

# Owner's Manual



## HIGH SPEED BILL COUNTER WITH VALUE COUNTING



RBC-ED250



Thank you for purchasing the Royal Sovereign Bill Counter with Value Counting - RBC-ED250. 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



Hopper

Carrying Handle

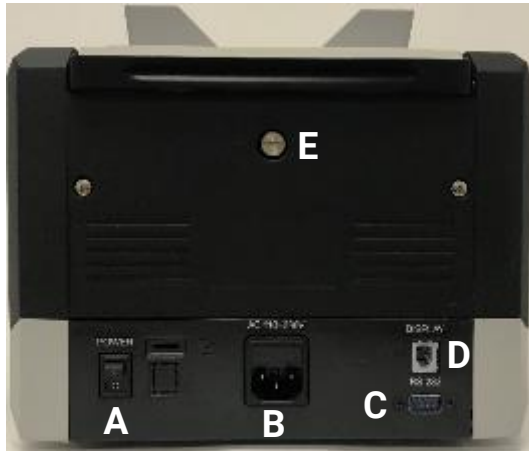
Control Panel

Bill Receiving Vanes

Stacker

## 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 once. 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 verifies dimensional specifications and imperfections caused in the counterfeiting process.

## **Dimensional Detection (DD)**

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

## **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 “ENTER/RESTART” button to exit this screen.

## **CLEAR/MENU Button**

Hold the Clear/Menu button to enter the User Menu screen. In this screen, you can change the: bill counting speeds, counterfeit detection levels, date/time settings, beep settings, and printer settings.

# 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 “ENTER/RESTART” 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 “ENTER/RESTART” to save the setting. Press the “BATCH” button again to clear.
  - **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 “ENTER/RESTART”.

PRESET setting operation: Press and hold the “CF” button for 2 seconds to enter the preset setting mode. “MG” would be flickering on the screen and it would display “OFF” or “ON” at the BATCH window, at the meanwhile press the “▲” button to turn on the magnetic counterfeit detection then it will display “ON” at the BATCH window and when you press the “▼” button to turn off the magnetic counterfeit detection then it will display “OFF”. Press the “CF” button for once, “UV” (UV counterfeit detection) would be flickering on the screen; repeatedly pressing the button for once, then it would be turned to “IR” (Infrared counterfeit detection) and “DD” (dimensional detection) in order. To turn on or turn off the detection, repeat the above steps. After the setting, press the “ENTER/RESTART” button to save and exit the mode.

## PRODUCT OPERATION (Continued)

- **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 and hold 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 are have been counted press and hold the "REPORT" button and the number of bills and value for each denomination along with a grand total will show on the display screen.

- **Menu Setting:**

Press and hold the "CLEAR/MENU" button for 2 seconds, you will see: 1. SPEED SET 2. LEVEL SET 3. WARN COUNT SET 4. DATE&TIME SET 5. BEEP SET 6.PRINTER SET 7. DEVELOPER OPTIONS these 7 options interface, press the "▼" or "▲" buttons to select the option you need, then press the "ENTER/RESTART" button.

1. SPEED SET - Press the "ENTER/RESTART" button to enter the setting, there are three speeds: SPEED 1,900pcs/min, SPEED2, 1,200pcs/min, SPEED3, 1,500pcs/min. press the "▼" or "▲" buttons to select the speed you need, then press the "ENTER/RESTART" button to quit.

2. LEVEL SET - Press the "ENTER/RESTART" button to enter the setting, it will show 1. UV LEVEL 2. MG LEVEL 3. DD LEVEL 4. DOUBLE LEVEL. press the "▼" or "▲" buttons to select the item you need, then press the "ENTER/RESTART" button and enter the setting. Each sensitivity has 5 levels: (1.low, 2-4.middle, and 5.high), press number key 4 or 6 to minus or add one sensitivity level, then press then press the "ENTER/RESTART" button to quit.

3. WARN COUNT SET - Press the "ENTER/RESTART" button to enter the setting, press the "▼" or "▲" buttons to select the item you need (WARN COUNT/ON means the counterfeit note is included in the amount; WARN COUNT/OFF means the total amount doesn't include the counterfeit notes), then press the "ENTER/RESTART" button to quit.



## PRODUCT OPERATION (Continued)

4. **DATE & TIME SET** - Press the “ENTER/RESTART” button to enter the setting, it displays “YYYY-MM-DD HH:MM:SS”, press the “▼” or “▲” buttons to minus or add one for the value to set the date and time, press the number 4 or 6 to go to the left or right option. Press the “ENTER/RESTART” button to quit.
5. **BEEP SET** - Press the “ENTER/RESTART” button to enter the setting, it will display 1. KEY BEEP ON 2. KEY BEEP OFF 3. WARNING BEEP ON 4. WARNING BEEP OFF. Press the “▼” or “▲” buttons to select the item you need then press the “ENTER/RESTART” button to quit.
6. **PRINTER SET** - Press the “ENTER/RESTART” button to enter the setting, 1. 4800bps 2. 9600bps 3. 14400bps 4. 19200bps 5. 28800bps 6. 38400bps 7. 57600bps, press the “▼” or “▲” buttons to select the item you need then press the “ENTER/RESTART” button to quit.
7. **DEVELOPER OPTIONS** - For factory setting only when producing the machine, please do not enter to it when you are using or it might be not working normally.

3. Place bills into the hopper to begin counting.

## 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.

# 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
NL CHECK FAIL	The left counting sensor is dirty or broken	Clean the sensor or contact Royal Sovereign.
NR CHECK FAIL	The right counting sensor is dirty or broken	Clean the sensor or contact Royal Sovereign.
UV CHECK FAIL	UV Sensor Error	Clean the sensor or contact Royal Sovereign.
HOPPER CHECK FAIL	Hopper sensor is dirty or broken	Clean the sensor or contact Royal Sovereign.
STACKER CHECK FAIL	Banknote receiving sensor is dirty or broken	Clean the sensor or contact Royal Sovereign.
ERROR HALF	Suspect note is flagged due to half note error (suspicious bill size)	Remove first bill from the stacker, then continue counting.
ERROR DOUBLE	Suspect note is flagged due to double note error (two or more banknotes passed together)	Remove first bill from the stacker, then continue counting.
ERROR EC	Suspect note is flagged due to jointed notes error	Remove first bill from the stacker, then continue counting.
ERROR JAM	Jammed note.	Remove jammed bill from the machine, then continue counting.
ERROR UV	Suspect note is flagged due to UV error	Remove first bill from the stacker, then continue counting.
ERROR MG	Suspect note is flagged due to MG error	Remove first bill from the stacker, then continue counting.
ERROR DD	Suspect note is flagged due to Dimensional note error	Remove first bill from the stacker, then continue counting.

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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.

## 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 top 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 top of the machine) clockwise. Repeat bill counting and adjust if the problem continues.

## SPECIFICATIONS

Model	RBC-ED250
Power	AC 100V~240V 50/60 Hz
Power Consumption	60W (Max)
Temperature Range of Operation	32~104 °F / 0~40 °C
Hopper Capacity	500 notes
Counting Speed	900 / 1,200 / 1,500 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	10.20" W x 9.30" D x 9.80" H (261 x 238 x 249 mm)
Net Weight	10.80 lbs. / 4.90 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](http://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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