Banknote Sorter
BCS-160
User Manual



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1. Introduction

1.1 Preface

Thanks for buying our product. The user manual includes the operation steps and matters need attention.

In order to use the machine correctly, please read this manual carefully. If you meet any difficulty please contact your local distributor immediately.

We keep the right to modify the content of the manual without notice.

1.2 Notice

This product is used to sort and count banknotes ,If any loss caused due to incorrect use, or any modification to the machine not done by our company or our distributor, our company will not be responsible for it. Please contact your distributor if you want to install or transport this machine to avoid the wrong installation or damage during the transportation.

●This product is used for counting and sorting the mentioned banknotes in user manual. Please don't use this machine for other purpose.

●Due to different power supply standard and safety standard, please do not use this machine in countries with disaccorded power supply.

●Some content may be modified without notification, please kindly understand.

●We are working continuously for improving the quality of products, so the actual machine may be a little different with the manual.

●If the machine is changed or modified by user without our notice, our company will not be responsible for it.

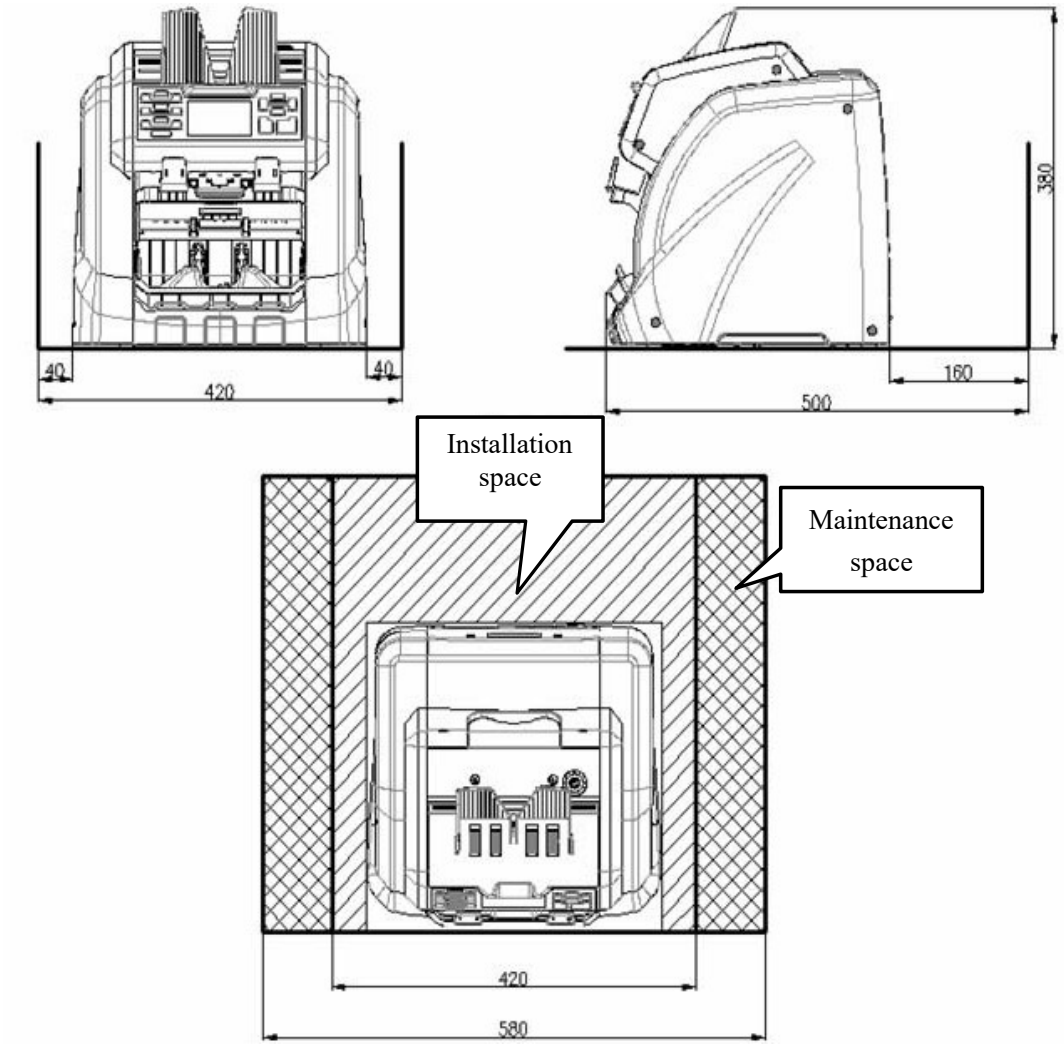
2. Installation Notice

2.1 Installation Notice

1) If you need to install this product, please contact the nearest distributor or our authorized distributor.
2) The machine is only suitable for indoor use, please do not install it and use it outdoor.
3) Please install the machine in an even place which can hold the weight of this machine.
4) Please do not use or put flammable or volatile items around the machine, such as diluents.

2.2 Installation place notice

Install the machine as below, there should be enough space for your operation, such as putting the notes, opening and closing the cover and doing maintenance.



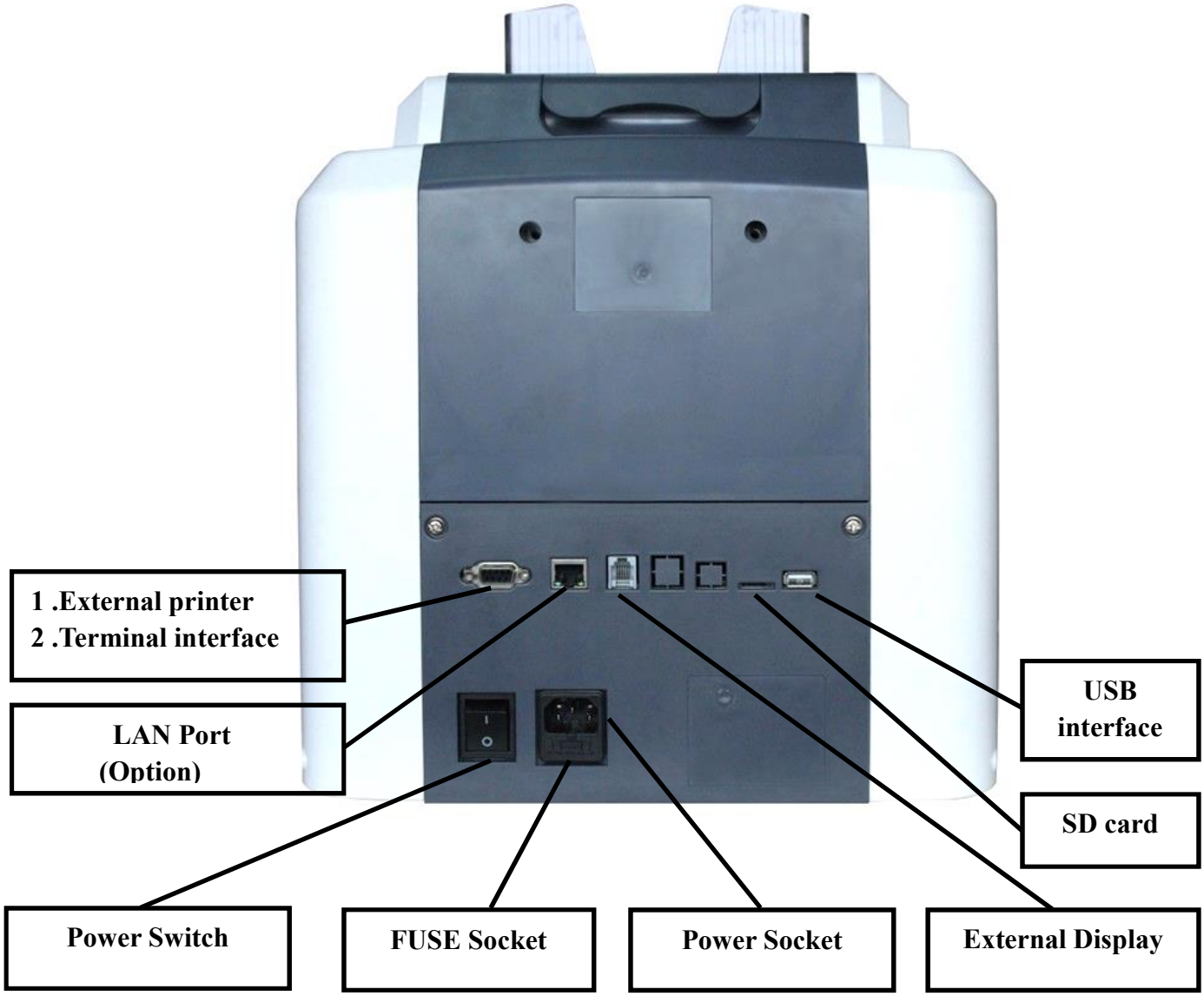
Measurement（mm）

3. Diagram

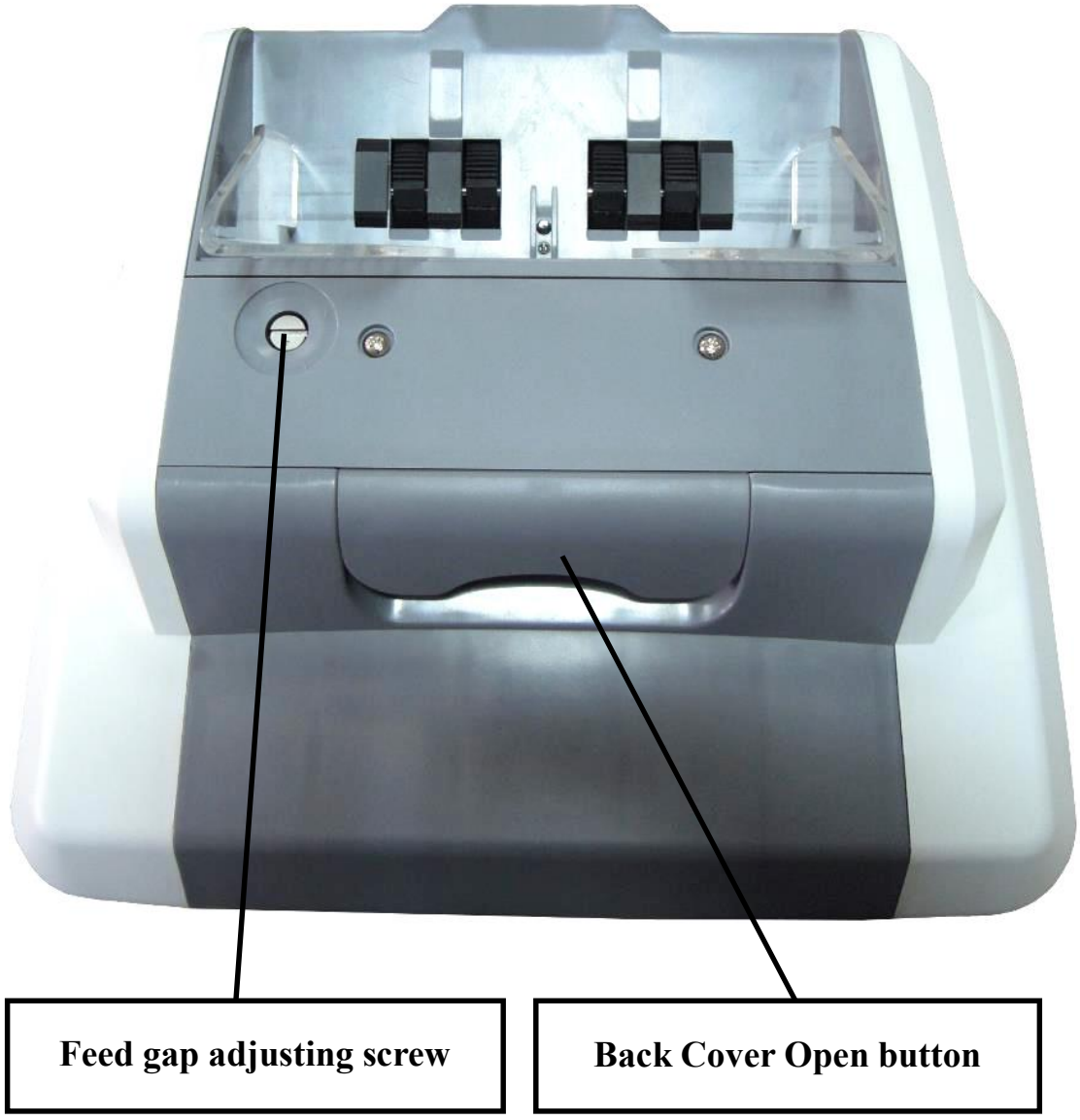
3.1 Front Diagram



3.2 Back Appearance



3.3 Top Appearance



4. Specification

Dimension(W×L×H)	340mm×340mm×380mm
Weight	13KG
Hopper Capacity	600pcs
Stacker	200pcs
Reject Pocket Capacity	100pcs(brand new)
Display	3.5 inch TFT Screen
Interface	RS-232/LAN/RJ12/SD/USB
Currency Support	Maximum 14 currencies
Sortable Notes Size	Width: 100mm~180mm Length: 50mm ~90mm
Sortable Notes Thickness	0.05mm~0.12mm
Counting Speed	800/1000pcs/min (MIX/SDC mode) 800/1000/1200pcs/min (CNT modes)
Sorting Modes	MIX Counting Mode, FACE Sorting Mode, Denomination Sorting Mode, Orientation Sorting Mode, Pieces Counting Mode
Batch No.	0~200
Counterfeit Detection	UV/MG/MT/IR
Power Supply	AC 220V 50Hz ±10% AC 110V 60Hz ±10%
Power Consumption	Sleeping Mode ≤15W During Operation ≤70W
Working Condition	Temperature(0~40°C)/Humidity(40~90%) Air Pressure(70-106kpa)
Storing Condition	Temperature(-40~55°C)/Humidity(10~95%) Air Pressure(70-106kpa)

5. Display and Operation interface

5.1 Display Interface



5.2 Key Function Explanation



Currency selection and numeric key 1



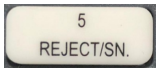
Counting modes selection or numeric key 2



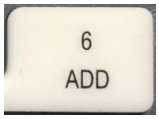
Face/Orientation selection or numeric key 3



Check counting details or numeric key 4



Suspected notes checking and serial number checking or numeric key 5



Accumulation function switch or numeric key 6



Printing or numeric key 7



User setting or numeric key 8



Quantity/Amount batch or numeric key 9



Speed selection or numeric key 0



Move the cursor up



Move the cursor down



Exit or Cancel or Return



Function enter or confirmation or Save

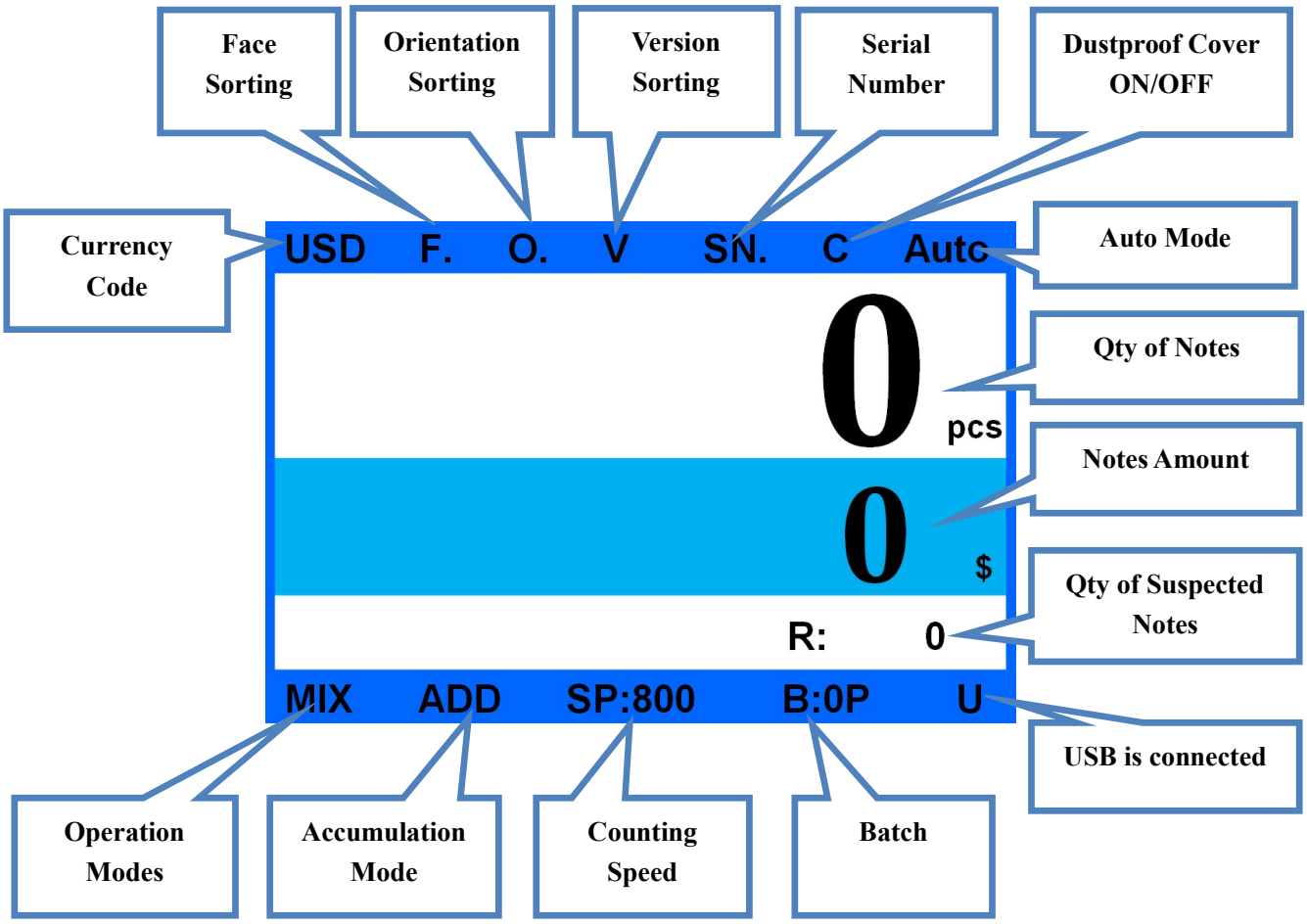


Clear function or error code



Start the machine manually

5.3 Software Interface Explanation



6. Operation Instruction

6.1 Turn on the machine

Connect the machine with power supply and turn on the machine, the machine will enter into loading interface and self-testing interface, shown as Fig.1.

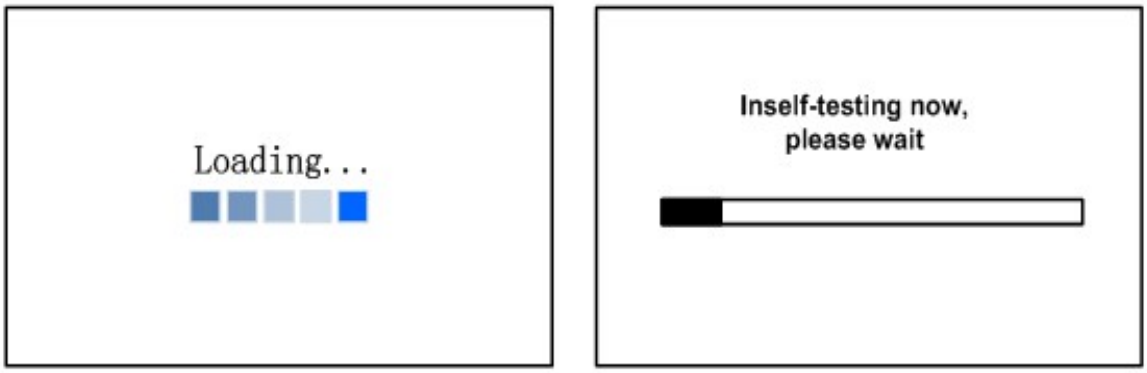


Fig.1

Please wait for about 1min and the machine will initialize successfully and enter into main interface as Fig.2.

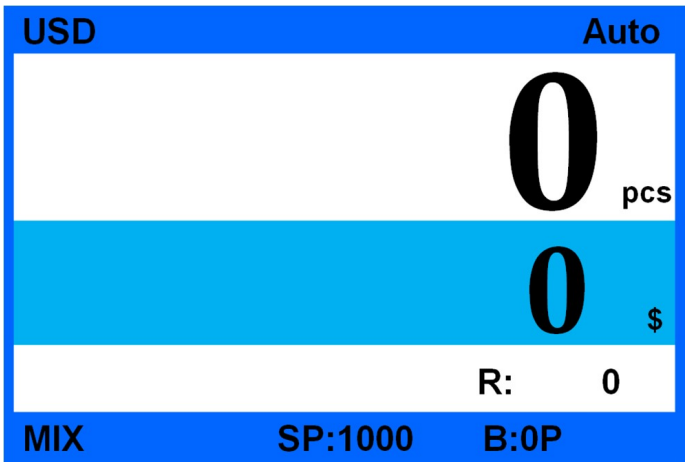


Fig.2

6.2 Currency Setting

***Note：Before counting please check the currency code area and confirm is the currency is correct, if not, please adjust the currency according to below instructions(take USD for example).**

Press “

” key to enter into currency selection mode, check Fig.3.

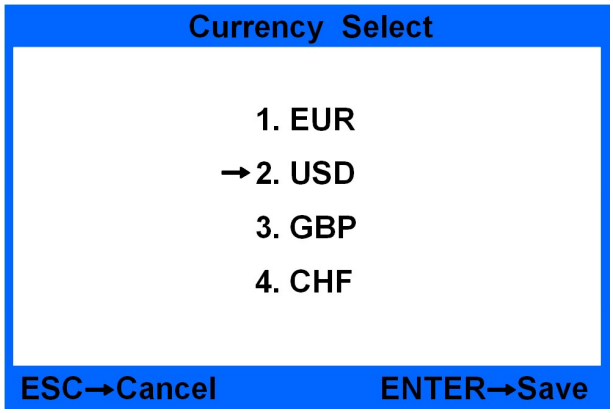


Fig.3

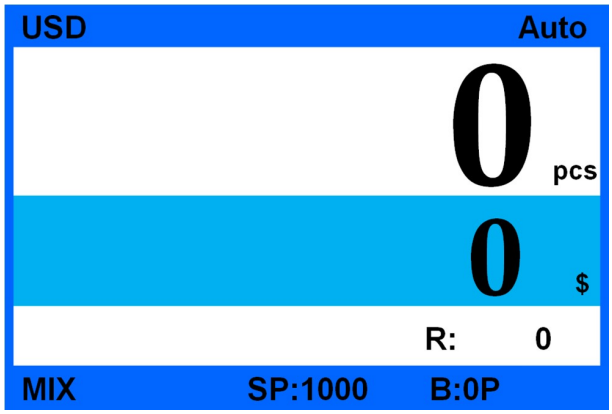
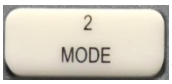


Fig.4

Under currency selection interface, move the arrow key to move the cursor to select the currency, press ENTER key to save the setting and return to main interface; if press ESC key, then it will not save the setting and return to main interface.(Fig.4 is to select the currency to be USD)

If the machine you ordered is with single currency, then it is not possible to select currency.

6.3 Counting Modes Selection

Press “

” key to switch 3 counting modes in circle. Under every mode the machine will operate under default setting, the modes order is MIX→SDC→CNT as Fig.5 shows, if default setting needs to be adjust please refer to User Setting.

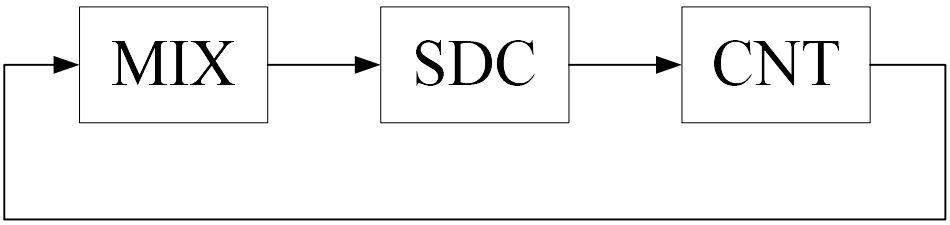


Fig.5

6.3.1<MIX > MIX COUNTING MODE

The Fig.6 shows the Mix counting mode under auto state, under this mode, the machine will keep the detailed information of notes in stacker including total quantity and total amount and detailed information for notes in reject pocket. Under this mode, the machine will count notes under a default speed at 1000pcs/min and detect the notes in a strict way.

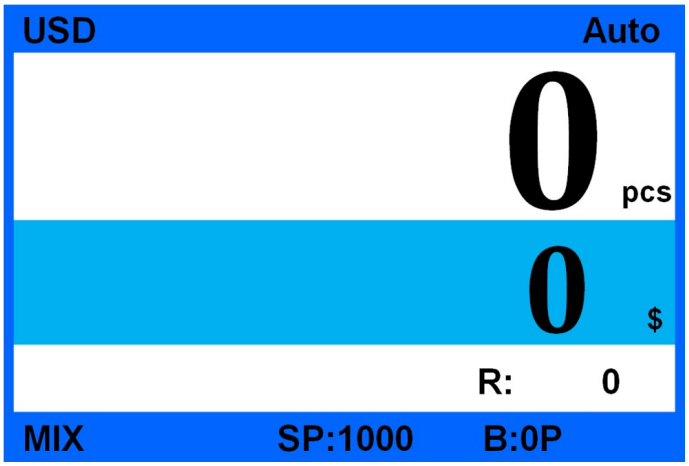


Fig.6

6.3.2 <SDC > Single Denomination Counting Mode

The Fig.7 shows the machine in SDC mode under auto state. Under this mode, the machine will sort the notes according to the first note it counts , in the meantime, it will calculate and save the total amount, total quantity in stacker and quantity in reject pocket. Note: the notes rejected under this mode will give a size error code reminding. The default speed under this mode is 1000pcs/min and the counterfeit detection level is same as MIX mode.

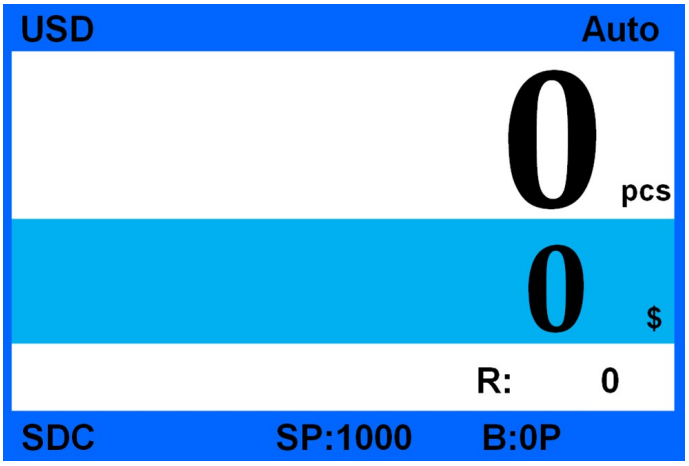


Fig.7

6.3.3 <CNT > Pieces Counting Mode

The Fig.8 shows the CNT mode under auto state, the machine only calculate the quantity of notes regardless currencies. Under this mode, the machine will count the notes in a default speed at 1000pcs/min without counterfeit detection, but the machine has DB detection, based on the thickness of first note, the machine possibly reject some notes due to different thickness. So under CNT mode with DB function ON, the machine is more suitable for counting the same denomination of same currency. In order to ensure the smooth counting, we suggest to turn off the DB function. For more detailed information please refer to User Setting.

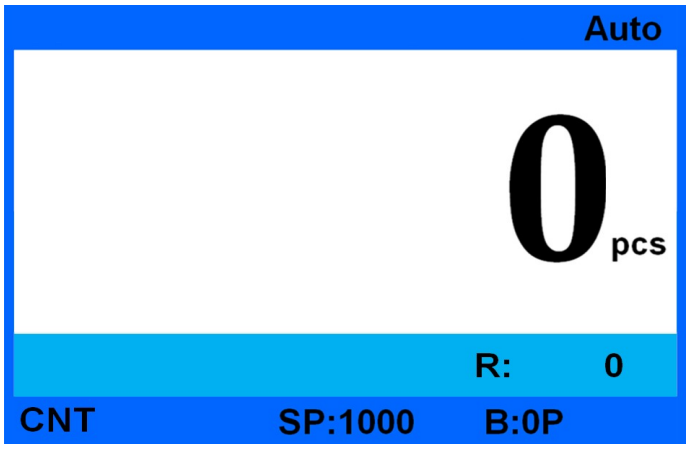


Fig.8

6.4 Quantity Batch and Amount Batch Setting

6.4.1 Quantity Batch (suitable for MIX/SDC/CNT mode)

Under counting interface press“

”key to enter into Quantity Batch setting interface as Fig.9：

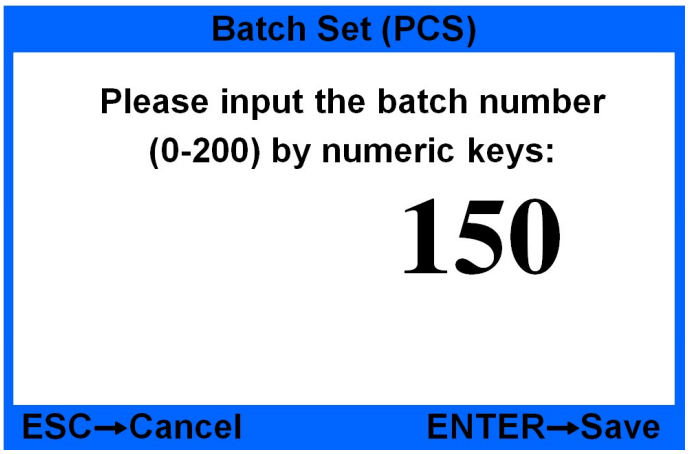


Fig.9

Under Quantity batch setting interface, press the numeric key to set the desired batch, press ENTER key to save setting and exit, the main interface will highlight show the quantity(for example B:150P means the batch quantity is 150), shown as Fig.10. If it is B:0P, it means the machine will stop automatically when it counts 200pcs notes.

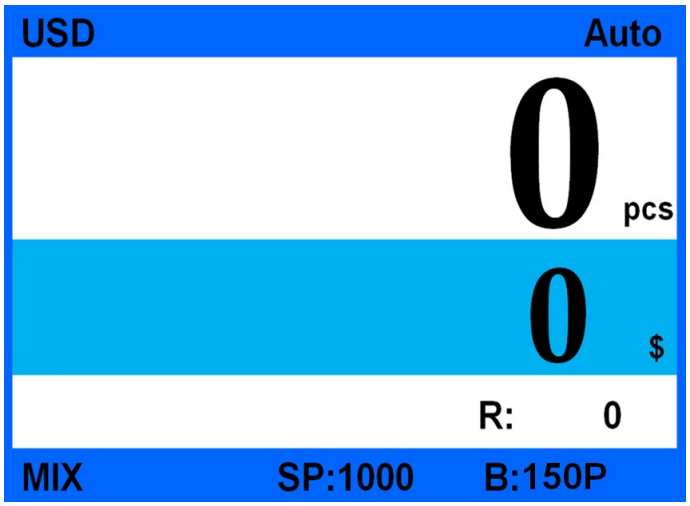


Fig.10

Amount Batch(this is only suitable for MIX mode, under SDC and CNT mode, the Fig 4 interface will not show the B:0P, and can not switch batch mode by press arrow key). Under Quantity Batch setting mode press "△" key to enter into Amount Batch setting interface.

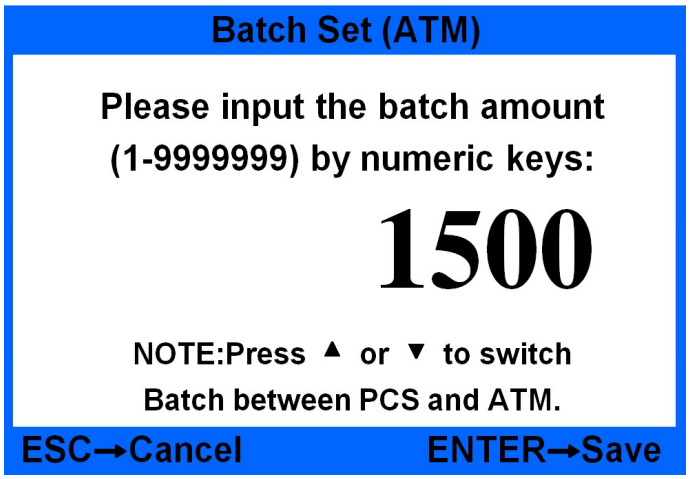


Fig.11

According to the interface prompt please press numeric key to batch amount (1-9999999). After setting press ENTER key to save and exit, the main interface will show B:1500A(it means the amount batch is set at 1500); After setting if press ESC key, the setting is invalid and will not be saved.

6.5 Face/Orientation Sorting Setting

This function is only valid for MIX/SDC mode, the user can settle the face/orientation by pressing "

"key. Press one time, the main interface will show F.，press two times it will show O.，press three times it will show F.O., press again to turn off this function. When F. Is turned on, the banknotes with the same face will go to stacker; When O. Is turned on, the same orientation banknotes will go to stacker; When F.O. Is turned on at the same time, the banknotes with same face and same orientation will go to stacker. The F.And O. Will highlight on the interface, the Fig. 12 shows the machine is under MIX counting mode with face and orientation sorting function turned on.

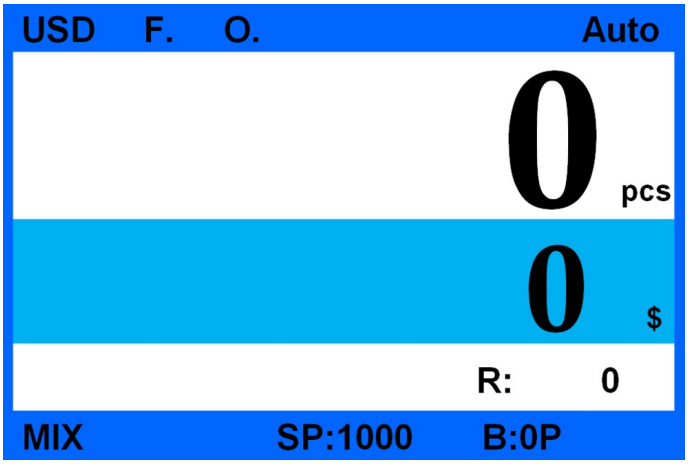
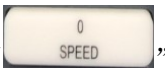


Fig.12

6.6 Counting Speed Setting

The counting speeds has 3 levels to select 1200, 1000 and 800（note：1200 is only available for CNT mode），the default setting under 3 modes is 1000pcs/min. If you want set the speed, please press"

" key to switch different speeds under any kind of counting mode. The Fig. 13 shows the speed is 800 under MIX counting mode.

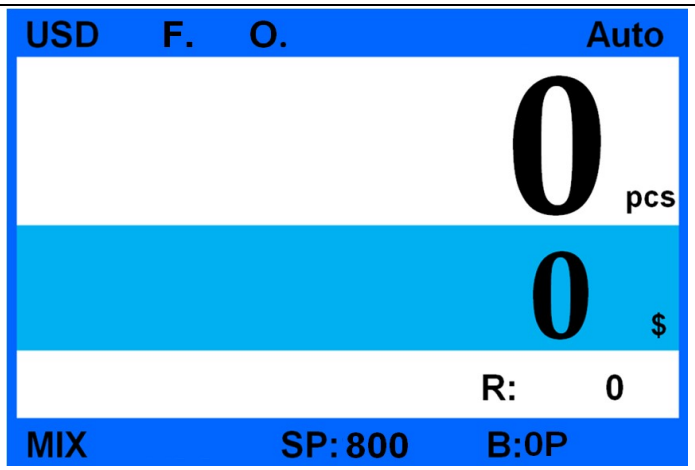


Fig.13

6.7 Accumulation Function

Press “6 ADD” key under any kind of counting mode to turn on accumulation function. The Fig.14 shows the Accumulation function is turned on.

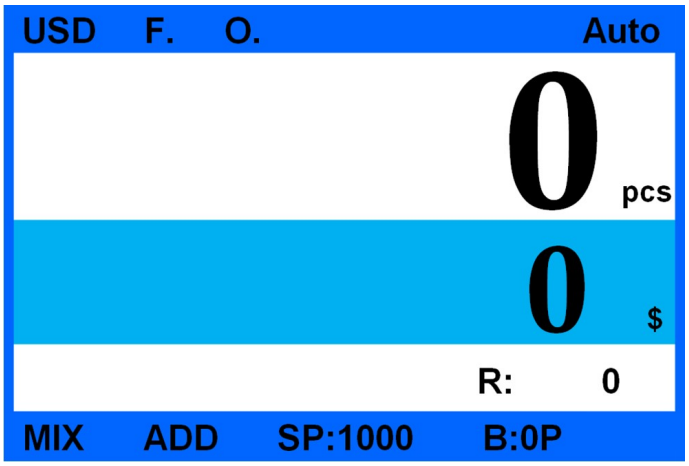


Fig.14

7. Check counting result and printing information

7.1 Check counting result

Under MIX mode or SDC mode, after counting, press “4 LIST” key to check the counting details as shown by Fig.15 :

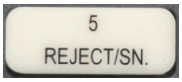
DENOM.	QTY	AMT
$100	0	$0
$50	0	$0
$20	0	$0
$10	0	$0
$5	0	$0
$2	0	$0
$1	0	$0
Total:	0	$0

Fig.15

This interface is for checking the quantity and amount for each denomination you counted, as well as the total amount.

7.2 Check Suspected Notes Details and Serial Number

7.2.1 Check Suspected Notes Details

After finish counting, if there are suspected notes in reject pocket and want to check reject reason, please press “

” key to enter into following interface(Fig.16) to check detailed information. To exit from current interface you can press ESC key or put notes on hopper to count directly.

Reject Information

Code	Reason	Count

Total: 0

Fig.16

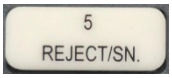
Error Codes List

No	Error code	Explanations
R-01	Stacker Full	The stacker is full
R-02	MG Quantity	Side MG quantity is not correct

R-03	MG Position	Side MG position is not correct
R-04	MT Quantity	Middle MG quantity is not correct
R-05	MT Code	Middle MG code is not correct
R-06	UV	UV mark is abnormal
R-07	Double	Double note is detected
R-08	Half	Half note is detected
R-09	Long	Banknote image is too long
R-10	Short	Banknote image is too short
R-11	Gap	Chain notes are detected
R-12	IMG Timeout	Image processing is timed out
R-13	IMG Size Unknow	Image size is unknown
R-14	IMG ORT Unknow	Image orientation is unknown
R-15	IMG Version	Image version is not correct
R-16	IMG FACE	Face image is not correct
R-17	IMG ORT	Orientation image is not correct
R-18	IMG Angle	Image angle is not correct
R-19	IR OVD	OVD image is not correct
R-20	IR MT	IR metal thread is abnormal
R-21	IR Hole	Hole is detected
R-22	IR Dog-Ear	Dog-ear image is detected
R-23	IMGDIRT	Dirty image is detected
R-24	IRFeature1	IR feature 1 is detected
R-25	IRFeature2	IR feature 2 is detected
R-26	IRFeature3	IR feature 3 is detected
R-27	IRFeature4	IR feature 4 is detected
R-28	IRFeature5	IR feature 5 is detected
R-29	IRFeature6	IR feature 6 is detected
R-30	IRFeature7	IR feature 7 is detected
R-31	IRFeature8	IR feature 8 is detected
R-32	IMG FACE ORT	Image face and orientation is abnormal

R-34	OCR1	Serial number is coved
R-35	OCR2	Serial number is wrong

7.2.2 Check Serial Number

Under the interface of Fig.15 press “

” key to enter into following interface as shown by Fig.17 to check serial number:

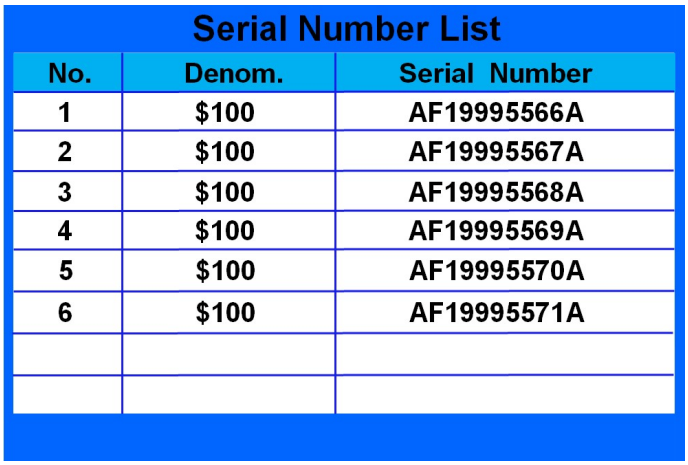


Fig.17

Under this interface you can read and check the serial number of accepted notes, press arrow key to turn pages. To exit the interface please press ESC key or put the notes to count directly.

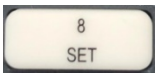
Notes: this interface can only show when serial number reading function is turned on(SP:800).

7.3 Printing Information

When external printer is connected and is ready for printing, after counting, press LIST key to enter into list checking interface, then press “

” key the printer will print the counting list and total amount automatically. Under the interface of serial number reading, press PRINT key to print the serial number.

8. User Setting

Press “

” key to enter into User Setting interface as Fig.18 shows.

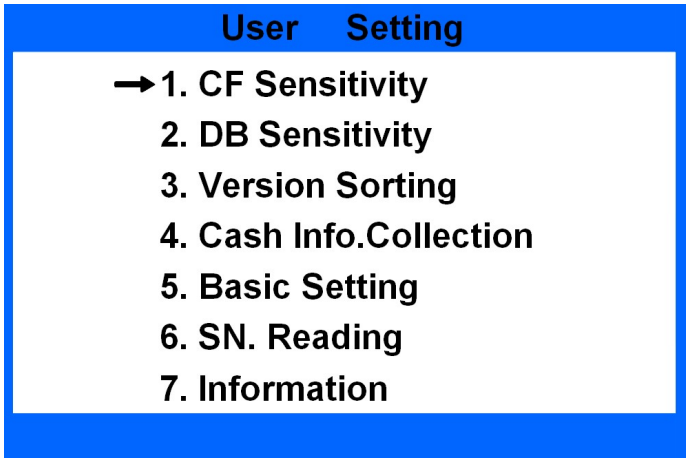


Fig.18

Press the cursor to select and press ENTER to enter into next menu, press ESC to return to last menu.

8.1 Counterfeit Detection Setting

Under Fig.18 interface, move the cursor to No.1 CF Sensitivity, press ENTER key to enter into Fig.19 interface:

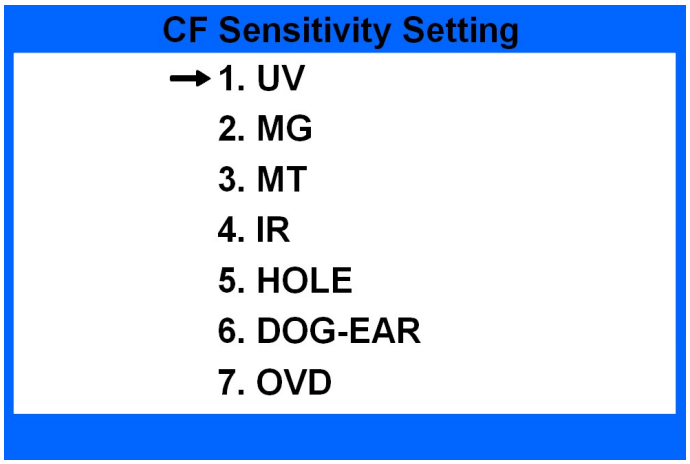


Fig.19

The detailed explanation for each function for Fig.19 is as below:

NO.	Fuc.Setting	Explanation
1	UV	UV detection level setting
2	MG	side MG detection level setting
3	MT	MT detection level setting
4	IR	IR detection level setting
5	HOLE	Hole detection level setting

6	DOG-EAR	folded corner detection level setting
7	OVD	Optical variable strip detection setting

Choose the function you want to set and press ENTER key to enter, press ESC key to return to last menu.

8.1.1 UV Detection Setting

Under Fig.19 interface, choose No.1 UV and press ENTER key to enter interface as Fig.20 shows:

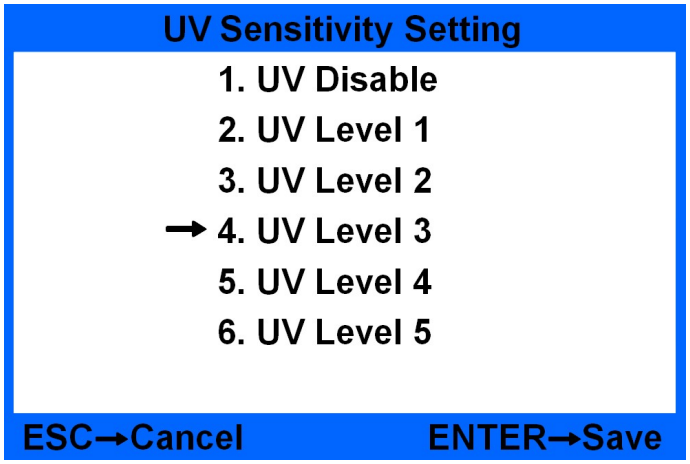


Fig.20

Under this interface there are 5 different levels for selection and 1 option to disable the detection. The higher the level the more sensitive it is. After choose the proper level press ENTER key to save setting, the default setting is Level 3.

8.1.2 MG Detection Setting

Under Fig.19 interface choose No.2 MG and press ENTER key to enter interface as Fig.21 shows.

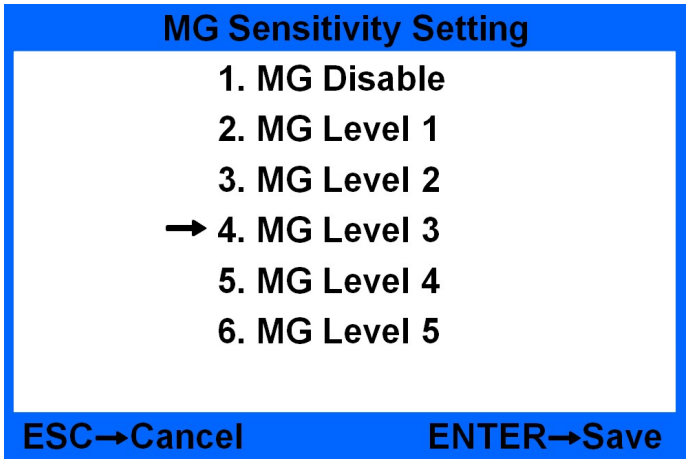


Fig.21

Under this interface there are 5 different levels for selection and 1 option to disable the detection. The higher the level the more sensitive it is. After choose the proper level press ENTER key to save setting, the default setting is Level 3.

8.1.3 MT Counterfeit Detection Setting

Under interface Fig.19 to choose No. 3 MT and press ENTER key to enter interface as Fig.22 shows.

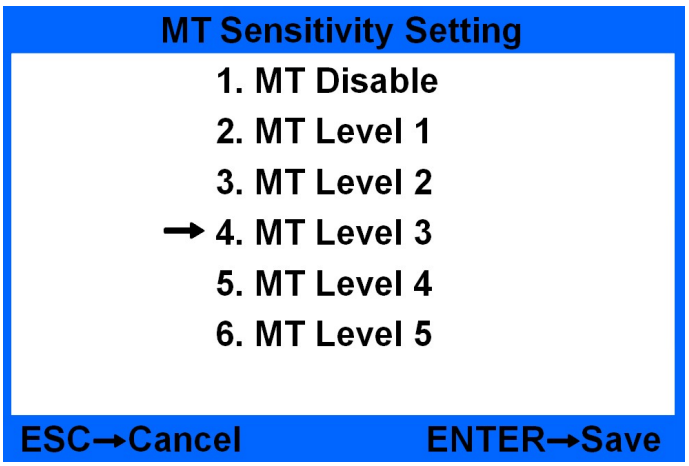


Fig.22

Under this interface there are 5 different levels for selection and 1 option to disable the detection. The higher the level the more sensitive it is. After choose the proper level press ENTER key to save setting, the default setting is Level 3.

8.1.4 IR Counterfeit Detection Setting

Under interface Fig.19 to choose No.4 IR, press ENTER key to enter interface as Fig.23 shows.

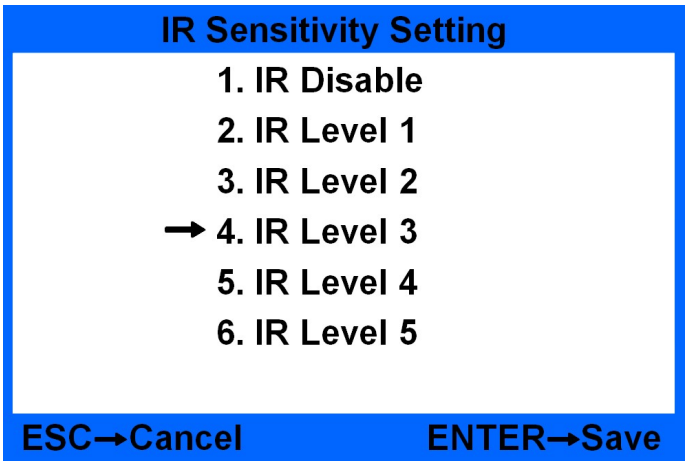


Fig.23

Under this interface there are 5 different levels for selection and 1 option to disable the detection. The higher the level the more sensitive it is. After choose the proper level press ENTER key to save setting, the default setting is Level 3.

8.1.5 Hole detection level setting

Under Fig.19 interface choose No.6 Hole and press ENTER key to enter into Fig.24 interface.

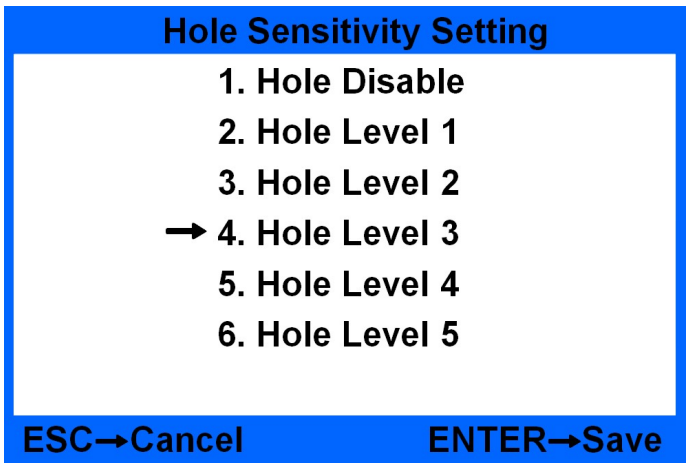


Fig.24

Under this interface there are 5 selectable choices and 1 Off choice, the higher the level the more sensitivity it is. After choose the suitable level please press ENTER key to save, the default setting is level 3.

8.1.6 Dog-Ear detection level setting

Under Fig.19 interface please choose No.7 Dog-Ear and press ENTER to enter into Fig. 25 interface.

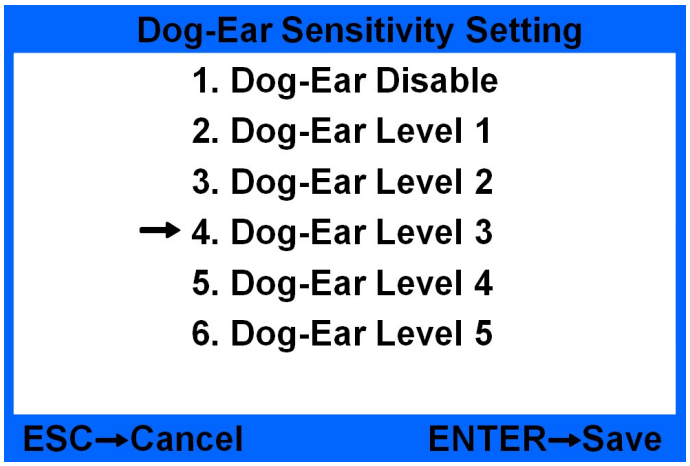


Fig.25

Under this interface there are 5 selectable choices and 1 Off choice, the higher the level the more sensitivity it is. After choose the suitable level please press ENTER key to save, the default setting is level 3.

8.1.7 OVD detection level setting

Under Fig.19 interface please choose No.8 OVD and press ENTER to enter into Fig. 26 interface.

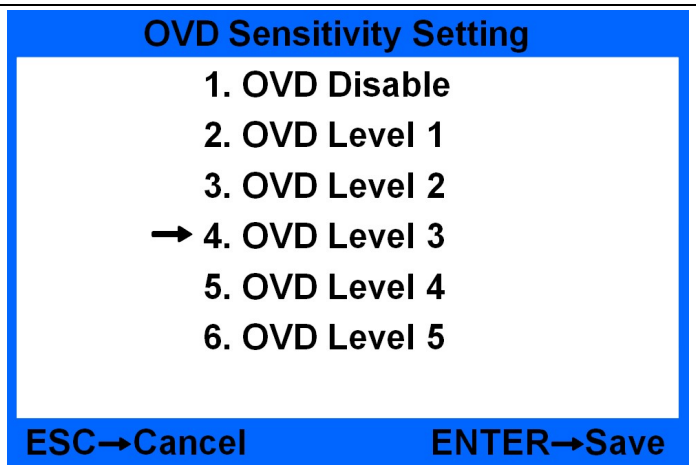


Fig.26

Under this interface there are 5 selectable choices and 1 Off choice, the higher the level the more sensitivity it is. After choose the suitable level please press ENTER key to save, the default setting is level 3.

8.2 Double banknotes detection setting

Move the cursor to the user setting interface under Fig.18, choose item 2 DB sensitivity and then press ENTER key to come into the following Fig.27 interface:

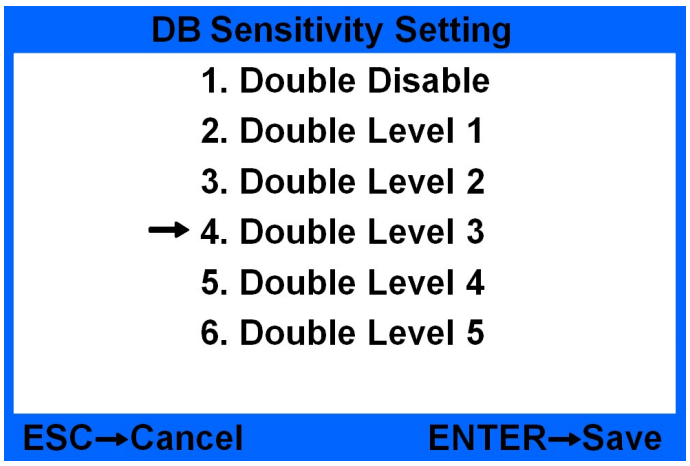


Fig.27

Press “” or “” key to choose different sensitivity level or disable DB detecting function. The higher the level, the more sensitive the detection is. After setting, press ENTER key to save. Press ESC key will quit to the previous menu.

The default setting is level 3.

8.3 Banknote version sorting setting

Move the cursor to the user setting interface under Fig.18, choose item 3. Version sorting and then press ENTER key to enter the below interface, shown as Fig.28:

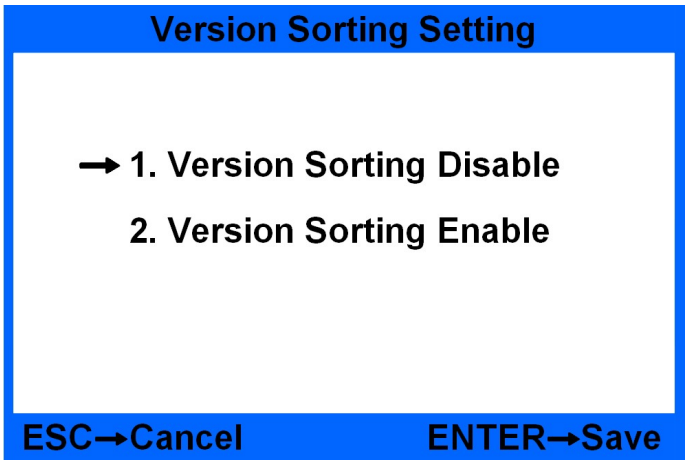


Fig.28

Press "" or "" key to disable or enable the version sorting function and then press ENTER key to confirm. Press ESC key will quit to the previous menu.

When the function is enabled, there will be a sign of V displayed on the screen, shown as Fig.29. For the same version banknotes, they will be counted to stacker; for those different version banknotes, they will be rejected to the reject pocket. This function is only valid for SDC mode.

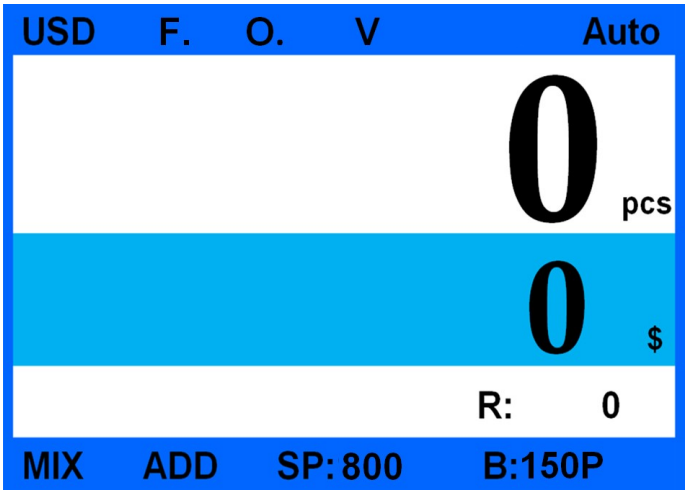


Fig.29

8.4 Banknote information collection

Move the cursor to the user setting interface under Fig.18, choose item 4. Cash info. collection and then press ENTER key to enter the below interface, shown as Fig.30:

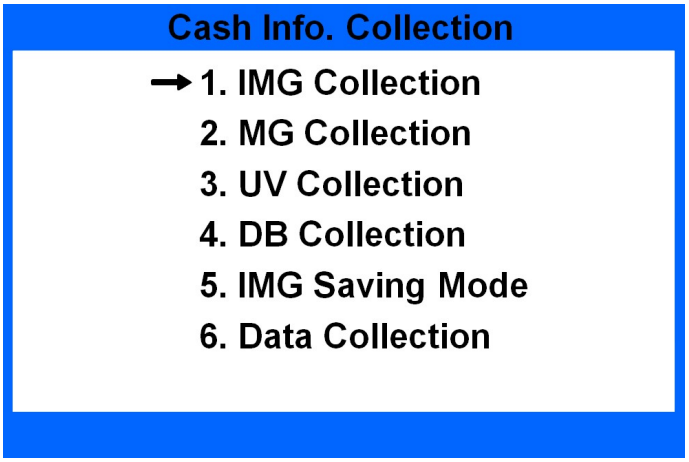


Fig.30

Press “ ” or “ ” key to choose different information collection and then press ENTER key to confirm. Press ESC key will quit to the previous menu.

8.4.1 Image information collection

Under Fig.30 interface to choose item 1. IMG Collection and then press ENTER key to come into the following setting interface, shown as Fig.31:



Fig.31



Fig.32

Put one banknote to count, the display will show its image on the screen, shown as Fig.32. By pressing “ ” or “ ” key to turn on the pages, you will get total five different images.

This image collection function is only valid under MIX and SDC modes.

8.4.2 UV/MG/DB information collection

Under Fig.30 interface to choose item 2 to 4, and then press ENTER key to enter, you could collect the banknote’s MG/UV/DB information.

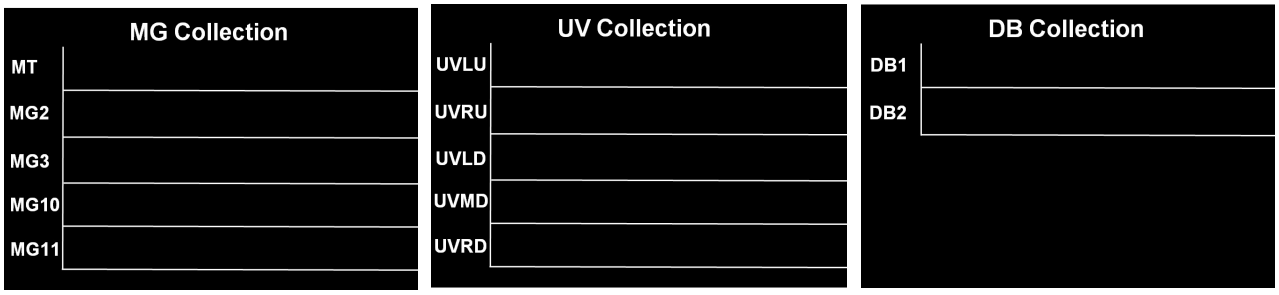


Fig.33

8.4.3 Image saving setting

***Notes: Before you collect the images, please make sure the USB flash drive is well inserted. There will be a sign of "U" on the bottom right screen corner if the drive is successfully connected, shown as Fig.34.**

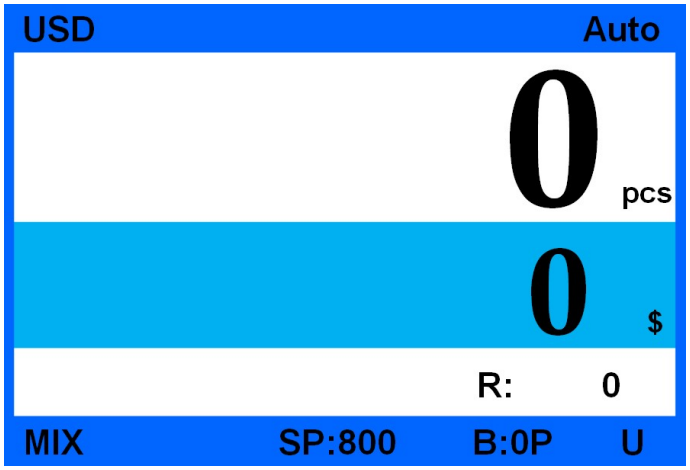


Fig.34

Under Fig.30 interface to choose item 5. IMG saving mode and then press ENTER key to come into the following interface, shown as Fig.35:

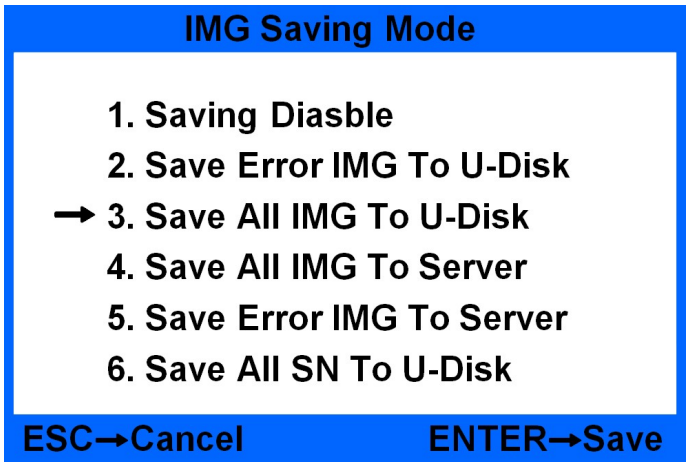


Fig.35

Press "" or "" key to choose different mode and then press ENTER to save.

The default setting is saving disable. Item 2 is only to save error images for those rejected banknotes from the reject pocket to USB flash drive. Item 3 is to save all images for all counted banknotes from both reject pocket and stacker to USB flash drive. After image saving, it will create automatically files named IMGERR(for error images only) and IMGALL(for all images), all images will be saved to the file according to date.

Below Fig.36 shows the process of image saving.



Fig.36

8.4.4 Data collection

Under Fig.30 interface to choose item 6. Data collection and press ENTER key to come into the following interface Fig.37:

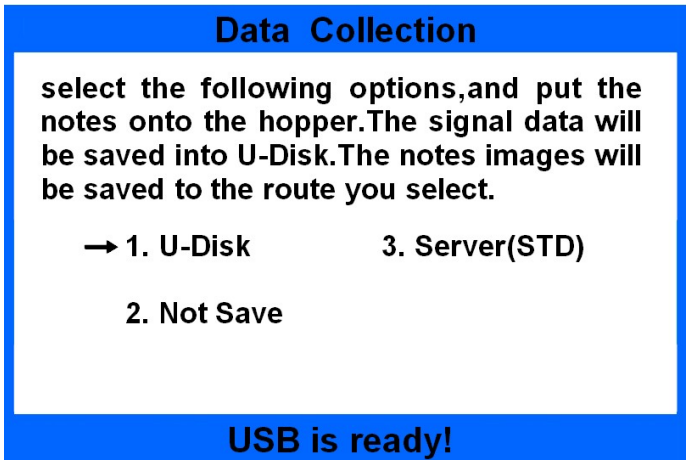


Fig.37

Before you collect data, please make sure the USB flash drive is successfully connected. Load one batch banknotes to count, the machine will collect banknote data(image, UV, MG, DB) for every 10pcs. After collection, it will save images to a created file named CASHINFO, all images will be saved to this file according to date.

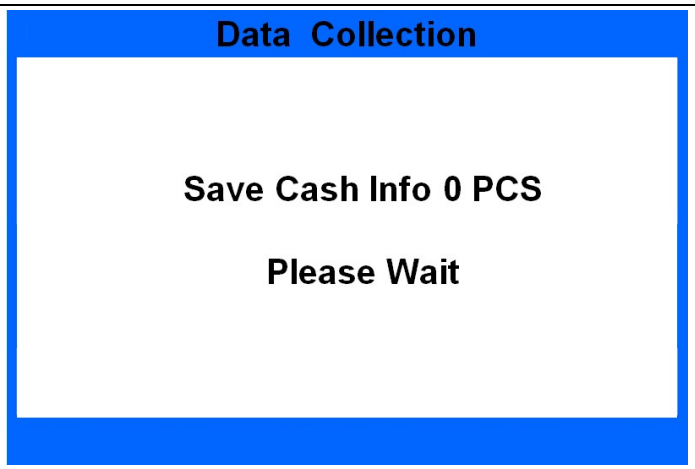


Fig.38

***Notes: During the data saving process, it need some time to finish, please wait with patience.**

8.5 Basic setting

Move the cursor to the user setting interface under Fig.18, choose item 5. Basic setting and then press ENTER key to enter the below interface, shown as Fig.39:

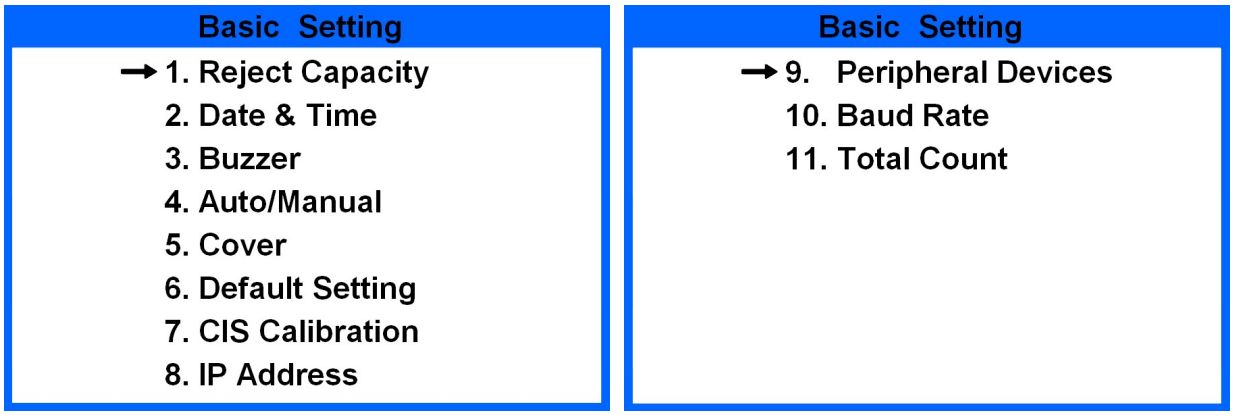


Fig.39

Under this interface, you could set reject pocket capacity, date and time, buzzer, machine start way, dust-proof cover, default setting, calibration and IP address.

8.5.1 Reject pocket capacity setting

Under Fig.39 interface to choose item 1. Reject Capacity and then press ENTER key to come into the following setting interface, shown as Fig.40:

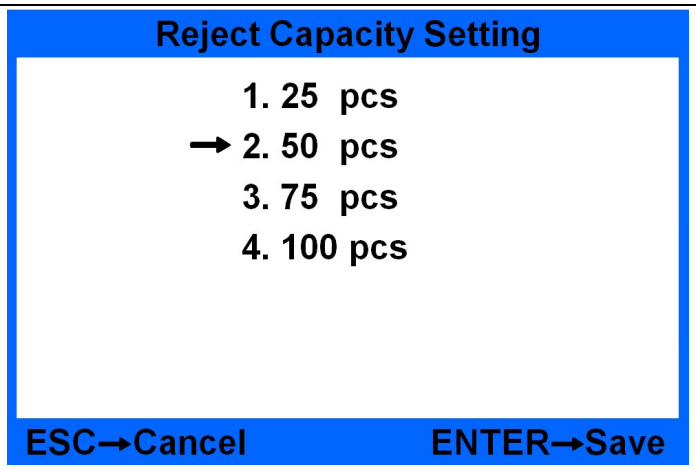


Fig.40

By pressing “ ” or “ ” key to choose different quantity and then press ENTER key to save. The default setting is 50pcs.

8.5.2 Date & time setting

Under Fig.39 interface to choose item 2. Time & Date and then press ENTER key to come into the following setting interface, shown as Fig.38:

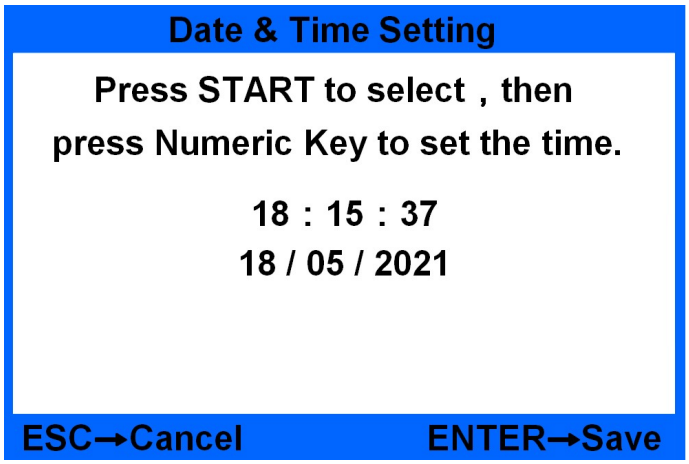


Fig.41

After setting, press ENTER key to save. Press ESC will quit from the interface.

8.5.3 Buzzer setting

Under Fig.39 interface to choose item 3. Buzzer and then press ENTER key to come into the following setting interface, shown as Fig.42:

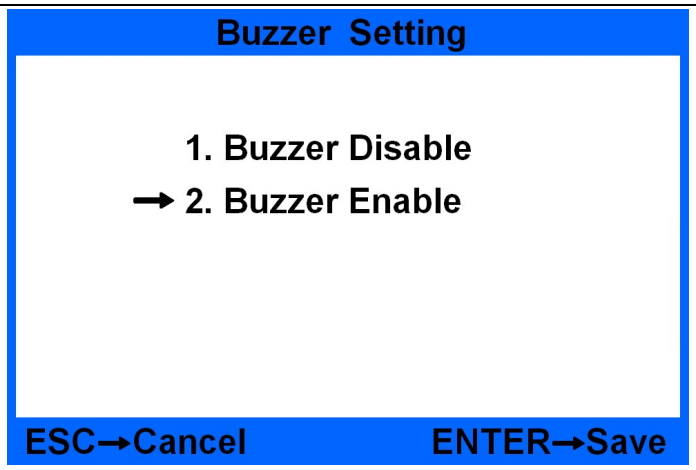


Fig.39

By pressing "" or "" key to set the buzzer function ON/OFF, then press ENTER key to save. Press ESC will quit from the interface.

The default setting is buzzer enable.

8.5.4 Start way setting

Under Fig.39 interface to choose item 4. Auto/Manual and then press ENTER key to come into the following setting interface, shown as Fig.43:

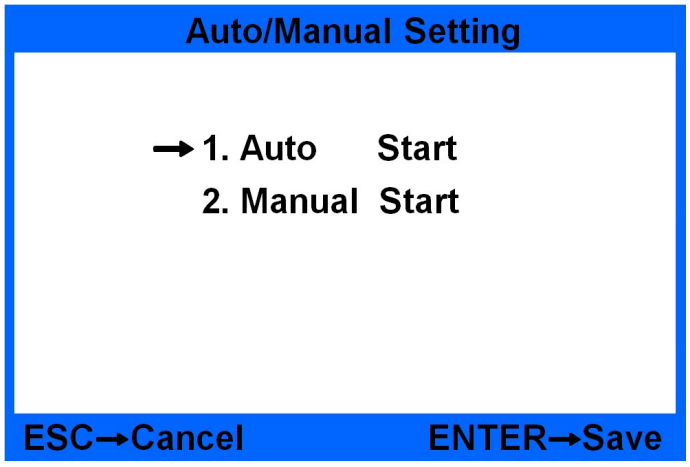


Fig.43

Press "" or "" key to choose automatic machine start or manual machine start. After setting, press ENTER key to save. Press ESC will quit from the interface.

The default setting is auto start.

8.5.5 Dust proof cover setting

Under Fig.39 interface to choose item 5. Cover and then press ENTER key to come into the following

setting interface, shown as Fig.44:

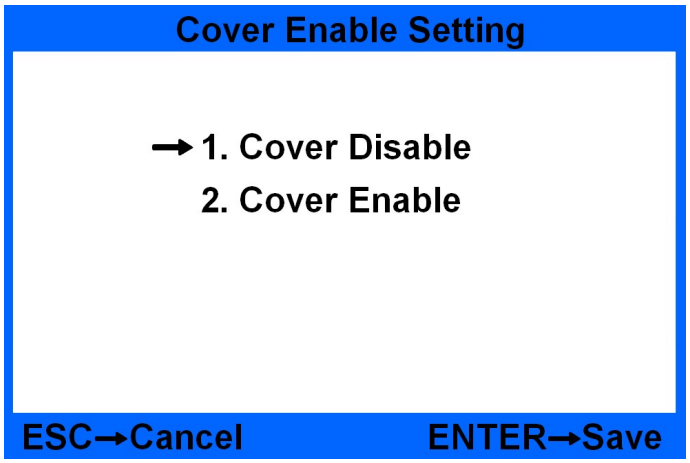


Fig.44

Press "" or "" key to choose cover ON/OFF. After setting, press ENTER key to save. Press ESC will quit from the interface.

The default setting is cover disable.

8.5.6 Default setting

Under Fig.39 interface to choose item 6. Default setting and press ENTER key to confirm. After inputting the passwords 1234, it will come into the following interface, shown as Fig.45:

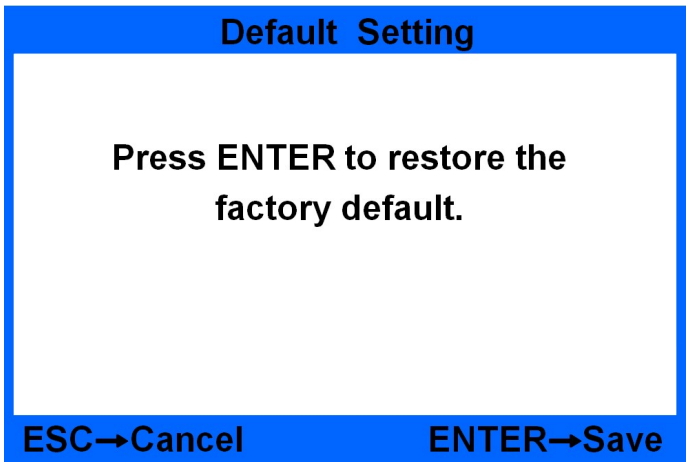


Fig.45

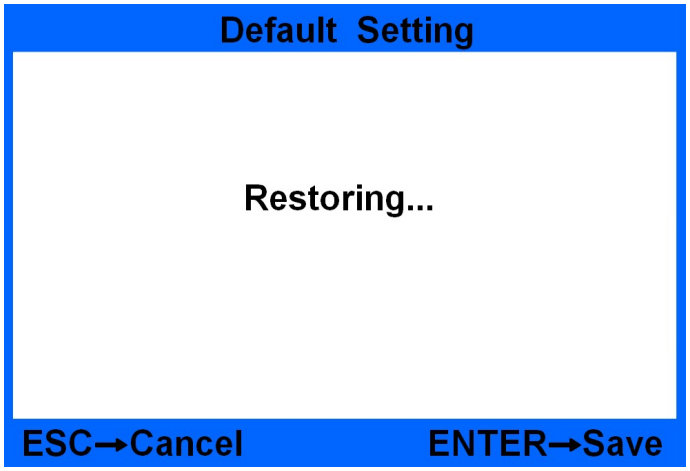


Fig.46

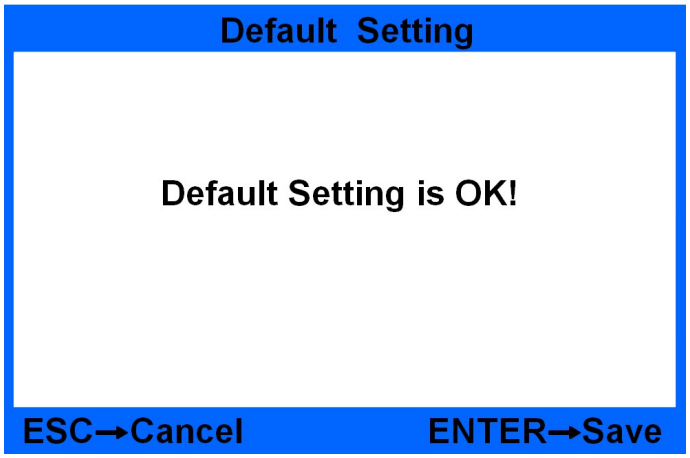


Fig.47

By following the indicative message on the screen, press ENTER key to confirm. After restoring successfully, it will display the messages “Default setting is OK!”, shown as Fig.47.

8.5.7 CIS calibration

Under Fig.39 interface to choose item 7. CIS calibration and press ENTER key to confirm. After inputting the passwords 0508, it will come into the following interface, shown as Fig.48:

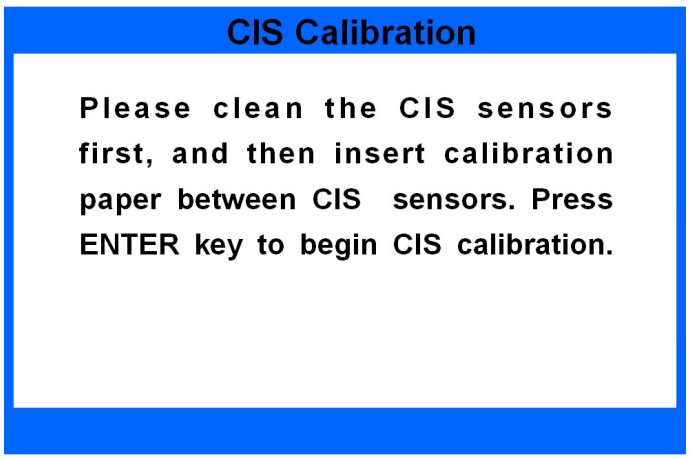


Fig.48

Before you begin the CIS calibration, please make sure you have inserted the calibration paper correctly, otherwise it will cause problem. The calibration paper must cover the whole CIS sensor.

8.5.8 IP address setting

Under Fig.39 interface to choose item 8. IP setting and then press ENTER key to come into the following interface and then set the IP address by pressing the numeric keys:

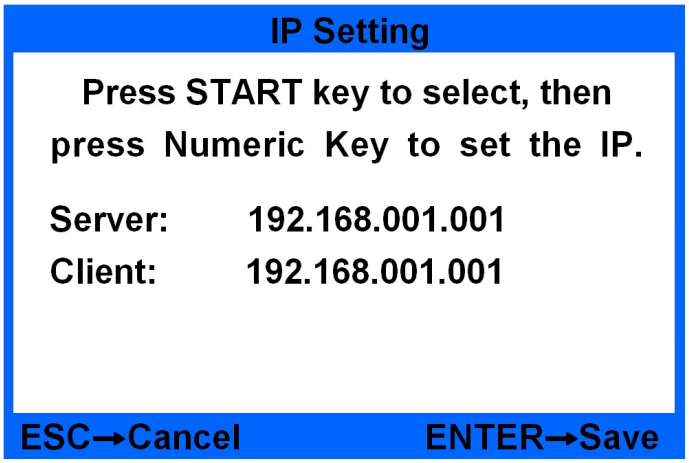


Fig.49

8.5.9 Port Setup

Move the cursor to Fig.39 choose No.9 and press ENTER to enter into Peripheral Devices Setting as below picture, you can choose to connect with Printer or PC through RS232 port

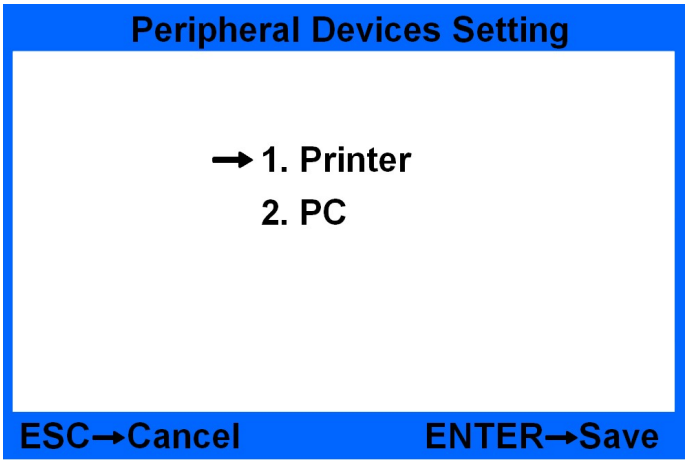


Fig.50

8.5.10 Baud Rate Setting

Move the cursor to Fig.39 choose No.10 and press ENTER to enter into Baud Rate Setting as below picture, you can choose the baud rate according the external devices' baud rate.

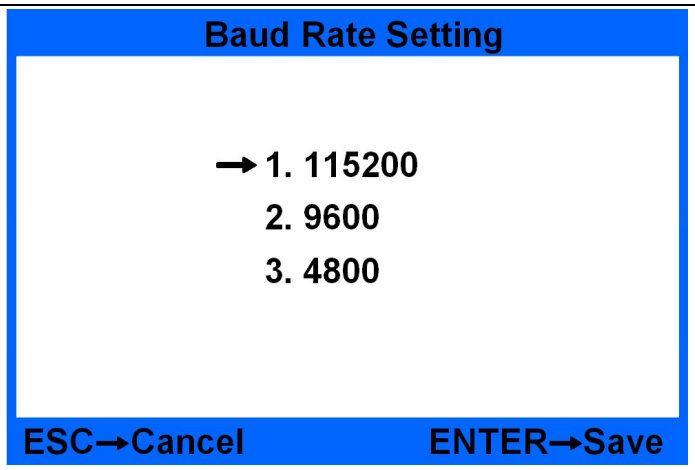


Fig.51

8.5.11 Other functions

Prefix/serial number switch function setting interface：

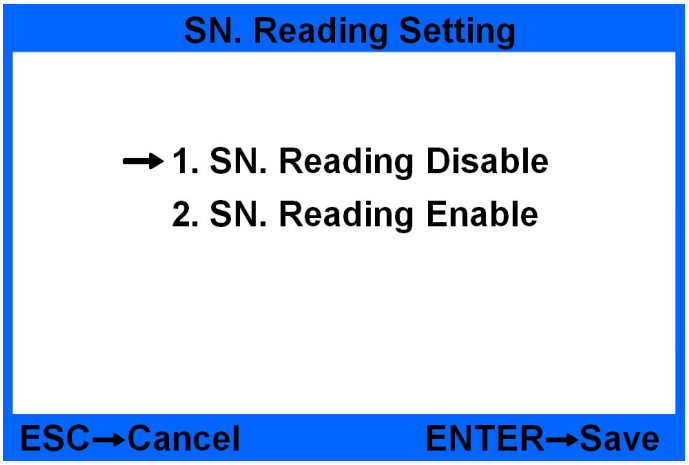


Fig.52

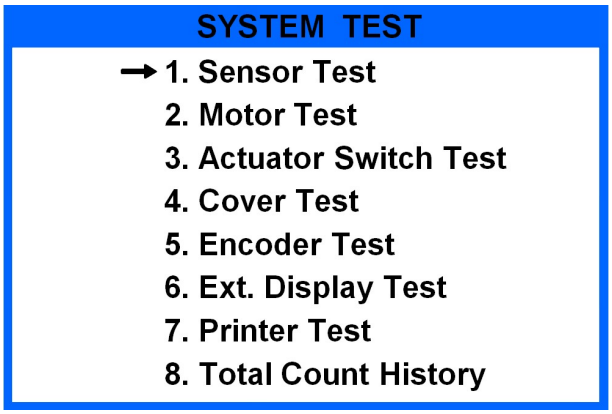
Software version view interface：



Fig.53

8.6 Sensitivity Setting for QT sensor

Turn on the power switch and press “8 SET” key to enter into SYSTEM TEST interface.



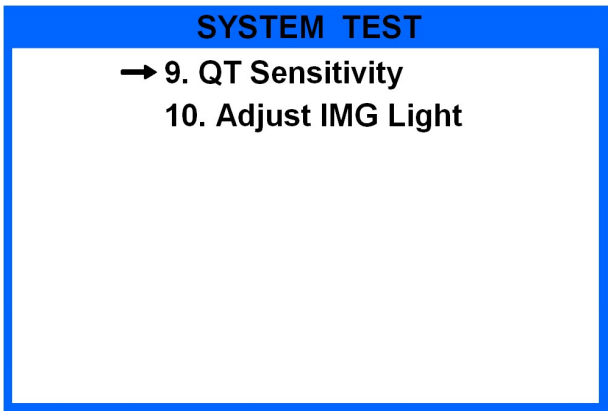


Fig.54

Choose No.9 and press ENTER to enter into QT sensitivity level setting interface. The factory default setting is level 3, means highest sensitivity. Level 1 means lowest sensitivity. Press ENTER key to save and exit level setting interface

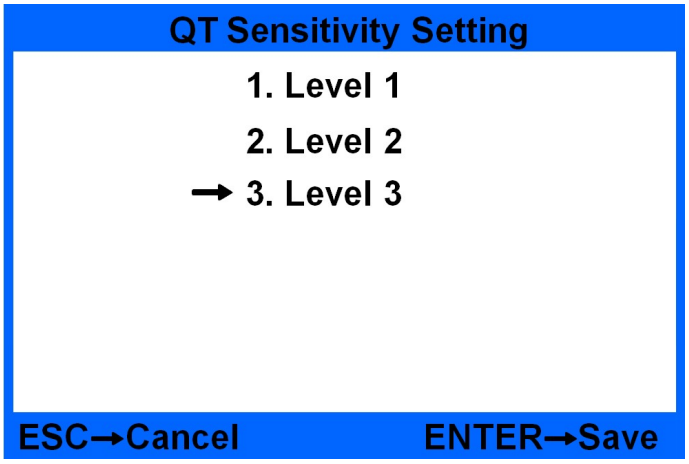


Fig.55

9. Troubleshooting

9.1 Common errors

During use of machine, sometimes you may meet some abnormal situation and the machine cannot work normally, and the machine will display error messages. The following sheet shows the error message, possible reason and detailed solution. Please do trouble shooting according to the following solution. If you can not solve the problem with the provided solution, please contact your local distributor.

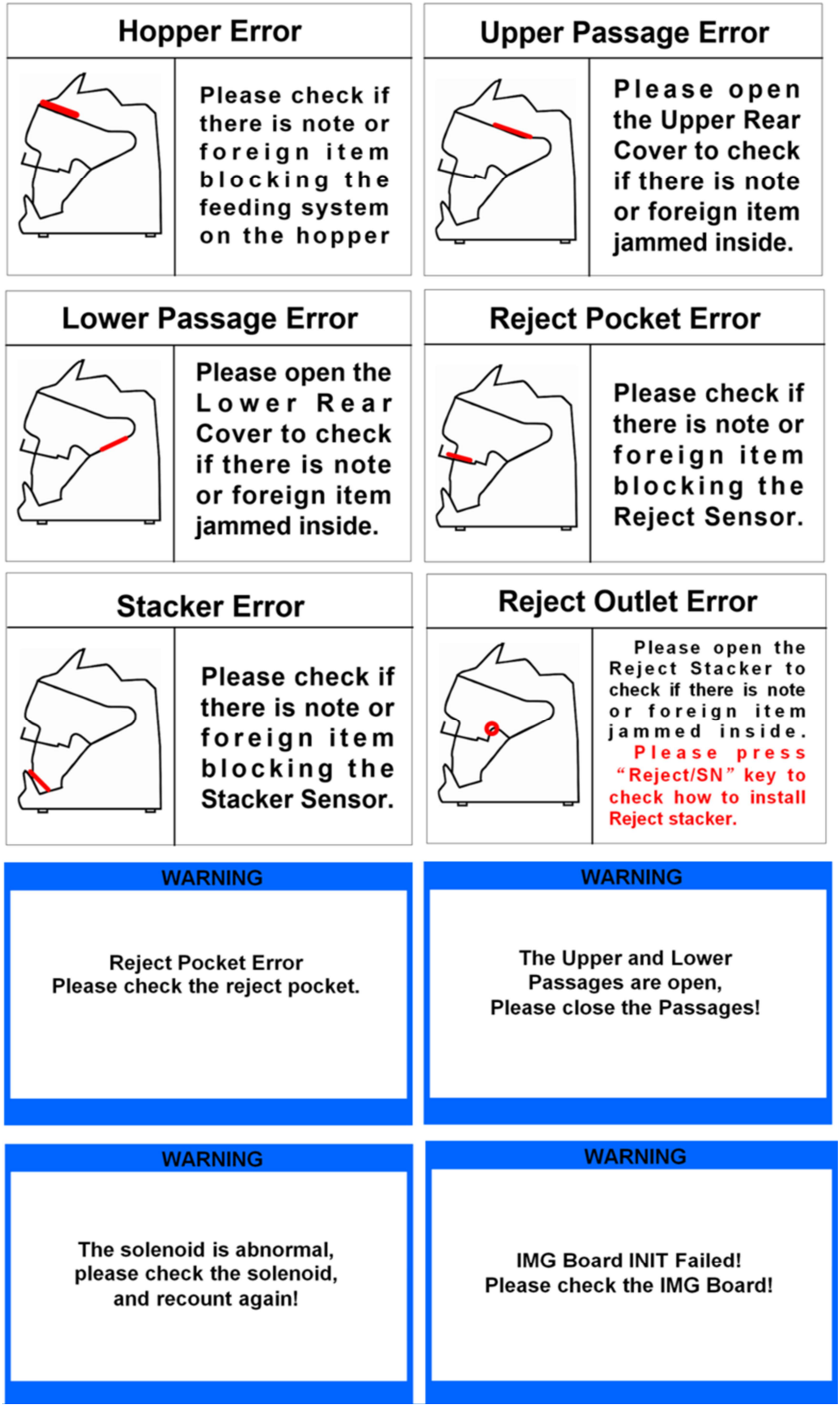

Hopper Error
Please check if there is note or foreign item blocking the feeding system on the hopper
Upper Passage Error
Please open the Upper Rear Cover to check if there is note or foreign item jammed inside.
Lower Passage Error
Please open the Lower Rear Cover to check if there is note or foreign item jammed inside.
Reject Pocket Error
Please check if there is note or foreign item blocking the Reject Sensor.
Stacker Error
Please check if there is note or foreign item blocking the Stacker Sensor.
Reject Outlet Error
Please open the Reject Stacker to check if there is note or foreign item jammed inside. Please press "Reject/SN" key to check how to install Reject stacker.
WARNING
Reject Pocket Error
Please check the reject pocket.
WARNING
The Upper and Lower Passages are open,
Please close the Passages!
WARNING
The solenoid is abnormal,
please check the solenoid,
and recount again!
WARNING
IMG Board INIT Failed!
Please check the IMG Board!

Fig.56

9.2 Banknote jamming and solution

If the notes get jammed during counting progress, there will be warning messages displayed on the screen. You need to take out the jammed notes firstly and then press START key to check if there is still hidden jammed notes. Last, press CLEAR key to clear warning message. If the machine still displays “JAM”, you will need to open the machine and take out the notes from interior passage.

Once jamming happens, please recount the notes to avoid counting mistake.

*After clean the sensor and passagewell, please press “

” key to clear the error interface and enter into main interface to go on counting.

*If after checking, there is no foreign items blocking the sensor, and after press “

” key there is still error interface, please refer to service manual to do trouble shooting.

10. Software Upgrade

This model adopts flash drive (USB) upgrading method for software upgrade. Please copy the upgrading file into the flash drive, and insert the flash drive into the USB port at the back of machine. Hold on pressing the START key, and then turn on the power switch, you will find the choosing interface as follows:



Fig.57

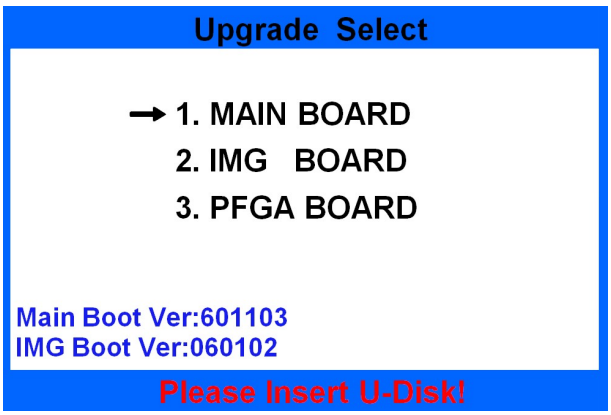


Fig.58

***If the USB flash drive is inserted well, the display will show “USB is Ready!”, otherwise it will show “Please insert the U-Disk!”.**

For the upgrading file, it is not allowed to change its name and format, otherwise will cause upgrade failure.

10.1 MAINBOARD upgrading

Under interface Fig.38, press "" or "" key to choose "1.MAINBOARD", and then press ENTER key to start software upgrading, shown as Fig.59. If there is no software file or file name is not correct, it will display warning messages shown as Fig.60.

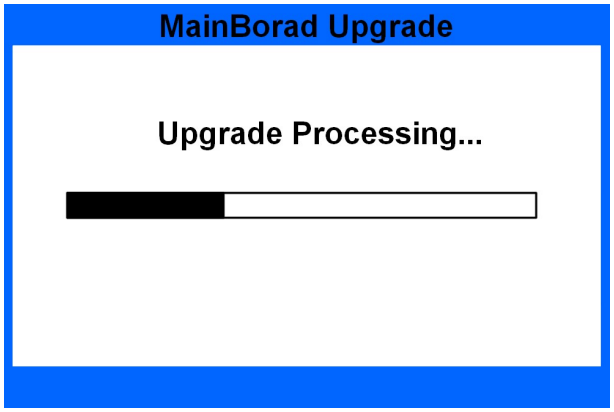


Fig.59

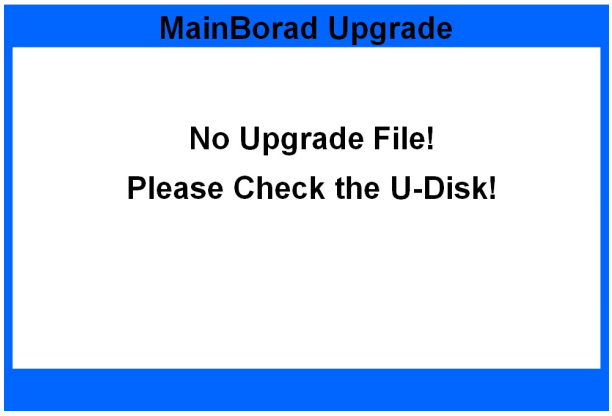


Fig.60



Fig.61

After software upgrade, please restart the machine referring to the following message.



Fig.62

10.2 IMAGEBOARD upgrading

Under interface Fig.58, press“ ”or “ ”key to choose “1. IMG BOARD” and then press ENTER to start software upgrading, shown as Fig.58. If there is no software file or file name is not correct, it will display warning messages shown as Fig.61.

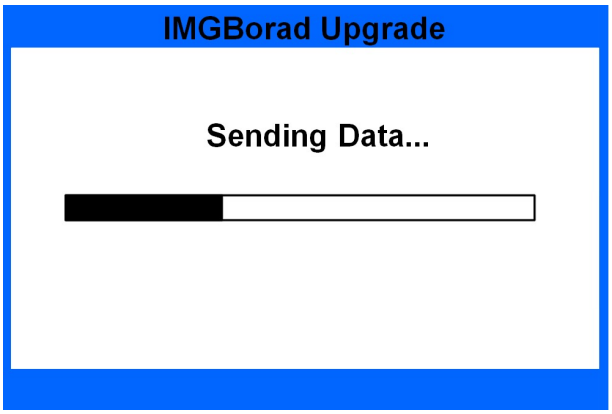


Fig.63

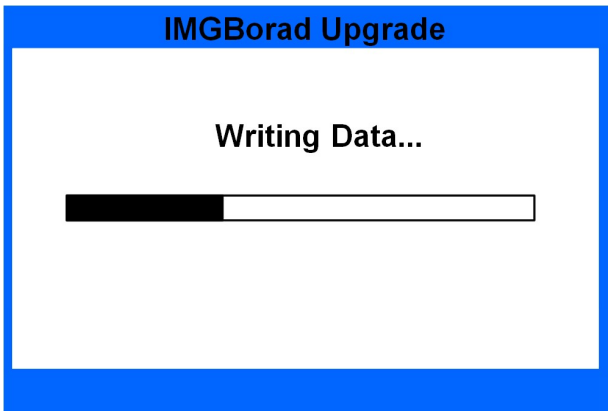


Fig.564

After software upgrade, please restart the machine referring to the following message.

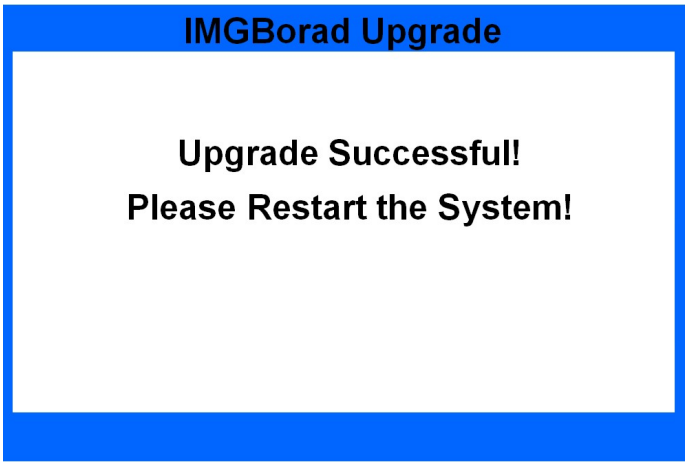


Fig.65

11. Image Collection through PC

11.1 Operating Environment of PC Software

Please get the upper PC software from the agent, and then install software 

, and then open the software 

.

11.2 Config the IP Address

11.2.1 Config the IP address of PC

a）Windows xp system：Please set the IP address as below picture and save it.

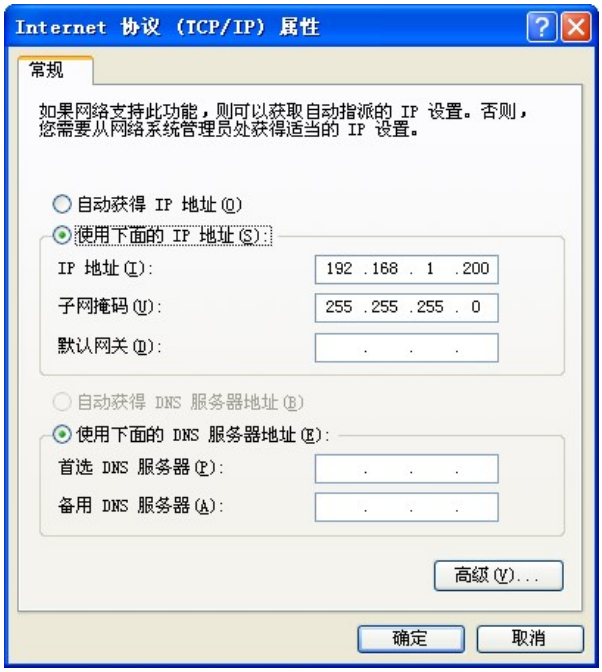


Fig.66

b）Windows 7 system：Please set the IP address as below picture and save it

11.2.2 Configure the IP of machine

The factory default setting of IP address is as below:

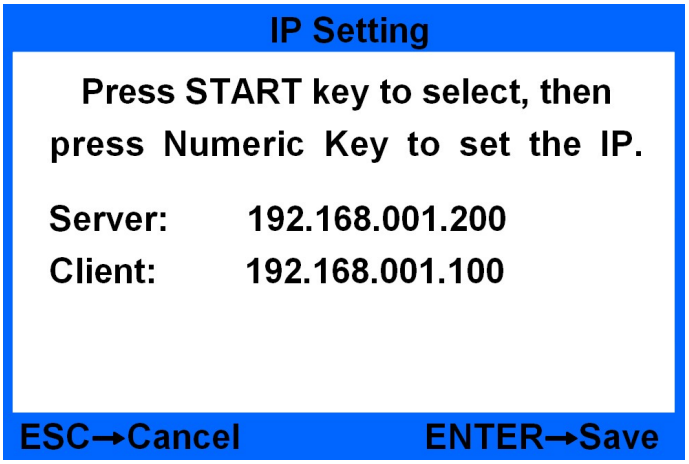


Fig.67

If it is not the IP address as Fig.67,you need to revise it, USER SETTING-→BASIC SETTING→IP SETTING, You can revise the number according to the hints on machine, use START key to move position.

11.3 Notes collection

There are two ways for collection, USB collection and LAN port collection,You can collect notes images and notes information

11.3.1 Error images collection

The error images collection is used when machine have frequent error code or feeding is not smooth. You can only collect notes images, and it can collect 40pcs notes at one time.

a）If you use USB to collect(it takes one minute to collect one note, so we suggest to use LAN to collect if there are many notes), please connect USB to machine(>=1G, format 32), and choose setting"2. Save Error IMG to U-Disk", and return to main interface(you can put 40pcs notes at most and CAN NOT choose EUR mode.)

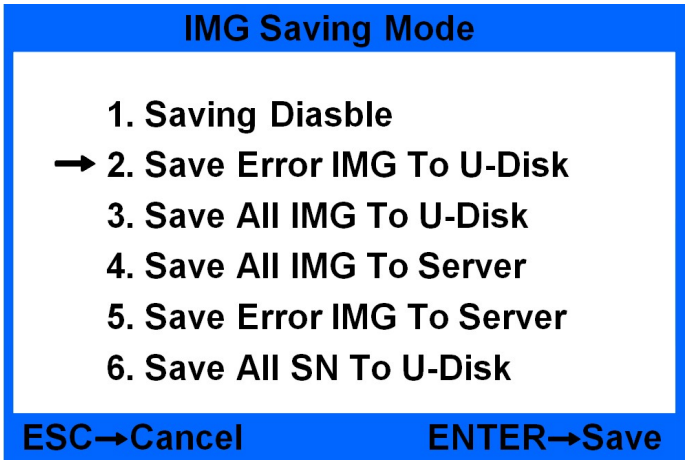


Fig.68

b）If you use PC software to collect, please connect the machine with PC, and choose "**5. Save Error IMG To Server**", open the PC software, return to main interface and collect(you can put 40pcs notes at most and CAN NOT choose EUR mode)

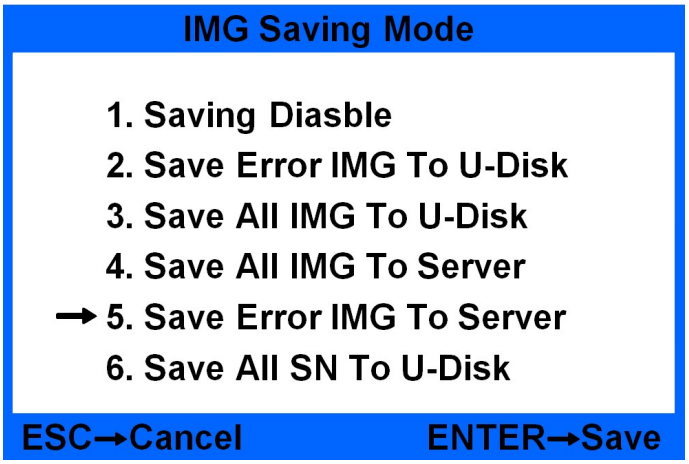


Fig.69

11.3.2 Notes information collection

Notes information collection is used to develop new currency software and analyse fake notes. The data is more complete, the operation steps is as below:

a）If you use USB to collect, please connect USB to machine(>=8G, format 32), and choose setting as below picture, and put the notes into the hopper, the notes information will be collected automatically. You can check the information in Data menu (you CAN NOT choose EUR mode to collect).

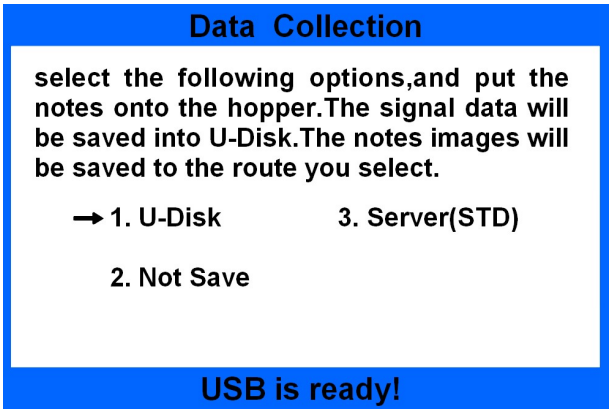


Fig.70

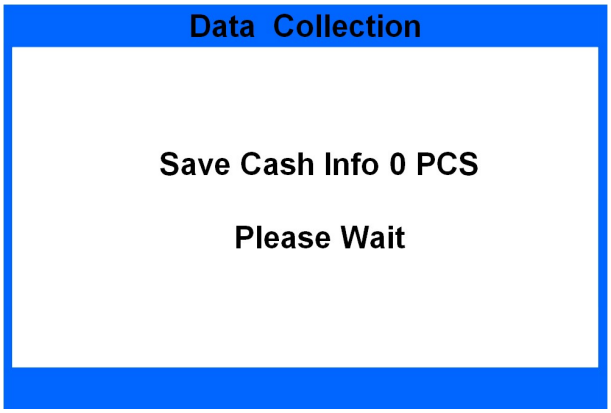


Fig.71

b）If you use PC software to collect, please connect the machine with PC, and choose setting as below picture, open the PC software, you can put notes into the hopper and the it will start collection automatically, you can check the information under Data menu(you CAN NOT choose EUR mode).

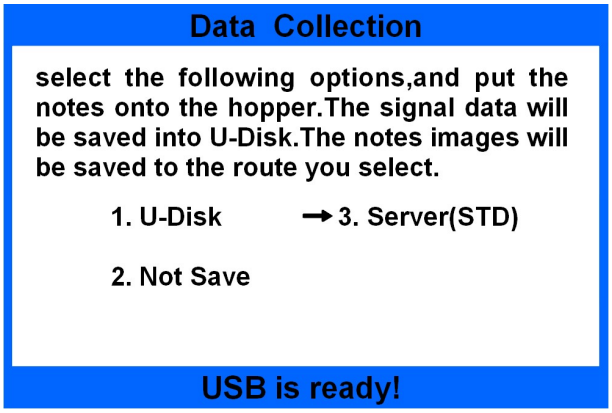


Fig.72



Fig.73

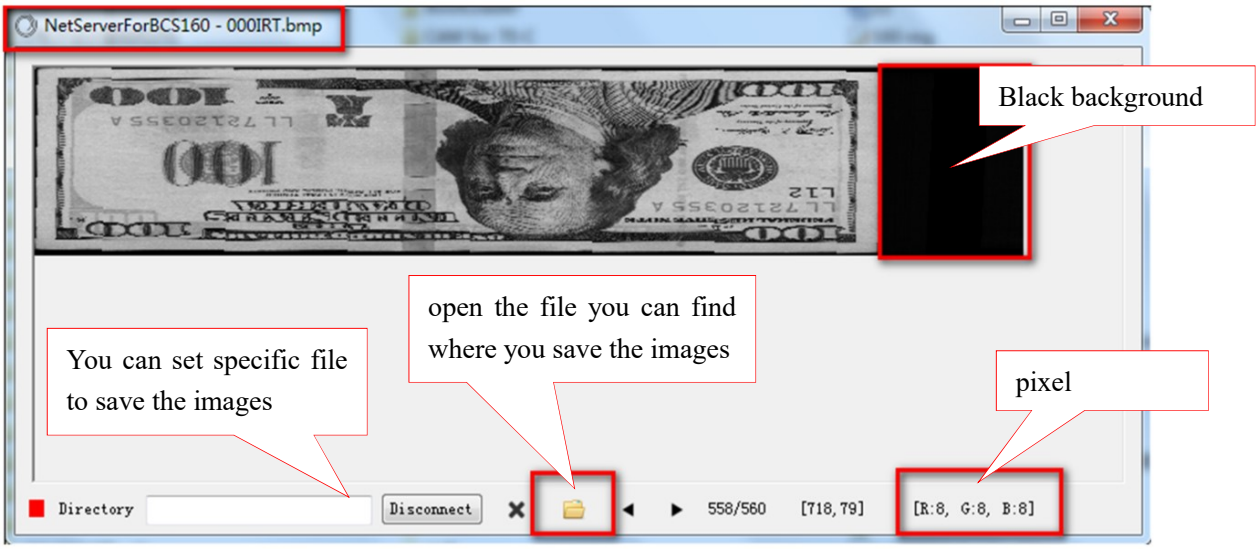


Fig.74

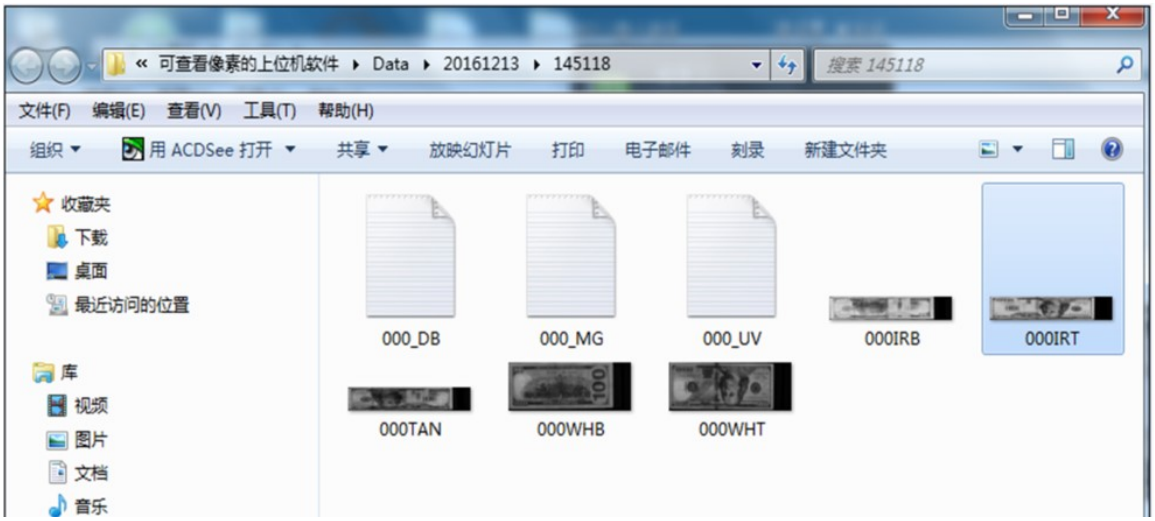


Fig.75

11.4 Notes

If there are many notes rejected during counting, you need to collect Error notes images according to 11.3.1, the maximum quantity you put on hopper is 40pcs.

For new currency development, please choose NON-EURO mode, under Data Collection interface(the machine will stop to save data every 10pcs notes). Please prepare 200pcs notes for each denomination, collect at ABCD four different orientations and save into four separate files. Please refer to 11.3.2.

For fake notes collection, you need to choose the corresponding currency, under Data Collection interface(the machine will stop to save data every 10pcs notes). Please prepare 200pcs notes for each denomination, collect at ABCD four different orientations and save into four separate files. Please refer to 11.3.2.

For Euro notes collection, no matter to collect Error notes image or collect notes information, you need to set the speed under 800 or 1000.

12. How to check the counting list

12.1 connect the serial cable

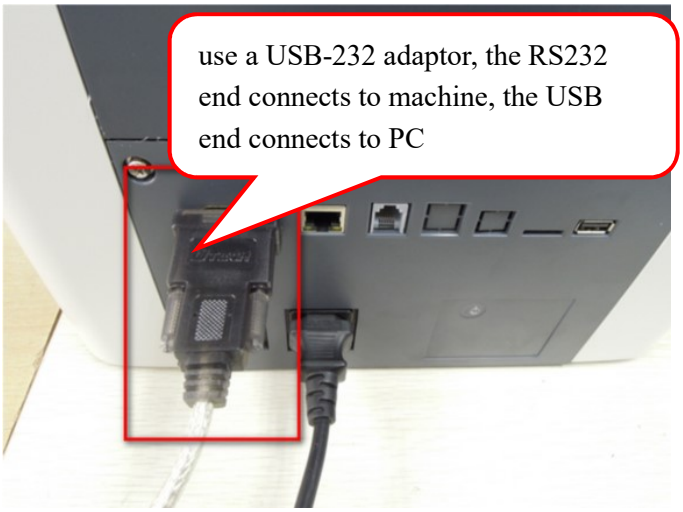


Fig.76

12.2. Machine setup

Turn on the machine, press SET key, choose “Peripheral Devices “and choose “2.PC “use ↑↓

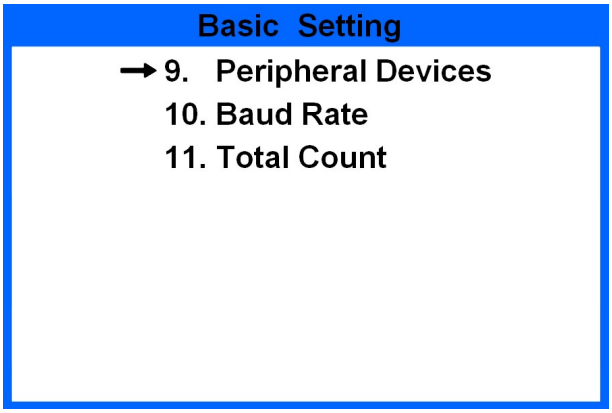


Fig.77

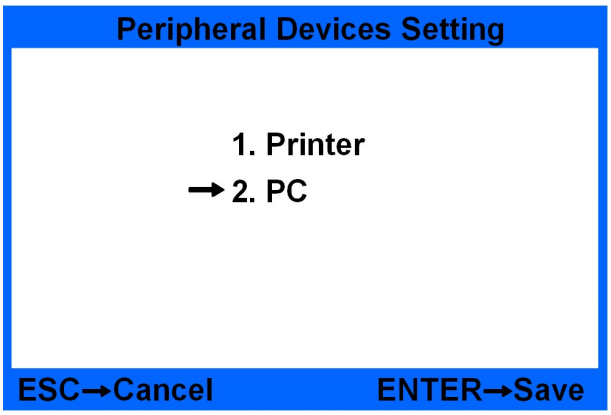


Fig.78

12.3 Collect list information

Open our PC software 

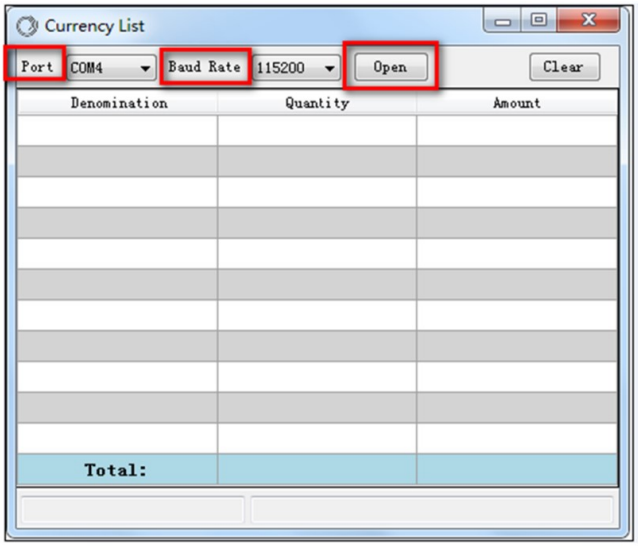


Fig.79

Choose the serial port and baud rate, press Open and the count the notes you will see the detailed information.

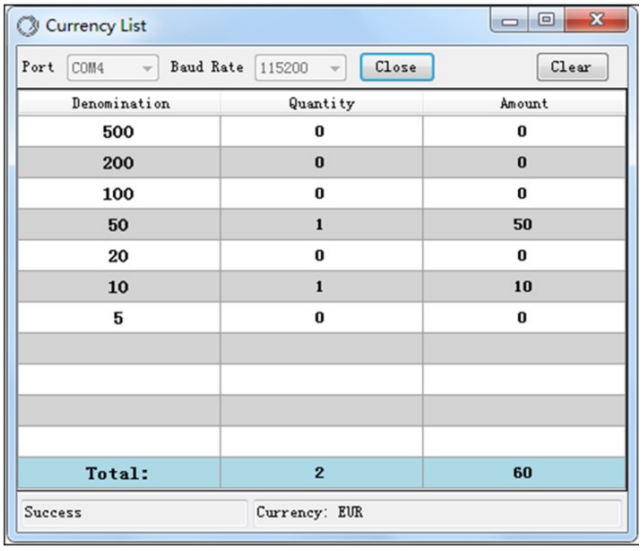
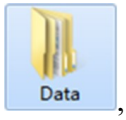
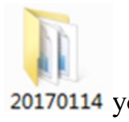


Fig.80

In the meantime there will generate a file named Data 

, open the file 

you will find the list information



Fig.81

13. Daily Maintenance

Any dust, dirty objects or other substances can stick to the sensors and disturb the normal work of the sensors and then cause inaccurate counting result, so please clean the sensors and rollers everyday with the provided cleaning kit.

Please turn off the power switch before starting the cleaning in order to avoid any risk of electric shock or other injury.

Please do not use any chemical agent or water such as benzene, thinner which may cause the color fading or crack of the machine.

13.1 Clean the hopper sensor

Please use a brush or clean cloth to clean the hopper sensor(QT).

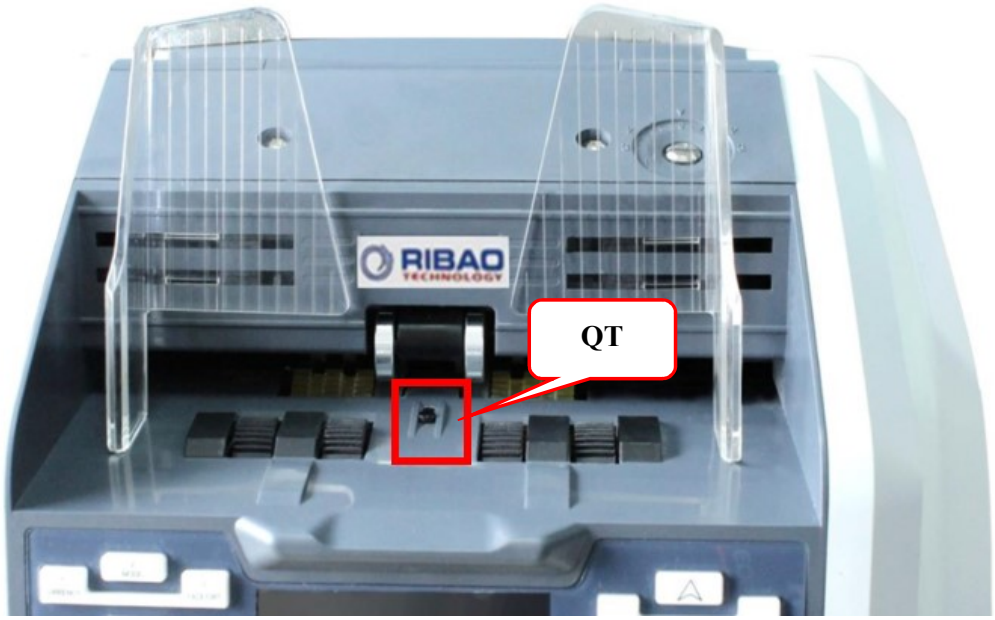


Fig.82

13.2 Clean the drum roller shaft and feed roller shaft

Please use a brush or clean cloth to clean the drum roller shaft and feed roller shaft.



Fig.83

13.3 Clean the leak sensor

Please use a nylon brush or clean cloth to clean the leak sensor (ST), circled in below picture.

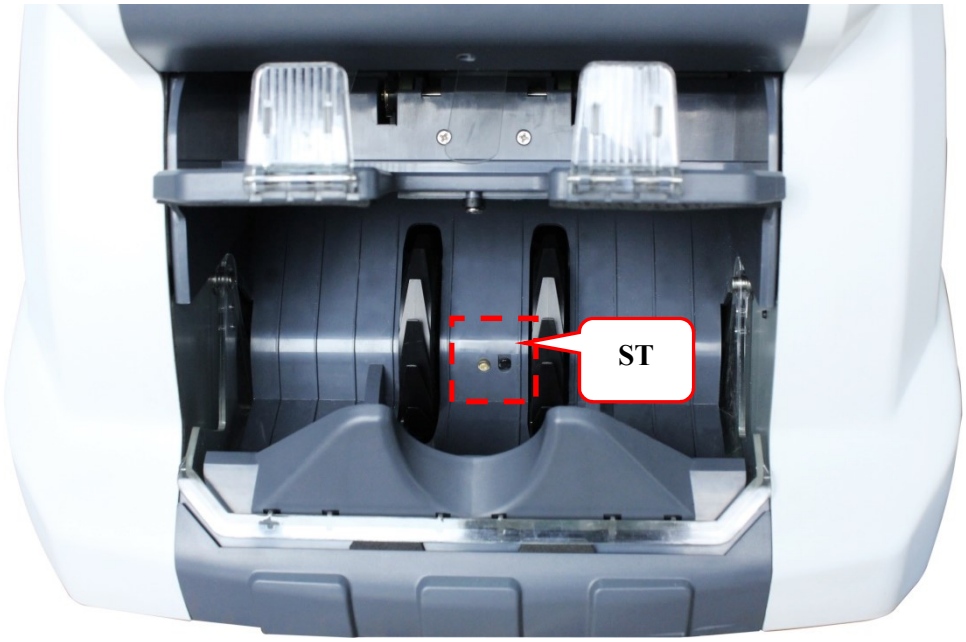


Fig.84

13.4 Clean the inside sensor

1) Pull the button to open the back cover.



Fig.85

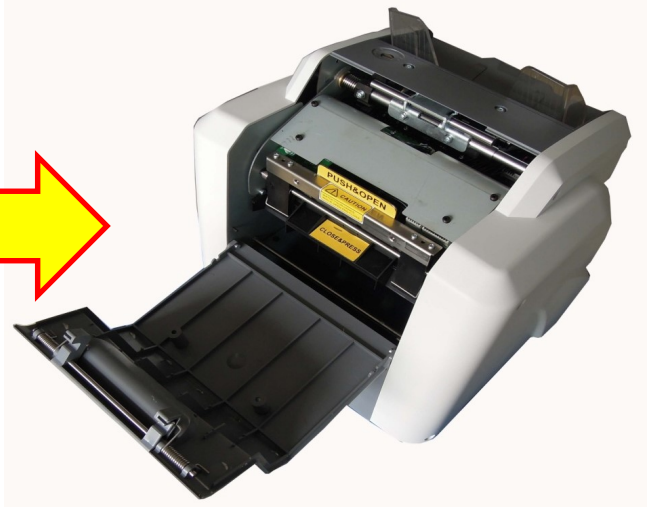


Fig.86

2) Press and push forward the metal bar to open the interior passage.



Fig.87



Fig.88

3) Clean the following sensors PS2, MG, MT, CIS and UV1.

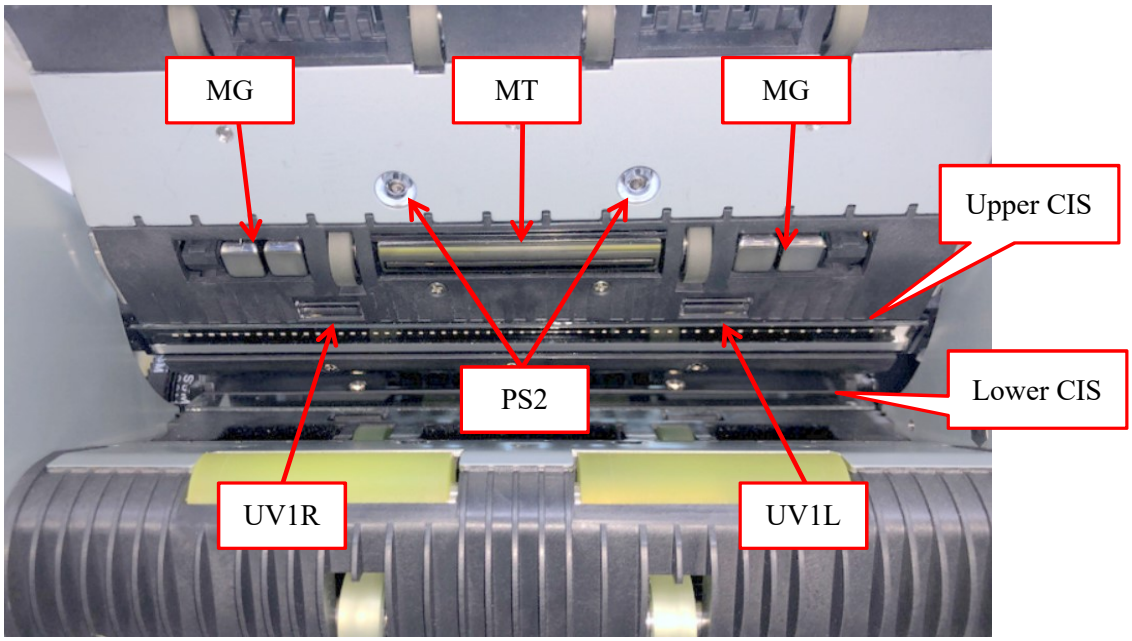


Fig.89

4) Clean the following sensors **PS1, UV2M, PS3 and brush shaft.**

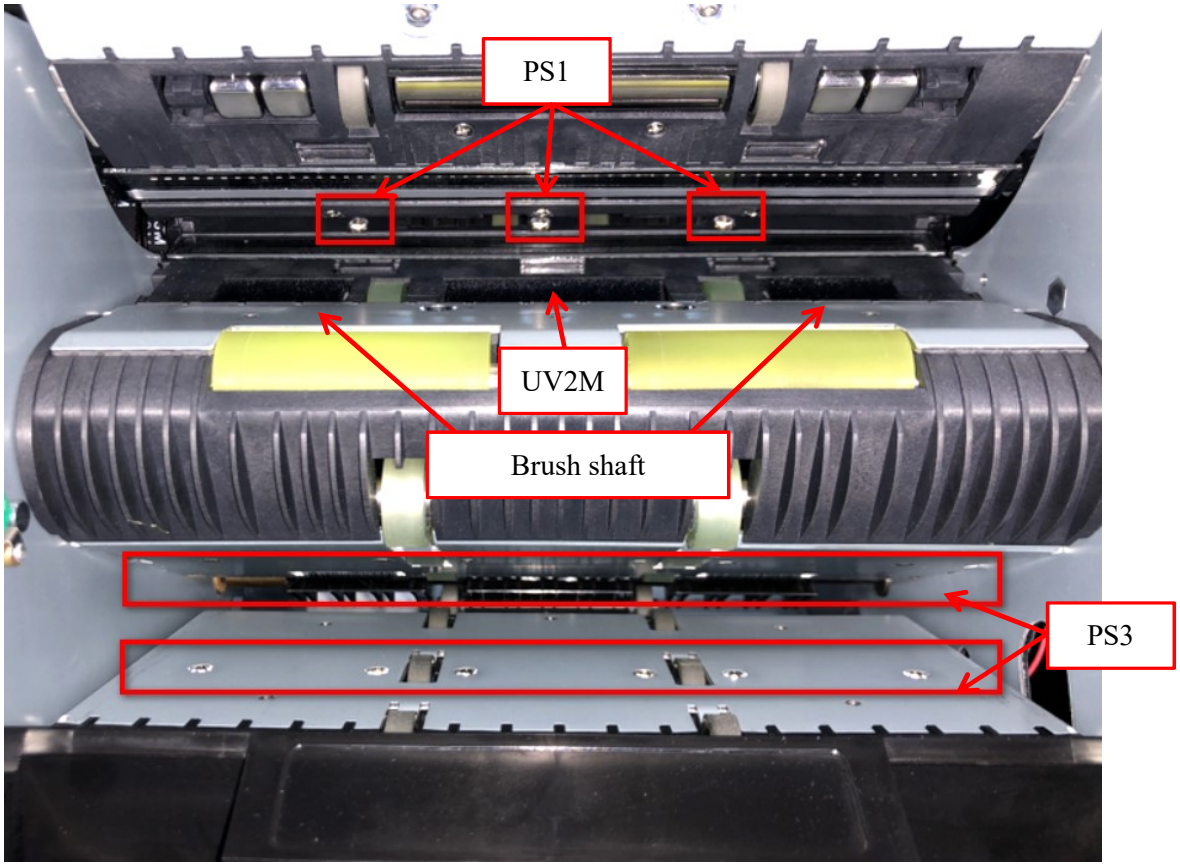


Fig.90

5) Take out the reject pocket as following picture and then clean the sensors PS4 & RJ. When you install back the reject pocket, you must protect the banknotes pressing plate as below：

●Hold both ends of reject pocket with two hands, and pull the reject pocket out of the rack horizontally：



Fig.91

●please check below the sensors that needed to be clean：

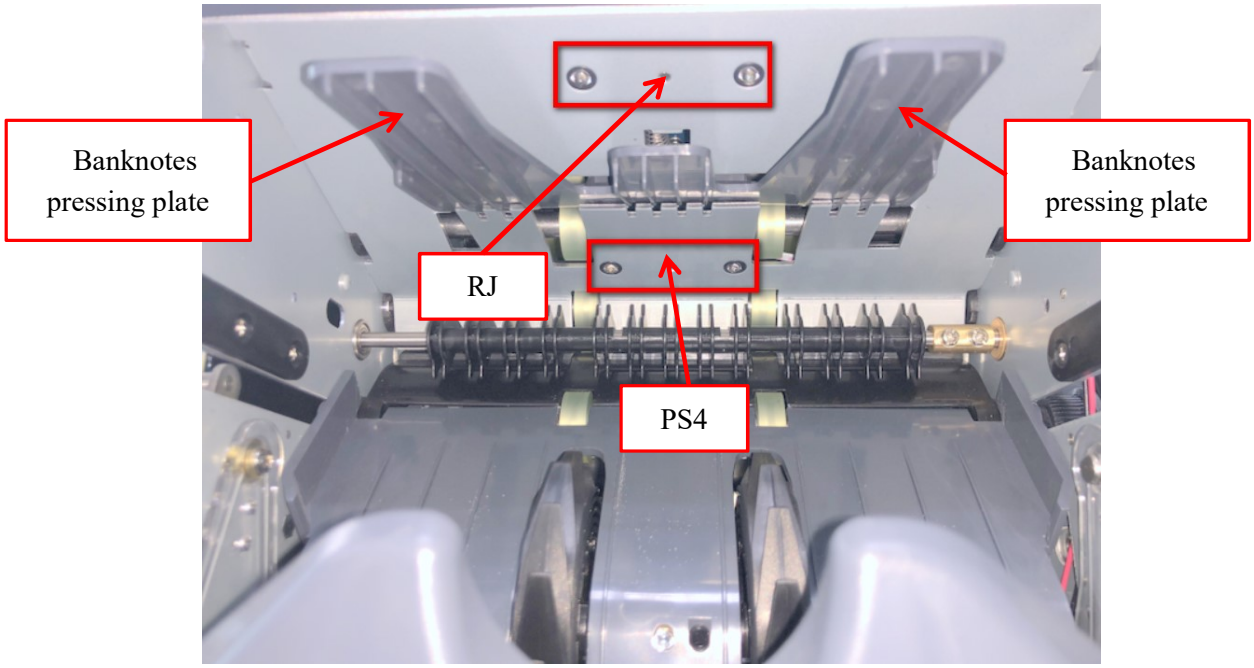


Fig.92

●when the cleaning is completed, please install back reject pocket as below instructions: take the reject pocket to make it level, and press the two feet of the banknote block horizontally upward by another hand：

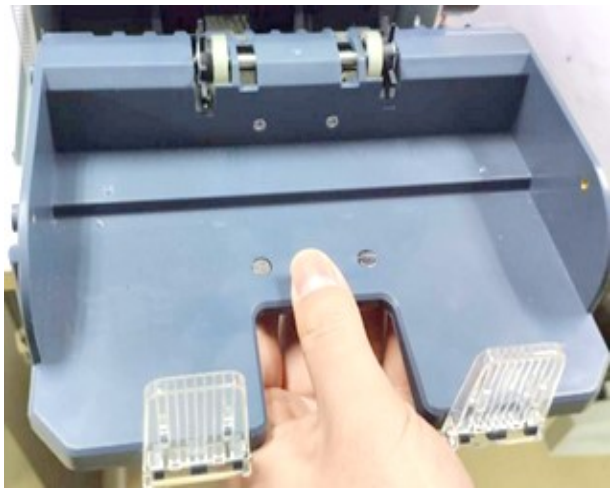


Fig.93

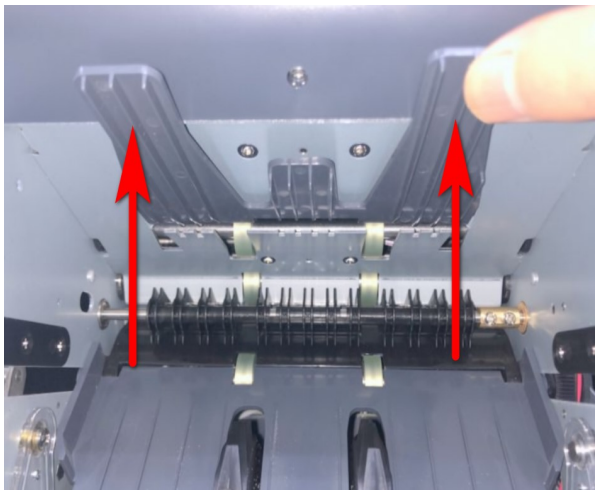


Fig.94

●Align the slots on both sides of reject pocket with the rails on both sides of the rack, and load the reject pocket into the rack horizontally

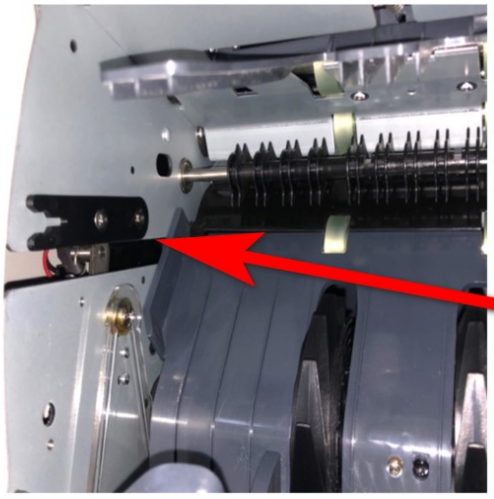


Fig.95

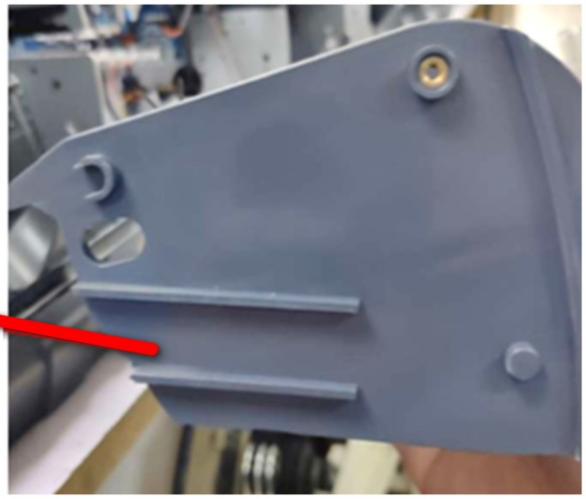


Fig.96

●Push the reject pocket horizontally and frontward, and then press frontward hard by both hands until you hear the sound of "click" on the left and right sides, it indicates that the reject pocket t is assembled properly



Fig.97

●Push the feeding roller forward by hand as below first picture, at same time, check whether the two D18 pressure rollers and D22 axle wheels as below second picture are in full contact with each other.

If they are in full contact with each other when complete one rotation, it indicates the assembly is in place. If there are untouched points during one rotation, it indicates that the assembly is not in place and it may cause jamming and splashing problem, please take down the reject pocket and install it again as instructions until it is in place

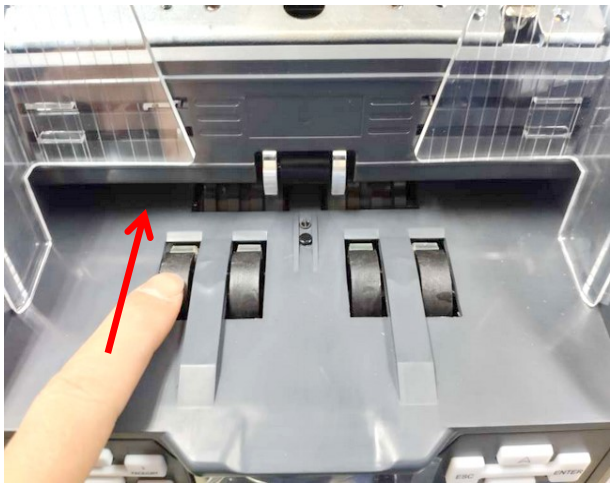


Fig.98

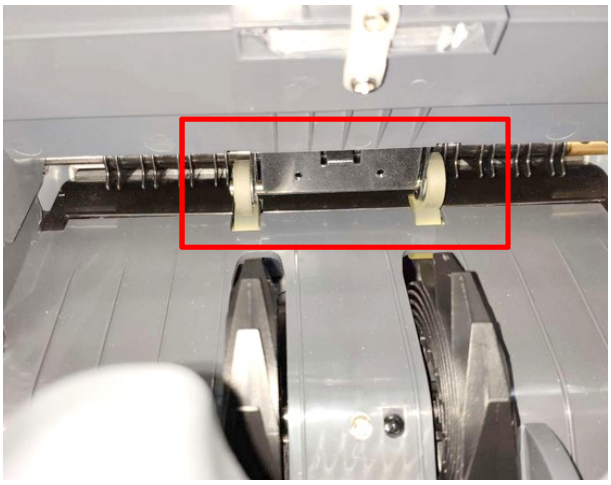


Fig.99

14. Accessories

1. Power Cord	1PCS
2. Plastic Brush	1PCS
3. Operation Manual	1PCS
4. Check package (Option)	1PCS
5. External Display (Option)	1PCS
6. External Printer (Option)	1PCS

***** In the interests of our policy of continual product improvement, specifications are subject to change without notice *****