Magner 155
- User Guide

MAGNER®
Magner International Corporation

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Safety Instructions

General Instructions

Do not place the product near heat sources such as a stove or a heater.

Do not try to disassemble or repair the product if you are not trained and authorized. Such an unauthorized activity may cause accident or critical damage to the product and it would not be covered with the warranty.

Do not place heavy objects or liquid containers, such as a beverage can, on the product.

Do not apply excessive force to the product.

Do not try to open or operate the product by force.

Make sure to apply proper grounding through the plug. Short-circuit may cause sudden electrical shock.

Before maintenance or repairing activity, make sure to turn its power off and then start to replace with a fuse or to check the components.

Do not pull out the power cord when unplugging. Such action may cause electric shock or fire.

Operation Circumstances

Do not expose the product to the direct sunlight for normal operation and life cycle.

Avoid dusty location and place the product on the stable and non-vibrating desk.

Keep and use the product under the optimal conditions as follows:

-Temperature: 5℃~45℃(41F~113F)

-Humidity: 0%~85%(no condensation)

Do not press the LCD screen or control keys with sharp objects such as a pen or a pin.

In case of safekeeping for long period, put the cover on the product.

Banknotes Avoidance

Do not count the wet or significantly worn notes.
Do not count the torn or deformed notes. Otherwise, it may cause jam.

Damaged Banknotes

Curled Banknotes

Folded or Partial Banknotes

Caution for Operators

During operation, never put anything like clips or any other stuff except banknotes on the hopper. Surely be careful that the operator's hair, clothes or necktie would not be picked and absorbed into machine.

Straighten the folds or corners of banknotes before insertion.
Banknotes should be properly arranged and then put on the hopper as shown below for efficient operation.

Installation Guide

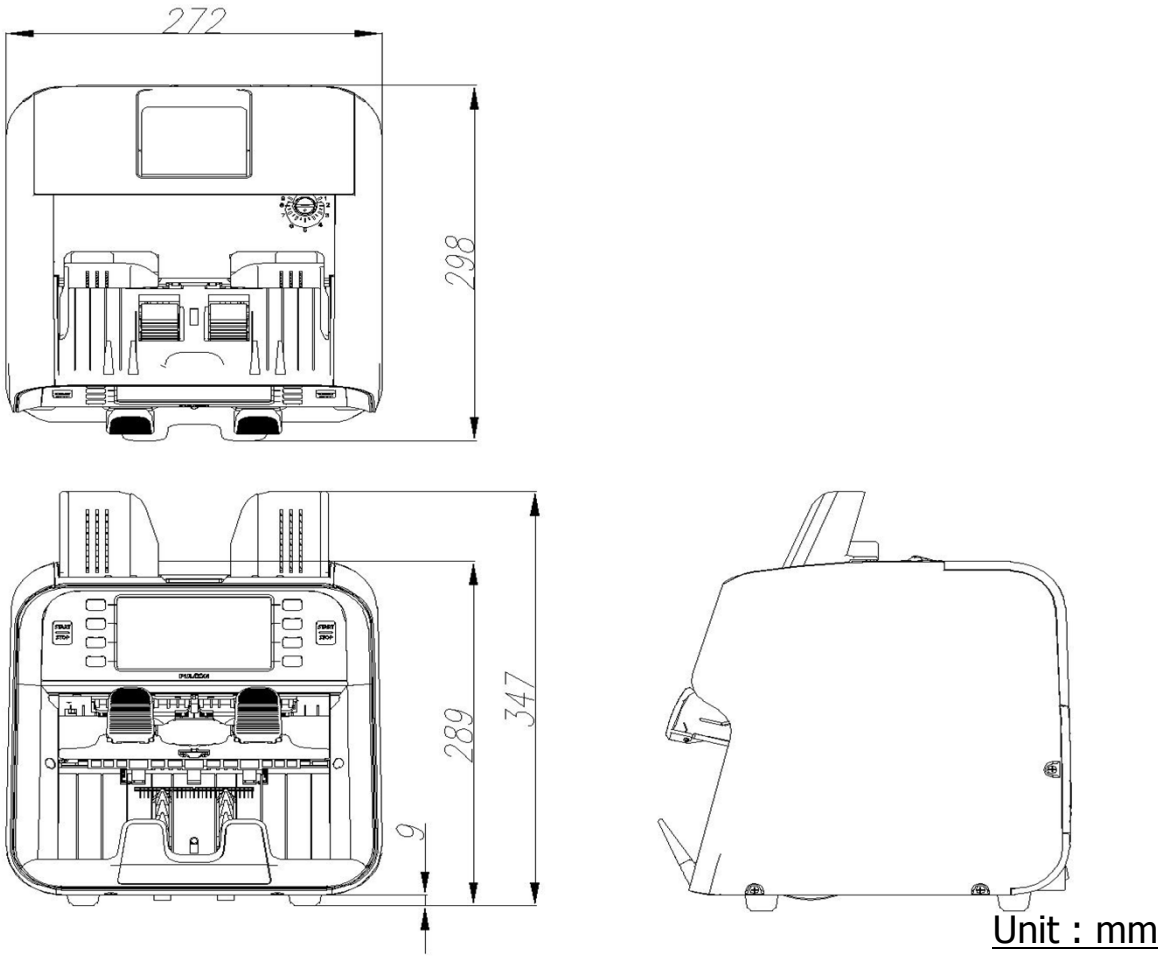
At installation

For normal installation, contact to the designated sales agent near to you.

· This product is allowed only for indoor use. Do not install outdoors.
· The product should be installed in the stable place enough to endure the weight and operation. Avoid unstable, slanting or uneven position.
· After installation, daily attention and management for the product is strongly recommended for normal and reliable operation.

Installation Space

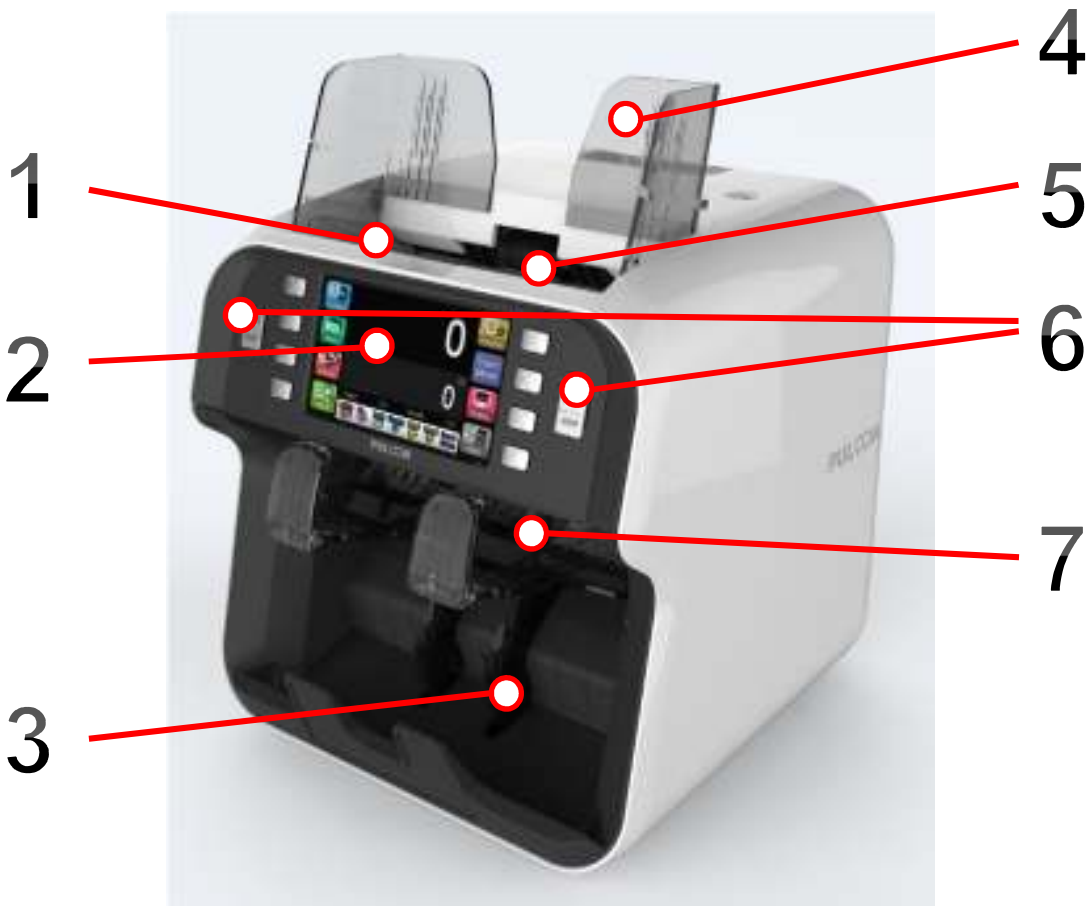
The product should be installed at the proper place having enough space for loading notes, opening/closing with ease and even simple maintenance activity.



Unit : mm

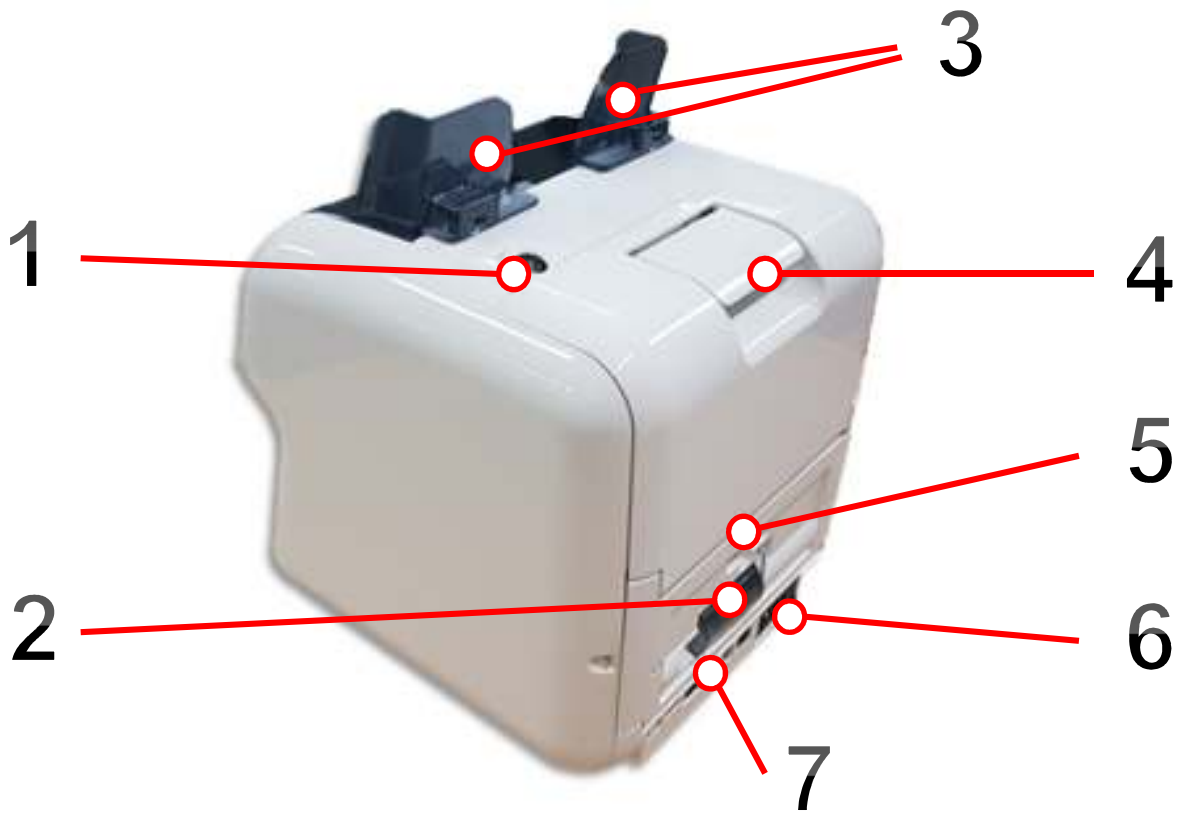
Machine Overview

Name of Each Part (Front View)



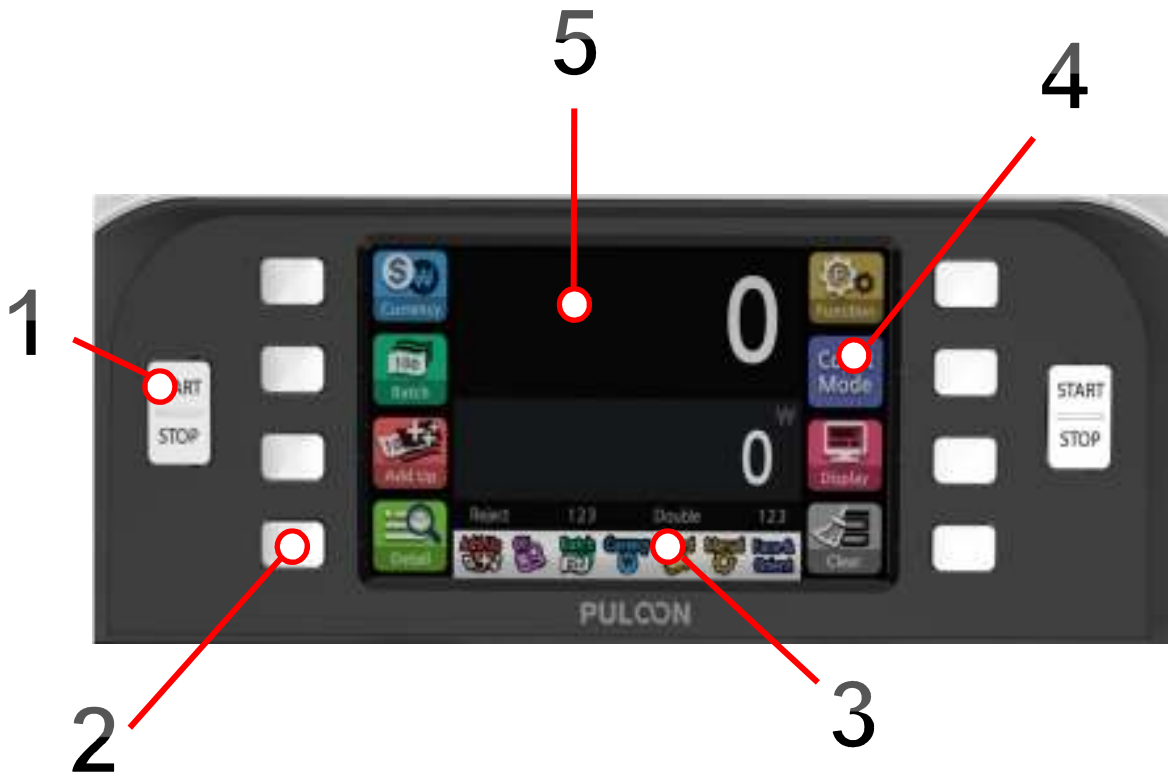
1	Hopper	Space for Loading Notes
2	Display Panel	Direct U/I by Full Color Touch Screen
3	Stacker	Space for Counted Notes
4	Hopper guide	Adjustable Guides to Note Size
5	Pickup Roller	Pick-up Roller to Feed Notes for Counting
6	Operation buttons	Start/Stop Keys for Counting
7	Reject Stacker	Space for Rejected Notes

Name of Each Part (Rear View)



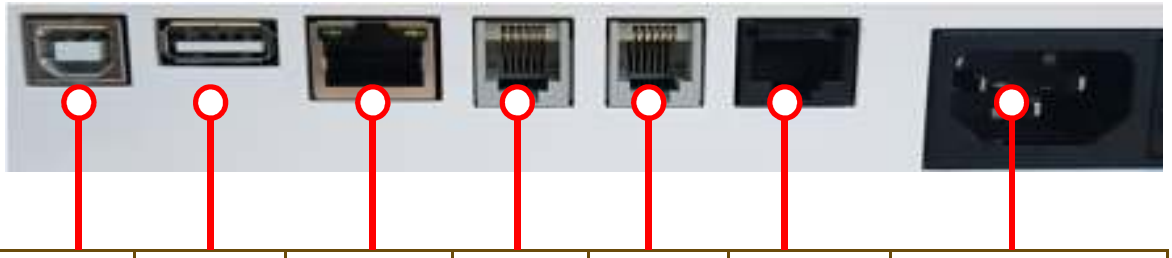
1	Feed gap Adjustment	Adjustment screw for feed gap size
2	Dust Pocket	Pocket for Colleting Dust on Operation
3	Hopper guide	Adjustable Guides to Note Size
4	Upper cover lever	Latch Handle to Open Upper Cover
5	Low cover lever	Latch Handle to Open Lower Cover
6	Power switch	Switch for Power On/Off
7	I/O port	I/O port (Refer to “I/O port” on 11 page)

Description on Control Panel



1	Start/Stop Button	To Start/Stop
2	Function Keys	To select the function (equal to using touch key)
3	Status Band	To show current settings
4	Menu icons	To show the menu available
5	LCD Screen	To show the number and the amount of notes

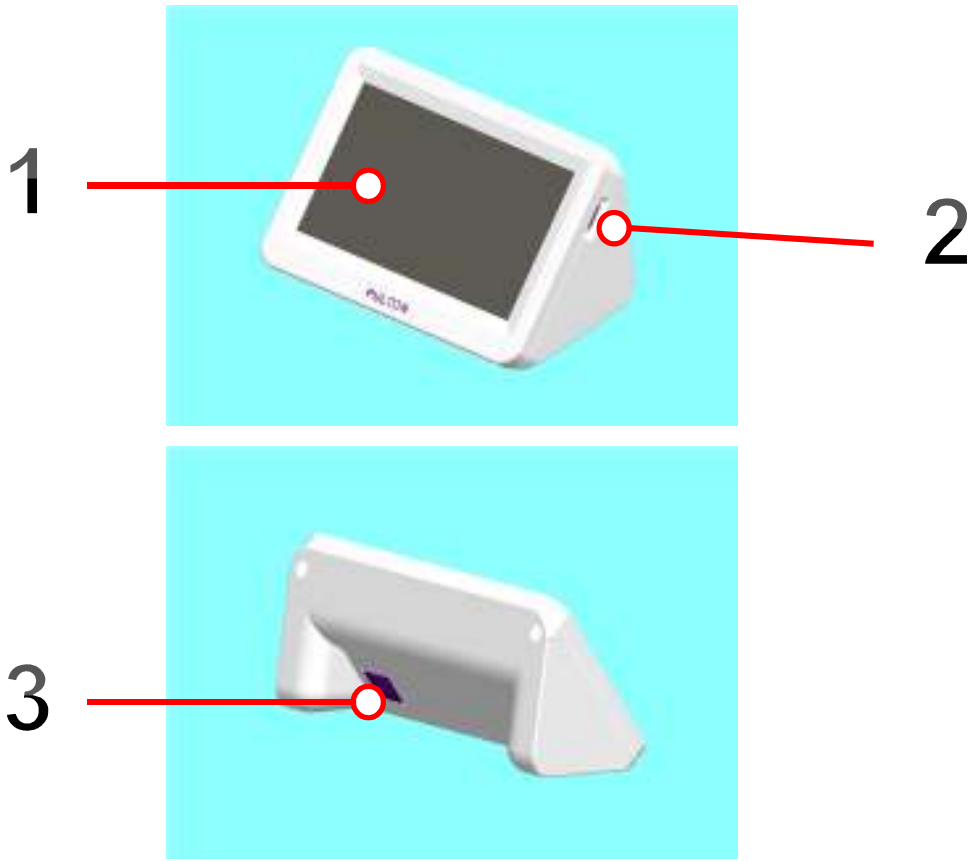
Description on I/O PORT



Port No.	CON6	CON4	CON5	CON3	CON2	CON1	Input Power
Pin	4	4	8	6	6	8	3
Spec.	USB2.0	USB2.0	LAN	Serial communication			100~240V AC
USE	Device	Host	Ethernet	Printer	Display	Display2	

*Recommended Printers are STP-103 III, IDP-3550, TSP-600, TM-881V

External Display (optional)



1	Display Panel	Full color graphical display.
2	Micro SD port	Micro SD saves icon & background data
3	EE7 interface port	Port is linked to the EE7

Summary of Each Setting

Description of each setting can be found on the following pages

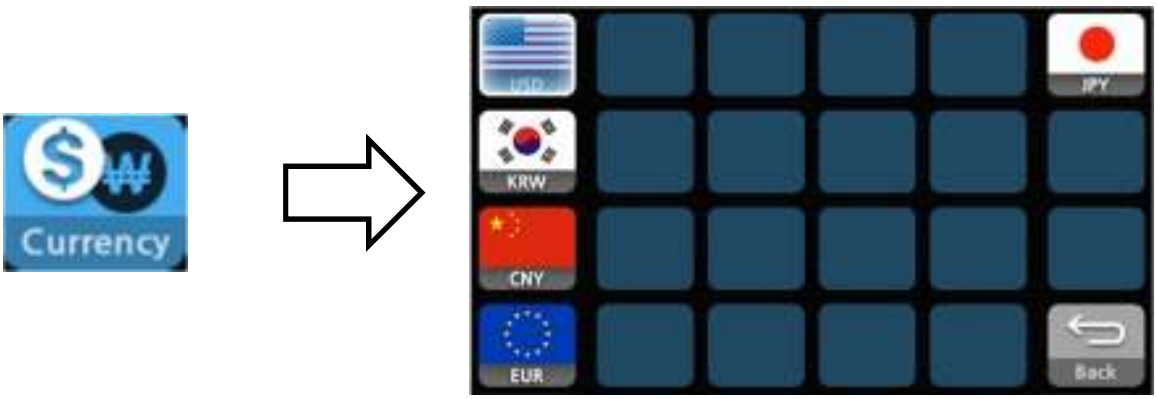
	Default setting	Page
Currency		14
Add up	Add up	15
CF	CF Run	18
Single/mix	Mix	18
Auto/Manual	Auto	19
Batch	100	19
Service		20
Language	English	26
Digit mark	1,000	26
Beep	On	27
Time	Present time	27
Old/New	OLD&NEW	28
Capacity	S-100, R-50	28
Speed	1000	29
Cyclone	On	29

Select Currency

Select Currency for counting

A range of currencies registered within the EE7 firmware are displayed but the currency with active data table could be counted and evaluated.

1)Press the button below to enter the currency select menu.



2)Press national symbol to select currency.

*The currency name and icon will be shown in the Status Band to indicate the selected currency

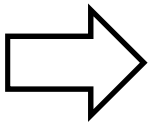
ADD UP

Select ADD UP mode

When activated, the current amount and number of banknotes are added up to the total counting. Even though the banknotes are removed from the pocket, it is still displayed until the button,

, is pressed.

1)Press the button below to operate the EE7 in a accumulative count mode.



*The Accumulative count mode symbol will change on the screen to indicate the selected mode

Function

How to Set the Function

Each setting item has to be set prior to use

1)Press the button below to enter the function menu

2)Press the function button to use among .

3)When finishing the selection of the function, press button to exit the function selection mode.

User Settings

List of Functions

Description of Functions

1. CF (Counterfeit)

Decides to run or stop when a counterfeit is detected.

1)Press button to select setting.

*The CF symbol will appear/disappear on the screen when a counterfeit is detected.

2. Single / Mix

Single mode is to count the designated denomination only, which is recognized for the first time. If the notes are different from the designated denomination, the machine will send other notes to the reject pocket under Single Mode.

1)Press button to select the single or mix.

*The Single/Mix symbol will appear on the screen to indicate the selected state.

3. Auto / Manual

Automatic counting would be started when the notes are set in the hopper under AUTO mode. In case of Manual, the counting would start only when press the START button.

1)Press

button to select setting.

*The Auto/Manual symbol will change on the screen to indicate the selected state.

4. Batch

The number of notes could be counted by specifying the batch size.

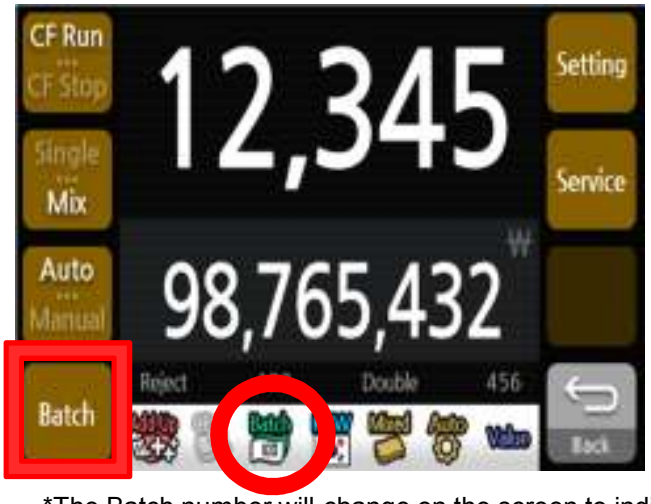
1)Press

button.

2)Set the batch size by putting the wanted number.

3)When finishing, press the

button to exit the batch setting menu.



*The Batch number will change on the screen to indicate the batch number.

5. Setting

Refer to “Setting” on 24 page.

6. Service and F/W versions check

Check and adjust the EE7

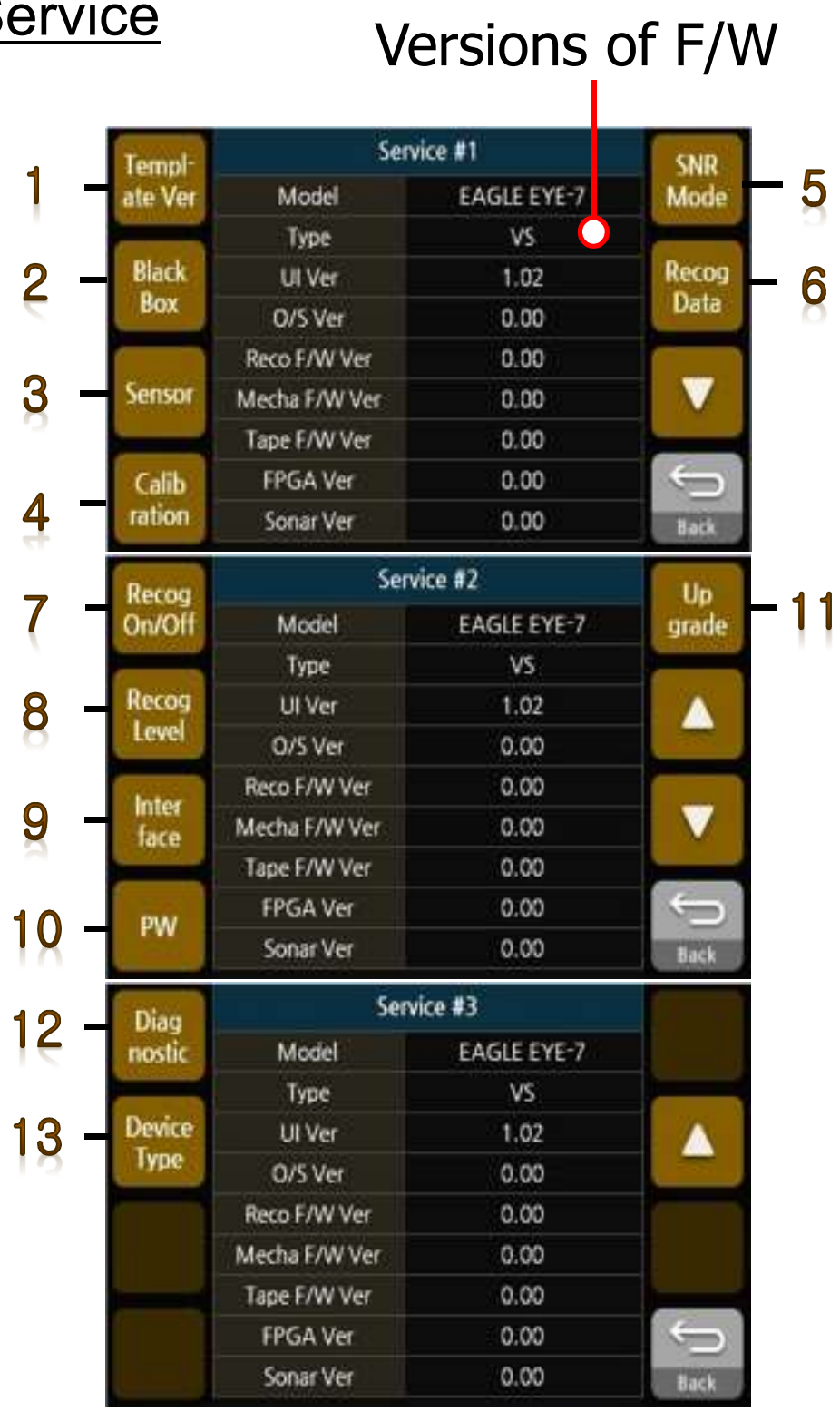
1)Press Service button.

2)Press OK after press passwords.

3)Press Service buttons to set the each setting.

4)When finishing, press the Back button to exit the service menu.

List of Service



Service

No.	Service Menu	Sub Menu	
1	Template Version		To obtain Template Version
2	Black Box		Display the history of this machine since factory shipment.
3	Sensor		To check sensors state
4	Calibration	CIS	CIS Calibration
		CIS-R	CIS Calibration
		MR	
		UV	UV Sensor Calibration
		Tape	Tape Sensor Calibration(FS,FSD-only)
		Sonar	Sonar Sensor Calibration(VS,VSD-only)
		Touch screen	Touch screen Calibration
5	SNR Mode	Normal	Displays the more accurate of the serial numbers in the banknote
		Compare	Make sure that the serial numbers in the banknote are the same
6	Recognition Data	Image Data	To obtain Image Data using USB (100DPI)
		Dimage Data	To obtain saved Image Data using USB(25 DPI)
		MR Data	To obtain MR Data using USB
		Tape Data	To obtain Taped Notes Data using USB
		UV Data	To obtain UV Data using USB
7	Recognition On/OFF		Turn on/off for CF,MR,UV,IMAGE
8	Recognition Level		To set MR, UV, Image, Double, Fitness Level from 1 to 100 Levels

Service

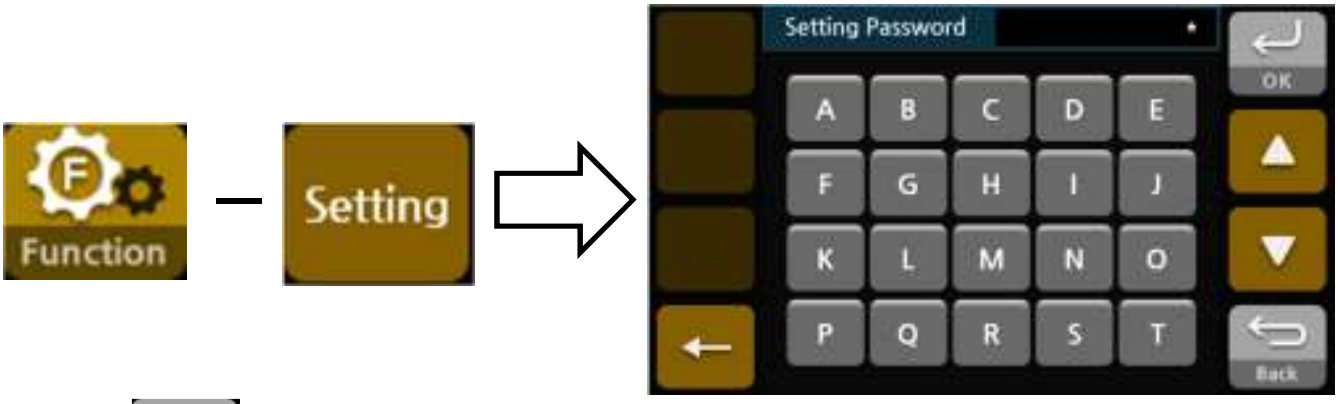
No.	Service Menu	Sub Menu	
9	Interface	Print	To set Baud rate, Data Bit, Stop Bit, Parity. Column, Cutting Code about Print
		Network	To set IP, Subnet mask, Gate Way, DNS, Port, Fixed IP
		External Display	To set 7 Segment, LCD Single, LCD Double
10	PW		Setting the ID/Password
11	Upgrade	Mecha F/W	To Upgrade Mecha firmware using USB
		Recog F/W	To Upgrade Recog firmware using USB
		UI S/W	To Upgrade UI software using USB
		Template	To Upgrade Template using USB
		Tape F/W	To Upgrade Tape firmware using USB (FS,FSD-only)
		Sonar F/W	To Upgrade Sonar firmware using USB (VS,VSD-only)
12	Diagnostic	Pick-up Motor	To drive the Pick-up motor during 10 sec.
		Feed Motor	To drive the Feed motor during 10 sec.
		Fan Motor	To drive the Fan motor during 10 sec.
		Swing Selector	Turn it on and off repeatedly 5 times.
		Circulation	To drive every motor.
		Count	Emit notes with Stack or Reject

Settings

How to Change the Settings

Each setting item has to be set prior to use

1) Press the buttons below to enter the setting password menu



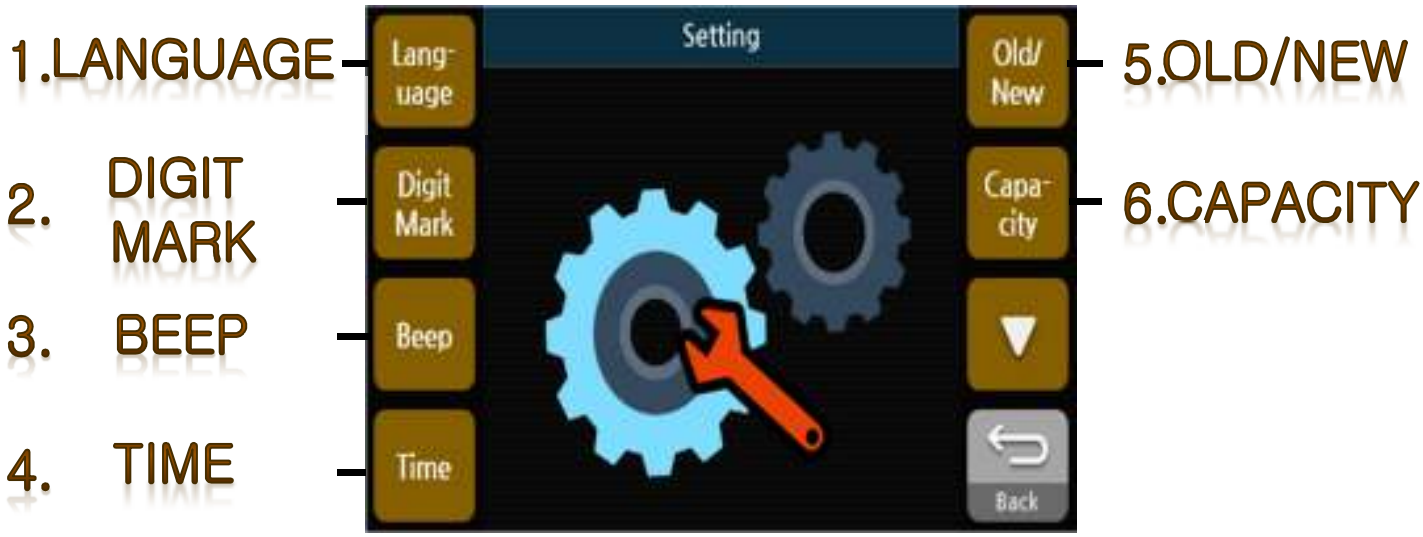
2)Press after press passwords.

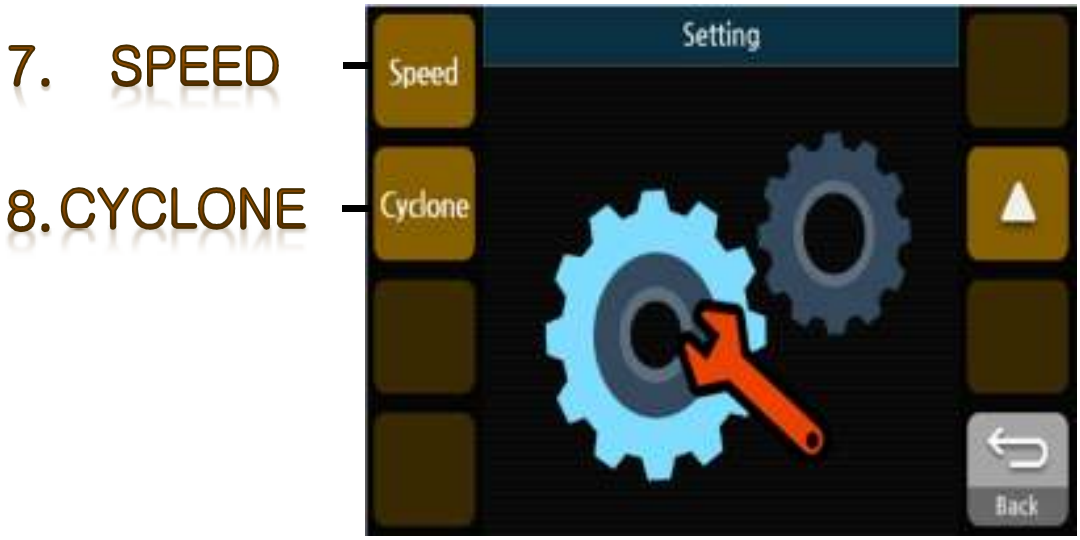
3)Press button to set the each setting.

4)When finishing, press the button to exit the setting menu.

User Settings

List of Settings





Description of Settings

1. Language

Select language for the display. Choose from English or, another registered language.

1)Press

button to select language.

2. Digit Mark

Select the digit mark to display the amount of money.

1)Press

button to select digit mark style.

3. Beep

Turn ON or OFF the Beep. If beep setting is ON, the beep tone will be generated when button is pressed.

1)Press

button to select turn on or off.

4. Time

Setting the date and time.

1)Press date or time button to select item.

2)Press numbers to adjust data or time.

3)Press

button to set.

5. Setting Old/New

Counts separately between the old banknotes and the new ones.

1)Press button to select setting.

6. Setting Capacity

Sets the maximum capacity of the stacker and reject.

1)Press stacker capacity button and reject capacity button.

*If select S-500 ,stacker should be emptied every 200 notes.

7. Setting Speed

The EE7 offers with three speeds; 800 / 1000 NPM (Notes per Minute)

1)Press

button to select EE7 speed.

8. Setting Cyclone

Turn ON or OFF the Cyclone. If Cyclone setting is ON, dusts collected in dust pocket during the operation.

1)Press

button to select turn on or off.

Summary of Operation

Description of each setting can be found on the following pages

	Default setting	page
Reject reason	none	32
Detail	none	33
Count	Value	36
Value		36
Face		37
Orient		37
Face & Orient		38
Fitness Sort		38,39
Serial Number		39
Serial No info.	none	42
Black List		43
Count Log		44
Sort up/down	down	44
Total	none	45
Sub Total		45
Grand Total		46

Reject Reason

To display the reason of rejected banknotes

It displays the reject codes, reject reasons and the number of the rejected up to the reject code

1) Press the button below to enter the reject reason menu.

2) When finishing, press the

button to exit the reject reason menu.

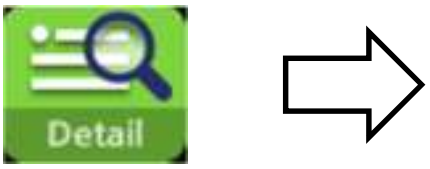
*If an external printer is connected and enabled, pressing Print button will transmit the reject reason data to the printer

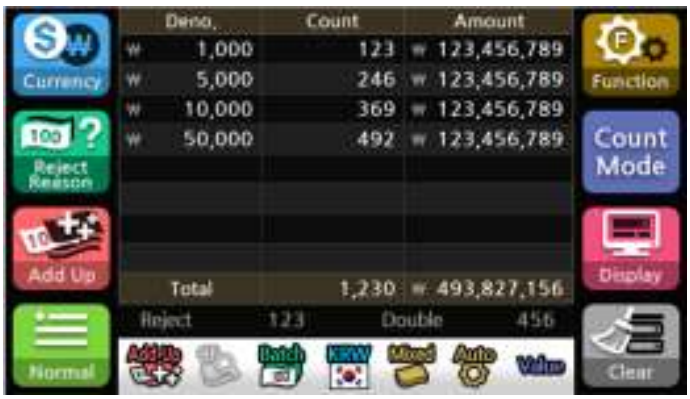
Detail

Confirm the count

The table shows the denomination, the number of each denomination and the amount of the summation value to each denomination.

1) Press the button below to confirm the detail counting results.





2)When finishing, press the button to exit the detail table.

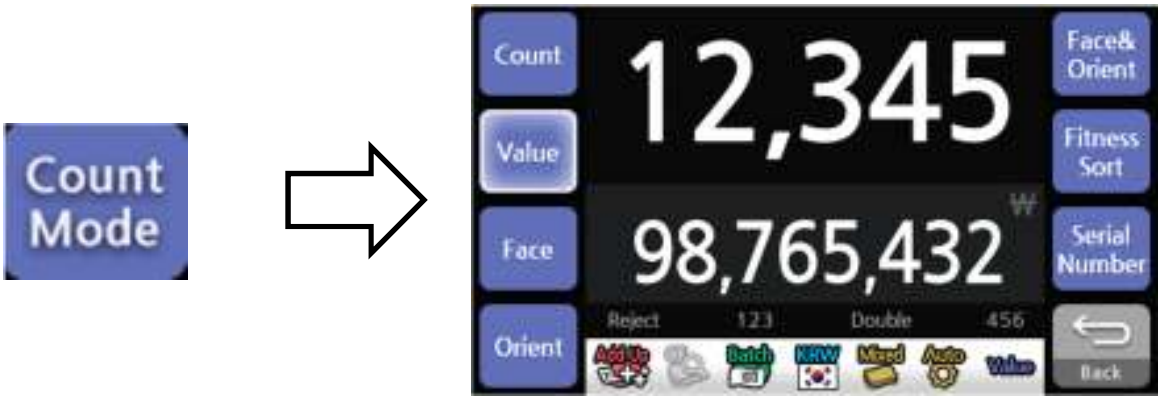
*When you start counting on the detail mode, it automatically switches to normal mode. When the counting is finished, it returns to the detail mode again.

Count Mode

How to Select the Count Option

Each count mode has to be set prior to use

1)Press the button below to enter the count mode menu



2)Press button to set the each setting.

3)When finishing, press the button to exit the count mode menu.

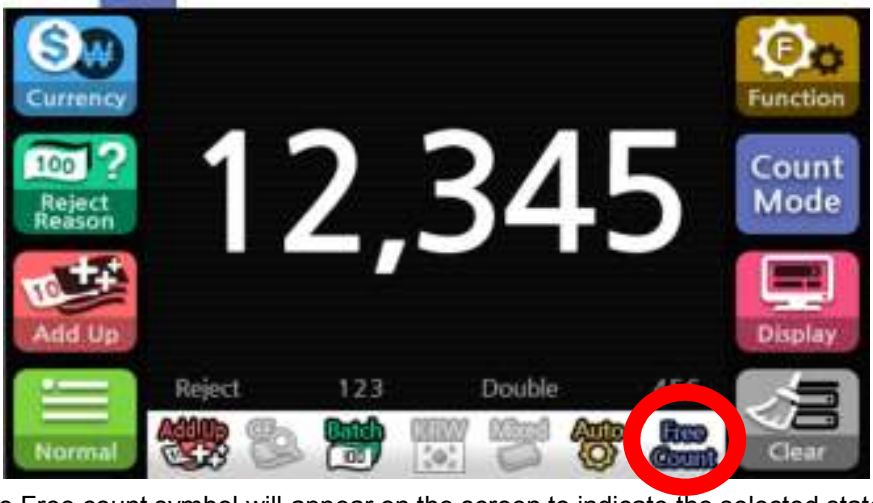
List of Count Modes

Description of Count Mode

1. Count

To count the total number of banknotes without recognition of denomination.

1)Press Count button to select free count mode.

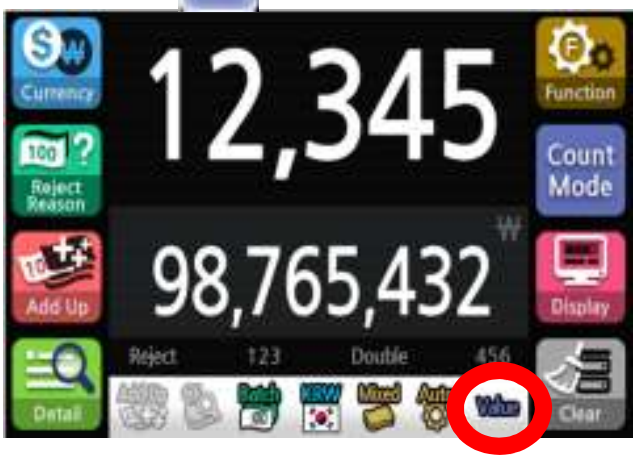


*The Free count symbol will appear on the screen to indicate the selected state.
*The count mode doesn't offer the detail menu.

2. Value

To count the total number of banknotes with recognition of denomination.

1)Press Value button to select value mode.



*The Value symbol will appear on the screen to indicate the selected state.
*To confirm the denomination and count, press button.

3. Face

To count by same side(front/back) of the banknote which is counted at first. If the note is not the same side, the machine will send the banknote to the reject pocket.

1)Press Face button to select face mode.

*The face symbol will appear on the screen to indicate the selected state.
*To confirm the denomination and face count, press button.

4. Orient

To count by same direction(UP/Down) of the banknote which is counted at first. If the note is not the same direction, the machine will send the banknote to the reject pocket.

1)Press Orient button to select orient mode.

*The Orient symbol will appear on the screen to indicate the selected state.
*To confirm the denomination and orient count, press button.

5. Face & Orient

To count by same side(front/back) and same direction(UP/Down) of the banknote which is initially counted.
If the note is not the same side and direction, the machine will send the banknote to the reject pocket.

1)Press Face& Orient button to select Face & Orient mode.

*The Face & Orient symbol will appear on the screen to indicate the selected state.
*To confirm the denomination and face & orient count, press button.

6. Fitness Sort

To sort out fit and unfit banknotes separately.

1)Press Fitness Sort button to select Fitness Sort mode.

*The Fitness symbol will appear on the screen to indicate the selected state.

*To confirm the denomination and Fitness count, press button.

*Press - Service - Recog Level button to select the level of fitness.

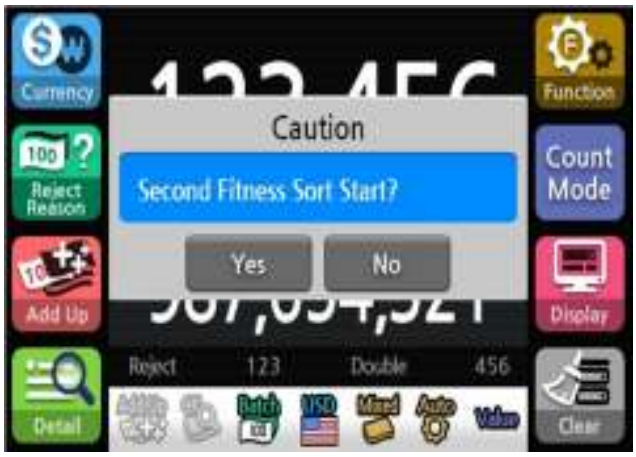
*This mode is not available on EE7 VS model.

Operation

6.1. Fitness Second Sort

If Counterfeit notes are Detected after First Fitness sort , Second Sort Mode will Start Automatically.

1)Press Yes button to Run Second sort at message
2)Clear Notes in Stack and Move Notes in Reject bin to Hopper.



*To Stop Second sort Press Yes after Run Message.

7. Serial Number

Recognizes the series number of the banknote and shows it on the display.

1)Press Serial Number button to select Serial Number mode.

*The Serial Number symbol will appear on the screen to indicate the selected state.

*To confirm the denomination and the serial number of the last banknote, press button.

*To confirm the Serial number information, using menu.

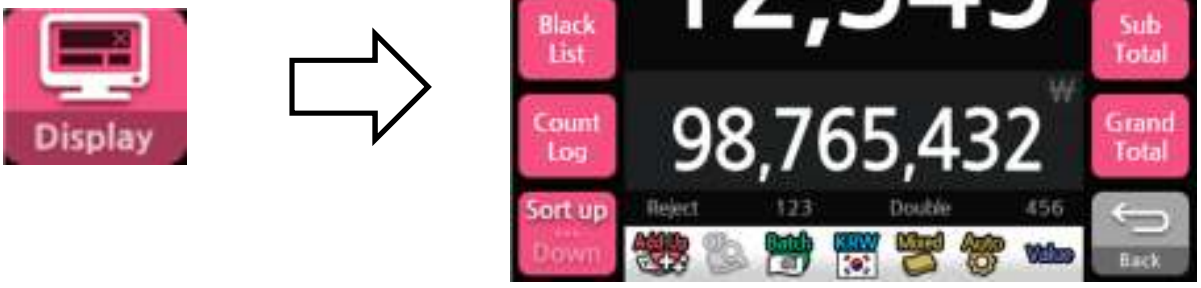
*The speed of Serial number recognition is fixed at 800 notes/min.

Display

How to Set the Display

Each setting item has to be set prior to use

1)Press the button below to enter the function menu



2)Press button to set the each setting.

3)When finishing, press the button to exit the display menu.

List of Display

Description of Display

1. Serial Number Information

This table shows the time and date obtained, the denomination value and the serial numbers.

1)Press Serial No Info. button to select serial number information.

To search the serial number information, press Search button

*If an external printer is fitted and enabled, pressing Print button will transmit the serial number information to the Printer

*To remove serial number information, press Clear All button

2. Black List

This table shows black list registration date, denomination value, the serial numbers. If the serial number of banknote is in black list, the machine will send the banknote to the reject pocket.

1)Press Black List button to select black list.

To search the black list, press Search button

*If an external printer is fitted and enabled, pressing Print button will transmit the black list information to the Printer

*To remove black list information, press Clear All button

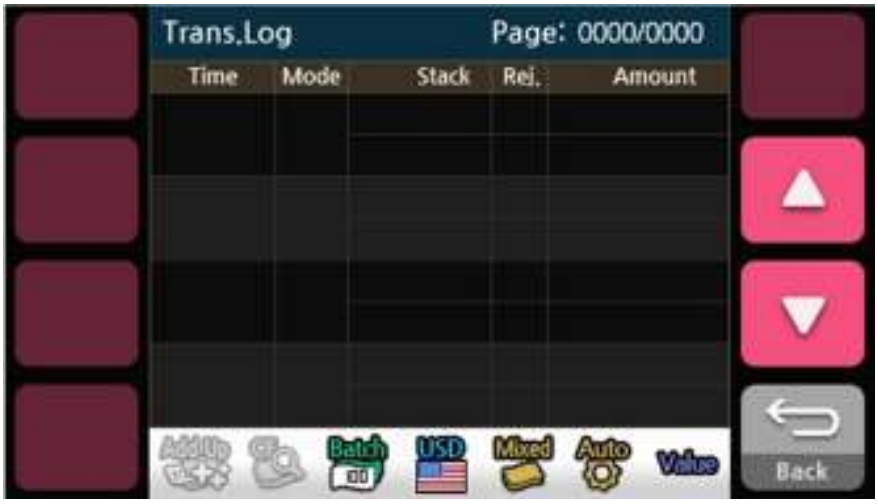
3. Count Log

This table shows count log.

1)Press

button to select count log.

2)To set the time the log was recorded.



4. Sort up/down

Decide to sort method.

1)Press

button to select setting.

5. Total

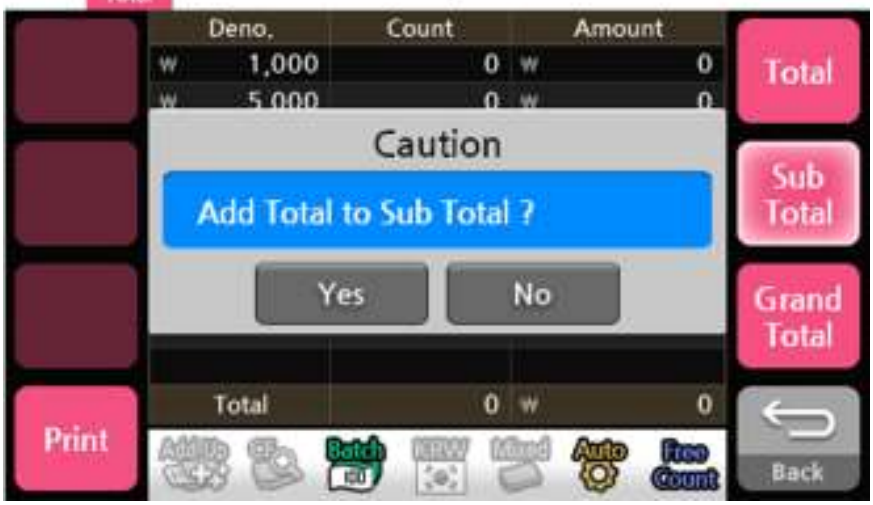
To show the denomination and the number of banknotes and the total amount of the banknotes counted.

1)Press Total button to select setting.

6. Sub Total

To show the denomination and number of banknotes, the total amount of the banknotes received from Total

1)Press Sub Total button to select setting.



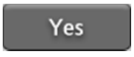
*Press Yes button to transfer the count value to the sub total.

7. Grand Total

Show the denomination and number of banknotes, the total amount of the banknotes received from sub total

1)Press

button to select setting.

*Press 

button to transfer the count value of sub total to the grand total.

Maintenance

Maintenance Method

No.	Check Point	Maintenance Method	Cycle	Remarks
1	Hopper Sensor and Rollers	Cleaning	Daily	48 Page
2	Detection sensors	Cleaning	Daily	49 Page
3	Stacker sensor and reject stacker sensor	Cleaning	Daily	50 Page
4	Diverter sensor	Cleaning	Daily	51 Page
5	Dust pocket	Clean and empty the dust pocket.	2 month	51 Page
6	Pick-UP Roller	Check strain	6 month	Replacement by trained person
7	CABLE and CONNECTOR	Check exfoliation and disconnect	6 month	Replacement by trained person
8	PATH SENSORS	Using Service-Sensor Menu	6 month	Replacement by trained person
9	Motors	Using Service-Diagnostic Menu	6 month	Replacement by trained person
10	TIMING BELT	Check abnormal noise and belt deviation	6 month	Replacement by trained person

Miscounting may be caused if dust, dirt, and other materials get stuck or clutter the sensors.
It is necessary to clean the sensors and rollers with an attached cleaner once a day.

⚠ CAUTION	Turn off the power switch before cleaning. otherwise, this may result an electric shock or injury.
	Do not use chemicals such as benzene, thinner, or water. use of such may result in discoloring or breakage.

Guide for Components

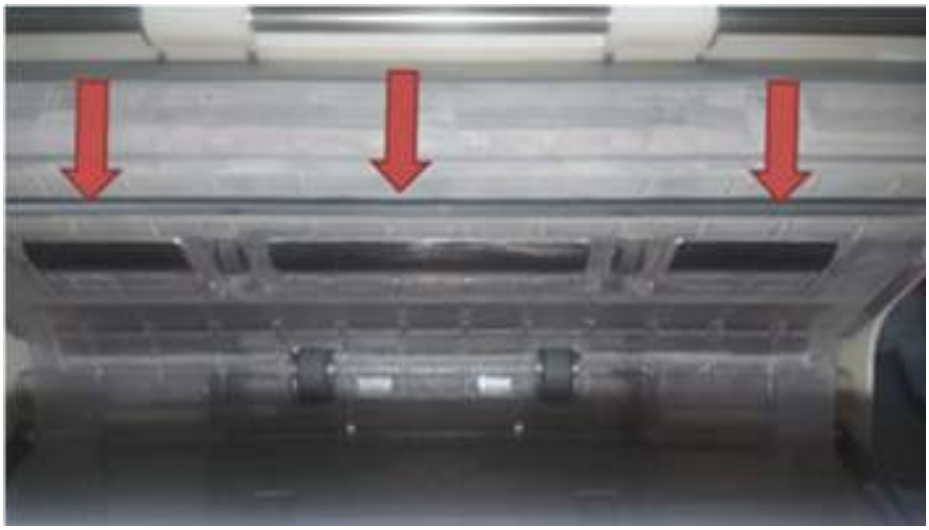
The hopper sensor and rollers

Clean the Inlet sensor and the roller as shown in the photo below with a soft cotton towel or a brush.

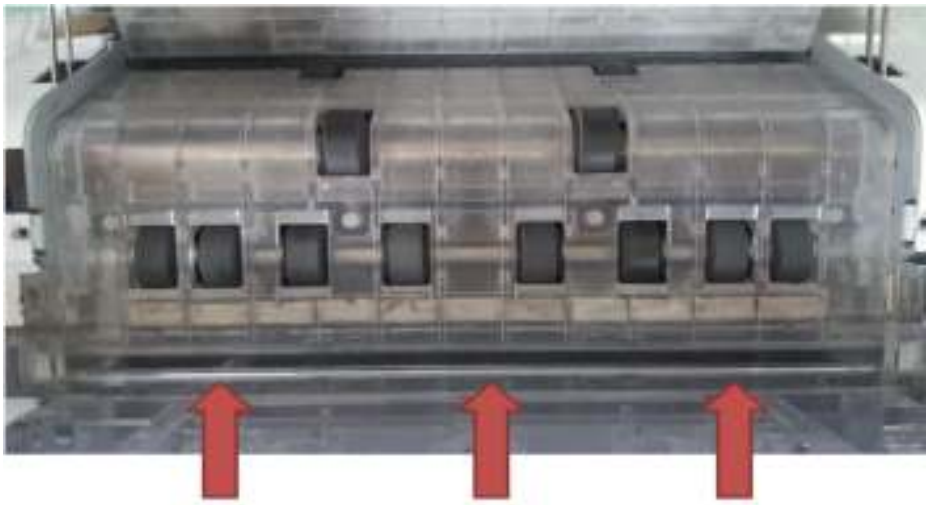
<Inlet Sensor and Rollers>

Detection sensors

Open the upper cover by pulling the lever and clean the sensors as shown in the photo below with a soft cotton towel or a brush.



< MR and Upper CIS >

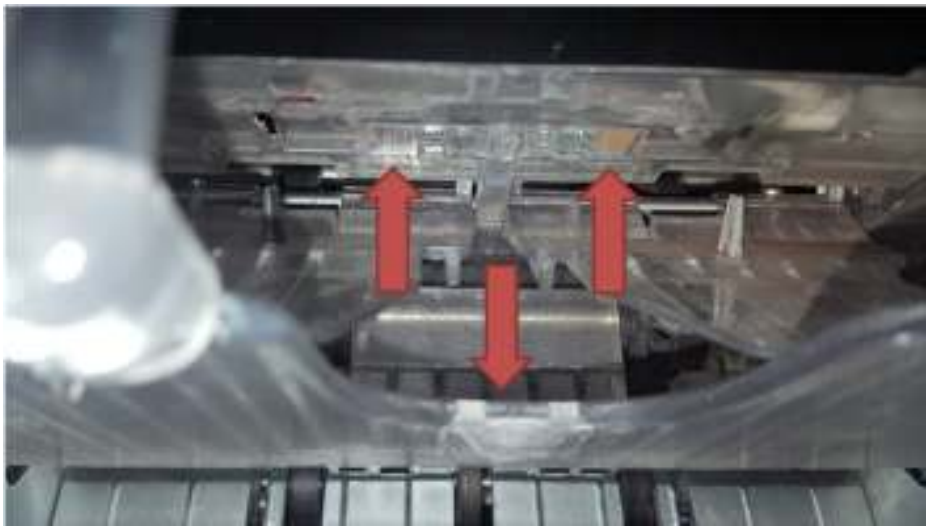


<Lower CIS>

The stacker sensor and reject stacker sensor

Clean the sensors as shown in the photo below with a soft cotton towel or a brush.

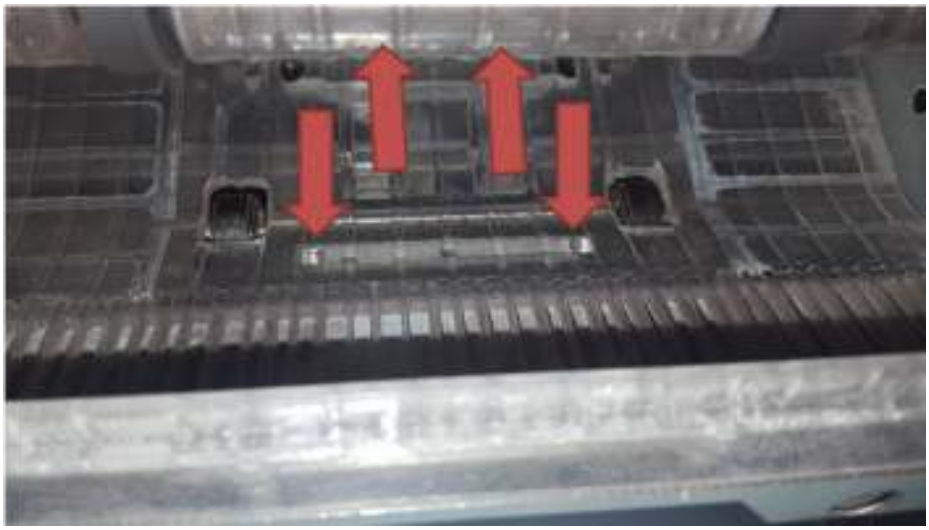
<Stack Sensor>



<Reject Sensor>

Diverter sensor

Open the lower cover by pulling the lever and clean the sensors as shown in the photo below with a soft cotton towel or a brush.



<Diverter Sensor>

The dust pocket

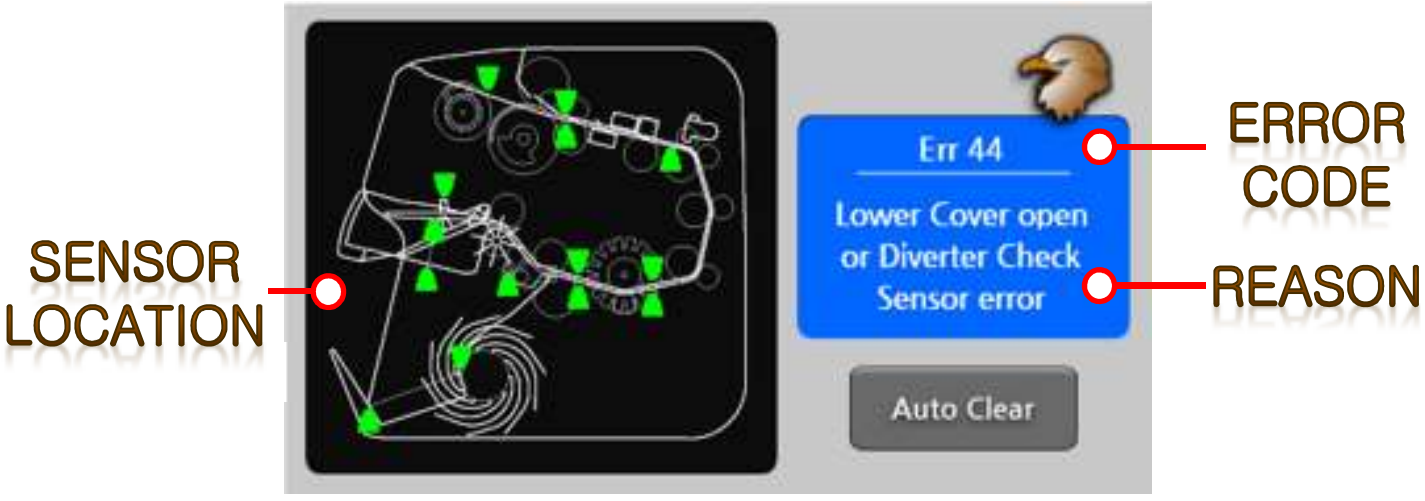
Pull out a dust pocket and clean it

<dust pocket>

When Errors Occur

If an error occurs during using, an error code is displayed on the LCD display. Find the cause of the error by the error code and follow the instructions to release the error.

*Press the OK button, after cleared error.



*Press the Auto Clear button, after cleared error.

Error Code List

Code No.	Reason	Releasing Method
01~05	Communication error	1. Turn the power switch off and on. 2. If the Error continues, please Contact to service Center.
10	Initial Inlet Sensor Fail	1. Open the upper cover and lower part. 2. Check and Cleaning the sensors.
11	Initial Check R Sensors Fail	1. Check and Cleaning the check sensors.
12	Initial Check L Sensors Fail	
13	Initial Diverter Sensor Fail	1. Check and Cleaning the diverter and diverter end sensors.
15	Initial Diverter End Sensor Fail	
16	Initial Stack Sensor Fail	1. Remove the banknotes from the stacker. 2. Check the stack sensor.
17	Initial Reject Sensor Fail	1. Remove the banknotes from the reject stacker. 2. Check the reject sensor.
18	Initial Reject Full Sensor Fail	
20	Miscount	1. Count mismatch. Please count again.
21	Guide Open	1. Close the upper cover.
22	Feed Motor Error	1. Check the feed Motor.
23	Pickup Motor Error	1. Check the pickup Motor.
24	Feed Check Error	1. Turn the power switch off and on. 2. If the Error continues, please Contact to service Center.
25	Diverter Act Error	1. Count mismatch. Please count again.
2A	Pickup Fail	1. Clean the pickup sensor and rubber.

Error & Guide

Code No.	Reason	Releasing Method
31	Pickup JAM	1. Open the upper cover, remove the notes. 2. Press auto clear button.
32	Path JAM	1. Open the upper cover and lower part, remove the notes. 2. Press auto clear button.
33	Diverter Out JAM	
41	Check R Sensor Fail	1. Check and Cleaning the check sensors.
42	Check L Sensor Fail	
43	Diverter Sensor Fail	1. Check the lower cover is closing 2. Check diverter sensor.
44	Diverter Check Sensor Fail	1. Check and Cleaning the Diverter sensors.
45	Diverter End Sensor Fail	
46	Stack Sensor Fail	1. Remove the banknotes from the stacker.
47	Reject Sensor Fail	1. Remove the banknotes from the reject stacker.
48	Reject Full Sensor Fail	
50	Boot State	1. Turn the power switch off and on. 2. If the Error continues, please Contact to service Center.
51~53, 56~58	Program upgrade error	1. Program upgrade retry. 2. If the Error continues, please Contact to service Center.
61~62	Hardware problems	1. Turn the power switch off and on. 2. If the Error continues, please Contact to service Center.
65~66	Calibration Error	1. Calibration retry. 2. If the Error continues, please Contact to service Center.

Product Specifications

Mode	Count, Value, Single, Mixed, Face/Orient, Fitness Sort, Serial Number Recognition			
Pocket number	2 Pockets			
Outside Dimensions	273(W) x 275(D) x 293(H) mm			
Weight	8.6kg			
Counting Speed	Value Counting, Fitness Sorting (EE7-FS)	1000 Note/min		
	Serial Number Recognition	800 Note/min		
Size of countable notes	W:50~90mm, L:100~185mm			
Hoper Capacity	500 (1000 optional)			
Stacker Capacity	200			
Reject Stacker Capacity	Approximately 100			
Display	5” TFT Color Touch Screen LCD			
Sensor	CIS - 2EA			
	MR, IR, UV			
	Mechanical Thickness Sensor(EE7-FS) or Sonar(EE7-VS)			
Power supply specification	Voltage	100~240V		
	Frequency	50/60Hz		
	Power consumption	140W		
Usage Environment	Temperature	0℃~45℃(32F~113F)		
	Humidity	10%~90%(no condensation)		
	Do not expose the product to the direct rays of the sun for a long period.			
	Do not place the product in a dusty space and unstable place.			
Model		Value Count	Tape Detect	Serial Number Recognition
	EE7 VS	●	X	●
	EE7 FS	●	●	●
Interface	3 Serial Ports, 1 USB2.0 (device), 1 USB2.0X1(Host), LAN port			

List of Attachments

Standard Attachments

Power Cord

User Guide

Optional Attachments

External display

External display cable