



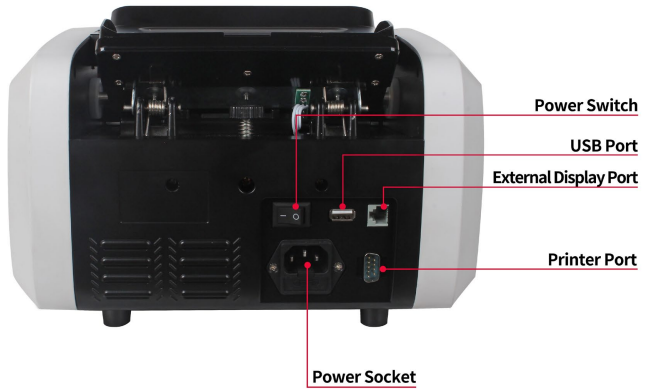
Sentinel SB-901

User Manual









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1. Machine Overview














2. Package Contents

Item Name	Picture	Quantity (pcs)
Sentinal SB-901		1
External Display		1
Power Cable		1
Calibration Card		1
Cleaning Brush		1
Cleaning Cloth		1
Spare Fuse		1
User Manual		1
Dust Cover		1

3. Safety Precautions

- 1) This machine is designed specifically for indoor use. Do not install or use outdoors.
- 2) Place machine on a flat and stable surface.
- 3) Do not use or place combustible materials or items around or inside the machine.

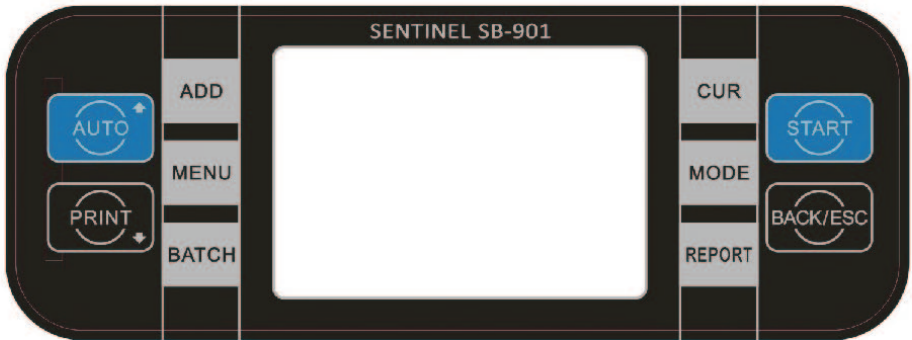
 Warning	
	Do not use this product in areas where it may be exposed to water or other liquids.
	Unplug this product from the wall outlet before cleaning. Do not use liquid or aerosol cleaners. Use a damp cloth for cleaning.
	To reduce the risk of electric shock, do not disassemble this product. Take it to qualified service personnel when service or repair work is required. Opening or removing covers - like the rear cover plate - may expose you to dangerous voltages or other risks. Incorrect re-assembly can cause electric shock when the appliance is subsequently used.
	Only use the cable provided with the unit. The use of other cables may result in electric shock, fire or cause serious damage to the unit.
	Do not operate the unit in areas with high temperature or high humidity since it may prevent it from working correctly.

 Caution	
	When unplugging the power plug, do not pull it by the cord but rather grip the plug to pull it out. Not following these instructions may result in electric shock, fire or damage to the unit.
	Do not use the unit if the power cord is damaged or if the plug socket contact is loose. Not following these instructions may result in electric shock, fire or other hazards.
	Do not place heavy objects over the cord and do not bend it excessively since it could get damaged. Not following these instructions may result in electric shock, fire or other hazards.
	When not using the unit for a long period of time, remove the power plug from the wall outlet.

4. Technical Specifications

Model:	Sentinel SB-901 Mixed-Denomination Money Counter
Counterfeit Detection:	Ultraviolet, Magnetic (MG/ MT), Dual IR Mapping
Error Detection:	Double Note, Half Note, Chain Note
Supported Currencies:	USD, CAD
Hopper Capacity:	200 Bills
Stacker Capacity:	200 Bills
Counting Speed:	1000 pcs/ min
Feeding System:	Rear-Load Roller Friction
Power Supply:	AC 110V-240V, 50-60Hz
Dimensions:	310x265x175mm (12.2x10.4x6.9 Inches)
Net Weight:	5.3 kgs (11.7 lbs)
Gross Weight:	6.3 kgs (13.9 lbs)

5. Control Panel



Auto Key - Toggle between automatic start and manual start.



Print Key - Print your count results.



Add Key - Activate or disable the adding function.



Menu Key - Enter maintenance menu.



Batch Key - Access batch counting function.



Currency Key - Select desired currency.



Mode Key - Select counting mode.



Report Key - Review your count results.

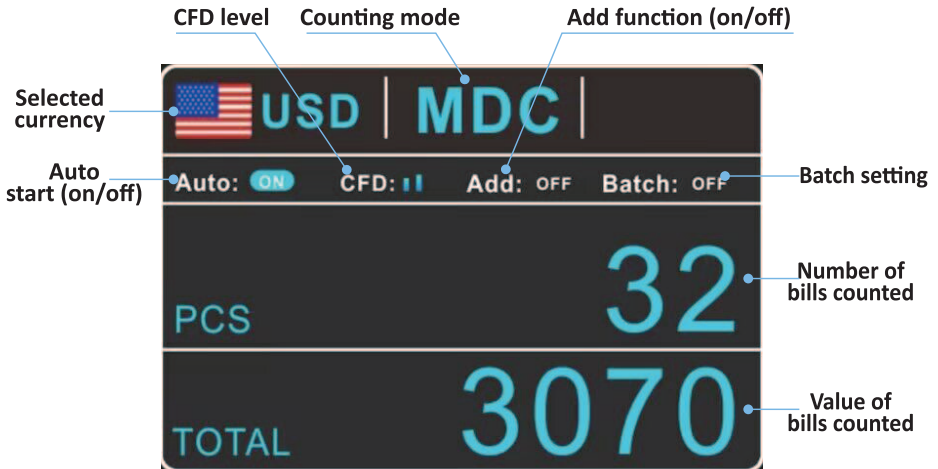


Start Key - Start or restart counting.




Back/ ESC Key - Stop the count or return to previous screen.

6. Display Interface



7. Counting Modes

The default counting mode is MDC. You can cycle between the three counting mode options by pressing the  key on the control panel.

MDC Mode

In MDC mode, the counter will count all denominations of the selected currency, recording both the total value of the bills counted, as well as the total number of bills counted.



SDC Mode

In SDC mode, the counter will count a single denomination of the selected currency, recording both the total value of the bills counted, as well as the total number of bills counted. The denomination counted is based on the first bill scanned, and all other denominations will be rejected. This function can be used to sort bills manually.

CNT Mode



In CNT mode, the counter will only count the number of bills, and it does not track the denomination of the bills or the currency. NOTE: while using CNT mode, counterfeit detection is disabled.

8. Currency Options



While the counter is powered on, a flag and 3-digit currency code will appear in the top left corner of the display, indicating the current currency setting. The currency is set to USD by default. To change the currency, press the  key, use the arrow keys to highlight the desired currency, then press the  key.






9. Optional Counting Functions

Automatic Start

When automatic start is enabled, the machine will start counting as soon as bills are placed into the hopper. If automatic start is disabled, the machine will not start counting until you press the  key. Automatic Start is on by default, and can be enabled or disabled by pressing the  key.


Batch Counting

The batch counting function is a convenient way to prepare bills for bundling or strapping. Press the  key to enter the batch menu. Pressing the  key while in this menu will cycle the batch setting from off, 50 pieces and 100 pieces.



The batch quantity can be changed by pressing the arrow keys. Pressing the  key will increase the batch by 10, pressing the  key will decrease the batch by 10, pressing the  key will increase the batch by 1, and pressing the  key will decrease the batch by 1. After confirming the batch quantity, press the  key to return to the main counting screen.


NOTE: The stackers maximum capacity is 200 bills, so the batch should be less or equal to 200.

Adding Function

During normal operation, the count is reset with every new batch of bills placed into the hopper. The adding function allows you to keep a running total for large counting jobs. The adding function is disabled by default, and can be enabled by pressing the  key.

10. Count Detail Report & Printing

After performing a count in MDC or SDC mode, you can view the count details by pressing the  key. The report includes the total number of bills counted, the total value counted, as well as a breakdown of each denomination counted. Press the  key to return to the main count screen.

If the machine is connected to a printer, the count details can be printed. After performing a count, press the  key to enter the print menu.

Press the  key to print the count details.

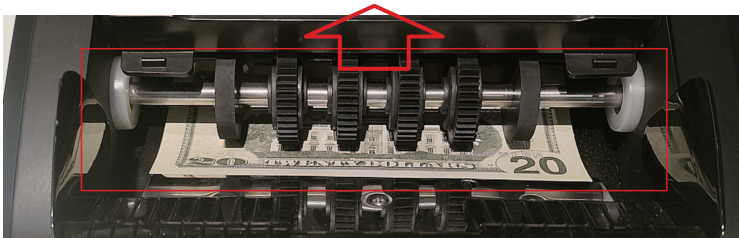
11. Counterfeit Detection Level (CFD)

Counterfeit detection sensitivity can be adjusted by pressing and holding the  key until you hear a beep. Press the  key again to cycle between the three available sensitivity options.

NOTE: Setting the CFD level to zero will disable counterfeit detection entirely.

12. Bill Jams

In the event a bill gets stuck in the machine, the error 'HOPPER' will flash on the screen. Turn the power switch to the off position, then rotate the bill feeding wheel towards the front of the machine, as shown below.



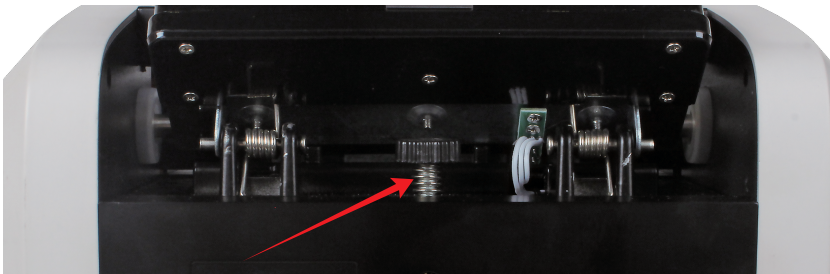
Bill jams can be caused by the following:

- 1) Foreign Objects - the bill channel is blocked by a foreign object (rubber band, paper clip, tape, etc).
- 2) Feed Gap - the feed gap is set either too tight or too loose. Calibrate the feed gap as described in section 12.
- 3) Damaged Bill - the jammed bill was defective in one way or another, as shown below. It is not recommended to count damaged bills.




13. Feed Gap Calibration

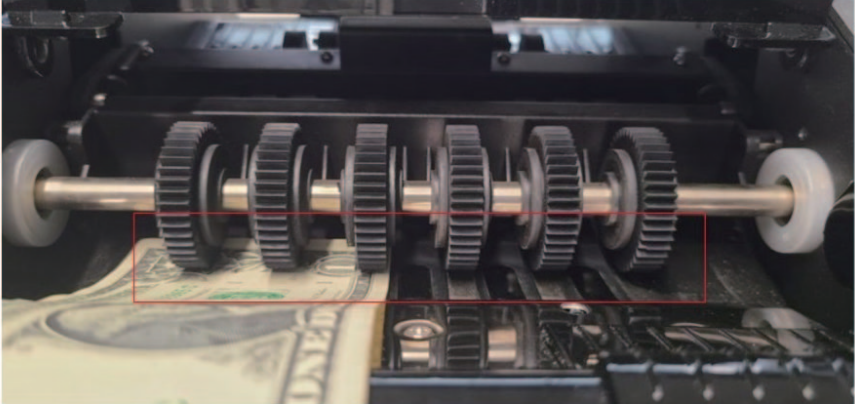
A properly calibrated feed gap will ensure smooth counting and trouble-free operation. Bill jamming, double bill errors, chain note errors, and half note errors can be caused by a misaligned feed gap. The feed gap may also need to be adjusted when counting new, mint condition bills or when counting heavily circulated bills. The feed gap can be fine-tuned by adjusting the feed gap screw.



Turn the feed gap screw clockwise to make the feed gap wider, and counterclockwise to make the feed gap narrower.

Fine tune the feed gap as follows:

- 1) Disable automatic start by pressing the  key.
- 2) Insert a single bill into the gap between the rollers, as shown below.



- 3) If the bill does not fit into the gap, or is hard to fit into the gap, this means the feed gap is set too small. Rotate the feed gap screw clockwise to open the gap wider.
- 4) If the bill fits loosely into the gap, or you can fit more than one bill at once, this means the feed gap is set too wide. Rotate the feed gap screw counterclockwise to reduce the gap.
- 5) Use the banknote to check both sides of the gap between rollers. Fine tune the feed gap screw until the bill can be inserted into both sides smoothly.