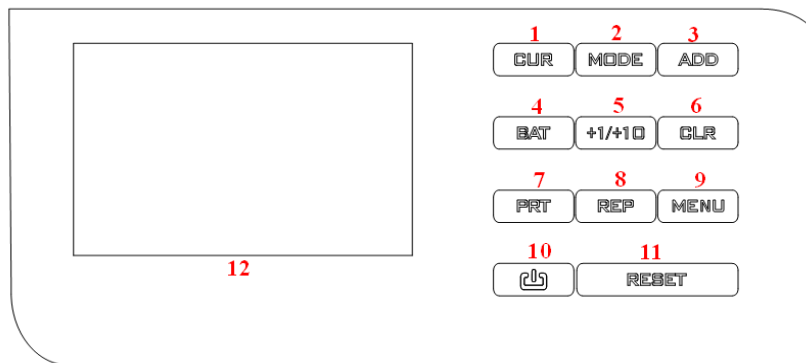10、Banknote receiving adjustable plate

11、Printer interface

12、Power socket

13、External display interface

14、USB interface

15、Micro-SD card socket

2.4 Operation panel

1. **CUR**: Press this key to select currency type or free count.

2. **MODE**: Press this key to select a counting mode (Mix & Sort).

3. **ADD**: Press this key to enter the Add function (Accumulative counting).

4. **BAT**: Press this key to set the batch function.

5. **+1/+10**: Use this key to increase the batch number by 1 or 10.

6. **CLR**: Clear count memory.

7. **PRT**: Press and hold this key to print the counting result report.

8. **REP**: Press this key to view the counting result report.

9. **MENU**: Press this key to enter setting function menu.

10. **⏻**: Press and hold this key to turn on/off the machine.

11. **RESET**: Press "RESET" to start/stop counting, Press "RESET" once to stop counting, Press again to continue.

12. LCD Display screen: Display counting result or error message.

3. Preparation

3.1 Open the stacker subassembly
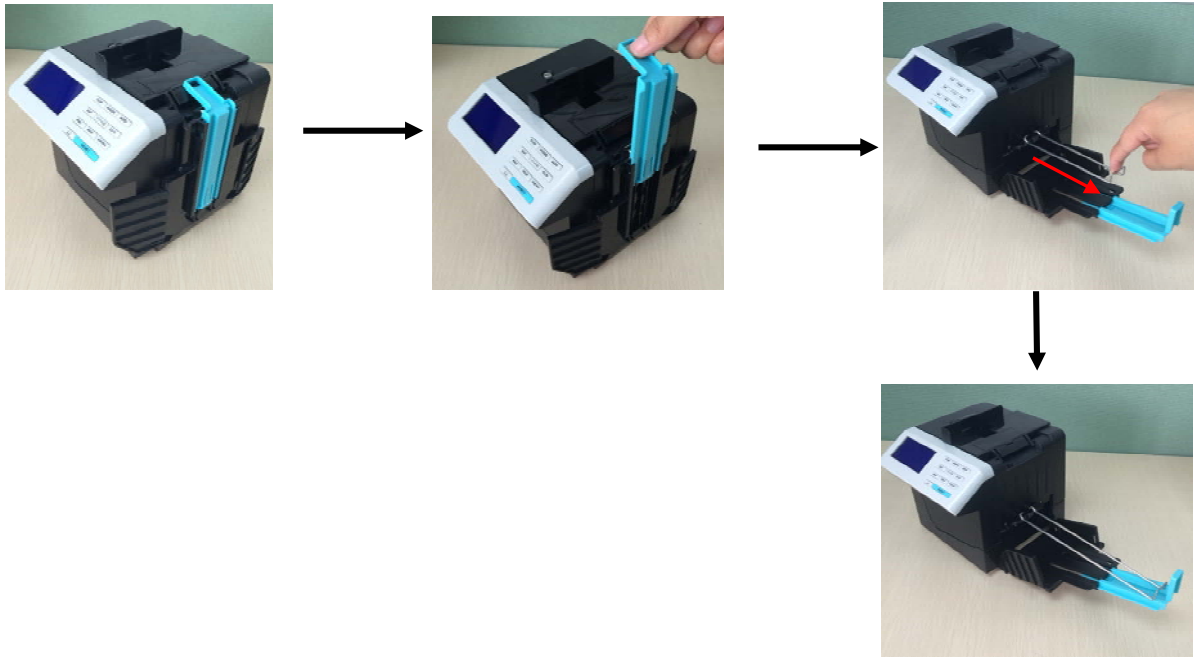
3.2 Open the hopper
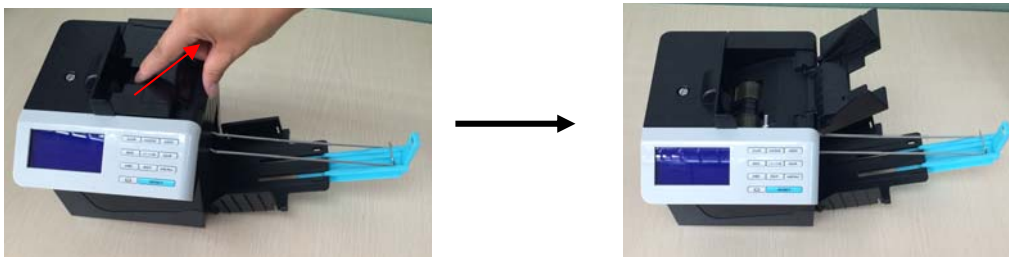
3.3 Adjust the Hopper guide

When detecting the US Dollar, set the hopper guide to the minimum position.

When detecting other currency types, set the hopper guide to a suitable position based on the width of the banknotes.

| Open the positional block | Increase the width | Decrease the width |
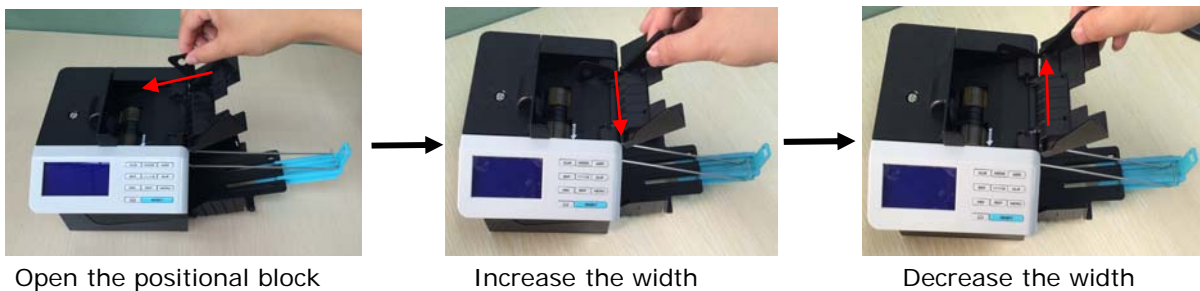
3.4 Connect the power source

There are two types of power source can be connected to the counter:
-The AC/DC power adapter: convenient for indoor use
-The battery: convenient for portable use

3.5 Install the battery

Note: Operate following the direction of arrow, mind your hand.

● When the counter connects to the external power supply, it will be charged automatically. The battery status symbol is displayed on the upper right corner of the LCD. A solid symbol means the battery is full and an empty symbol means the battery is insufficient. If the symbol is flashing and changing from solid to empty, it means the battery is being charged. When the battery is poor, "Low Battery" will be displayed. It means the battery is too lowly, the counter will turn off automatically.

● If the counter doesn't install the built-in battery, the battery status symbol will not be displayed.

● If it installs the battery but doesn't connect to the external power supply. In working mode, when the counter idles up to 20 minutes, it will turn off automatically.
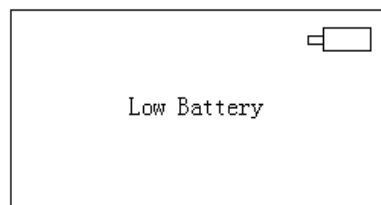
4. Operation

Place the machine on a flat surface, then open the underprop foot, ensure there is no strong electromagnetic field and strong sunshine interfering around it. Plug the electric

socket into AC electric source. If you have purchased an external display, connect it to the external display interface on the back of the counter.

Press "⌨" for 2 seconds, the machine will perform a self-test (see Figure 4-1).

If the self-test is successful, the machine will enter into ready state (see Figure 4-2), if some error messages are displayed, please deal with them according to the Troubleshooting in the manual.

| Figure 4-1 | Figure 4-2 |

❗ In order to avoid counting/detecting errors, the following banknotes shall be eliminated before counting.

① Banknotes repaired with white paper
② Banknotes which have been washed
③ Banknotes seriously contaminated
④ Banknotes damaged or broken

Put the banknotes in order (See Figure 4-3), separate the banknotes according to the par value and eliminate the above four kinds of banknotes. Then set the hopper guide to the minimum position, and put the banknotes on the hopper flatly, the detector will start counting. (See Figure 4-4、Figure 4-5).

| Figure 4-3 | Figure 4-4 |

Figure 4-5

Figure 4-6

The operations as shown in Figure 4-4, Figure 4-5 are correct operations, while operation shown in Figure 4-6 is wrong operation.

When a piece of counterfeit or suspicious banknote is detected, the counter will stop immediately and the buzzer will beep. The top piece in the stacker is a counterfeit or suspicious one (see Figure 4-7).Remove the counterfeit banknote, press "RESET" key, the machine will continue counting.
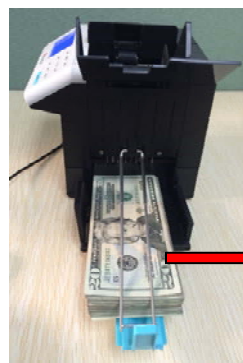
The top piece

Figure 4-7

❗ **Note: When an error is found, and causes the machine to stop automatically, please re-count these banknotes.**

5. Function operating instructions

5.1 Select currency

After turning on the machine, the symbol of current currency is displayed on the LCD. If you need to count other sort of currency, press "CUR" key to change current currency, the symbol of counted/detected currency will be displayed in turn.

"USD" means US Dollar;

"EUR" means Euro;

"GBP" means Pound Sterling;

"Free Count" means free counting;
  ...etc.

5.2 Select Auto/Manual mode

Press "MENU" key to switch between Auto/Manual mode. In Auto mode, "A" will be displayed in the middle of the last line, the machine will detect the notes automatically; in Manual mode, "M" will be displayed at the same place, press "RESET" key first, then the counter will detect the notes.

Auto mode   Manual mode

5.3 Select detecting/counting mode

Two detecting/counting modes are supported. They are Mix Mode and Sort Mode.

A. Mix mode

When you need to count/detect the value of the banknotes with different denomination, press "MODE" key on the control panel. If "Mix" is displayed on the LCD, the machine will count the total number and total value. After the counting is finished, the total value and total number are displayed on the LCD.
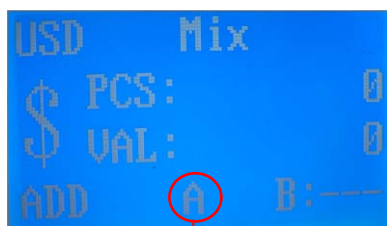
B. Sort mode

When you need to count/detect a pile of banknotes with the same denomination, press "MODE" key on the control panel. If "Sort" is displayed on the LCD, the machine will count the total number and total value. If a banknote of different denomination is mixed in a pile, the machine will stop when detecting to this one, the buzzer will beep and "Denomination different" will be displayed on the LCD. The top banknote in the stacker is the one of different denomination.

5.4 Reporting and printing function

In Mix mode, open the ADD function, after detecting, the machine will provide a report of all counted banknotes by pressing "REP" key. US dollar result can be as follows.

denomination   piece   value

Total number   Total value
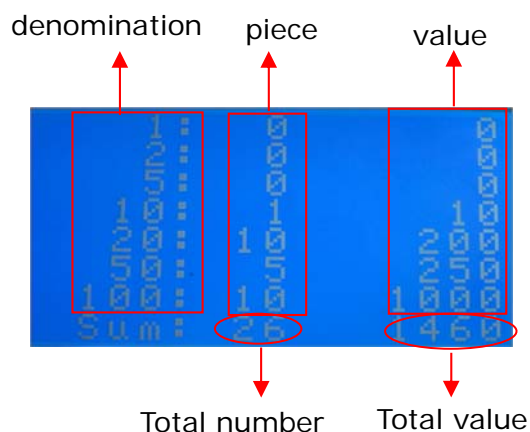
Press any key to exit the report mode automatically. Press "CLR" key to clear the count memory.

If the printer is connected to the machine, press and hold "PRT" key, "Print…" will be displayed on the LCD (Shown in the following figure) and the report will be printed. After printing finished, it will return to ready state.

Print...
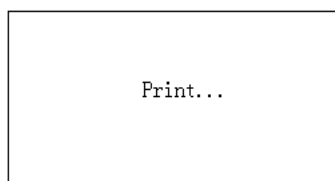
5.5 Select accumulative counting

When you need an accumulative counting, press "ADD" key on the control panel and then "ADD" will display on the LCD. The machine will count on the basic of the original number displayed on the LCD. After the banknote counting is finished, the number displayed on the LCD is the summation of the several times' counting. When the accumulative pieces reach 999+1 or accumulative value reaches 999999+1, it will be resumed to 0.
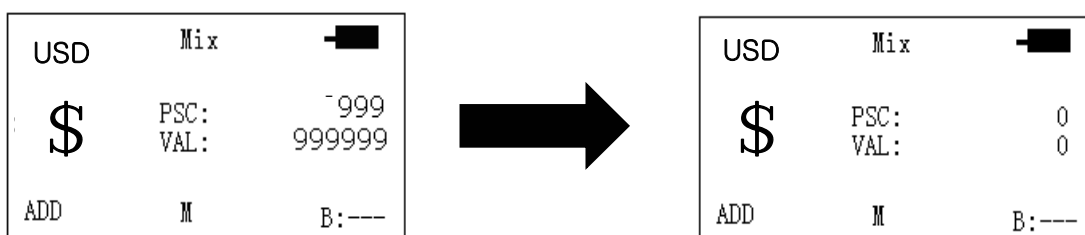
5.6 Select batch counting

When you need a batch counting, press "BAT" key, when "100" is displayed on the preset window, it shows the batch function has been turned on, the batch number is 100. Each time when you press "BAT" key, 100, 50, 20, 10 and "---" will be displayed in turn repeatedly. If the LCD displays "---", the batch function is disabled. You also can press or hold "+1/+10" key to increase the batch number by 1 or 10 according to desire. The batch number can be selected in the range of 1~200. After setting the batch number, Put the banknotes on the hopper and the machine will count automatically, while reach the batch number, the machine will stop automatically.

6. Setting function menu

Press "MENU" key to enter setting function menu:

```
Time Set
Auto      :           ON
SleepTime:            10M
```

Time Set：　　**Setting time**
Auto：　　　　**Setting Auto/Manual mode**
Sleep Time：　**Setting sleep time(5 minutes,10 minutes or off)**

Click **"**CUR" key to select the option continuously.

Click "ADD" key to change the parameter.

When reach the Time Set option, press "ADD" to enter into time set interface, it will display like below:

```
08:36 2015-04-03
```

Press "CUR" key to switch the value that need modify，click "ADD" key (+) and "MODE" key (-) to change the parameter of time.

Press "MENU" key to save the change and exit setting function menu automatically.

7. Troubleshooting

7.1 Self-test error message display and solutions

The machine performs a self-test automatically after powering on. If one of the following error messages is displayed on the LCD, usually it is because the sensor is blocked by banknotes or dusts. Please use a brush or a piece of soft cloth to clean the dusts on the sensor or remove the banknotes, then restart the machine.

Error message display	Solution
PassA counting sensor PassB counting sensor PassC counting sensor PassD counting sensor	Remove the banknotes and clear away the dusts, or aim at the axes of the light beam
Upper IRA sensor Upper IRB sensor Upper IRC sensor Upper IRD sensor Lower IRE sensor Lower IRF sensor Lower IRG sensor Lower IRH sensor Upper color sensor Lower color sensor Upper spectrum sensor Lower spectrum sensor	Remove the banknote and clear away the dusts

Banknote feeding sensor	Remove the banknote and clear away the dusts
Magnetic A sensor Magnetic B sensor Magnetic C sensor Magnetic D sensor	Remove the banknote and clean the magnetic sensor
Internal memory fault	Resume to factory setting
Rotate speed sensor	Clean the code wheel and sensor, or replace the rubber-belt

## 7.2 Detective error message display and solutions

If the following error message is displayed on the LCD during the course of counting, you can deal with them as per the following solutions after the machine is stopped.

Error message display	Causes and solutions
Incomplete notes	Half piece or incomplete banknote, remove it and press "RESET" to continue counting
Magnetic feature fail IR error UV error Image error Paper error Spectrum error Holograph error Denomination different	Counterfeit or suspicious banknote, remove it and press "RESET" to continue counting.
Slant notes	Banknote tilt, press "RESET" to continue counting. If it occurs frequently, adjust the adjusting screw toward the counter-clockwise direction.
Double notes Chained notes	Some banknotes are connected or overlapped, put the banknotes in the banknote stacker back to the banknote hopper to count again. If it occurs frequently, adjust the adjusting screw toward the clockwise direction.
Passing error	Press "RESET" key, or press the handle up to open the banknote transport path, then remove the banknote and clear away the dusts.

7.3 How to adjust the feeding clearance

The adjusting screw of the feeding clearance has already been set to the best position in the factory. When the counting error messages frequently occur (i.e. Double notes/Chained notes/Slant notes), it is necessary to readjust the adjusting screw.

- When the machine can't count the banknotes smoothly or displays "Slant notes" frequently, turn the screw counter-clockwise to make the clearance larger.

- When the machine displays "Double notes" or "Chained notes" error frequently, turn the screw clockwise to make the clearance smaller.

Increase the clearance   Decrease the clearance
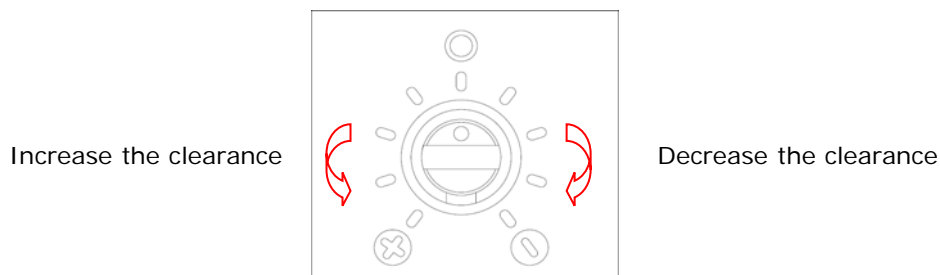
Note: The adjusting screw is very sensitive, when adjustment, each time only adjust semi-lattice until the errors disappear, usually don't adjust it at will.

7.4 How to open the banknote transport path

When the machine displays a self-test error or detective error message, usually it is because the sensor is blocked by banknotes or dusts. Press the handle up to open the banknote transport path, then remove the banknote and clear away the dusts (see the figure below).
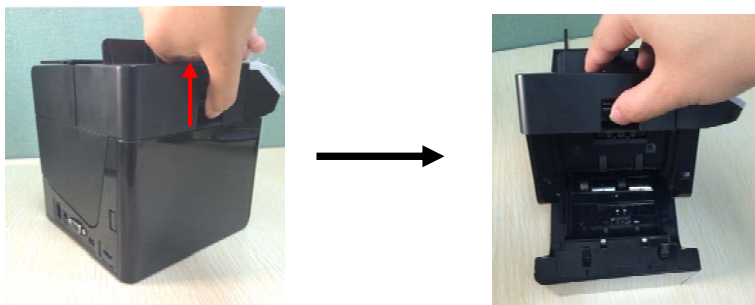
8．Download Software

8.1 Download software by Micro-SD card

Convert the ".EUP" files to ".ISO" file, then download the ".ISO" file to Micro-SD card.

Insert the Micro-SD card into Micro-SD socket first, next connect the machine to the external power source.

Press "RESET" key and " [⬚] " key to turn on the machine, the LCD will display "Downloading….Please wait！SD CADR MODE", it shows the machine has already entered into download mode,

After the downloading job finished, the machine will beep and "Load successfully, press power key, will turn off！" is displayed, then press " [⬚] " key turn off.

8.2 Download software by USB

◆ When you download software for the first time, please install (PL-2303) driver first on PC according to the installation cue, it needn't be installed again for the later use.

◆ Use the provided USB download cable to connect the banknote detector and the USB port on PC together.

◆ Press "RESET" key and " [⬚] " key to turn on the machine, the machine will display "Ready to download …. Boot Ver 4.0", it shows the machine has already entered into download mode, double clicks the icon " Load.exe " and it will display the following interface.
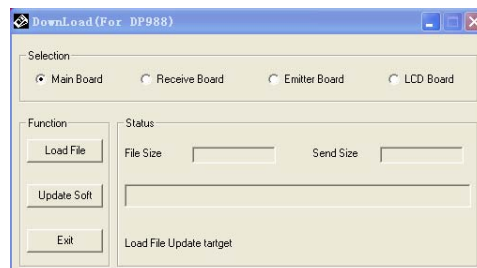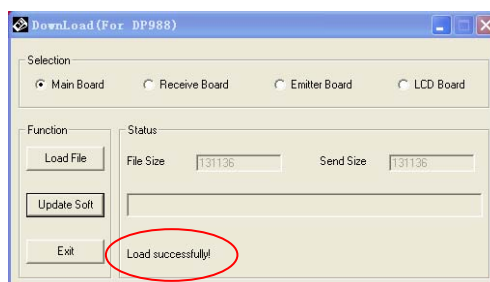

◆ Click "Load File" to select the ".EUP" file that you want to download.

◆ Select the "Main Board" and click "Update Soft" button, the software will be downloaded automatically.
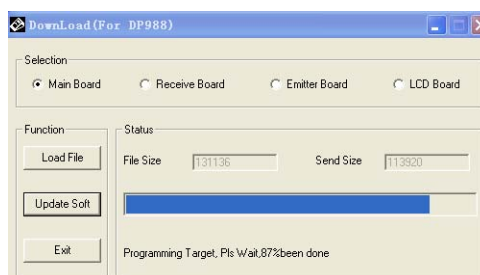
◆ When "Load successfully" is displayed on the download interface, it means the download job is finished, then Press "⌫" key turn off.

9. Daily Maintenance

1. Periodically check the voltage of the power supply to ensure that the voltage is within the specified range.
2. Keep the counter in ventilated place and beyond strong sunshine and strong magnetic field.
3. Periodically clean the sensors: use a piece of cotton with a small amount of alcohol to clean all sensors, rubber wheels and rubber synchronous belt. Keep the surface of sensors away from sharp and hard articles to avoid damage.
4. Don't attempt to disassemble the counter at will.

   ❶ DON'T USE ANY CHEMICALS TO CLEAN THIS MACHINE.

10. Technical Specification

1. Detection features: magnetic ink, infrared ink, image, spectrum, length, thickness, UV, etc.

2. Dimensions: 170x157x152 (mm)

3. Power supply: AC100V~240V 50/60Hz or DC12V/2.0 A

4. Hopper capacity: 100 notes

5. Stacker capacity: 100 notes

6. Operating temperature: 0~40℃

7. Storage temperature: -20~65℃

8. Battery: rechargeable lithium battery 10.8V/2000mAH (Optional)

9. Power consumption: 20W (Max)

10. Speed: 200~250 notes per minute

11. Weight: 1.80kg (Without battery)

※ If the machine has some faults that you can't solve, please contact the Technical Support Dept of our company or our agent for services.

※ Products subject to change without further notice.