

# User Manual

---

Banknote counter with  
UV, IR, MG and dual CIS

**FiscalFlow-9020**

## Table of contents

Specifications:.....	3
Kit contents:.....	3
Precautions .....	5
Description of the counter construction .....	6
Getting started.....	7
Power On.....	7
Installation of banknote guides .....	8
Placement of banknotes .....	8
Function keys and touch display.....	9
Description of function keys .....	9
Touch screen .....	11
Operating Modes and Functions .....	11
Currency selection.....	11
Counting modes .....	12
User Menu .....	15
Service menu.....	15
Sensor Reading.....	16
Dual CIS Calibration .....	16
MG MT Waveforms.....	17
Function settings.....	17
Automatic diagnostics.....	17
Counting and Reset .....	18
Getting a CIS image.....	18
Detection level.....	18
Restoring Settings .....	19
Release notes .....	19
Setting the current time.....	19
Setting the Menu Language .....	20
Feed Gap Adjustment.....	20

CIS Calibration.....23

Software update ..... 26

Imaging Data Detection..... 28

Error messages .....29

Maintenance.....32

## Specifications:






- **Warranty:** 2 years
- **Counterfeit Detection:** UV (Ultraviolet), MG (Magnetic), IR (Infrared), Dual CIS (Dual Image Sensors)
- **Counting speed:** Selectable: 800, 1000, 1200 banknotes/min, 800, 1000 banknotes/min in MDC and SDC mode
- **Dispenser capacity:** max. 500 banknotes
- **Stacker capacity:** max. 200 banknotes
- **Discarded banknote stacker capacity:** approx. 50 banknotes
- **Feeding System:** Roller
- **Size of counted banknotes:** 5 x 11 – 9 x 19 cm
- **Supported currencies:** PLN, EUR, USD, GBP, RUB, CHF, MOP, THB, CAD, HKD, JPY, KRW, THB, SGD, etc.
- **Thickness of counted banknotes:** 0.08mm-0.12mm
- **Display:** 4.5 inch touch screen
- **Power supply:** AC 100-240V 50/60Hz
- **Power Consumption:** ≤ 80W
- **Interface:** USB, RS-232, RJ-11
- **Additional features:** banknote scanning from both sides simultaneously (top and bottom), serial number recognition, damaged banknote detection, automatic currency identification, banknote sorting, ADD, MDC, SDC, SDCV and BATCH
- **Operating Temperature:** 15°C-35°C
- **Operating Humidity:** 30-80%
- **Dimensions of the device:** 26.5 x 27 x 32.5 cm
- **Device weight:** 9.5 kg
- **Weight with packaging:** 12 kg

## Kit contents:

- Banknote counter

- Outdoor display with RJ11 cable
- Power cord
- Banknote guides
- CIS calibration paper
- Nylon brush
- Soft cleaning cloth
- Backup fuse for power protection
- User Manual

When opening the box, check that all the items described below are included. If any of the components are damaged or missing, contact the retailer where you purchased the device.

<b>Name</b>	<b>Photo</b>	<b>Quantity</b>	<b>Description</b>
Banknote counter		1	Counter with two banknote trays
External display		1	Outdoor LED Screen With RJ11 Cable
Power cord		1	Power Cable
Banknote guides		2	Installed at the feeder
CIS calibration paper		1	Used for CIS calibration

Nylon brush		1	Used to clean the machine
-------------	---	---	---------------------------

Soft cleaning cloth		1	Cleaning CIS and other sensors
Fuse		1	Backup fuse for power protection
User Manual		1	

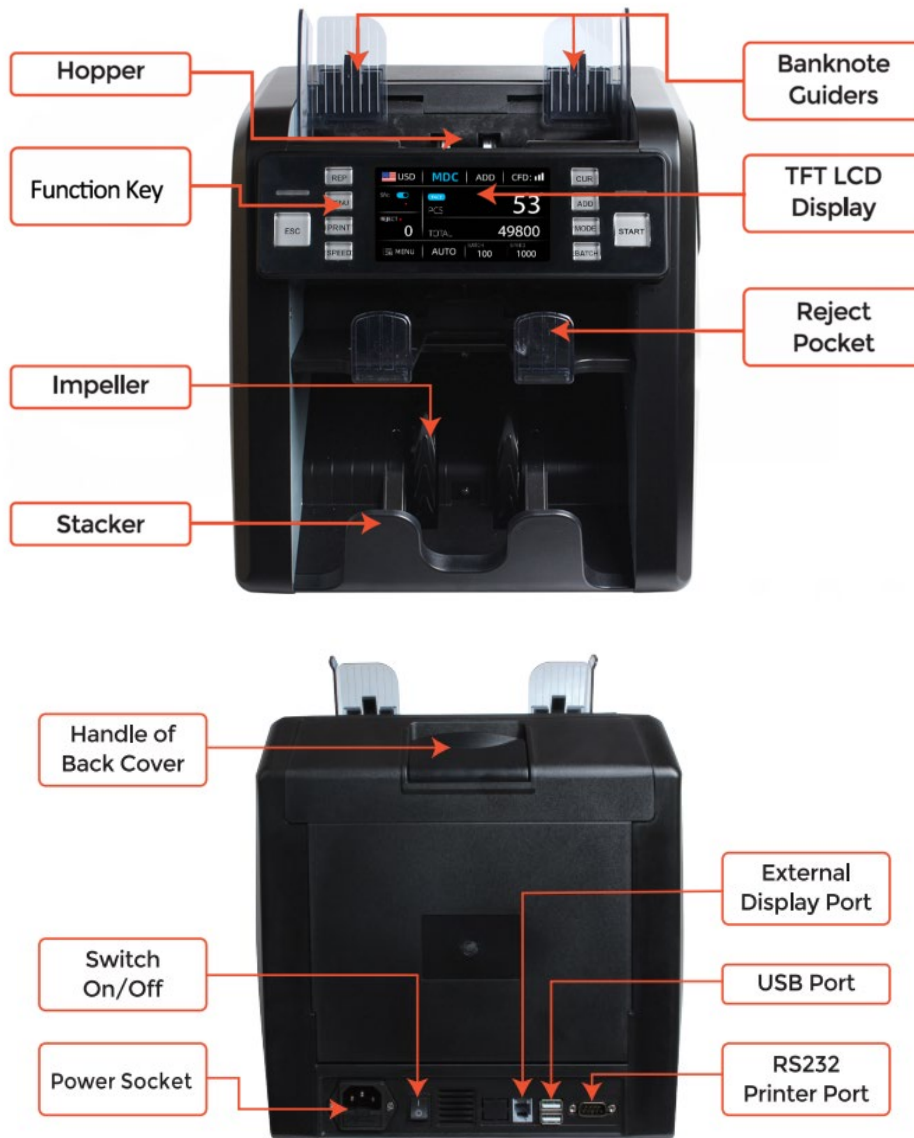
## Safety Precautions

When using this product, basic safety precautions should always be followed to minimize the risk of fire, electric shock, or personal injury, including:

- The appliance should be placed on a flat and stable surface.
- Do not place the appliance in a dusty or dirty environment.
- Do not place the appliance in direct sunlight or near heat sources.
- Always unplug the power cord before servicing the appliance.
- The appliance should always be plugged into a grounded outlet.
- The appliance should only be connected using the included power cord.
- The operating temperature is 15–35°C / 59–95°F.
- Operating relative humidity 30–80%
- Do not use the appliance outdoors.
- Do not expose the appliance to liquids.
- U ruling contains rotating parts. Never touch moving parts when the appliance is switched on.
- Keep jewelry, long hair, ties, and other protruding parts away from the appliance while working.

- Never disassemble the appliance.
- The device contains moving parts and sharp edges. Always be careful. Do not touch the components inside the device while it is running.
- Be careful not to allow any foreign objects such as coins or staples to enter the appliance as this may damage the appliance.

## Description of the counter construction





## Getting started

### Power On

- Plug the power cord into the appliance and a power outlet.
- Press the power button to turn on the device.
- After a short boot and self-test, the device will go to the main menu.

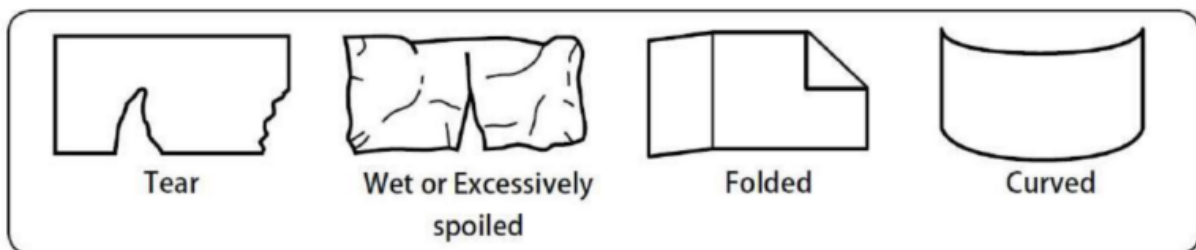


## Installation of banknote guides

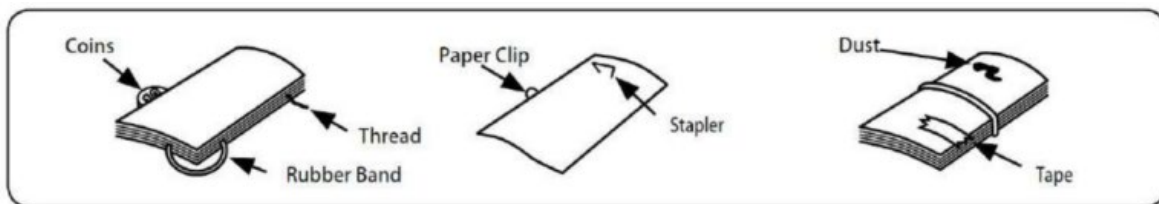


## Placement of banknotes

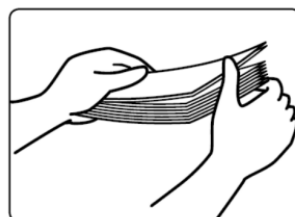
Avoid counting wet, excessively dirty or damaged banknotes.



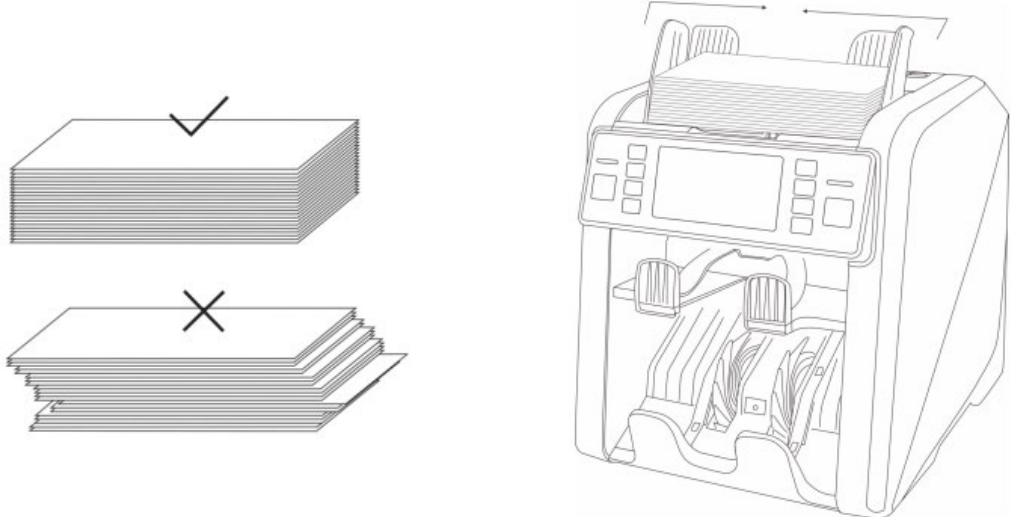
Check that there are no foreign objects (paper particles, rubber bands, paper clips, dust, etc.) among the banknotes.



Remove the folds of the banknote tips. Use your fingers to separate the banknotes to avoid sticking them together.



Position the banknote dispenser guides so that the sides of the banknotes are covered. Arrange the banknotes in a neat stack, making sure the back of the stack is straight. Place the banknotes between the guides. The device will automatically start counting.






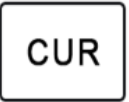

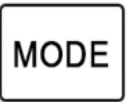
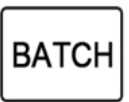
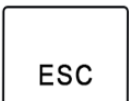

## Function keys and touch display

Description of function keys

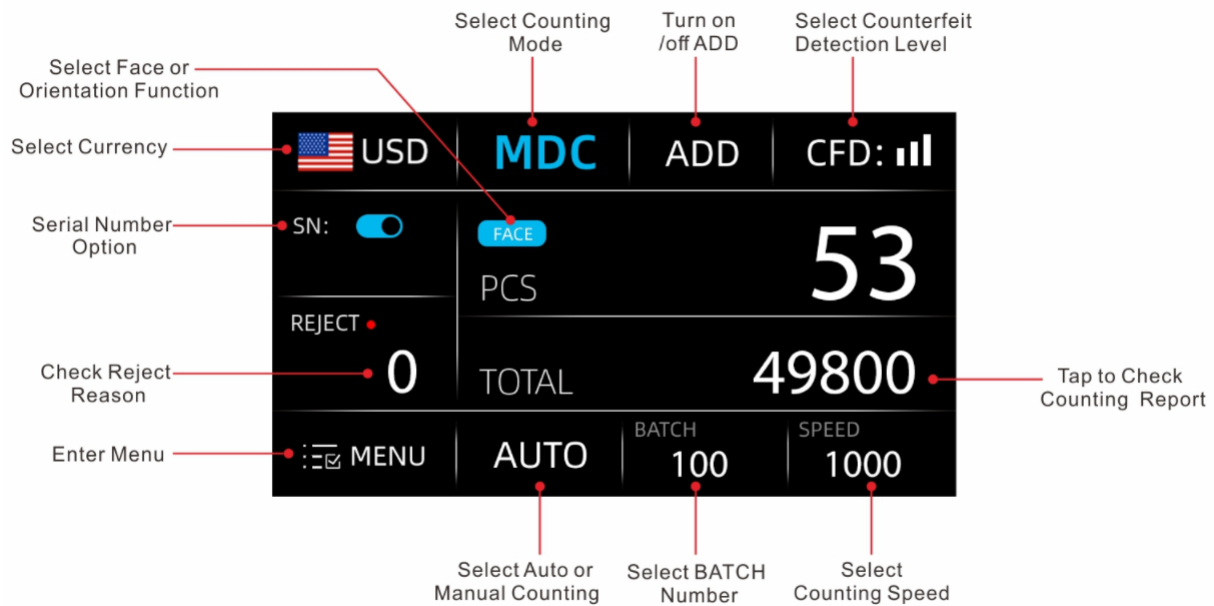


Press this button once to check the detailed list of converted currencies, and then press it again to check

the serial number list when the serial number reading function is enabled.


-  Press and hold this button to enter the menu interface or press it to confirm your selection.
-  Press this button to print a receipt with the counting result if the machine is connected to the printer.
-  Press this button to select one of the available counting speeds.
-  Press this key to select the counting mode: currency, auto-recognize, or multi-currency.
-  Press this button to enable/disable the accumulation counting function.
-  Press this key to select the counting mode from MDC(MIX), CNT(COUNT), SDC (SINGLE), SDCV (VERSION).
-  Short press this button to set the batch number. Press and hold this button to set the batch value.
-  Press this key to return to the previous interface.
-  Press this button to start counting, clear the counting result, or save the setting to the menu.

## Touch screen



## Operating Modes and Functions

### Currency selection

Press  or tap on the country flag  on the screen there will be an option to select a currency, the display will show the options AUTO, MULT and available currencies, tap on the one you need.

- **AUTO (Auto Recognition Mode):** Allows the device to automatically recognize the currency based on the first banknote. If another currency is detected, the machine will sound an alarm and stop, take out the banknote and press the START button to continue counting. Please note that the device only recognizes currencies displayed in the currency selection interface.
- **MULT (Multi-Currency Counting Mode):** Allows the machine to count different currencies. Once converted, the display will show the number of pieces and the value of

each currency. Please note that the machine only recognizes the first 4 currencies displayed in the currency selection interface.

**Note:** Only MDC mode is active in multi-currency mode.

### Counting modes

- **MDC (Counting Different Denominations) mode** – this mode allows the user to count banknotes of different denominations. When the count is complete, the value and number of banknotes are displayed on the screen. The user can view a detailed report by pressing the REP button or tapping on the total amount item on the screen.
- **SDC (Single Denomination Counting) mode** – This mode allows the user to count and sort banknotes by denomination, which is automatically determined by the first scanned banknote in the stack. This can be useful to make sure that there are no banknotes of other denominations in a large stack of banknotes. The first banknote in the tray determines the denomination to be counted and sorted. Whenever a banknote passing through the machine does not match the denomination determined by the first banknote, the machine will stop counting and sound an alarm, take out the suspicious banknote, and press the START button to continue counting. The total number of banknotes and their value will be displayed on the home screen. Once the operation is complete, you can view a detailed report by pressing the REP button or tapping the total amount position on the screen.
- **SDCV (Version Sorting) mode** – allows the user to count and sort banknotes by one version, which is automatically

determined based on the first scanned banknote in the stack. This can be useful to make sure that there are no banknotes of other versions in a large stack of banknotes. The first banknote in the tray determines the version to be counted and sorted. Whenever a banknote passing through the machine does not match the version specified by the first banknote, the machine throws it into the reject pocket. The total number of banknotes and their value will be displayed on the home screen. Once the operation is complete, you can view a detailed report by pressing the REP button or tapping the total amount position on the screen.

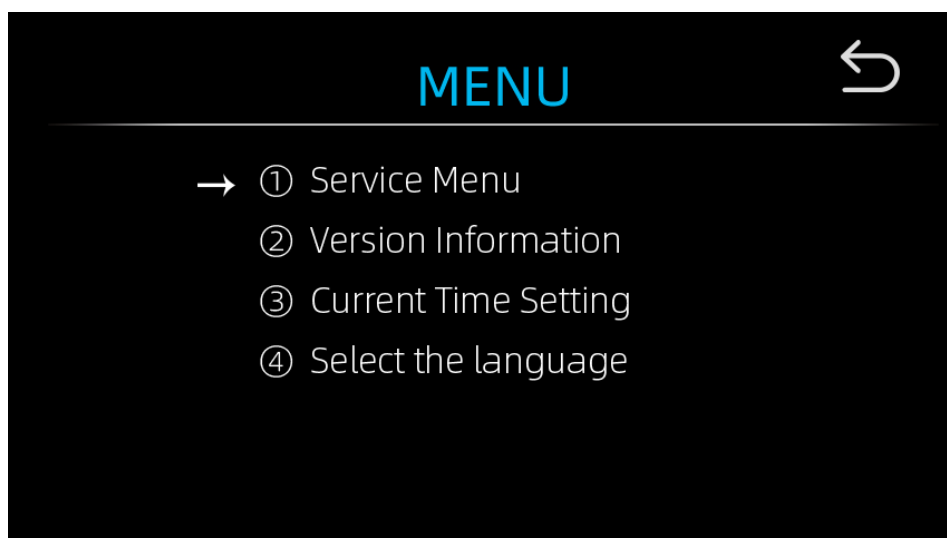
- **FACE mode** - allows the user to sort banknotes depending on whether they are placed in the tray face up or face down. The first banknote in the tray determines the orientation of sorting and counting. If the first banknote in the machine is facing up, all banknotes in the tray that are facing up will go to the stacker. All other banknotes, which are the obverse to the bottom, will go to the discard pocket. The total number of banknotes and their value will be displayed on the home screen.
- **Orientation Mode** - allows the user to count and sort banknotes according to one of 4 orientations. The first banknote in the tray determines the counting orientation. Whenever a banknote passing through the machine does not match the orientation specified by the first banknote, the machine will throw it into the reject pocket. The total number of banknotes and their value will be displayed on the home screen.

- **CNT (Piece Counting) Mode** - Allows the user to count the total number of banknotes. It does not recognise or register banknote denominations. In CNT mode, forgery detection is not active.
- **Auto/Manual Counting Mode** - When powered on, the unit will switch to Auto Count Mode by default, and the home screen will display "AUTO". In this mode, the device will start counting automatically. To enter manual counting mode, tap the "AUTO" button on the screen and switch to "MANUAL" mode. In this mode, the device will automatically stop counting. To start counting, press the "START" button.
- **BATCH function** - is used to select the number of banknotes for a specific counting process. In batch mode, the machine counts the set number of banknotes and then stops counting when the batch number is reached, even if the banknotes remain in the tray. When you remove the banknotes from the stacker, the machine automatically continues counting to the preset batch number to create the next batch.
- **ADD function** - is used to add the results of counting multiple elements to the total. When Add Mode is activated, the Add icon is displayed on the home screen. To exit add mode, press the add button again or tap the add icon on the screen.
- **BATCH + ADD function** - this function groups the desired number of invoices and simultaneously monitors their current total.
- **Serial number reading function** - registers the unique serial numbers of converted banknotes. The serial number

reading feature is only available for certain currencies, such as USD, EUR, GBP, RUB, CNY, TRL, IDR, etc.

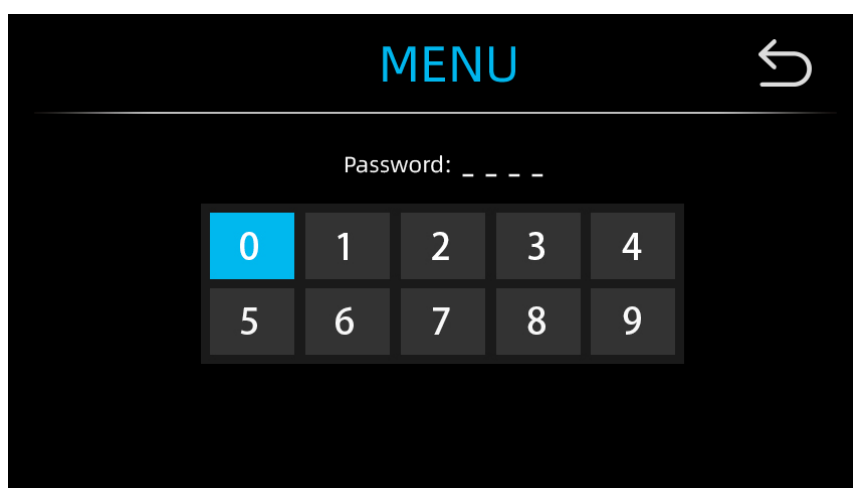
## User Menu

Press the MENU button or tap the MENU button on the screen to enter the menu interface as shown in the figure below.

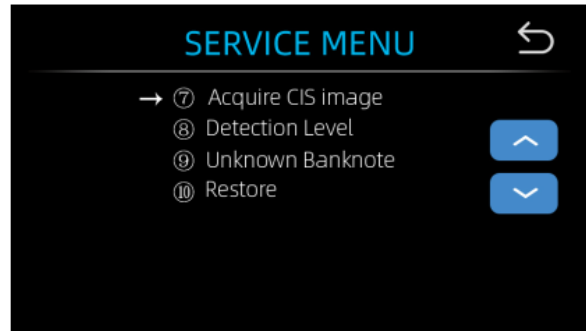
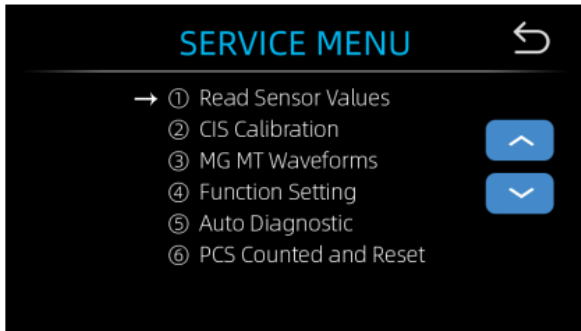


## Service menu

To enter the service menu, you will be asked to enter your password in the interface below. The default password is 9999.

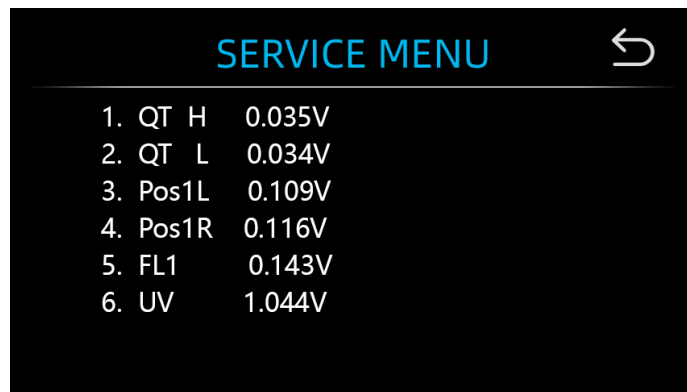


Once you enter the 9999 password, the interface will switch to the following:



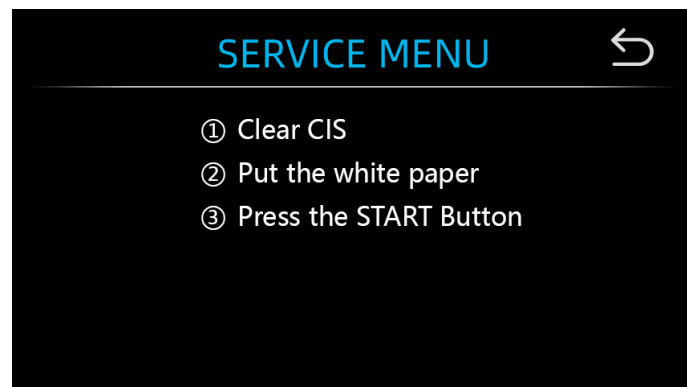
Click on the submenu you want to enter, then click on the back icon to return.

### Sensor Reading



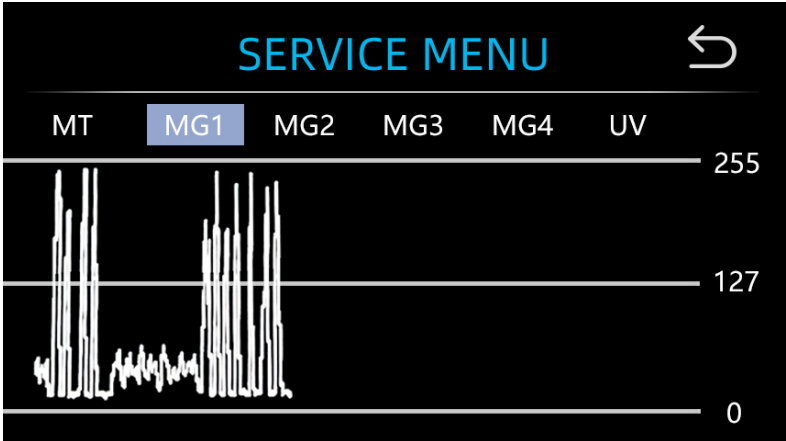
As shown in the figure above, the sensor values are only used by the engineer to check if any of the sensors are not working properly. In case of any problems with use, please take a picture of this page and contact the seller.

### Dual CIS Calibration



The contact image sensor (CIS) in the device is properly calibrated at the factory. With regular and basic use, the sensitivity of the sensor decreases, which can lead to image errors. To resolve this issue, you can recalibrate the machine using the white calibration paper that came with the device.

### MG MT Waveforms



### Function settings

The left screenshot shows the following settings:

- 1. key beep
- 2. Warning beep
- 3. Batch no clear
- 4. PC terminal
- 5. RJ old ver. USD
- 6. Printer baud rate 9600

The right screenshot shows the following settings:

- 7. Paper width 58mm
- 8. Cut paper CMD 0
- 9. Err counted in
- 10. Cut paper after print
- 11. print reject detail

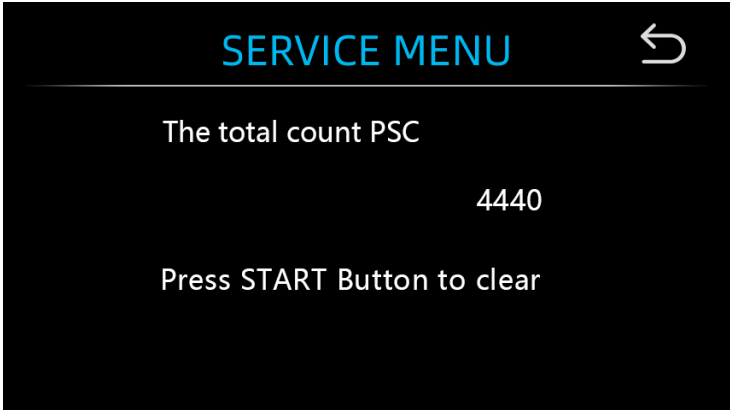
### Automatic diagnostics

The screenshot shows the 'SERVICE MENU' with the instruction: ① Press RESTAET KEY to start. A back arrow is visible in the top right corner.

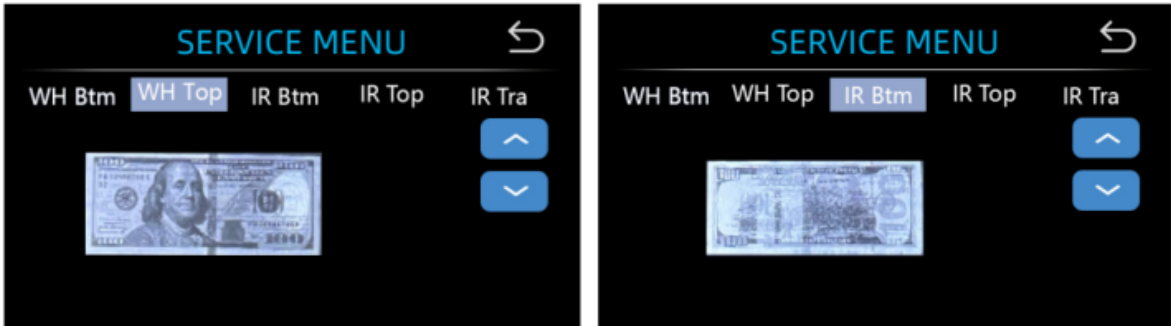
An option designed for production purposes and professional service.

### Counting and Reset

Once you select "PCS Counting & Resetting", you will see the interface below. Use this interface to reset the total number of banknotes counted in this counter since the last zero.

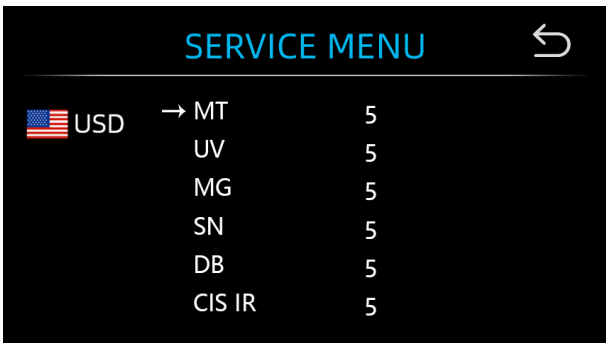


### Getting a CIS image



### Detection level

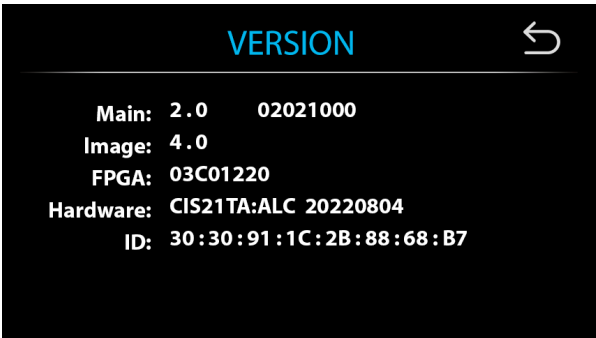
We recommend that you do not change the sensitivity levels without first contacting your local distributor.



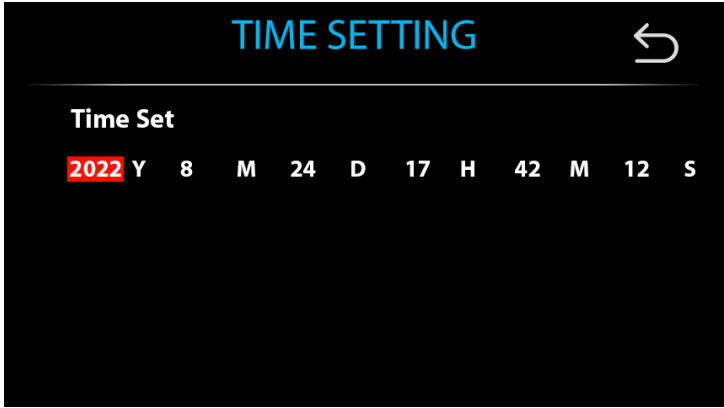
## Restoring Settings



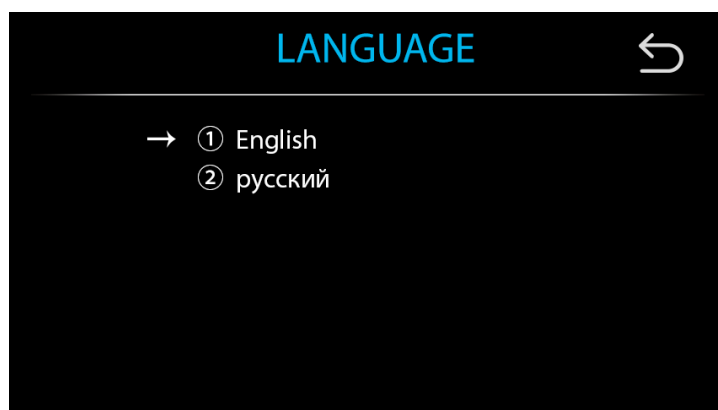
## Release notes



## Setting the current time



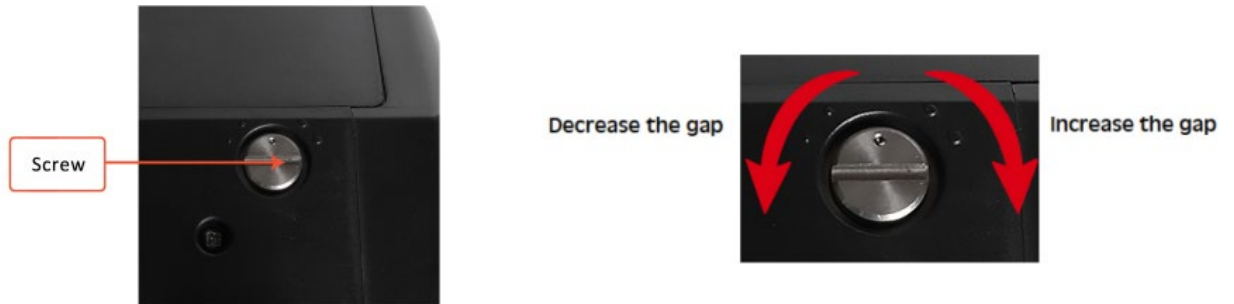
## Setting the Menu Language



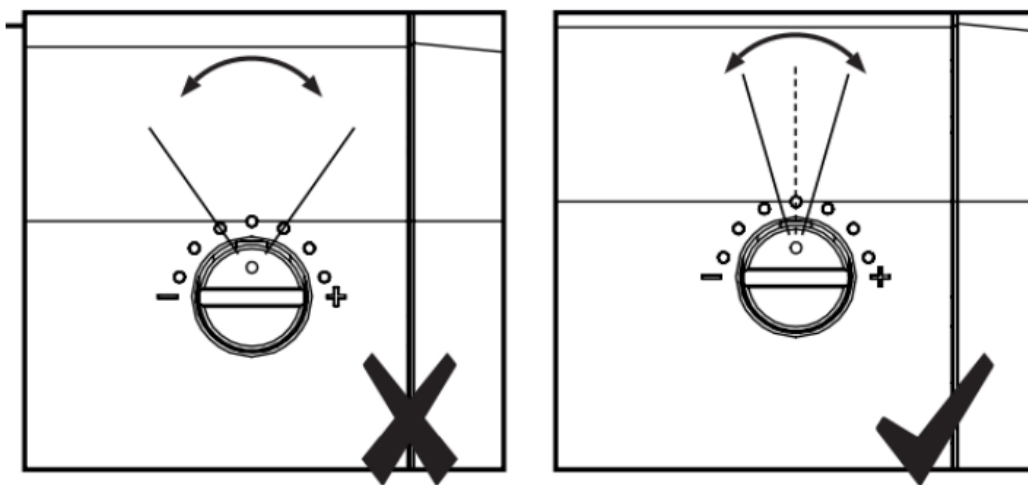
## Feed Gap Adjustment

If counting errors such as double banknotes, tight or skewed banknotes occur frequently, or if the banknotes are not fed smoothly by the machine, it may be necessary to adjust the feeder adjustment screw. The position of the feeder wheel is optimally positioned at the factory. However, sometimes during the transport of the machine, the adjustment of the feeding mechanism may become loose, and due to the specificity of some banknotes, adjustment may need to be made to ensure optimal feeding.

- **When banknotes are not counted smoothly:** increase the gap between the thrust wheel and the gear that rotates the banknotes by turning the adjustment screw clockwise (+).
- For common counting errors, such as "double banknotes" or "combined banknotes", reduce the gap by turning the adjustment screw counterclockwise (-).

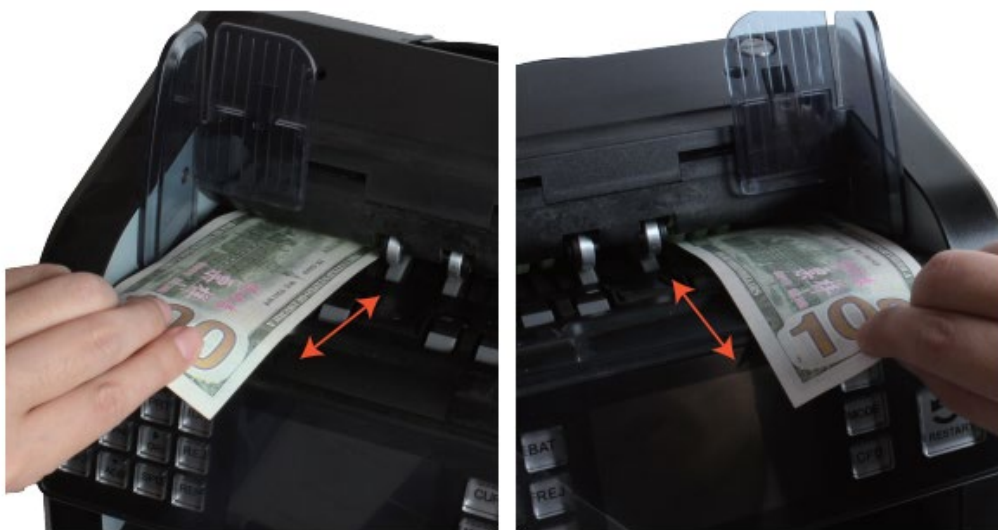
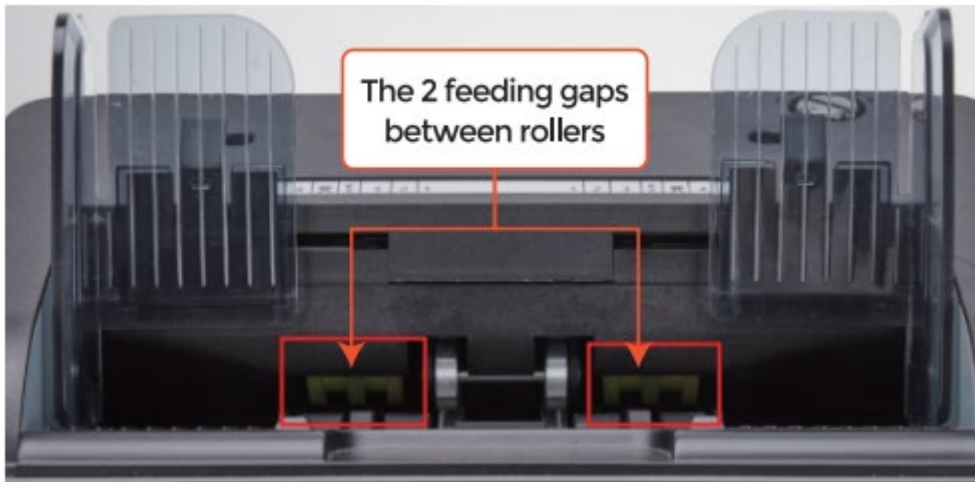


**NOTE:** Only make minor changes at a time. Make changes every dot or half a dot.



Please adjust the feeding interval precisely by following these steps.

- First, stop the automatic count.
- Then insert one note into the gap between the rolls to see if it can be inserted smoothly as shown below.



- If the banknote is difficult to slide in, which means that the gap between the rolls is too small, turn the screw clockwise until the banknote can be inserted smoothly. If the gap between the rolls is so large that two or more banknotes can be inserted, turn the screw counterclockwise until the gap allows only one banknote to be inserted.
- Use the banknote to check the remaining sides of the roll gap to ensure that the bill can be smoothly inserted into both sides of the roll spacing.

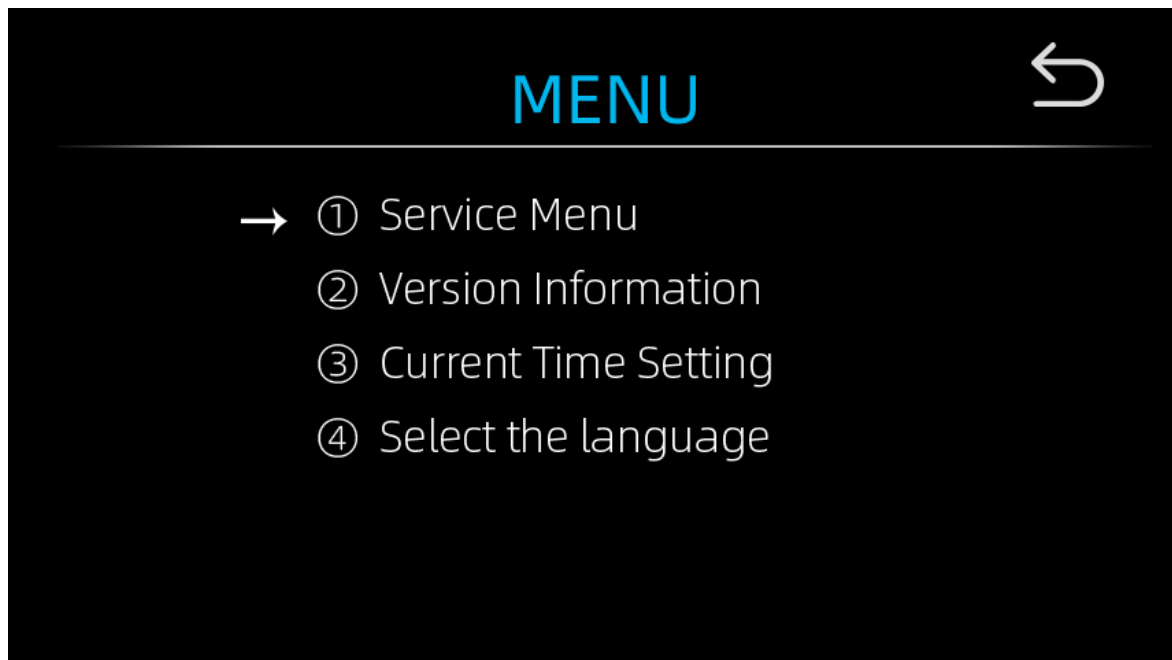


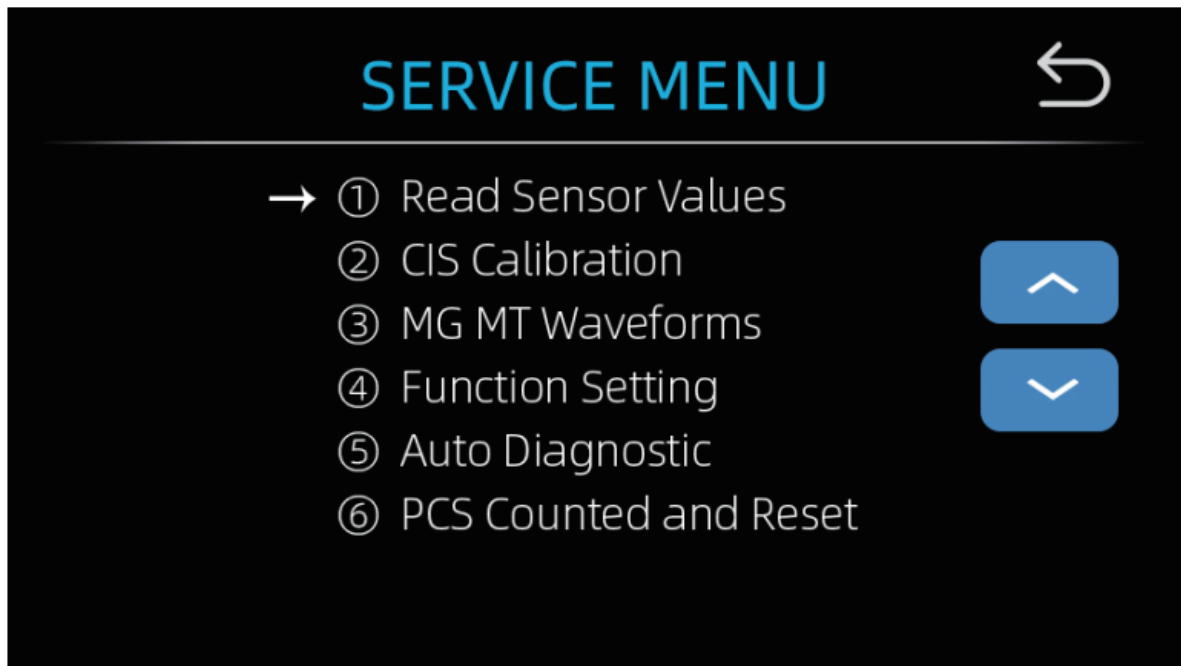
**Tip:** You only need to use one coin to turn the screw.

## CIS Calibration

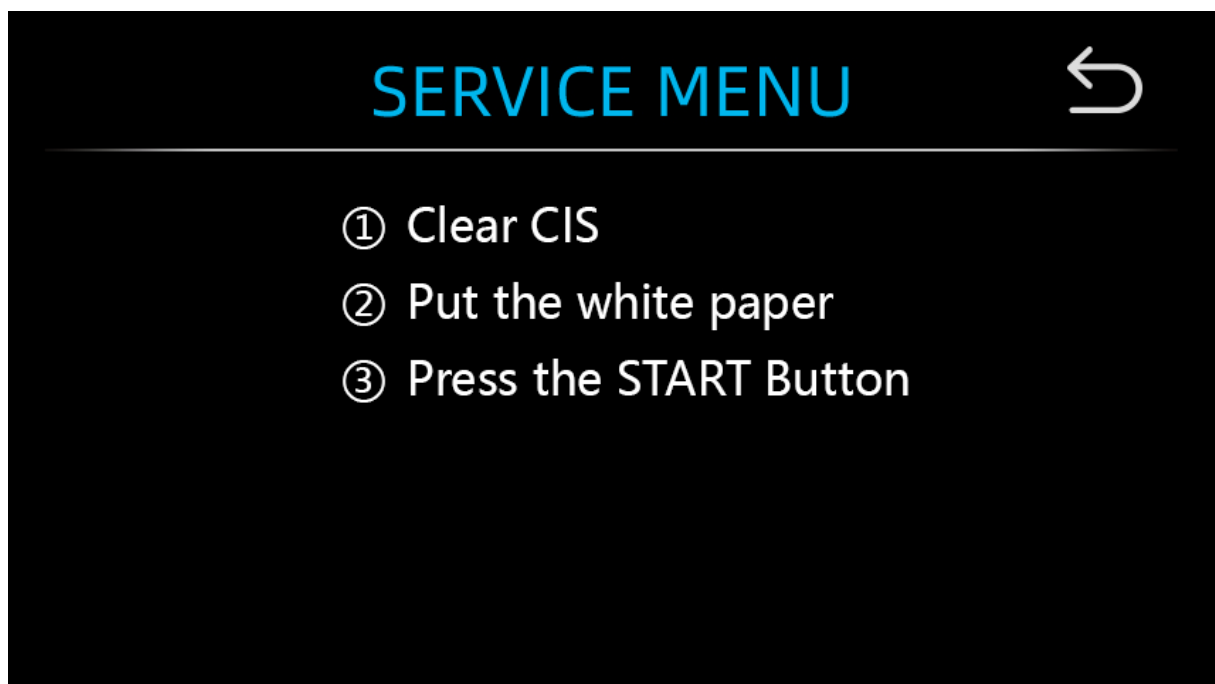
CIS calibration is necessary when there are many errors when counting banknotes. For calibration, follow the steps below:

- Enter the menu interface and enter the service menu by typing the password "9999" as shown in the following figures.





- Click on the "CIS Calibration" option, the screen shown in the figure below will be displayed.



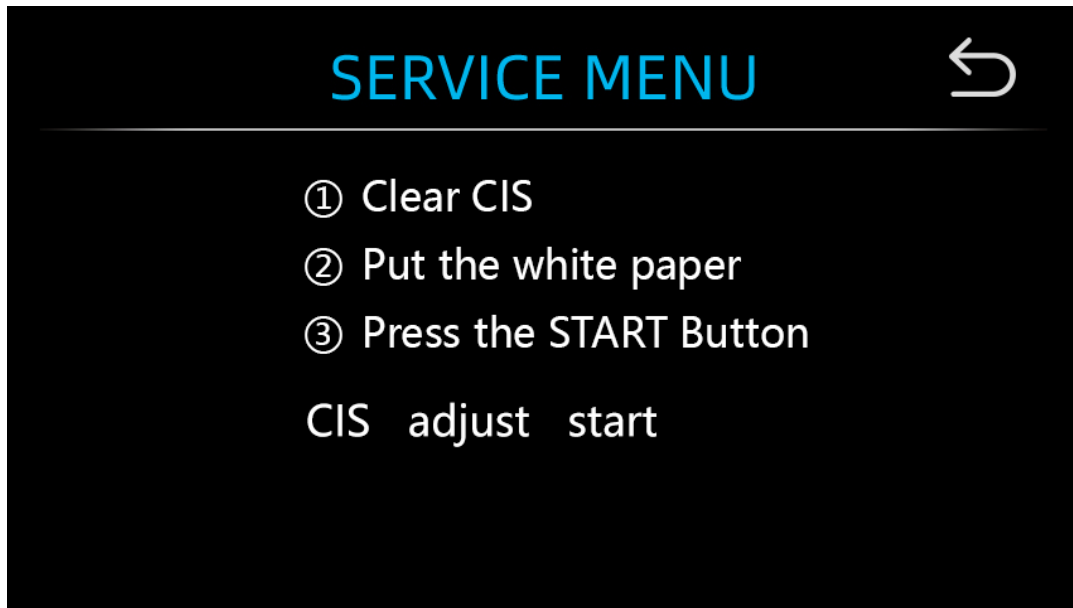
- Open the back cover to clean the CIS sensors with a cleaning cloth.



- Insert CIS (white paper) calibration paper inside and close the back cover.



- Start the CIS calibration by pressing the "START" button

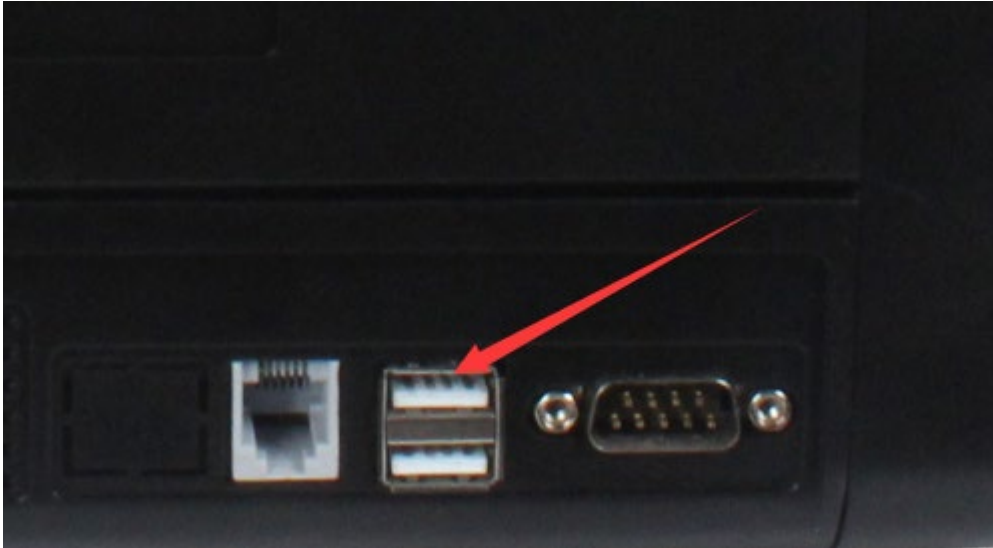


- Once the adjustment is complete, simply remove the calibration paper, close the back cover, and turn off the device.
- Turn on the device to complete CIS calibration.

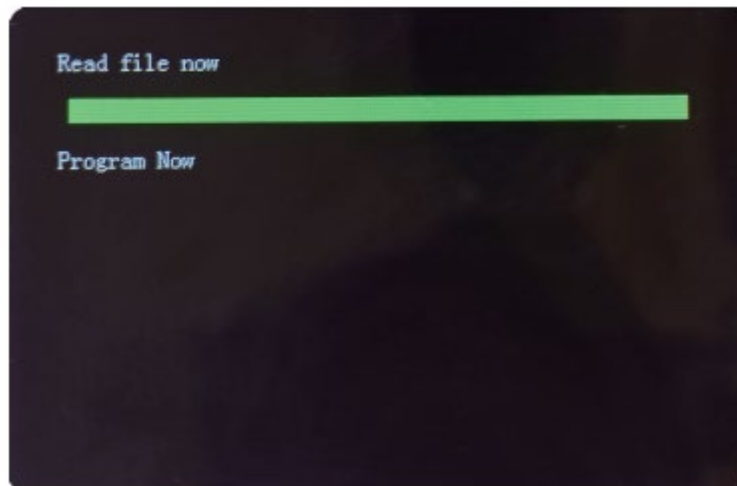
## Software update

The U drive update method is used to update the software of this device.

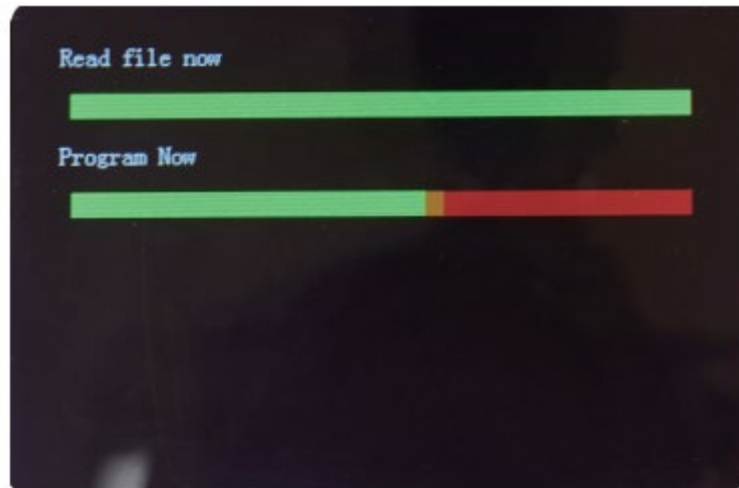
- Move the update file to the root directory of the U drive. (Do not change the name or format of the update file. No more than two update files can be in the root directory of the U drive.)
- Insert the U drive into the top USB port on the back of the device. Before inserting the U drive, make sure the device is turned off.



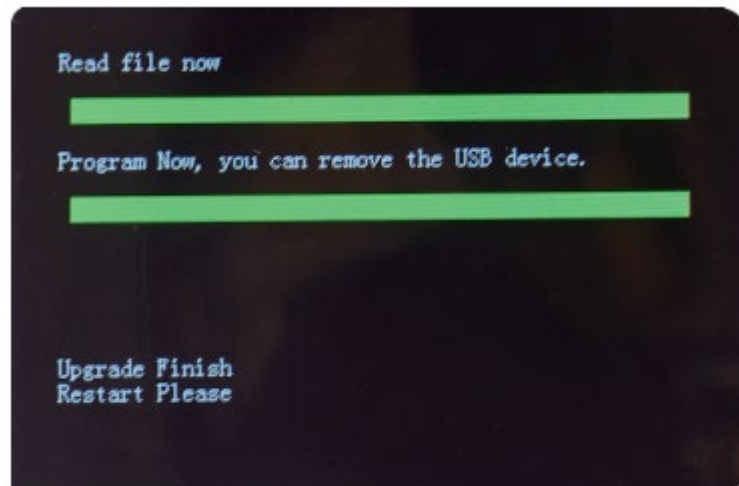
- Turn on the counter and the device will automatically recognize the update file. Once it is successfully recognized, the device will read the file first.



- Program the file to the counter.



- When programming is complete, unplug the U disk and restart the machine.



## Imaging Data Detection

### **Detecting counterfeit banknotes or data from new banknote versions**

- Insert the U drive into the top USB port on the back of the device and the USB icon will appear on the display.
- Select the currency, then press the MODE button to select CNT and set the speed to 800.

- Count the four directions of counterfeit banknotes, and the device will automatically save the data to the U drive in a file.

### Collecting error data on original banknotes

- Insert the U drive into the top USB port on the back of the device and the USB icon will appear on the display.
- Select the currency, then press the MODE button to select MDC and set the speed to 800.
- Count the four directions of notes, and the machine will automatically save the data to the U disk in the file.

### Error messages

The device will perform a self-test when it is turned on. Most of the following messages are caused by banknotes or dust blocking the sensor. Remove the jammed banknotes or use a brush or soft cloth to clean the sensor of dust and restart the device.

<b>Error code</b>	<b>Error message</b>	<b>Solution</b>
E1	UV error	Take out the banknote, clean the UV sensor
E2	Double banknotes	If errors occur frequently, adjust the adjustment screw
E3	Glued banknotes	counterclockwise, to reduce the gap.

E4	Half of a banknote	Take out a banknote
E10	Image error	Take out the banknote, clean the CIS sensor;  Calibrate the CIS sensor;  Collect the banknote details.
E11 – E12	Denomination error	
E13	Banknote front recognition error	
E14	Size recognition error	
E15	Orientation Recognition Error	
E20	MT error	Remove banknote, clean or replace MG sensors
E21	MG1 Error	
E22	MG2 error	
E23	MG3 error	
E24	MG4 error	

E30	IR Transmission Area Error 1	Take out the banknote, clean the CIS sensor;  Calibrate the CIS sensor;  Collect the banknote details.
E31	IR Transmission Area Error 2	
E32	IR 3 transmission area error	
E33	IR 4 transmission area error	
E34	IR 5 transmission area error	
E35	IR Transmission Area Error 6	
E36	IR 7 transmission area error	
E37	IR 8 transmission area error	
E38	IR 1 reflection area error	

## Maintenance

**WARNING:** Always turn the appliance off and unplug it from the power cord before cleaning. DO NOT use solvents such as thinner, alcohol, etc. to clean the device.

Most operational problems can be avoided with regular care and preventive maintenance. Regular care of the device will significantly extend its lifespan.

To avoid problems, make sure that there are no metal paper clips or recipe rubber bands in the banknotes you are counting. Be sure to follow the correct procedure for filling the hopper.

For best results, it is recommended to use compressed air and a soft brush to remove dust and debris from the inside of the unit. If the appliance is not going to be used for an extended period of time, cover it with a cover (not included with the appliance) to prevent dust from settling inside.

All parts of the machine require daily care and cleaning. Pay close attention to sensors, which are delicate components. If dust or other foreign objects adhere to the sensors, it can cause various problems during the operation of the machine.

- To avoid failure caused by foreign objects, clean the device daily.
- Open the back cover and clean the sensors frequently with the included brush or dry cloth.
- Clean the top cover and CIS sensor frequently with the included brush or dry cloth.