# HIGH SPEED BILL COUNTER WITH COUNTERFEIT DETECTION

RBC-5000

Thank you for purchasing the Royal Sovereign High Speed Bill Counter with Counterfeit Detection, RBC-5000. 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.

# CONTENTS

# SAFETY INSTRUCTIONS

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

### ⚠ WARNING

1. Only use the power cord that comes with the machine. Using a different power cord may result in electric shock, fire, or cause serious damage to the machine. Plug the power cord into a properly grounded wall outlet.
2. Do not use the machine if the power cord is damaged. This may result in electric shock, fire, or other hazards.
3. Do not place the machine in an area where it may be exposed to water or other liquids.
4. To reduce the risk of electrical shock, do not take apart the machine. When service or repair is needed bring to a qualified service repair technician.
5. When unplugging the power plug, grip the plug to pull it out. Pulling the cord may result in electric shock, fire, or damage to the machine.
6. Do not place objects on the power cord and do not bend it excessively. This may result in electric shock, fire, or other hazards.

### ⚠ CAUTION

1. Before dusting the machine with a brush, unplug the machine from the wall. Do not use liquid or aerosol cleaners on the machine.
2. Do not use the machine in areas with high temperature or high humidity. This may result in the machine not working properly.
3. When not using the machine for long periods of time, unplug the power cord from the outlet.

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

## BOX CONTENTS



Bill Counter



Power Cord

## PRODUCT VIEW



Hopper
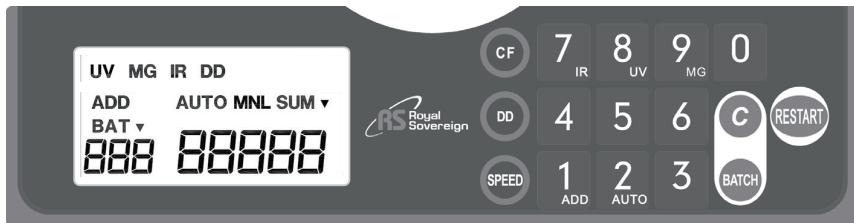
Control Panel

Bill Receiving
Vanes

# QUICK START GUIDE

1. Plug the power cable into the back of the unit and into the wall power outlet.
2. On the back of the machine, flip the power switch to power on.
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.

Carrying Handle

Power Switch

Power Socket

# CONTROL PANEL



**UV Counterfeit Detection**
Counterfeit bills often use white or bleached paper, which will glow under ultraviolet light. To use ultraviolet counterfeit detection, press the "CF" button and then the "UV" button (#8 on the numeric keypad). Press the "CF" button and then the "UV" button to disengage the UV function.

**Magnetic Counterfeit Detection**
If the magnetic detector does not find the presence of magnetic components that are standard in authentic bills, the machine will stop counting to allow removal of the counterfeit bill. To use magnetic counterfeit detection, press the "CF" button and then the "MG" button (#9 on the numeric keypad). Press the "CF" button and then the "MG" button to disengage the MG function.

**Infrared Counterfeit Detection**
Most bills often have infrared markings. Infrared light is used to validate these markings. To use infrared counterfeit detection press the "CF button" and then the "IR" button (#7 on the numeric keypad). Press the "CF" button and then the "IR" button to disengage the IR function.

**Dimensional Detection**
The dimension detector measures the width of the center of each bill by using infrared light. If the detector finds an odd-sized bill, the machine will stop counting to allow removal of the bill and display the error code on the preset display. To use dimensional counterfeit detection, press the "DD" button. To adjust the DD level press the "DD" button for 3 seconds, the display will show the current size (dd- -5). Press the numeric key 1 to 9 to adjust the level, 1 for lowest, 9 for highest. After choosing the level number press the "RESTART" button to confirm. To disengage this function press the "DD" button again.

## PRODUCT OPERATION

1. **Attach power cable to back of machine, plug into a three prong outlet, and turn power switch on.**
   - The unit will conduct an automatic self-diagnostic test to ensure accurate counts.
   - After five seconds, the screen will display a "0" on the left and on the right of the display with the word "AUTO" above the zeros.
   - If there is a problem, the preset display will show an error code. (See ERROR CODE DISPLAYS -LOCATED ON PAGE 10.)
2. **Select bill counting settings:** Before counting, select counting settings that are related to your counting needs:

   **- ADD mode:**
   To continuously add totals for a cumulative total when counting press the "CF" key on the control panel, then the "ADD" button on the keypad (#1 on the keypad). Press the "CF" key then the "ADD" button to cancel the add mode.

   **- BATCH mode:**
   The machine is preset to common counting mode, which automatically counts all bills placed into the hopper. To count bills in predetermined batches, press the "BATCH" button. To clear the batch function and return to original bill counting, press the "CLEAR" button.
   - Press once for a batch quantity of 10
   - Press twice for a batch quantity of 20
   - Press three times for a batch quantity of 25
   - Press four times for a batch quantity of 50
   - Press five times for a batch quantity of 100
   - CUSTOM BATCH MODE - Select the "BATCH" button, and use the numeric keypad to enter a batch number between 1 and 999

   **- Bill Counting Speed:**
   Press the "SPEED" button on control panel and continue to press the key until you come to speed setting you wish to use (800, 1,200, 1,600, 1,900).

## PRODUCT OPERATION (CONTINUED)

- **Counterfeit Detection Methods**
Ultraviolet and Magnetic Counterfeit Detection Methods are automatically on when the unit is powered up. To manually turn off any or all methods see (CONTROL PANEL - LOCATED ON PAGE 5.)

- **AUTO or MANUAL Start**
The machine is preset to automatically start counting bills once placed into the hopper. To change to the manual start mode, press the "CF" button and then the "AUTO" button (#2 on the numeric keypad). MNL will appear on the display. Insert the bills into the hopper, and press "RESTART" button. Press the "CF" button and then the "AUTO" button (#2 on the numeric keypad) to return to Auto mode.

- **Bill Counting Mode**
The bill counting mode is preset on type 2. To adjust the counting mode, press "SET" twice. Preset display window will display "F". Use the keypad to select a type 1-3.

  - <u>Type 1</u> will not count counterfeit or irregular bills and stop counting to allow the removal of bill(s) in question, and allow re-insertion of all bills into the hopper to restart counting from zero.
  - <u>Type 2</u> will stop counting when a counterfeit or irregular bill is detected and include these bills in the master count (shown on the count display).
  - <u>Type 3</u> will count counterfeit or irregular bills and continue counting, unless there is a jam error (either EA2, two or more bills counted as one, or EA3, part of one bill overlapping another bill), in which case the count may be inaccurate. In this case, bill(s) in question are counted, and the machine will stop to allow re-insertion of all bills into the hopper to restart counting from zero.

3. **Place bills into the hopper to begin counting; press "RESTART" if in manual mode**

# MAINTENANCE OF THE MACHINE

**WARNING:** Before doing any 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 damped 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 contaminates 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 contaminates. Cleaning cards are recommended to be used after every 100 cycles.

**CAUTION: DO NOT CHANGE THE POSITION OF THE DETECTORS AND/OR OPTICAL SENSORS**

# SPECIFICATIONS

| Model | RBC-5000 |
|---|---|
| Power | 100Vac/60Hz (240Vac/50Hz) |
| Power Consumption | 75W (Max) |
| Temperature Range of Operation | 0~40°C / 32~104°F |
| Hopper Capacity | 300 notes |
| Counting Speed | 800 / 1,200 / 1,600 / 1,900 bills per minute |
| Accepted Note Size | L:50~100mm(1.9 - 3.9 in)   W:90~190mm(3.5-7.5 in) |
| Display Range | Counting: 4 Digits / Batch Counting: 3 Digits |
| Dimensions | 250 × 230 × 255 mm (9.80 x 9.10 x 10.00 in) |
| Net Weight | 10.80 lbs. / 4.90kg |

## TROUBLESHOOTING

Note: when counting and detecting is not accurate, please check the machine as follows:

| Problem | Reason | Solution |
|---|---|---|
| Bills get damaged | Hopper Tension is too tight | To loosen the tension, please turn the bill thickness adjuster (located on the top of the machine) one notch to the right (+). Repeat bill counting and adjust if problem continues. |
| 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) one notch to the right (+). Repeat bill counting and adjust if problem continues. |
| Bills eject from the machine | Hopper Tension is too loose | To tighten the tension, please turn the bill thickness adjuster (located on the top of the machine) one notch to the left (-). Repeat bill counting and adjust if problem continues. |
| 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) one notch to the left (-). Repeat bill counting and adjust if problem continues. |

# ERROR CODE DISPLAY AND SOLUTIONS

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

| Error Code | Messages | Solutions |
|---|---|---|
| UU | A suspicious bill is detected by the UV function; | Remove the suspicious bill from the stacker, press "RESTART" to continue |
| | Problem with the UV function | Lower the UV sensitivity level |
| nng | A suspicious bill is detected by the MG function; | Remove the suspicious bill from the stacker, press "RESTART" to continue; |
| | Problem with the MG function | Lower the MG sensitivity level |
| dbL | A suspicious bill is detected by the IR function; | Remove all the bills from the stacker, press "RESTART" to continue; |
| | Problem with the IR function | Lower the MG sensitivity level |
| dd | A suspicious bill is detected by the DD function; | Remove all the bills from the stacker, press "RESTART" to continue; |
| | Problem with the DD function | Lower the DD sensitivity level |
| HALF | Half note | Remove all the bills from the stacker, press "RESTART" to continue; |
| CHn | Double note | Remove all the bills from the stacker, press "RESTART" to continue; |
| ERO | Problem with the right counting sensor. | Clean the sensor. |
| ER1 | Problem with the left counting sensor. | Clean the sensor. |
| ER3 | Problem with main motor and control circuit. Problem with drive belt. Problem with the feeding sensor or the control circuit. | Contact Royal Sovereign Product Support. |
| ER2 | Problem with the reset sensor or the control circuit. | Contact Royal Sovereign Product Support. |

Most of the errors listed above may be caused by dust or dirt on the inside of the machine. Keeping the machine clean is highly recommended (Please refer to MAINTENANCE OF THE MACHINE - LOCATED ON PAGE 8).

# ONE YEAR LIMITED WARRANTY

**Royal Sovereign International, Inc.** warranties 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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