



Count on one.

S-1000 Mini Series Currency Counter Operating Manual

Models S-1000, S-1015 and S-1025



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Introduction

Congratulations on your purchase of a Semacon S-1000 Mini Series Compact High Speed Currency Counter. You have just taken the first step towards counting your money in a more efficient manner. We understand that you had a variety of choices when selecting your counter and we would like to thank you for choosing Semacon for your money handling needs.

Important! Save the original box and all packing materials for future shipping needs, should you ever need to send your counter in for cleaning or servicing.

Before operating your new currency counter for the first time, please carefully read through these instructions to become familiar with the proper operation of the counter. Should you have any questions, please contact your distributor or Semacon for further assistance.

Semacon's S-1000 Mini Series Currency Counters are designed to help you reduce the amount of time you spend on the tedious process of counting, verifying and bundling currency. These counters require a very small amount of space and are designed to handle large volumes of currency in a high speed manner.

The S-1000 Mini counters are designed to count a single denomination of currency at approximately 900 notes per minute. The counterfeit detection models (S-1015 and S-1025) have the additional capability to spot and pinpoint suspect counterfeit bills during the counting process. Combined with the capability for the operator to select desired stop points for batching and bundling banknotes, the S-1000 Mini Series is capable of greatly reducing the amount of time you spend handling money.

NOTE: This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area may cause harmful interference in which case the user will be required to correct the interference.

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S-1000 Mini Series Currency Counter

Front View

- 1) Control Panel
- 2) Count Display
- 3) Hopper Sensor
- 4) Hopper
- 5) Retractable Carrying Handle
- 6) Batch Setting Display
- 7) Upper Cover
- 8) Count Sensors
- 9) Stacker Wheels
- 10) Stacker Rack
- 11) Stacker Sensor



Figure 1

S-1000 Mini Series Currency Counter

Rear View

- 12) Rubber Resistance Tongue
- 13) Hopper Adjustment Knob
- 14) Power Switch
- 15) Power Cord
- 16) External Display Jack (Optional)



Figure 2

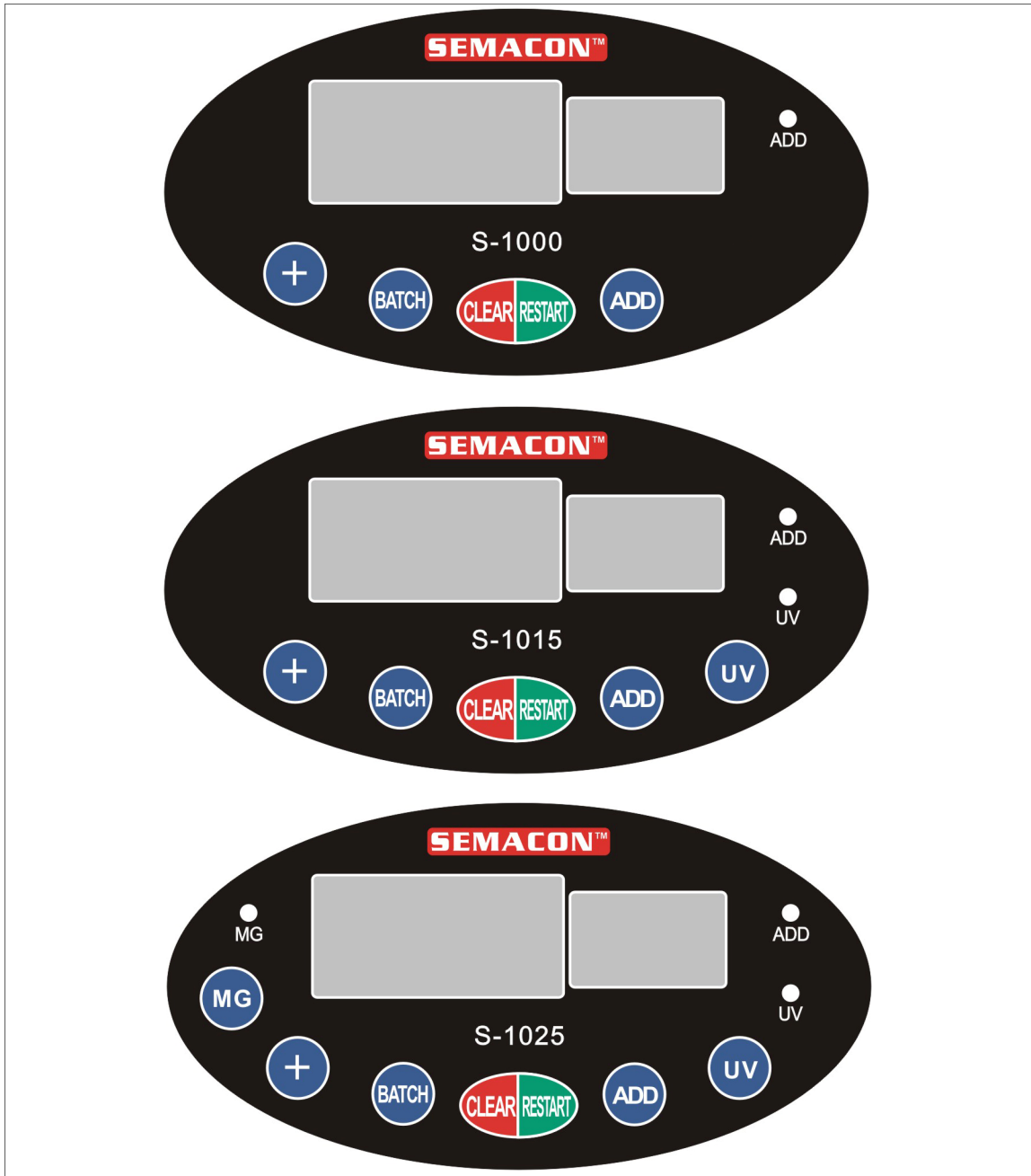








Figure 3. Control Panel Diagrams

KEY	FUNCTION
CLEAR/RESTART	Clears the Count Display or restarts the counting process
ADD	Turns on/off the ADD function which maintains a cumulative total of the separate groups of banknotes counted
BATCH	Selects the starting batch stop setting (10, 20, 25, 50, 100, none)
+	Increases the batch stop setting by 1
UV	Turns on/off and adjusts the UV counterfeit detection feature setting
MG	Turns on/off and adjusts the MG counterfeit detection feature setting

Control Panel Functions

	<p>The CLEAR/RESTART button may be used to manually restart the counting process after the machine stops during batch counting or after an error. The machine may also be auto-restarted by removing all of the banknotes from the stacker. The CLEAR/RESTART button also clears the Count Display when the machine is in standby mode (no banknotes in the hopper).</p>
	<p>The BATCH button turns Batch Mode on and off and selects the starting batch stop setting (10, 20, 25, 50, 100, none). When the Batch Setting Display is blank, Batch Mode is off. Use the + button (see below) to set the batch stop to a number other than 10, 20, 25, 50 or 100.</p>
	<p>The + button increases the batch stop setting by 1. This button is used to set the batch stop to a number other than 10, 20, 25, 50 or 100.</p>
	<p>The ADD button turns the Add feature and indicator light on and off. When the Add feature is off (Normal Counting Mode), the counter is reset to zero each time the operator removes the banknotes from the stacker and places a new stack of banknotes in the hopper. When the Add feature is on (Add Mode), the counter is not reset when the operator removes the banknotes from the stacker and places a new stack of banknotes in the hopper and the counter adds the additional notes to the previous total.</p>
	<p>The UV button turns the Ultraviolet Counterfeit Detection feature and indicator light on and off and adjusts the sensitivity level. When the Ultraviolet Counterfeit Detection System is activated, the counter will scrutinize the paper of each banknote during the counting process and test for suspect counterfeit notes. If a suspect counterfeit banknote is detected, the counter will stop and alert the operator. There are two sensitivity levels selectable by the operator numbered 1 -2, with 1 representing the lowest sensitivity level. The factory setting is 2. If you are experiencing too many false suspects, the UV detection feature should be desensitized (reduced) or deactivated.</p> <p style="text-align: center;">(This feature applies to models S-1015 and S-1025 only)</p>
	<p>The MG button turns the Magnetic Counterfeit Detection feature and indicator light on and off and adjusts the sensitivity level. When the Magnetic Counterfeit Detection System is activated, the counter will scrutinize the ink of each banknote during the counting process and test for suspect counterfeit notes. If a suspect counterfeit banknote is detected, the counter will stop and alert the operator. There are two sensitivity levels selectable by the operator numbered 1-2, with 1 representing the lowest sensitivity level. The factory setting is 2. If you are experiencing too many false suspects, the MG detection feature should be desensitized (reduced) or deactivated.</p> <p style="text-align: center;">(This feature applies to model S-1025 only)</p>

Placing Banknotes In The Hopper

For proper operation, it is important that the banknotes be placed in the hopper as illustrated in the following diagram (see Figure 4). Following this method of placing the banknotes into the hopper will ensure the most accurate count and reduce the likelihood of jams. If the banknotes are not placed onto the hopper correctly, there is a higher potential that you may experience misfeeds and jams that could effect the counting process.

Avoid placing damp or wet banknotes into the machine. Always make sure to remove any paper clips, rubber bands, staples or other items attached to the banknotes before counting. If the banknotes are curled, folded, crumpled or bent, flatten them before attempting to run them through the counter.

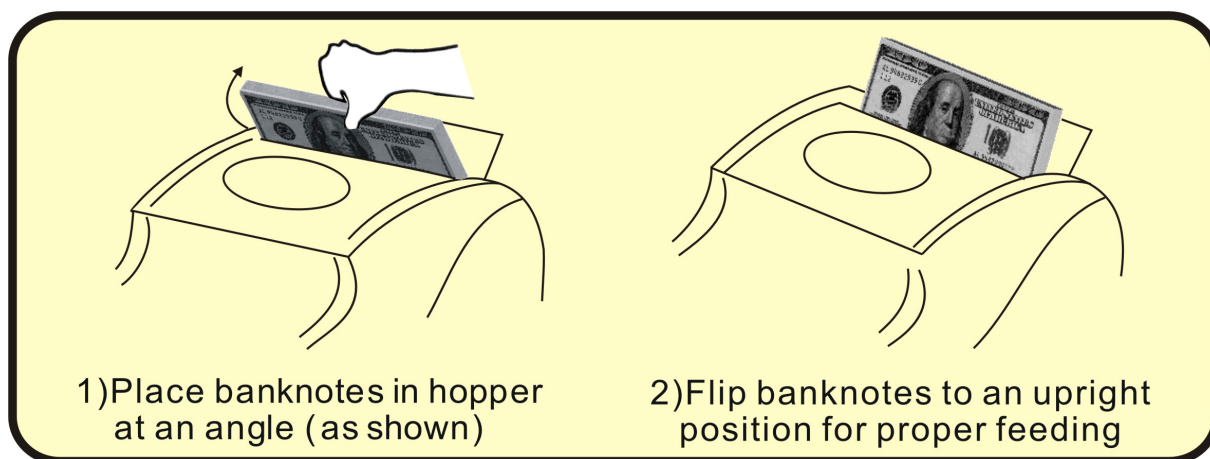


Figure 4



Warning

The following two illustrations demonstrate improper methods of loading the banknotes in the hopper.

Do not place the banknotes in the counter in this manner!




Figure 5





Figure 6

Operating Instructions Overview

Startup and Self-Test

Turn on the power switch located at the back of the counter. The display will appear as follows indicating the unit is completing its self-test process and checking the sensors: 

Then the display will appear as follows indicating the counter has successfully completed its self-test process and is now in standby mode and ready to be used: 

If during the self-test startup process the machine encounters a problem, the counter will display an error message, for example: 

Please refer to the **Malfunction Code List** in Figure 8 to determine what the error code represents.

Error Codes During The Counting Process

During the counting process, when a suspect counterfeit banknote is detected or a feeding error occurs that may affect the total count (such as a half note, chain note, skewed note, double note, etc.), the counter will stop and the appropriate error code will be displayed. Please see the **Error Code List** in Figure 9 to interpret the meaning of any error codes.

Basic Counting Process

Place the banknotes in the hopper and the counter will auto-start the counting process. It will count the banknotes in the hopper and display the total count on the count display.

To continue counting, remove the counted banknotes from the stacker and place the next stack of banknotes in the hopper. The counter will begin counting from zero again (if the machine is not in **ADD** mode).

If the banknotes in the stacker are not removed before placing additional banknotes in the hopper, the counter will restart automatically and add the additional banknotes to the previous total.

Counterfeit Detection

Some of the counter models include a counterfeit detection system (models S-1015 and S-1025). While the counterfeit detection features are designed to be as accurate as possible, they are specifically designed to pinpoint suspect banknotes that are believed to have a high probability of being counterfeit. An alert to a suspect counterfeit banknote does not assure nor guarantee that the banknote is counterfeit. Additionally, while the counter is designed to detect potential counterfeit banknotes, there is always the possibility that an actual counterfeit banknote may pass through the screening process undetected. The UV detection found in models S-1015 and S-1025 is designed to inspect and scrutinize the banknote paper for potential counterfeit properties while the MG detection found in model S-1025 is designed to inspect and scrutinize the banknote ink for potential counterfeit properties. The combination of UV and MG detection capabilities found in model S-1025 offers the greatest protection and has the highest probability of catching a suspect counterfeit banknote.

Operating Instructions - Counting Modes

Selection of the Counting Mode

There are two counting modes: **NORMAL** and **BATCH**. The **NORMAL** count mode is selected automatically when there is no batch stop setting entered and shown on the Batch Setting Display. The **BATCH** mode is selected by entering any batch stop setting from 1 to 999 which is shown on the Batch Setting Display. The optional batch stop setting is entered by pressing the **BATCH** button on the control panel and optionally the + button to set the batch stop setting to a number other than 10, 20, 25, 50 or 100. In both modes, the counted number indicated on the Count Display will be reset to zero every time the banknotes are removed from the stacker and a new group of banknotes are placed in the hopper (if the machine is not in **ADD** mode).

NORMAL Counting Mode

- 1) Place a stack of banknotes in the hopper and the optical sensor on the hopper plate will cause the machine to start counting automatically.
- 2) The machine will continue to count until all the notes in the hopper have fed through and the counted number is indicated on the Count Display.
- 3) The number displayed on the Count Display is cleared by removing the banknotes from the stacker and placing the next group of banknotes in the hopper. The next counting operation will resume with zero on the Count Display (if the machine is not in **ADD** mode).
- 4) Loading the hopper with additional banknotes without removing the previous banknotes stacked in the stacker will cause the new counted number to be added to the previous total.

BATCH Counting Mode

- 1) Select any number from 1 to 999 on the Batch Setting Display by pressing the **BATCH** button on the control panel and optionally the + button to set the batch stop setting to a number other than 10, 20, 25, 50 or 100. For example, to enter the batch stop setting "12", press the **BATCH** button (the selection will be "10") then press the + button twice to select "12".
- 2) Place a stack of banknotes in the hopper. The machine will start counting and will stop once the counted number reaches the preset batch stop setting.
- 3) To repeat the batch counting with the same batch stop setting, simply remove the banknotes in the stacker and the machine will continue to count out the banknotes in the batch size you entered.
- 4) To clear the batch stop setting, press the **BATCH** button repeatedly until the Batch Setting Display is blank.

Adding Mode

- 1) Adding in the **COUNT** mode is performed by pressing the **ADD** button (the indicator light will illuminate to indicate the counter is in **ADD** mode). In this mode, removing the counted notes from the stacker and placing a new stack in the hopper will not clear the counted number on the Count Display. Placing the next group of banknotes in the hopper will cause the machine to start the next counting operation with the new counted number added to the previous total.
- 2) The adding feature can also be utilized in **BATCH** mode in the same manner as described above by simply selecting a batch stop setting when the **ADD** mode is activated.

Counterfeit Detection Modes

UV Counterfeit Detection Feature (models S-1015 and S-1025 only)

Press the **UV** button and “UV” will appear in the Batch Setting Display followed by a number from 1-2. The “UV” signifies the Ultraviolet Counterfeit Detection feature is activated and the number indicates the Ultraviolet Counterfeit Detection setting. “1” is the lowest detection level and “2” is the highest detection level. To change the detection level, continue to press the **UV** button. When you stop pressing the button, the unit will save the setting after a few seconds and go into the standby (ready) mode (or you can press the **CLEAR/RESTART** button to save the setting immediately). The **UV** indicator light will be on when the Ultraviolet Counterfeit Detection system is active. Continue to press the **UV** button to turn the feature and indicator light off.

NOTE: The factory setting for the UV Counterfeit Detection feature is 2. If you get too many false UV errors, lower the sensitivity setting to reduce the potential for false suspect notes.

MG Counterfeit Detection Feature (model S-1025 only)

Press the **MG** button and “ng” will appear in the Batch Setting Display followed by a number from 1-2. The “ng” signifies the Magnetic Counterfeit Detection feature is activated and the number indicates the Magnetic Counterfeit Detection setting. “1” is the lowest detection level and “2” is the highest detection level. To change the detection level, continue to press the **MG** button. When you stop pressing the button, the unit will save the setting after a few seconds and go into the standby (ready) mode (or you can press the **CLEAR/RESTART** button to save the setting immediately). The **MG** indicator light will be on when the Magnetic Counterfeit Detection system is active. Continue to press the **MG** button to turn the feature and indicator light off.

NOTE: The factory setting for the MG Counterfeit Detection feature is 2. If you get too many false MG errors, lower the sensitivity setting to reduce the potential for false suspect notes.

Clearing A Jam

WARNING: Never place your fingers inside the machine during operation.

With the machine off and the power cord unplugged, reach in and remove any jammed banknotes. Access to remove a jam can be from the top area of the machine in the feed wheel area or by the stacker area, depending on where the banknote or obstruction is. The upper cover of the machine pivots upward with the lifting point location by the carrying handle to allow easy access to the feed wheel area. Extend the carrying handle towards the back of the machine before lifting the upper cover.

Cleaning & Maintenance

In order to properly maintain your counter, it should be cleaned on a regular basis.

- 1) Always turn off the power switch and unplug the power cord before cleaning.
- 2) Blow any dust and dirt out of the counter with a can of compressed air. These can be purchased at most office supply stores.

WARNING: Always switch the power off and unplug the power cord before cleaning the machine or reaching into the counter to clear a jam or obstruction.

- 3) Gently clean each of the sensors with a soft brush or towel to remove any dirt or dust that may have accumulated on the sensor. There is one optical sensor located on the hopper, two optical sensors located in the stacker and four optical count sensors located under the top cover. A cotton swab dipped in alcohol or windex may be used to clean the sensors.

Depending on your usage level, your counter should be professionally cleaned and serviced on an annual basis by your authorized Semacon distributor or it can be sent to the Semacon Service Center for a general preventative cleaning & maintenance service. Contact your distributor to determine the proper location for service.

If you have any problem with your counter which is not described in this manual, please contact your authorized Semacon service facility or Semacon for further assistance.

Feeding Adjustment

If the banknotes do not feed smoothly through the counter or the counter is generating a lot of feeding errors, you may need to adjust the counter's feed wheel tension. As the rubber feed wheels and the rubber resistance tongue wear over time, you may need to adjust (tighten) the feeding system to compensate for this normal wear. To adjust the feeding system, turn the **Hopper Adjustment Knob** (see Figure 7) approximately a half turn counter-clockwise to tighten the feed system tension and compensate for the wear of the rubber parts. Repeat this adjustment until the machine runs smoothly and without feeding errors.

- 1) Always turn the power switch off and disconnect the power cord before adjusting the hopper assembly.
- 2) The hopper is adjusted downward to tighten the feeding tension. First, loosen the fastening screw located in the center of the rear panel. The **Hopper Adjustment Knob** can then be adjusted by turning the knob counter-clockwise.

Turning the **Hopper Adjustment Knob** clockwise will increase the gap between the banknote rubber feeding wheels and the rubber resistance tongue and reduce the friction on the banknotes. This will loosen the feeding system and is not normally required.

When the adjustment is completed, tighten the fastening screw located in the center of the rear panel.

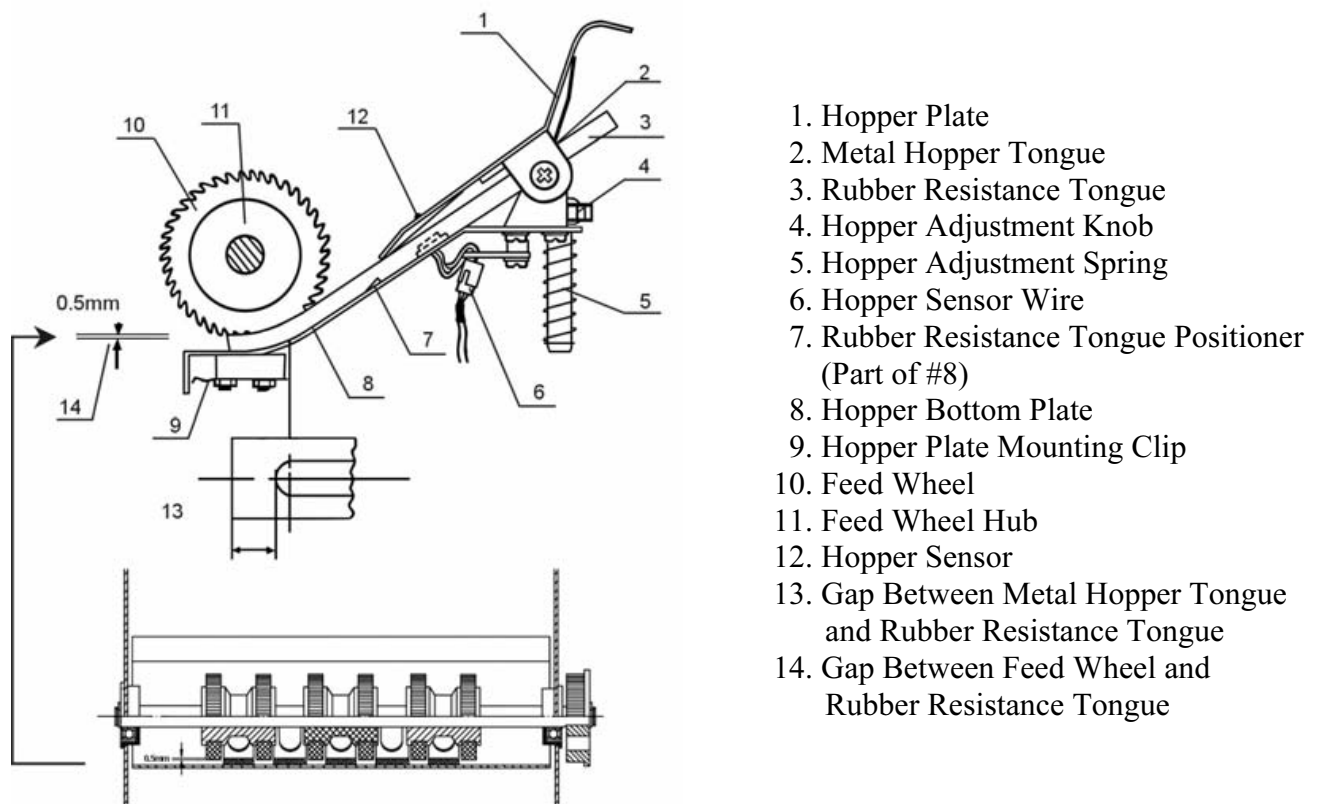


Figure 7

MALFUNCTION CODE LIST		
Malfunction Code	Cause	Solution
E1	The left count sensor pair is covered with dust, out of alignment or needs repair	Clean both sensors with a can of compressed air and then use a cotton swab dipped in alcohol or windex. If this does not correct the problem, your counter should be sent to an authorized Semacon service center or Semacon for repair.
E2	The right count sensor pair is covered with dust, out of alignment or needs repair	Clean both sensors with a can of compressed air and then use a cotton swab dipped in alcohol or windex. If this does not correct the problem, your counter should be sent to an authorized Semacon service center or Semacon for repair.
E3	The magnetic counterfeit detection system needs cleaning or repair	Your counter should be sent to an authorized Semacon service center or Semacon for repair.
E4	The ultraviolet counterfeit detection system needs cleaning or repair	Your counter should be sent to an authorized Semacon service center or Semacon for repair.
E5	The hopper sensor is covered with dust or needs repair	Clean the sensor with a can of compressed air and then use a cotton swab dipped in alcohol or windex. If this does not correct the problem, your counter should be sent to an authorized Semacon service center or Semacon for repair.
E6	The stacker sensor pair is covered with dust, out of alignment or needs repair	Clean both sensors with a can of compressed air and then use a cotton swab dipped in alcohol or windex. If this does not correct the problem, your counter should be sent to an authorized Semacon service center or Semacon for repair.

Figure 8

ERROR CODE LIST	
Error Code	Cause Of Error
CF1	Suspect UV Counterfeit Note Stop Alert (models S-1115 and S-1125 only)
CF2	Suspect MG Counterfeit Note Stop Alert (model S-1125 only)
dBH / dBL	Double Note High/Low Detection Stop Alert
ECH / ECL	Chain Note High/Low Detection Stop Alert
Ob	Skew Note Detection Stop Alert
Eh	Half Note Detection Stop Alert
EJ	Jam Detection Stop Alert

Figure 9

Technical Specifications

1) Ambient Temperature	0 - 40 °C
2) Ambient Humidity	30 - 80%
3) Banknote Feeding System	Friction Roller System
4) Counting Speed	Approximately 900 notes/min
5) Size of Countable Banknotes	115x50 - 167x85 mm
6) Thickness of Countable Banknotes	0.07 - 0.15 mm
7) Hopper and Stacker Capacity	Approximately 80 notes (circulated banknotes) Approximately 120 notes (new banknotes)
8) Count Display	Three digits (LED)
9) Batch Display	Three digits (LED)
10) Power	AC 110V±10%/60Hz (North America Model) AC 220V±10%/50Hz (Export Model)
11) Power Consumption	<65W
12) Stand-by Consumption	<10W
13) Unit Dimensions	11.5”D x 9”W x 5.5”H 290D x 230W x 140H mm
14) Packing Dimensions	13.5”D x 11.75”W x 7.75”H 340D x 300W x 200H mm
15) Net Weight	Approximately 4.5 kg (10 lbs)
16) Gross Weight	Approximately 5.0 kg (11 lbs)

Specifications are subject to change without notice.



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