# Currency Counter BC-40 User Manual 



Service Contact:
Ribao technology (USA) Inc.
Address : 1600 S Airport Dr,Ste 100,McKinney,TX 75069
Email : info@ribaotechnology.us; jameswang@ribaotechnology.us
Telephone:+1(469)2066052
Mob:+1(206)406 7653

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## 1. Machine Overview 1.1 Safety Instruction

## NOTE:

- This product is used for counting banknotes described in the specification. Please do not use this product for any other purposes.
- This product is only used in corresponding countries or regions and may not be used in other countries or regions due to the difference between power supply specifications and safety standards.
- Please understand that the contents of this manual are subject to change without prior notice.
- The appearance and technical specifications of this product are subject to change without prior notice. Therefore, the actual product may be different from the instructions in this manual.
- This product may not be changed or modified in any form without the explicit written authorization of our company.
- Please contact your nearest sales store or our designated distributor if you need to install this product.
- This machine is specially designed for indoor use. Please do not install or use it outdoors.
- Please do not install it in places that cannot bear the weight of this product or in places that are inclined or uneven.
- Do not use or place combustible materials, inflammables and volatile items such as thinners around/inside this product.
- Do not bend the power cord excessively, or place heavy or sharp objects on top of the machine.
- Do not use this product in an excessively humid environment.
- Please avoid strong light and strong magnetic field interference.
- When the machine is not in use, please turn off the machine switch. Prevent curtains and various entangled materials from getting caught in the machine.
- When cleaning the machine, turn off the machine switch.


### 1.2 Installation Instruction

As shown in the Figure 1, please stay away from the surrounding walls and reserve sufficient operation space for placement of banknotes, opening or closing of the cover plate, as well as for maintenance.


Figure 1

### 1.3 Machine \& Accessories



Machine


Note guider(left)


Note guider(right)


User manual


Power cable


Clean brush

### 1.4 Appearance

### 1.4.1 Front Appearance



### 1.4.2 Back Appearance



### 1.5 Technical Parameters

| Overall dimensions ( $\mathrm{L} \times \mathrm{W} \times \mathrm{H}$ ) | $300 \mathrm{~mm} \times 247 \mathrm{~mm} \times 287 \mathrm{~mm}$ |
| :---: | :---: |
| Weight | 5.5KG |
| Banknote capacity | Max 4 currencies in one machine |
| Power requirement | AC100V-240V 50/60Hz $\pm 10 \%$ |
| Counting mode | Mix counting mode, single counting mode, piece counting mode, automatic recognition mode, multi-country mix counting mode. |
| Counting speed | Value counting mode (MIX/SDC): <br> $\mathrm{L}(800 \mathrm{PCS} / \mathrm{min}) / \mathrm{M}(1000 \mathrm{PCS} / \mathrm{min}) / \mathrm{H}(1100 \mathrm{PCS} / \mathrm{min})$ speed <br> Piece counting mode (CNT): <br> L ( $1000 \mathrm{PCS} / \mathrm{min}$ )/M (1100 PCS/min)/H (1500 PCS/min) speed |
| Counterfeit function | UV/MT/IR/IRT/CIS/3D-size |
| Preset number | 0~200 |
| Display | 3.5-inch TFT touch screen |
| Hopper capacity | 500pcs |
| Stacker capacity | 200pcs |
| Size range of sortable banknotes | Length: $120 \mathrm{~mm} \sim 180 \mathrm{~mm}$ <br> Width: $50 \mathrm{~mm} \sim 90 \mathrm{~mm}$ <br> Thickness: $0.05 \mathrm{~mm} \sim 0.15 \mathrm{~mm}$ |
| Machine power | standby 515 W , normal operation $\leq 50 \mathrm{~W}$ |
| Noise from machine operation | No load $<60 \mathrm{~dB}$, operation $<75 \mathrm{~dB}$ |
| Software upgrade | USB upgrade |
| External display | Optional |
| Use environment | Ambient temperature ( $0 \sim 40^{\circ} \mathrm{C}$ )/humidity ( $40 \sim 90 \%$ ) <br> Air pressure ( $70-106 \mathrm{kpa}$ ) |
| Storage environment | Ambient temperature ( $-40 \sim 55^{\circ} \mathrm{C}$ )/humidity (10~95\%) <br> Air pressure ( $70-106 \mathrm{kpa}$ ) |

### 1.6 Start-up

Reminder: To ensure smooth counting please install the left and right Note Guider in the box. Please check below Figure 2.


Figure 2

1) Take out the left Note Guider, install the click into the rail of the Note Guider, and press the Note Guider until you hear a clicking sound, it means the Note Guider is installed in position, as shown in the Figure 3.


Figure 3
2) Then take out the right Note Guider, intall it in the same way. After you finish both, the machine looks like this:


Figure 4
3) Connect the machine to the power supply and turn on the power switch. First, the machine enters the loading interface. After loading, the machine enters the self-check interface, as shown in Figure 5 below. The machine will enter the main interface after self-checking succeeds, as shown in Figure 6 below:


Figure 5


Figure 6

### 1.7 Notes Placement

1) Please put the handle of the machine on the back of the machine first.
2) The banknotes to be counted should be sorted according to size and then put into the hopper. The banknotes counted should be pre-arranged and straightened out when they encounter folds, and arches, which can increase the one-time pass rate.
3) During the banknote counting process, the note guider should be limited according to the maximum size of currently counted notes to ensure that the banknotes can be accurately identified by the relevant sensors. Taking US dollars as an example, please arrange the banknotes first, and then limit the note guider according to the largest size banknote. Finally, put the banknotes into the hopper and start counting, as shown in the Figure 7:


Figure 7

### 1.8 Counting error code

| Error code | Cause |
| :---: | :---: |
| ERROR-001 | The image of the banknote cannot be recognized to report an error |
| ERROR-002 | A different denomination is detected under single denomination counting mode |
| ERROR-003 | UV warning |
| ERROR-004 | Side MG warning |
| ERROR-005 | Middle MG warning |
| ERROR-006 | Banknote size error |
| ERROR-007 | Timeout error |
| ERROR-008 | Different currency error when auto recognition |
| ERROR-009 | Chained notes detected |
| ERROR-010 | Double notes detected |
| ERROR-011 | Infrared feature area 1 abnormal |
| ERROR-012 | Infrared feature area 2 abnormal |
| ERROR-013 | Infrared feature area 3 abnormal |
| ERROR-014 | Infrared feature area 4 abnormal |
| ERROR-015 | Infrared feature area 5 abnormal |
| ERROR-016 | Infrared feature area 6 abnormal |
| ERROR-017 | Infrared feature area 7 abnormal |
| ERROR-018 | Infrared feature area 8 abnormal |
| ERROR-019 | Infrared feature area 9 abnormal |
| ERROR-020 | Infrared feature area 10 abnormal |
| ERROR-021 | Infrared feature area 11 abnormal |
| ERROR-022 | Infrared feature area 12 abnormal |
| ERROR-023 | Infrared feature area 13 abnormal |
| ERROR-024 | Infrared feature area 14 abnormal |
| ERROR-025 | Infrared feature area 15 abnormal |
| ERROR-026 | An error is reported when the passing position is too close to the edge of the machine |
| Power Abnormal ! | Power abnormal |
| JAM | Jam |
| Passage Abnormal ! | Passage Abnormal! |
| Stacker Error! | Stacker Error! |

## 2. Function Introduction

### 2.1 Function Introduction

### 2.1.1 Display Interface and Touch Screen Description



1. Currency selection key
2. Counting mode
3. Preset quantity
4. Counterfeit level
5. Automatic/manual
6. Number of banknotes counted
7. Counting amount
8. PC or printer mode
9. U-disk logo
10. Accumulation

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Figure 8

### 2.1.2 Operating Instructions for Function Keys

## ESC

Return key, to return to the previous interface when the function is set; Clear key.

## $\$$

Currency selection key.


Mode switch key.


Function key.


Counting information check key.


Accumulation function switch key.


Preset switch key.


Data printing key.


Speed switch key.

## ENTER <br> START

Start key, start the machine manually; Save key after selecting and entering, confirming or modifying the function.

### 2.1.3 Manual/Automatic Setting

The "Auto " key in the upper right corner of the display is the manual/automatic switch key. Touch it and the mode will be changed.

Automatic mode: the word "
Auto " will appear in the upper right corner. The machine will count the banknotes automatically when they are put into the banknote hopper, as shown in Figure 9.

Manual mode: the words "Manual", will appear in the upper right corner. Put the banknotes into the banknote hopper, after pressing START key, the machine will count the banknotes.


Figure 9

### 2.1.4 Selection of Counting Mode

### 2.1.4.1 Single Country Currency Model

The currencies of different countries can be selected by pressing the " $\square$ $\$$ " key on the keyboard plate or touching the ""趶" flag pattern in the upper left corner of the display, as shown in Figure 10 below:


Figure 10

Take US dollars as an example．After the touch of＂ $\square$ key，the display returns to the main interface，and the top left corner displays the $\square$ ＇flag graphic，indicating that the machine is in the mode of counting US dollars．

By pressing the＂煰＂key or touching the＂MIX＂，key above the display，the three counting modes can be cyclically switched．In each mode，the machine will work with the default value of the system．The corresponding order of each mode is shown in Figure 11 below．


Figure 11

## 2．1．4．1．1＜MIX＞Mix Counting Mode

Figure 12 and Figure 13 below show the interface of Mix Counting Mode in the automatic state of the machine．In this mode，the machine will count all the denominations of the same currency and record the detailed information of the counted banknotes，including the total amount and the total number of banknotes in the stacker for the convenience of users to view．When this mode is selected，the machine will count at the default speed（L：800／M：1000／H：1100 PCS／min． 3 levels for option）．


Figure 12


Figure 13

## 2．1．4．1．2＜SDC＞Single Counting Mode

Figure 14 and Figure 15 below show the interface of Single Counting Mode in the automatic state of the machine．In this mode，the machine will take the first banknote to be counted as a reference to count the same denomination of the same currency，and at the same time the detailed information of the counted banknotes，including the total amount and the total number of banknotes in the stacker，will be
counted, and saved in detail for the convenience of users to view (note: different denominations rejected in this mode will be prompted with an error in size). When this mode is selected, the machine will count at the default speed (L: 800/M: 1000/H:1100 PCS/min. 3 levels for option).


Figure 14


Figure 15

### 2.1.4.1.3 <CNT> Count Mode

Figure 16 and Figure 17 below show the interface of CNT Count Mode in the automatic state of the machine. This mode does not limit the currency and only counts the number of PCS. When this mode is selected, the machine will count at the default speed (L: 1000/M: 1100/H:1500 PCS/min), and only the counterfeit function is reserved.


Figure 16


Figure 17

Note: In MIX Counting Mode and SDC Single Counting Mode, the machine has the functions of image acquisition, magnetic detection, ultraviolet detection and duplicate detection. While in CNT Counting Mode, there is only a double detection function.

### 2.1.4.2 Multi-country Mix Counting Mode

Multi-country Mix Counting: A mixture of national currencies placed in a machine to count, displaying the number and amount of each currency according to its currency name. Note: The machine
can only recognize the supported national currency displayed by the machine. The currency not supported will be stopped.

Press the "\$" key or the " \$2.7)
currency selection interface as shown in Figure 10. Then click "MLUT" Multi-country Mix Counting Mode, and the display screen will automatically switch to the main interface. At this time, the currencies of the four existing countries in the software will be displayed (depending on customer requirements, the currencies of different countries will be displayed) as shown in the following figure 18:


Figure 10


Figure 18

Example: Put a handful of banknotes (including USD, EUR, CAD, GBP) into the machine to count. Details of counting after counting are shown in the following Figure 19:

| \$57) | MIX | B:OFF | CF:M | Auto |
| :---: | :---: | :---: | :---: | :---: |
| CURRENCY |  | PCS | AMT |  |
| USD |  | 5 | 50 |  |
| EUR |  | 10 | 200 |  |
| CAD |  | 10 | 200 |  |
| GBP |  | 10 | 100 |  |
|  |  |  |  |  |

Figure 19

### 2.1.4.3 Automatic Recognition Mode

Automatic recognition: Refers to the automatic recognition of banknote counting mode. In the process of counting banknotes, the machine uses the first banknote passing through the sensor as the judgment rule to recognize banknotes of all denominations of the same country. When banknotes from other countries are recognized, the machine will alarm and stop. At this time, banknotes from other countries need to be taken out, and the machine will continue counting. The machine can only recognize the currency of the country displayed in the program.

Press the "\$" key or the " " A.
selection interface, as shown in Figure 10 below. Click the " Auto" automatic identification mode, and the display screen will be automatically adjusted to the main interface after selection, as shown in Figure 20 below:


Figure 10


Figure 20

In the automatic recognition mode, there are two counting modes: Mix Counting Mode and SDC Single Counting Mode. Customers can choose operation according to their needs. It is recommended that customers choose Mix Counting Mode for automatic recognition.

### 2.1.5 Counting Speed Setting and Function Description

The counting speed is divided into three options: H, M, L (high, medium, and low). Under any counting mode, different counting speed can be changed by pressing the " $\square$ " key. The current speed level will be displayed in the red box of Figure 21. The letter H means high level. If medium or low level is selected, SP:M or SP: L will be displayed accordingly.


Figure 21
The corresponding counting speed of each level under each counting mode is shown in the following table:

| Counting mode | H | M | L |
| :---: | :---: | :---: | :---: |
| MIX | $1100 \mathrm{PCS} / \mathrm{min}$ | $1000 \mathrm{PCS} / \mathrm{min}$ | $800 \mathrm{PCS} / \mathrm{min}$ |
| SDC | $1100 \mathrm{PCS} / \mathrm{min}$ | $1000 \mathrm{PCS} / \mathrm{min}$ | $800 \mathrm{PCS} / \mathrm{min}$ |
| CNT | $1500 \mathrm{PCS} / \mathrm{min}$ | $1100 \mathrm{PCS} / \mathrm{min}$ | $1000 \mathrm{PCS} / \mathrm{min}$ |

### 2.1.6 Check counting details on Machine

Under MIX counting mode or SDC counting mode, after finish counting and press left side button", you can check the counting details as Figure 22 shows, Figure 23 is the interface after finish counting:

| VALUE | PCS | AMT | LIST |
| :--- | :--- | :--- | :---: |
| 100 | 0 | 0 | ESC |
| 50 | 0 | 0 |  |
| 20 | 0 | 0 | Next |
| 10 | 0 | 0 |  |
| 5 | 0 | 0 | Back |
| 2 | 0 | 0 | Print |
| 1 | 0 | 0 |  |
| Total | 0 | 0 |  |

Figure 22

| VALUE | PCS | AMT | LIST |
| :--- | :--- | :--- | :---: |
| 100 | 2 | 200 | ESC |
| 50 | 4 | 200 |  |
| 20 | 2 | 40 | Next |
| 10 | 5 | 50 |  |
| 5 | 2 | 10 | Back |
| 2 | 10 | 20 |  |
| 1 | 10 | 10 | Print |
| Total | 35 | 530 |  |

Figure 23

This interface is used to check the number of banknotes of various denominations and the total amount of this denomination, as well as the total amount of all amounts. At the same time, banknotes can also be counted by directly placing them under this interface. To exit this interface, please press ESC or touch the

ESC
" key in the upper right corner of the display.

### 2.1.7 Batch Setting

### 2.1.7.1 Default Preset Number

Press the " " key or touch the "B:OFF" key on the main interface to select the preset number. The default is $10 / 25 / 50 / 100 / 200 / O F F$. (For example, Figure 24 is the preset number 25, and Figure 25 is the preset number 50 ). The preset number of the previous "10/25/50/100" can also be changed. When the preset number is off, the default preset number of the machine is 200 . When the preset number reaches 200, the machine will automatically stop running.


Figure 24


Figure 25

### 2.1.7.2 Modify Default Batch

1) Press the
 " key to enter the main interface of USER MENU, as shown in Figure 26 below, Press "1.Preference" to enter into PREFERENCE SETTING interface, as figure 27.


Figure 26


Figure 27
2) Press "2.Batch parameter" under Figure 26 to enter into Batch Setting interface, as figure 28.


Figure 28
3) BATCH1, BATCH2, BATCH3 and BATCH4 on the right of the figure above are the four default preset values of the system. If one or more of the default four values are not available to customers, they need to be changed to other values.
4) Example: The default preset number of 25 is not required by the customer. The customer needs a value of 155 . Then the operation is as follows:
5) Touch "BATCH 25 " and the key will turn yellow, as shown in Figure 29 below:


Figure 29
6) Press "155" directly on the right digit key and the "BATCH2" value will also become 155, as shown in

Figure 30 below. Please press the "SAVE" key in the upper right corner to save the data.


Figure 30
7) Please press the "ESC/CLEAR" key to return to the main interface, and then press the " $B$ : " key at the top of the display screen to switch to the previously set value of 155, as shown in Figure 31 below:


Figure 31

### 2.1.7.3 Customized Shortcut Key for Preset Number

1) Hold down the " key under the main interface for 3 seconds until the preset interface pops out, as shown in Figure 32 below:


Figure 32
PS: "Range:5~200" means that the preset value must be between 5 and 200, or it will not be saved with the "SAVE" key.
2) At this point, we enter the example value: 155 in the input field, as shown in Figure 33. Click the
"SAVE " key in the upper right corner of the display again. The machine automatically jumps to the main interface, and the current preset number also jumps to 155, as shown in Figure 34 below:


Figure 33


Figure 34

### 2.1.8 Accumulative Function Setting

In any counting mode, the accumulative function of PCS can be opened by pressing the
 key. At the same time, the word "ADD" in the bottom left corner of the counting interface changes from gray font to white font (ADD-ADD). Figure 35 shows the closed state of accumulative function, and Figure 36shows the open state of accumulative function.


Figure 35


Figure 36

1) When the accumulative function is on: Put a batch of banknotes on the hopper, when counting is finished, the machines will show the total amount and quantity of this batch counting. Remove the banknotes and put a new batch of banknotes on the hopper, and the current counted amount and quantity will be accumulated with last batch result.
2) When the accumulative counting function is off: Put a batch of banknotes on the hopper, when the first counting is finished, the machine will show the total amount and quantity of this batch counting. Remove the banknotes and put a new batch of banknotes on the hopper, when counting is finished, the machine will show the total amount and quantity of the second counting as the banknotes are not yet taken from the stacker. When the banknotes are taken out of the stacker, the machine accumulates the amount and quantity of the banknotes counted the second time with the first time. Currently, press CLEAR one time to clear the first counting information, and press CLEAR again to clear all counting information
3) During counting if any error detects, the machine will automatically delete the counting information and remind to perform the count again.
4) The accumulative function will be disabled when switching currencies in automatic mode.

### 2.1.9 Counterfeit Detection Setting

### 2.1.9.1 Simple Setting of Counterfeit Detection Level

The "CF:M " key on the display screen is the simple level adjustment key. Touching it will switch in the three levels $(H, M, L)$.

H: High level, with the highest counterfeit sensitivity, as shown in Figure 37.
M : Medium level, with the moderate counterfeit sensitivity, suitable for the daily count of all national currencies.

L: Low level, with the relatively weaker counterfeit sensitivity.


Figure 37

### 2.1.9.2 Precise Setting Counterfeit detection

1) Press the " $\square$ " key to enter the main interface of USER MENU, as shown in Figure 26 below, Press "1.Preference" to enter into PREFERENCE SETTING interface as Figure 27.


Figure 26


Figure 27
2) Touch "1. Counterfeit level" to enter the interface of counterfeit level setting, as shown in Figure 38 below:

| ESC | CF SETTING |  |  | SAVE |
| :---: | :---: | :---: | :---: | :---: |
| CF:M | USD | CURRENT |  |  |
|  | NEW |  |  |  |
| MG | 3 | 3 |  |  |
| UV | 3 | 3 |  |  |
| IR | 3 | 3 |  |  |
| DB | 3 | 3 |  |  |

Figure 38
3) "CF:M" means that the counterfeit gear is in the medium level, and the default value of the counterfeit capability is 3 . Touch the "CF:M" key in the upper right corner to check the counterfeit gear (H, M, L).

| Gear | Counterfeit sensitivity |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  | MG | UV | IR | DB |
| H (High) | 5 | 5 | 5 | 5 |
| M (Medium) | 3 | 3 | 3 | 3 |
| L (Low) | 1 | 1 | 1 | 1 |

4) The customer selects the corresponding counterfeit gear according to the actual counting requirements. If he wants to adjust the counterfeit gear for a certain item or several items, he can directly contact the value of the NEW row after the counterfeit item on the screen.
5) Example: If the customer wants to reduce the level of MG's counterfeit capacity under the medium gear, please operate as follows:
a) The initial parameters of the medium gear are shown as follows. The default counterfeit gear of MG is

3, and the default NEW row value is 3, as shown in Figure 39 below:

| ESC | CF SETTING |  |
| :---: | :---: | :---: |
| CF:M | SAVE |  |
|  | USD | CURRENT |
| MG | 3 | NEW |
| UV | 3 | 3 |
| IR | 3 | 3 |
| DB | 3 | 3 |

Figure 39
b) Touch the value 3 in the NEW row corresponding to MG, and the following interface appears, as shown in Figure 40. Each counterfeit capacity has 6 positions from 0 to 5 . 0 represents closed counterfeit capacity, 1 represents the weakest counterfeit capacity and 5 represents the strongest counterfeit capacity. At this point, the gear Level of MG's counterfeit capacity needs to be reduced, so touch "Level 2" to set the gear value to 2, as shown in Figure 41.

| Esc C | CF SETTING |  | SAVE |
| :---: | :---: | :---: | :---: |
| CF:M USD | Select | NEW |  |
| MG | Level 0 | 3 |  |
| UV | Level 2 | 3 |  |
| IR | Level 3 | 3 |  |
| DB | Level 5 | 3 |  |

Figure 40

| ESC | CF SETTING |  |  | SAVE |
| :---: | :---: | :---: | :---: | :---: |
| CF:M | USD | Select | NEW |  |
|  | MG | Level 0 Level 1 | 3 |  |
|  | UV | Level 2 | 3 |  |
|  | IR | Level 3 | 3 |  |
|  | DB | Level 5 | 3 |  |

Figure 41
c) After selecting "Level 2", the NEW row value corresponding to MG on the display interface will become 2, as shown in Figure 42 below. Please click the "SAVE", key in the upper right corner to save the value, as shown in Figure 43.


Figure 42

| ESC | CF SETTING |  | SAVE |
| :---: | :---: | :---: | :---: |
| CF:M | USD |  |  |
|  | CURRENT |  |  |
| MG | NEW |  |  |
| UV | 3 |  |  |

Figure 43
d) Click "Save", and the display interface will jump back to the interface shown in Figure 38.
e) Then touch the "1.Counterfeit level" key to enter the counterfeit interface, and it can be seen that the value of the counterfeit gear of MG becomes 2, as shown in Figure 44 below:

| ESC | CF SETTING |  |
| :---: | :---: | :---: |
| CF:M | SAVE |  |
| MG 2 2 <br> UV 3 3 <br> IR 3 3 <br> DB 3 3 |  |  |

Figure 44

### 2.1.10 Time and Date Setting

1) Press the " " key to enter the main interface of USER MENU, as shown in Figure 26 below, Press "2.General" to enter into GENERAL SETTING interface as Figure 45:


Figure 26

EsC GENERAL SETTING

1. Time and date
2. Buzzer On/Off
3. Serial port mode
4. Printer Cut
2) Touch "1. Time and date" to enter the time \& date setting interface, as shown in Figure 46 below:


Figure 46
Touch the value of time and date, and the font shading will turn yellow. At this time, the customer can modify the time and date according to their needs. After modification, please click the "SAVE" key in the upper right corner to save.

### 2.1.11 Buzzer Setting

1) Press the "" key to enter the main interface of USER MENU, as shown in Figure 26 below, Press "2.General" to enter into GENERAL SETTING interface as figure 47.


Figure 26

Esc GENERAL SETTING

1. Time and date
2. Buzzer On/Off
3. Serial port mode
4. Printer Cut

Figure 47
2) Touch "2. Buzzer On/Off" to enter the buzzer setting interface, as shown in Figure 48 below:


Figure 48

Touch the open or close button, and the shading will turn yellow.
Touch "ENABLE" to open the buzzer switch, and then click the top right "SAVE", key to save. Touch "DISABLE" to close the buzzer switch, and then click the top right "SAVE", key to save.

### 2.1.12 Software Version Viewing

Press " " key to enter into USER MENU interface, as shown in figure 26, Press "4.Version" to check the software version as figure 49.


Figure 26


Figure 49

### 2.1.13 Counting History Information

1) Press the "\%" key to enter the main interface of USER MENU, as shown in Figure 26 below, then press the " " key again for two consecutive times to enter debugging mode, as shown in Figure 50 below:


Figure 26


Figure 50
2) press "1.Historical data" as showsn in figure 50 to check historial data as shown in figure 51:


Figure 51
"Total 64059" represents the historical total number of counting.
"Suspicious 122" represents the historical total number of suspicious currency.
"Currency USD EUR" represents the 2 currencies with the max counting numbers.
"Error code ERR-002 ERR-001" represents the two error codes with the max errors.
3) Press the " Reset", key corresponding to the right to clear the data, and the interface will be displayed as shown in Figure 52 below:


Figure 52

### 2.1.14 Restore Factory Setting

1) Press the " " key to enter the main interface of USER MENU, as shown in Figure 26 below, then press the " " key again for two consecutive times to enter debugging mode, as shown in Figure 50 below:


Figure 26

## Esc MAINTENANCE SETTING

1. Historical data
2. Factory setting
3. Cash Information
4. Speed Test
2) Touch the "2. Factory setting" key to enter the interface of restoring factory setting, as shown in Figure 53 below:


Figure 53
3) Click the "OK " key to restore factory setting, which will restore all other settings except the initial time \& date setting to the initial state. Please restart the machine after restoring factory setting, as shown in Figure 54 below:


Figure 54

### 2.2 Printer Introduction

### 2.2.1 Print Paper Cutting Setting

If you have purchased the serial thermal printer, please check if it comes with a cutting function according to the manual.

If the printer does not come with a cutting function, this operation setting can be skipped.

If the printer with a cutting function, print paper cutting setting needs to be opened, as follows:

1) Press $\square$ " to enter the main interface of USER MENU, as shown in Figure 26. Press "2. General" to enter into the interface of "GENERAL SETTING" as shown in Figure 47.


Figure 26

## EEC GENERAL SETTING

1. Time and date
2. Buzzer On/Off
3. Serial port mode
4. Printer Cut

Figure 47
2) Click "4. Printer Cut" to enter the interface of cut setting, as shown in Figure 55.

| ESD | CUT Setting | SAVE |
| :---: | :---: | :---: |
|  | ENABLE |  |
|  |  |  |
|  |  |  |
|  |  |  |

Figure 55
3) Click "ENABLE" and click the "SAVE" button in the upper right corner to save, indicating that the cut function is turned on.
4) Click "DISABLE" and click the "SAVE" button in the upper right corner to save, indicating that the cut function is turned off.

### 2.2.2 Baud Rate Setting

1) If you buy a serial thermal printer. Please confirm the corresponding baud rate first according to the printer's instructions.
2) Press " " key to enter into USER MENU as figure 26, then press "2.General" to enter into GENERAL SETTING interface as figure 47:


Figure 26

Esc GENERAL SETTING

1. Time and date
2. Buzzer On/Off
3. Serial port mode
4. Printer Cut

Figure 47
3) Press "3.Serial port mode" under figure 55 and enter into SERIAL PORT MODE interface as shown in figure 56.

| ESC SERIAL PORT SETTING SAVE |  |
| :---: | :---: |
| MODE | BAUD RATE |
| PC | 4800 |
| PRINTER | 9600 |
|  | 115200 |

Figure 56
4) In the "SERIAL PORT MODE" interface, first touch to select "PRINTER" in the MODE column on the left, and then touch to select the baud rate "115200" in the BUAD RATE column on the right. After the selection is complete, click the button "SAVE" in the upper right corner to save, as shown in Figure 57 below.

| ESC SERIAL PORT SETTING SAVE |  |
| :---: | :---: |
| MODE | BAUD RATE |
| PC | 4800 |
| PRINTER | 9600 |
|  | 115200 |

Figure 57
5) Connect the printer to the power source, connect one end of the RS232 cable in the printer box to the printer, and the other end to the 232 interface of the machine.
6) When the external printer has been connected and can be printed, after counting, press the " $\qquad$ , key to enter the detail list checking interface, and then press the " key, the printer will print the detail and total amount of counting. The format printed is shown in Figure 59 below.

| CUSTOMER ID : |  |  |
| :--- | :--- | :--- |
| USD |  |  |
| Deno. | Count | Value |
| 100 | 5 | 500 |
| 50 | 2 | 100 |
| 20 | 0 | 0 |
| 10 | 0 | 0 |
| 5 | 30 | 150 |
| 1 | 21 | 21 |
| Total: | 56 | 771 |
| -- |  |  |
|  | $11 / 09 / 2021$ | $11: 14: 30$ |

Figure 58
7) If you encounter other problems, please contact US, we will provide the perfect solution.

### 2.3 Introduction of uploading the counting data

If the customer wants to upload the machine's point currency detail data to the PC, the customer needs to do the following:

### 2.3.1 Serial cable connection

Take a USB to 232 serial cable, connect the USB end to the PC, and insert the 232 serial end into the machine, as shown in Figure 59


Figure 59

### 2.3.2 Machine Setup

1) Press the " " key to enter the main interface of USER MENU, as shown in Figure 26 below, Press"2.General" to enter into GENERAL SETTING interface, as figure 47.


Figure 26

ESC GENERAL SETTING

1. Time and date
2. Buzzer On/Off
3. Serial port mode
4. Printer Cut

Figure 45
2) Press NO. 3 under figure 45 "3.Serial port mode" to enter SERIAL PORT MODE interface as figure 60:

| ESC SERIAL PORT SETTING SAVE |  |
| :---: | :---: |
| MODE | BAUD RATE |
| PC | 4800 |
| PRINTER | 9600 |
|  | 115200 |

Figure 60
3) In the "SERIAL PORT MODE" interface, first touch select "PC" in the MODE column on the left, and then touch 4800,9600 or 115200 to select the corresponding baud rate according to the actual situation of the external device. The factory default baud rate of the machine is "115200". After the selection is complete, click "SAVE" on the upper right corner to save, as shown in Figure 61 below.

| ESC SERIAL PORT SETTING SAVE |  |
| :---: | :---: |
| MODE | BAUD RATE |
| PC | 4800 |
| PRINTER | 9600 |
|  | 115200 |

Figure 61

### 2.3.3 Instruction of Data collection PC software

1) Open the upper computer software provided by our company "UpperMonitor", as shown in Figure 62 below.


Figure 62
2) Select serial port and baud rate, and the baud rate must be consistent with the baud rate selected on the machine, as shown in Figure 63 below.


Figure 63
3) Press the Open key again, the font of serial port and baud rate will be dimmed, OPEN will be changed to CLOSE, and then counting can be performed and the counting information can be checked, as shown in Figure 64 and Figure 65 below.


Figure 64


Figure 65
4) At the same time, the folder stored in the upper computer will automatically generate a Data folder "Data". Open the "Data" folder to find the corresponding list information, as shown in Figure 67 below.

| $\wedge$ | Name へ | Date modified | Type | Size |
| :---: | :---: | :---: | :---: | :---: |
|  | [\% 163444_038.pdf | 2021/10/9 16:34 | Foxit Reader PD... | 12 KB |
|  | [0] 163447_720_SN.pdf | 2021/10/9 16:34 | Foxit Reader PD... | 0 KB |

Figure 66

### 2.4 Instruction of External display

### 2.4.1 External Display Version Setting

If you have not purchased our external display, then you can ignore this setting operation.
If you have purchased our external display, please check and set the following when you use the external display.

1) Our external display has two versions, V2.1 and V1.1, which have differences in display functions.
2) Please turn on the machine, connect the external display to the RJ12 interface on the back of the machine, the external display will start automatically, at this time the software version will be displayed in the upper left corner of the external display.


Figure 67
3) Press the "
 key to enter the "USER MENU" interface, as in Figure 26. Then click the "1. Preference" key to enter the "PREFERENCE SETTING" interface, as in Figure 27. PREFERENCE SETTING" interface, as in Figure 27.


Figure 26

## ESC PREFERENCE SETTING

1. Counterfeit level
2. Batch parameter

## 3. ExDisplay version

Figure 27
4) Click "3. Exdisplay version" to enter the external display software version setting interface, as shown in Figure 68 below.


Figure 68
5) According to the software version number displayed, select the corresponding software version in the interface of Figure 55, and then press the "SAVE" button in the upper right corner to save it.
6) Please unplug the external display and reinsert it into the machine to use it normally.

### 2.4.2 External Display Description

1) After turn on the machine and select the currency of the corresponding country, the code of the corresponding country will also be displayed on the external display.
2)Example: The machine selects the US dollars currency mixed point mode, as shown in Figure 69, at this time the word "USD" will appear on the external display, as shown in Figure 70:


Figure 69


Figure 70
3) Put in a bundle of US dollars to count. After counting ends, the total number and total amount of counted banknotes will appear on the display, as shown in Figure 71 below. At this time, there will also be two lines of values on the external display: the first line is the number of banknotes, and the second line is the total amount, as shown in Figure 72:

| 8 | MIX | B:OFF | CF:M | Auto |
| :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |

Figure 71


Figure 72

## 3. Maintenance Instruction

### 3.1 Software Upgrade

### 3.1.1 U-disk Preparation

1) The software upgrade of this product adopts the U-disk upgrade method.
2) Please plug the U-disk into your PC first, and create a new folder named "GIN" at the bottom of the root directory of the U-disk, as shown in Figure 73 below.


Figure 73
3) Please extract the application software in .rar or .zip format provided by our company (e.g. BC40 _ GLImage.rar) and get the application software with the suffix ".GIN" (e.g. BC40_GLImage.GIN). GIN" format (e.g.BC40_GLImage.GIN).
4) Copy the application in ".GIN" format to the bottom of the folder named "GIN" in the root directory of the USB flash drive, as shown in Figure 74 below.


Figure 74
Special reminder: Please do not modify the name or suffix name (i.e. .GIN) of the application software, otherwise the machine will not recognize the software in the USB flash drive, resulting in software upgrade failure.

### 3.1.2 Software Upgrade

1) Insert the U-disk into the USB interface of the machine when the machine is off, as shown in Figure 73 below:


Figure 73
2) Turn on the power of the machine, and the software in the U-disk is automatically read by the machine for upgrading. The upgrade interface as shown in Figure 74 appears. After the software upgrade is successful, the machine will conduct self-check and enter the main interface of counting, as shown in Figure 75 below:


Figure 74


Figure 75
3) The machine automatically enters the main interface, so the software upgrade of machine is completed.

### 3.2 Daily Clean instruction

Any dust, dirt or other substances sticking to the sensor will interfere with the normal operation of the sensor and cause erroneous counting results. Therefore, the sensor and roller shaft shall be cleaned with the attached cleaning tools as necessary every day.

Please turn off the power switch before cleaning to prevent electric shock or other injury accidents.
Please do not use chemicals such as benzene, thinner or water, which may cause fading or cracking of the machine.

### 3.2.1 Clean the Hopper Sensor

As shown in the Figure 76, clean the start-up sensor with clean brush or cleaning cloth.


Figure 76

### 3.2.2 Clean the Drum Roller Shaft and the Feed Roller Shaft

As shown in the following Figure 77, clean the drum roller shaft and feed roller shaft with clean brush or cleaning cloth.


Figure 77

### 3.2.3 Clean the Stacker Sensor

As shown in the following figure, clean the sensor with clean brush or cleaning cloth. (ST)


Figure 78

### 3.2.4 Clean the Channel Internal Sensors

1) Pull the back cover in the direction shown in the figure to open the back cover.


Figure 79
2) Wipe the light strip of mark 1 in one direction with a dust-free cloth.


Figure 85
3) Wipe the CIS of mark 1 in one direction with a dust-free cloth, and then clean the lower UV lamp of mark 2 with a nylon brush.


Figure 86

### 3.3 Common Errors and Corresponding Descriptions

In the process of using the machine, the machine may show abnormal state, resulting in abnormal operation, and the machine will display corresponding fault information. The following provides the phenomenon when the machine malfunctions. Please refer to the maintenance manual for specific handling methods. If the user still cannot solve the problem according to the maintenance manual, please contact the local agent.

## Error description of boot self-check:

| Code | Error position | Cause | Troubleshooting |
| :---: | :---: | :---: | :---: |
| QT(101) | Hopper | The hopper is blocked | Check if hopper sensor is covered by dust or blocked. |
| ST(102) | Stacker | The stacker is blocked | Check if stacker sensor is covered by dust or blocked. |
|  |  |  | Check if the sensor cable is loose. |
| UVD(105) | Lower UV | UV signal is abnormal | Check the channel for foreign bodies. |
| ENC(107) | Encode | Encode disk signal is abnormal | Check whether the encode disk cable is loose. |
|  |  |  | Check whether the starting motor is running normally. |
|  |  |  | Check whether the encode sensor is abnormal. |
| PWR(108) | Power | Power supply is abnormal | Check whether the power cable is loose. |
|  |  |  | Replace the power supply box. |

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[^0]:    ***Our company reserves the right to change the Manual in order to continuously improve our products.***

