

RBC-EP2000

Deluxe Two-Pocket Discriminator

OPERATING MANUAL



Thank you for purchasing the Royal Sovereign Deluxe Currency Discriminator, RBC-EP2000. This manual will provide you with safety information, instructions for optimal use, and proper care and maintenance for your product. Please read this manual carefully before operating.

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SAFETY INSTRUCTIONS

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

WARNING

1. Place the machine on a secure, stable surface. The machine can be seriously damaged if it falls.
2. Provide the correct power to the machine, as listed on the back of the machine.
3. If the plug has three prongs, it must be plugged into a grounded (three hole) 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.
4. Do not plug too many electrical devices into a wall outlet or into an extension cord. An overloaded outlet could be a reason of fire or an electrical shock hazard.
5. Before dusting the machine, unplug it from the power outlet. Clean exposed parts with a soft cloth slightly dampened with water. Do not use aerosol cleaners.
6. Never use any machine close to a gas leak. If you think gas is leaking, call your gas company immediately. A small electrical spark in the machine could cause a fire or an explosion.

CAUTION

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.
4. Do not place your machine where the cords can be damaged by persons walking on them.
5. Use supplies or cleaning materials only as directed. Keep all supplies and materials out of reach from 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. Refer servicing to authorized service personnel.
8. Never alter the interlock switches. This machine is designed to restrict the operator access to unsafe areas. Covers, guards, and interlock switches are provided to ensure that the machine will not operate when the covers are open.
9. Avoid direct viewing of the image sensor lights. The lamps are bright and, while not harmful, may cause an annoying afterimage. Always keep the rear cover closed during operation and storage.

WARNING

This product may contain a chemical known to the State of California to cause cancer, or birth defects or other reproductive harm.

PRECAUTION

Managing the Performance of the Machine

This unit has many sophisticated sensors. To ensure a long life, please read the “Daily Maintenance” section of this manual carefully. If the performance becomes deteriorated, please clean all the sensors first before calling your Royal Sovereign Customer Service.

Safety Notes

Your machine and the supplies are designed and tested to meet strict safety requirements. 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.

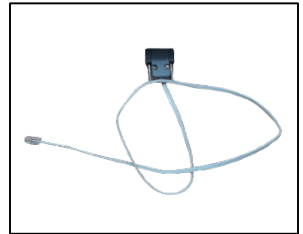
BOX CONTENTS



Bill Counter

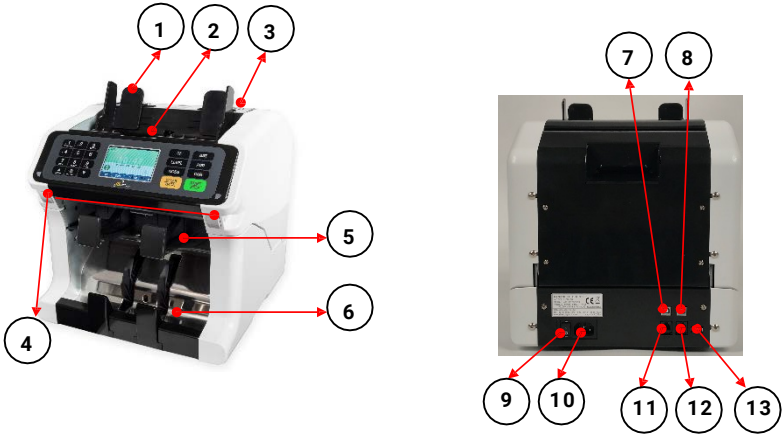


Power Cord



Printer Cable

PRODUCT VIEW
















NO	Parts	Note
1	Guide for Counting Notes	Expansion Guide
2	Hopper	
3	Thickness Adjustment Screw	Gap Control Screw
4	Button for Cover Open	
5	Reject Pocket	
6	Stacker	
7	USB Connector for Main Board, LCD Board	For Debugging
8	USB Connector for CIS Board	
9	Power Switch	
10	Power Plug	
11	Connector for Thermal Printer	
12	Connector for External Display	
13	Connector for S/W Upgrade	Main, LCD, CIS

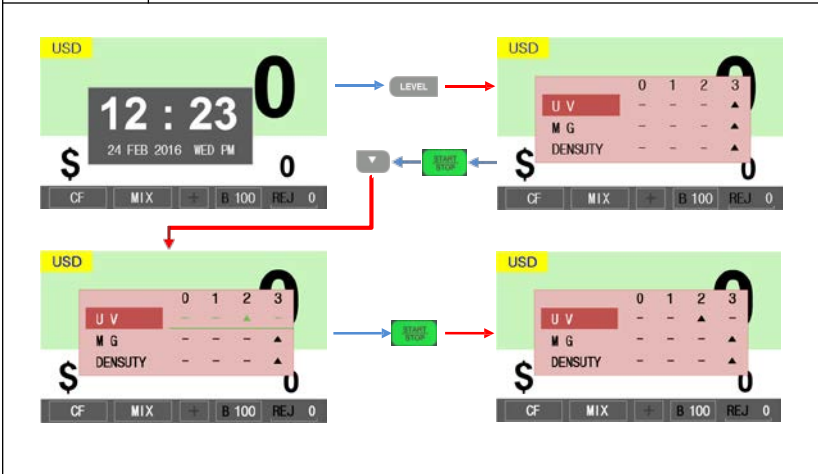
CONTROL PANEL



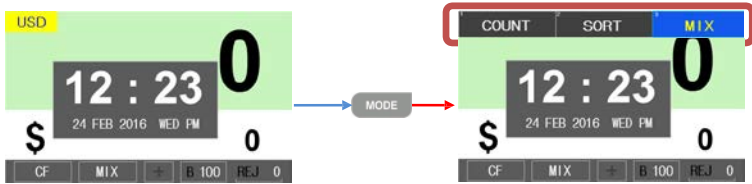
Key	Description	Key	Description
	Switching the function of stacker-pocket and reject-pocket.		Counterfeit detection on/off.
	Speed setting. (Simple count mode only)		Preset number of notes.
	Printing receipt.		Adjusting UV, MG and density level key. Detailed sort mode. (FACE-ORIENT-SERIES-DENOM) by key combination with "MODE" key. "MODE" → "LEVEL"
	Checking cause of reject.		Cumulative count on/off.
	Checking counted record.		Count mode. (COUNT-SORT-MIX) Count mode 2. (MODE + LEVEL key) (FACE-ORIENT-SERIES-DENOM)
	Entering the user menu or UP key in the menu.		Unit only counts USD.
	Display type setting.		Clearing counted number and total value or "ESC" function in the menu.
	DOWN key in the menu.		Start & stop or "confirm" function in the menu.

Key	Action																																				
	When you press this key, you can swap the function of stacker-pocket and reject-pocket.																																				
	This machine has 4 different speeds. Press number "3" to select your bill counting speed: 900/min, 1,100/min, 1,300/min, 1,500/min You can change the counting speed only in the count mode. Under CF on, mixed mode /sort mode, counting speed will be set at 900 notes/minute.																																				
	By pressing this key, you can print a copy of your counting receipt. NOTE: External printer needs to be connected.																																				
	By pressing this key, you can check the cause of the notes in the reject pocket.																																				
	By pressing this key, you can check the counted record for previous bill counts.																																				
	By pressing the UP key, you can enter the user menu or move to the previous line in the menu																																				
	By pressing this key, you can change the display type.																																				
  <table border="1" data-bbox="633 901 920 1079"> <thead> <tr> <th>USD</th> <th>Denom</th> <th>Count</th> <th>Amount</th> </tr> </thead> <tbody> <tr> <td></td> <td>5</td> <td>0</td> <td>0</td> </tr> <tr> <td>CF</td> <td>10</td> <td>0</td> <td>0</td> </tr> <tr> <td>MIX</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>ADD</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>B 100</td> <td>500</td> <td>0</td> <td>0</td> </tr> <tr> <td>REJ 0,</td> <td>Total</td> <td>0</td> <td>0</td> </tr> </tbody> </table>		USD	Denom	Count	Amount		5	0	0	CF	10	0	0	MIX	20	0	0		50	0	0	ADD	100	0	0		200	0	0	B 100	500	0	0	REJ 0,	Total	0	0
USD	Denom	Count	Amount																																		
	5	0	0																																		
CF	10	0	0																																		
MIX	20	0	0																																		
	50	0	0																																		
ADD	100	0	0																																		
	200	0	0																																		
B 100	500	0	0																																		
REJ 0,	Total	0	0																																		

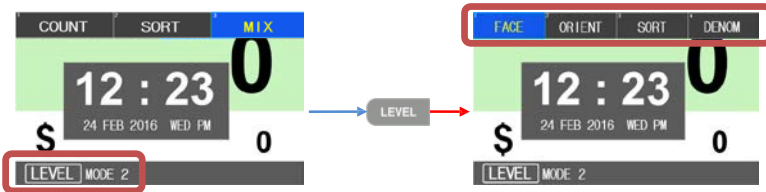
Key	Action
	By pressing the DOWN key, you can move to the next line in the menu screen.
	This key can be used to detect counterfeit notes. When a counterfeit note is detected while counting, the LCD screen will display a specific message or error message signaling the error. The counting speed will automatically be set on low (900 bills per min.) when CF is on. To turn counterfeit detection on and off, press the "CF" button.
	To count bills in batches, press the "BAT" key on the control panel. Batching is preset for 0, 25, 50, 75, and 100, which can be selected by continually pressing the "BAT" key. You can also use the numeric keypad to enter a batch number between 1 and 999. When the counted number reaches the batch number, the machine will stop automatically and resume counting when the notes are removed from the stacker.
	By pressing the "LEVEL" key, you can adjust UV, MG, and the DENSITY level. By pressing the "UP" or "DOWN" key, select the part that you want to adjust.



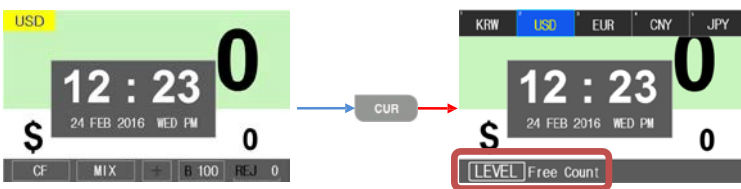
Key	Action
ADD	When you press the ADD key, the accumulated total of notes will be shown on the LCD screen when they have been counted. By pressing the CLEAR/BACK key user can clear the counted value.
MODE	By pressing the MODE key, you can select the operating mode "COUNT / SORT / MIX"





Key combination with "MODE" key, you can select detailed sort mode. "MODE" → "LEVEL" (FACE-ORIENT-SERIES-DENOM)

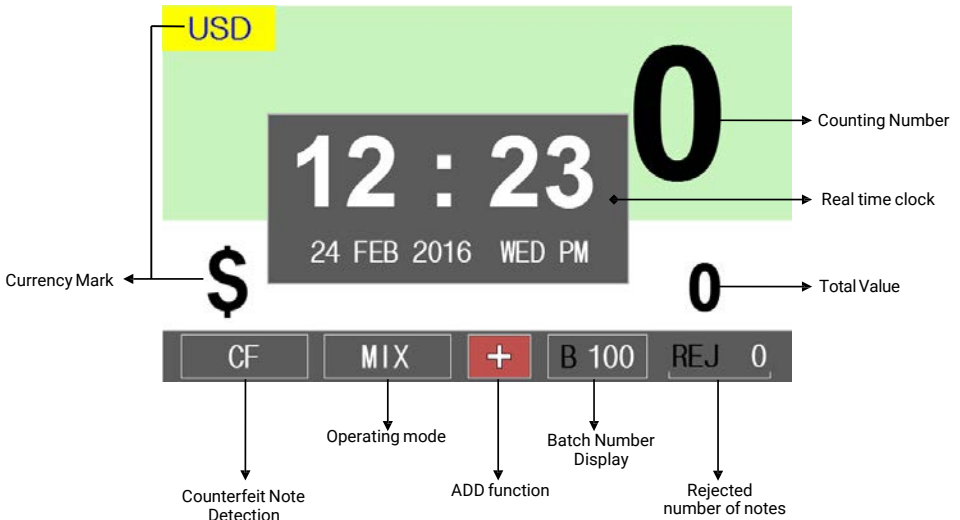


CUR	By pressing the "CUR" key, you can select currency (USD) or Free count MODE
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Key	Action
	<p>By pressing the "CLEAR/BACK" key, you can clear the counted number and total value after counting.</p> <p>Also, the "CLEAR/BACK" key allows the user to go to the previous step or delete the previous text.</p>
	<p>By pressing the "START/STOP" key, you can manually start the machine (IN MANUAL MODE).</p> <p>Also, the "START/STOP" key allows the user to enter the selected menu or values.</p>

LCD DISPLAY



Currency Mark: Current currency indicator (USD)

CF: Counterfeit note detection activation

Operating Modes: COUNT / SORT / MIX

ADD (+): ADD function on / off

Batch Number Display: Displays the batch number

Total Value: Total value of counted notes (Max 9 digits)

Real Time Clock: Time, date, and day of the week

Counted Number: Number of notes (Max 3 digits)

Reject: Rejected number of banknotes

PRODUCT OPERATION

1. PLACING BILLS INTO HOPPER

It is very important to place the bills into the hopper correctly because recognition performance of the bills is highly affected by the arrangement of the bills. Please avoid counting bills in bad conditions such as wet, excessively dirty, folded, curled notes, or with foreign material like clips, bands, etc., as it may cause a malfunction of the machine.

2. COUNTING

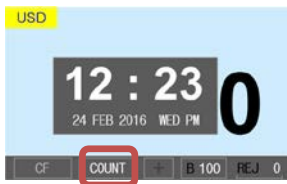
If ADD mode is set, the cumulative number will be displayed.

If an error occurs during operation and the machine stops, then an error message will be displayed. To clear the error, press the "START/STOP" key. The machine will solve the problem automatically, however if it fails to clear a jam or there is some other mechanical error, please remove the jammed bills manually. Then, press the "START/STOP" key again to clear the error message.

COUNT MODE (By pressing MODE key)

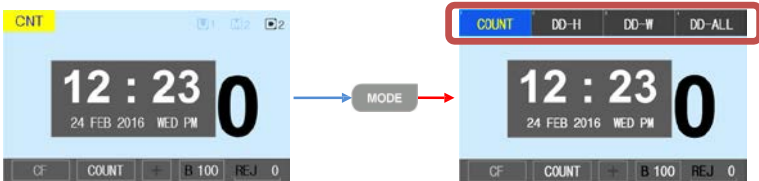
The machine can count the bills without any denomination recognition.

This mode is only for simple counting that selected currency without counterfeit detection.

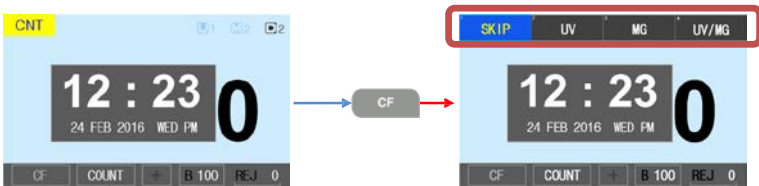


FREE COUNT MODE (By pressing CUR + LEVEL key)

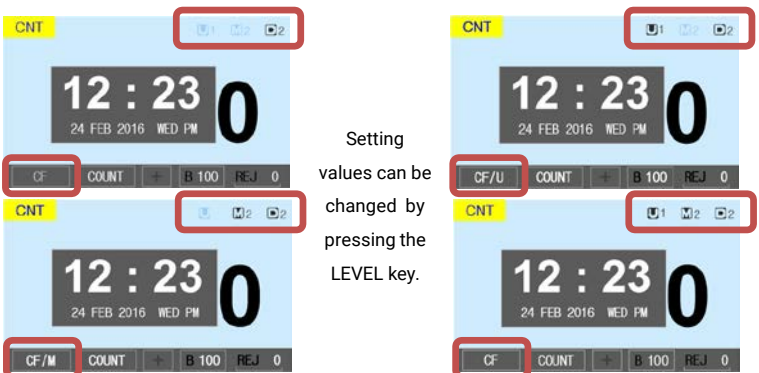
The machine can count the bills without CIS image recognition.
Counterfeit detection by UV/MG, different denomination detection by size sensor is available.



COUNT : simple counting.
DD-H : different denomination detection by height.
DD-W : different denomination detection by width.
DD-All: different denomination detection by height + width.

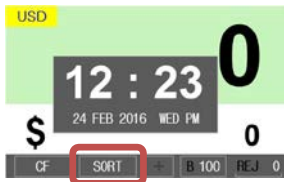


SKIP: counterfeit detection off.
UV : detect counterfeit by UV.
MG : detect counterfeit by MG.
UV/MG : detect counterfeit by UV + MG.



SORT MODE (By pressing MODE key)

The machine can catch the different denomination bill while counting. In this mode, the machine will read the first bill that goes through and sort based on that denomination. Therefore, if a mixed bill is stuck in the pile, the machine will display an error code informing the user of the different denomination and place it in the reject pocket..



ORIENT-SORT MODE (By pressing MODE + LEVEL key)

The machine can catch the different orientation bill while counting. In this mode, the machine will orient bills in proper direction (heads facing right or heads facing left) based on the first bill placed in the hopper. All bills of different orientations compared to the first bill will be rejected.



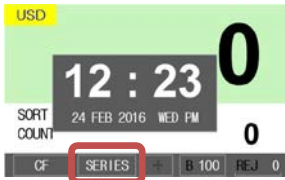
FACE-SORT MODE (By pressing MODE + LEVEL key)

The machine can catch the different face bill while counting. In this mode, the machine will face all bills the same way (heads up or heads down) based on the first bill placed in the hopper. All bills that are opposite facing compared to the first bill will be rejected.



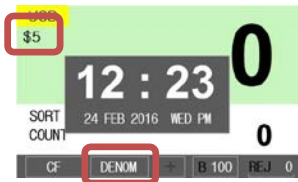
SERIES-SORT MODE (By pressing MODE + LEVEL key)

The machine can catch the different series(version) bill while counting.



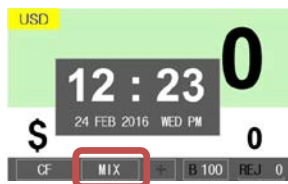
DENOM-SORT MODE (By pressing MODE + LEVEL key)

The machine can count only the specified denomination bill. The selected denomination will be counted and all other denominations will go into the reject pocket.



MIX MODE (By pressing MODE key)

The machine can make the value counting for mixed notes and total amount will be displayed on the screen.



COUNTING – Local currency

By pressing the MODE key, user can select MIX / COUNT / SORT



3. CHECKING COUNTED RECORD

By pressing number "9(C.REC)" key, user can check 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.

Date	(123/123)	Count	REJ	C
22 FEB 01 12:34		100	0	USD
22 FEB 02 12:39		0	1	USD
22 FEB 03 11:22		8	31	USD
22 FEB 12 10:35		8	0	USD
22 FEB 15 09:09		100	2	USD
22 FEB 15 10:10		0	0	USD
22 FEB 16 15:14		30	0	USD
22 FEB 16 16:36		100	0	USD

Select row to be checked.

Date	(119/123)	Count	REJ	C
22 FEB 01 12:34		100	0	USD
22 FEB 02 12:39		0	1	USD
22 FEB 03 11:22		8	31	USD
22 FEB 12 10:35		8	0	USD
22 FEB 15 09:09		100	2	USD
22 FEB 15 10:10		0	0	USD
22 FEB 16 15:14		30	0	USD
22 FEB 16 16:36		100	0	USD

Denom	Count	Amount
1	1	1
2	1	2
5	1	5
10	1	10
20	1	20
50	1	50
100	1	100
Total	8	188

Denom	Count	Amount
1	1	1
2	1	2
5	1	5
10	1	10
20	1	20
State	Normal	
Check	NO	

<Counted number is "0">












Date	(117/123)	Count	REJ	C
22 FEB 01 12:34		100	0	USD
22 FEB 02 12:39		0	1	USD
22 FEB 03 11:22		8	31	USD
22 FEB 12 10:35		8	0	USD
22 FEB 15 09:09		100	2	USD
22 FEB 15 10:10		0	0	USD
22 FEB 16 15:14		30	0	USD
22 FEB 16 16:36		100	0	USD

Date	(4/123)	Count	REJ	C
22 FEB 01 12:34		100	0	USD
22 FEB 02 12:39		0	1	USD
22 FEB 03 11:22		150	1	USD
22 FEB 12 10:35		8	0	USD
22 FEB 15 09:09		100	2	USD
State	Normal			
Check	NO			

<Reject pocket full or error occurred while counting.>

Date	(178/123)	Count	REJ	C
22 FEB 01 12:34		100	0	USD
22 FEB 02 12:39		0	1	USD
22 FEB 03 11:22		8	31	USD
22 FEB 12 10:35		8	0	USD
22 FEB 15 09:09		100	2	USD
22 FEB 15 10:10		0	0	USD
22 FEB 16 15:14		30	0	USD
22 FEB 16 16:36		100	0	USD

Denom	Count	Amount
1	1	1
2	1	2
5	1	5
10	1	10
20	1	20
State	POCKET FULL	
Check	NO	

The menu key usage in this mode			
	Select Previous Case		Select Next Case
	1 Page Down		1 Page Up
	10 Pages Down		10 Pages Up
	100 Pages Down		100 Pages Up
	Searching by time		
	Confirm the menu		Leave the menu

4. SELECTING ADD FUNCTION

The ADD function provides a cumulative count for the operator. 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 or Off by pressing the "ADD" key and you can clear the counted value by pressing the "CLEAR/BACK" key.

5. SELECTING BATCH FUNCTION

The "BAT" key is used to select a preset batch number. In the batch count mode, the machine stops counting when the counted number reaches the set number, even though bills may remain on the hopper. The user can edit the batch number by pressing the "BAT" key + 1~9 number keypad.

6. SELECTING AUTOMATIC/MANUAL COUNTING

The machine is preset to AUTOMATIC MODE.

In AUTOMATIC mode, when the hopper sensor detects banknotes on the hopper, the machine will automatically start to count the bills.

To change to manual mode, press the "UP" key, then select #4 (Counting Setup), select #1 (Auto/Manual Start), and then select #1 (Manual).

In MANUAL mode, the machine will not count the bills automatically even though the bills are on the hopper. When the user presses the "START/STOP" key manually, the machine will count the notes.


While counting, the machine will display the number of the bills on the LCD display and it may stop working when it meets the conditions described below:

- No bills on the hopper
- The number of the bills counted is the same as the batch number 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.

7. THERMAL PRINTER (OPTIONAL)


Available Printers: Compatible via RJ11/RJ12 Cable

Ensure the printer has the following pin configuration. If so, connect the RJ11/RJ12 end to the P/P input. Turn the printer on and press “  ” to print the receipt.




Pin #	Description
1	GND
2	VCC(Not Used)
3	TX (Counter->PC)
4	RX (PC->Counter)

Available Printers: Compatible via RS232 Printer

Connect the transfer cable that comes with the bill counter to the P/P input. Turn the printer on and press “  ” to print the receipt.



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.)

Normal receipt		
=====		
USD VALUE LIST		
=====		
DATE 26 FEB 16 12:34		
=====		
DENO	UNITS	VALUE
=====		
5	40	200
10	20	200
20	0	0
50	6	300
100	1	100
200	1	200
500	1	500
=====		
TOTAL	69	1500

Printer Error

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

USER MENU

(Press  Key)

No	Title	Description
1	Display type for value - Default(default) - Toggled - Detail 1 - Detail 2	<u>Default :</u> The total count & value are displayed on the screen. <u>Toggled :</u> The total value & each denomination value pages are <u>alternately</u> displayed on the screen. (It's related to the mix, sort mode) <u>Detail 1 :</u> Each denomination value pages are displayed on the screen after 2 seconds from the end of counting. (It's related to mix, sort mode) <u>Detail 2 :</u> Display type-2 pages are displays on the screen. (It's related to mix, sort mode)
2	External Device - External Display - Printer Baudrate - Absence Message - Serial Print	External display & printer baud-rate setting <u>Printer Baudrate :</u> Printer baudrate setting <u>Absence Message :</u> Not in use. <u>Serial Print :</u> Serial print density setting.
3	Time Set - Date & Time Set - Time Display - Disabled - Enabled(default) - Clock Calibration - Short Calibration(10s) - Long Calibration(32s) - Reset Calibration	<u>Date & Time Set :</u> Time setting of real time clock function. <u>Time Display :</u> If set "Enable" Displays RTC on the screen. <u>Clock Calibration :</u> Not in use.

No	Title	Description
4	Counting Set up <ul style="list-style-type: none"> - Auto/Manual Start - Manual - Auto(default) - Counting Type - Counting Enable - Counting Disable(default) - Stacker Time Set (15 / 30(default) / 60 seconds) 	<u>Auto/Manual Start :</u> Auto/Manual start setting. <u>Counting Type :</u> When the machine notifying to user by the beep sound, the machine can count added note or not (It's related to stacker time set) <u>Stacker Time Set :</u> Passed note remains on the stacker after 15 / 30 (default) / 60 seconds, machine notify to user by beep sound until remove it.
5	Pocket Capacity Set <ul style="list-style-type: none"> - Stacker Pocket Capacity - Reject Pocket Capacity 	Stacker pocket capacity (0/100/200/400) Reject pocket capacity (20/40/60/80/100)
6	My Device Information <ul style="list-style-type: none"> - Software Version - Counted Record - Display style 	<u>Software Version:</u> Software version and serial number <u>Counted Record</u> Machine can save 16,000 records. If full, the oldest record will be replaced by each new record. <u>Display Style:</u> Background color setting
7	Language	Language Setting

ADMIN MENU

(Press  +  + 1 + 5 + 9 + 0 Key)

The password (1+5+9+0) is not required until restart the machine.

No	Title	Description
1	BATCH SET (0, 50, 100, 150, 200, 250)	Initial value of batch count
2	ALARM BEEP SET - ALL - ERROR - OFF	<u>ALL</u> : Beep sounds every time the count is finished <u>ERROR</u> : Beep sounds when an error occurred <u>OFF</u> : No beep sounds
3	DIGITMARK SET - OFF - 1,000 - 1,0000 - 1.000	Digit mark set
4	STMOTOR SPEED SET	Stacker motor speed setting
5	RESET - LOCAL - ALL	The operator can initialize the machine by this function: <u>Local</u> : Only selected <u>Currency All</u> : Initialize all
6	SYSTEM SET	Not in use.
7	COUNT RECORD SUMMARY	Summary of counted record

ERROR MESSAGES & TROUBLESHOOTING

ERROR		
Message	Cause	Solution
CASE OPENED	Front or rear case is opened.	Check the front and rear cover.
POCKET FULL	Stacker or reject pocket is full.	Remove all notes in the stacker/reject pocket.
ENCODER ERROR	Motor is in abnormal condition.	Check the Main/Sub motors.
FEEDING ERROR	Something detected on the hopper sensor, but nothing inserted into the machine.	Check the hopper sensor.
ERROR CIS ROCK-UP	CIS process has not successfully done.	Remove all notes and count again.
JAM OCCURRED	Jam error occurred	Remove all notes and count again.
ERROR NOTE SEPARATE	The gap between passed two notes is too narrow. (chained)	Check the note and count again.
SEARCH CURRENCY FAIL	Unknown currency has detected.(only in auto-currency mode)	Check the banknote.

NOTIFICATION		
Message	Cause	Solution
REMOVE ALL NOTES	Banknote is remained in the stacker or reject pocket.	Remove the banknote from stacker or reject pocket.
INCOMPLETE BATCH	Batch count is not complete.	Count more banknotes.
CLEAR COUNT	If the count result remained on the screen, Pocket switch function is not available.	Clear the count result.
CLEAN UP CIS	Dust is in the sensor surface.	Clean the CIS sensor.
PRINTING...	Print operation in progress.	Print operation in progress.

REJECT		
Message	Cause	Solution
CHAIN OCCURRED	2 or more notes have passed at the same time or chained.	Remove all notes and count again.
SKEW ERROR	Note passed with skewed left or right.	Check the note and count again.
SEPARATE FAIL	2 or more notes have chained on the separator.	Remove all notes and count again.
DOUBLE PASSED	2 or more notes have passed at the same time.	Remove all notes and count again.
DIFFERENT DENOM	Different denomination detected in sort mode.	Remove all notes and count again.
DIFF FACE/ORIENT	Different Face or Orient detected in sort mode.	Remove all notes and count again.
OVER COUNT	Over count on value-batch mode.	Remove all notes and count again.
DAMAGED NOTE_S	Passed note is contaminated or damaged.	Check the note.
SUSPECT UV 1	Suspected to counterfeit by UV	Check the note.
SUSPECT UV 2	Suspected to counterfeit by UV	Check the note.
SUSPECT UV 3	Suspected to counterfeit by UV	Check the note.
SUSPECT IR_A	Suspected to counterfeit by IR	Check the note.
SUSPECT IR_C	Suspected to counterfeit by IR	Check the note.
SUSPECT MG-1	Suspected to counterfeit by MG	Check the note.
SUSPECT MG-2	Suspected to counterfeit by MG	Check the note.
SUSPECT MG-3	Suspected to counterfeit by MG	Check the note.

REJECT		
Message	Cause	Solution
IMAGE GET FAIL	Failed to recognize image.	Check the note.
IMAGE ERROR	Abnormal banknote image has recognized.	Check the note.
UNKNOWN NOTE	Unknown banknote has detected.	Check the note.
DIFFERENT HEIGHT	Different vertical-size banknote has detected.	Check the note.
DIFFERENT SIZE	Different horizontal-size banknote has detected.	Check the note.
DOUBLE DETECTION	2 or more notes have passed at the same time.	Remove all notes and count again.
CIS HEIGHT	Abnormal vertical-size note is detected on CIS.	Check the note.

SPECIFICATIONS

Item	Specification
Dimensions (WxDxH)	11.00" W x 11.50" D x 11.75" H
Weight	27.50 lbs.
Hopper Capacity	300 pcs
Stacker Capacity	200 pcs
Reject Capacity	60 pcs (max 100 pcs)
Display Type	400 x 240 color graphic LCD
Banknote Size Range	W: 100 ~ 190, H: 50 ~ 100
Banknote Thickness Range	0.05 ~ 0.2 mm
Counting Speed	900 / 1100 / 1300 / 1500
Preset Batch Number	1 – 999
Counterfeit Detection	MG, MT, UV, FL, IR
Power Requirements	100 – 240VAC, 50 ~ 60 Hz, 1.5A
Power Consumption	Standby: 10w, Operation: 70w

DAILY CARE

WARNING: Before dusting, turn the power switch off and disconnect the power cord from the machine. It is very important to clean all the sensors in the machine with a soft brush to avoid any paper particles or dust from sticking to the light transmitter or the light-receiver sensors. It is important to clean the inside of the machine occasionally. Unplug the machine and lift the top cover to gain access to the interior.

If necessary, the glass surfaces of the detectors may also be wiped with a soft cloth dampened with alcohol.

To get the best results out of your bill counter, Royal Sovereign recommends using **Royal Sovereign Cleaning Cards (RBC-CLN)** to remove dirt, dusts, oils, and other contaminants from your bill counter. With the machine on, simply run the cleaning card through the machine like a bill. This cleaning card will run through and clean the sensors of dirt and other contaminants. Cleaning cards are recommended to be used after every 100 cycles.

CAUTION:

DO NOT CHANGE THE POSITION OF THE DETECTORS AND/OR OPTICAL SENSORS.

ONE YEAR LIMITED WARRANTY

Royal Sovereign International, Inc. warrants this product to be free from defects in material and workmanship for a period of one (1) year. This warranty is extended to the original purchaser only.

This warranty only covers products that are properly installed, properly maintained, and properly operated in accordance with the instructions provided. This limited warranty does not cover any failures or operating difficulties due to normal wear and tear, accident, abuse, misuse, alteration, misapplication, improper installation, or improper maintenance and service by you or any third party.

Returned product will not be accepted without a Return Authorization number. To request a Return Authorization number, please visit us at www.royalsovereign.com. All transportation costs for the return of damaged product or parts will be the responsibility of the purchaser. Return defective product, in original packaging, to the address below.

Royal Sovereign International, Inc. requires reasonable proof of your date of purchase from an authorized retailer or distributor. Therefore, you should keep your receipt, invoice, or canceled check from the original purchase. The limited warranty shall be limited to the repair or replacement of parts which prove defective under normal use and service within the warranty period.

Royal Sovereign International, Inc. (and its affiliated companies) SHALL HAVE NO LIABILITY WHATSOEVER TO PURCHASER OR ANY THIRD PARTY FOR ANY SPECIAL, INDIRECT, PUNITIVE, INCIDENTAL, OR CONSEQUENTIAL DAMAGES. Some states do not allow the exclusion or limitation of incidental or consequential damages so the above exclusion and limitations may not apply to you.

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