



User Guide

AB1100PLUS

Retail Grade Bill Counter
Basic, UV, or MGUV



**Thank you for trusting *AccuBANKER*
with your cash handling needs.**

**In order to optimize the performance of your
equipment, we encourage you to thoroughly read
this user guide prior to use.**

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Safety Instructions

Warning



Do not use this product in areas where it may be exposed to water or other liquids.



Unplug this product from the electric outlet before cleaning. Do not use liquid or aerosol cleaners. To clean, use a damp cloth.



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 may expose you to dangerous voltages or other risks. Incorrect reassembly 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 cord, 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 time, remove the power plug from the electric outlet.

Safety Instructions (cont.)

- Read and understand all of the safety instructions.
- Follow all warnings and instructions marked on the unit.
- This product is meant to be operated in an indoor environment with proper ventilation.
- Do not place near direct sunlight, heat sources, or air conditioners.
- This product should only be operated with the power cord supplied and the type of power source indicated in this user guide. If you are not sure of the type of power supply in your location, consult your vendor or local power company.
- To avoid the risk of fire or electric shock, never push objects into the unit through the case slots or openings, since they may touch dangerous voltage points or shortcut parts. Do not disassemble the unit.
- Never spill liquids of any kind on the product.
- Unplug this product from the wall outlet and refer servicing to qualified service personnel under the following conditions:
 - When the power supply cord or plug is damaged or frayed*
 - If liquid has been spilled into the unit, or it has been exposed to rain or water*
 - If the product has been dropped or the case has been damaged*
 - If the product shows a noticeable change in performance

**Not covered under warranty*

NOTE: Do not remove the "ground" prong from the power cord. It is a safety feature meant to protect the user from harm and the equipment from damage.



If the unit does not operate normally while following the instructions, adjust only those controls covered by the operating instructions. Improper adjustment of other controls may result in damage and will often require extensive work by a qualified technician to restore the product to normal operation.

1. Introduction

The AB1100 PLUS Series is our newest back-loading bill counter machine which is a step further in banknote counting technology. Its capability to reliably count either **PAPER** (traditional) or **POLYMER** (plastic) banknotes makes this new model an indispensable counting machine for the financial market of today.

The AB1100 PLUS models count at a rate of **1300 bills per minute**. Different models can include Adding, Batching UV, and MG Counterfeit Detection functions. Its counting speed as well as its capability to detect counterfeit banknotes during the counting procedure (depending on the model), will allow you to save time and money.

It is ready to tackle the most demanding tasks, from counting large amounts of cash to batching and adding according to client requirements.

The AB1100 PLUS Series makes an invaluable aid in banks, casinos, supermarkets, movie theatres, retail locations, and many other environments where money is used.

1. Introduction (cont.)

The main features of each model are listed below:

Model AB1100 PLUS Basic: This model counts at a rate of 1300 bills per minute. It includes Adding and Batching functions but not any Counterfeit Detection.

Model AB1100 PLUS UV: This model counts at a rate of 1300 bills per minute. It includes Adding, Batching, and UV Counterfeit Detection functions.

Model AB1100 PLUS MG/UV: This model counts at a rate of 1300 bills per minute. It includes Adding, Batching, UV, and MG Counterfeit Detection functions. This is the most advanced unit model in the AB1100 PLUS Series.

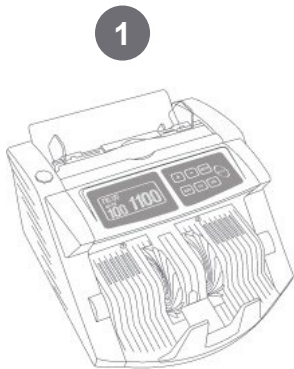
Before using this unit, read this manual carefully to get familiar with the functions and operations of the machine.

2. Box Contents

When opening the box, verify that all the items described below are included.

If any item is damaged or missing, contact your provider.

1. Bill Counter AB1100 PLUS
2. External Display
3. Power Cord
4. User Guide



3. Cleaning of the Machine



WARNING: BEFORE DOING ANY CLEANING, TURN THE POWER SWITCH OFF AND DISCONNECT THE POWER CORD FROM THE MACHINE. KEEP IN MIND THAT PROBLEMS OR DEFECTS THAT ARISE FROM LACK OF PERIODIC MAINTENANCE ARE NOT COVERED BY THE WARRANTY.

A) Cleaning the Optical Sensors

It is important to clean all the sensors to avoid any paper particles or dust from sticking to the IR transmitter or IR receiver sensors. The IR detectors may be wiped with a soft cloth soaked with alcohol.

B) Cleaning the Inside of the Machine Periodically

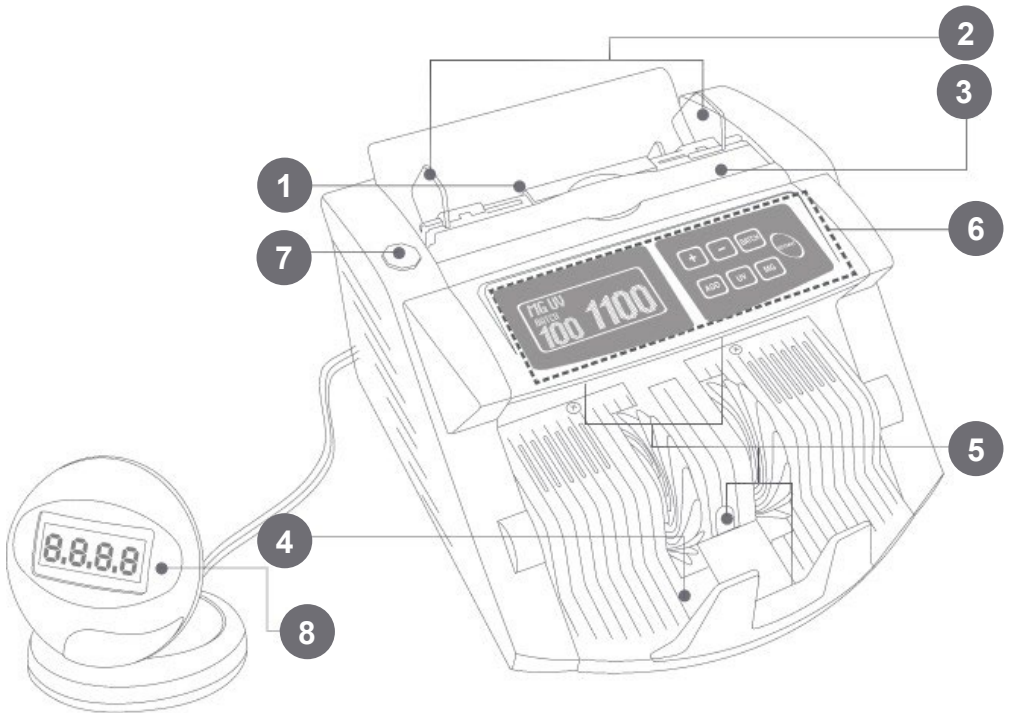
It is necessary to clean the inside of the machine once a month or when needed. Unplug the machine and lift the top cover (where the handle lays) to gain access to the interior.

C) Additional Recommendations

Avoid operating the machine in a dusty or dirty room. To guard the machine against the elements, always keep it protected with the supplied cover (when not in use).

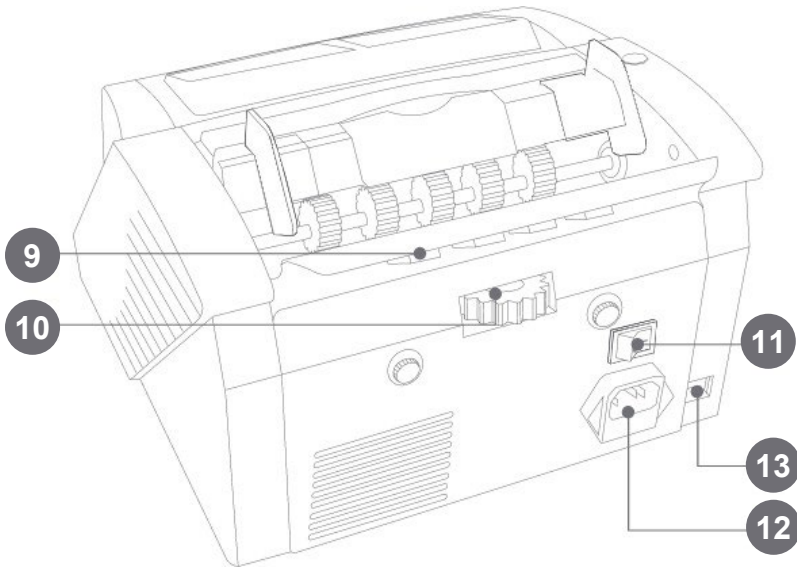
4. General Controls and Parts

1. Hopper
2. Hopper Guiders
3. Retractable Handle
4. Stacker
5. Optical Sensors
6. Control Panel
7. Emergency Stop Button
8. Auxiliary Counting Screen



4. General Controls and Parts (cont.)

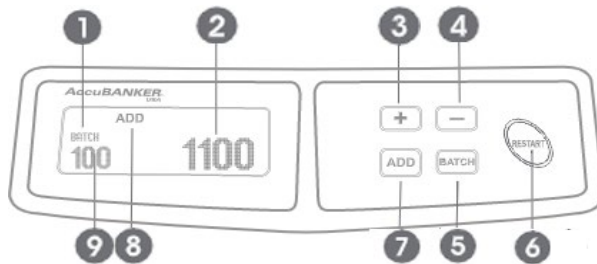
- 9. Rubber Tongue
- 10. Bill Thickness Adjustment Screw
- 11. Power Switch
- 12. Power Cord Outlet
- 13. Auxiliary Screen Jack



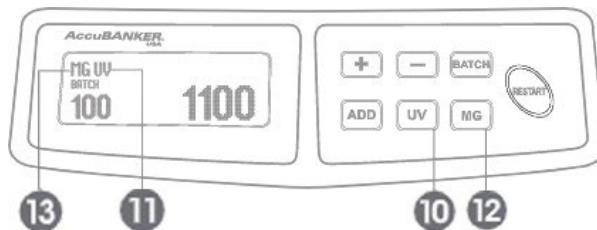
4. General Controls and Parts (cont.)

4.1 Control Panel and Display

1. Pre-set Number (Batch)
2. Counting Number (Counter)
3. Batch "+" Button (To add)
4. Batch "-" Button (To subtract)
5. Batch Button (Pre-set to 100, 50, 30, 20, 10, and 5)
6. Restart Button (For manual restart)
7. ADD Button (Addition function)
8. "ADD" Indicator
9. "BATCH" Indicator



10. UV Button (Ultraviolet detection)
11. "UV" Indicators
12. MG Button (Magnetic detection)
13. "MG" Indicator



5. Features

5.1 Counting Mode

Once turned on, the machine defaults to this mode, and will start to count the bills placed in the hopper.

5.2 Pre-set Batching Function

Counts bills per batch up to the numbers pre-set with the "Batch" and "+" or "-" buttons. In the batch pre-set mode, the machine is restarted by taking out the batched bills from the stacker. The unit will batch all inserted bills in the pre-set batch amount.

5.3 ADD Function

Counts all bills placed in the hopper and will add the total of all consecutive operations up to 9999 digits. Removing the counted bills from the stacker will not reset the counting quantity displayed on the screen.

5.4 MG and/or UV Detection Buttons

Counts all bills and will detect suspicious bills using different detection methods. The **AB1100 PLUS UV** uses UV fluorescence detection. The **AB1100 PLUS MG/UV** uses both, Magnetic, and UV detection systems.

5. Features (cont.)

5.5 Automatic Start

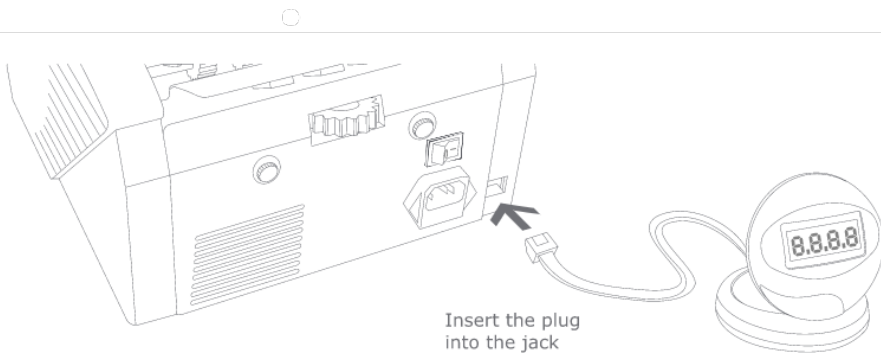
The machine starts counting when bills are placed in the hopper.

5.6 Emergency Stop Feature

The unit stops automatically when the resistance in the feeding friction rollers increases abnormally. Moreover, a red octagonal button located on the upper left side of the unit stops all operations when depressed.

5.7 Auxiliary Counting Screen

The AB1100 PLUS Series is equipped with an auxiliary counting screen. This accessory will help the user visualize the quantity of counted bills when the unit is placed out of his range of vision. It also serves the purpose of allowing third parties to visualize the count. The screen is automatically activated by plugging it into the unit.



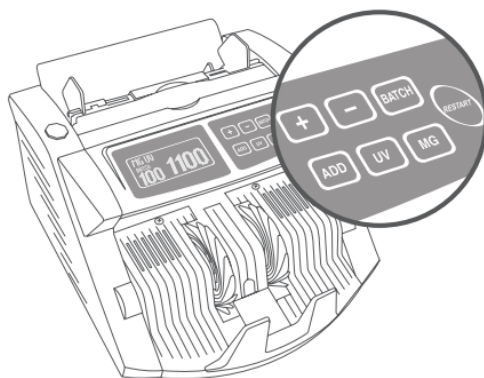
6. Operations

6.1 Power Up

Connect the power cord to the unit, then to a power source, and turn the power switch ON; the unit will conduct a self-check by spinning the counting wheels several times. The counting number display will show "0" when the unit is ready to start counting.

6.2 Mode Selection

Select the function you want to use: "ADD", "BATCH", "UV", or "MG" using the control panel. When turned on, the unit will automatically set the "MG" and/or "UV" functions to verify for counterfeit banknotes (for AB1100 PLUS UV and/or AB1100 PLUS MG/UV models only).



6. Operations (cont.)

6.3 Counting Function

Once the bills are correctly placed in the hopper plate, the machine will start counting automatically. The counted bill numbers will be shown on the Display. Moreover, once the bills are removed from the stacker and a new bundle of the bill is placed into the hopper, the "Counter" display will clear and the "Batch" display in turn will show the number from the previous counting.

1. Place the bills between the counting guides as shown in Figures 1 and 2. Swiftly, push the bills with a finger (see Figure 3) to make them rest on top of the hopper plate, in the correct counting position.

Figure 1

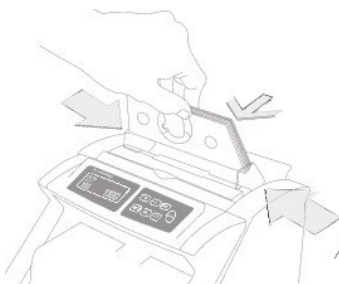


Figure 2



Figure 3



6. Operations (cont.)

6.3 Counting Function (cont.)

2. The machine will count until the hopper is empty or reaches a pre-set batching number.
3. The number of counted bills is displayed on the screen.
4. The next counting operation will start again, with "0" on the screen.
5. Loading the hopper with additional bills (without removing the previous notes accumulated on the stacker) will start the next counting operation automatically. The newly counted quantity will be added to the previous one.

6.4 Ultraviolet Detection Function

(Available for the models AB1100 PLUS UV and/or AB1100 PLUS MG/UV, only)

UV detection function is selected or deselected by pressing the UV button on the control panel.

Operation

If the unit detects a suspicious bill, it will stop counting and will emit a warning sound, meanwhile, the display shows the message "**UV ALARM**", alerting the user of the presence of a suspicious bill. The problematic bill will be the last one on the stacker. The warning message and the alarm will remain until the bills on the stacker have been removed or RESTART is pressed.

6. Operations (cont.)

6.4 Ultraviolet Detection Function (cont.)

UV Sensitivity Adjustment

a- Fine-Tuning Sensitivity Adjustment (UV parameter)

For adjusting the sensitivity of the UV function, press the UV button for 3 seconds. The display will show the current sensitivity level (UV-X). Using the "+" or "-" buttons, choose the desired sensitivity level from 1-9. To set the desired sensitivity level, press RESTART.

b- Coarse Tuning Sensitivity Adjustment (UN parameter)

Turn the unit OFF, then turn it ON again but having pressed the UV key. The display will show the current sensitivity level (UN-X). Using the "+" or "-" buttons, increase it or reduce it. Press RESTART to save the new value and test the unit after every adjustment.

NOTE: Do not increase the UN sensitivity too much in order to avoid false positives events.

6. Operations (cont.)

6.5 Magnetic Detection Functions

(Available for the model AB1100 PLUS MG/UV only)

The MG detection function is selected or deselected by pressing the MG button on the control panel. The Magnetic function is able to check all types of banknotes that use magnetic ink in its printing process.

Operation

MG function is automatically turned on when the unit is powered up. If the unit detects a suspicious bill, it will stop counting and will emit a warning sound, meanwhile, the display will show the message "**MG ALARM**", alerting the user of the presence of a suspicious bill.

The problematic bill will be the last one the stacker.

The warning message and the alarm will remain until the bills on the stacker have been removed or RESTART is pressed.

MG Sensitivity Adjustment

To adjust the sensitivity of the MG function, press the MG button for 3 seconds.

The display will show the current sensitivity level (MG-X). Using the "+" or "-" buttons, choose the desired sensitivity level from 0-9.

To set the desired sensitivity level, press RESTART.

NOTE: The ultraviolet and magnetic detection systems integrated with the AB1100 PLUS (models UV and MG/UV only,) are valuable instruments that help the user verify the legitimacy of bills. However, like all other counters with integrated detectors found in the market, it cannot guarantee the legitimacy of any bill analyzed by it due to the unpredictable techniques or advances that counterfeiters may introduce.

6. Operations (cont.)

6.6 "ADD" Function

The addition will be performed by pressing the "ADD" button. In this case, the unit will add all the counting performed with this function ON. Removing the counted bills from the stacker will not clear the previous quantity already counted. The total amount will be shown on the display time a bundle of bills is counted.

Pressing the "RESTART" button will clear the count from the display's main section.

6.7 "WIDTH" Detection Function

This feature will allow you to detect bills shorter than the first one counted by the unit. Press down the "Batch" button for 3 seconds to activate it, the current level adjustment will come out on the display (DD-X). The function can be adjusted in the range of 0-9 using the + and - keys.

DD-0 means the function is disabled.

6.8 Bill Density Detection Function

This feature will allow you to detect when two bills that are stuck to each other try to pass through the unit. This will also help determine if a bill doesn't meet the fitness requirements (too worn, damaged, etc.).

To activate it, press the "ADD" button for 3 seconds, the current level adjustment will come out on the display (IR-X). The function can be adjusted in the range of 0-9 using the + and - keys. IR-0 means the function is disabled.

6. Operations (cont.)

6.9 "BATCH" Function

By pressing the BATCH button sequentially, the pre-set batching value will change from 100, 50, 30, 20, 10, 5, and OFF.

Custom batching can be set up in case the user needs a different amount. The user must select the nearest pre-set batching value and reach the final value using the + and - keys.

To clear this function, press the "BATCH" button to clear the indicator on the display.

Once the hopper is loaded, the machine will start counting and will stop when the counted quantity reaches the pre-set batch quantity.

To repeat the batch counting operation under the same pre-set batch quantity, just remove the counted bills from the stacker.

6. Operations (cont.)

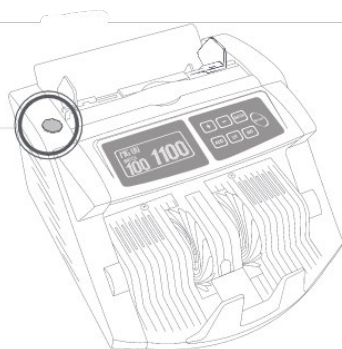
6.10 Emergency Stop Feature

The AB1100 PLUS Series is equipped with an emergency stop button, which protects the user in the event unintended objects (e.g. neckties, scarves, etc.) reach the feeding rollers of the unit. If the internal resistance increases beyond the parameters of normal bill counting, the counting operation is stopped immediately.

In the event of an emergency, this feature can be activated manually by pressing the red Emergency Stop Button located on the upper left side of the machine. The button has a red **LED** indicator that blinks when the function is ON. Once ON, the unit will show the message "**EMERGENCY STOP RESTART UNIT**".

Once the Emergency Stop feature is activated, the machine must be turned OFF, and the foreign objects removed. Then turned back ON to continue the bill counting operations.

Emergency Stop Button



7. Troubleshooting

7.1 Avoiding Problems

Pre-select the bills you are going to count in the machine. Do not count bills:

- a. With staples or metal clips
- b. Torn or washed
- c. Profusely stained
- d. Covered with adhesive media (for AB1100 PLUS UV and AB1100 PLUS MG/UV models, only)

7.2 Jamming

- a. Before you start operating the machine, make sure that there are no foreign elements (such as silica bags) obstructing the moving parts of the unit.
- b. To avoid jamming, load the bills as indicated in this manual. The bill facing you (in front) will go in first.
- c. If jamming occurs, make sure to turn the machine off. Carefully remove the bill stuck into the rollers. Look for any other foreign object like paper clips, rubber bands, etc., and remove them.
- d. Check for proper tightness of the bill thickness adjustment screw, in the back of the unit.
- e. Verify proper placement of the bills on the hopper.

7. Troubleshooting (cont.)

7.3 Counting is Wrong (Miscounting)

- a. Turn the thickness adjustment screw counterclockwise (to reduce friction) or clockwise (to increase friction), small adjustments work best, until the unit is working properly.
- b. Adjust the rubber tongue position until the counting number is right.
- c. Verify the adjustment of the hopper plate bracket. If loose, tighten it according to the instruction given in the "Maintenance" section.
- d. Remove the black rubber tongue. Flip it (one side may be worn out) if necessary. Detailed instructions to complete this procedure can be found in the "Maintenance" section.

NOTE: Some Polymer bills with transparent windows might provoke counting errors depending on their positions inside the bill and the size of the transparent windows.

7.4 Additional Recommendation

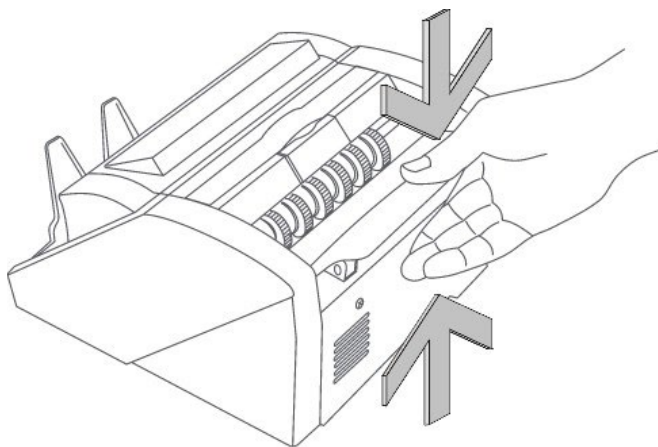
The models AB1100 PLUS UV and AB1100 PLUS MG/UV should never be placed under intense light sources. The sensibility of the UV sensors may be affected.

8. Maintenance

8.1 Verifying the Adjustment of the Hopper Plate

The hopper plate ensures proper feeding of the bills for counting. It is secured to the back of the unit by two pivoting points and a magnetic lock. To verify that the Hopper Plate is properly adjusted, press down, or lift the hopper plate and look for any displacement (see Figure 1). If any displacement occurs, press or lift the hopper plate until the magnetic lock holds the piece in place.

Figure 1



8. Maintenance (cont.)

8.2 Flipping the Rubber Tongue

When should the rubber tongue be flipped?

The rubber tongue should be flipped when the bill thickness adjustment screw does not solve the problem of improper banknote feeding or repeated miscounting errors.

Procedure: Press the hopper plate (metal plate) downward (Figure 1). While pressing the hopper plate down, push back and remove the rubber tongue located underneath the hopper plate (Figure 2).

Figure 1

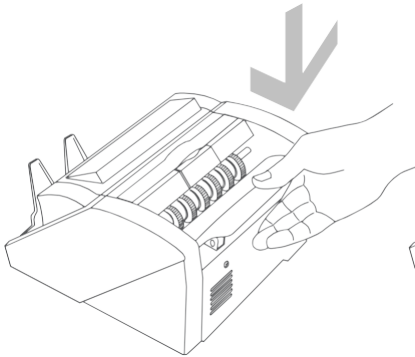
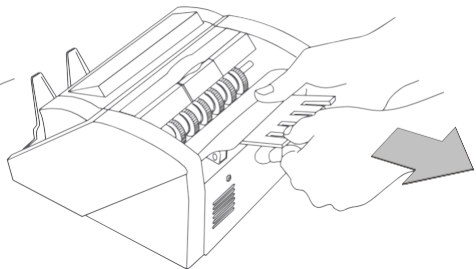


Figure 2



8. Maintenance (cont.)

Flip the rubber tongue and place it back in its original position (Figures 3A and 3B).

Make sure the rubber tongue is 1/4" ahead of the tips of the metal plate that holds it down.

Once both sides of the rubber tongue have been used, contact your local service representative or AccuBANKER to get a new one.

Figure 3A

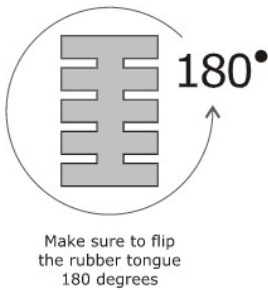
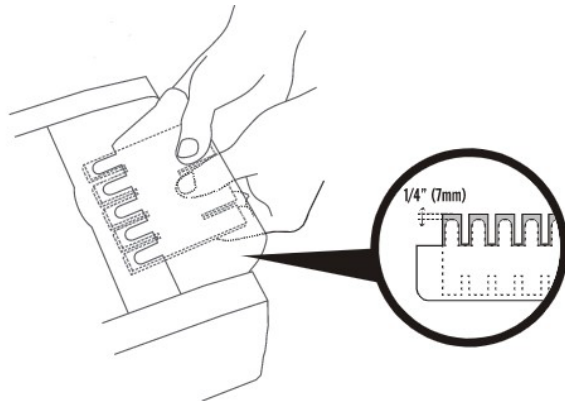


Figure 3B



9. Error Messages

MESSAGES	POSSIBLE CAUSES	SOLUTION
UV ALARM	Suspicious UV features	a) Remove the suspicious bill and count again b) In case you need it, reduce the UV sensitivity
MG ALARM	Suspicious MG features	a) Remove the suspicious bill and count again b) In case you need it, reduce the MG sensitivity
CHAIN ALARM	a) Two or more bills were fed b) Bills jammed inside the unit	a) Verify the Hopper is not loose b) Adjust the Hopper if necessary
WIDTH ALARM	A bill thinner than the rest was detected	Remove the problematic bill
HALF BILL ALARM	Bill size problem	Remove the problematic bill
DOUBLE BILL ALARM	Two bills are stuck together	Remove the problematic bill
EMERGENCY STOP	The emergency stop function is activated	Turn the unit OFF and ON again (RESTART)
COUNT SENSOR ERROR	Problem with the Counting Sensors	Clean the Sensors

10. Specifications

Temperature	32° - 104°F (0° - 40°C)
Humidity	25% - 80%
Variants	Basic, UV, MGUV
Display	LCD
Counting Speed (new bills)	1,300 bills / minute
Feeding System	Roller Friction System
Feeding Type	Back-loading
Hopper Capacity	200 bills (new bills)
Stacker Capacity	200 bills (new bills)
Power Source (INPUT)	110 VAC / 60 Hz or 220 VAC / 50 Hz
Power Consumption	40 Watts Max. (3 Watts Standby Max.)
Accepted Banknote Type	Paper, Polymer, etc.
Accepted Banknote Dimensions (L x W)	3.9 x 1.97 - 7.2 x 3.9 in 10 x 5 - 18.5 x 10 cm
Product Dimensions (L x W x H)	10.8 x 9.8 x 6.7 in (27.5 x 25 x 17 cm)
Product Weight	12.7 lb (5.7 kg)



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