

BC-30

Currency Counter



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 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 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

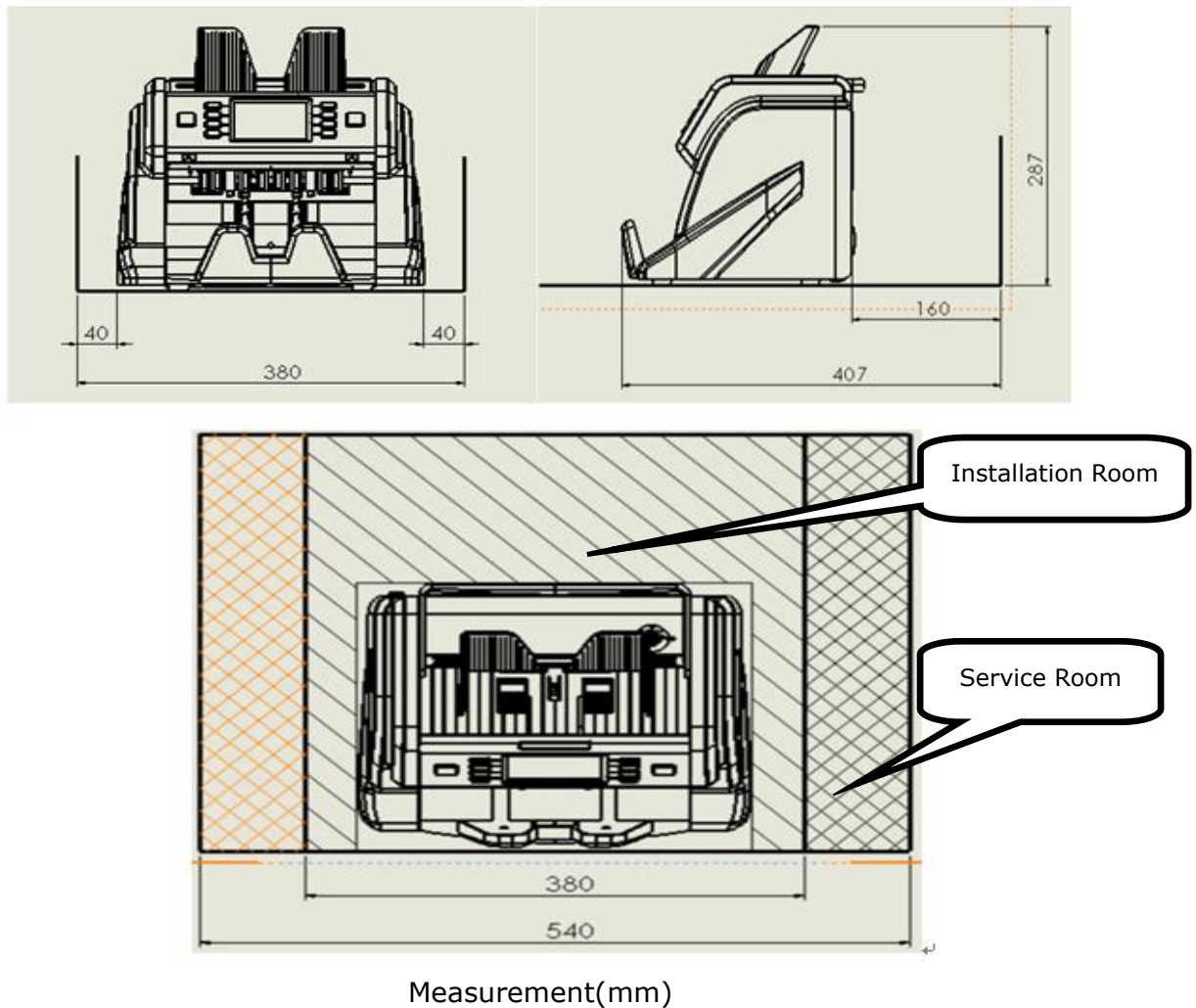
2.1 Installation Notice

- 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.



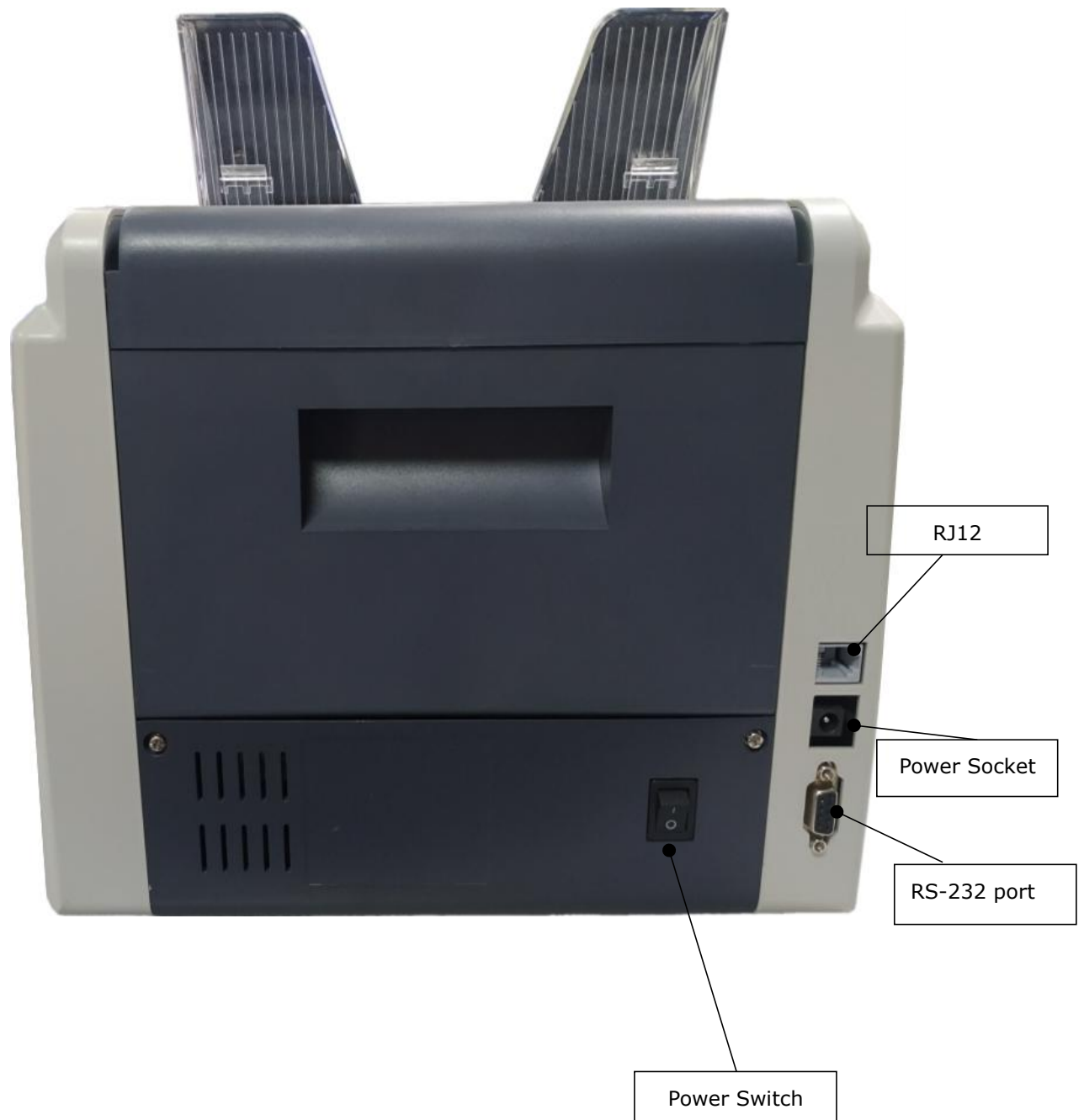
3. Diagram

3.1 Front Diagram

Hopper Extender



3.2 Back Appearance



3.3 Top Appearance



4. Specification


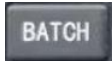

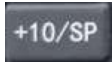
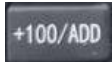





Dimension(W×L×H)	300mm×247mm×287mm
Net Weight	abt 7KG
Currency Support	Single
Power Supply	DC 15V 4.5A
Counting Mode	Piece counting with preset value
Counting Speed	900/1200/1500 pcs/min
Counterfeit Detection	UV
Other Detection	Width Detection, Double Detection, Half Notes Detection
Batch umber	0~200
Display	480×320 LED
Hopper Capacity	abt 500pcs
Stacker	200pcs
Countable Notes Size	Length: 120mm~180mm Width: 50mm ~90mm
Countable Notes Thickness	0.05mm~0.15mm
Power Consumption	Sleeping Mode ≤15W During Operation ≤50W
Working Noise	Idle running ≤ 60dB, operation ≤ 75dB
Software Upgrade	RS-232 Port
External Display	Optional Part
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

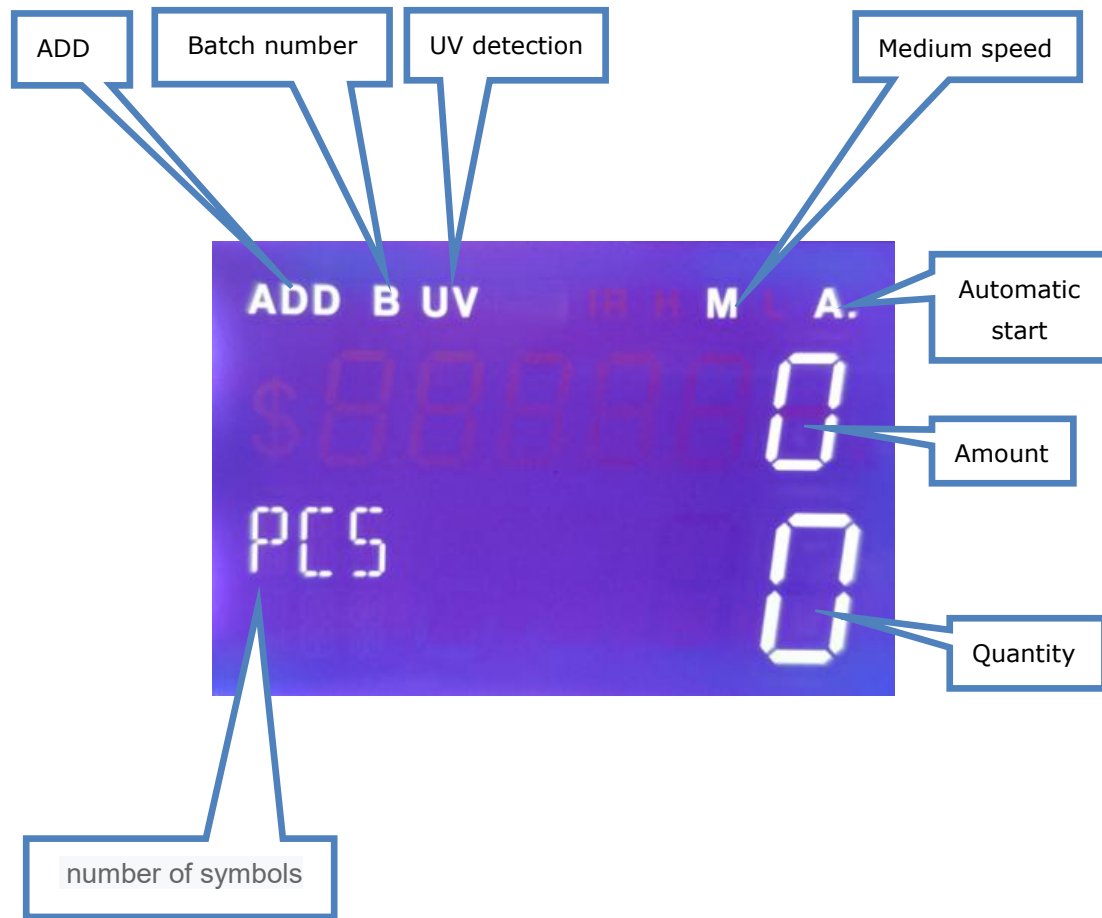
5.1 Display Interface



5.2 Key Function Explanation

- : Clear the data; Escape to upper interface
- : Batch set
- : +1; Counterfeit detection set
- : +10; Speed set
- : +100; Accumulative counting set
- : Value set
- : Automatic/Manual start set; Increase the level under SET mode
- : Ageing key; Decrease the level under SET mode
- : User set
- : Start key; Enter the function setting interface; Save settings.

5.3 Software Interface Explanation



6. Operation Instruction

6.1 Operation

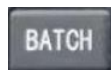
Connect the machine with power supply and turn on the machine, the machine will enter loading interface, showing the firmware version as below picture, 101110 is the firmware version as an example.



Then the machine will enter below main operation interface.



6.2 Batch Set



Press **BATCH** key to activate batch counting function. After successful setting, there will be a sign of B on the upper left corner. The default setting of batch number is 0, 10, 20, 50, 100. When batch function is OFF, the sign of B will disappear. The maximum default batch number is 200, so when the counting quantity reaches 200, the machine will stop.



6.3 Counterfeit Detection Set

Press **+1/CF** key one time, it will activate UV detection, see as below picture.



Press **+1/CF** key two times, it will turn off UV detection, see as below picture,



6.4 Speed Set

There are totally three levels, highest speed at 1500pcs/min(H), medium speed at 1200pcs/min(M), lowest speed at 900pcs/min(L). Press **+10/SP** key to switch the speed from the lowest to highest. There will be also the sign of H,M,L on the upper right corner after successful set, see as below picture.




6.5 Accumulative Counting(ADD) Set

Press **+100/ADD** key under any kind of counting mode, the accumulative counting (ADD) function can be turned on, at the same time, there will be a sign of ADD shown on the display as below picture.



A) Put a batch of banknotes on the hopper, after counting or the stacker is full, the machine will show the total amount and quantity of this counting; remove the notes and put on the hopper again, continue counting, the amount and

quantity on display will be accumulated. Press  key to clear the total amount and quantity.

B) During counting if any error detects, the machine will stop with error code for reminder, then you need to remove the suspected banknote and then press



key to continue counting.

6.6 Value Set

***Mark: this model is only suitable for single currency counting, it does not suitable for other currencies. Please press VALUE key to set the denomination.**

For example, if this machine is only suitable for counting Euro, then it is not suitable for other currencies.

Press VALUE key continuously, the denomination will switch according to this sequence 500-200-100-50-20-10-5-1



PS:

1) For the currency with denomination "1"

- a. Customer can turn on the detection according to actual need and start counting.
 - b. Customer can turn off DD .etc function, then you can count the quantity for mixed denomination.
- 2) For the currency without denomination "1"
Customer can turn off DD .etc function, then you can count the quantity for mixed denomination.

6.7 CNT mode




Under CNT mode, the machine only counts the quantity of banknotes.

- 1) Press VALUE key until the denomination shows 1




- 2) Press SET key to enter into user setting mode, press SET key continuously until it shows dd as below picture, the "2" means the DD level is level 2



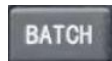
- 3) please press  key, at this moment the "dd" will blink. Press  or  key, you can change the default detection level of DD from level 2



to 0, it means the DD is turned off . press  key again to save, and the "dd" will stop blinking.



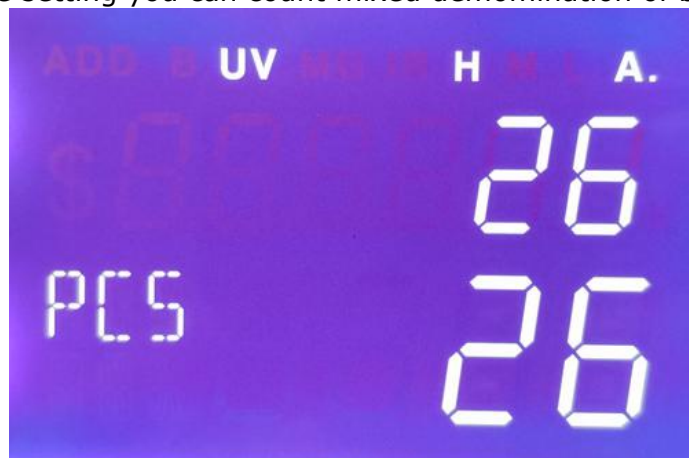
4) Press  key to exit main interface, press  key to turn off the



batch function, you can press  to turn off UV detection.



5) After above setting you can count mixed demomination of banknotes



"26" means the quantity of current counting.

6.8 Manual/Automatic Counting Set



Press  key to switch between Auto and Manual mode.

Auto Mode: There will be a sign of A. on the upper right corner after successful set. Put the banknotes on the hopper, the machine will count the banknotes automatically.

Manual mode: There will be a sign of M. on the upper right corner after successful set. Put the banknotes on the hopper, the machine will start to count

only after you press  key manually.




Auto Mode



Manual Mode


6.9 Firmware Version Check

Press  key to check the current firmware version.




101110 is the current firmware version.

6.10 User Setting

Press  key to enter into user setting interface as below picture, press SET key continuously, the detection symbol on left corner will switch according to **bAT-UV-dd-db-SET-CC-bUZ** in circle.


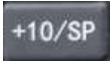

6.10.1 Batch setting

If the default Batch number does not satisfy you, you can also set manually, the setting range is 0-200.


- 1) Press  key to enter into setting interface, until the left corner shows "bAT"





- 2) Press  key, "bAT" will blink

- 3) press    key to adjust your desired number, for example, 155 as below picture shows:







4) Press  key to save, "bAT" will stop blink.

5) Press  key to return to main interface, and press  key several times until it shows 155 and then release, after one second the 155 will disappear. Then the machine will stop automatically when it reaches 155.



6.10.2 UV detection level setting


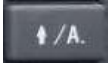

The UV displayed at the left corner means UV detection level, the range is 0-3, 3 is the highest level and the default setting is level 2.

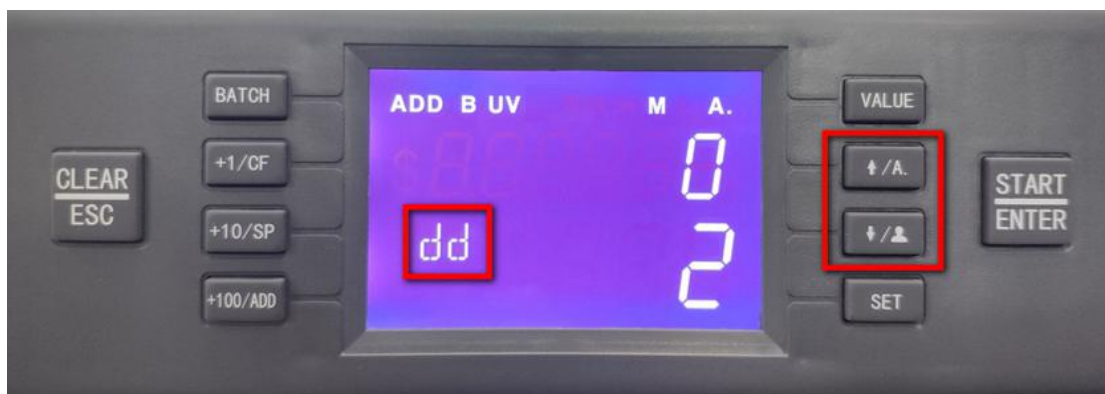
If you want to adjust the detection level, please press  key, at this moment the "UV" will blink. Press   key to adjust the detection level. After adjustment, press  key again to save, and the "UV" will stop blinking.



6.10.3 DD(size detection)detection level setting




The "dd" displayed at the left corner means width detection level, the range is 0-3, 3 is the highest level and the default setting is level 2.

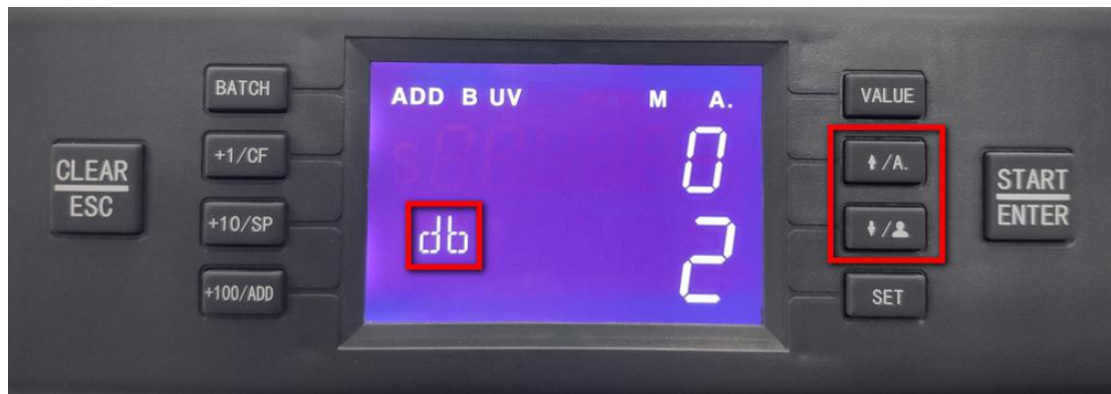
If you want to adjust the detection level, please press  key, at this moment the "dd" will blink. Press  key to adjust the detection level. After adjustment, press  key again to save, and the "dd" will stop blinking.



6.10.4 DB(double notes)detection level setting

The db displayed at the left corner means double detection level, the range is 0-3, 3 is the highest level and the default setting is level 2.

If you want to adjust the detection level, please press  key, at this moment the "db" will blink. Press  key to adjust the detection level. After adjustment, press  key again to save, and the "db" will stop blinking.



6.10.5 Historical record check

Press **SET** key to enter into setting interface until the left corner shows "CC":







"824" means this machine has totally counted 824pcs notes.

6.10.6 Buzzer setting

Press **SET** key to enter into setting interface until the left corner shows "bUZ":



Under this interface, 0 means the buzzer is turned on, 1 means the buzzer is turned off, the default setting is 0

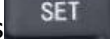
If you want to turn off the buzzer, please press  key, at this moment "bUZ" will blink. Press  or  to adjust it to be 0 or 1. After finish adjustment, press  key to save, "bUZ" will stop blink and the buzzer is turned off.



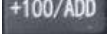
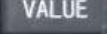
6.10.7 Activate/deactivate currency symbol "\$"

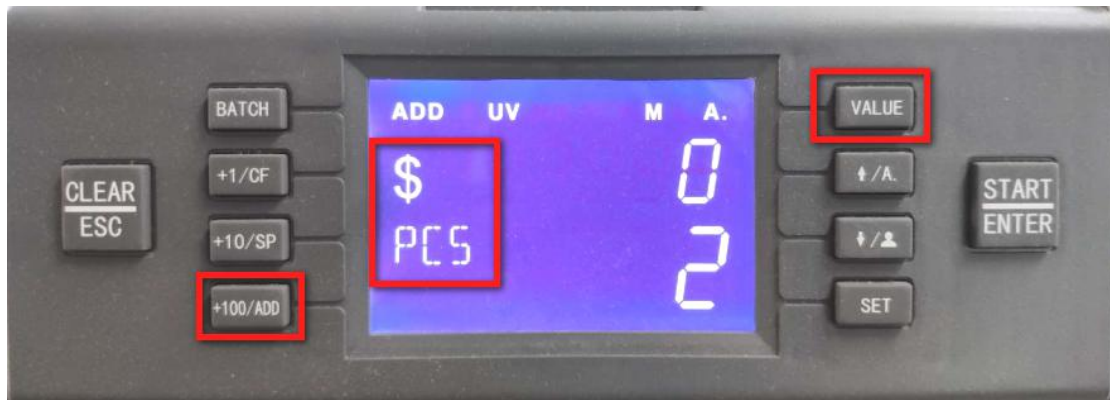
Currency symbol "\$" can be activated/deactivated according to needs.

6.10.8.1 Activate the currency symbol "\$"

Press  key to enter into debug interface, dd db MG interface are all available to make this change



Press  and  at the same time, it will show "\$" and "PCS" on display



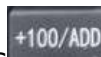
Press **CLEAR/ESC** key to exit to main interface, it will show "\$" on display



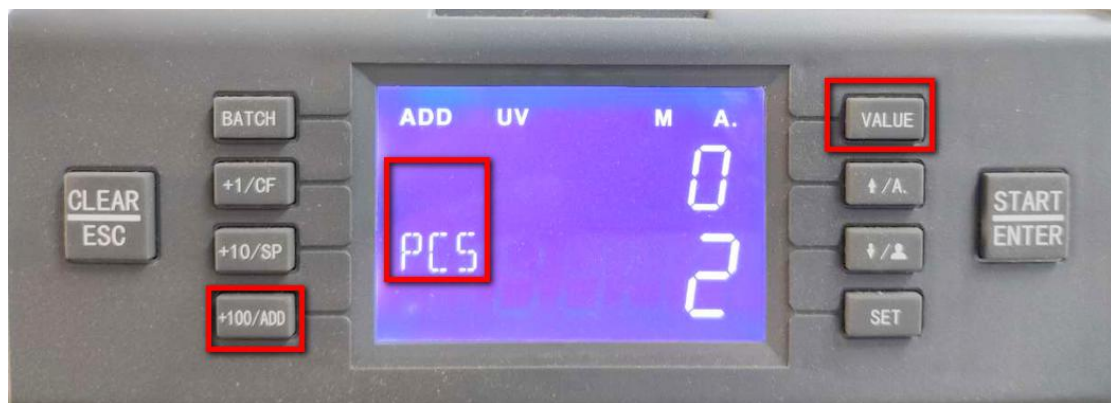
6.10.8.2 Deactivate "\$"



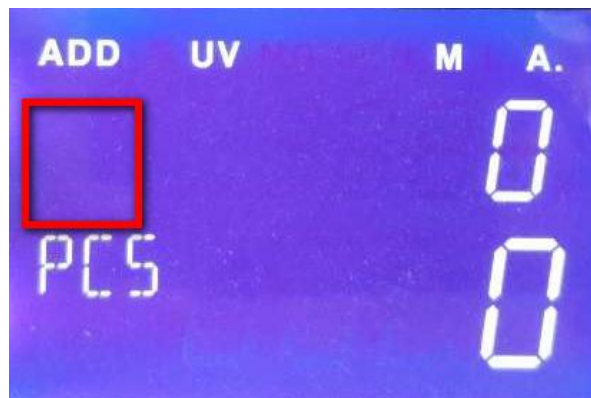
Press **SET** key to enter into debug interface, dd db MG interface are all available to make this change



Press **+100/ADD** and **VALUE** key at the same time, "\$" will disappear and only show "PCS" on display



Press **CLEAR ESC** key to exit to main interface, it will not display "\$" symbol anymore.



6.11 Restore to factory setting

Keep pressing **↑/A.** key and turn on the machine, until the left corner shows "ERR 888".



At this moment press **SET** key to switch, the left corner symbol will switch according to **bAT-UV-dd-db-SET-CC-dE-bUZ in circle, until it shows "dE"**.



Press **START ENTER** key, "1" changes into "0", it means the restore is successful and please restart the machine.



7. Trouble shooting

During operation, the machine may occur some abnormal situation and can not run normally, it will show error messages, please find below sheet for check. Please solve the error according to service manual, if the error still can not be fixed, please contact your local distributor.

Self-test error

Code	Error position	Cause	Trouble shooting indication
193	Hopper sensor	hopper sensor is blocked	check if hopper sensor is covered by dust or blocked
194	Stacker sensor	stacker sensor is blocked	check if the sensor is covered by dust or blocked. check if the sensor cable is loose
195	Left IR sensor	Left IR sensor is blocked	check if the sensor is covered by dust or blocked. check if the sensor cable is loose

196	Right IR sensor	right IR sensor is blocked	check if the sensor is covered by dust or blocked.
198	Right UV sensor	UV signal is abnormal	check if there are foreign items inside passage
199	Encode disk	Encode disk signal is abnormal, encode value <10 after turn on the machine	check if the encode disk cable is loose check if the motor can run normally when turn on the machine check if the encode sensor is abnormal

Counting Error codes:

Error code	Cause
111	Detect the back cover is opened and gives warning
121	Hopper sensor is covered for 3S but no notes pass
151	Double notes detected
200	Stacker is full
252	Right UV warning
451	Half notes detected
452/453	Chained notes detected
454	Inclined notes
551	Size error detected

8. Firmware Upgrade

The firmware upgrading is realized by serial port, before upgrading, please copy the mainboard firmware(.hex, **for example, yancj.hex**) into a special loader, (please do not change the file name or format). Please refer to the upgrading SOP.

Turn off the machine, use a USB cable to connect a DC 5V power supply, when the downloader shows green light, connect it with machine serial port, press the button of downloader, then turn on the machine, the downloader light changes from green to blue. Loose the button of downloader, the blue light keeps shining, it means the software is downloading. After finish downloading, the motor stops running, and the green light and blue light shine at the same time.

PS: after you turn on the machine, if the downloader does not change to be blue and blink, it means program is not upgraded successfully, please do following steps:

1. turn off the machine
2. disconnect the cable which supplies power to downloader, light will be off
3. reconnect the power cable of downloader, the green light will be on
4. hold the button of downloader and turn on the machine
5. Follow above steps until the blue light is on and blink and the program is burned in.

9. Daily Maintenance

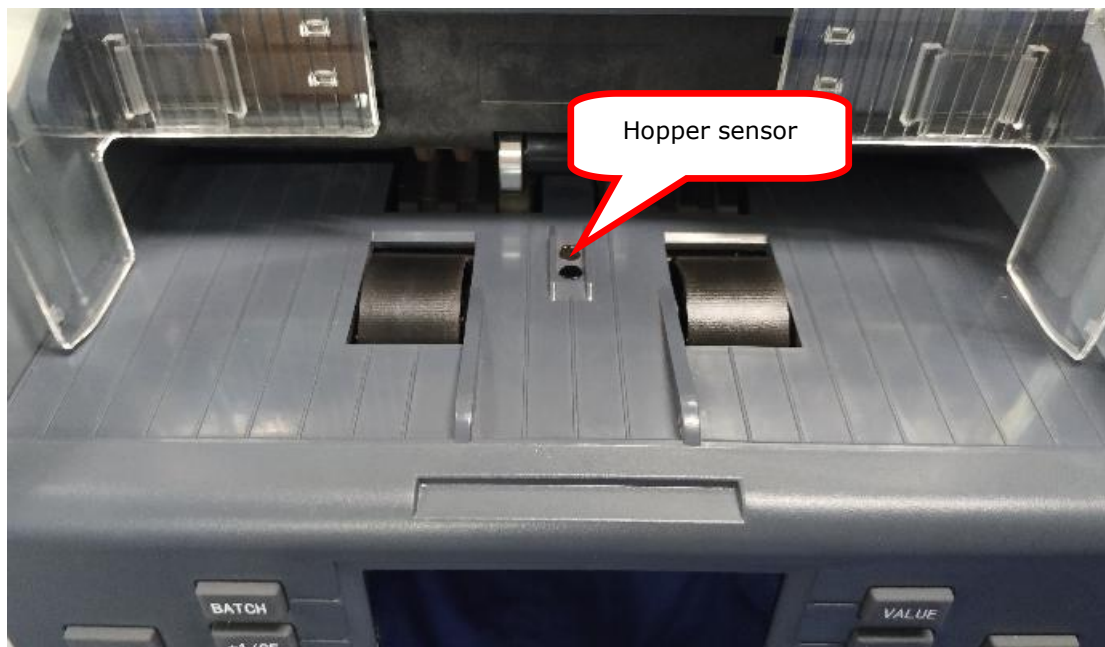
Any dust or dirty or foreign items sticking on the sensor will influence the normal working of sensor, and cause wrong counting. So, please use the cleaning tools equipped with the machine to clean the CIS and shaft.

Before cleaning, please turn off the power supply to avoid electric shock or other accidents.

Please do not use chemical liquid like benzene or diluent or water to clean the machine, since those liquids may cause machine broken or color fading.

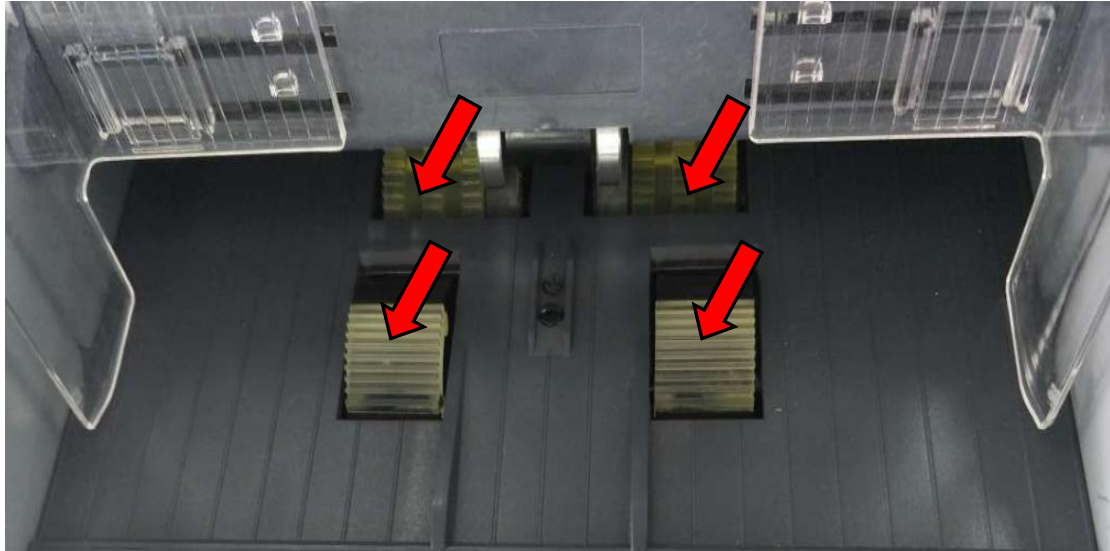
9.1 Clean the Hopper Sensor

Please use nylon brush or clean cloth to clean the hopper sensor.



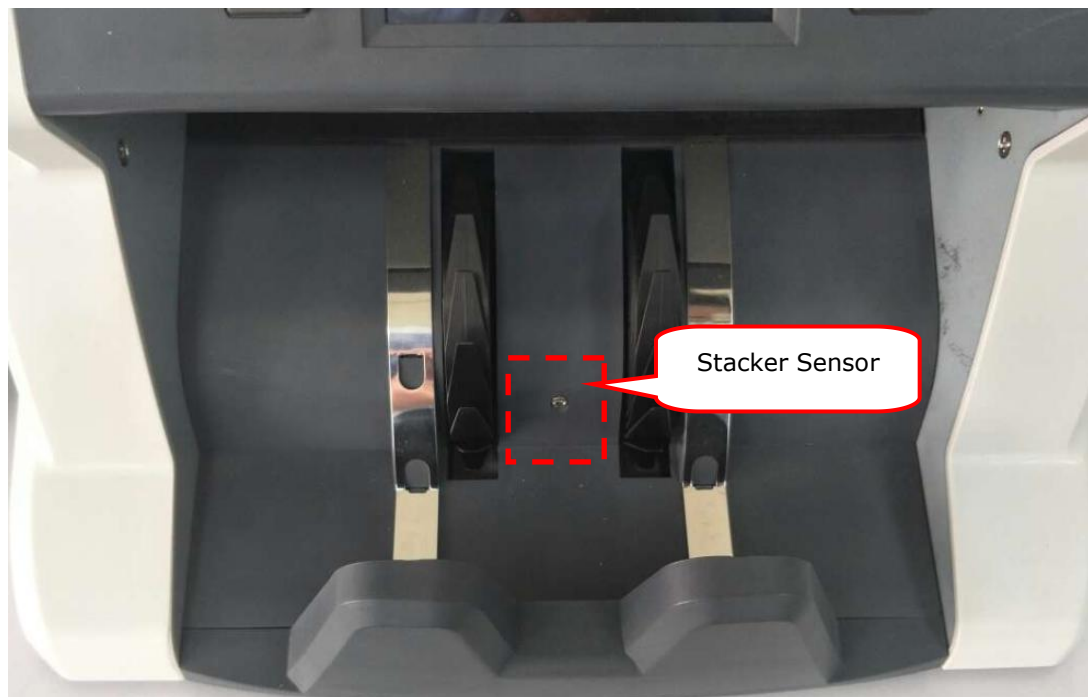
9.2 Clean the Feed Roller Shaft and Friction Roller Shaft

Shown as below picture, please use nylon brush or clean cloth to clean the feed roller shaft and friction roller shaft.



9.3 Clean the Stacker Sensor

Shown as below picture, please use nylon brush or clean cloth to clean the stacker sensor.

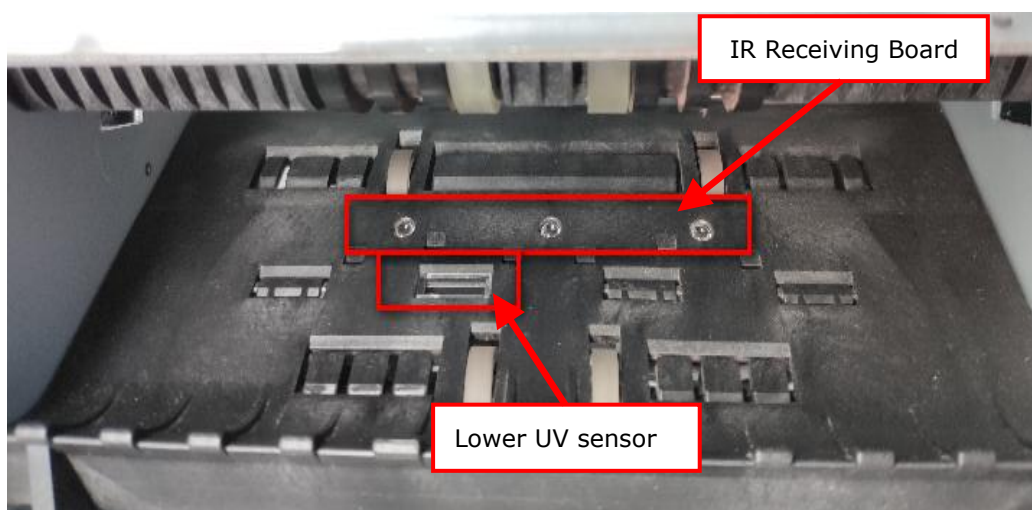


9.4 Clean the Inside Sensors

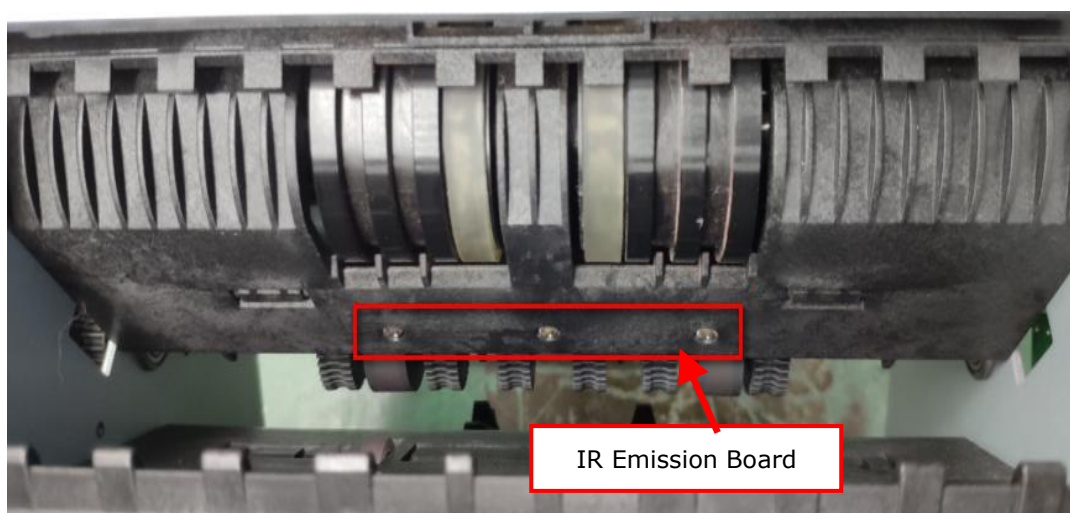
- 1) As shown by the picture, pull the back cover and open the whole passage.



- 2) Please use nylon brush to clean the lower UV sensor and 3 IR tubes on IR receiving board.



- 3) Please use nylon brush to clean the 3 IR tube on IR emission board



10. Accessories

1. Power cord	1pc
2. Nylon brush	1pc
3. User manual	1pc
4. External display(option)	1unit
5. External printer(option)	1unit
6. Power adapte	1unit

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