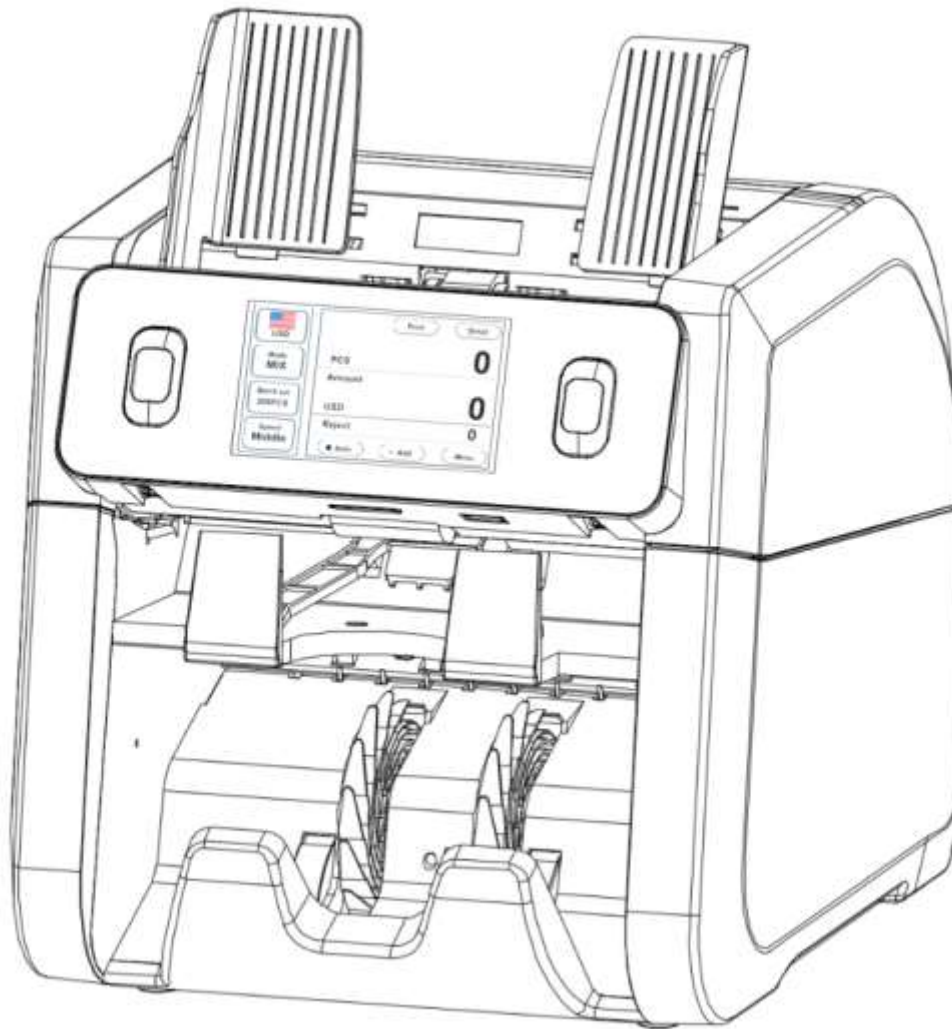


# Banknote Sorter M1500 User Manual



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# 1. Machine overview

## 1.1 Safety Instructions

### Special Reminder:

- This product is used to count the banknotes described in the specification. Please do not use this product for other purposes. Due to the different specifications and safety standards of power supply, this product is only used in corresponding countries or regions, and may not be used in other countries or regions.
- Please understand that the items recorded in this manual are subject to change without prior notice.
- The appearance and technical specifications of this manual are subject to change without prior notice. Therefore, if the actual product is different from the contents in this manual, please understand.
- No alteration or modification of this product in any form is permitted without the express written authorization of the Company
- This machine is designed for indoor use. Please do not install or use it outdoors.
- Please do not install it in places where it can't bear the weight of this product or in inclined and uneven places.
- Do not use or place diluent and other combustibles, flammable materials and volatile materials around/inside this product.
- Do not over-bend the power cord, or put heavy and sharp objects on the machine.
- Do not use this product in excessively humid environment.
- Please avoid the interference of strong light and strong magnetic field.
- When the machine is not in use, please turn off the machine switch. Prevent curtains and various entanglements from being involved in the machine
- When cleaning the machine, please turn off the machine switch in advance.

## 1.2 Installation Instructions

As shown in Figure 1 below, please keep away from the surrounding walls and reserve sufficient operating space for placing banknotes, opening, or closing the cover plate, etc., and leave room for maintenance.

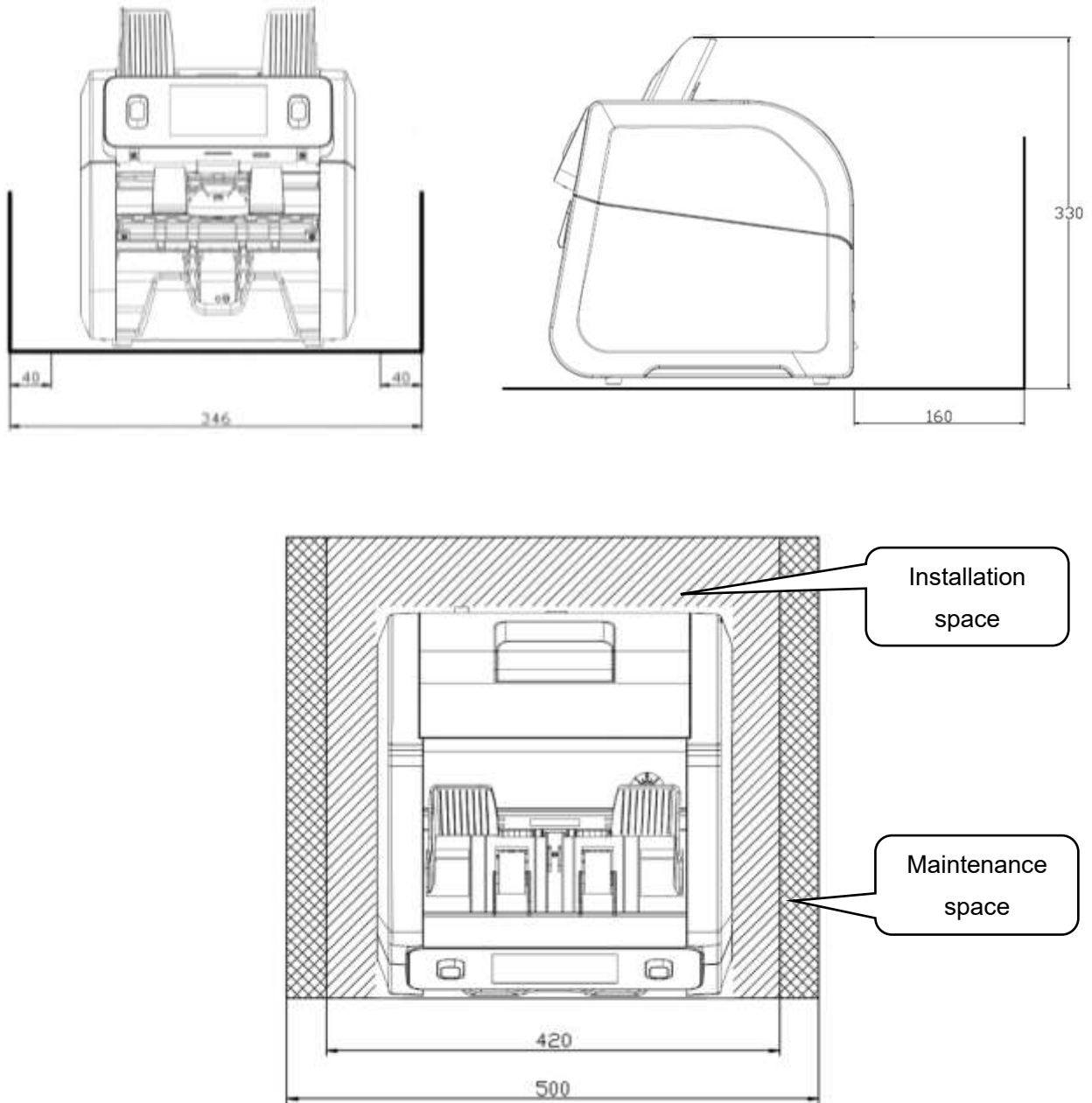


Figure 1

Unit (mm)

## 1.3 Machine and Accessories

Machine	1PCS
Note Guider (left)	1PCS
Note Guider (right)	1PCS
User Manual	1PCS
Power Cord	1PCS
Cleaning Brush	1PCS

## 1.4 Appearance of Machine

### 1.4.1 Front Appearance

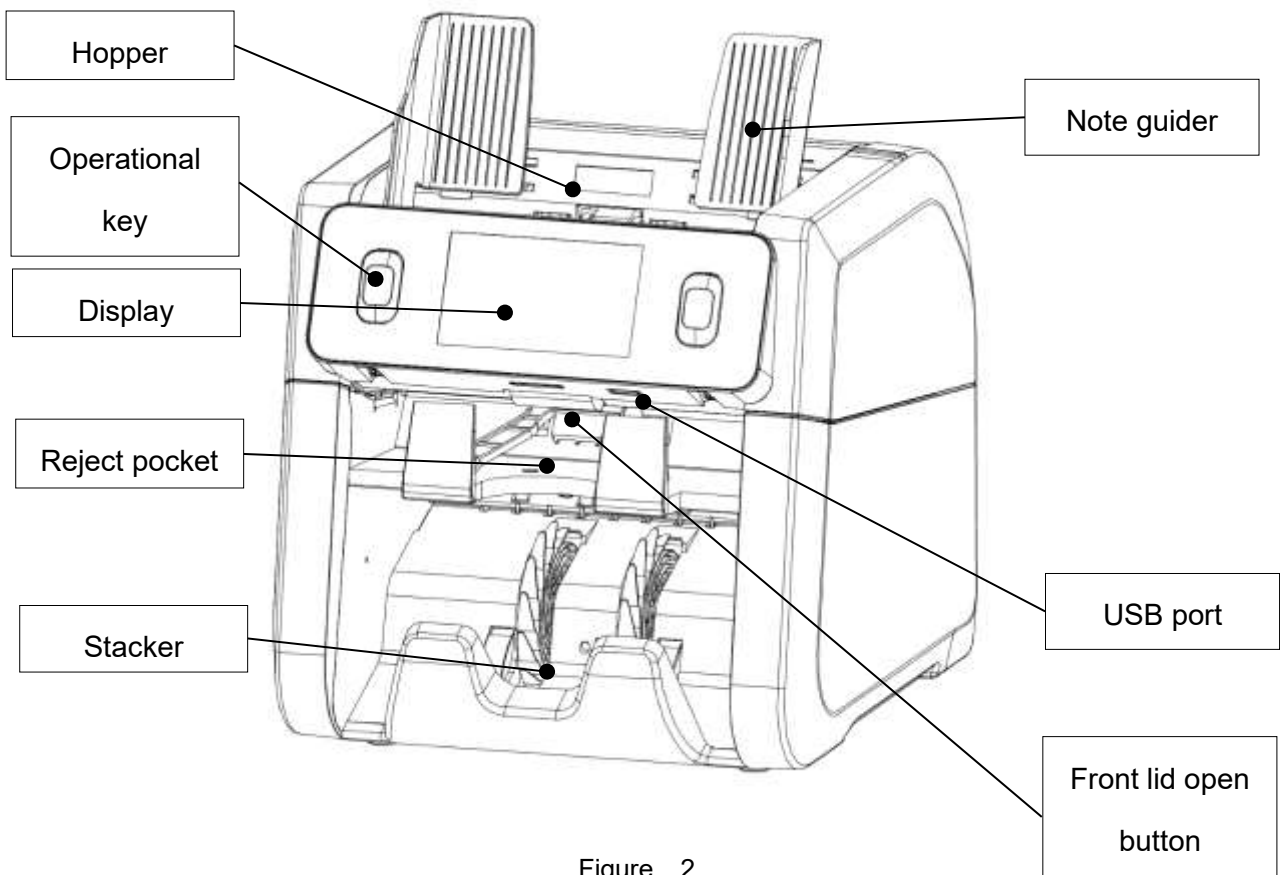


Figure 2

## 1.4.2 Back Appearance

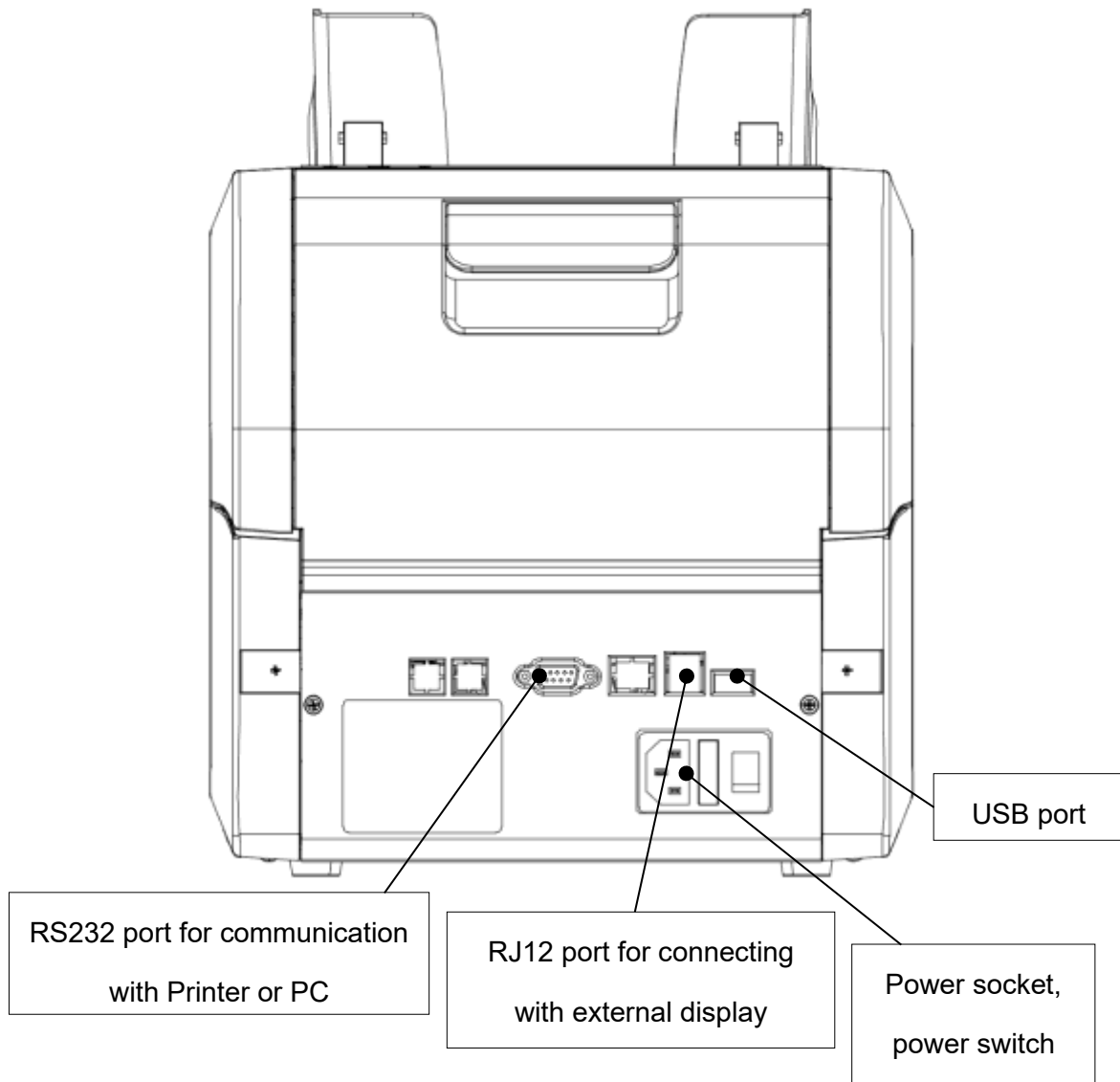


Figure 3

### 1.4.3 Top Appearance

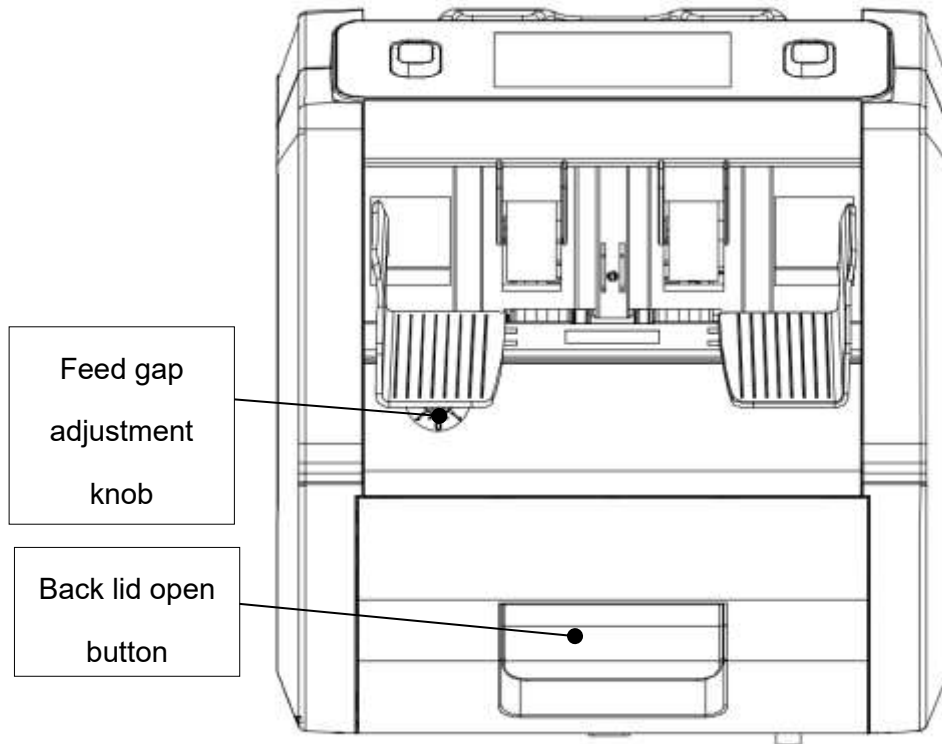


Figure 4

## 1.5 Technical Parameters

Machine dimension (L×W×H)	270x290x290mm
Weight	9.5KG
Hopper capacity	500pcs
Stacker capacity	200pcs
Reject pocket capacity	Default 50pcs, maximum 70pcs flat banknotes
Display	4.3-inch TFT display
Interface	RS-232/RJ12/USB
Currency capacity	Maximum 20 currencies
Multi-currency capacity	Maximum 20 currencies
Countable notes size	100x55mm--180x85mm
Countable notes thickness	0.05mm~0.12mm
Counting speed	800/1000/1200pcs/min ( <b>MIX, SDC, CNT</b> mode)
Counting mode	Mix count/ Single denomination sort/ Face sort/ Orientation sort/Piece count mode
Batch quantity	1~200
Batch amount	1~999999999
Counterfeit detection	UV/MG/MT/IRR/IRT/CIS
Power supply	AC100-240V,50/60Hz ±10%
Power consumption	Standby≤8 W, operation≤50 W
Use environment	Ambient temperature (0 ~ 40° C) / humidity (40 ~ 90%) Air pressure (70-106kpa)
Storage environment	Ambient temperature (-40 ~ 55° C)/humidity (10 ~ 95%) Air pressure (70-106kpa)

## 1.6 Startup Readiness

- 1) Warm tips: To ensure smooth counting, please open the carton of the machine and load the left and right note guiders.
- 2) Connect the machine to the power supply and turn on the power switch, first the machine enters the loading interface, after loading is completed, the machine enters the self-test interface, as shown in Figure 5. After successful self-test, the machine enters the main interface, this process takes about 30 seconds, as shown in Figure 6 below:

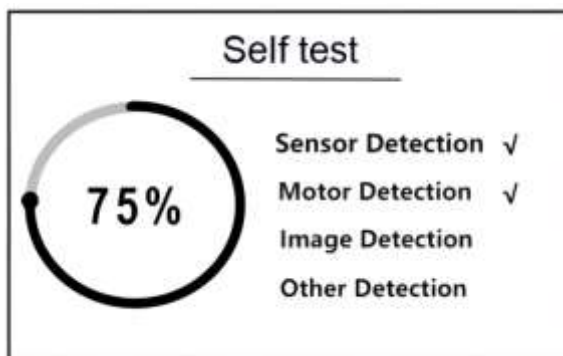


Figure 5

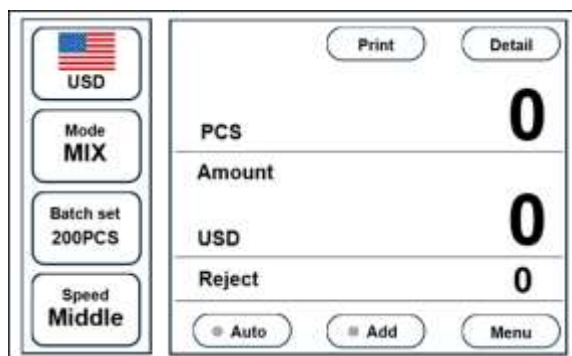


Figure 6

## 1.7 Banknote Arrangement

- 1) Please organize the banknotes to be counted by size before placing them in the hopper. The banknotes should be organized in advance when they are wrinkled or arched, so as to improve the one-time passing rate of counting.
- 2) In the process of counting banknotes, it is necessary to adjust the limit position of the left and right note guiders according to the maximum size of the current counting banknotes, so as to ensure that the banknotes can be accurately identified by relevant sensors. Take US dollars as an example, please organize the banknotes first, and then adjust the limit position of the note guiders according to the largest size of banknotes. Finally, put the banknotes into the hopper for counting, as shown in Figure 7:

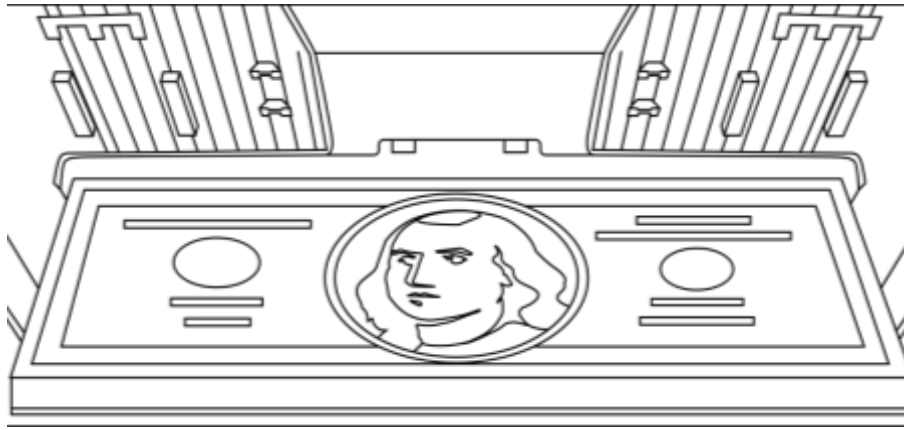


Figure 7

## 1.8 Counting Error Code

Error Code	Cause	Solution
ERR-B001	Stacker Full	Stacker is full, please remove the banknotes from stacker.
ERR-B002	Side Magnetic Quantity	Side MG quantity abnormal, please put the banknotes in the middle of the hopper.
ERR-B003	Side Magnetic Position	Side MG position abnormal, please put the banknotes in the middle of the hopper.
ERR-B004	Middle Magnetic Quantity	Middle MG quantity abnormal, please check the banknotes or put the banknotes in the middle of the hopper.
ERR-B005	Middle Magnetic Code	Middle MG code abnormal, please check the banknotes or put the banknotes in the middle of hopper.
ERR-B006	Ultraviolet	UV reflection abnormal, please check the banknotes or recount
ERR-B007	Double Notes	Double notes detected, please check the banknotes or feed gap of machine.
ERR-B008	Half Notes	Half note detected, please check the banknotes or recount.

ERR-B009	Abnormal Width(long)	Abnormal length, please check the feed gap of machine.
ERR-B010	Abnormal Width(short)	Abnormal width, please check the banknotes or recount.
ERR-B011	Chained Notes	Chained notes detected, please check if the feed gap is too loose.
ERR-B012	Image Timeout	Please check the banknotes and recount.
ERR-B013	Wrong Image Size	Size abnormal, please check the banknotes and feed gap of machine
ERR-B014	Image Not Recognized	Not recognized, please check the banknotes and feed gap of machine.
ERR-B015	Different Note Version	Different version detected, please check machine's note version setting.
ERR-B016	Different Note FACE	Different face detected, please check if the face sort is turned on.
ERR-B017	Different Note Orientation	Different orientation detected, please check if the orientation sort is turned on.
ERR-B018	Inclined Note	Feed angle abnormal, please check if the feed gap is the same on both sides.
ERR-B019	Infrared Image Abnormal(OVD)	IR image abnormal, please check the banknotes or recount.
ERR-B020	Infrared Image Abnormal(MT)	IR image abnormal, please check the banknotes or recount.
ERR-B021	IR Hole Or Dog-ear	Damaged or folded note detected, please sort the banknotes and recount.
ERR-B022	IR Dog-Ear	Folded note detected, please sort the banknotes and recount.
ERR-B023	Dirty Note	Dirty note detected, please clean the banknotes and recount.

ERR-B024	Infrared Image Abnormal 1	IR image abnormal, please check the banknotes.
ERR-B025	Infrared Image Abnormal 2	IR image abnormal, please check the banknotes.
ERR-B026	Infrared Image Abnormal 3	IR image abnormal, please check the banknotes.
ERR-B027	Infrared Image Abnormal 4	IR image abnormal, please check the banknotes.
ERR-B028	Infrared Image Abnormal 5	IR image abnormal, please check the banknotes.
ERR-B029	Infrared Image Abnormal 6	IR image abnormal, please check the banknotes.
ERR-B030	Infrared Image Abnormal 7	IR image abnormal, please check the banknotes.
ERR-B031	Infrared Image Abnormal 8	IR image abnormal, please check the banknotes.
ERR-B032	Different Face &Orientation	Different face/orientation detected, please check if the face/orientation sort is turned on.
ERR-B033	SN Recognition Abnormal	Serial number recognition abnormal, please check the banknotes or recount.
ERR-B034	SN Comparison Abnormal	Serial number comparison abnormal, please check the banknotes or recount.
ERR-B035	Repeat SN	Repeat serial number detected, please check the banknotes or recount.
ERR-B036	Infrared Image Abnormal 9	IR image abnormal, please check the banknotes.
ERR-B037	Infrared Image Abnormal 10	IR image abnormal, please check the banknotes.
ERR-B038	Infrared Image Abnormal 11	IR image abnormal, please check the banknotes.

ERR-B049	Infrared Image Abnormal 12	IR image abnormal, please check the banknotes.
ERR-B040	Infrared Image Abnormal 13	IR image abnormal, please check the banknotes.
ERR-B041	Infrared Image Abnormal 14	IR image abnormal, please check the banknotes.
ERR-B042	Infrared Image Abnormal 15	IR image abnormal, please check the banknotes.
ERR-B043	Image Double Notes 1	Double notes detected, please check the banknotes or recount.
ERR-B044	Image Double Notes 2	Double notes detected, please check the banknotes or recount.
ERR-B045	Image Double Notes 3	Double notes detected, please check the banknotes or recount.

## 2. Introduction of Machine Functions

### 2.1 Introduction to Usage Features

#### 2.1.1 Display interface and touch screen interface description

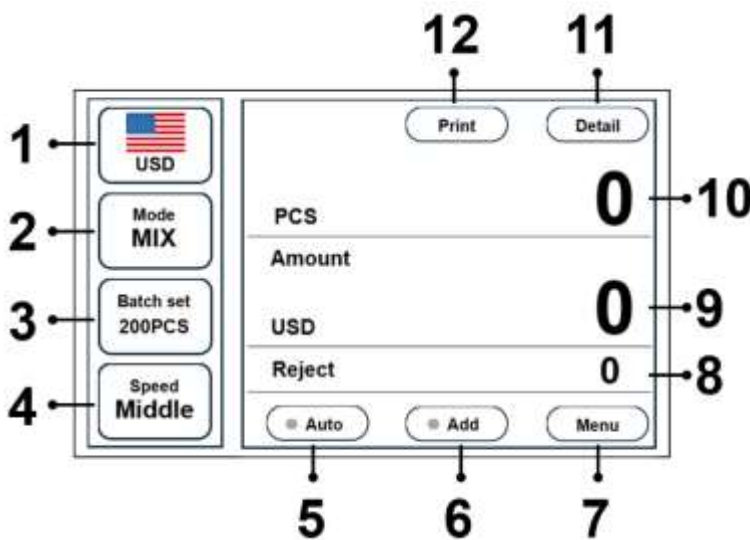


Figure 8

1. Currency selection key
2. Counting mode switch key
3. Batch setting key
4. Speed switch key
5. Automatic/Manual mode switch key
6. Accumulated function switch key
7. Menu key
8. Quantity of rejected banknotes
9. Amount of counting
10. Quantity of counting
11. Counting details key
12. Print key

## 2.1.2 Operation instructions for function keys

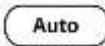


: Clear key, return key




: Start the machine manually

## 2.1.3 Automatic/Manual mode setting

The “” key at the bottom of the display is the manual/automatic mode switch key. Touch it and the startup mode will be changed.

Automatic mode: The dot in front of the character “Auto” lights up, as shown in Figure 9. At this point, when the banknotes are put into the hopper, the machine will automatically start counting the banknotes.

Manual Mode: The dot in front of the character “Auto” dims as shown in Figure 10. At this point, the machine will not automatically count the banknotes when they are placed into the hopper. The machine

will only count the banknotes when the right side “” key is pressed.

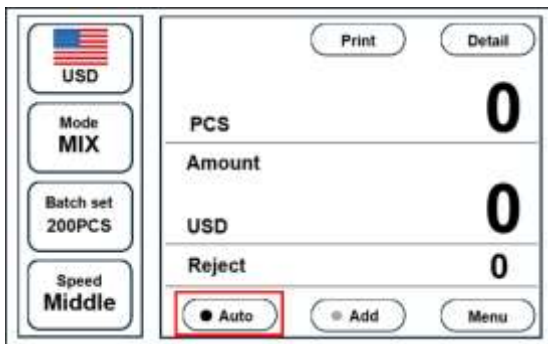


Figure 9

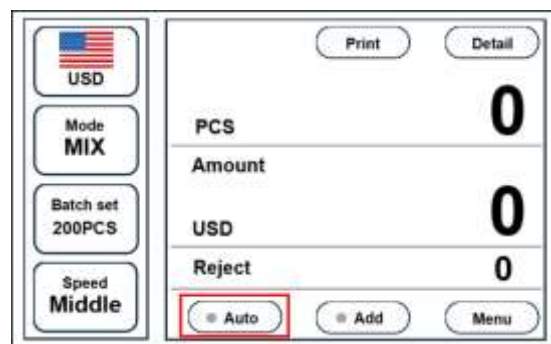



Figure 10

## 2.1.4 Counting mode selection

### 2.1.4.1 Single currency counting mode

Under the main interface, touch the “” logo pattern on the upper left corner of the display, as shown in Figure 11, to enter the “Currency” interface to select the currency of different countries, as shown in Figure 12 below:

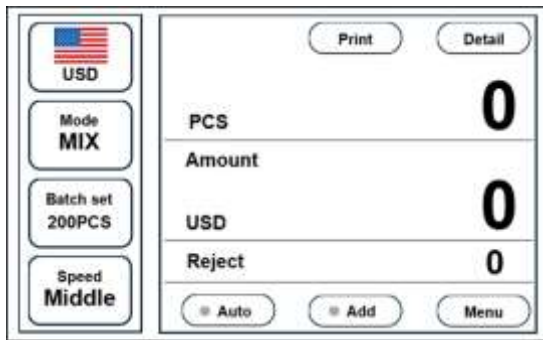


Figure 11

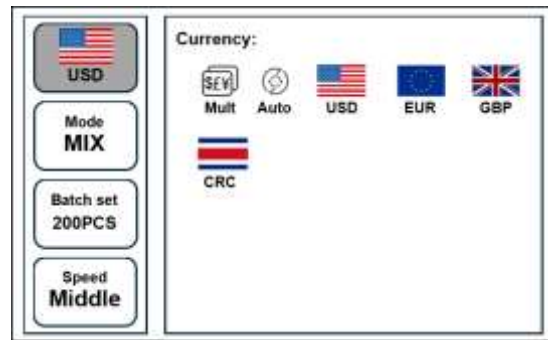




Figure 12

Take the US dollar as an example. After touching the “” button, the display screen returns to the main interface, and the “” logo graphic is displayed in the upper left corner, indicating that the machine is in the mode of counting US dollars.

By pressing the “Mode MIX” key on the left side of the screen, the three counting modes can be cyclically switched, and the three counting modes are cycled according to MIX-SDC-CNT, as shown in Figure 13 below.

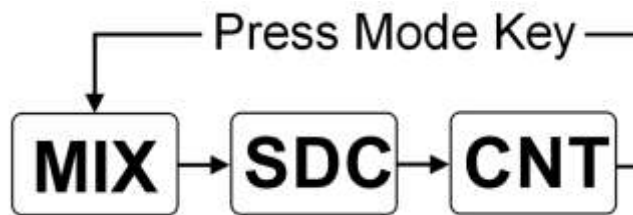


Figure 13

### 2.1.4.2 <MIX> Mixed denomination counting mode

Figure 14 below shows the interface of the mixed denomination counting mode in the automatic state of the machine. In this mode, the machine will count all denominations of the same currency and record the detailed information of the counted banknotes, including the total amount and the total quantity of the banknotes in the stacker, which is convenient for users to view. When this mode is selected, the machine will count at the selected speed level (L:800 pcs/min; M:1000 pcs/min, H:1200 pcs/min, 3 optional).

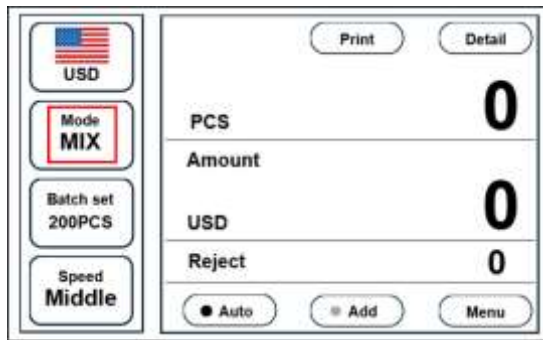


Figure 14

### 2.1.4.3 <SDC> Single denomination counting mode

Figure 15 below shows the single denomination counting mode in the automatic state of the machine. In this mode, the machine will take the first banknote as a reference and count the banknotes with the same currency and denomination, and at the same time count the detailed information of banknotes in the stacker, including total amount and total quantity of banknotes, which is convenient for users to view (note: currencies of different denominations cannot be placed in this mode, otherwise they will be kicked into the reject pocket). When this mode is selected, the machine will count at the selected speed level (L: 800 pcs/min; M: 1000 pcs/min, H: 1200 pcs/min, 3 optional).

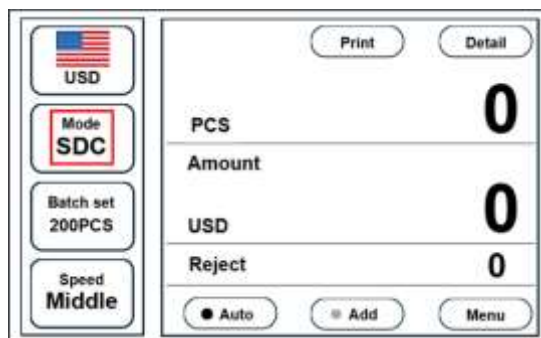


Figure 15

### 2.1.4.4 <CNT> Piece count mode

Figure 16 below shows the interface of the machine in the automatic state for quantity counting only. This mode does not limit the currency and only counts the quantity of banknotes. When this mode is selected, the machine will count at the selected speed level (L: 800 pcs/min; M: 1000 pcs/min, H: 1200 pcs/min, 3 optional).

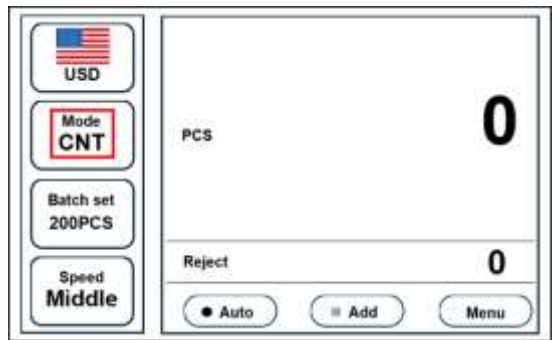




Figure 16

Note: In MIX mode and SDC mode, the machine has image, magnetic detection, UV detection and double detection functions. In CNT mode, only the double detection is available.

### 2.1.4.5 Multi currency mixed counting mode

Multi-currency mixed counting: The currencies of various countries are mixed together and put into the machine for counting, and the quantity and amount of each currency are displayed according to the currency name. Note: The machine can only recognize the supported currencies displayed by the machine, unsupported currencies will be kicked into the reject pocket. Please change the counting mode to MIX mode first.

Under the main interface, touch the “” logo on the upper left corner of the display to enter the currency selection interface, as shown in Figure 17. Then click “” Multi currency mixed counting mode, the display will automatically switch to the main interface. As shown in Figure 18 below:

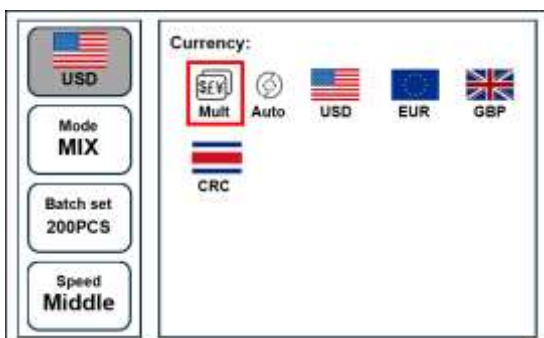


Figure 17

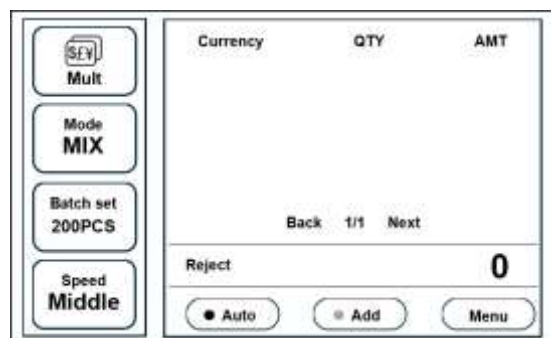


Figure 18

Example: Put a handful of banknotes (including USD, EUR, GBP and CRC) into the machine for counting. Details of counted banknotes are shown in Figure 19 below:

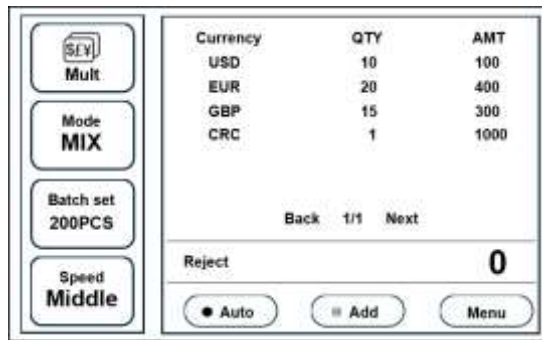




Figure 19

### 2.1.4.6 Automatic recognition mode

Automatic recognition: machine will recognize the currency types of the banknotes automatically. In the process of counting, the machine recognizes banknotes of all denominations in the same country based on the first banknote passing through the sensor. When banknotes from other countries are recognized, they will be kicked into the reject pocket. The machine can only recognize the currency of the country shown in the program.

Touch the “” logo on the upper left corner of the display in the main interface to enter the currency selection interface, as shown in Figure 20. Click on “” automatic recognition mode, the display will automatically switch to the main interface after selection, as shown in Figure 21 below:

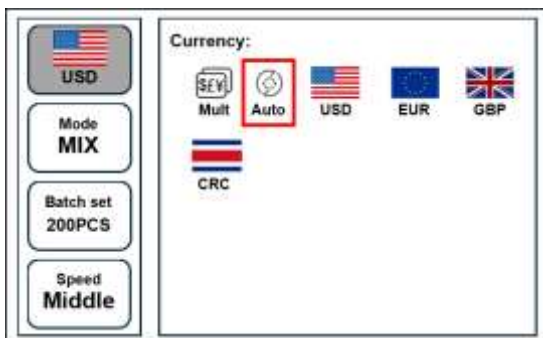


Figure 20

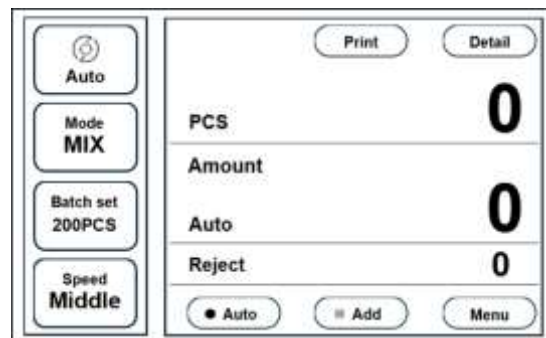


Figure 21

### 2.1.5 Counting speed setting

There are three counting speed options: high speed (1200PCS/min), medium speed (1000PCS/min), and low speed (800PCS/min). In any counting mode, you can switch between different counting speeds

by clicking the “Speed” button on the left side of the display. As shown in the red box in Figure 22 below, Speed Middle means that the machine is in the medium level of counting speed mode.

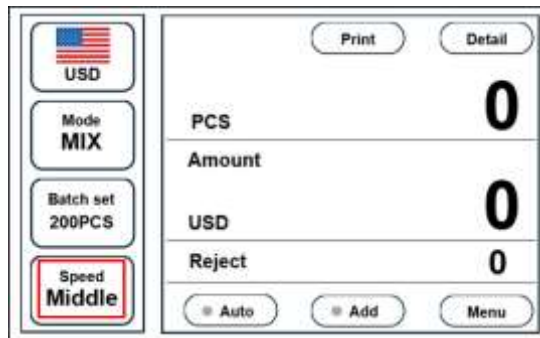


Figure 22

The following table shows the counting speeds corresponding to each counting mode and each speed level:

Counting mode	High	Middle	Low
MIX	1200PCS/min	1000PCS/min	800PCS/min
SDC	1200PCS/min	1000PCS/min	800PCS/min
CNT	1200PCS/min	1000PCS/min	800PCS/min

### 2.1.6 Check counting details

In MIX mode or SDC mode, press the “Detail” button at the upper right corner of the main interface after the counting is finished, as shown in Figure 23, you can view the counting details, as shown in Figure 24, taking the US dollar as an example.

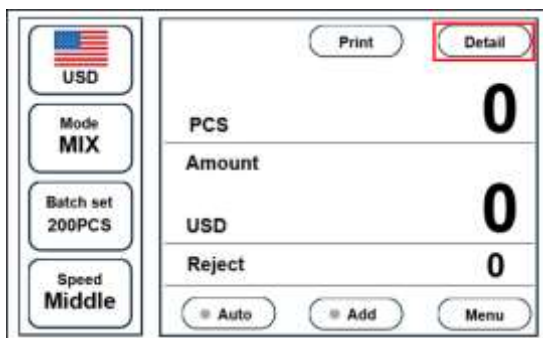


Figure 23

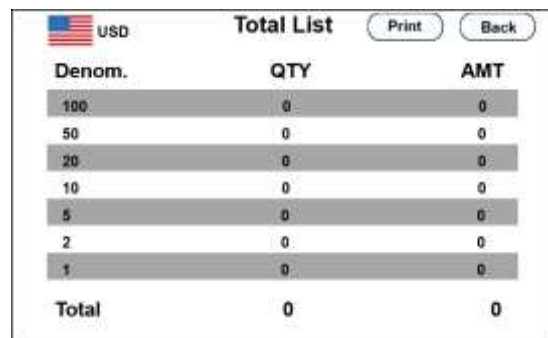




Figure 24

This interface is used to check the quantity and amount of the denomination of the corresponding currency, as well as the total amount of all banknotes. To exit this screen, please touch the “Back” key in the upper right corner of the screen or click the “” key on the left side.

## 2.1.7 Check reject details

After the counting is finished, if there are suspicious banknotes in the reject pocket, and you want to check the reason for rejecting the banknotes, touch the reject display area to enter, as in Figure 25, the interface can be viewed in details, as shown in Figure 26 below. If you need to exit the current interface, please touch the “Back” button on the upper right corner of the screen or press the “” key.

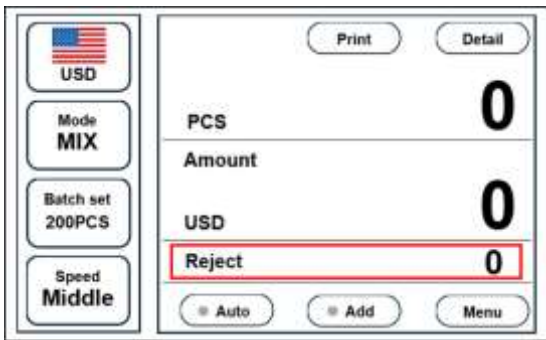


Figure 25

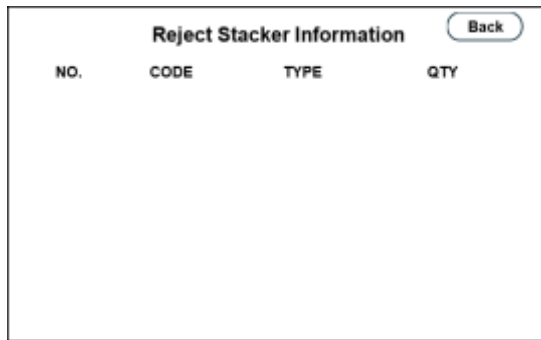




Figure 26

## 2.1.8 Check serial number details

- 1) This function requires that the counting mode be adjusted to MIX mode or SDC mode.
- 2) After the counting is finished, if you want to check the details of the serial numbers, please touch the “Detail” button on the upper right corner of the screen to enter the counting details interface, as shown in Figure 27. Long press the “” key for 3 seconds to enter the SN Detail interface, as shown in Figure 28. If you need to print the current interface, please touch the “Print” button on the upper right corner of the screen, if you need to exit the current interface, please touch the “Back” button on the upper right corner of the screen or press the “” key on the left side.

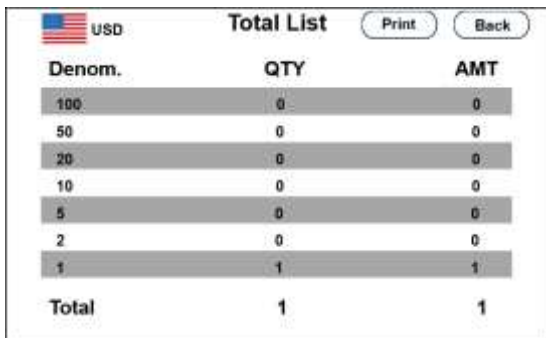


Figure 27

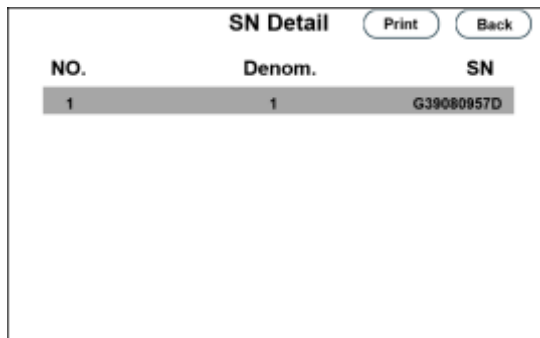


Figure 28

- 3) The SN Detail function has a switch, refer to 2.1.11.3 for the specific procedure.

## 2.1.9 Batch setting

### 2.1.9.1 Batch quantity setting

1) Touch the “Batch set” key in the main interface, the batch number in the main interface will cycle between “10/25/50/100/200/OFF”, as in Figure 29, the left side of the main interface displays the logo “Batch set:10pcs”. When the batch number is “OFF”, the maximum stacker capacity is 200, when it reaches 200, the machine will stop running automatically.

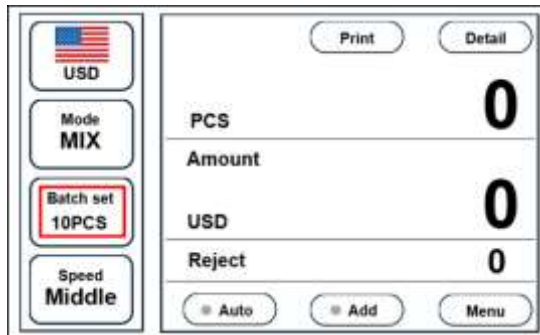


Figure 29

2) Touch the batch set area of the main interface for 1-2 seconds to enter the customized batch parameters setting interface, as shown in Figure 30 below, first click the “✕” key to clear the original value, then click the numeric keypad below to enter the value within “5~200”, then click the bottom of the “√” key to save the batch setting. It will automatically switch back to the main interface at the same time. As shown in Figure 31 below, the batch quantity is set to 155. Note: When the batch quantity is over 200, the machine cannot save it, the default batch quantity is 200.

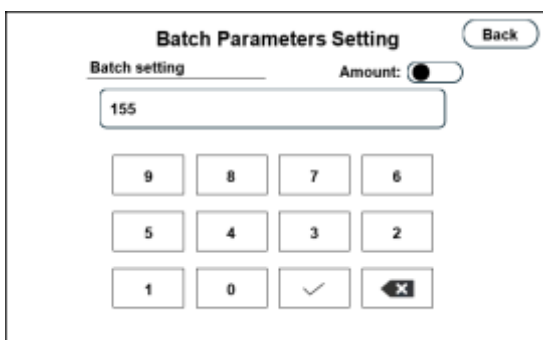


Figure 30

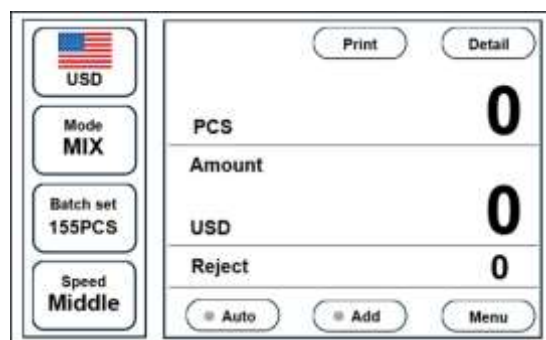


Figure 31

3) Touch the “Menu” key at the lower right corner of the screen to enter the “User Menu” interface, touch and select the “Preference Setting” option, as in Figure 32, touch the “Batch” option on the right side of the screen, the interface switches to the default batch setting interface, the default batch values are “10/25/50/100”, as in Figure 33.

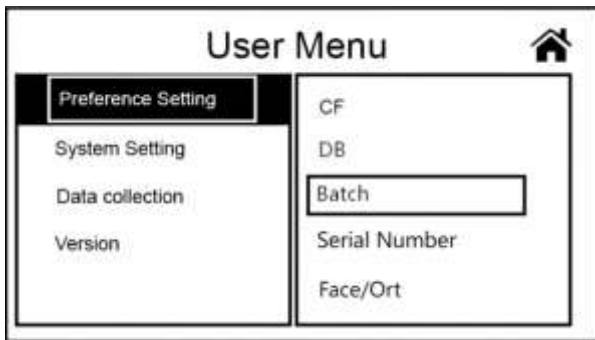


Figure 32

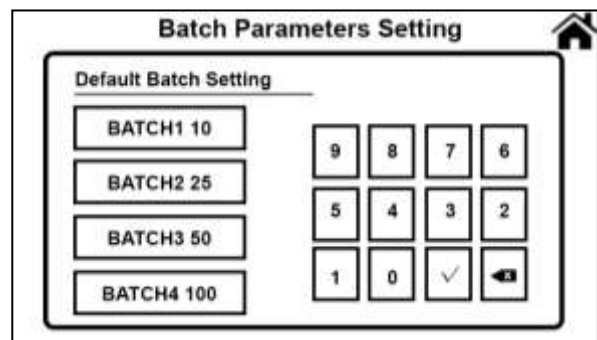


Figure 33

- 4) If the default 4 sets of preset numbers do not meet the customer's needs, can be modified as follows:
- For example, change "BATCH1 10" to "155". First touch the screen to select "BATCH1 10" as in Figure 34, and then click "✕" to clear the original number, as in Figure 35.

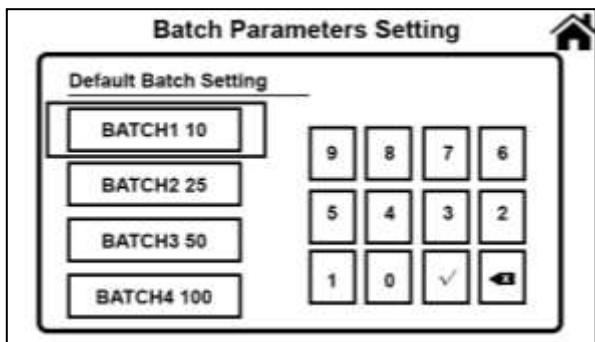


Figure 34

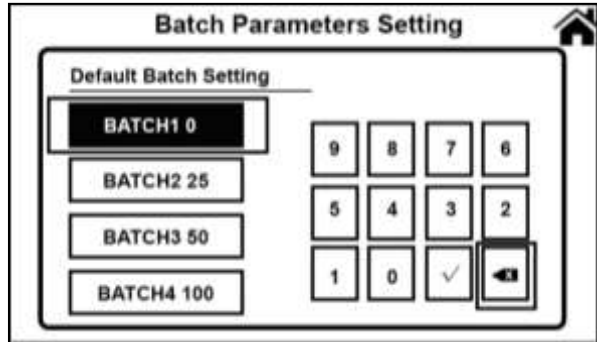


Figure 35

- Then click the number keys 1-5-5 on the right side, and then click "✓" to complete the setting, as shown in Figure 36. The number in the main interface changes to "Batch set 155pcs", as shown in Figure 37.

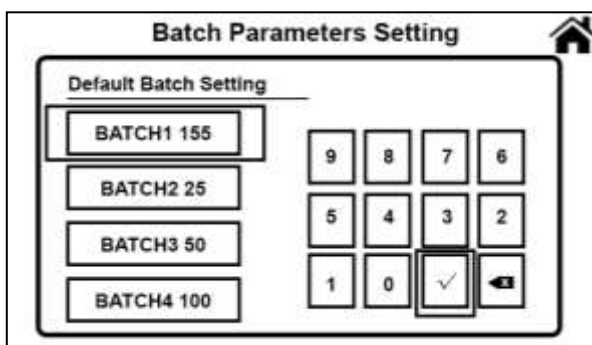


Figure 36

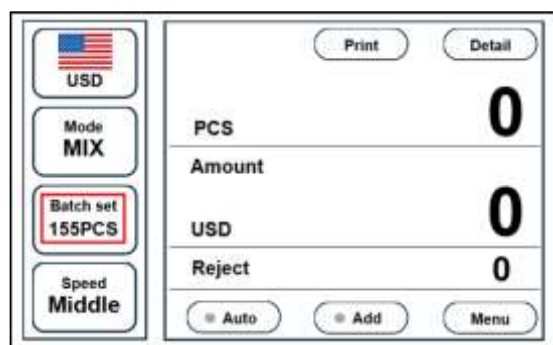


Figure 37

- At this time, the default batch number will be changed to "155/25/50/100/200", if you need to modify other default number, or restore the original number, please refer to the above steps to set.

## 2.1.9.2 Batch amount setting

1) Touch the batch set area of the main interface for 1-2 seconds to enter the customized batch parameters setting interface, as shown in Figure 38 and Figure 39 below.

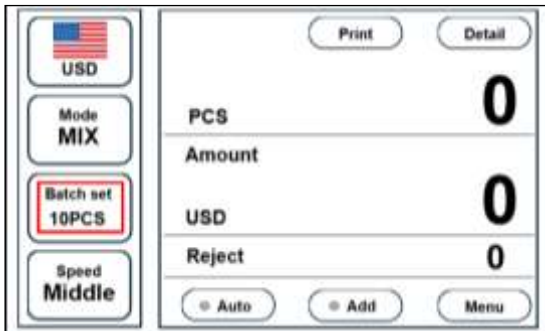


Figure 38

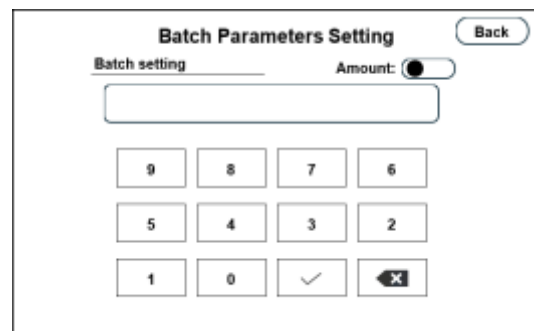




Figure 39

2) Click the button behind “Amount” of the touch screen, it turns from  to , indicating that the batch amount function is turned on, as in Figure 40. The amount can be preset in the range of “1~999999999”, enter the amount through the below numeric keypad. Example: As in Figure. 41, the batch amount is 500.

Then press “√” key to confirm saving, the machine automatically returns to the main interface.

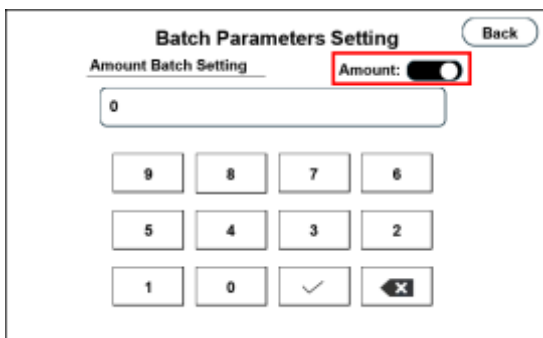


Figure 40

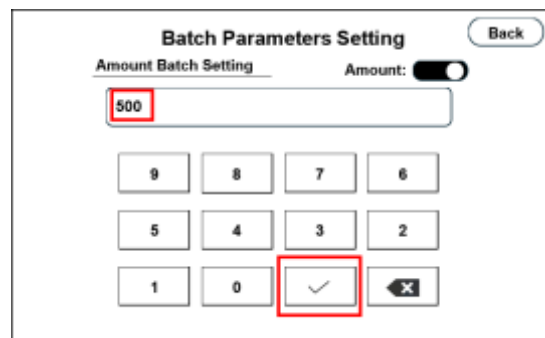


Figure 41

3) The “Batch amt 500” logo is displayed on the left side of the main interface as shown in Figure 42.

Note: The batch quantity and amount can only be one of them at one time, and the machine defaults to the batch quantity.

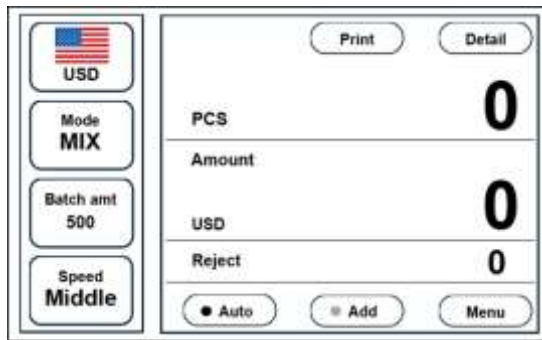


Figure 42

### 2.1.10 Accumulative mode setting

In any counting mode, you can touch the “Add” at the bottom of the screen to turn on or off the accumulative function. Figure 43 shows the state of the accumulative mode off. Figure 44 shows the accumulative mode on.

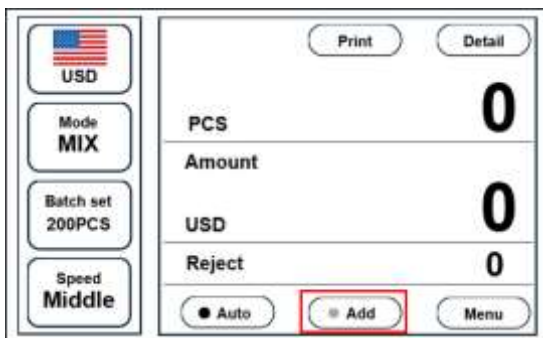


Figure 43

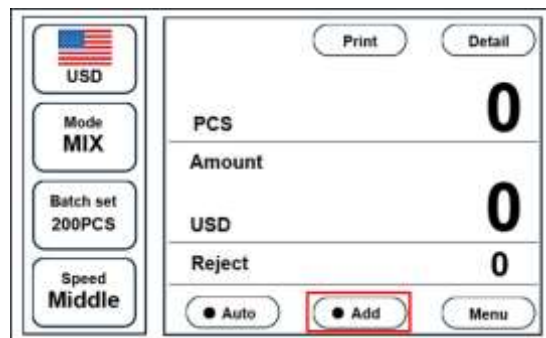




Figure 44

- 1) Accumulative function off: Put a handful of banknotes in the machine for counting, and the machine will display the quantity and amount of banknotes counted this time after counting. After taking out all the banknotes in the stacker, put them back into the banknotes for counting. After counting, the machine will only display the banknote information counted this time, but not the banknote information counted before.
- 2) Accumulative function on: Put a handful of banknotes into the machine for the first count, and the machine will display the quantity and amount of banknotes counted this time after the counting is completed. After taking out all the banknotes in the stacker, put them back into the banknotes for the second count. When the banknotes are not removed from the stacker after counting, the machine will display the quantity and amount of banknotes counted for the second time. When the banknotes are removed from the stacker, the machine will accumulate the quantity and amount of the banknotes counted

for the second time and the first time. At this time, press “” key to clear the first counting information, and then press “” key again to clear all counting information.

3) In the counting process, if there is a malfunction or abnormality such as jammed banknotes, which may lead to inaccurate counting results, the machine will automatically delete the information of the counted banknotes and prompt to count again.

4) When switching currencies in automatic recognition mode, the accumulative function will fail.

## 2.1.11 User setting

### 2.1.11.1 Counterfeit detection level setting

1) Touch the “Menu” key to enter the “User Menu” interface, as shown in Figure 45 below. Then press “Preference Setting” to enter the “Preference Setting” interface, as shown in Figure 46.

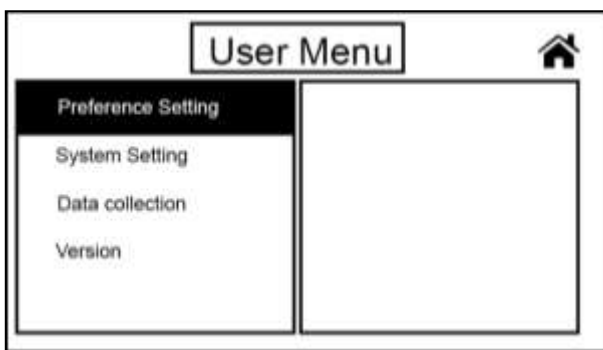


Figure 45

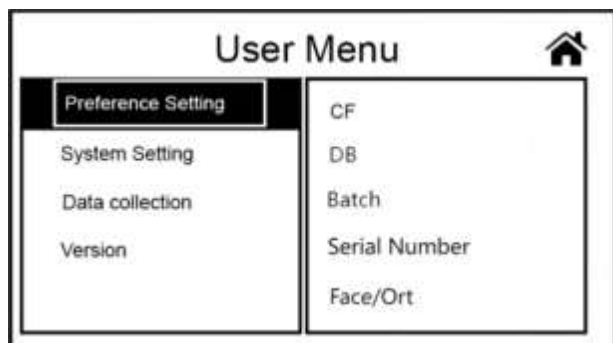


Figure 46

2) As in Figure 47, touch the first “CF” button on the display. Enter into the CF SETTING interface, need to input the password 0508 first, as in Figure 48.

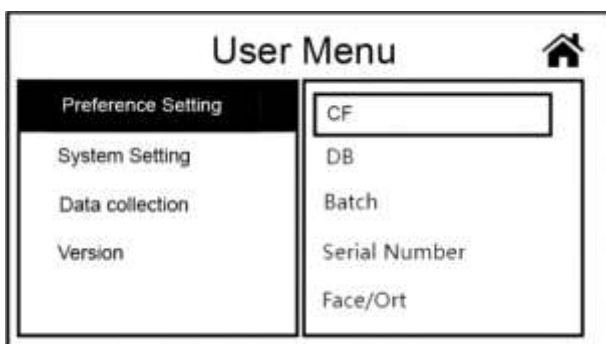


Figure 47

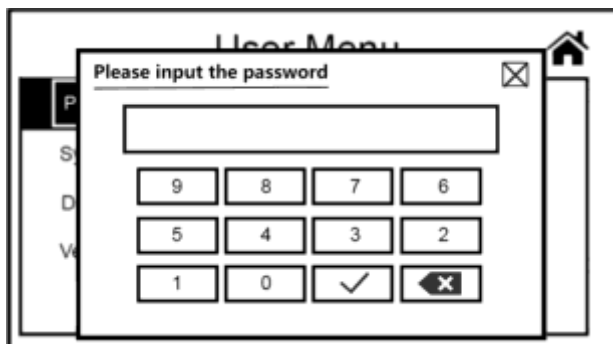


Figure 48

3) Users can modify the corresponding detection level according to specific requirements, as shown in Figure 49.

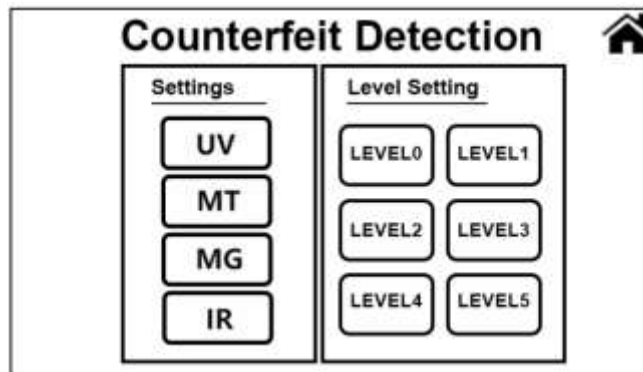


Figure 49

4) If customers want to change the detection level of MT, please do as follows:

a. As in Figure 50, touch the “MT” option on the left side of the screen, and the default level is “LEVEL3”.

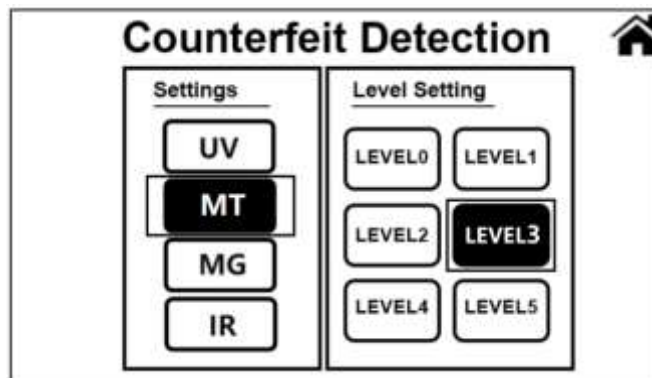




Figure 50

b. For example: If users want to raise the “MT” counterfeit level, we can choose “Level 4”. There are 6 levels for each detection capability, from 0 to 5. 0 represents the capability to detect counterfeit off, 1 represents the weakest capability to detect counterfeit, and 5 represents the strongest capability to detect counterfeit. A low detection level enhances the smooth counting of genuine banknotes but at the same time reduces the capability to catch counterfeit notes, while a high detection level enhances the capability to catch counterfeit notes but at the same time may result in the error reports. Therefore, when the rate of errors is high, you can lower the MT detection level, and when counterfeit notes cannot be caught, you can increase the MT detection level. Users can change the level according to the actual demand, as shown in Figure 51. After selection, the machine can automatically save the setting, touch the “” key on the upper right corner of the screen or press the “” key to return to the previous interface.

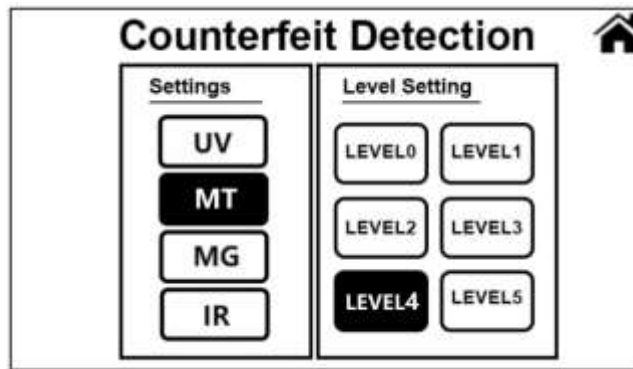


Figure 51

### 2.1.11.2 DB counterfeit level setting

1) Touch the “Menu” key to enter the “User Menu” interface, as shown in Figure 52 below. Then press “Preference Setting” to enter the “Preference Setting” interface, as shown in Figure 53.

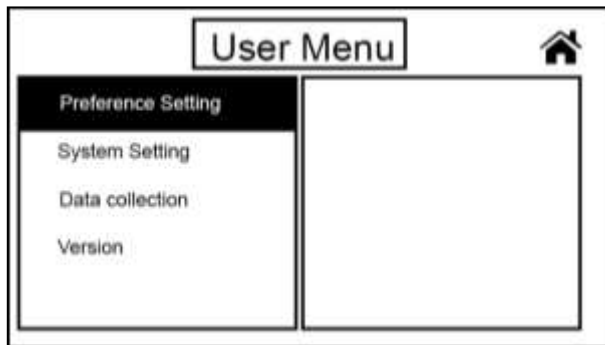


Figure 52

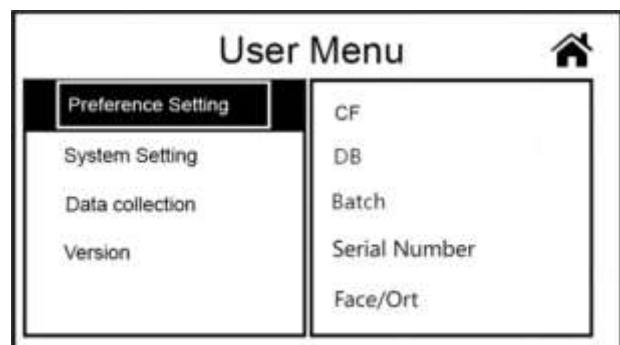


Figure 53

2) As in Figure 54, touch the second “DB” button on the display. Enter into the DB Setting interface, need to input the password 0508 first, as in Figure 55.

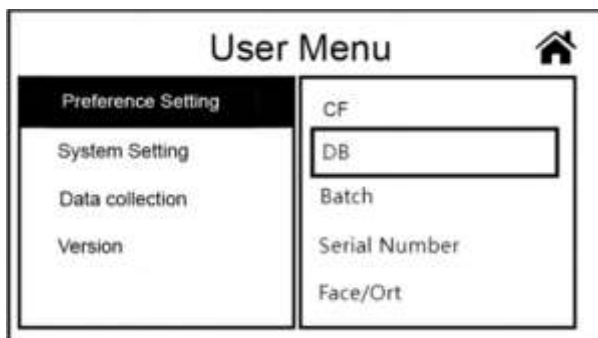


Figure 54

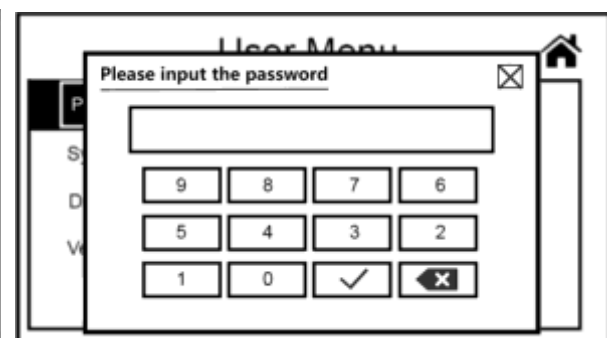


Figure 55

3) As in Figure 56, users can set the DB level in this interface. There are 6 levels for DB counterfeit detection, from 0 to 5. 0 represents the capability to detect counterfeit off, 1 represents the weakest capability to detect counterfeit, and 5 represents the strongest capability to detect counterfeit. A low


detection level enhances the smooth counting of genuine banknotes but at the same time reduces the capability to catch counterfeit notes, while a high detection level enhances the capability to catch counterfeit notes but at the same time may result in the error reports. Therefore, when the rate of errors is high, you can lower the DB detection level, and when counterfeit notes cannot be caught, you can increase the DB detection level. Users can change the level according to the actual demand. After selection, the machine can automatically save the setting, touch the “

Figure 56

### 2.1.11.3 Serial number function setting

1) Touch the “Menu” key to enter the “User Menu” interface, as shown in Figure 57 below. Then press “Preference Setting” to enter the “Preference Setting” interface, as shown in Figure 58.

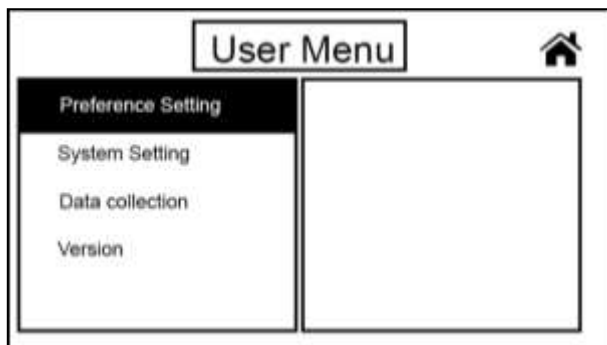


Figure 57

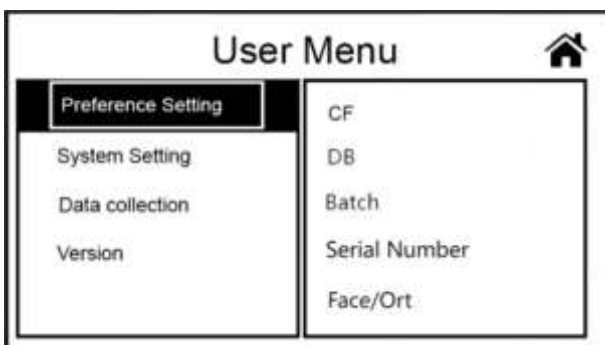




Figure 58

2) As in Figure 59, touch the fourth item “Serial Number” to enter the serial number setting interface, as in Figure 60. Users can turn on/off the serial number reading in this interface. The left side of the interface “SN.Reading” ON represents to turn on the serial number reading, OFF represents to turn off the serial number reading, this function is only available in MIX mode and SDC mode. When turn on this function,

the machine will read the serial numbers of the recognized currency (see 2.1.8). Touch the “” key on the upper right corner of the screen or press the “” key to return to the previous interface.

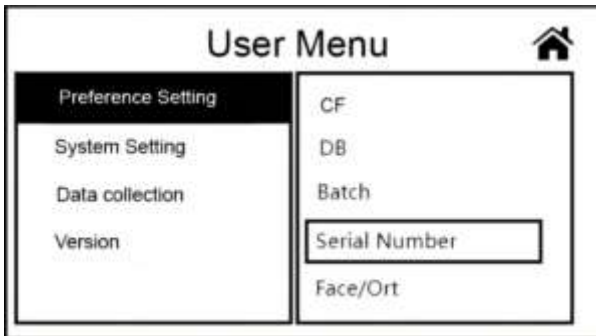


Figure 59

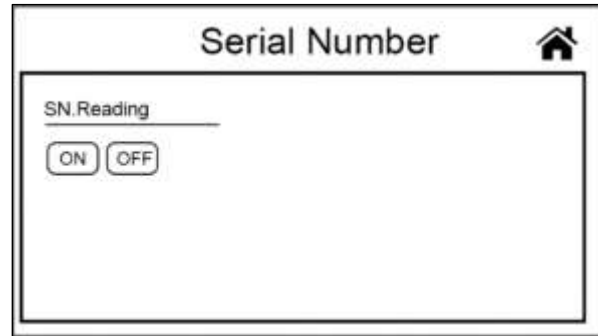


Figure 60

### 2.1.11.4 Face/Ort function setting

1) Touch the “Menu” key to enter the “User Menu” interface, as shown in Figure 61 below. Then press “Preference Setting” to enter the “Preference Setting” interface, as shown in Figure 62.

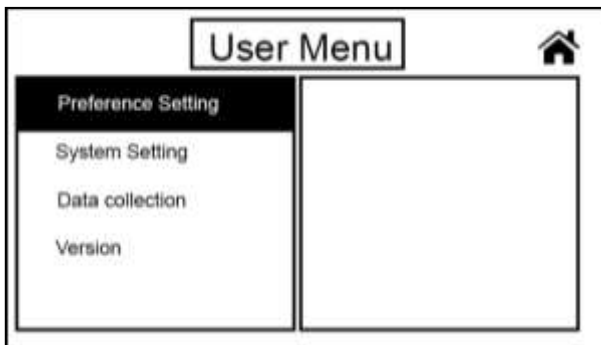


Figure 61

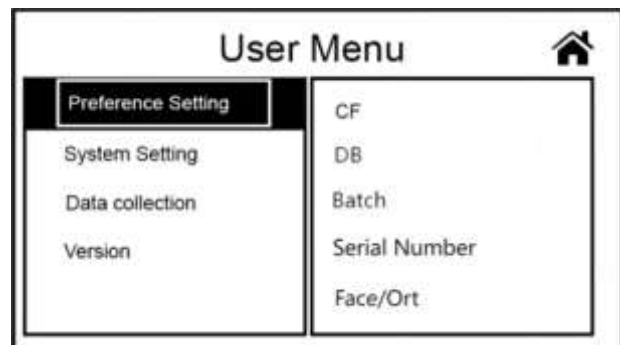


Figure 62

2) As in Figure 63, touch the fifth item “Face/Ort” to enter the Face/Ort function setting interface, as in Figure 64. Users can set the switch of Face and Ort function in this interface.

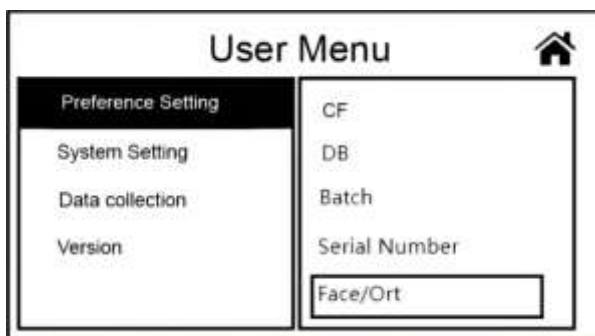


Figure 63

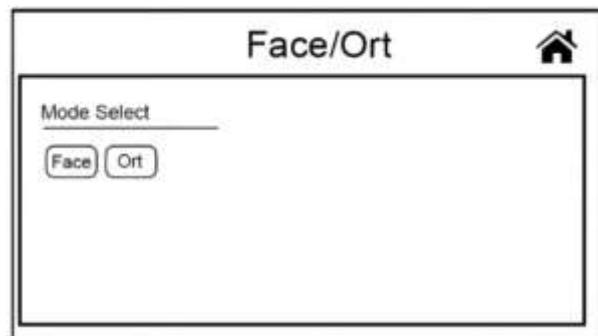



Figure 64

3) When the bottom color of both buttons is gray, it means the face and ort functions are off. Touch the “” key on the upper right corner of the screen to return to the previous interface. As shown in Figure 65, the face/ort information is not displayed in the upper area of the main interface.

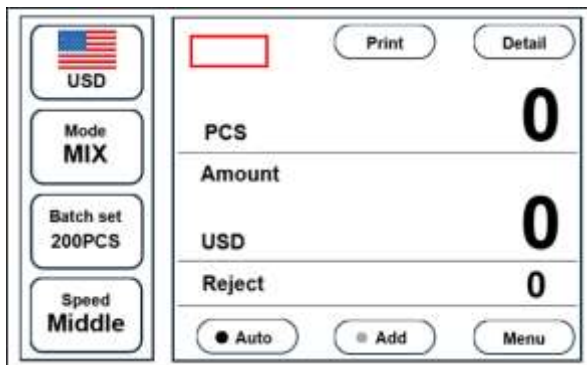



Figure 65

4) When clicking on the “Face” button, the bottom color of the button changes to blue, as in Figure 66. Touch the “” key on the upper right corner of the screen to return to the previous interface. The upper area of the main interface displays the “FACE” information, as shown in Figure 67. At this time, when the banknotes are counted, the machine will take the face of the first banknote as the standard, and the banknotes with different faces will be kicked into the reject pocket.

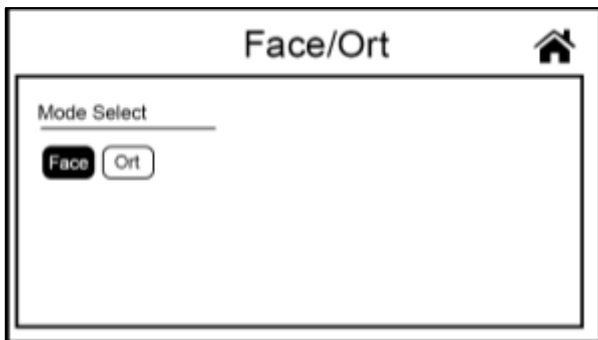


Figure 66

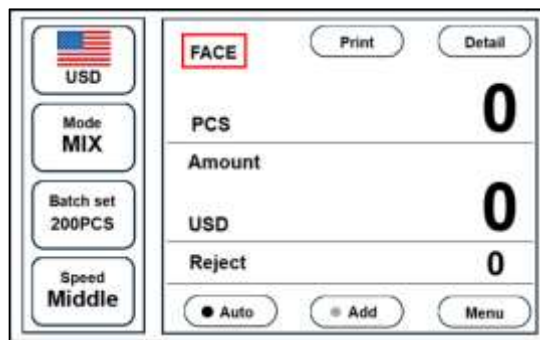



Figure 67

5) When clicking on the “Ort” button, the bottom color of the button changes to blue, as in Figure 68. Touch the “” key on the upper right corner of the screen to return to the previous interface. The upper area of the main interface displays the “ORT” information, as shown in Figure 69. At this time, when the banknotes are counted, the machine will take the orientation of the first banknote as the standard, and the banknotes with different orientations will be kicked into the reject pocket.

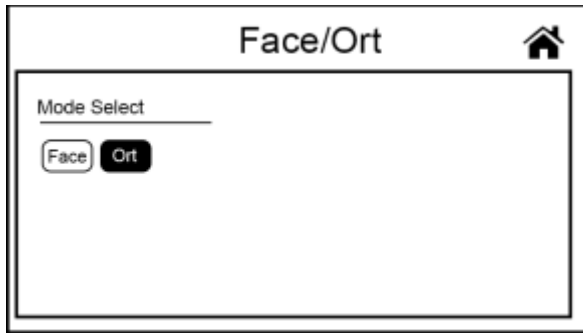


Figure 68

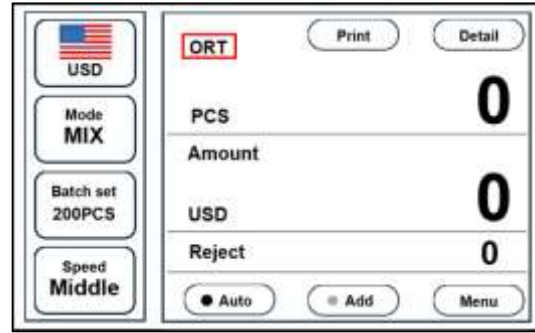



Figure 69

6) When the “Face” and “Ort” buttons are selected at the same time, the bottom color of the two buttons will change to blue, as in Figure 70. Touch the “” key on the upper right corner of the screen to return to the previous interface. The upper area of the main interface displays the “F&O” information, as in Figure 71. At this time, when the banknotes are counted, the machine will take the face and orientation of the first banknote as the standard, and the banknotes with different faces and orientations will be kicked into the reject pocket.

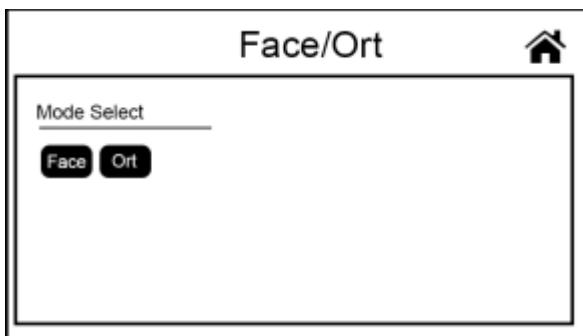


Figure 70

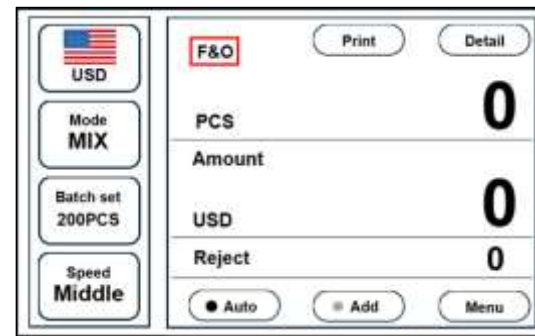


Figure 71

Tip: It is recommended that customers use this function for face arrangement first and then for orientation arrangement.

### 2.1.11.5 Version sorting function setting

1) Touch the “Menu” key to enter the “User Menu” interface, as shown in Figure 72 below. Then press “Preference Setting” to enter the “Preference Setting” interface, as shown in Figure 73.

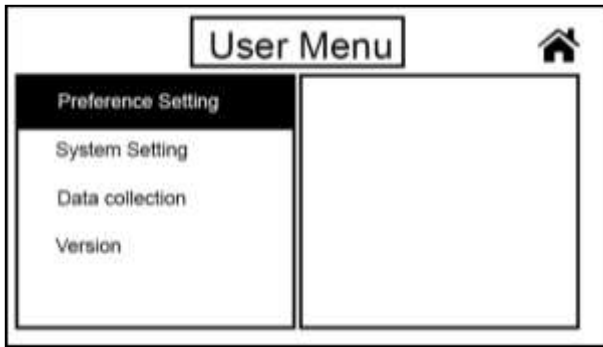


Figure 72

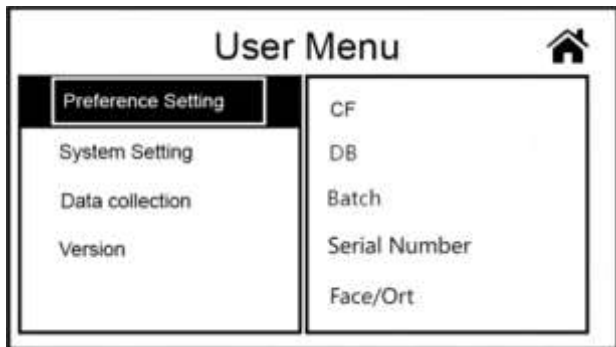




Figure 73

2) Touch the sixth item “More” to enter the interface, as shown in Figure 74, users can set the switch of the version sorting function in this interface, ON means the version sorting function is turned on, OFF means the version sorting function is turned off. This function is only available in the SDC mode. In the version sorting mode, the machine will kick the different version of the banknotes into the reject pocket, and the same version will be put into the stacker. This function is off by default, after selecting it, the shadow will change from gray to blue, as shown in Figure 75, and the machine can save the setting automatically. Touch the “” key on the upper right corner of the screen or press the “” key to return to the previous interface.

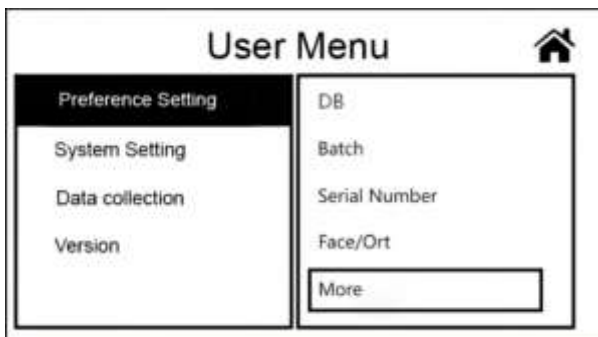


Figure 74

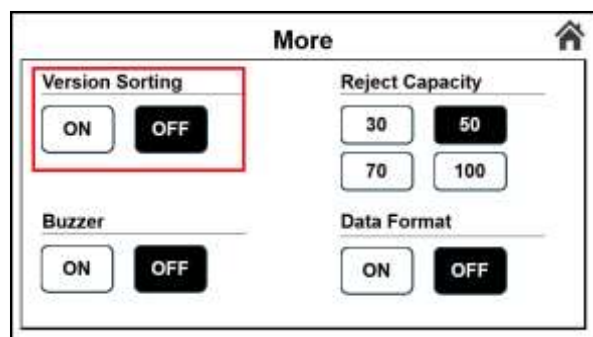


Figure 75

### 2.1.11.6 Reject capacity setting

1) Touch the “Menu” key to enter the “User Menu” interface, as shown in Figure 76 below. Then press “Preference Setting” to enter the “Preference Setting” interface, as shown in Figure 77.

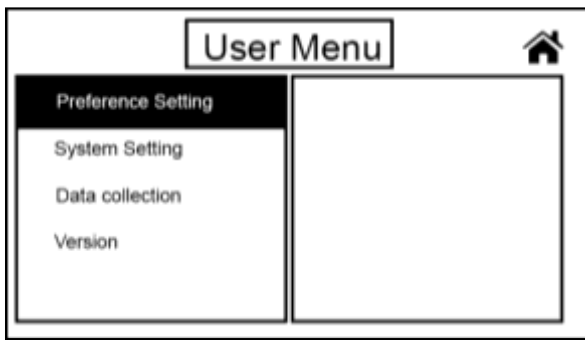


Figure 76

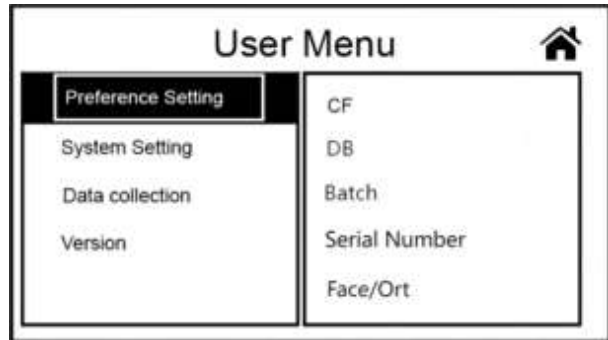




Figure 77

2) Touch the sixth item “More” to enter the interface, as shown in Figure 78. Users can select the reject capacity in this interface. The default is 50, as shown in Figure 79 below. There are four values of reject capacity 30/50/70/100, users can choose according to their needs, after choosing, the bottom color changes from gray to blue, and the machine can save the setting automatically. Touch the “” key on the upper right corner of the screen or press the “” key to return to the previous interface. Note: The reject capacity of 100 is based on the flatness of the banknotes. If the counted banknotes are too wrinkled or soft, please lower the reject capacity value.

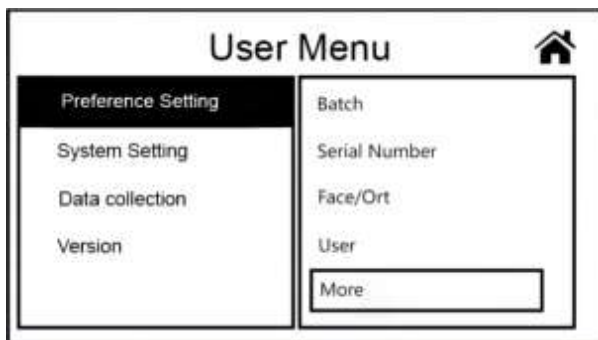


Figure 78

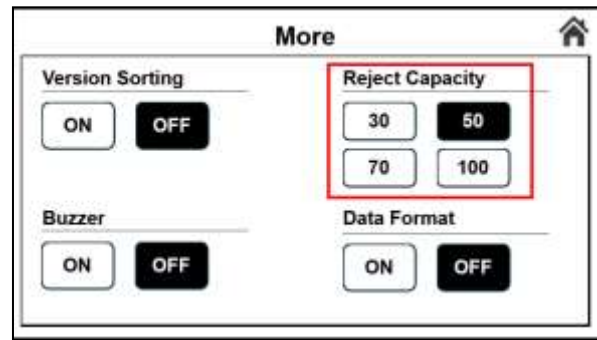


Figure 79

### 2.1.11.7 Buzzer setting

1) Touch the “Menu” key to enter the “User Menu” interface, as shown in Figure 80 below. Then press “Preference Setting” to enter the “Preference Setting” interface, as shown in Figure 81.

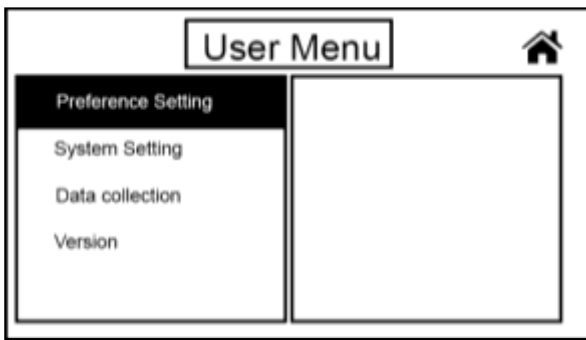


Figure 80

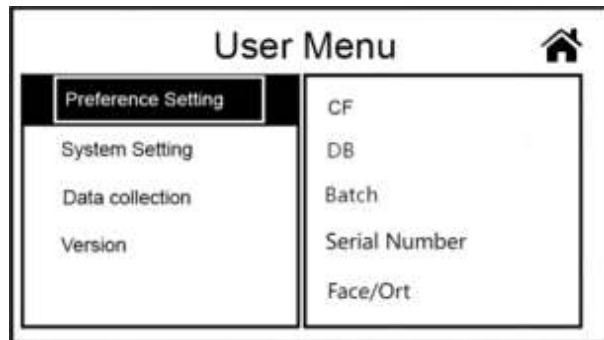




Figure 81

2) Touch the “Menu” key to enter the “User Menu” interface, as shown in Figure 82 below. Users can set the switch of buzzer function in this interface. ON means buzzer function is turned on, OFF means buzzer function is turned off. After selecting, the shadow changes from gray to blue, as in Figure 83, and the machine can save the setting automatically. Touch the “” key on the upper right corner of the screen or press the “” key to return to the previous interface.

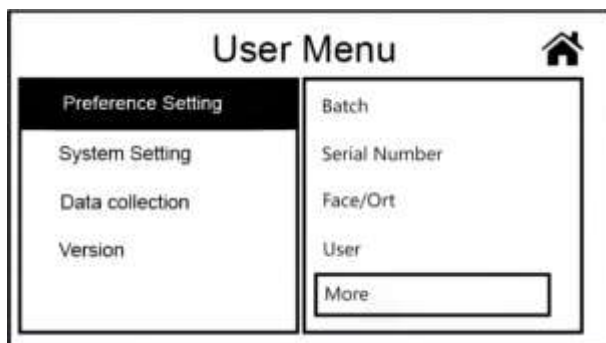


Figure 82



Figure 83

### 2.1.11.8 Data format setting

1) Touch the “Menu” key to enter the “User Menu” interface, as shown in Figure 84 below. Then press “Preference Setting” to enter the “Preference Setting” interface, as shown in Figure 85.

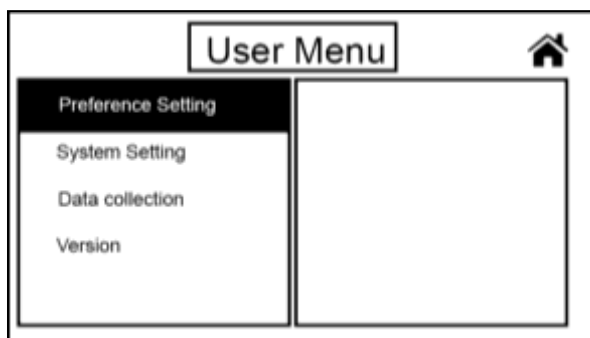


Figure 84

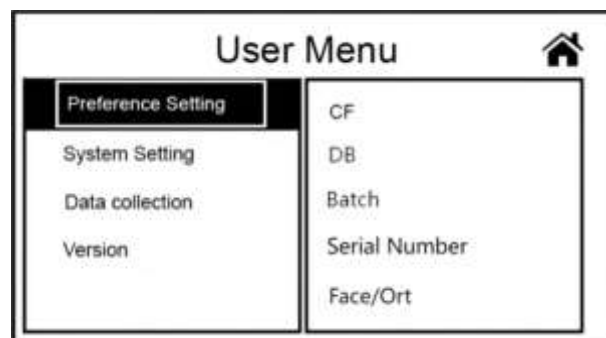




Figure 85

2) Touch the “Menu” key to enter the “User Menu” interface, as shown in Figure 86. Users can set the switch of data format function in this interface, ON means the data format function is turned on, OFF means the data format function is turned off. This function is off by default, after selecting it, the shadow will change from gray to blue, as in Figure 87, and the machine can save the setting automatically. Touch the “” key on the upper right corner of the screen or press the “” key to return to the previous interface.

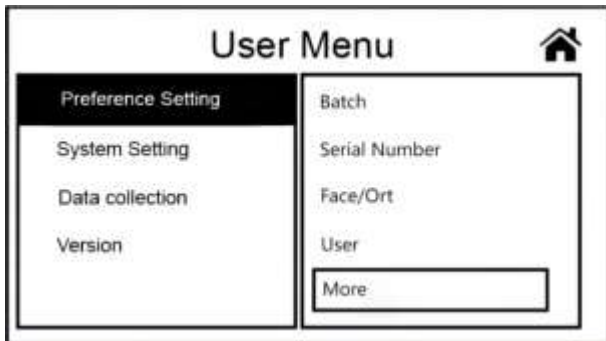


Figure 86

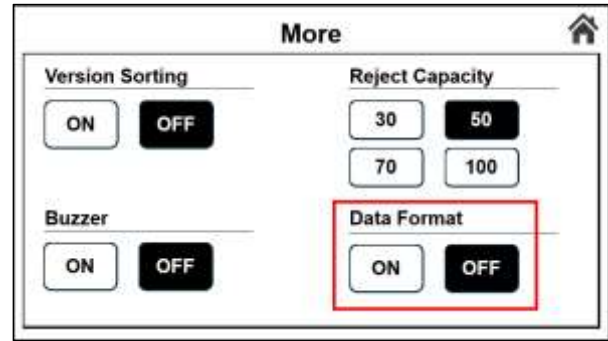


Figure 87

## 2.1.12 System setting

### 2.1.12.1 Time and date setting

1) Touch the “Menu” key to enter the “User Menu” interface, as shown in Figure 88 below. Then press “System Setting” to enter the “System Setting” interface, as shown in Figure 89.

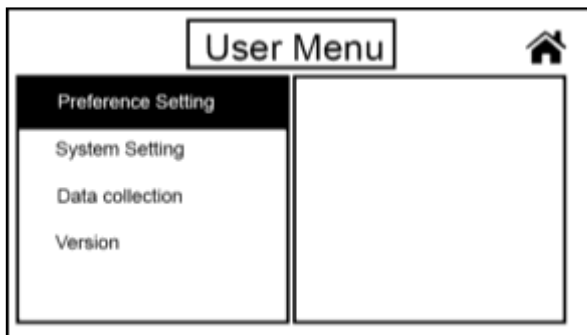


Figure 88

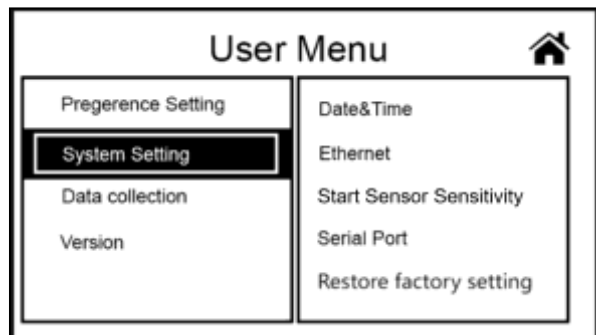




Figure 89

2) Touch the first item “Date & Time” to enter the interface, as shown in Figure 90 below. Touch the value of time and date, the interface will pop up the numeric keyboard, as shown in Figure 91, at this time users can modify the time and date according to their own needs. After modification, the machine will save the setting automatically. Touch the “” key on the upper right corner of the screen or press the “” key to return to the previous interface.

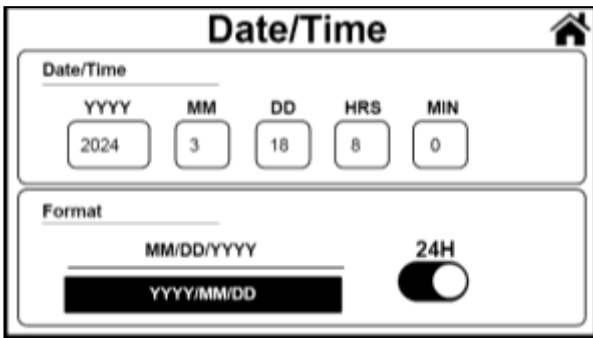


Figure 90

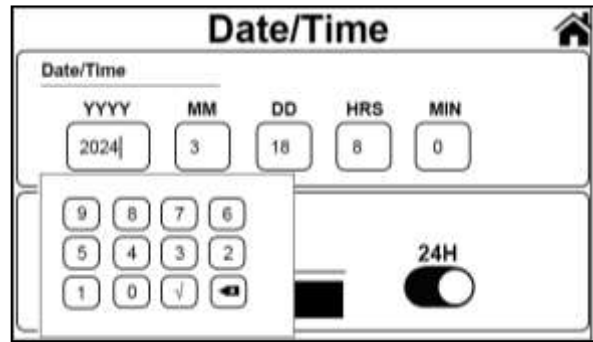


Figure 91

### 2.1.12.2 QT Start sensor sensitivity setting

1) Touch the “Menu” key to enter the “User Menu” interface, as shown in Figure 92 below. Then press “System Setting” to enter the “System Setting” interface, as shown in Figure 93.

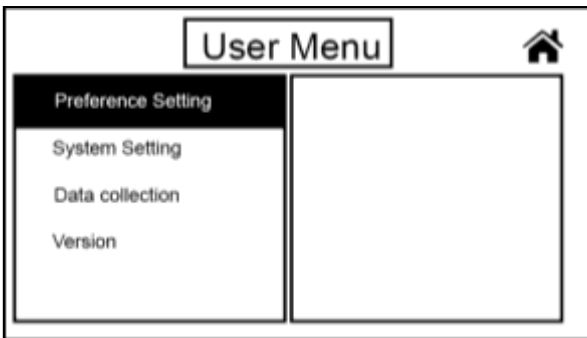


Figure 92

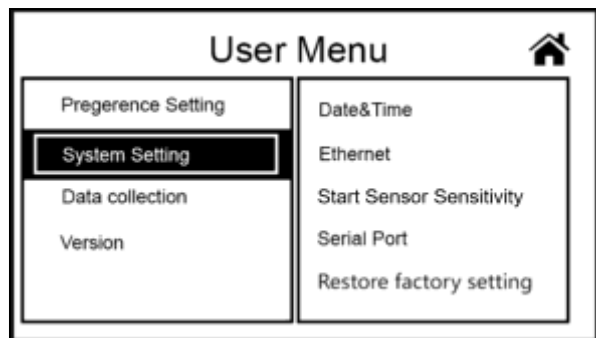




Figure 93

2) As shown in Figure 94, touch “Start Sensor Sensitivity” to enter the setting interface. There are six levels in total, the default is 0.4V, as shown in Figure 95. Users can choose according to their needs, and the shadow of the corresponding position will turn blue. Touch the “” key on the upper right corner of the screen or press the “” key to return to the previous interface.

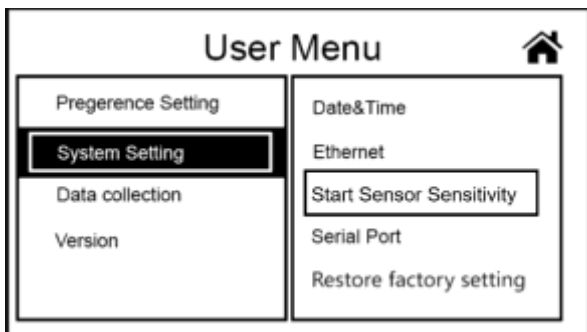


Figure 94

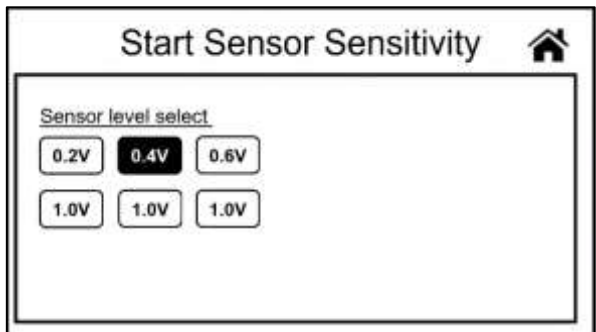


Figure 95

### 2.1.12.3 Serial port setting

1) Touch the “Menu” key to enter the “User Menu” interface, as shown in Figure 96 below. Then press “System Setting” to enter the “System Setting” interface, as shown in Figure 97.

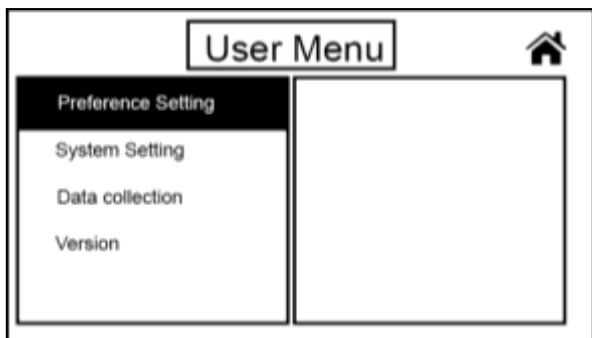


Figure 96

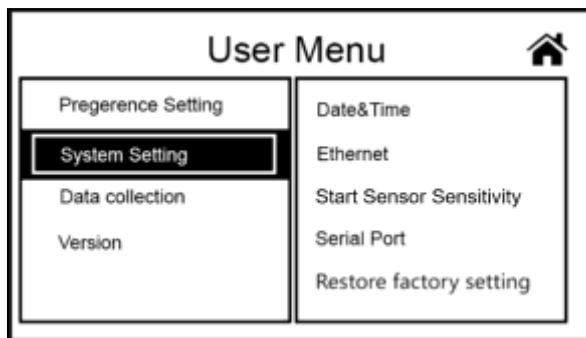


Figure 97


2) As in Figure 98, touch “Serial Port” to enter the serial port setting interface. On the left side of the interface, you can choose printer and PC, the bottom color of the corresponding serial port will change to blue. As in Figure 99, the interface is for choosing printer. After selecting the corresponding baud rate on the right side, only the baud rate of the printer can be switched, and the bottom color of the corresponding baud rate value will change to blue, and the machine can save the settings automatically. Touch the “

Figure 98

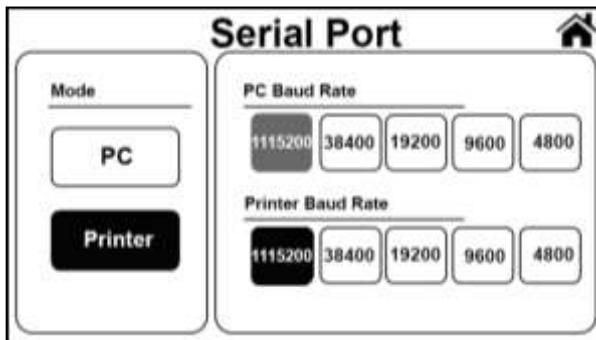


Figure 99

3) Connect the printer to the power supply, connect one end of the data line in the printer box to the printer, and connect the other end to the RS232 port of the machine.

4) After the external printer is connected and ready to print, click the “Print” key to print directly from the main interface or the list interface, and the printer will print the counting details. The format of the printout is shown in Figure 100 below.

CUSTOMER ID:		
-----		
USD		
Deno.	Count	Value
100	15	1500
50	7	350
20	16	320
10	12	120
5	31	155
2	1	2
1	18	18
<b>Total:</b>	<b>100</b>	<b>2465</b>
-----		
2024/5/15 04:26:00 PM		

Figure 100

### 2.1.12.4 Restore factory setting

1) Touch the “Menu” key to enter the “User Menu” interface, as shown in Figure 101 below. Then press “System Setting” to enter the “System Setting” interface, as shown in Figure 102.

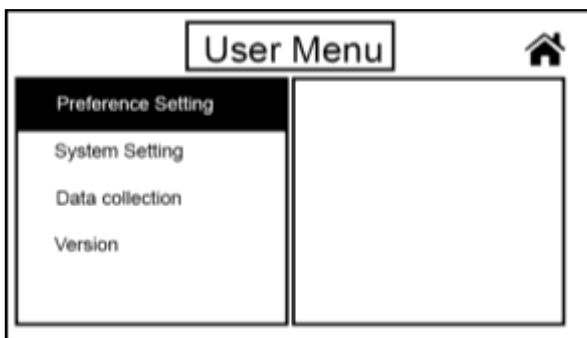


Figure 101

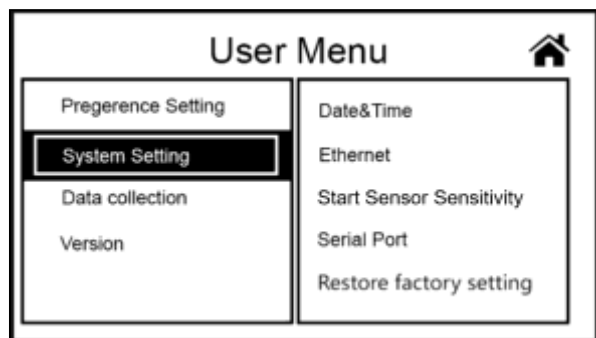


Figure 102

2) As in Figure 103, touch the “Restore factory setting” option to enter the factory setting interface, as in Figure 104.

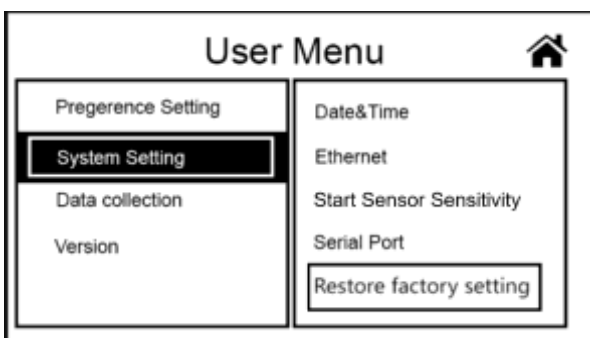


Figure 103

Figure 104

3) Click the “YES” button to restore the factory settings, all other settings except the initial time and date settings will be restored to the initial state. After restoring the factory settings, please restart the machine as shown in Figure 105 below:



Figure 105

## 2.1.13 Data collection

### 2.1.13.1 All data collection setting

1) Please plug the U-disk into the machine before collection, as shown in Figure 106.

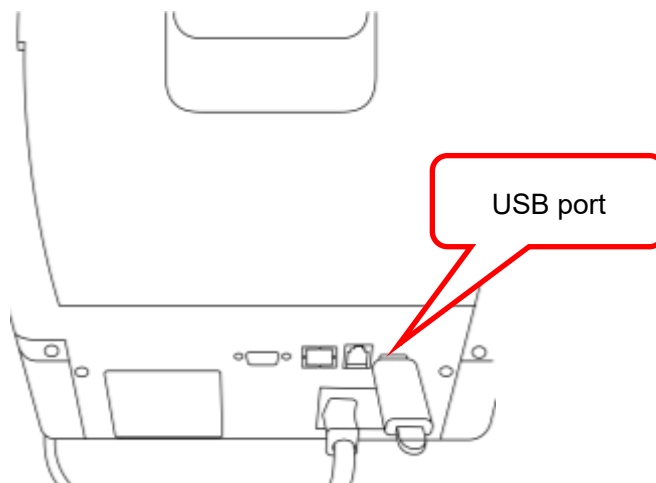


Figure 106

2) Touch the “Menu” key at the lower right corner of the screen to enter the “User Menu” interface, as shown in Figure 107. Then touch the “Data Collection” to enter the Data Collection interface, as shown in Figure 108.

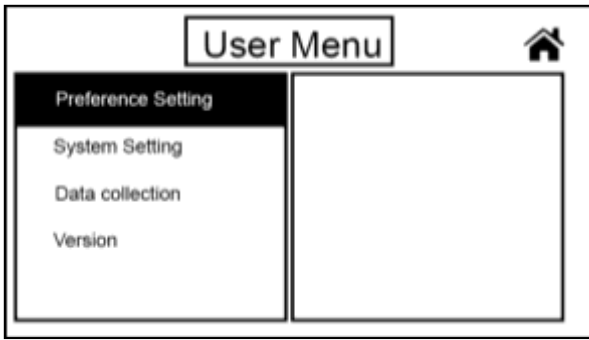


Figure 107

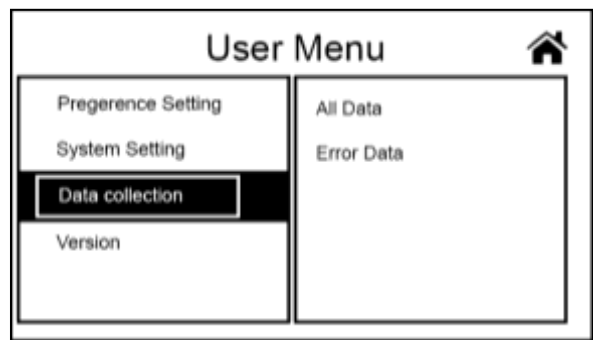


Figure 108

3) Touch “ALL Data” to enter the All Data collection interface, as shown in Figure 109. Then touch the “Collect by U-Disk” button to enter the collection mode interface, as shown in Figure 110.

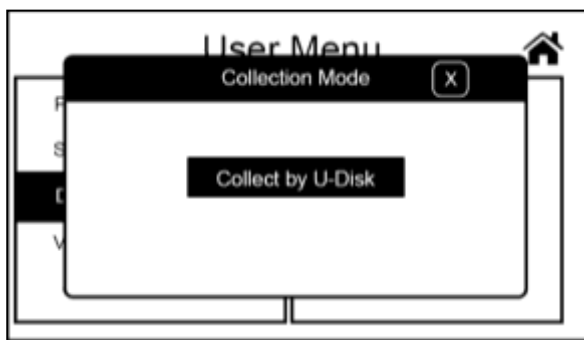



Figure 109



Figure 110

4) After counting banknotes in this interface, the machine will automatically store the collected images in

the folder “  collect\_cash ” in the root directory of the U-disk.

### 2.1.13.2 Error data collection setting

1) Please plug the U-disk into the machine before collection, as shown in Figure 111.

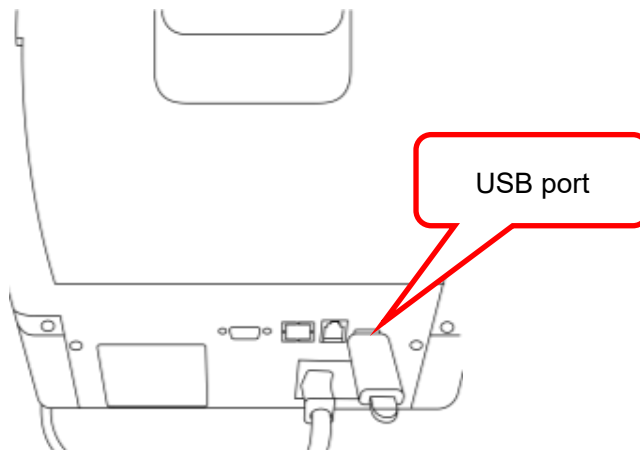


Figure 111

2) Touch the “Menu” key at the lower right corner of the screen to enter the “User Menu” interface, as shown in Figure 112. Then touch the “Data Collection” to enter the Data Collection interface, as shown in Figure 113.

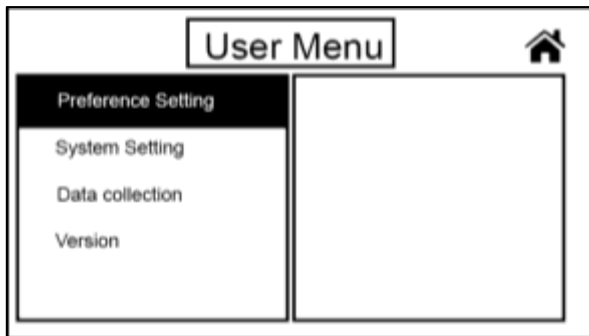


Figure 112

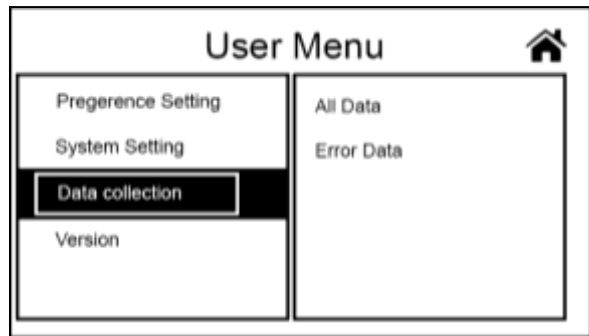


Figure 113

3) Touch “Error Data” to enter the Error Data collection interface, as shown in Figure 114. First turn on the Error Data Collection Mode button, then click “Collection by U-Disk”, machine will switch to the main interface automatically as shown in Figure 115.

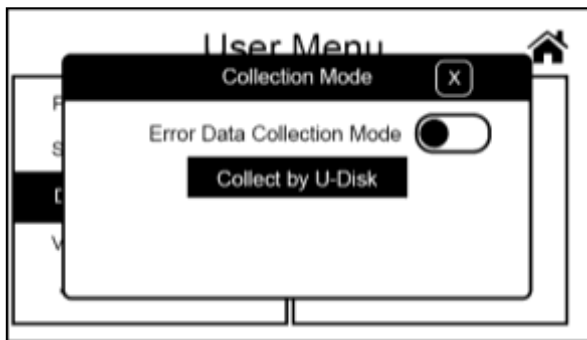


Figure 114

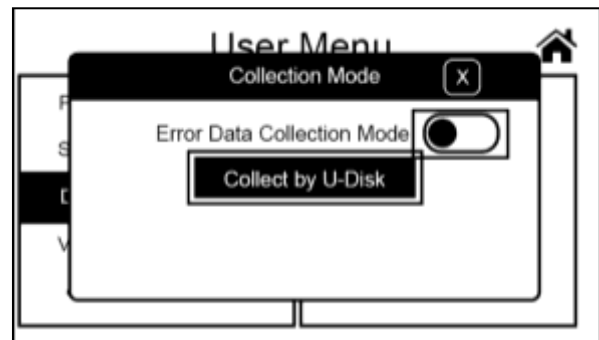



Figure 115

4) Counting the banknotes in the main interface, the machine will automatically store the error images in the folder “  abnormal\_cash ” in the root directory of the U-disk.

5) You need to turn off the Error Data Collection Mode button after finish the collection of error data as shown in Figure 115.

## 2.1.14 Check software version

Touch the “Menu” key at the lower right corner of the screen to enter the “User Menu” interface, as in Figure 116. Then touch “Version” to enter the “Version” interface. Users can view all kinds of software versions through this interface, as in Figure 117.

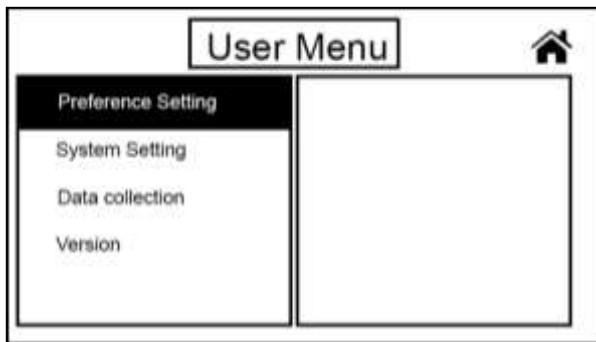


Figure 116

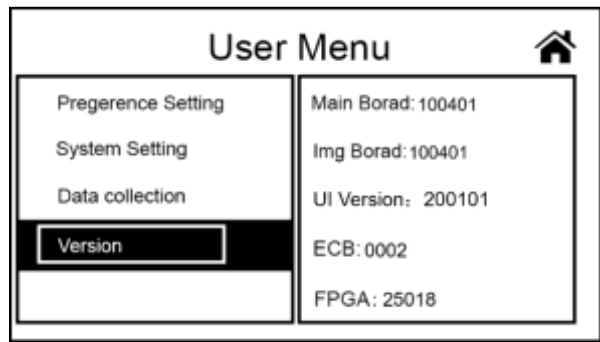


Figure 117

### 3. Maintenance Instructions

#### 3.1 Software Upgrade

##### 3.1.1 Preparation of U-disk

- 1) The software upgrade of this product adopts the U-disk upgrade method.
  - 2) Please plug the U-disk into the PC first.
  - 3) Please unzip the .rar or .zip format application software provided by our company to get the application software with the suffix “ZPK” and the display software with the suffix “bin”. Put the upgrade software “\*\*\*\*\*.ZPK” and “APP.bin” into the root directory of the U-disk, please do not change the suffix name of the software, otherwise the machine will not recognize the U-disk and the upgrade will fail.
- Special reminder: There can only be one “ZPK” and “bin” file in the root directory of the U-disk, otherwise it will lead to software upgrade failure.



Figure 118

##### 3.1.2 Application software upgrade

- 1) Plug the U-disk into the USB port on the back of the machine while it is turned off, as shown in Figure 118 below:

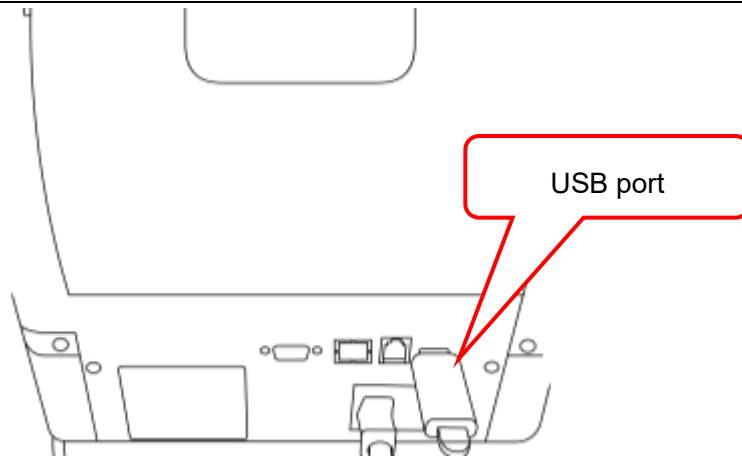


Figure 118

2) Turn on the machine, the machine automatically reads the software in the U-disk to upgrade. The interface shown in Figure 119 will appear. After that, it will switch to the standby interface, need to wait about 1 minute.

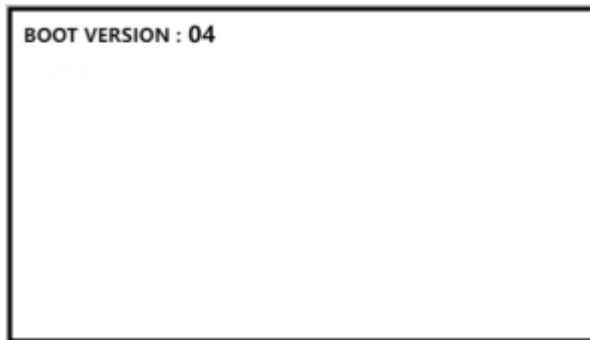


Figure 119

3) Then the machine will switch to the upgrade interface, as shown in Figure 121 below, after the software upgrade is successful, the interface will prompt to restart the machine, as shown in Figure 122 below. Please unplug the U disk first, and then restart the machine, after the self-test is completed, it will automatically enter the main interface, the machine software upgrade is complete. This process takes about 2 minutes and 20 seconds.



Figure 121

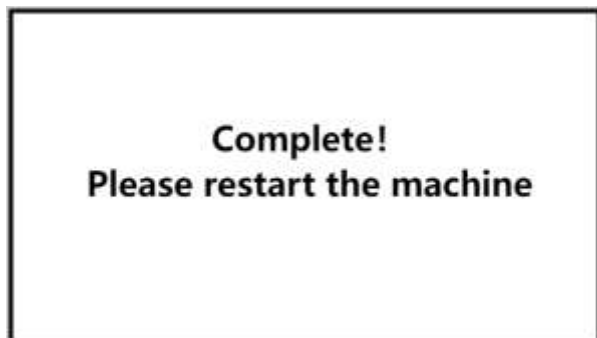


Figure 122

### 3.1.3 UI software upgrade

1) With the machine turned off, press as shown in Figure 123. Open the front cover, and plug the U-disk into the USB port under the display of the machine, as shown in Figure 124.

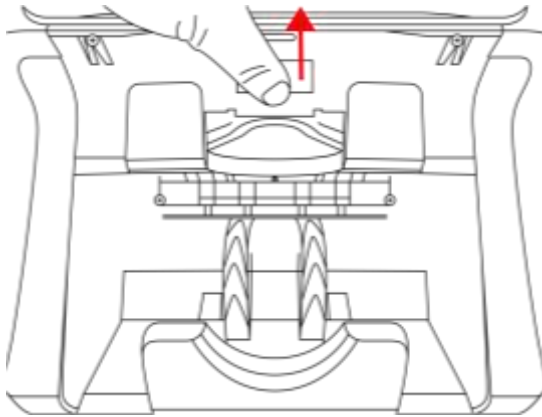


Figure 123

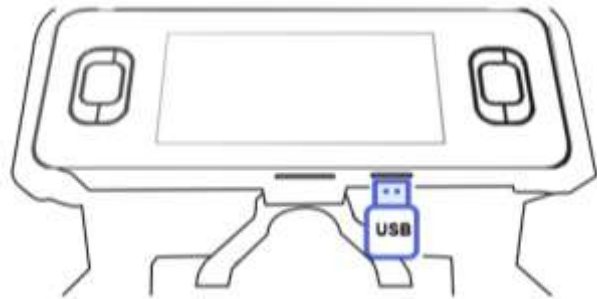


Figure 124

2) Turn on the machine, the machine automatically reads the software in the U-disk for upgrading. The upgrade interface appears as shown in Figure 125. After the software is successfully upgraded, the interface will prompt to restart the machine as shown in Figure 126. Please unplug the U-disk first, and close the front cover, then restart the machine. After the machine self-test is completed, it will automatically enter the main interface and the machine software upgrade is completed. This process takes about 10 seconds.

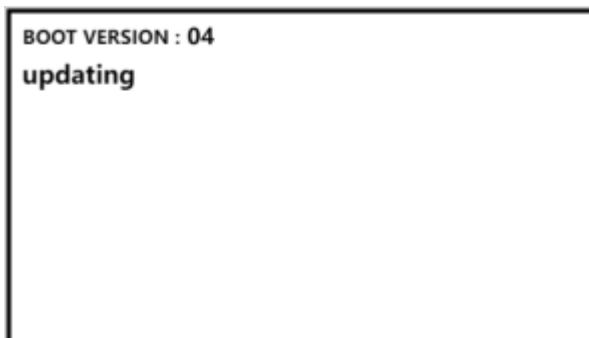


Figure 125

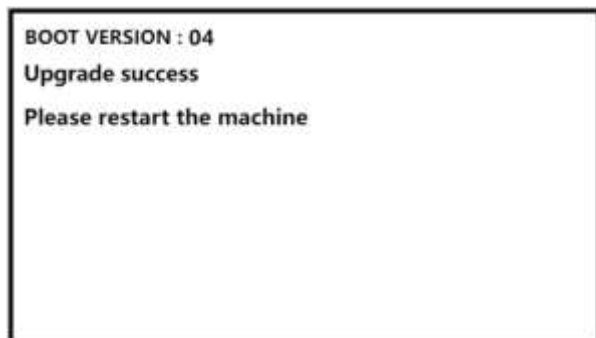


Figure 126

## 3.2 Daily Cleaning Instructions

Any dust, dirt or other substance that adheres to the sensor will interfere with the normal operation of the sensor and lead to incorrect counting results. Therefore, clean the sensor daily with the included cleaning tool as needed.

Please turn off the power switch before cleaning to prevent electric shock or other injuries.

Please do not use chemicals such as benzene, diluents, or water, which may cause the machine to fade or crack.

### 3.2.1 Clean the hopper sensor

As shown in Figure 127, clean the hopper sensor with a clean brush or cloth.

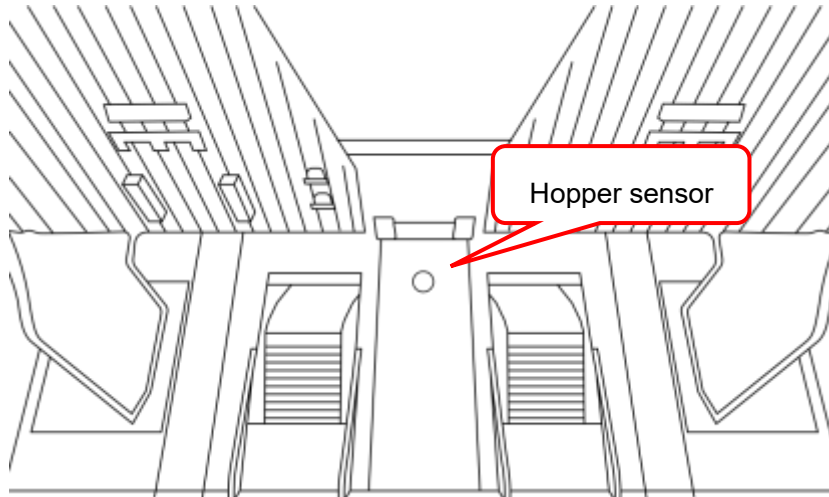


Figure 127

### 3.2.2 Clean the kicker roller rubber and feed roller rubber

As shown in Figure 128 below, clean the kicker roller rubber and feed roller rubber with a clean brush or cleaning cloth.

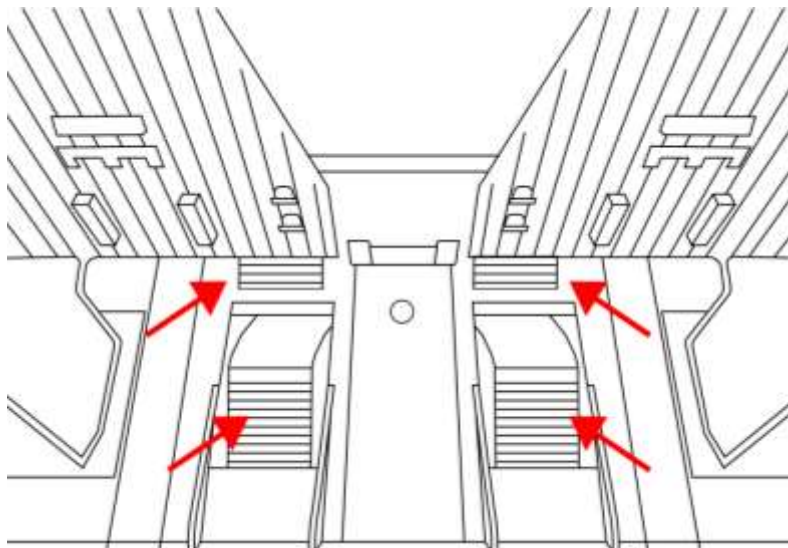


Figure 128

### 3.2.3 Clean the stacker sensor

As shown in Figure 129, clean the stacker sensor with a clean brush or cloth.

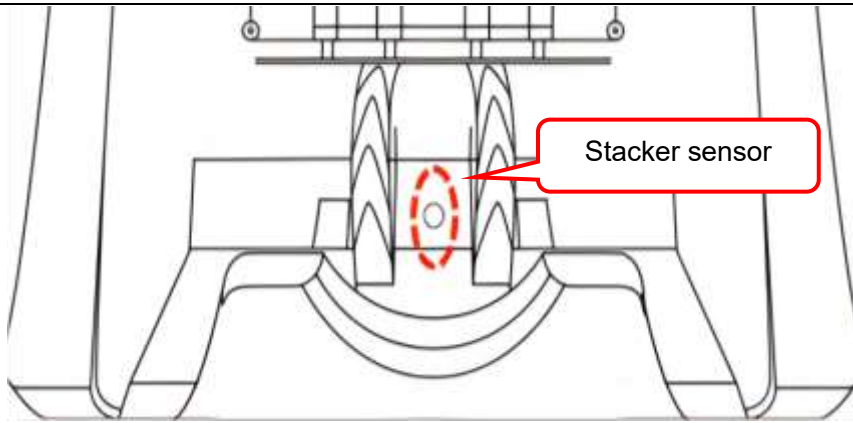


Figure 129

### 3.2.4 Clean the sensors inside the guide plates

1) Open the back cover by pressing upward and inward in the direction of the arrow in Figure 130.

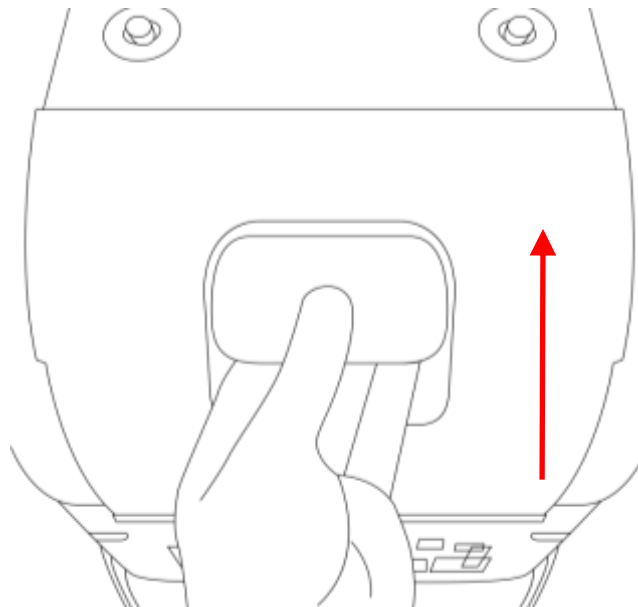


Figure 130

2) As in Figure 131, wipe the CIS sensor of Marker 1 in one direction with a dust-free cloth, and clean the brush stick of Marker 2 and the lower UV sensor of Marker 3 with a nylon brush.

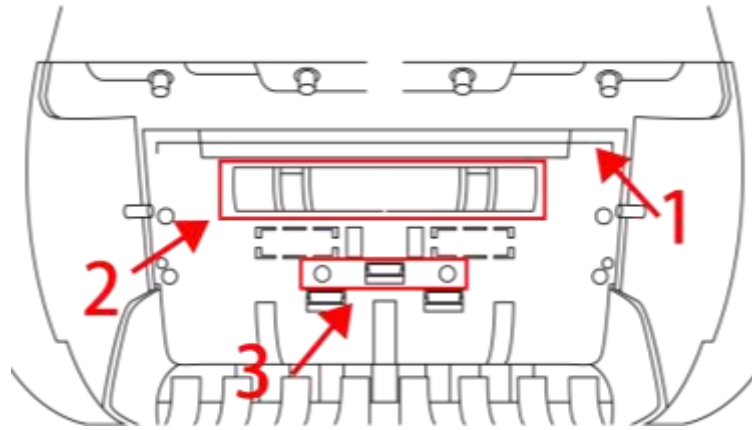


Figure 131

3) As in Figure 132, wipe the upper CIS sensor in one direction with a dust-free cloth, then clean the upper UV, PS1, PS2, MG, and MT sensors with a clean brush.

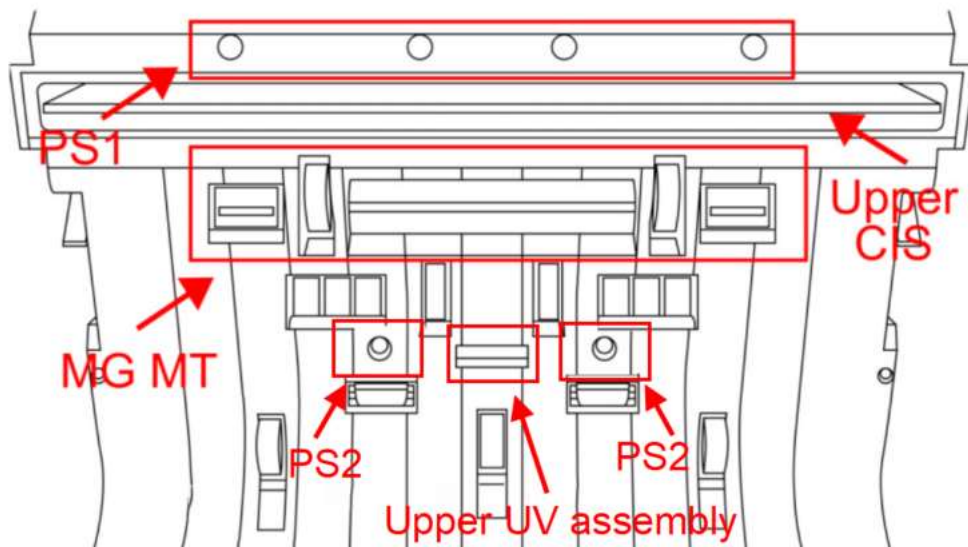


Figure 132

### 3.2.5 Clean the sensors inside the passages

1) In the direction of the arrow in Figure 133, press up to open the upper and lower passage boards.

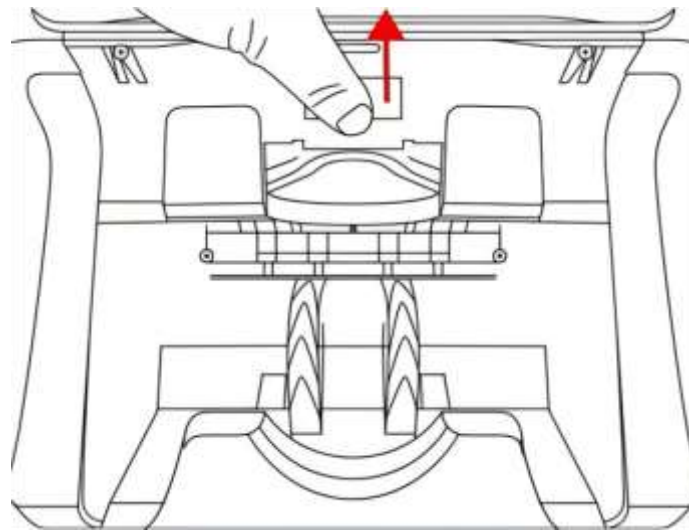


Figure 133

2) Clean each sensor in the red box in Figure 134 below with a clean brush.

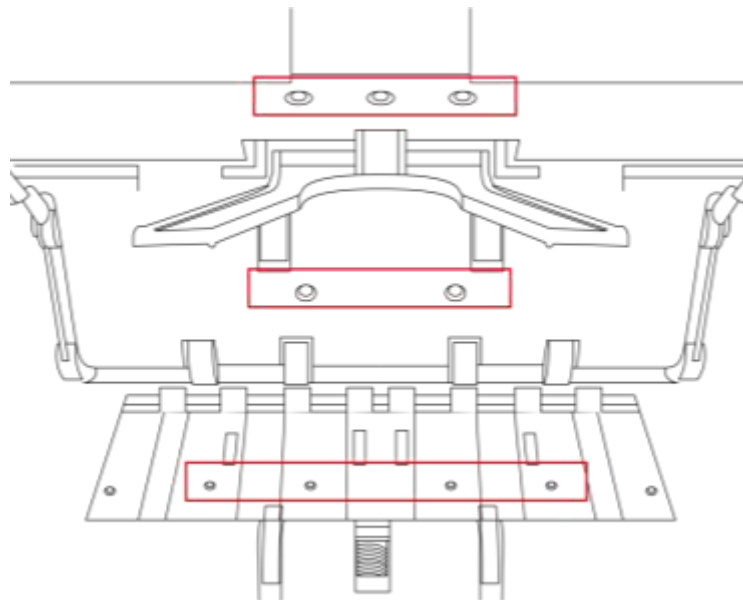


Figure 134

### 3.3 Common Errors and Corresponding Descriptions

During operation, the machine may appear abnormal state, resulting in abnormal operation. When this occurs, the machine will display corresponding error information. The following table outlines common errors and corresponding description. Please refer to the service manual for specific troubleshooting methods. If the issue persists after following the manual, please contact us for assistance.

**Description of self-test error:**

<b>Code</b>	<b>Location for error</b>	<b>Reason for error</b>	<b>Troubleshooting</b>
Banknote Hopper Jam	Hopper sensor	The hopper sensor is blocked	Check the sensor for dust accumulation or occlusion.
Banknote Stacker Error	Stacker sensor	The stacker sensor is blocked	Check the sensor for dust accumulation or occlusion.
			Check whether the sensor cable is loose.
Reject Pocket Jam	Reject sensor	The reject sensor is blocked	Check the sensor for dust accumulation or occlusion.
Lower Passenger Error	Upper and lower passage boards	The sensors are blocked in the upper and lower passage boards	Check the sensor in the passage for dust accumulation or occlusion.
Lower Passenger Open	Upper and lower passage boards	The upper part of the machine is opened	Check that the upper passage of the machine is closed tightly.
Upper Passenger Error	Upper and lower guide plates	The rear of the machine is opened or the sensors in the guide plates are blocked	Check that the rear passage of the machine is closed tightly or the sensor in the guide plates for dust accumulation or occlusion.

**\*\*\* In order to continuously improve our products, we reserve the right to revise the user manual. \*\*\***