

CD-1000

Mixed Denomination Value Counter

(Counting/Detecting/Value)



Important Safety Information

Always be careful when using the machine. To reduce the risk of fire, electrical shock, and other injuries, keep these safety considerations in mind when installing, using, and maintaining your machine:

Stability. Place the machine on a secure, stable surface. The machine can be seriously damaged if it falls.

Power Supply. Provide correct power to the machine, as listed on the back of the machine. If you are not sure of the type of power supplied to your office, call your electric company.

Grounding. If the plug has three prongs, it must be plugged into a grounded (three holes) outlet. Grounded plugs and outlets are designed for your safety - do not try to make a three-prong plug fit into a two-prong outlet by modifying the plug or outlet in any way. If you cannot insert the plug into your wall outlet easily, then the outlet should be inspected by a qualified electrician.

Overload. Do not plug too many electrical devices into a wall outlet or an extension cord. An overloaded outlet could be a reason of fire and electrical shock hazard.

Cleaning. Before cleaning the machine, unplug it from the power outlet. Clean exposed parts with a soft cloth slightly dampened with water. Do not use aerosol cleaners.

Gas Leaks. Never use any machine close to a gas leak. If you think gas is leaking, call the gas company immediately. A small electrical spark in the machine could cause a fire or explosion.

Precaution

When using the machine, these precautions should always be followed.

1. Never push objects of any kind into your machine through the case or cabinet openings.
2. Do not use your machine near water, in wet locations, or outdoors.
3. Do not allow anything to rest on the power cord, line cord, or PC interface cable.
Do not locate your machine where the cords can be damaged by persons walking on them.
4. Do not allow pets to chew the power cord or PC interface cable.
5. Use supplies or cleaning materials only as directed. Keep all supplies and materials out of the way of children.
6. The power supply turns this machine on and off. Make sure that your machine is installed near an outlet and is easily accessible.
7. Never remove covers or guards that require a tool for removal. There are no operator

serviceable areas inside your machine. Refer servicing to authorized service personnel.

8. Never defeat interlock switches. This machine is designed to restrict operator access to unsafe areas. Covers, guards and interlock switches are provided to ensure that the machine will not operate with covers opened.
9. Avoid direct viewing of the image sensor lights. The lamps are bright and, while not harmful, they may cause an annoying afterimage. Always keep the rear cover closed during operation and storage.
10. Risk of explosion If battery is replaced by an incorrect type. Dispose of used batteries according to the instruction.

Managing the performance of the machine

This unit has many sophisticated sensors. Without proper maintenance, it cannot last its good performance. Please read the “Daily Maintenance” section of this manual carefully, and do it everyday. When the performance is deteriorated on a sudden, please clean all the sensors first before calling a service.

Safety Notes

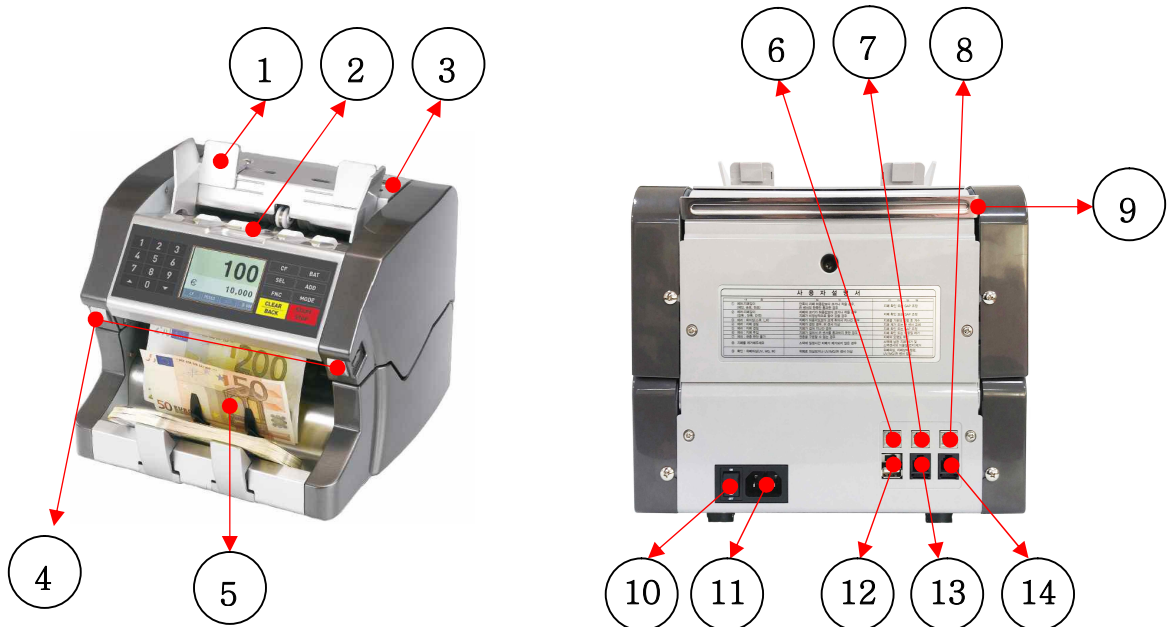
Your machine and the supplies are designed and tested to meet strict safety requirements. Included are safety agency examination and approval and compliance to established environmental standards.

Please read the following instructions carefully before operating your machine, and refer to them as needed to ensure the continued safe operation of your machine.

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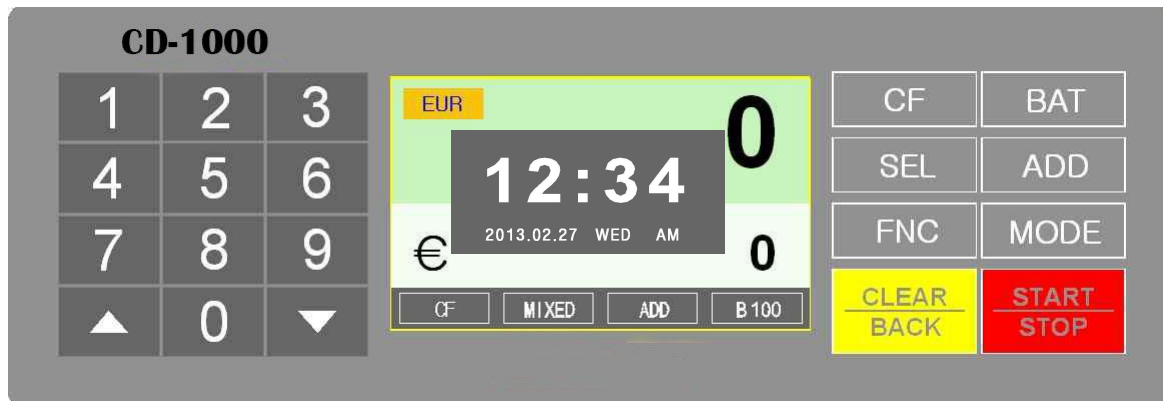
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1. Description of the Parts



NO	The name of the Parts	note
1	Guide for counting Note	Expansion Guide
2	Hopper	
3	Thickness Adjustment Screw	Gap Control screw
4	Button for Cover open	
5	Stacker	
6	Not in use	
7	Not in use	
8	Not in use	
9	Moving handle	
10	Power Switch	
11	Power Plug	
12	Connector for S/W upgrade	
13	Connector for Thermal Printer	
14	Connector for external display	

2. Function of Control Panel



- ①  : COUNTERFEIT DETECTION KEY
- ②  : PRESET NUMBER OF NOTES
- ③  : COUNTING SPEED SELECTABLE KEY
- ④  : ACCUMULATED NUMBER COUNT
- ⑤  : CHANGE THE COUNTING MODE.
(MIXED-COUNT-SORT Denom-SORT Orient)
DD on/off in XXX mode
- ⑥  : SELECT CURRENCY KEY
- ⑦  : COUNTED NUMBER AND TOTAL VALUE CLEAR KEY
- ⑧  : START & STOP
- ⑨  : UP KEY & NUMBER / TOTAL VALUE OF COUNTED NOTE
- ⑩  : DOWN KEY

2-①.

This key can be used to detect counterfeit note by pressing it. When counterfeit note or suspected notes were detected while counting, some of specific message or error messages are displayed on the LCD screen. The counting speed will be set low speed automatically when CF on.

2-②.

When press BAT key, you can select batch number, which is already registered (0-10-25-50-100). or if you want to select a special batch number, please use number key
When the counted number reaches at the batch number, the machine will stop automatically.

2-③.

It is the SPEED key which has 4 different speeds. Whenever you press this key, it will be forwarding as shown under.

Lo(Low)-Mi(Middle)-Hi(High)-FA(Fast)

Low	900 notes/ minute	Mid :	1,000 notes/ minute
High :	1,200 notes/ minute	Fast :	1,400 notes/ minute

You can change the counting speed under CF off in count mode and CF off, DD off in XXX mode.

Under CF on, DD on, mixed mode /sort mode, SEL key will not operate.

2-④.

When press ADD key, the accumulated total of notes will be shown on the LCD screen when they have been counted. By pressing CLEAR/BACK key user can clear the counted value.

2-⑤.

By pressing FNC key, you can select the operating mode
MIXED-COUNT-SORT Denom-SORT Orient or DD on/off in XXX mode

2-⑥.

By pressing MODE key, you can select currency. (EURO, USD, local currency or XXX mode)



After counting - By pressing CLEAR/BACK key, you can clear counted number and total value.
On the other condition - CLEAR/BACK key performs going to previous step or deleting previous text.



By pressing START/STOP key you can manually start the machine.
(It needs to activate the manual count mode)
On the other condition – START/STOP key performs to enter selected menu or vales.

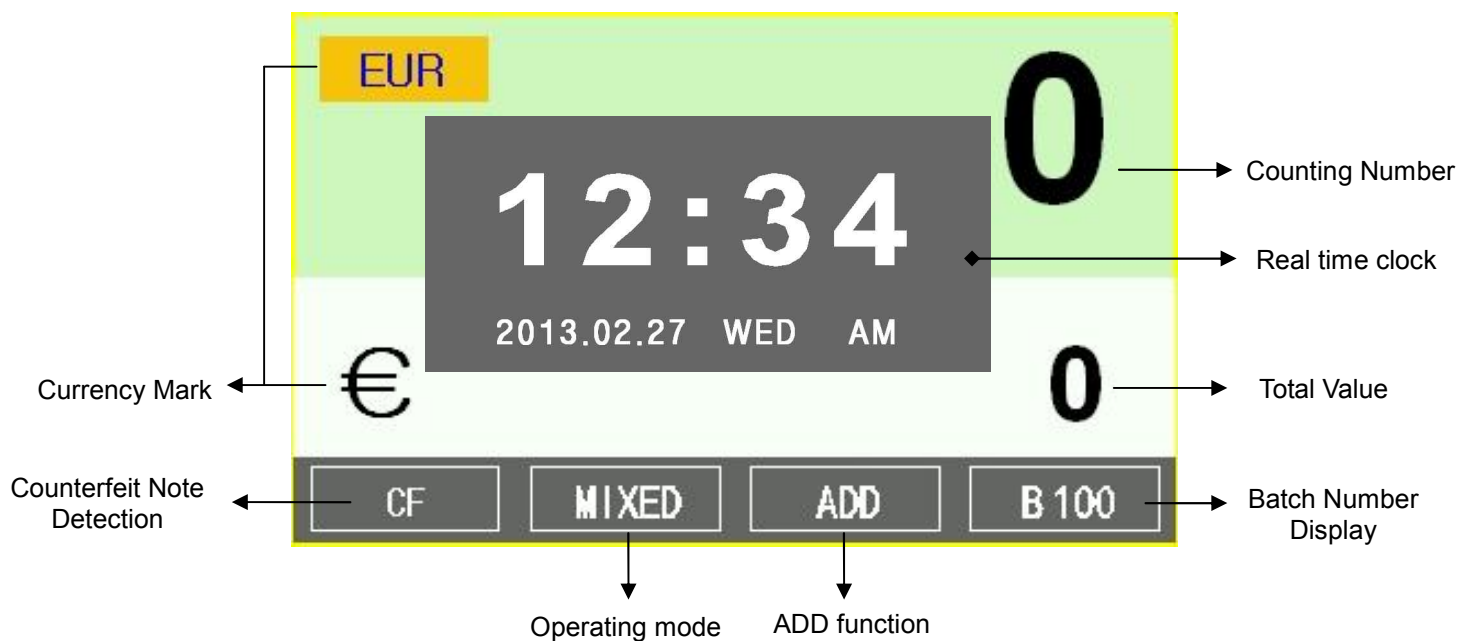


After counting – By pressing UP key, you can check counted number and total values.
After clear counted value – By pressing UP key, you can enter user setting menu.
By pressing UP key, you can move to the previous line in setting mode.



By pressing DOWN key, you can move to the next line in setting mode.

3. Overview of Display (LCD)



Currency mark : which currency is now operating

CF: Counterfeit note detection activation

MIXED / COUNT / DENOM / ORIENT: operating mode

ADD : ADD function on/off

BATCH function : Display the batch number

Total Value : total value of counted noted (Max 9 digit)

Real time clock : Real time clock

Counted number : number of notes (Max 3 digit)

4. Operating

Placing Bills onto the Hopper

It is very important to place the bills onto the hopper correctly because recognition performance of the bills is highly affected by the arrangement of the bills. Please avoid counting bills in bad condition such as wet, excessively dirty, spoiled, folded, curled notes and with foreign material like clips, bands, etc. Sometimes it causes malfunction of the machine.

Counting

If ADD mode was set, the cumulative number will be displayed.

If an error occurs during operation and the machine stops, then an error message will be displayed.

To clear the error, press start/stop key. The machine will try to solve the problem automatically, but if it fails to clear a jam or there are some other mechanical errors, remove jammed bills manually.

Then press the start/stop key again to clear error message.

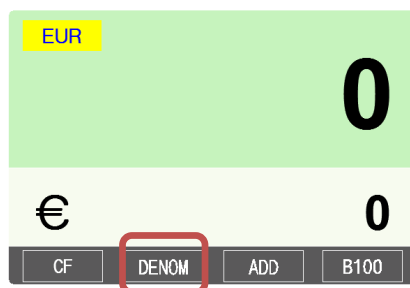
COUNT MODE (By pressing FNC button)

The machine can count the bills without any denomination recognition



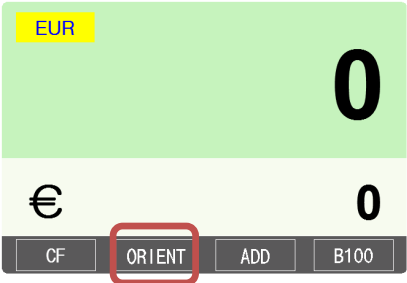
SORT Denom (By pressing FNC button)

The machine can detect the different denomination bill while counting



SORT Orient (By pressing FNC button)

The machine can detect the different orientation bill while counting



MIXED MODE (By pressing FNC button)

The machine can make the value counting for mixed notes and total amount will be displayed on the screen. Under this status, if you press UP key, you can see the breakdown of the denomination as picture. By pressing CLEAR/BACK key. and then return to previous screen.

The image shows the machine's interface in MIXED MODE. The top screen shows 'EUR' and a large '6'. The bottom screen shows '€' and a large '385'. The 'MIXED' button on the keypad is highlighted with a red box. To the right of the keypad, a table displays the breakdown of denominations. A red arrow points from the 'UP' key (represented by a triangle icon) to the table. Another red arrow points from the 'CLEAR BACK' button to the table. The table has three columns: Denom, Count, and Amount. The rows show denominations from 5 to 200, each with a count of 1 and an amount equal to the denomination. The final row is 'Total' with a count of 6 and an amount of 385.

Denom	Count	Amount
5	1	5
10	1	10
20	1	20
50	1	50
100	1	100
200	1	200
Total	6	385

Counting – Local currency

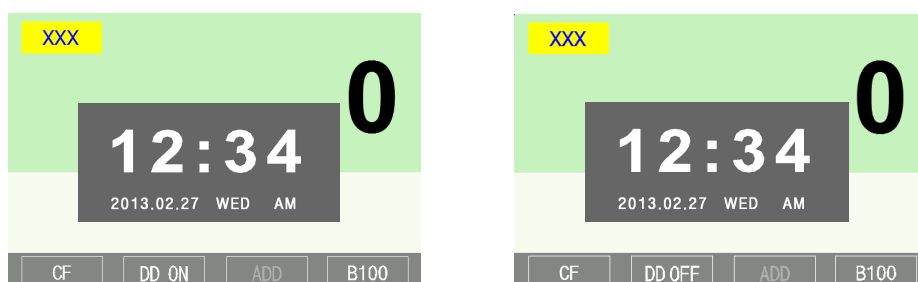
In local currency mode (by pressing MODE button), user can select MIXED / COUNT / SORT Denom / SORT Orient



Counting – Local currency under XXX mode

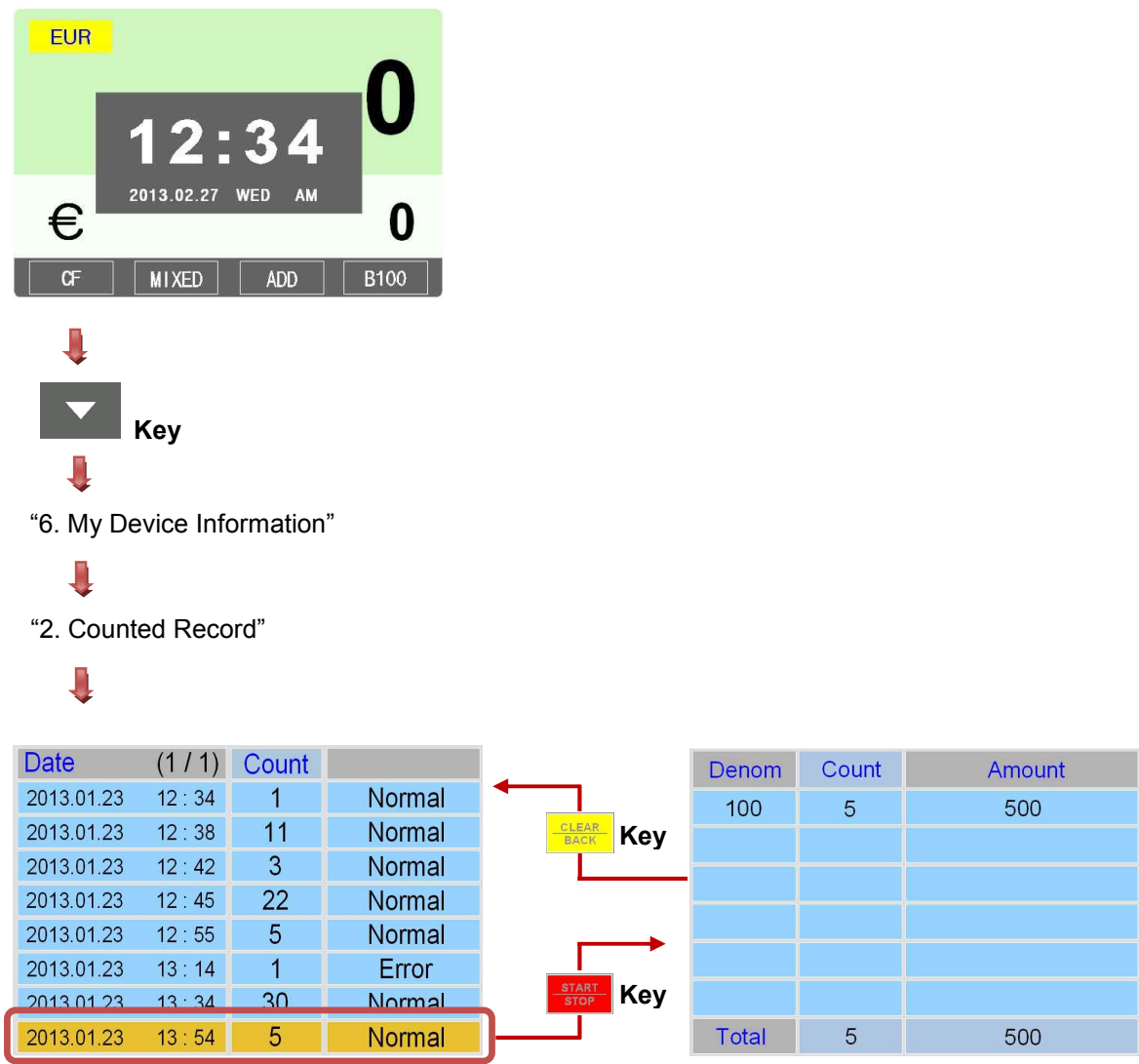
(This mode can be used for any currency)

In XXX mode (by pressing FNC button), user can select DD on / DD off



Checking the counted record

The machine can save counted records. (maximum 16,000 cases)
If full, the oldest record will be replaced by each new record.



The menu key usage in this mode			
	select previous case		select next case
	1Page down		1Page up
	10 Pages down		10 Pages up
	100 Pages down		100 Pages up
	Searching by time		

Selecting Add Function

ADD function provides a cumulative count, to the operator. For example, if someone tries to count up to 400, but the machine cannot count over 300, which is maximum capacity of the Stacker. But pressing **ADD** key, then try to count again. The machine counts and stops when the stacker is full. After removing those notes from the Stacker, you can begin counting again, and the total counted number will be increased from the previous total. The Add function is On/Off by pressing ADD key and clears counted value by CLEAR/BACK key.

Selecting Batch Function

BAT key is used to select preset batch number. In the batch count mode, the machine stops counting when the counted number reaches at the set number, even though the bills remain on the Hopper. User can edit batch number by pressing BAT key + 1~9 number key.

Selecting Automatic/Manual

In AUTOMACTIC mode, when the hopper sensor detect banknote on the hopper, machine will automatically start to count the bill.

In MANUAL mode, the machine will not count the bills automatically even though the bills are onto the hopper. When user presses START key manually, the machine will start to count.

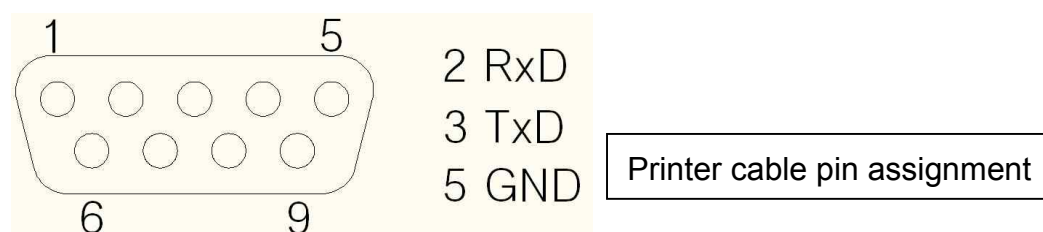
While counting, the machine will display the number of the bills on LCD display and it stops working when it meets the conditions described as below;

- No bills on the hopper
- The number of the bills counted is the same as the batch number to be set in BATCH mode.
- Errors have occurred.

When the machine finishes counting without errors, the number of counted bills will be displayed on the LCD screen.

Thermal Printer Guide

Available Printers



Most of standardized printers will be interwork with our product.

The following printer models are verified to interwork with our product.

- CT-S280 (CITIZEN)
- STP-103 (BIXOLON)

Printer Setting

- Set the baud rate 9600 BPS
- Connect power and serial cable
- Insert the paper
- Power switch on


CD-1000 Setting

- Connect printer serial cable to port -2 →



- Power switch on
- Set the baud rate 9600 BPS
("User Menu" → "3.External Device"
→ "2.Printer Baudrate"
→ "2.Printer 9600 bps")

Operating Printer

- Press  key after counting banknote.
(User can print again and again by pressing the down key until reset the values on the screen.)
- Print function only can work under "Mixed" or "Sort" mode.

=====		
EUR VALUE LIST		
=====		
DATE	2013.04.24	10:38
=====		
DENO	UNITS	VALUE
=====		
5	40	200
10	20	200
20	0	0
50	16	800
100	1	100
200	1	200
500	1	500
=====		
TOTAL	79	2000

Printer Error

- Check the printer and CD-1000 settings.
- Check the cable pin assignment.

5. User setting menu





(After clear the counted value and press  Key)

No	Title	Description
1	Display type for value - Default(default) - Toggled - Detail	Default : The total count & value are displays on the screen. Toggled : The total value & each denomination value pages are alternately displays on the screen. (It's related to mixed, sort mode) Detail : Each denomination value pages are displays on the screen after 2 seconds from the end of counting. (It's related to mixed, sort mode)
2	Counting Type - Counting Enable - Counting Disable(default)	When the machine notifying to user by beep sound, machine can count added note or not (It's relate to stacker time set)
3	External Device - External Display - Printer Baudrate - Absence Message	External display & printer baud-rate setting Absence Message : Not in use.
4	Counting Mode - Manual - Automatic(default)	Auto(default) / manual counting setting
5	Time Set - Time Set - Stacker Time Set (15 / 30(default) / 60 seconds) - Time Display - Disabled - Enabled(default)	Time Set : Time setting of real time clock function. Stacker Time Set : Passed note remains on the stacker after 15 / 30(default) / 60 seconds, machine notify to user by beep sound until remove it. Time Display : If set "Enable" Displays RTC on the screen.

6	My Device Information - Software Version - Counted Record - Display style	Software version : Software version & Serial number Counted Record : Machine can save 16,000 records. If full, the oldest record will be replaced by each new record. Display style : Background color setting.
7	Banknote Type -MIX -SORT	Sorting banknote type or not. (Default: MIX)
8	언어설정(Language)	Language setting

6. Error messages & Troubleshooting

Error message	Cause of error	Solution
ERROR TOO LONG NOTE	2 or more notes have passed at the same time.	Remove all notes from the counter and recount.
ERROR TOO SHORT NOTE	Passed note was too short.	Remove and check the note.
ERROR HALF PASSED	Half note has been detected.	Remove and check the note.
ERROR SKEW-LEFT DIR	Note passed with skewed left.	Check the note and count again.
ERROR SKEW-RIGHT DIR	Note passed with skewed right.	Check the note and count again.
JAM OCCURRED	Notes were jammed.	Remove notes or check end sensor.
ERROR DIFF	Unrecognizable denomination note has passed.	Remove and check the note.
ERROR SUSPECT FL	Out of FL sensor value bounds.	Remove and check the note.
ERROR SUSPECT IR	Out of allowed IR sensor value bounds.(only for USD)	Remove and check the note.
ERROR SUSPECT MG-P01	Lower than allowed MG sensor value bounds.	Remove and check the note.
ERROR SUSPECT MG-P02	Lower than allowed MG sensor value bounds.	Remove and check the note.
ERROR DOUBLE PASSED	A duplicated note has been passed.	Check the passed note with dirty or glued.
ERROR FEEDING ERROR	Notes were jammed on IR sensor.	Remove notes.
REMOVE ALL NOTES	Passed note was not removed from stacker over 30 seconds.	Remove notes from the stacker.
ERROR DIFFERENT DENOM	Different denomination detected in sort mode.	
ERROR DIFFERENT ORIENT	Different orientation detected in sort mode.	
ERROR SIZE DIFF(Normal)	Passed note has incomparable size data with color data.	Check the note and count again.
ERROR DIFFERENT TYPE	Different type bank note has	

	detected.	
ERROR WHITE NOTE	White paper was passed.	Remove and check note.
ERROR SUSPECT UV	Lower than allowed UV sensor value bounds.	Remove and check note.
ENCODER SENSOR	Encoder malfunction.	Check the cable connection.
ERROR SUSPECT BRIGHTNESS	Higher than allowed color brightness value bounds. (only for USD)	Check the note and count again.
ERROR IMAGE ERROR	CIS recognition error.	Check the note and count again.
ERROR SUSPECT MG-P03	Lower than allowed center MG sensor value bounds.	Check the note and count again.
ERROR SUSPECT MG-P21	Lower than allowed side MG sensor value bounds. (direction 1)	
ERROR SUSPECT MG-P22	Lower than allowed side MG sensor value bounds. (direction 2)	
ERROR SUSPECT MG-P23	Lower than allowed side MG sensor value bounds. (direction 3)	
ERROR SUSPECT MG-P24	Lower than allowed side MG sensor value bounds. (direction 4)	
ERROR CIS SIZE	Out of allowed X-size value bounds.	Check the note and count again.
ERROR CIS HEIGHT	Out of allowed Y-size value bounds.	Check the note and count again.
ERROR NOTE SAPARATE	The gap between passed two notes is too narrow. (chained)	Check the note and count again.
“Hopper Sensor Fail”	Sensor initialization error.	Check the sensor and restart.
“Stacker Sensor Fail”	Sensor initialization error.	Check the sensor and restart.
“Encoder Sensor Fail”	Sensor initialization error.	Check the sensor and restart.
“IR Sensor Fail”	Sensor initialization error.	Check the sensor and restart.
“IR Sensor2 Fail”	Sensor initialization error.	Check the sensor and restart.

“Color Sensor Fail”	Sensor initialization error.	Check the sensor and restart.
“CIS Sensor Fail”	Sensor initialization error.	Check the sensor and restart.

To enter the setting menu, please press “9, 1, 1, 1” + “1, 5, 9, 0” as password + “MODE” key 5 times after selecting the currency.

1. UV Error

1.1 Cause : It happen when the passed note has higher FL(UV) value than the reference value limit.

1.2 Action : Select [5.CASH FL SET] Menu in setting menu → Set the reference value high by pressing “▲” button. (The higher number makes more insensitivity.)

→ Setting range : 0~255

2. MG Error

2.1 Cause : It happen when the passed note has lower MG value than the reference value limit.

2.2 Action : Select [6.CASH MG SET] Menu in setting menu → Set the reference value low by pressing “▼” button. (The lower number makes more insensitivity.)

→ Setting range : 0~9

3. Color Error

3.1 Cause : It happen when the color of the passed note is out of its set range. (Each denomination has color data range. If it is over, the machine detects the note to prevent mis-recognition of denomination.)

3.2 Action : Select [7.COLOR CHECK SET (1/0)] Menu → Set the value “0” by pressing “▲” or “▼” button.

4. IR Error

4.1 Cause : It happen when the passed note has less IR data than normal note or machine could not have collected enough IR data from the note.

4.2 Action : Select [8.CHECK IR SET (1/0)] Menu → Set the value “0” by pressing “▲” or “▼” button.

7. Specifications

Item	Specification
Dimension (W x D x H)	278[W] x 270[D] x 259[H] mm
Weight	Approx 7.3 kgs
Hopper capacity	300 pcs(extension Max 500 pcs)
Stacker capacity	200 pcs
Display Type	400 x 240 color Graphic LCD
Banknote Size Range	W: 100 ~ 190, H: 50 ~ 100
Banknote thickness range	0.05 ~ 0.2mm
Counting Speed	900/1000/1200/1400
Preset Batch Number	1 – 999
Counterfeit Detection	MG, MT, UV, FL, IR
Power Requirements	100-240VAC, 50~60Hz, 1.5A
Power Consumption	Standby: 8w, Operation: 28.7w

Notes:

- This machine specification can be changed without any notice
- The contents of this user's guide also can be changed.

8. Daily care

We recommend you to clean the sensors with brush or dried cloth. When cleaning the sensors, please do not use any Chemicals and watery cloth.



9. Product warranty

Thank you for purchasing our product.

If a failure occurs due to defects,

Contact your dealer or product manufacturer to repair or compensate the product.

All process about warranty is in accordance with our terms of warranty.

< Terms of warranty >

Warranty coverage

- A failure occurred under normal condition, 1-year warranty from date of purchased product.

Warranty exclusion

- A failure occurred by customer's negligence or incorrect operation.
- A failure occurred by alternation of product or repair from non-certified service engineer.
- A failure occurred by input power.
- A failure occurred by non-official consumables.
- A failure occurred by natural disasters.

After the expiry of the warranty period

- If repair is required, the customers have to pay for visit, repair or consumable cost.

Securement of A/S parts

- If the product is discontinued, warranty to supply A/S parts during 5-years.