

Owner's Manual



HIGH SPEED BILL COUNTER WITH VALUE COUNTING



RBC-ES250



Thank you for purchasing the Royal Sovereign Bill Counter with Value Counting - RBC-ES250. 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

When using this machine follow these safety precautions to reduce risk of fire, electric shock, or injury.

WARNING

1. Only use the power cord that comes with the machine. Plug the power cord into a properly grounded wall outlet.
2. Do not use the machine if the power cord is damaged.
3. Do not place the machine in an area where it may be exposed to water or other liquids.
4. Do not take apart the machine. When service or repairs are needed, bring to a qualified service repair technician or contact Royal Sovereign Customer Service.
5. When unplugging the power cord from the outlet, grip the plug to pull it out.
6. Do not place objects on the power cord and do not bend it excessively.
7. Before dusting the machine with a brush, unplug the machine from the wall. Do not use liquid or aerosol cleaners on the machine. Use a soft brush to avoid any paper particles or dust from sticking to the light transmitter or the light receiving sensors.
8. Do not use the machine in areas of high temperature, high humidity, or strong sunlight. This may result in the machine not working properly.
9. When not using the machine for long periods of time, unplug the power cord from the outlet.
10. The effective power must be in scope of 110V.

Read & Fully Understand This Owner's Manual Before Using This Machine.

BOX CONTENTS



Bill Counter



Power Cord



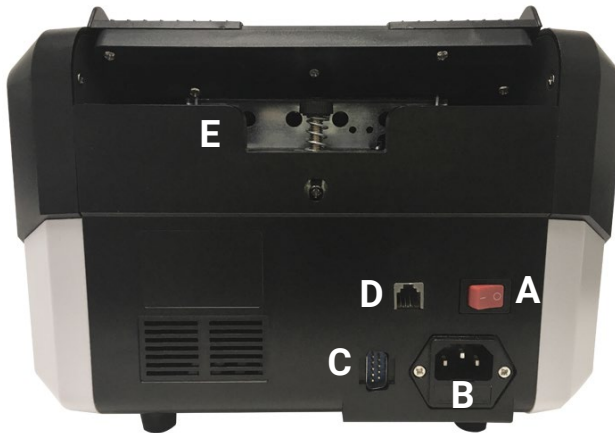
External Display

PRODUCT VIEW



QUICK START GUIDE

1. Plug the power cable into the back of the unit and into the wall power outlet (B).
2. On the back of the machine, flip the power switch to power on (A).
3. The machine will go through an automatic self-diagnostics test to ensure accurate bill counting. The counting wheels in the bill counter will spin several times to ensure it is ready for use. When the machine has completed its test run and "0" displays on the machine, it is now ready for counting.
4. Place your currency into the hopper to automatically begin counting.



A: Power Switch

B: Power Socket

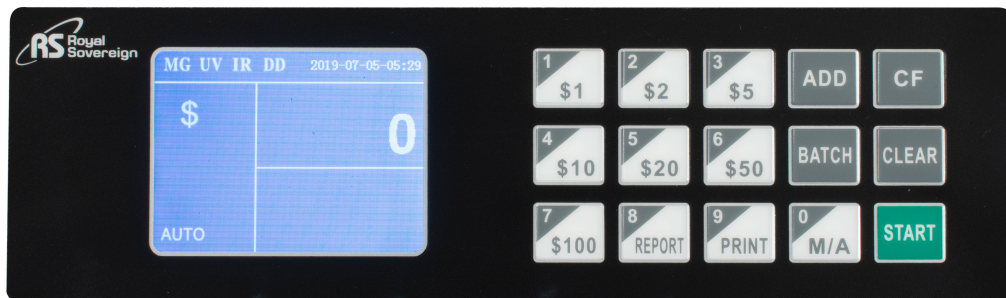
C: Printer Port

D: External Display Port

E: Bill Thickness Adjuster

For More Detailed Instructions, Go To Page 6

CONTROL PANEL



Counterfeit Detection (CF Key) – To use the detection methods, press the “CF” button. If the machine detects an error due to one of these methods, the machine will stop counting to allow for removal of the suspect bill and an error code will display.

Ultraviolet Counterfeit Detection (UV)

The Ultraviolet detector will look for suspect bills that use white or bleached paper.

Magnetic Counterfeit Detection (MG)

The Magnetic detector will look for the presence of magnetic components that are standard in authentic bills.

Infrared Counterfeit Detection (IR)

The Infrared detector will look for possible double and half notes as well as checking the banknote width.

Dimensional Detection (DD)

The Dimensional detector measures the width of the center of each bill, looking for odd sized bills.

Setting MG/UV/IR/DD

To turn On/Off MG and UV setting, continue to short press the “CF” button until set to the desired setting.

To turn On/Off IR setting, long press the “CLEAR” button.

To turn On/Off DD setting, long press the “CF” button.

REPORT Button

Select the “REPORT” button to view the count record. By holding “REPORT”, you can view the total number of bills and values of each denomination along with a grand total. Press the “CLEAR” button to exit this screen.

PRINT Button

To use the print function, you will require a printer with RS-232 interface (not included). To print, ensure you are in the Report Screen. Press “PRINT” to print the report.

PRODUCT OPERATION

1. Attach the power cable to the back of the machine, plug into a three-prong outlet, and turn the switch on.
 - The unit will conduct an automatic self-diagnostics to ensure accurate counts.
 - After three seconds of the counting wheels spinning, the screen will display “0”.
 - If there is a problem, the preset display will show an error code. (See ERROR CODE DISPLAY AND SOLUTIONS – LOCATED ON PAGE 9.)
2. Before counting, select counting settings that are related to your counting needs:
 - **Auto and Manual Start Modes:** The machine is preset to automatically start counting bills once placed into the hopper. To change to manual start mode, press the “M/A” button, insert the bills into the hopper, and press the “START” button. Press the “M/A” button again to return to auto mode.
 - **Add Mode:** The Add mode displays the cumulative total of all bills counted. To turn the ADD mode on, press the “ADD” button.
 - **Batch Mode:** The machine is preset to common counting mode. To count bills in batches, press the “BATCH” button. Batching is preset to 100 bills. To change the batch amount, use the keypad to enter a batch number between 1 and 999. Press the “BATCH” button again to clear.
 - Press the “BATCH” button again to set the amount to 50.
 - Press the “BATCH” button again to set the amount to 20.
 - Press the “BATCH” button again to set the amount to 10.
 - Press the “BATCH” button again to set the amount to 1.
 - Press the “BATCH” button again to turn the batch mode off.
 - To customize the quantity, you can simply press on the keypad the batch quantity. For example, if you wish to batch in quantities of 30, simply press on the keypad “3”, followed by “0” (Enter 30). The number 30 will be displayed on the control panel.
 - **Counterfeit Detection:** To turn on/off counterfeit detection methods, press the “CF” button. If a suspicious bill is found, the machine will stop counting to allow removal and will display the error code on the display. To resume counting, simply press “START”.

PRODUCT OPERATION (Continued)

- **Date and Time Set:**

- On the control panel, press and hold "ADD". The cursor button will flash over the date/time setting. The display shows year-month-day-hour-minute.
- Press the "1" button to move left. Press the "7" button to move right.
- Move the cursor key to the desired position that you would like changed and ensure the cursor is flashing over this setting. Press "ADD". Use "1" and "7" buttons to choose the desired setting, followed by pressing "ADD".

For example, to change the Year, ensure the cursor is flashing over the Year. Press "ADD". If you want the year 2020, press "1" or "7" on the control panel until 2020 is shown. Next, press "ADD" to set the year.

- Repeat the previous step for Year-Month-Day-Hour-Minute, until the desired setting is achieved. Finally press "START" to save and exit.

- **Value Counting:**

The machine will total the number of bills by denomination and total value by denomination as well as provide a grand total. Each denomination must be counted separately. To operate press the "ADD" button. Then on the keypad press the denomination to be counted (\$1 - \$100). After the denomination is counted, press the next denomination to be counted and continue until all denominations needed to be counted are complete. Then press the "REPORT" button to view the total number of bills and values of each denomination along with a grand total.

Single Denomination Counting-

Select denomination to be counted from the Numeric/Denomination keypad

Place bills in hopper.

Total number of bills and denomination value will show on display screen after bills are counted.

Multi-Denomination Value Counting-

Press the "ADD" button.

Select denomination to be counted from the Numeric/Denomination keypad

Place bills in hopper.

Select next denomination and repeat process above.

After all denominations have been counted press the "REPORT" button and the number of bills and value for each denomination, along with a grand total, will show on the display screen.

To exit Value Counting screen, press "CF".

3. Place bills into the hopper to begin counting.

TROUBLESHOOTING

Error Code	Reason	Solutions
Bills get damaged / Machine runs slow	Hopper Tension is too tight	To loosen the tension, please turn the bill thickness adjuster (located on the back of the machine) anti-clockwise. Repeat bill counting and adjust if the problem continues.
Bills eject from the machine / Display shows miscount	Hopper Tension is too loose	To tighten the tension, please turn the bill thickness adjuster (located on the back of the machine) clockwise. Repeat bill counting and adjust if the problem continues.

ADJUSTING SENSITIVITY AND COUNTING LEVELS

The bill counter is set to the recommended settings for sensitivity and counting. Should, however, you wish to adjust these settings, it can be done as shown below: to adjust default settings, long press "BATCH" and select the setting to be changed.

Gear	Function	Default Number	Data Range	Comment
CS-01	UV Sensitivity	5	0-9	The higher the number, the higher the sensitivity. If set to 0, it is off.
CS-02	MG Sensitivity	5	0-9	The higher the number, the higher the sensitivity. If set to 0, it is off.
CS-03	Double Note	4	0-9	The higher the number, the higher the sensitivity. If set to 0, it is off.
CS-04	Width Size	4	0-9	The higher the number, the higher the sensitivity. If set to 0, it is off.
CS-05	Auto/Manual Count	0	0-1	0 – Auto 1 – Manual
CS-06	Fake Note Count/No Count	0	0-1	0 – Do not count suspect note in count. 1 – Count suspect note in count

ERROR CODE DISPLAY AND SOLUTIONS

The display may show some error codes when counting, which means there are some problems with the machine. Refer to the chart below to solve the errors.

Error Code	Reason	Solutions
A	UV suspect banknote	Remove first bill from the stacker, then continue counting.
B	MG suspect banknote	Remove first bill from the stacker, then continue counting.
C	Double Note (Chain note) error	Remove first bill from the stacker, then continue counting.
D	DD suspect note due to bill width	Remove first bill from the stacker, then continue counting.
F	Half Note error	Remove first bill from the stacker, then continue counting.
E01/E02	Counting Sensor error	Clean the sensor or contact Royal Sovereign to replace sensor if error code persists.
E03	Code disc sensor error	Clean the sensor or contact Royal Sovereign to replace sensor if error code persists.
E04	Hopper sensor error	Clean the sensor or contact Royal Sovereign to replace sensor if error code persists.
E05	Stacker sensor error	Clean the sensor or contact Royal Sovereign to replace sensor if error code persists.
H	Hole in bill (Sometimes found in very old or dirty bills)	Remove first bill from the stacker, then continue counting.

If you are receiving error codes above, check the machine for dust. If you continue to receive error codes, please contact Royal Sovereign's Service Center at 1-800-397-1025.

MAINTENANCE OF THE MACHINE

WARNING: Before dusting or cleaning, 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 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, dust, oils, and other contaminants from bill counters. 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.

SPECIFICATIONS

Model	RBC-ES250
Power	AC 120V 50/60 Hz
Power Consumption	80W (Max)
Temperature Range of Operation	32~104 °F / 0~40 °C
Hopper Capacity	200 notes
Counting Speed	1,400 bills per minute
Accepted Note Size	L:50~100mm (1.9 - 3.9 in) W:90~190mm (3.5-7.5 in)
Accepted Currency	USD
Display Range	Counting: 4 Digits / Batch Counting: 3 Digits
Dimensions	12.40" W x 10.10" D x 8.00" H (316 x 258 x 202 mm)
Net Weight	11.0 lbs. / 5.0 kgs

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.

ROYAL SOVEREIGN INTERNATIONAL, INC.

2 Volvo Dr., Rockleigh, NJ 07647 USA

TEL: +1) 800-397-1025

Email: info@royalsovereign.com