Manual

Banknote counter

FiscalFlow-5012

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Specifications:

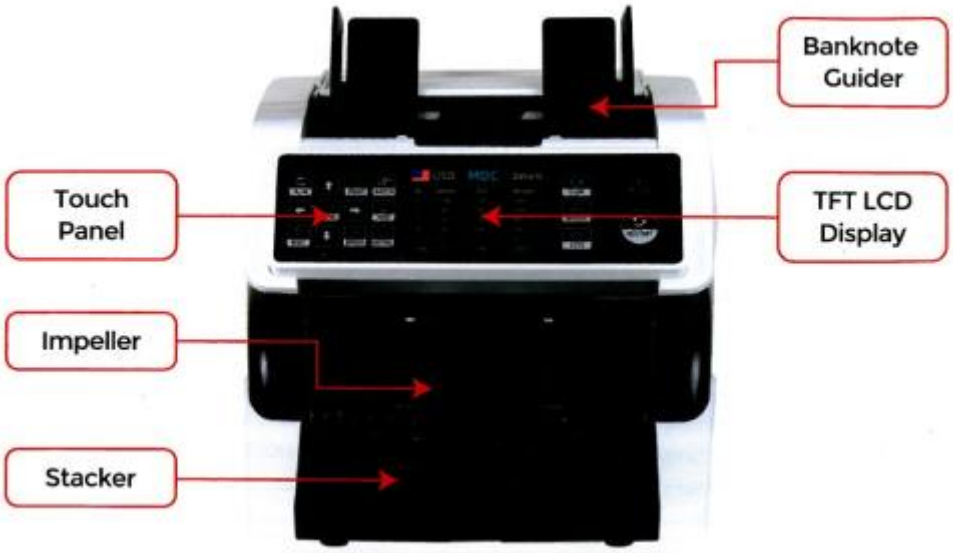
- **Warranty:** 1 year
- **Color:** White, Black
- **Counting Speed:** 800, 1000 Pcs/min (MDC & SDC Mode), 800, 1000, 1200, 1500 Pcs/min (CNT Mode Only)
- **Feed Capacity:** 500 Notes
- **Stack capacity:** 200 banknotes
- **Size of the countable banknotes:** 50×110 – 90×190 mm
- **Thickness of countable banknotes:** 0.075 – 0.15 mm
- **Counterfeit Banknote Detection:** Image (2 CIS Sensors), Magnetic, Infrared, Ultraviolet
- **Error Detection:** Detection of double banknotes, half banknotes, string of banknotes
- **LCD Display:** 3.5 inch TFT LCD, 320×480
- **Interface:** RS232, 2 × USB, RJ11
- **Power Consumption:** ≤80W
- **Power Supply:** AC 100V-240V, 50-60Hz
- **Measurements:** 27 × 24.5 × 28.8 cm
- **Package dimensions:** 37 x 24 x 31.5 cm
- **Net Weight:** 6.5kg
- **Weight with packaging:** 7 kg

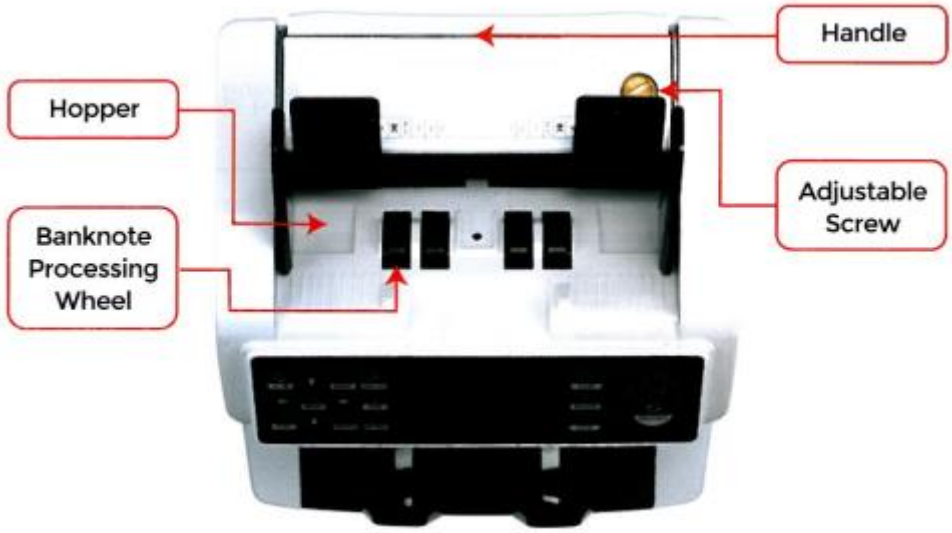
Set contents:

- Banknote counter,
- external display,
- Power cord
- banknote guides,
- CIS calibration paper,
- nylon brush,
- soft cleaning cloth,
- fuse
- Manual

Item Name	Picture	Quantity (pcs)	Description
Banknote Counter		1	Mixed denomination Banknote counter
External Display		1	External LED display screen with RJ11 cable
Power Cable		1	Power supply cable
Banknote Guiders		2	Install at the hopper
CIS Calibration Paper		1	Used for the CIS calibration
Nylon Brush		1	Clean the machine
Soft cleaning Cloth		1	Clean the CIS or the other sensors
Fuse		1	The backup fuse for the power protection
User Manual		1	

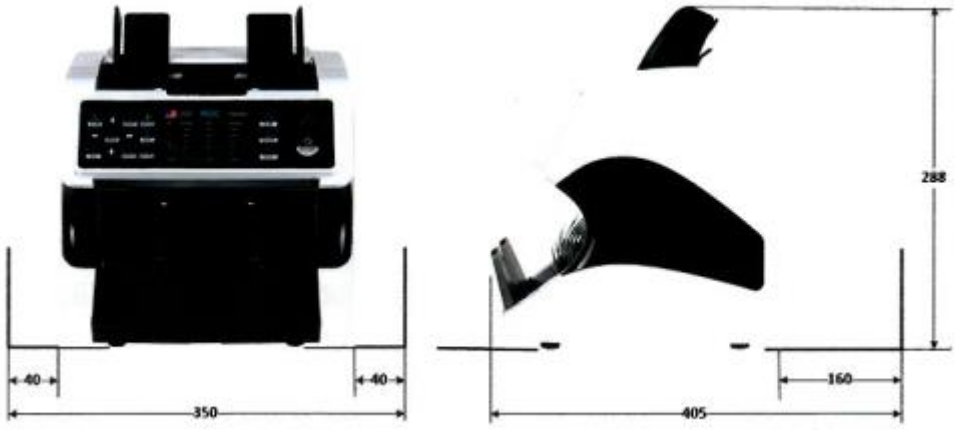
Overview of the machines:

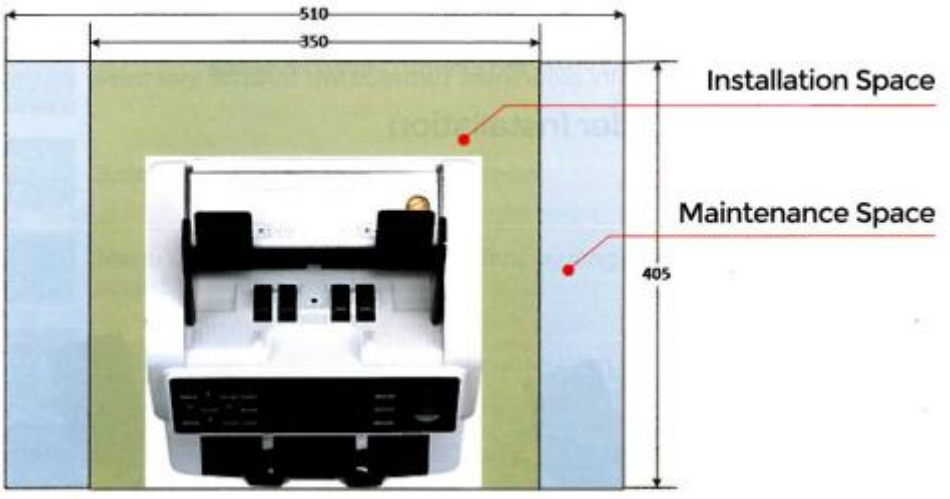




Installation and Location of Use:

As shown in the figure, keep a distance from the surrounding walls and allow sufficient operating space for placing banknotes, opening or closing the lid, as well as for maintenance purposes.





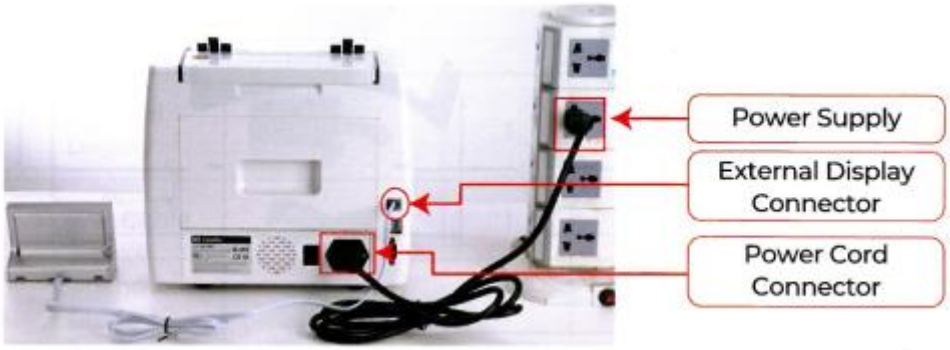
Installation Instructions:

Installation Warnings

1. This machine is intended for indoor use only. Do not install or use it outdoors.
2. Do not install in locations that cannot support the weight of the appliance or that are inclined or uneven.

3. Do not use or store flammable materials, chemicals, or explosives near the appliance.

Connecting the power supply



Installing banknote guides

Display and Operation Interface:

Display appearance

Function keys

- **A/M**: Automatic counting after banknotes are placed. Manual counting requires the use of the restart button.
- **Arrows**: Directional keys.
- **PRINT**: Printing information about the counted banknotes.
- **BATCH:** Batch number selection.
- **MENU:** Entering the menu (long hold).
- **ADD**: Enable/disable the summing function.
- **ESC**: Return to the previous screen.
- **SPEED**: Choice of different counting speeds.
- **DETAIL:** Details button to check the details of the counted amounts.
- **CUR:** Currency button to select one of the currencies, automatic recognition or multi-currency mode for counting.
- **MODE:** Mode button to select CNT, SDC or MDC mode for counting.
- **CFD:** CFD level button to select the sensitivity level of counterfeit detection.
- **RESTART:** Restart button to start counting or other operations.
- Power button, long press to enter standby mode or resume working mode

Display Interface

Manual:

Run

Turn on the switch after connecting the device to the power supply. First, the machine will enter the self-inspection interface.

Wait patiently for about 20 seconds, and the machine will turn the banknote processing knob several times for self-checking, and then enter the main interface.

Counting Selection

Single Currency Counting Mode

When the machine is turned on, a flag and currency icon appears in the upper left corner, indicating that the machine is running in single currency counting mode. The default mode is MDC mode. By pressing the MODE button on the control panel, you can cycle through the three counting modes, which change in the MDC-CNT-SDC sequence.

MDC Mode

In this mode, the counter counts banknotes of all denominations of the selected currency and records detailed information about the banknotes being counted. This data includes the total amount and the total number of banknotes in the dispenser to make it easier for users to check them. In this mode, the counter offers 2 counting speeds (800/1000 pieces per minute).

SDC Mode

In this mode, the counter counts the banknotes of one denomination of the selected currency, taking the first banknote as a reference. At the same time, it stores detailed information about the bills being counted, including the total amount and the total number of bills in the dispenser to make it easier for users to check them. In this mode, the counter offers 2 counting speeds (800/1000 pieces per minute).

CNT Mode

This mode does not limit the currency and only counts the number of banknotes. It only works with double banknote detection and does not support other counterfeit banknote detection. In this mode, the counter offers 4 counting speeds (800/1000/1200/1500 pieces per minute).

Note: In MDC and SDC mode, the meter supports image acquisition, magnetic detection, ultraviolet detection, and double banknote detection. In CNT mode, only double note detection is available.

Auto recognition mode

When counting banknotes, the counter uses the first banknote passing through the sensor as a reference point to recognise banknotes of all denominations of the same currency. When banknotes of other currencies are recognized, the machine will give an alarm and stop. At this point, banknotes of other currencies must be removed and the machine will resume counting. The machine can only recognize the currencies displayed in the currency selection interface.

Press the **CURRENCY** button to open the currency selection interface shown in the figure. Move the cursor to "AUTO" using the directional key ("AUTO" is selected by default), and then press the **MENU** key. The display screen will automatically switch to the main interface as shown in the figure.

Example: Put a handful of USD bills into the counter feeder. The display interface will appear as the drawing when the counting is completed. The currency in the upper left corner is recognized as USD.

Multi-currency counting mode

Mixed counting of multiple currencies: Banknotes of different currencies are mixed together and inserted into the counter for counting. The counter can recognize the first 4 currencies displayed in the currency selection interface.

As shown in the figure, press the ▲ key to select the "MULT" option, shown in the figure, and then press the **MENU** key. The display screen will automatically switch to the main interface as shown in the figure.

Note: In multi-currency mode, only MDC mode works.

Example: Put a handful of banknotes (including USD, EUR, CAD, MXN) into the counter for conversion. The display interface after counting is shown in the figure.

Non-volatile memory for currency mode

Setting the currency mode is non-volatile. For example, if you set the meter to multi-currency counting mode before the meter is turned off, the next time you turn it on, the device will be in the same mode. This is very convenient because there is no need to redial the currency every time the meter is turned on.

Counting Function Options

Automatic banknote counting

Press the **START** button to enable or disable automatic banknote counting in the main interface. The default setting for automatic counting is "on". Each time the meter is reset, the setting returns to the "on" state.

As shown in the figure, pressing the **START** button is required each time banknotes are placed in the dispenser to start counting.

Read Serial Number (SN)

The ▲ button is used to enable or disable the serial number reading function in the main interface. The default setting for reading serial numbers is "on". Each time the meter is reset, the setting returns to the "on" state.

Batch Setting

Press the **BATCH** button to select the batch number on the bill counting interface. The screen display is shown in the figure. By

pressing the **MODE** button on the control panel, the batch number will cycle through the sequence 100-50-0.

The batch number will be increased by 10 when the ▲ key is pressed, or decreased by 10 when the ▼ key is pressed until it reaches 0. It can also be increased by 1 when the key ▶ is pressed, or decreased by 1 when the key ◀ is pressed.

Press **the START** key to return to the main interface if you confirm the batch number.

Note: The maximum capacity of the feeder is 200 banknotes, so the number of batches should be less than or equal to 200.

Accumulation function

Press the button to turn on the accumulation function. In any counting mode, the banknote accumulation function can be activated by pressing the **ADD key**.

Speed setting

Four counting speed options are available: 1500, 1200, 1000, and 800 (Note: 1500 and 1200 speeds are only optional in CNT mode). The default speed is 1000 in three modes. If necessary, you can switch to a different counting speed by pressing the **SPEED** key in any counting mode.

Counting Details

In MDC or SDC mode, after counting is completed, press **the MENU** key to enter the interface shown below and check the counting details.

Detailed Counting Screen

The interface displays information about the number of banknotes (PCS), denominations (Denom) and total amount

(Amount). The example in the figure shows the breakdown into individual denominations and grand total.

Serial number check

If the serial number reading (SN) is enabled, press the DETAILS key again and the banknote serial number will be displayed as shown in the figure below.

Printing information

After connecting the external printer and preparing it for printing, after finishing the counting, press the **MENU** key to enter the printing interface, shown in the figure. Then press **the START** key to start printing.

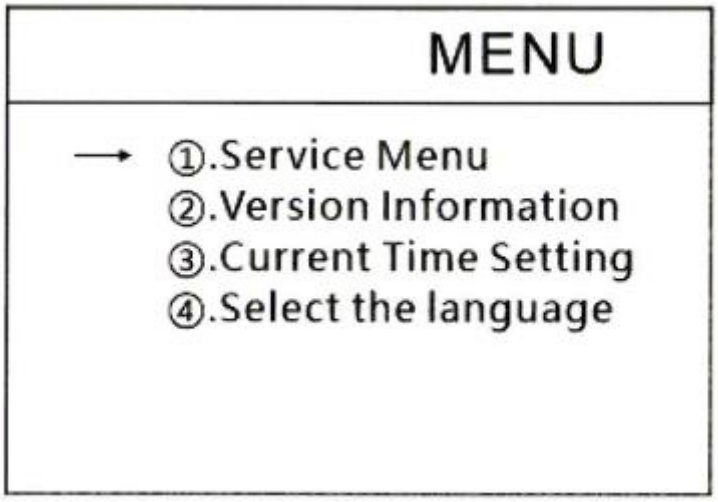
CFD Level

There are 3 adjustable CFD levels. By pressing the **CFD button**, you can change the graphic level of the CFD displayed in the upper right corner of the screen.

Note: CFD level 0 means no counterfeit banknotes are detected. The most stringent detection occurs at level 3.

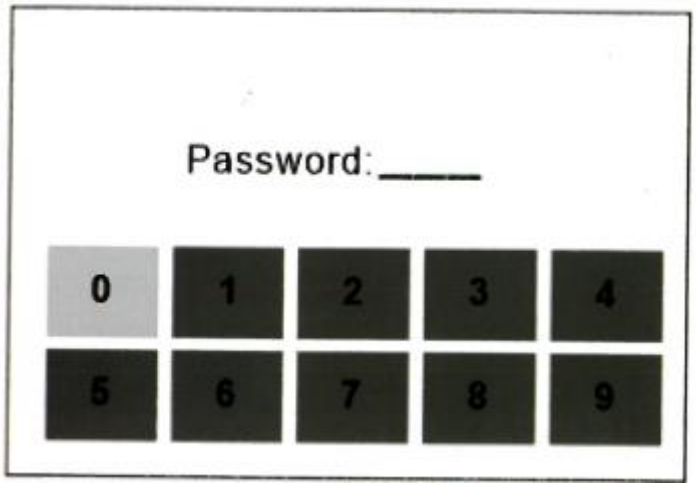
Menu settings:

To enter the menu interface, hold down the **MENU** key until you hear a beep as shown in the figure below.

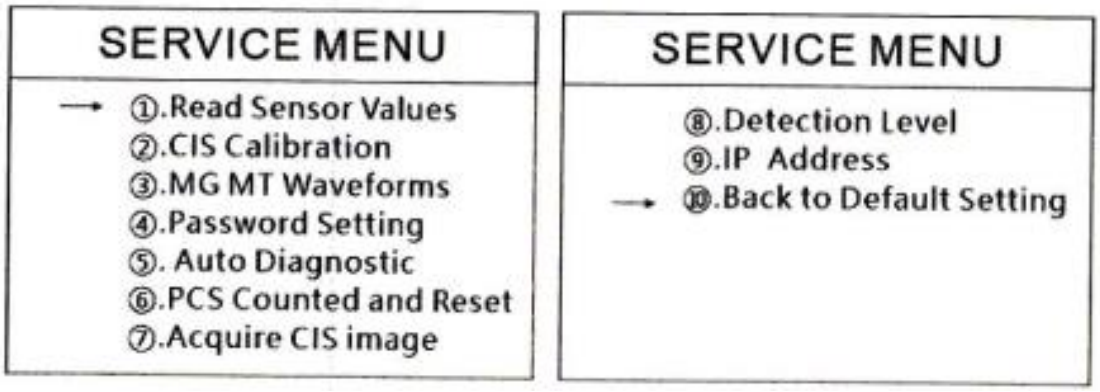


Service Menu

Press **the MENU** key to enter the service menu. You will be asked to enter your password on the interface below. The default password is **9999**.

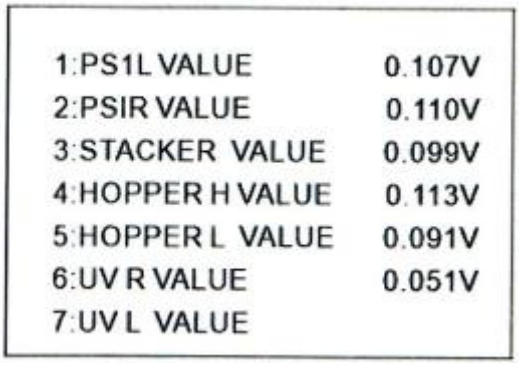


After entering the password, the interface shown in the figure will be displayed. Use the cursor to select the sub-menu you want to enter, press the **MENU** button to confirm, and then the **ESC** button to exit.



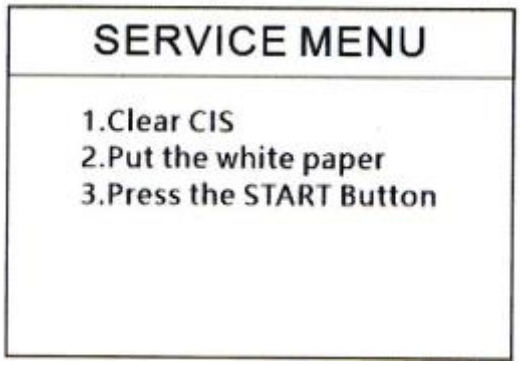
Reading values from sensors

As shown in the figure, the sensor values are only used by engineers to check if any of the sensors are malfunctioning. If you have problems with use, please take a photo of this page and contact us.

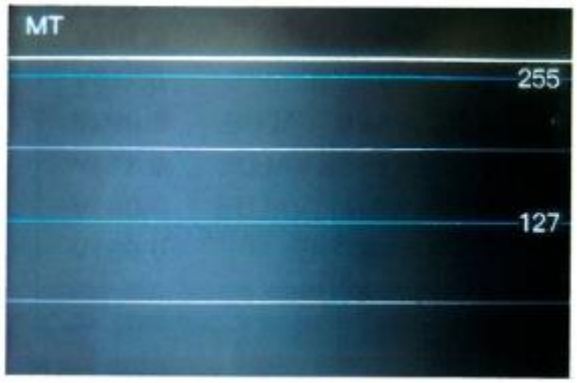


CIS calibration

If errors occur in the detection of banknotes, the CIS should be calibrated. The calibration steps are shown in the figure. For detailed instructions, refer to the maintenance manual.



MG/MT waveforms

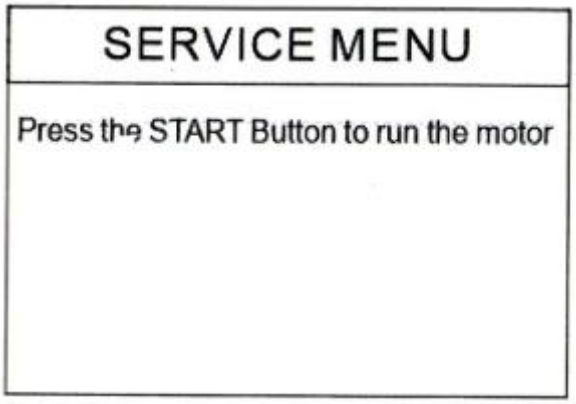


Password Setting

The password cannot be changed by the user at this time.

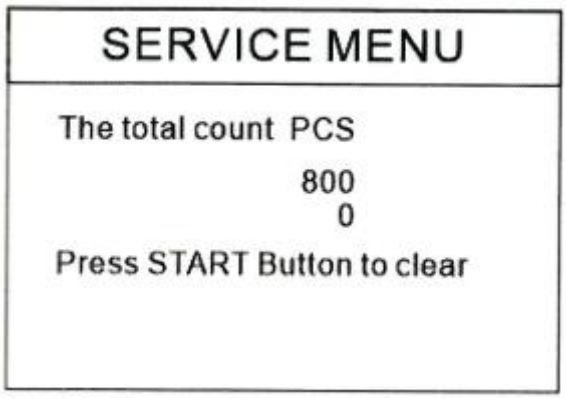
Self-diagnosis

This is intended for production purposes and professional servicing.

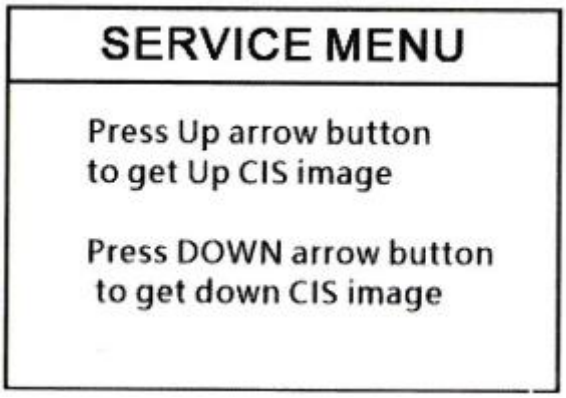


Number of PCS and reset

Shows the total number of counted banknotes in the counter since the last zero.



Detection level

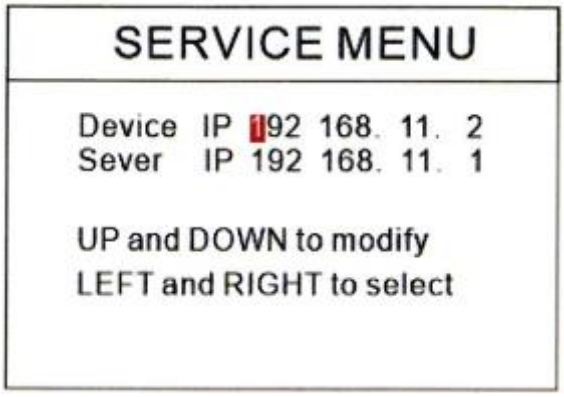


As shown in the figure, use **the LEFT** and **RIGHT** keys to select and the **UP** and **DOWN keys** to change the sensitivity levels. The currency code on the right indicates which currency the system is working for.

Note: Do not change the settings without first consulting us.

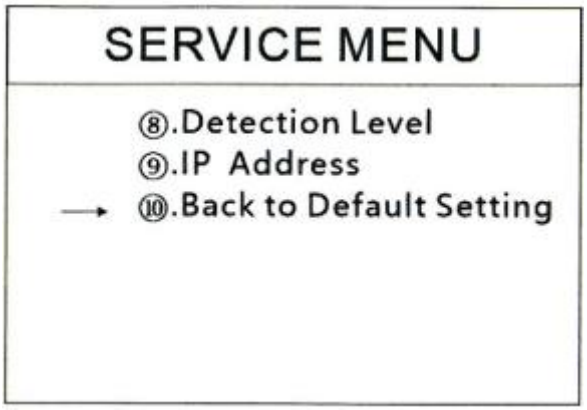
IP address

This setting is for engineers only.

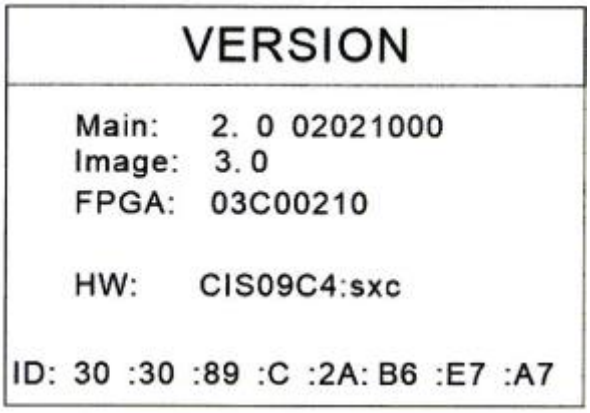


Back to default settings

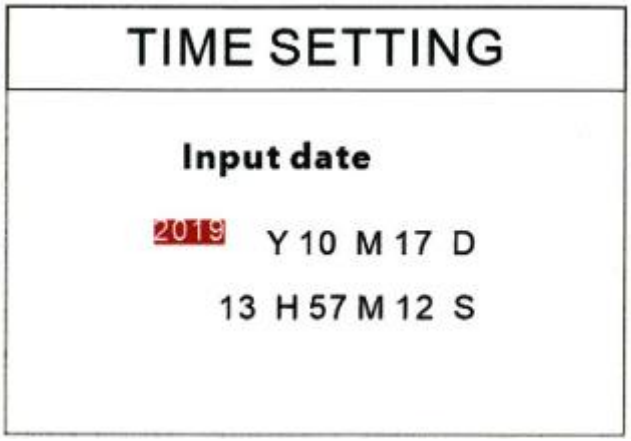
As shown in the figure, press the **MENU** button to reset all settings that have been previously changed.



Release notes



Time setting

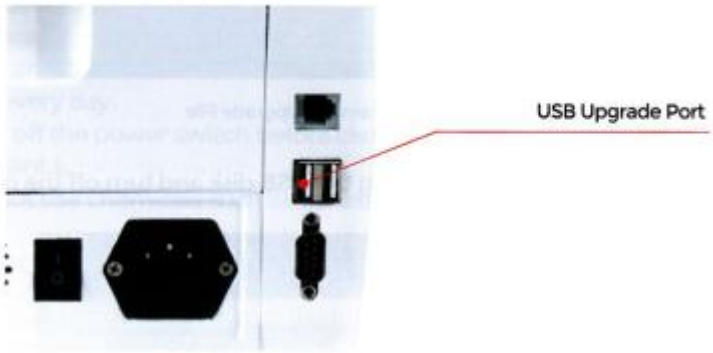


Language selection

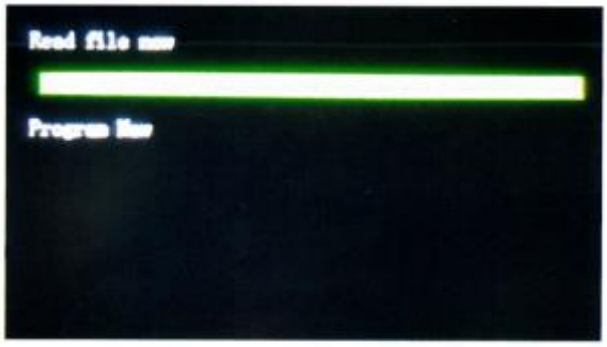
Software Update

The USB drive upgrade method has been adopted for this product. Please perform the firmware upgrade according to the steps below:

1. **The update file** should be moved to the root of the USB drive.(Do not change the name or format of the update file, and make sure that there is only one update file in the root directory of the USB drive.)
2. **Insert the USB drive** into the USB port on the back of the device. Make sure the power to the device is turned off before inserting the USB drive.



3. Turn on the machine – the machine will automatically recognize the update file. After successful recognition, the device will read the update file first.



4. Program the file on the meter.

5. When the programming is complete, remove the USB drive and turn off the device.

6. Turn on the device to enter the main interface. The software update is complete.

Maintenance

When you start the device, it will automatically perform self-diagnostics. If you see an error code or message in the settings

window that you need to clean the sensors, this is usually due to dust on the surface or a blockage of the sensor by banknotes. If this occurs, remove dust from the surface with a brush or soft cloth and then remove any obstructions. Restart your device.

Cleaning the machine

Dust, dirt, or other substances adhering to the sensor can interfere with the sensor and cause erroneous counting results. Therefore, the sensor and the rotating shaft should be cleaned with the included cleaning tools daily or as needed.

Before cleaning, turn off the appliance to prevent electric shock or other accidents. Do not use chemicals such as benzene, solvent or water.

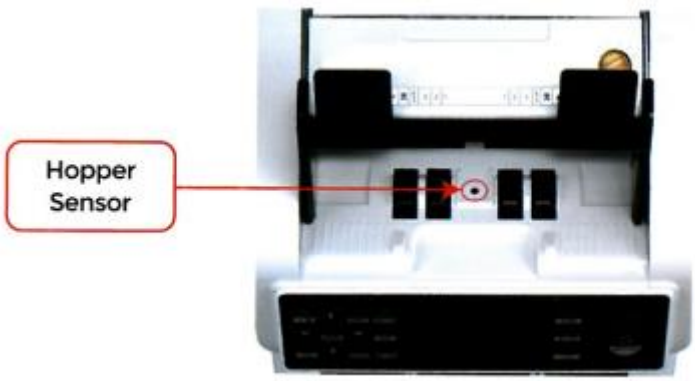
Checking the serial number

There are 3 parts in the feeder **that need cleaning**:

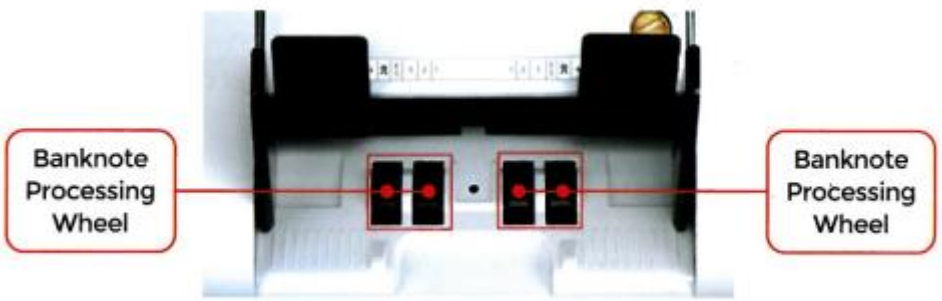
- feeder sensor,
- banknote processing roller,
- banknote input.

Feeder Sensor

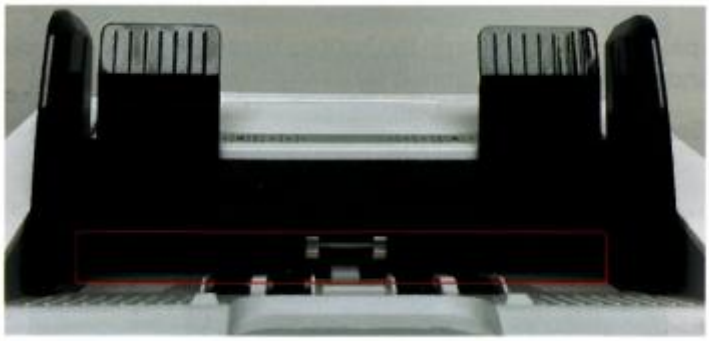
As shown in the figure, clean **the feeder sensor** with a nylon brush or cleaning cloth.



Banknote Processing Roller As shown in the figure below, clean the banknote processing roller with a nylon brush or cleaning cloth.

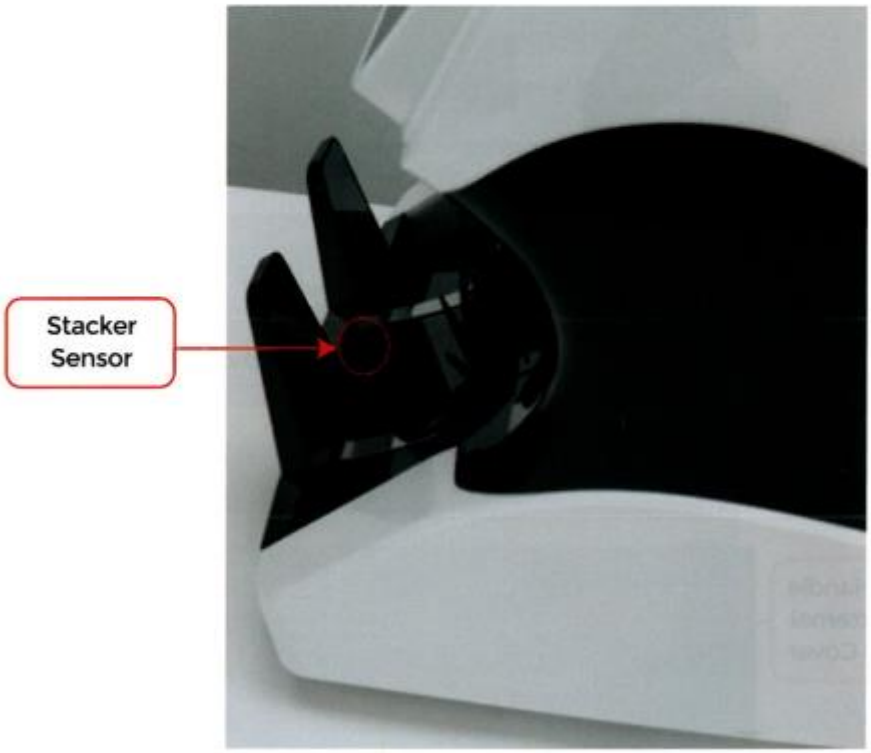


Bill Input As shown in the figure below, clean the banknote entry with a nylon brush.



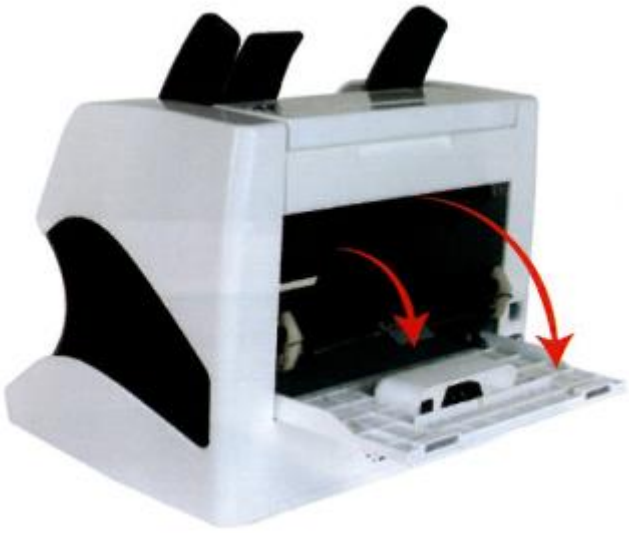
Cleaning Stack Sensors

As shown in the figure below, clean the stack sensors with a nylon brush or cleaning cloth.

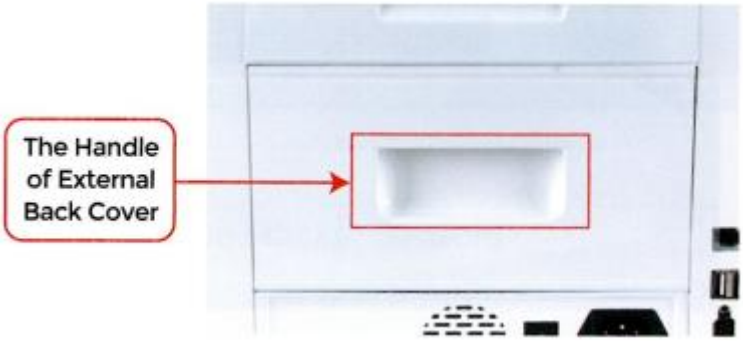


Cleaning the internal sensors

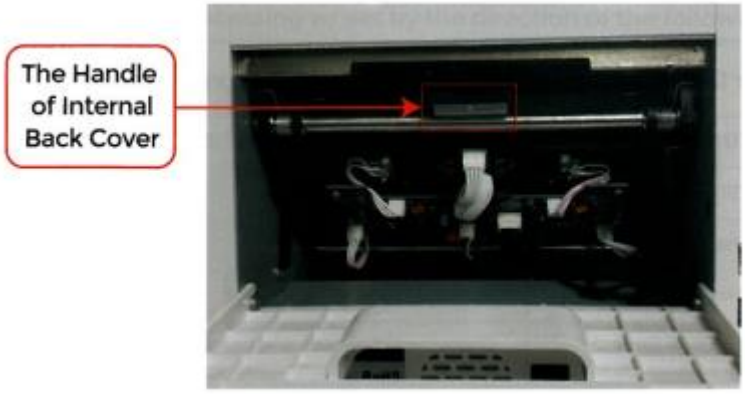
As shown in the figure below, clean the stack sensors with a nylon brush or cleaning cloth.



1. Pull the handle of the back cover with the direction shown in Figure 7-5 to open the back cover.



2. Pull the handle of the inner back cover in the direction shown in the figure to open it.



3. Clean the bottom **CIS** and **UV** sensors with a cleaning cloth or nylon brush.

4. Clean the top CIS sensor with a cleaning cloth.

Note: It is recommended to use a cloth to clean the CIS sensors.

Error codes

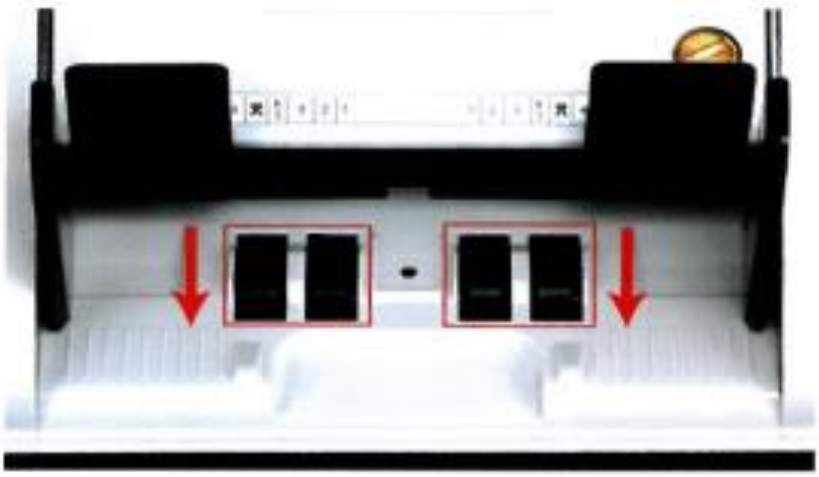
Code	Error description	Handling Method (Recommendation)
E1	Banknote UV sensor error	Remove the banknote, clean the UV sensor.
E2	Double banknote	If errors occur frequently, adjust the screw counterclockwise to reduce the feed gap.
E3/E8	Banknote string error	
E4	Half-note error	Remove the banknote.
E10	Image error	Clean the CIS sensor and calibrate the CIS.
E11/E12	Denomination recognition error	Remove the banknote. Clean the CIS sensor and calibrate the CIS. Collect the banknote details.
E13	Face recognition error	
E14	Size Recognition Error	
E15	Orientation error	
E20	MT Error	
E21	MG1 Error	

E22	MG2 Error	Remove the banknote, clean or replace the MG sensors.
E23	MG3 Error	
E24	Error MG4	
E30-E61	IR Error	Remove the banknote, clean the CIS sensor. Perform CIS calibration. Collect the banknote details.

When using IMC01, the device may show abnormal status and display error codes on the screen. For a description of the error codes and recommended handling methods, see the table.

Banknote jam

If banknotes get stuck inside the machine, turn off the machine and rotate the banknote processing roller in the direction shown in the figure below to remove the stuck banknotes.



There are several reasons why banknotes are jammed:

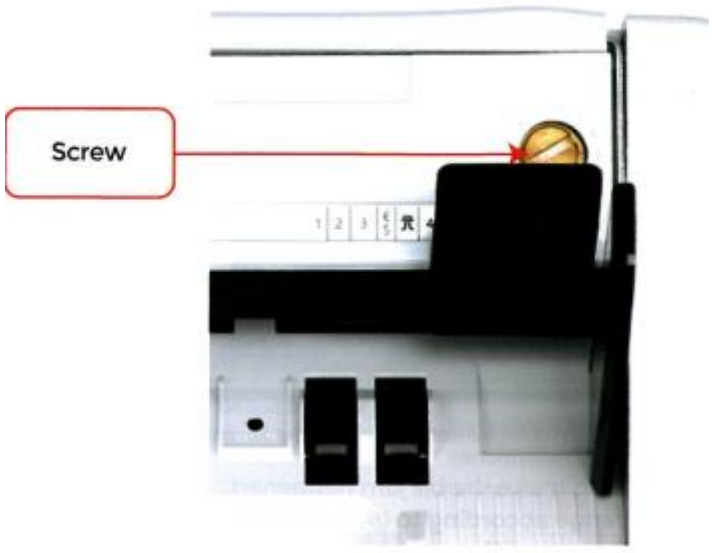
1. **The banknote size** is outside the range specified in the IMC01 specification.

2. **Damaged banknotes** – various damages such as missing corners, tape, holes, tears or folds. As shown in Figure 7-11, it is not recommended to count these banknotes.

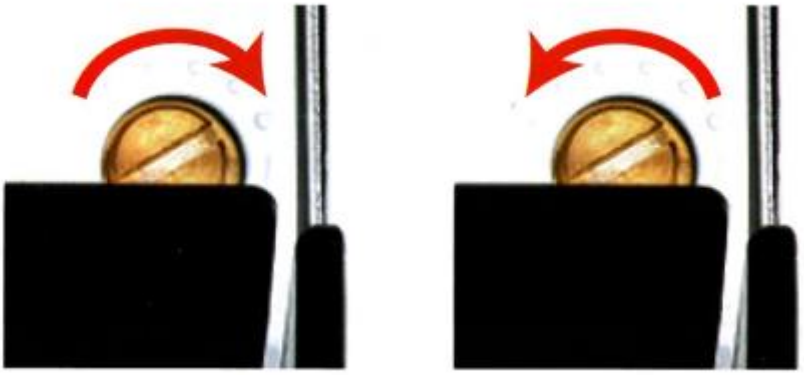
3. **If the banknote entry is too small** , it does not pass smoothly. In this case, fine-tune the screw by turning it clockwise (as specified in Section 7.4).
4. **Other malfunction** or unknown object inside IMC01. In this case, open the back cover, check and clean the internal sensors.

Feed gap calibration

The screw is used to adjust the width of the feeding gap.

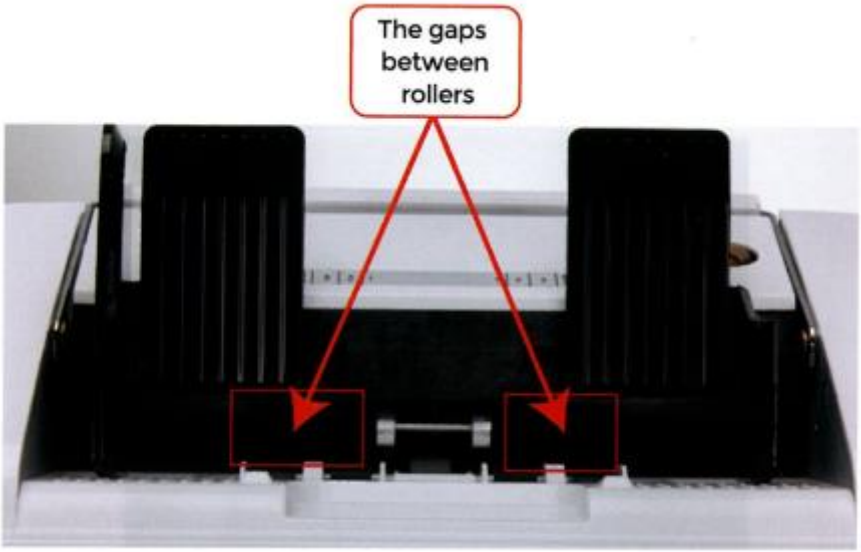


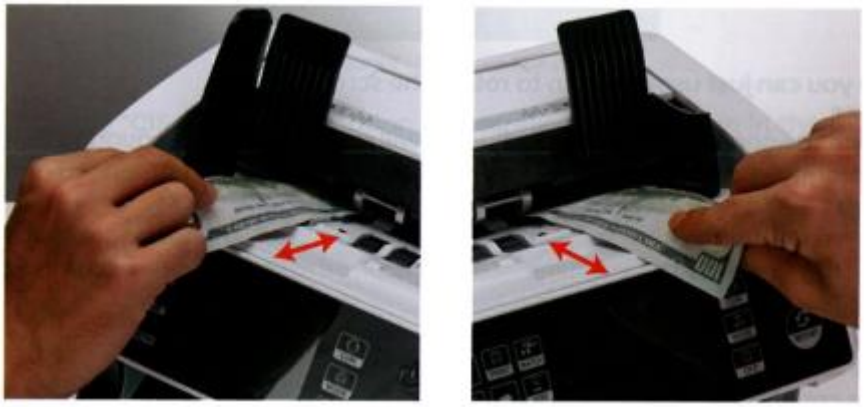
- The width **will decrease** if you turn the screw in the direction of the smallest dot.
- The width **will increase** if you turn the screw in the opposite direction.



Please fine-tune the feed slot by following the steps below:

1. **Stop automatic counting.**
2. **Insert one banknote into the slot between the rollers** to check that the banknote can be inserted smoothly, as shown in the illustrations below.





3. If the banknote is difficult to insert, the feed slot is too small. Turn the screw **clockwise** until the banknote can be inserted smoothly. If the gap is too large and allows you to insert two or more banknotes at once, turn the screw **counterclockwise** until the gap is small enough to allow only one banknote to be inserted.
4. Use the banknote to check both sides of the gap between the rollers to ensure that the banknote can be inserted smoothly on both sides.

Tip: You can use the coin to turn the screw.

Correct adjustment of the feed gap will ensure smooth counting and trouble-free operation. It is recommended that you do some trial and error before the final tuning and running of the count.

You can also perform this adjustment if:

- The banknotes do not pass smoothly through the machine.
- Errors such as **Double Banknote, Banknote String Error,** or **Half-Banknote Error occur**.

Other reasons why you may need to readjust the feed gap:

- Counting new or almost new banknotes.
- Counting of poor quality or damaged banknotes.
- Counting **polymer and paper banknotes counted together**.