

# iH-110 Series User Guide

Cash Counter & Discriminator



Are you searching for a high efficient banknote detector?

Then look no further!

iH-110 is a machine to obtain all your needs and requirements.

It can accurately count notes and safely detect counterfeit all at high speed operation.

This compact machine performs more than you might imagine.

Experience one for yourself and you will find your search is finally over!

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## Introduction

Thank you for purchasing iH-110.

The iH-110 is the new paradigm of counterfeit detection so your banknotes will be safe, and has added many functions and options to make your duties even easier.

The iH-110 is an enhanced high speed banknote counter that has accurate OCR (up to 800 notes/min) for reading the serial numbers on banknotes.

Through a visible 4.3 inch color Graphic LCD, convenient audio alert, LAN/USB for networking/upgrading, flexibly designed menu, GUI, and duplicated keys for two tellers, the iH-110 offers a highly convenient and easy operation.

## Safety Guidelines

In this section, the compliance matters are described in order to use the product safely, and to prevent you and other people from the damages brought by the product to the human bodies or properties.

Please read this instruction manual thoroughly in advance to use in the correct way.



### Warning

It denotes the contents in which mishandling of the product by neglecting this indication may cause people serious injury.

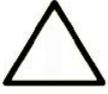


### Caution

It denotes the contents in which mishandling of the product by neglecting this indication may cause people light injury or, physical damage.

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This symbol indicates that the precautions for handling the product. Please read the indications well and utilize the product safely.



This symbol indicates prohibited matters, do not attempt. Please read the indications well. Never try any prohibited matters.



This symbol denotes that there are indication matters which should be done without fail. Please read the indicated matters thoroughly and always perform them as shown.





## Warning

## Installation



1. At installation and relocation of the products, please contact our distributor near you or our designated dealers. If installation is not perfect, there is a risk of a falling accident, electric shock, fire, or burn injury.
2. At installation and use of the products, keep the space sufficient for opening and closing the door, cover and operation. If a part of the product touches a human body incorrectly, it may cause an accident.
3. In case of installing the product at the following places, you should confirm the Road Law, Road Traffic Law and Fire Protection Law, etc. If compliance conditions are not clear, please consult with the authorities concerned.
  - The place which may disturb traffic or accident prevention.
  - The place adjacent to the fire extinguishing and detecting apparatus.
  - The place adjacent to the road signs or traffic signals.
  - The place where combustible materials or gas are treated (gas stations, etc.)Passages and facilities for evacuation Illegal installation may cause an accident.
4. Keep an installation space as described in the instruction manual, and do not block or close the ventilation inlet. If the ventilation inlet is blocked, heat is accumulated inside and it may cause fire.
5. Depending on the installation place, mounting of an earth leakage breaker is required by Electricity Enterprises Law. Illegal installation may cause an accident.



1. Do not install the product in any place where water may spill on it. If water enters into the product, insulation performance degrades and it may cause fire and/or electric shock.
2. Do not install the product at the place where the floor cannot bear the load of the product, or at any unstable place with inclination and/or irregularity. It may cause floor caving and sudden movement accidents of the product to occur.
3. Installation at the following places should be avoided:
  - 1m or less from volatile combustible materials or curtains.
  - 1m or less from heating apparatus such as stoves, heaters etc.
  - Any place with direct winds blown from air conditioners, ventilating openings etc.
  - There are safety problems and deterioration of the product may be accelerated, which leads to any cause for failure.

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- Any place with high temperature, high humidity, or low temperature.
- Any place with direct sunlight.
- Any place with large amounts of dust.

When installing the product at the following places, please contact our distributor near you or our designated dealers.

- Any place exposed to salty winds or corrosive gas.
- Any place with a large amount of swinging or vibration.



Grounding work should be made for safety and prevention of static electricity and noise failure. In addition, a ground wire should be installed independently without sharing the wire with other products. At grounding work, please be sure to contact our distributor near you or our designated dealers. In case of electrical leakage when grounding is insufficient or not connected, it may cause fire and/or electric shock.

The place where a ground wire can be fitted:

- Ground terminals for power receptacle.
- The copper piece etc. with a length of 65 cm or more, buried in the ground.
- The ground terminals on which grounding work is made.

The place where a ground wire must not be fitted.

- Gas pipes
- Telephone wires for exclusive use
- Lightning rods
- Water pipes or faucets with plastic materials at their intermediate part.



Do not use or put the combustible materials such as thinner, combustible gas, or a high-volatile object around/inside the product. Otherwise, it may cause explosion and/or fire due to heating from the product or flashing from power supply..



## Warning

## Power Supply



1. When using the product, connect it to the power supply specified in the instruction manual. If it is connected to the power supply, other than the product's specification, it may become a cause of fire, electric shock, and/or electrical leakage.
2. Do not use a power supply cord and the plug other than the attached ones. If a current that exceeds the rating flows in the power supply cord, it may cause fire.
3. Be sure to insert the blade part of the power supply plug into an outlet. Insufficient insertion may cause fire.



1. When the earth leakage breaker frequently operates, please contact our distributor near you or our designated dealers. If the product is used or left as it is, it may cause fire and/or electric shock.
2. Do not modify, process, or repair the power supply cord and the plug. In addition, do not convert a 3-prong power supply plug into a two-pole type. Grounding becomes insufficient and there may cause electric shock.



Please follow the items below to prevent electric shock and/or fire due to damage of the power supply cord.

- Do not pull the cord part when pulling out the power supply plug.
- Do not put anything on the cord part.
- Do not pass the cord near a source of heat.
- Do not bend or pinch the cord.
- Do not tread or twist the cord.
- Do not spill chemicals on the cord.
- Do not use it while it is bundled.
- Do not fix it with a stapler etc.



1. Do not use the power supply cord and the plug for other products or purposes. Further, when they are lost or damaged, please purchase them at our distributor near you or our designated dealers. The attached power supply cord and the plug are designed and confirmed the safety for connecting to this product to use. If they are used for other products or purposes, it may cause fire and/or electric shock.

2. The product should be used at the specified frequency. If it is used at other than the specified frequency, it may cause an accident.



## Caution

## Handling



1. The product should be used under the environment specified in the instruction manual. If it is used under the other environment of the specification, there may cause fire and electric shock.
2. When operating inside the product for error or clearing or cleaning etc., the operation should be made in accordance with the description in the instruction manual. Operation other than the description may cause an accident.



1. Do not turn off the power, pull out the power supply plug, or open the cover of the product during the operation. Otherwise, it may cause an accident.
2. Do not put a vase or glass with an object and/or water etc. on the product. Otherwise, it may cause fire, electric shock, and/or injury by spilling water or dropping.
3. Do not apply shock on the product. There is a risk of damaging the product and normal operation cannot be performed.
4. Do not use chemicals such as thinner or benzene when removing dirt of the product. Otherwise, it may cause damages.
5. Do not use a interface cable other than the attached one. When cables are other than the attachment, it may cause the interface error or machine trouble.



Do not use a combustible spray etc. around product. If spraying gas etc. contacts the electrical parts inside the product, it may cause explosion and fire.



1. When touching inside the product for cleaning or parts replacement etc., be sure to turn off the power. If you work with turning the power on, it may cause electric shock and/or injury.
2. Do not touch the product, power supply plug, and cord with a wet hand. There is a risk of electric shock.
3. The electrical parts inside the product should not get wet by rain or water at cleaning etc. if they get wet, it may cause electric shock and/or shock.
4. Do not turn off air heating suddenly when the product is completely cold. Moisture may adhere inside the product due to sudden air heating and it may cause electric shock.

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5. There is a charging part inside. Be sure to turn off the power before opening any cover. If the cover is opened without turning off the power, it may cause electric shock.



1. Do not drop any metallic piece such as a clip, staple etc. inside or in a clearance of the product. If a metallic piece drops inside the product and contacts the electric circuit, it may cause fire and/or damage to the product.

2. When the product is not use for a long time, be sure to pull out the power supply plug from an outlet for safety. Otherwise, it may cause heating and/or firing due to dust accumulation.



Do not modify the product or mount modified parts on the product. Further, do not dismount the portion which is not indicated to be opened/closed in the manual or the cover and parts etc. fixed with screws etc. Otherwise, it may cause fire, electric shock, and/or injury.



1. Keep your hand or clothes away from the machine during operation or any moving parts of the product reachable. This may cause body injury and/or damage to personal property.

2. When closing a door, pay attention not to not cause body injury or damage property.

3. When working ensure that all doors of the machine are locked. If a door is left open it may cause body injury or damage to property.



Do not touch the gear etc. It may cause injury.



## Warning

## Maintenance



1. For repairing the product, please contact our distributor near you or our designated dealers. Insufficient repair may cause fire, electric shock, and/or injury.
2. When the product has sunk under the water due to a disaster etc., stop using it and please ask for repair/check to our distributor near you or our designated dealers. If used as it is, it may cause fire and/or electric shock.
3. Check periodically whether its installation place is unstable or not. If there is any abnormality, please contact our distributor near you or our designated dealers. If it is continuously used with insufficient installation, it may cause a falling accident.
4. Check and clean the power supply plug and the cord regularly. If the power supply plug is broken or the cord is damaged, stop using and please replace it by contacting our distributor near you or our designated dealers. It may cause fire and/or electric shock.



When smoke, abnormal smell or abnormal sound is generated from the product, stop using it immediately, cut off power supply and pull out the plug from the outlet. Then, please contact our distributor near you or our designated dealers. If used or left as it is, it may cause fire and/or electric shock.

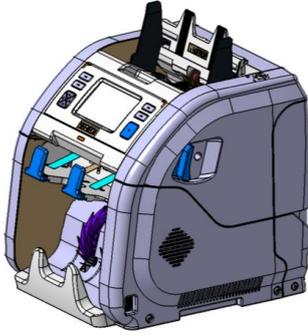
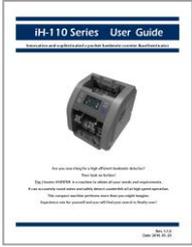
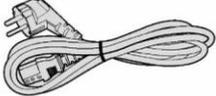


## Warning

## Other

1. This is a class A product. In a domestic environment, this product may cause radio interference in which case the user may be required to take adequate measures.
2. The socket-outlet shall be installed near the equipment and shall be easily accessible.
3. Risk of explosion if battery is replaced by an incorrect type. Dispose of used batteries according to the instructions.

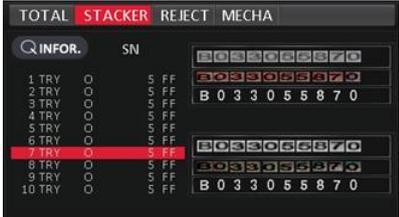
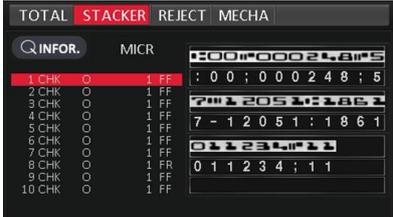
## Packing List

<p><b>iH-110 Series</b></p> 	<p><b>Manual</b></p> 	<p><b>Power Cable</b></p> 
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## Options (sold separately)

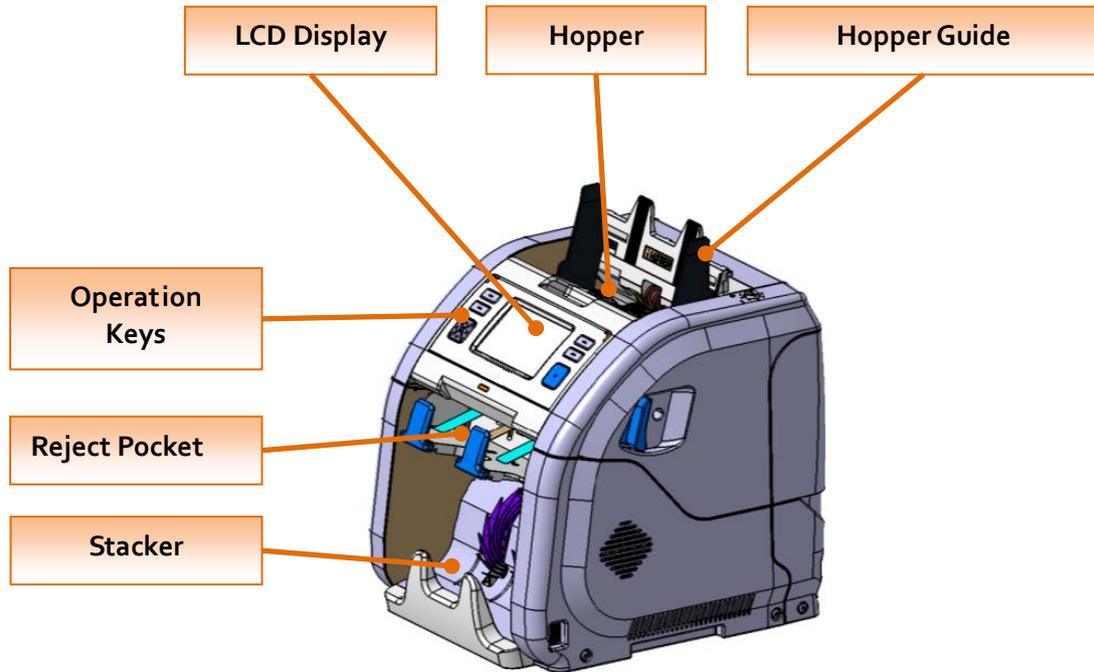
<p><b>External Display</b></p> 	<p><b>Serial Printer</b></p> 
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## Series

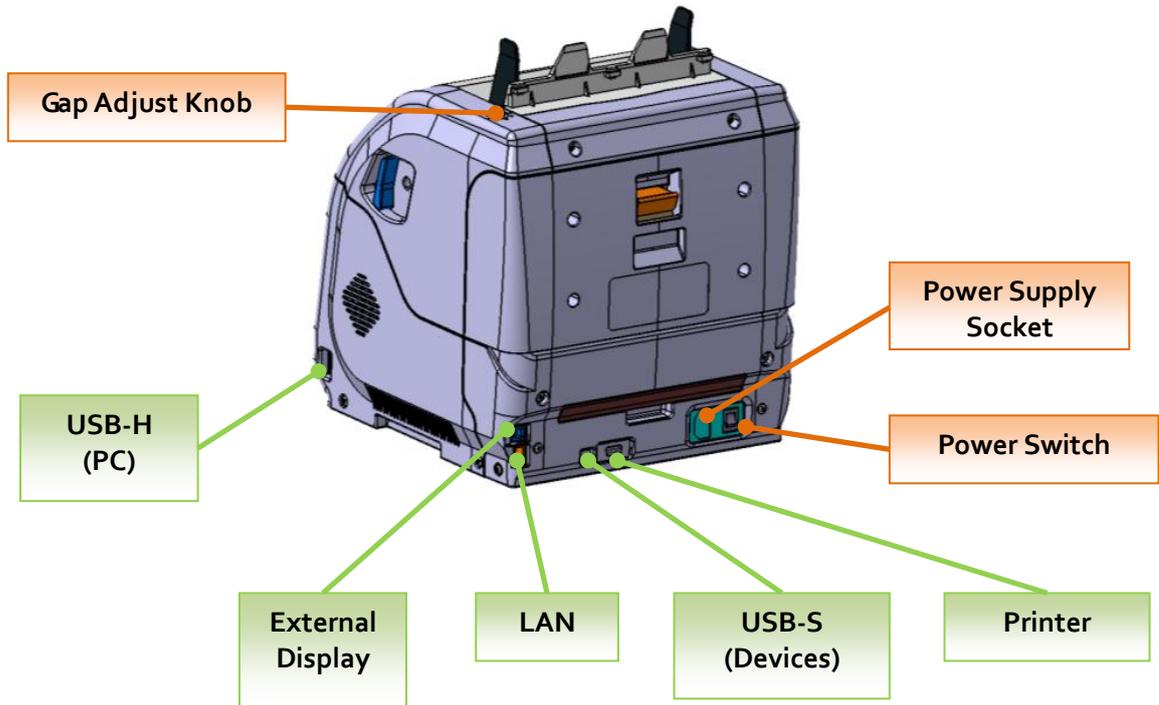
iH-110	iH-110S & iH-110B	iH-110F
<p>Accurate recognition of serial number with full color image and accurate recognition of OCR for serial number.</p> 	<p>MICR recognition of cheque and voucher with full color Image and OCR of MICR. Barcode recognition with full color image.</p> 	<p>Multi-currencies fitness sorter. Sorts notes by fitness parameters.</p> 

## Appearance

<Front View>

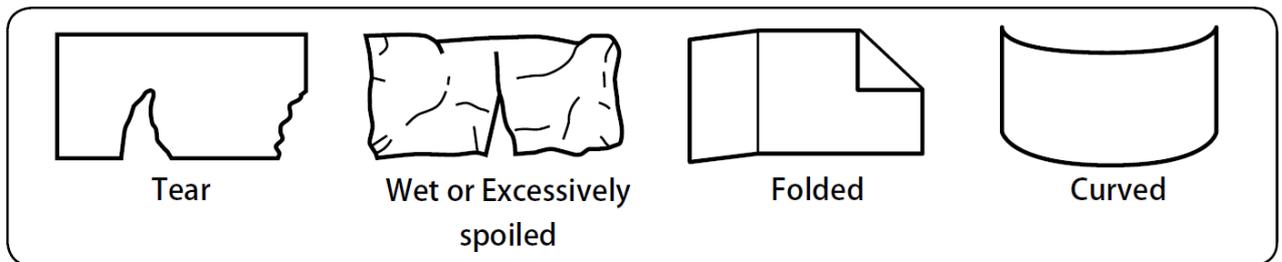


<Rear View>

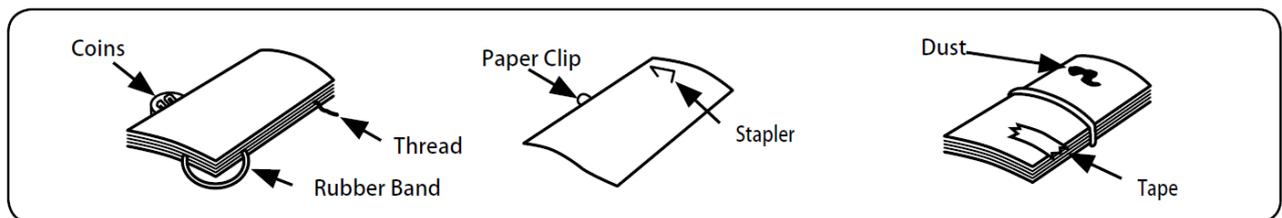


## Before Using

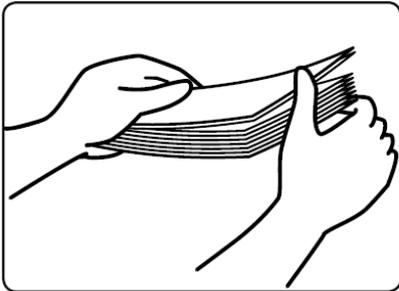
Avoid counting wet, excessively dirty or spoiled notes.



Check for foreign matter (paper chips, rubber bands, clips, dust etc.) mixed with notes.



Remove folds or end from notes beforehand. Spread and separate brand new notes well for some of them are slightly adhesive.



Align all the four corners and edges of notes. Any unevenness may cause an error.

## 1. Key Operation

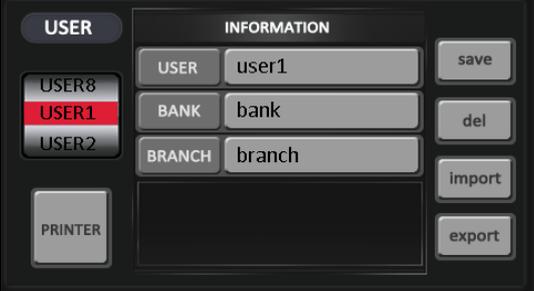


Key		Explain
LS1	Short Key	Change Mode and select Teller 1.
	Long Key	View Operation.

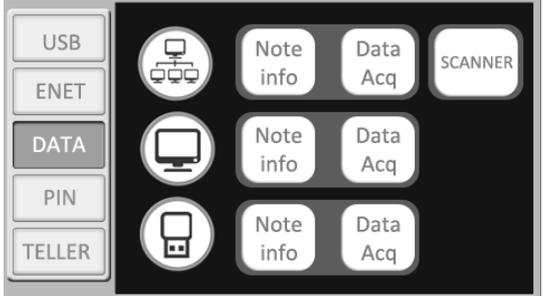
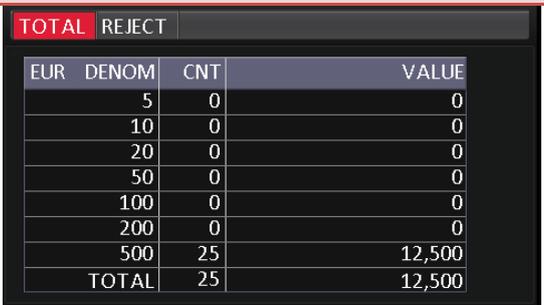
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<b>LS2</b>	Short Key	Change Speed. Print Key for Teller 1.
	Long Key	View Version.
<b>RS1</b>	Short Key	Change Local and select Teller 2.
	Long Key	View all locals.
<b>RS2</b>	Short Key	Print Receipt. Print Key for Teller 2.
	Long Key	View counting reseult.
<b>Arrow</b>		Used to move to the next item, change the value and menu selection and etc.
<b>Start</b>		Used to start and stop the counting or exit menus.
<b>LED(L)</b>		When Stacker is full, LED(L) is blinked. Turn on when Teller 1 is selected.
<b>LED(R)</b>		When Batch is full, LED(L) is blinked. Turn on when Teller 2 is selected.
<b>LED(B)</b>		When CF is detected or Reject is full, LED(B) is blinked with Red(CF) and Green(Reject).

## ※ Special Key or Drag Pattern Operation (Pincode is needed for some patterns.)

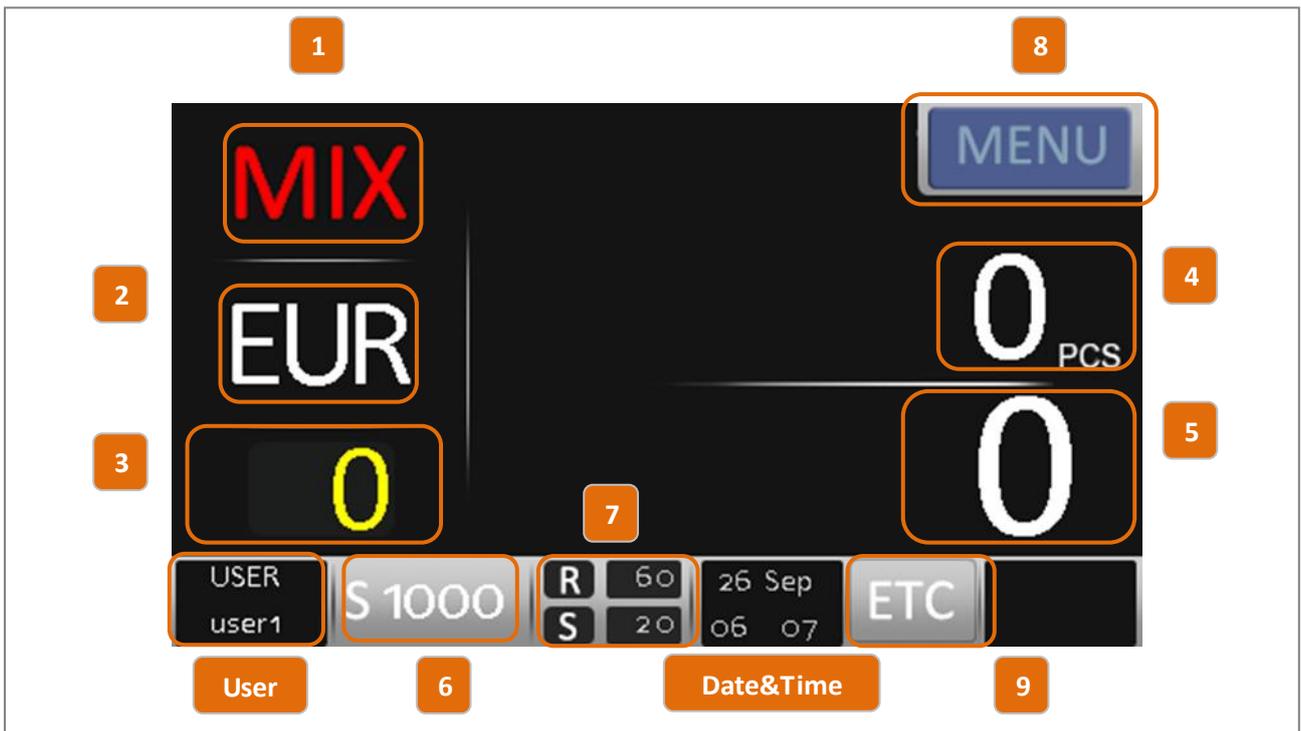
No.	Key Combination	Screen Drag Pattern	Mode(screen)	Menu Location
1	L1 + R1			4-6. Local Setting
2	L1 + R2			4-5. USER Setting

# iH-110 User Guide

3	L2 + R1			4-4. Comm. Info.																																				
4	L2+ R2			4-4. Comm. Info.																																				
5	None			4-2. Operation																																				
6	None		 <table border="1" data-bbox="738 1261 1235 1507"> <thead> <tr> <th>EUR</th> <th>DENOM</th> <th>CNT</th> <th>VALUE</th> </tr> </thead> <tbody> <tr><td></td><td>5</td><td>0</td><td>0</td></tr> <tr><td></td><td>10</td><td>0</td><td>0</td></tr> <tr><td></td><td>20</td><td>0</td><td>0</td></tr> <tr><td></td><td>50</td><td>0</td><td>0</td></tr> <tr><td></td><td>100</td><td>0</td><td>0</td></tr> <tr><td></td><td>200</td><td>0</td><td>0</td></tr> <tr><td></td><td>500</td><td>25</td><td>12,500</td></tr> <tr><td></td><td>TOTAL</td><td>25</td><td>12,500</td></tr> </tbody> </table>	EUR	DENOM	CNT	VALUE		5	0	0		10	0	0		20	0	0		50	0	0		100	0	0		200	0	0		500	25	12,500		TOTAL	25	12,500	3-1. Basic Count Mode
EUR	DENOM	CNT	VALUE																																					
	5	0	0																																					
	10	0	0																																					
	20	0	0																																					
	50	0	0																																					
	100	0	0																																					
	200	0	0																																					
	500	25	12,500																																					
	TOTAL	25	12,500																																					
7	Long press L1	None		3-7. Bookmark																																				

8	Long press L2	None		
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## 2. Display Operation



1

Display and change Counting Mode.

2

Display the current local currency and change the currency.

3

Display Reject Amount and see the details.

4

Display Quantity(Pieces) and view total count result.

5

Display Amount and view Stacker information.

6

Display and change Speed.

7

Display and change Batch quantity of Reject and Stacker.

8

Enter Menu screen.

9

User Setting Mode.

Date&Time

Display and set date and time.

User

Display the current user.

## 3. Normal Operation

## 3-1. Basic Count Mode (Mix/SP/SG)

By touch the screen, Count Mode is changed from Mix, SP and SG.

Mix -> SP -> SG -> Mix



①

TOTAL				STACKER	REJECT	MECHA
TRY	DENOM	CNT	VALUE			
	5	56	280			
	10	56	560			
	20	20	400			
	50	3	150			
	100	1	100			
	200	0	0			
	TOTAL	136	1,490			

View total counting result.

②

TOTAL				STACKER	REJECT	MECHA
Q	INFOR.	RGB				
1	TRY	0	5	FR		
2	TRY	0	5	FR		
3	TRY	0	5	FR		
4	TRY	0	5	FR		
5	TRY	0	5	FR		
6	TRY	0	5	FR		
7	TRY	0	5	BF		
8	TRY	0	5	FR		
9	TRY	0	20	BF		
10	TRY	0	20	BF		

View counting result from Stacker Pocket. If you want to see counting result in details with the image, please enter pincode first.

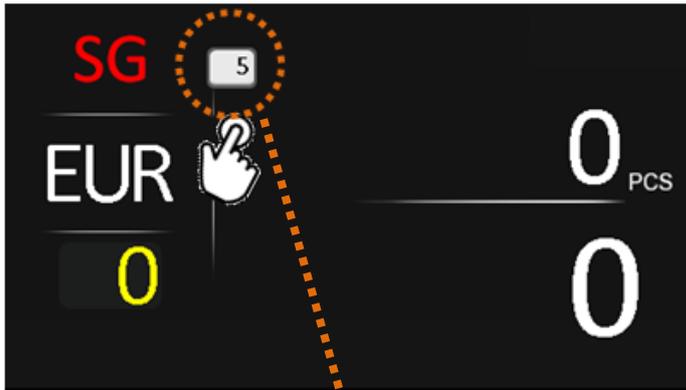
③

TOTAL				STACKER	REJECT	MECHA
Q	INFOR.	RGB				
1	OUTLINE LINE					
2	REC YSIZE					
3	REC YSIZE					
4	REC UNCERTAIN					
5	REC XSIZE					
6	REC UNCERTAIN					
7	REC XSIZE					
8	REC XSIZE					
9	REC UNCERTAIN					
10	REC UNCERTAIN					

View counting result from Reject Pocket. If you want to see reject counting result in details with the image, please enter pincode first.

## SG Mode

A user can select the version and denomination which he counts.



The screenshot shows a table titled 'Denom' with three columns: 'OLD', 'NEW', and 'B-NEW'. The table is enclosed in a dashed orange border. The '5' denomination is selected in the 'OLD' column. The 'NEW' column has '200' and '500' listed. The 'B-NEW' column is empty. The unit 'PCS' is indicated on the right side of the table.

Denom	OLD	NEW	B-NEW
5		200	
10		500	
20			
50			
100			

## 3-2. SN Reading (Optional)

This function is optional.

When order machines, you need to inform local currency that you want to install SN function.

In SN mode, you can check the serial numbers about all counted notes on screen.

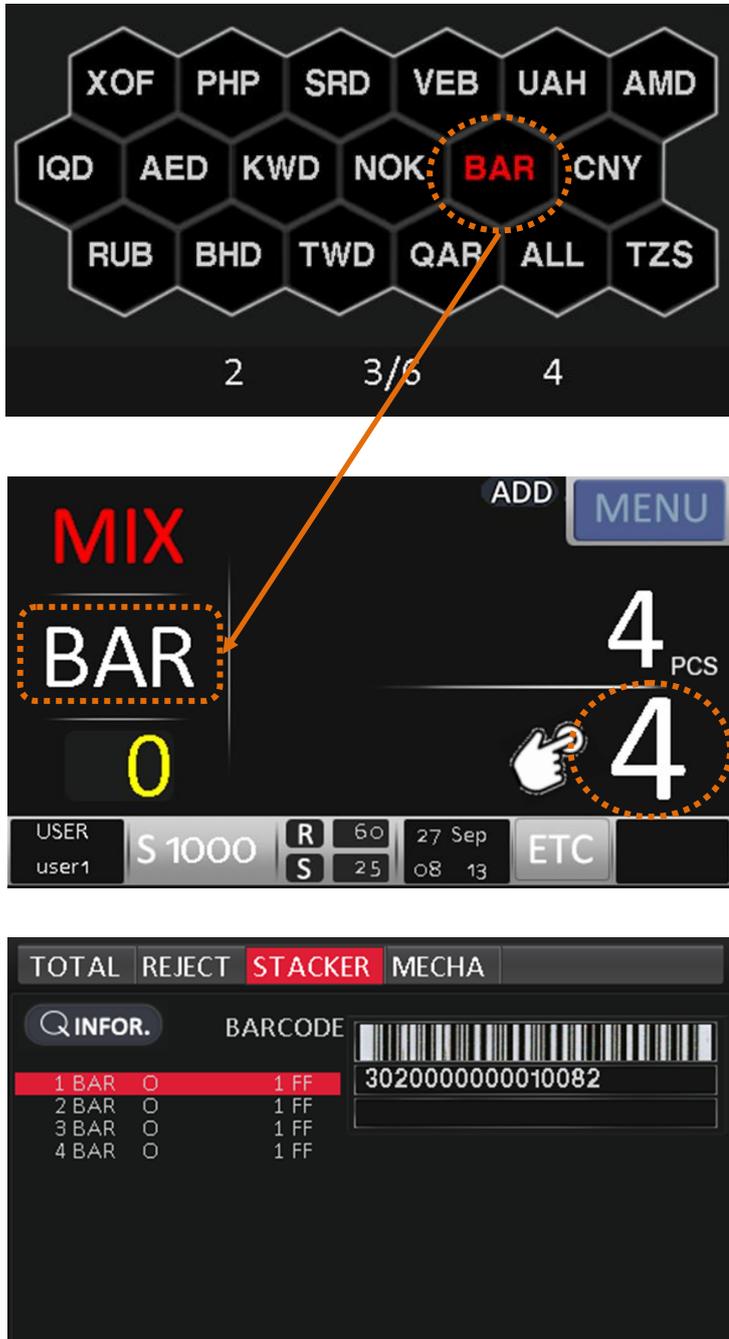


If you want to see the image of serial numbers, please enter pincode first.

### 3-3. Barcode Reading (Only for iH-110B model)

By long touch of Currency area, a user can select Barcode mode directly.

In this mode, a user can count Barcode tickets and check the recognized Barcode directly.



### 3-4. Check Reading(MICR) (Only for IH-110S model)

By long touch of Currency area, a user can select Check Reading mode directly.

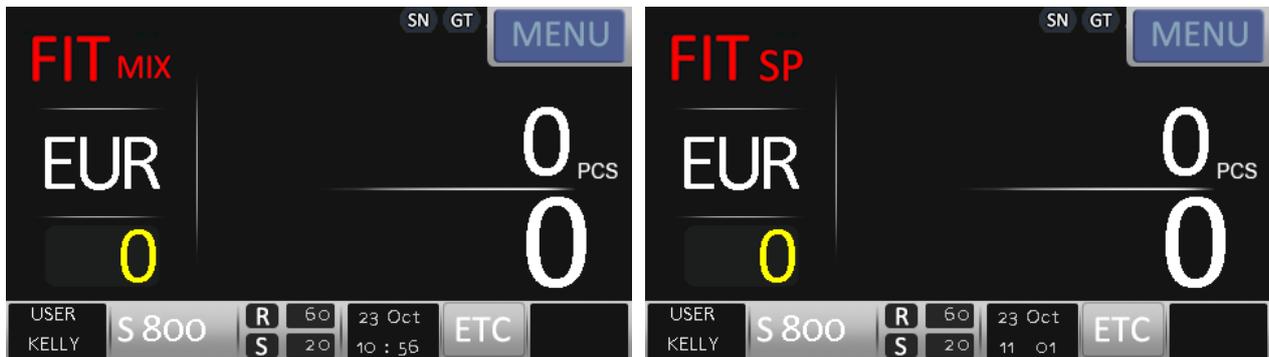
In this mode, a user can count Checks and see the recognized information directly.



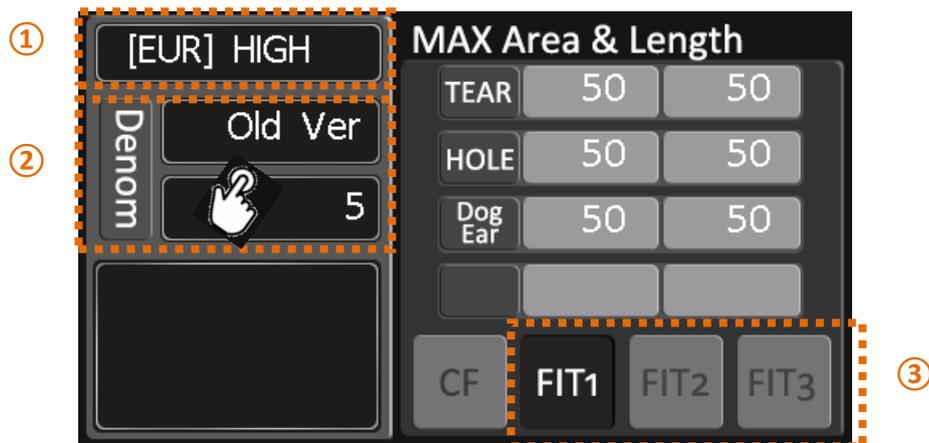
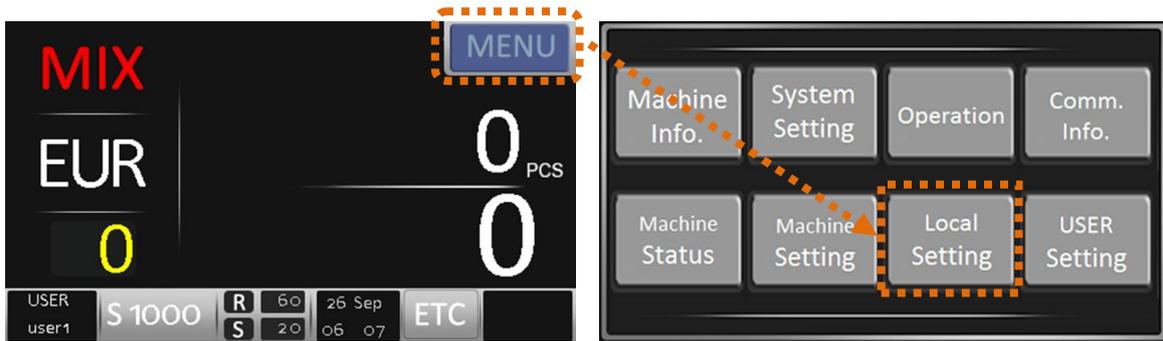
### 3-5. Fitness (Only for IH-110F model)

According to fitness parameters, iH-110 sorts clean banknotes.

After select Currency, press LS1 Key for select FIT MIX or FIT SP.



**\* How to set fitness parameters (Pincode is needed.)**



### ① [Currency] Fitness Level Sensitivity

There are 3 kinds of sensitivity for Fitness Level, High, Middle and Low. By pressing ↑ or ↓ Arrow Key, user can select the level.

### ② Denomination and Version of Currency

When touch the screen, user can change the denomination and version.

### ③ Fitness parameters

There are 3 modes for adjusting Fitness Parameters.



### FIT 1 – MAX Area & Length

Adjust Tear, Hole and Dog-Ear sensitivity about the largest damaged area of the note.



## **FIT 2 – Total Area & Length**

Adjust Tear, Hole and Dog-Ear sensitivity about the whole(total) damaged area of the note.



## **FIT 3 – FITNESS Level**

Adjust fitness parameters except Tear, Hole and Dog-Ear.

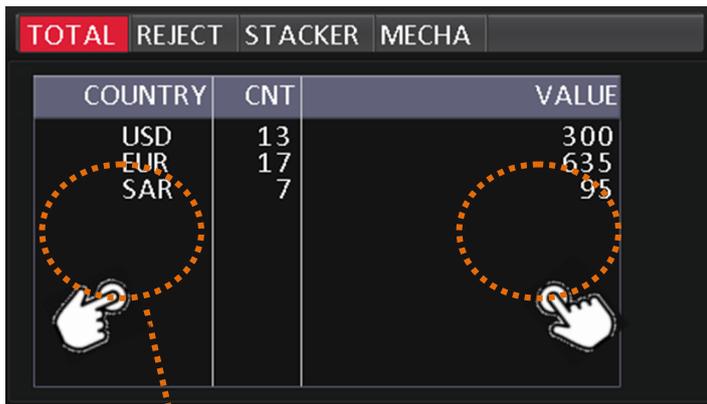
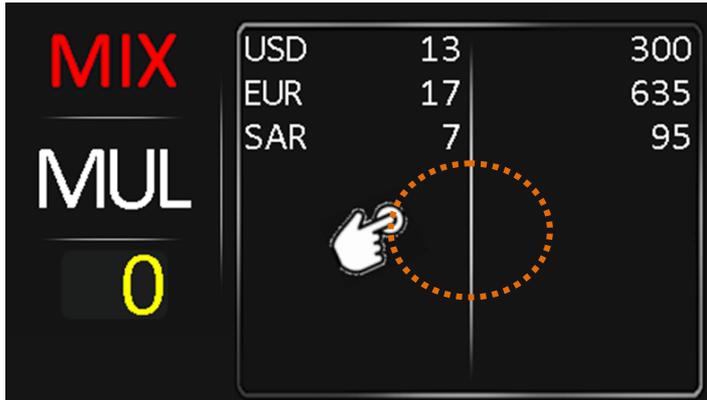
## 3-6. Multi Mix

By long touch of Currency area, a user can select Multi Currency mode directly.

In Multi Currency mode, a user can count the mixed currencies together.

(Max 16 currencies are available.)

A user can also check the counting result in detail about each currency separately.



When touch left or right side of Display, a user can see the details counting result of each currency.

USD	DENOM	CNT	VALUE
1	0	0	0
2	0	0	0
5	0	0	0
10	5	50	50
20	5	100	100
50	3	150	150
100	0	0	0
TOTAL	13	300	300

EUR	DENOM	CNT	VALUE
5	5	25	25
10	3	30	30
20	4	80	80
50	0	0	0
100	5	500	500
200	0	0	0
500	0	0	0
TOTAL	17	635	635

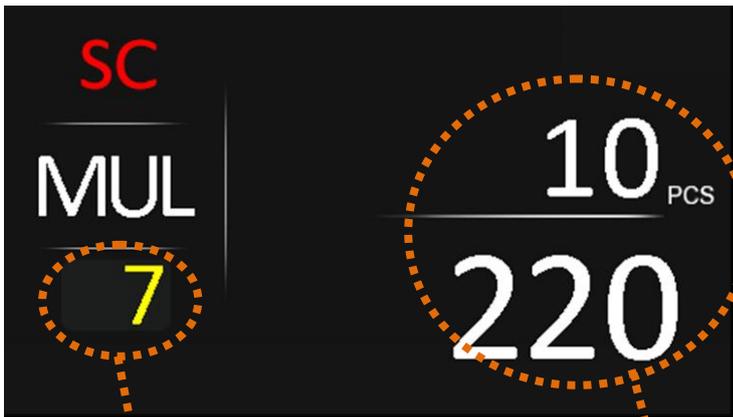
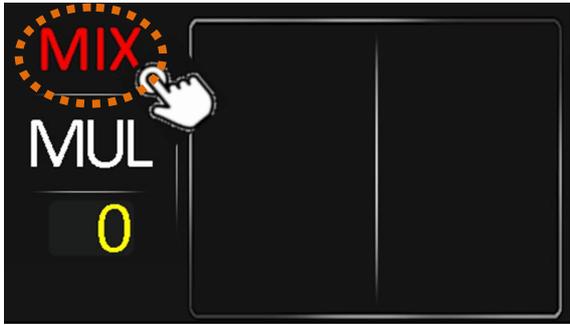
SAR	DENOM	CNT	VALUE
1	0	0	0
5	3	15	15
10	3	30	30
20	0	0	0
50	1	50	50
100	0	0	0
200	0	0	0
500	0	0	0
TOTAL	7	95	95

## 3-7. Multi SC (Auto Mode)

From Multi(Mix) screen, user can enter Multi SC mode.

In Multi SC mode, the first recognized currency is accepted only and the others are rejected.

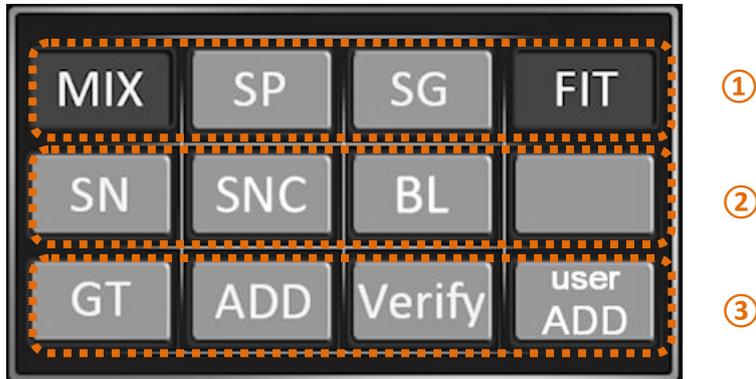
Error code of the rejected other currencies is DIFF CURRENCY.



USD	DENOM	CNT	VALUE
		1	0
		2	0
		5	0
		10	50
		20	100
		50	150
		100	0
TOTAL		13	300

## 3-8. Bookmark

When long press LS1 Key, Bookmark menu is shown as below.



### ① Counting Mode

Shortcuts for frequently used Counting Modes.

### ② Functions for Serial Number Reading

Shortcuts for SN recognition functions.

### ③ Functions for ADD and GT

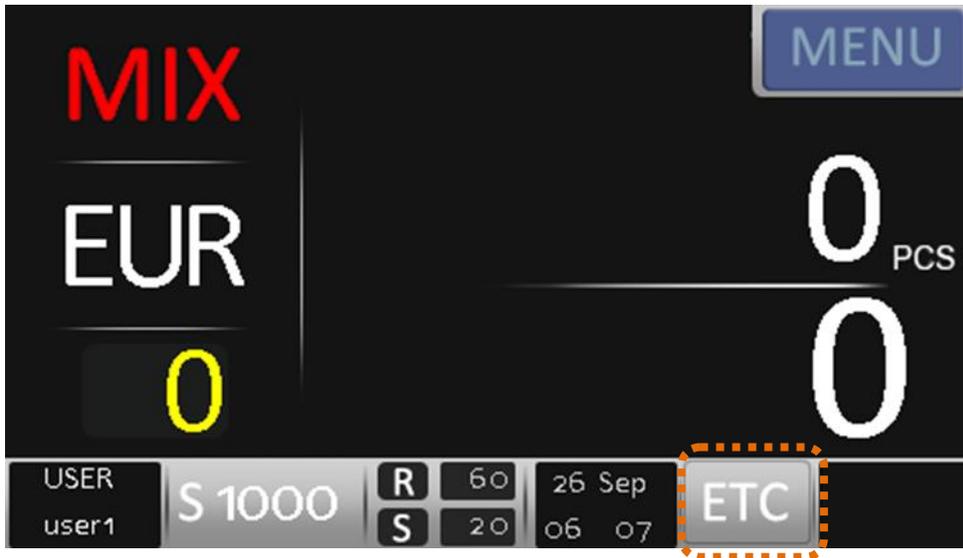
Shortcuts for ADD and GT operations.

- Verify - During counting in ADD mode, use can verify counting result which already counted.
- User Add - If this function is turned on, when remove the notes from Stacker, the machine asks you to add the counting result or not

## 4. Machine Settings

### 4-1. ETC

After select currency first and enter ETC menu for setting the functions.

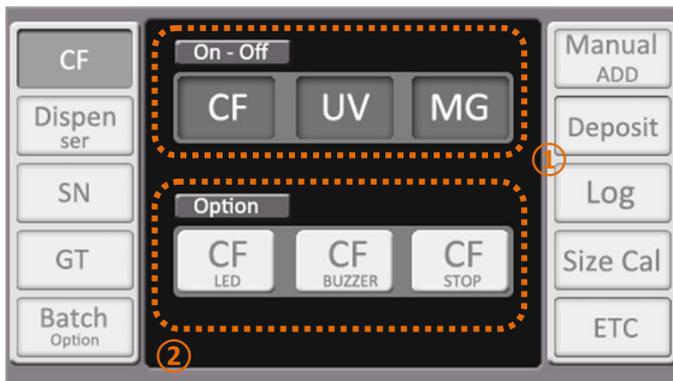


#### 1) CF

Set counterfeit detection method.

The default function is UV, MG and IR are ON.

If you want to change the functions, pincode is needed.



## ① On-Off

A user can turn on or off CF, UV and MG separately.

## ② Option

### CF LED

When CF is detected, LED(B) is turned on.

### CF BUZZER

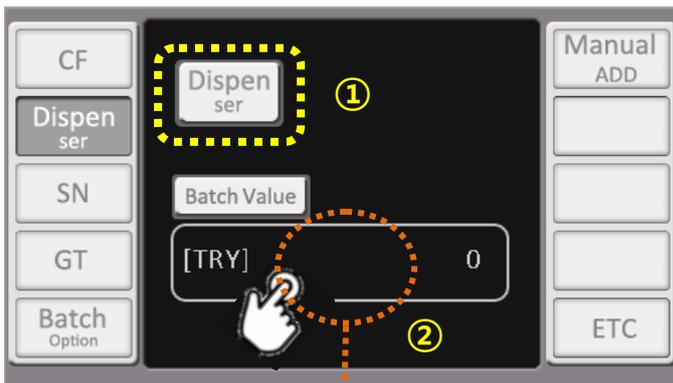
When CF is detected, the warning buzzer is turned on.

### CF STOP

when CF is detected, the machine is stopped.

## 2) Dispenser

Count a batch of notes with being set amount.



① Turn on Dispenser function.



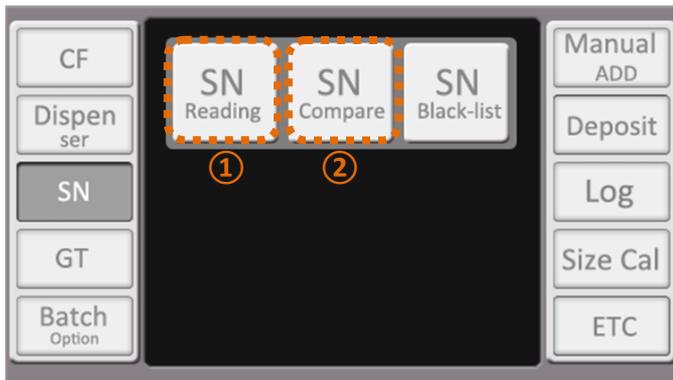
② Enter Value of the batched notes.



③ The amount of the counted notes is reached to the set value, the machine is stopped.

### 3) SN

Turn on or off SN Reading, SN Compare and SN Black-list.



### ① SN Reading

By OCR, Machine recognizes serial numbers of banknotes.

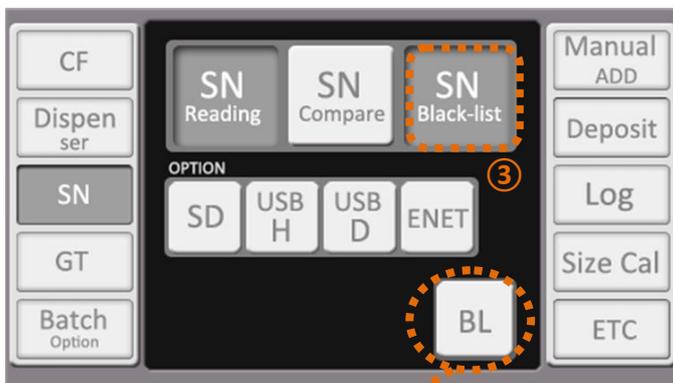
Machine can read both serial numbers on the note.

### ② SN Compare

Compare serial numbers from both side of a banknote.

If the numbers are different, the note is rejected.

The number of the compared characters is different from currencies.

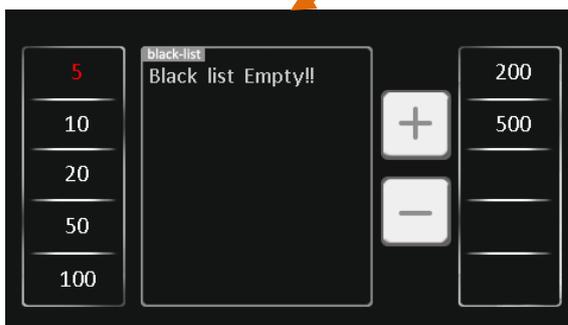


### ③ SN Black-list (Max 100 ea)

If a serial number is entered, the banknote with the serial number is rejected.

⊕ : Enter serial number to black list.

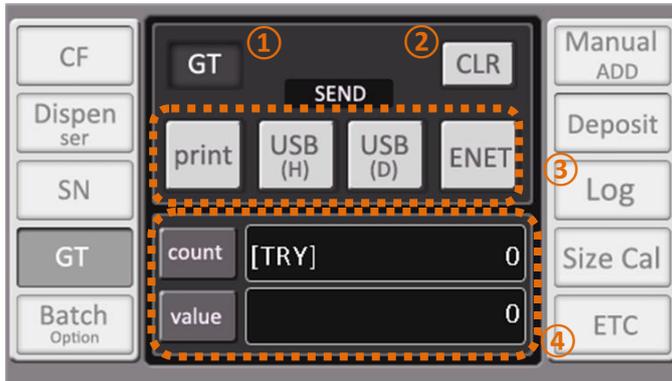
⊖ : Delete serial number from black list.



## 4) GT

User can clear Grand Total or send Grand Total to Printer, USD or ENET.

GT must be set by each currency separately.



## ① GT ON/OFF

Turn on or off GT function.

## ② CLR

Clear GT result.

## ③ SEND

Print or export GT result.

Print – When press PRINT key, the result is printed.

USB(H) – GT result is saved to USB Stick.

USB(D) – GT result is exported via USB Port.

ENET – GT result is exported via LAN port.

## ④ Current GT Result.

## 5) Batch Option



## ① WARNING

If Batch is not completed, Warning message is shown with alarm.

## ② OPTION

### **Continue**

When next Batch is started, the displayed value is started from the previous counting result.

### **Clear**

When next Batch is started, the displayed value is started from 0.

### **V.continue**

When next Batch is started, the displayed value is started from the previous counting result.. When Batch is not complete, the machine makes the warning sound.

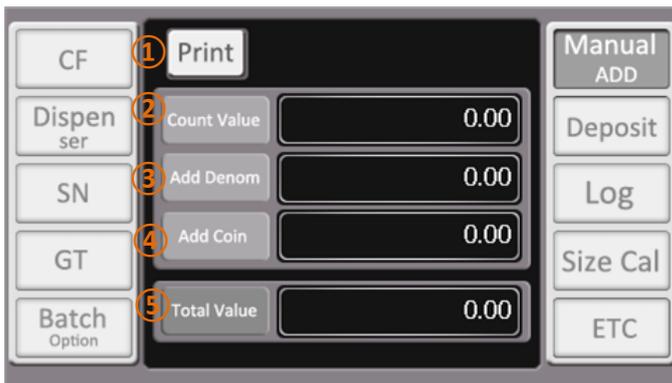
### **V. Clear**

When next Batch is started, the displayed value is started from 0.

When Batch is not complete, the machine makes the warning sound.

## **6) Manual ADD**

An arbitrary amount can be added to counting result by a user



## ① Print

Print the counting result with manually added amount.

## ② Count Value

Amount of normal Counting Result.

## ③ Add Denom

Add counting result manually by entering denominations.

## ④ Add Coin

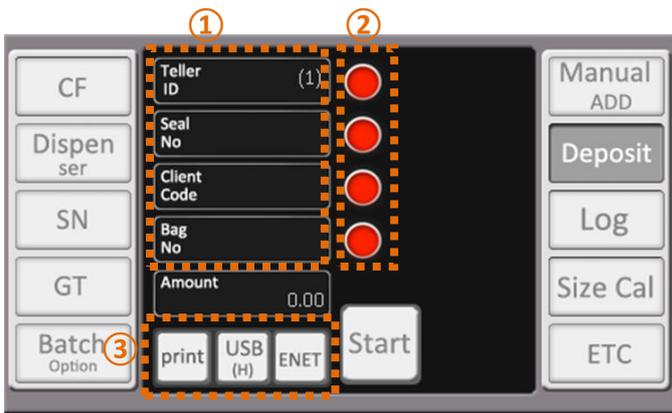
Add counting result manually by entering coin values.

## ⑤ Total Value

Total Amount after adding amount manually.

## 7) Deposit

Enter the client information, account no, type of deposit and keep and print value of the deposit.



## ① Customer information - Keypad

Enter all information by keypad.

## ② Barcode Scanner ON/OFF

Enter all information by Barcode Scanner.

## ③ Data export method

User can select the data export method.

- Print – The result is printed to Receipt.
- USB(H) – The result is saved to USB Stick by XML file. (D:\ih-110\deposit\xxx.XML)
- ENET – The result is exported via LAN port.

## 8) Log

Save counting result daily.



## ① Delete Period of Log

Select Log delete period. (week or month)

## ② Export method of Log

Log data can be exported by Printer, USBH or ENET.

The format of exported log data is the same with Print format.

## ③ Log list

The created log lists are shown.

## ④ SN

If the same serial number is counted within 10 minutes, the data is not saved.

## ⑤ View

View Log data.

Date	Local	Denom	CNT	AMOUNT
20161004	GBP	5	0	0
		10	0	0
		20	0	0
		50	0	0
		TOTAL	0	0

## 9) Size Cal

From this menu, user can check the damaged condition of the counted note by X and Y size and image.

From Main Screen, select Currency and enter Size Cal menu.

Select denomination which you want to check Size.

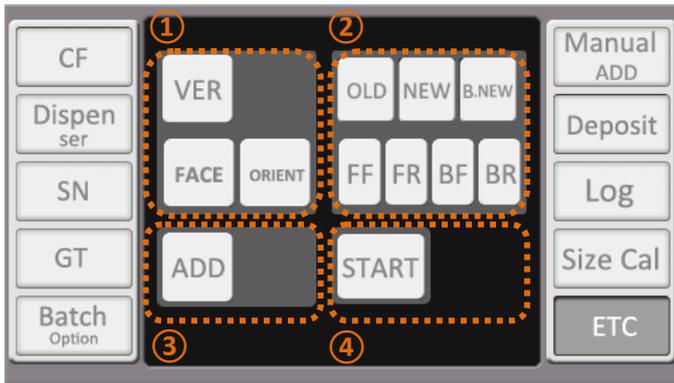
After put the note on Hopper, touch "Start" icon.

The note is counted automatically and Size and Image data of the note is shown.



## **10) ETC**

A user can set the counting conditions by himself.



**① Stacker condition 1**

A user can sort banknotes by Version and Direction.

**② Stacker condition 2**

A user can sort banknotes by Version, Direction and Orientation of the first counted note.

**③ ADD function**

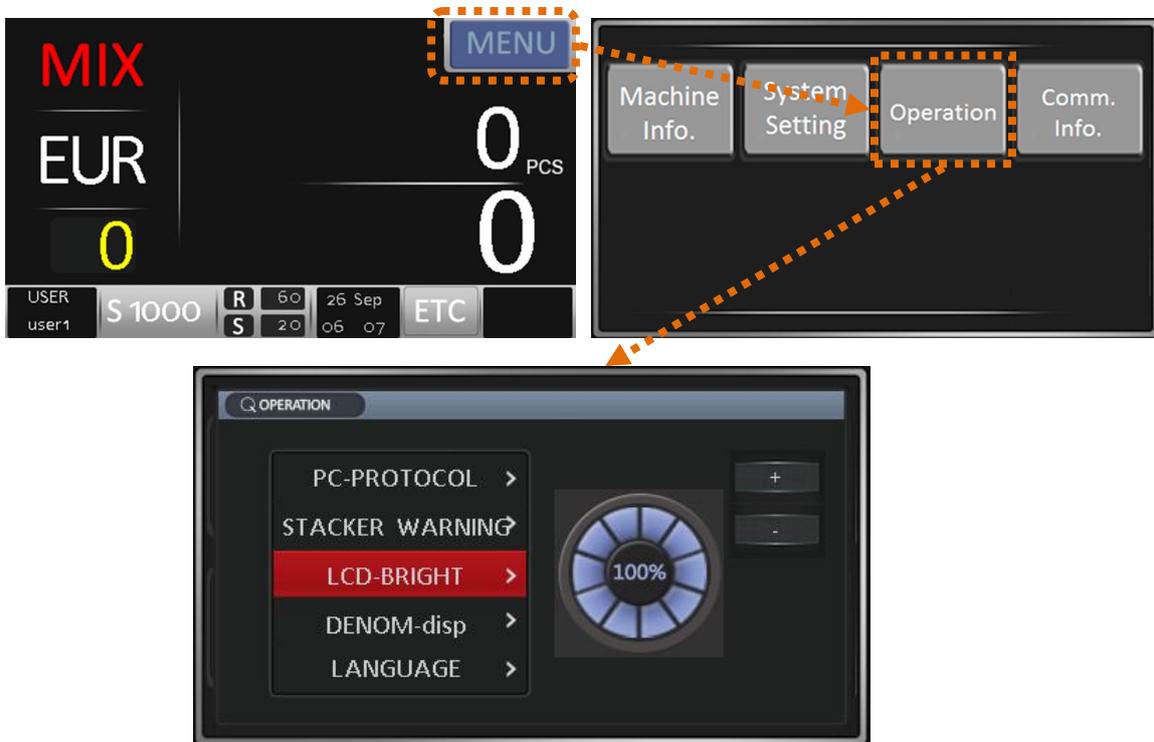
Turn on and off ADD function.

**④ MANUAL START**

Start Counting operation manually.

## 4-2. Operation

When touch **MENU** from Main Screen, the hidden menus are show.  
 Select(or enter) Operation.



### 1) LCD-BRIGHT

Adjust LCD brightness level.

### 2) DENON-disp

Show the denomination info. On Main screen.

MIX	DENOM	CNT	VALUE
TRY 0	5	0	0
	10	0	0
	20	0	0
	50	0	0
	100	0	0
	200	0	0
	TOTAL	0	0

### 3) LANGUAGE

Select the displayed language.

<For example - Cyrillic>



#### 4) FLAG

Select the display currency is Flag or Symbol.

<For example>



#### 5) HISTORY

Save Counting result about each boundle.

#### 6) USD100 - REJ

Reject new version 100USD(issued 1996).

#### 7) GBP OLD - REJ

Reject the withdrawn old and new version GBP.

#### 8) JPY OLD - REJ

Reject old version JPY.

#### 9) SNC ALL DIGIT

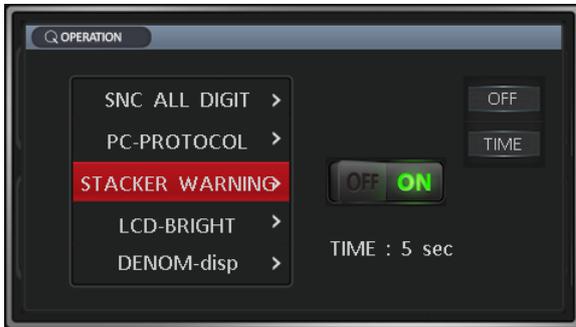
Compare all characters of serial numbers when SN Compare is turned on.

#### 10) PC-Protocol

Machine sends the counting result via USB Port to PC.

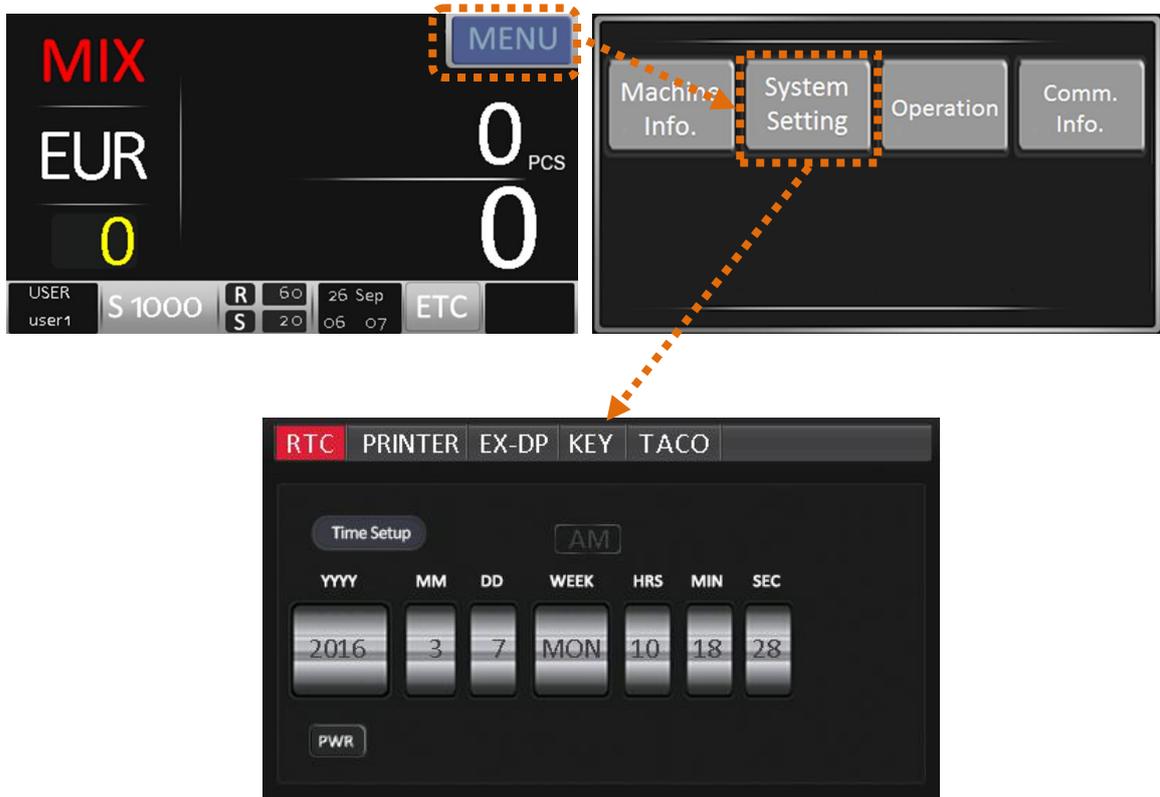
## 11) STACKER WARNING

When Stacker Warning message is displayed, the machine is stopped to count for the selected time.



## 4-3. System Setting

When touch **MENU** from Main Screen, the hidden menus are show.  
Select(or enter) System Setting.



### 1) RTC

Set date and time.



## 2) PRINTER

Set Printer Configurations.



### ① Setup

- **Baud** - Set Baud Rate between Machine and Printer.
- **Paper** - Select size of font.
- **Count** - Select the number of Receipt.
- **A/M** - Select Printing method.
  - Auto Print - After counting notes, print the receipt automatically.
  - Manual Print – Print the receipt by pressing Print Key.
  - Auto Batch – When a batch is completed, print the receipt automatically.

### ② Option

- **User** - A user can print user name, bank name and branch name to Receipt.
- **SN** - A user can select the printed data type of Serial Number.
  - OCR – Characters by OCR are printed.
  - Image – the scanned images are printed. The printing speed is very slow.



## 3) EX-DP



### ① DP TYPE

A user can select External Display Type.

### ② DP MODE

#### - AUTO

The same screen of Machine is displayed on External Display.

#### - Count/Value

Only quantity and amount are displayed.

#### - DENOM

Count result by denominations is displayed.

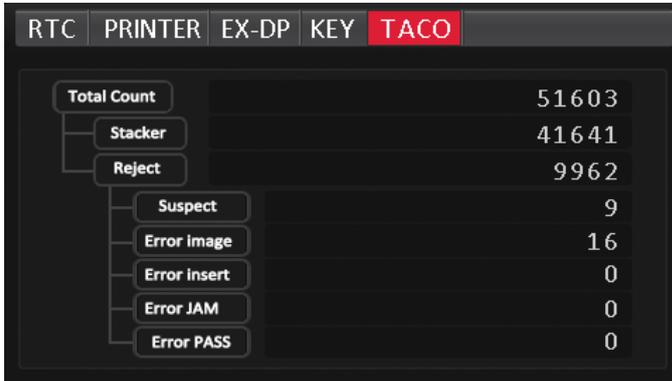
## 4) KEY

A user can change Key operation personally.



## 5) TACO

User can see Tacometer of the machine.



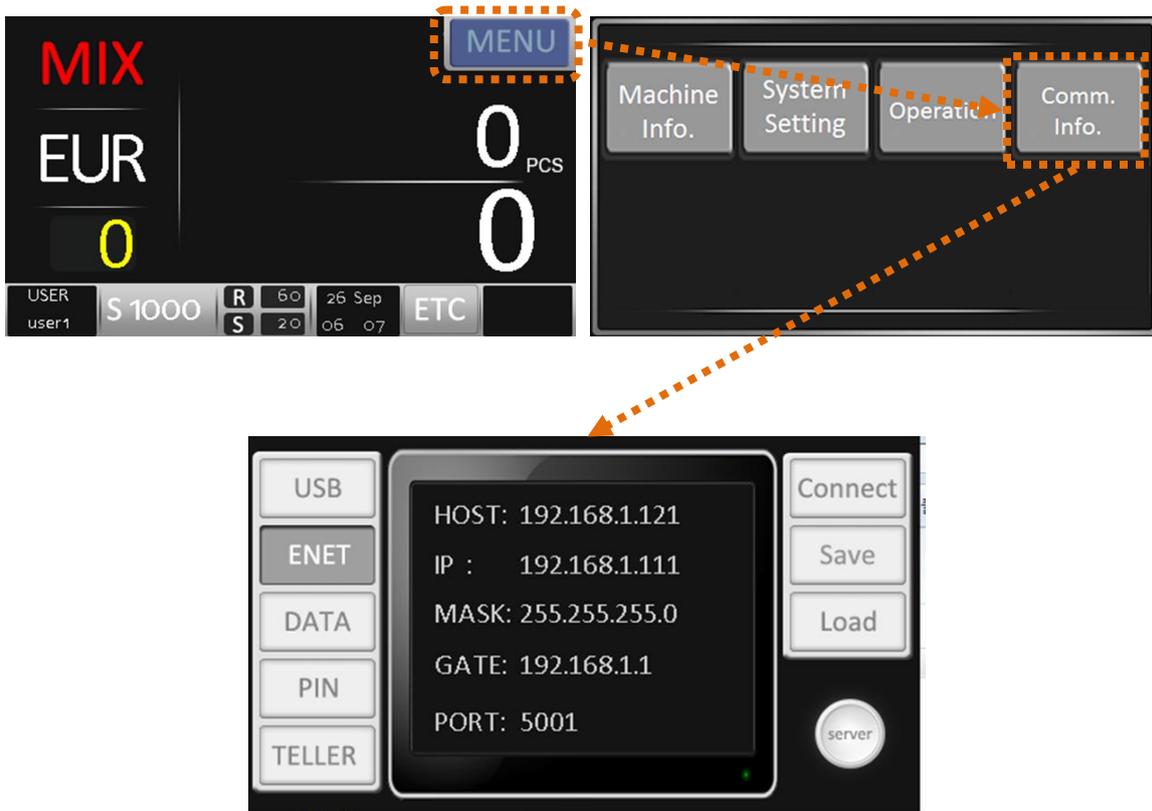
The screenshot shows a dark-themed interface with a top navigation bar containing buttons for 'RTC', 'PRINTER', 'EX-DP', 'KEY', and 'TACO'. The 'TACO' button is highlighted in red. Below the navigation bar, a list of metrics is displayed in a table format:

Total Count	51603
Stacker	41641
Reject	9962
Suspect	9
Error Image	16
Error insert	0
Error JAM	0
Error PASS	0

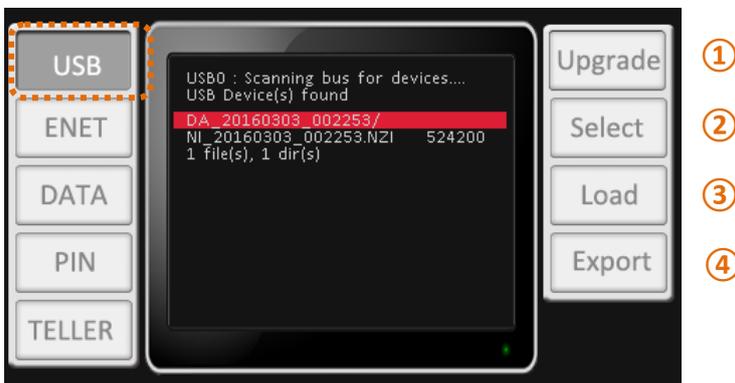
## 4-4. Comm. Info (Communication Setting)

When touch  from Main Screen, the hidden menus are show.

Select(or enter) Comm. Info.

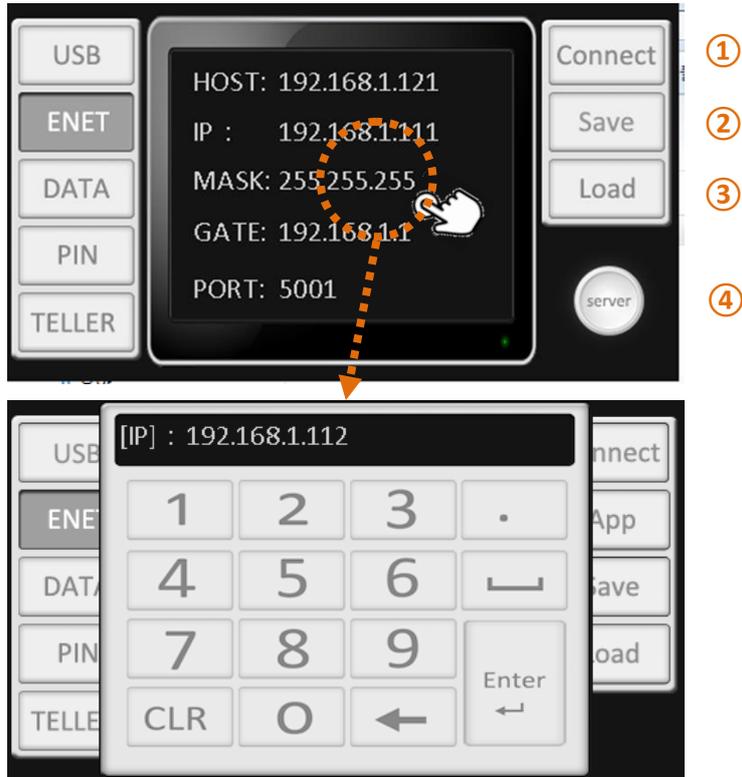


## 1) USB



- ① **Upgrade** – Upgrade the machine.
- ② **Select** – Select the file for special upgrading.
- ③ **Load** – Load data and settings from USB to Machine.  
For example, User Info, Exported data and etc.
- ④ **Export** – Export data to USB.

## 2) ENET



## ① Connect

After connect Machine to PC by ENET, click this button.

## ② Save

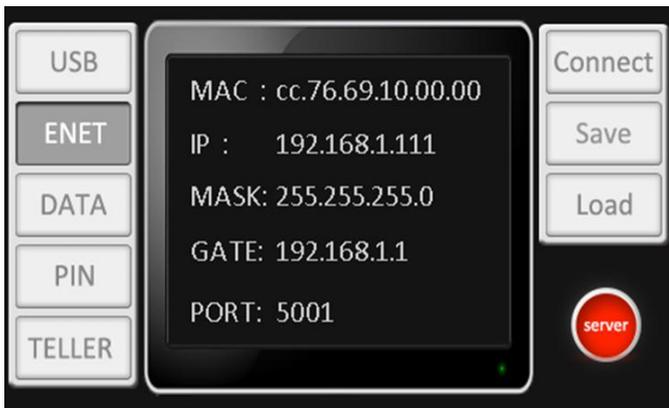
Save button of MAC, IP and etc.

## ③ Load

Load button for loading ENET information from USB.

## ④ Server

Set Sever and HOST.



## 3) DATA



By Network, USB Cable and USB Stick, Note Information, Data Acquisition and Scanned data are transferred

**- Note info**

Counting information, Serial Number, MICR, Barcode and Sensor Information are transferred..

**- Data Acq**

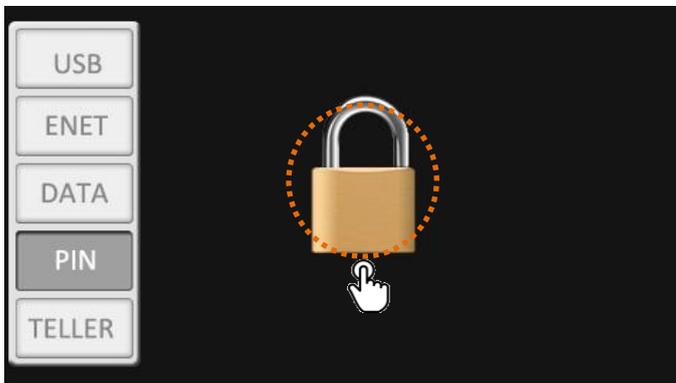
Including Note info, CIS Full Image is saved.

**- SCANNER**

only for iH-100(B) and iH-110(S) model.

Including Note info, CIS Color Image is transferred.

## 4) PIN



Some modes and menus are hidden only for engineers.

You can enter the hidden screen by entering Pincode.



## 5) TELLER

Set 2 Teller mode.

Before user 2 Teller mode, you need to add thesecond User to the machine first.

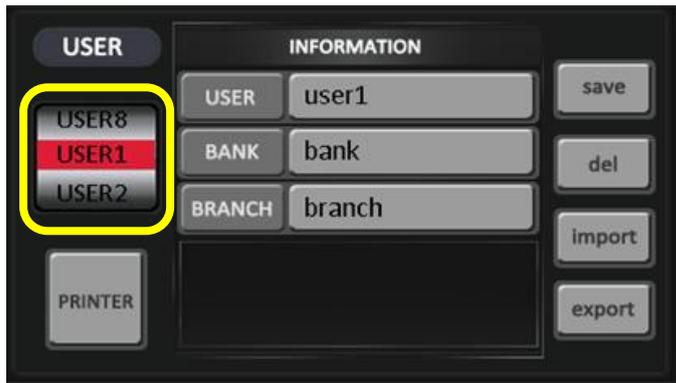
(1) Press L1 and RS2 Key together from Main screen.



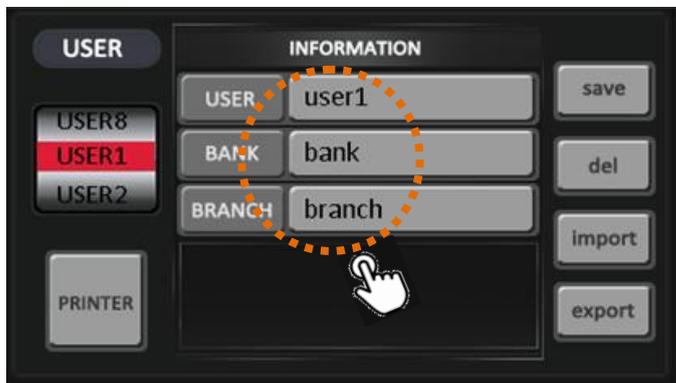
(2) You can see Machine Information Screen as below.



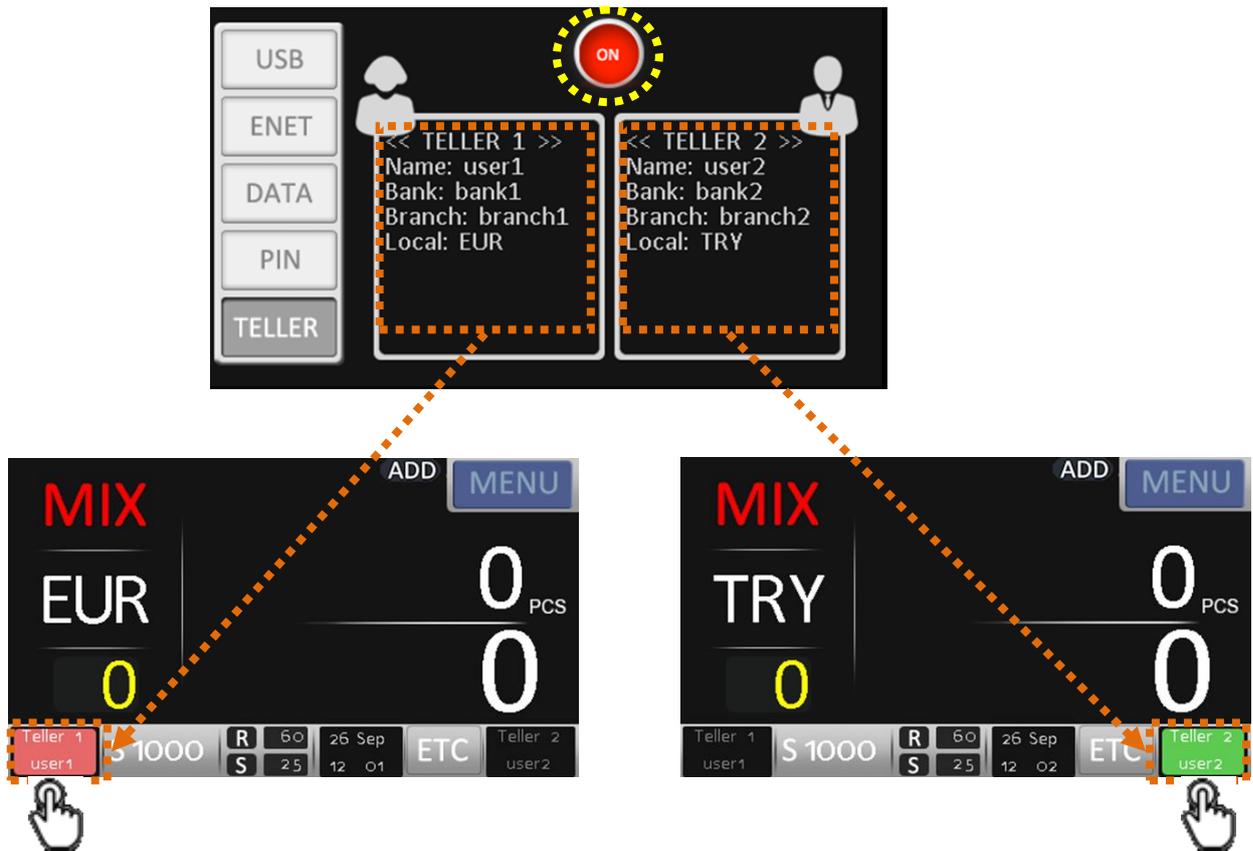
(3) Select User Number by pressing Arrow Key. (For example, USER2.)



(4) Touch INFORMATION area and enter USER, BANK and BRANCH information.



(5) After enter all information, press **RS1 Key** for saving.  
You can delete the information by pressing **RS2 Key**.  
When press **START Key**, you can exit the menu.



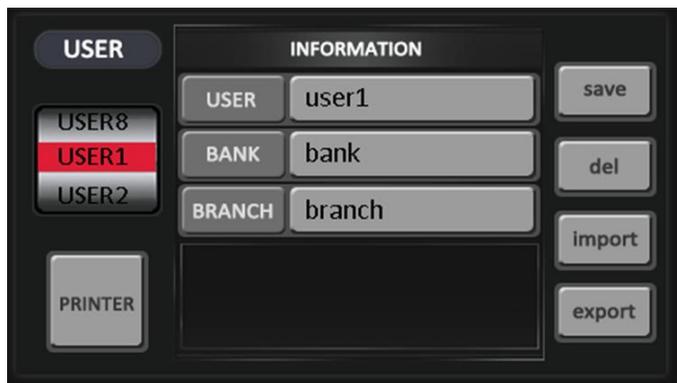
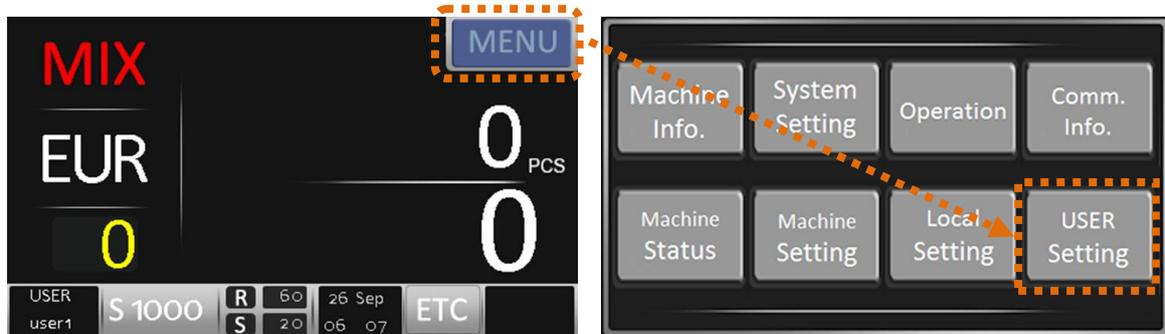
**LS 1: Select Teller 1.**  
**LS 2: Print Counting result of Teller 1.**

**RS 1: Select Teller 2.**  
**RS 2: Print Counting result of Teller 2.**

## 4-5. USER Setting (Pincode is needed.)

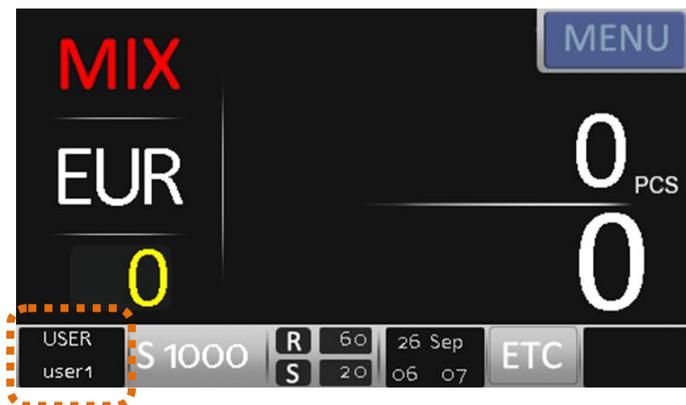
When touch **MENU** from Main Screen, the hidden menus are show.

Select(or enter) USER Setting.



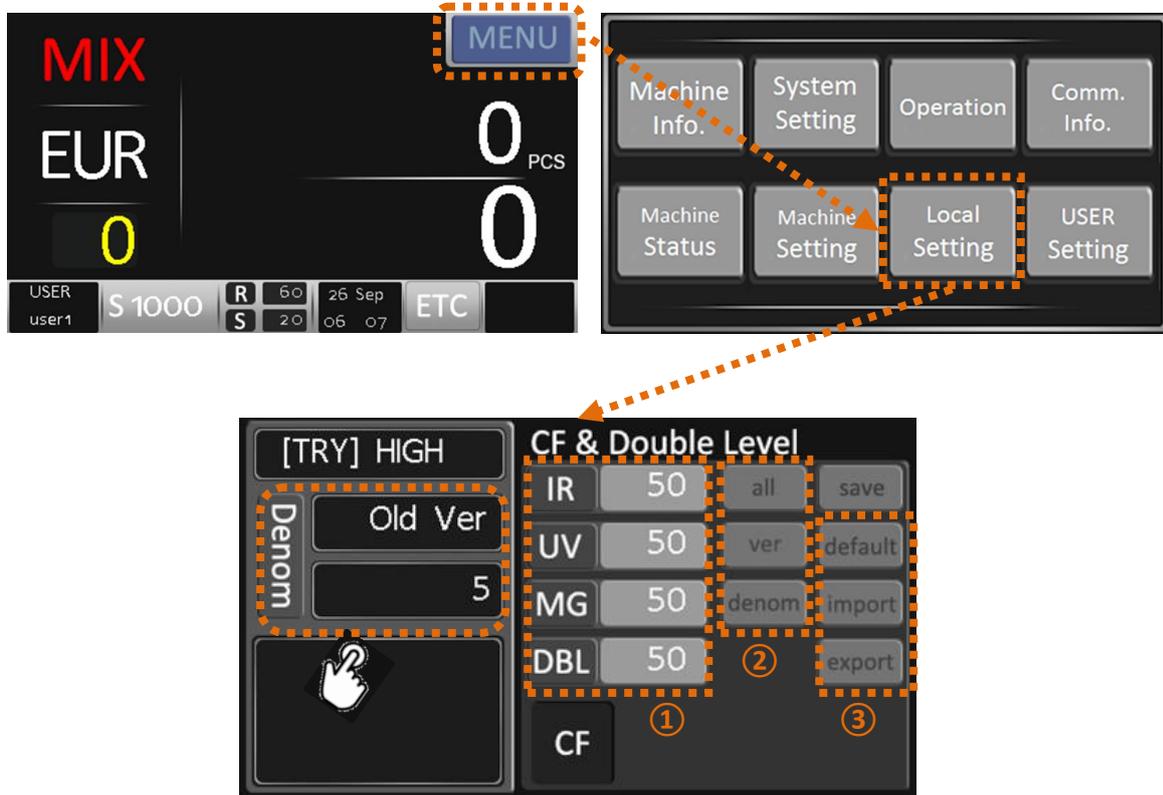
Enter User name, Bank name and Branch name for each user.

The entered data can be printed to Receipt.



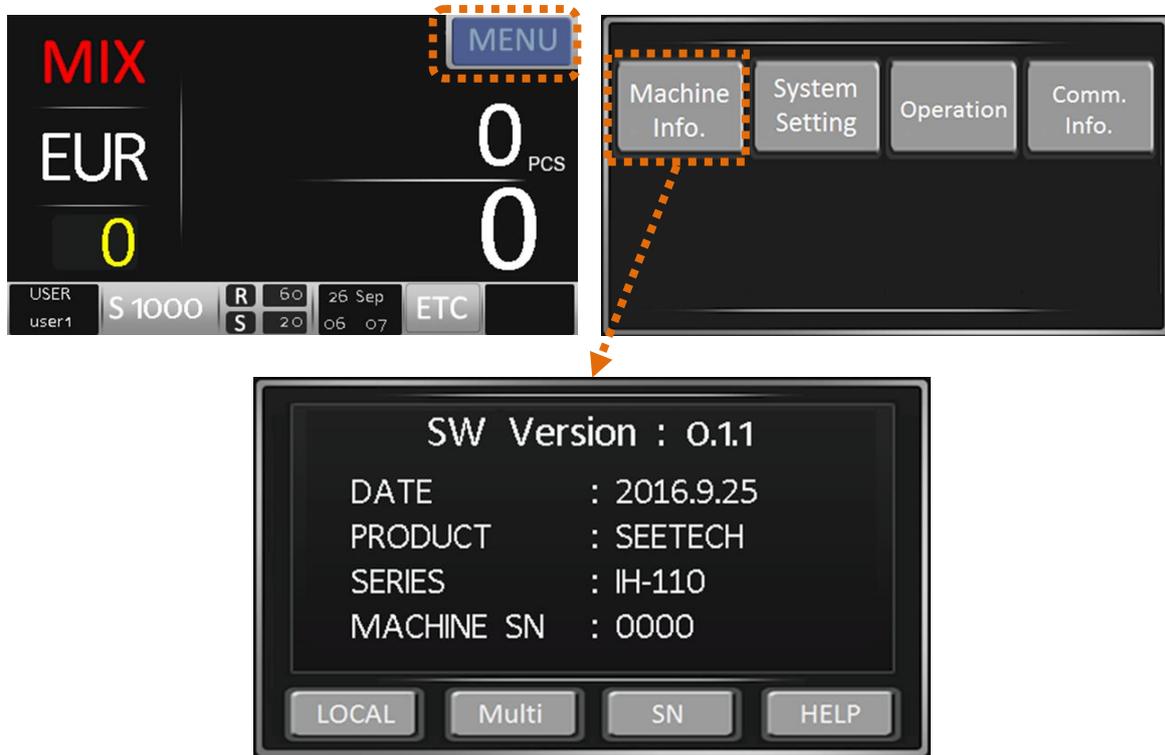
## 4-6. Local Setting(Pincode is needed.)

A user can change IR, UV, MG and Double Level for each currency and denomination.



- ① A user can adjust IR, UV, MG and DBL(Double Level). (Range 0 ~ 100)
- ② Changed Levels can be applied for all included currencies, version or denomination at once.
- ③ A user can load or export local levels.

## 4-7. Machine Info.



By Network, USB Cable and USB Stick, Note Information, Data Acquisition and Scanned data are transferred

### - LOCAL

Check all installed currencies.

### - Multi

Check the currencies which are available in Multi-Mix mode.

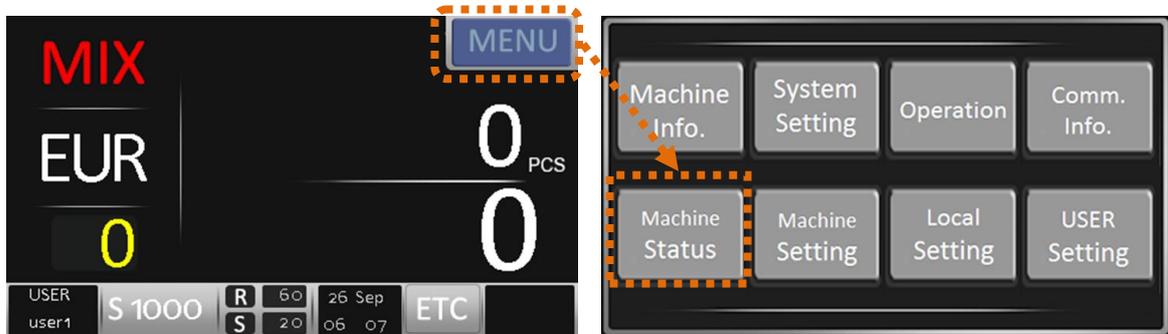
### - SN

Check the currencies with Serial Reading function.

### - HELP

Under developing

## 5. Machine Status (Pincode is needed.)



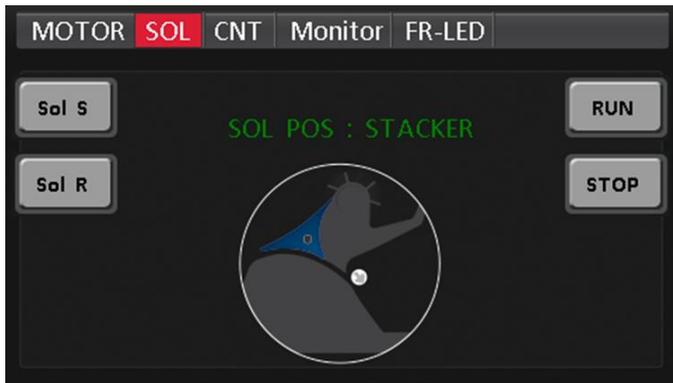
### 5-1. MOTOR

Test 3 kinds of Motor by a simple touch.



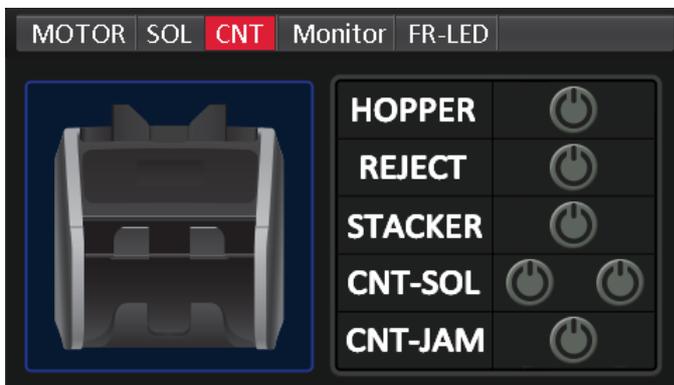
### 5-2. SOL

Test Solenoid condition.



## 5-3. CNT

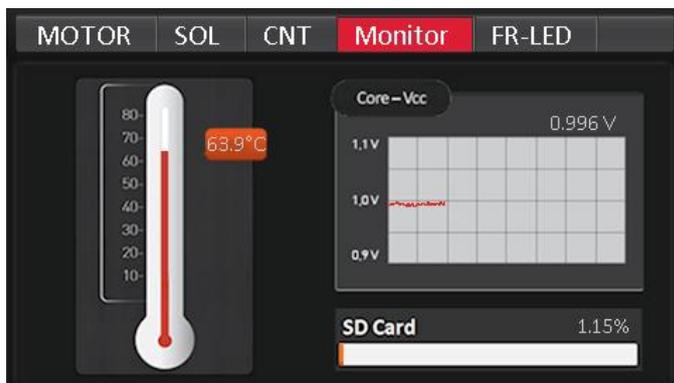
Check the condition of internal and external count sensors.



## 5-4. Monitor

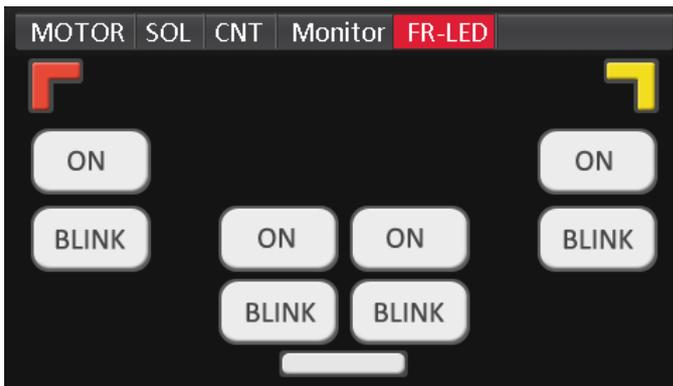
Check and monitor CPU internal power and temperature.

If some problems are caused, warning message is shown on Main Screen.



## 5-5. FR-LED

Test the conditions of 3 LEDs.



## 6. Specifications

<b>Currency</b>	Up to 80 currencies	
<b>Operating Speed</b>	Value Counting	Max 1300 notes/min
	Capture and Records: OCR, MICR, Barcode etc. with Full Color Image	700 ~ 900 notes/min
<b>Pocket Capacity</b>	Hopper	500 notes (Max 700 notes)
	Reject	60 notes (Max 100 notes)
	Stacker	200 notes (Max 250 notes)
<b>Display</b>	4.3 inch Color touch screen	
<b>Interface</b>	LAN, USB, (EX-DP), (Printer)	
<b>Dimension</b>	300(W) x 320(D) x 315(H)	
<b>Weight</b>	Approx. 13 Kg	
<b>Power Supply</b>	100 ~ 240V~ AC, 50/60 Hz	
<b>Options</b>	External Display, Thermal Printer, OSD(ON Screen Display)	
<b>Operating Temperature</b>	5 - 35°C	

## 7. Error code

No.	Error	Explanation
1	CHAIN	GAP between two notes is too narrow.
2	SKEW L	Note is skewed to the left.
3	SKEW R	Note is skewed to the right.
4	DOUBLE	Double notes are counted.
5	NO RESULT	reserved
6	NO RESULT (CIS)	No information from CIS Sensor.
7	NO RESULT (UV)	No information from UV Sensor.
8	STACKER FULL	reserved
9	BATCH FULL	Stacker or Reject Pocket is full.
10	REJECT FULL	reserved
11	SKEW DIFF	reserved
12	NOTE TRACKING	reserved
13	OUTLINE LR	Left or Right outline of the note is not found.
14	OUTLINE LINE	Up or Down outline of note is not found.
15	OUTLINE PIXEL X	Outline pixel of Up and Down of the note is different.
16	OUTLINE PIXEL Y	Outline pixel of Left and Right of the note is different.
17	XSIZE	X size is longer or shorter than the reference value.
18	YSIZE	Y size is longer or shorter than the reference value.
19	XYSIZE	reserved
20	FAN X	reserved
21	FAN Y	reserved
22	FAN XY	reserved
23	SLOPE	reserved

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24	REC XSIZE	X size of each denomination is longer or shorter than the reference value.
25	REC YSIZE	Y size of each denomination is longer or shorter than the reference value.
26	REC XYSIZE	X and Y size of each denomination is longer or shorter than the reference value.
27	REC UNCERTAIN	Recognition of the note is failed.
28	REC DENOM	The recognized denomination information from Top and Bottom CIS Sensor is different.
29	REC NOT VERIFY	Recognition is bad.
30	FALSE IMAGE	reserved
31	REC O VER	OLD Version is rejected.
32	REC N VER	NEW Version is rejected.

No.	Error	Explanation
33	REC V VER	Very NEW Version is rejected.
34	DIFF DENOM	In SP mode, the different denomination is counted.
35	DIFF FACE	The different FACE note is counted. (DIR- ON)
36	DIFF ORG	The different direction note is counted. (ORG- ON)
37	DIFF VERSION	The different version note is counted. (VER-ON)
38	USER OPERATION	reserved
39	OLD VERSION	OLD Version is rejected.
40	NEW VERSION	NEW Version is rejected.
41	B-NEW VERSION	Very NEW Version is rejected.
42	USER DENOM	reserved
43	DISPENSER REJECT	When Dispenser is completed, the next notes are rejected.
44	DIFF CURRENCY	The different currency is counted. (MUL-SC mode)
45	DOGEAR ERROR	Dog-Ear note is counted.
46	SN DIFF	Serial numbers from left and right are different. (SN Compare-ON)
47	SN CHANGE	reserved
48	SN MISS	Failed the extraction of characters from serial number image.
49	SN UNCERTAIN	The recognition rate of serial number is bad.
50	SN BLACK LIST	The recognized serial number to Black List is counted. (SN Black List - ON)
51	BAR WRONG SIDE	No Barcode is found.
52	BAR SEARCH	Failed to find the start position of the barcode.
53	BAR WT	reserved
54	BAR NP	reserved
55	ERROR BARCODE	reserved

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56	ERROR SN	reserved
57	IR(XXX)	IR Error XXX
58	MG(XX)	MG Error XX
59	UV(XX)	UV Error XX
60	IR(XXX), MG(XX), UV(XX)	Multi CF Error
61	IR(XXX), MG(XX)	
62	IR(XXX), UV(XX)	
63	MG(XX), UV(XX)	
64	UNFIT(000001)	SOIL
65	UNFIT(000002)	DEINKED
66	UNFIT(000004)	STAIN
67	UNFIT(000008)	GRAFFITI

No.	Error	Explanation
68	UNFIT(000010)	COMPOSED
69	UNFIT(000020)	MULTILATION
70	UNFIT(000040)	CRUMPLE
71	UNFIT(000080)	LIMPNESS
72	UNFIT(000100)	DOGEAR1
73	UNFIT(000200)	DOGEAR2
74	UNFIT(000400)	DOGEAR3
75	UNFIT(000800)	DOGEAR4
76	UNFIT(001000)	HOLE1
76	UNFIT(002000)	HOLE2
77	UNFIT(004000)	HOLE3
78	UNFIT(008000)	HOLE4
78	UNFIT(010000)	TEAR1
79	UNFIT(020000)	TEAR2
80	UNFIT(040000)	TEAR3
81	UNFIT(080000)	TEAR4
81	UNFIT(100000)	TAPE_VERTICAL
82	UNFIT(200000)	TAPE_HORIZONTAL
83	UNFIT(XXXXXX)	Multi UNFIT Error
84	???????	Unregistered error occurred

## 8. Maintenance

The machine has many sensitive sensors to perform high technology functions, for example counterfeit detection, denominations, etc.

Users are recommended to clean the machine sensors **at least once a day**.

Refer to following section and clean the machine regularly.

**✘ Please turn the power off before cleaning the machine.**

