AccuBANKER®

User Guide

D700

Duo Automatic Value and Counterfeit Bill Detector

www.AccuBANKER.com

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.

AccuBANKER®

Table of Contents

Introduction

The D700 incorporates the most sophisticated techniques for the evaluation and detection of counterfeit bills. The D700 allows the user to switch between two pre-programmed currencies. This detector assesses the security features that are present on each bill in detail and determines if the bills are genuine or suspicious while automatically alerting the user, both visually and audibly. This lightweight and portable detector allows the user to verify the authenticity of bills up to 4 bills per second.

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.

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1. Box Contents

1. D700
2. Power Adapter
3. Calibration Card
4. Rechargeable Lithium Battery *(Sold separately)*
5. User Guide & Quick Start Guide
6. Warranty Booklet
7. Cleaning Brush

1.

2.

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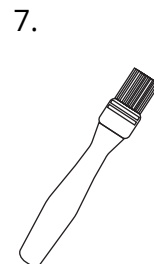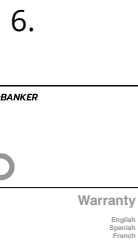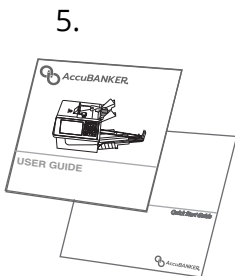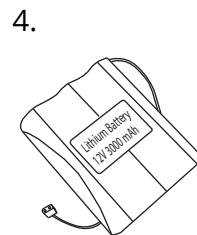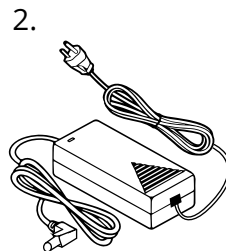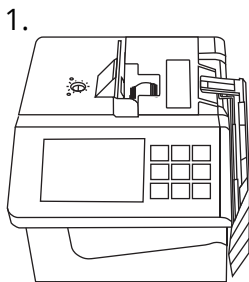
2. Equipment Overview

1. Thickness Adjustment Knob
2. LCD Display
3. Bill Feeding Channel
4. Bill Guider Extension
5. Bill Guider
6. Hopper Tray
7. Micro SD Card slot (Update Software)
8. Control Panel
9. Stacker Tray
10. Stacker Tray Extension
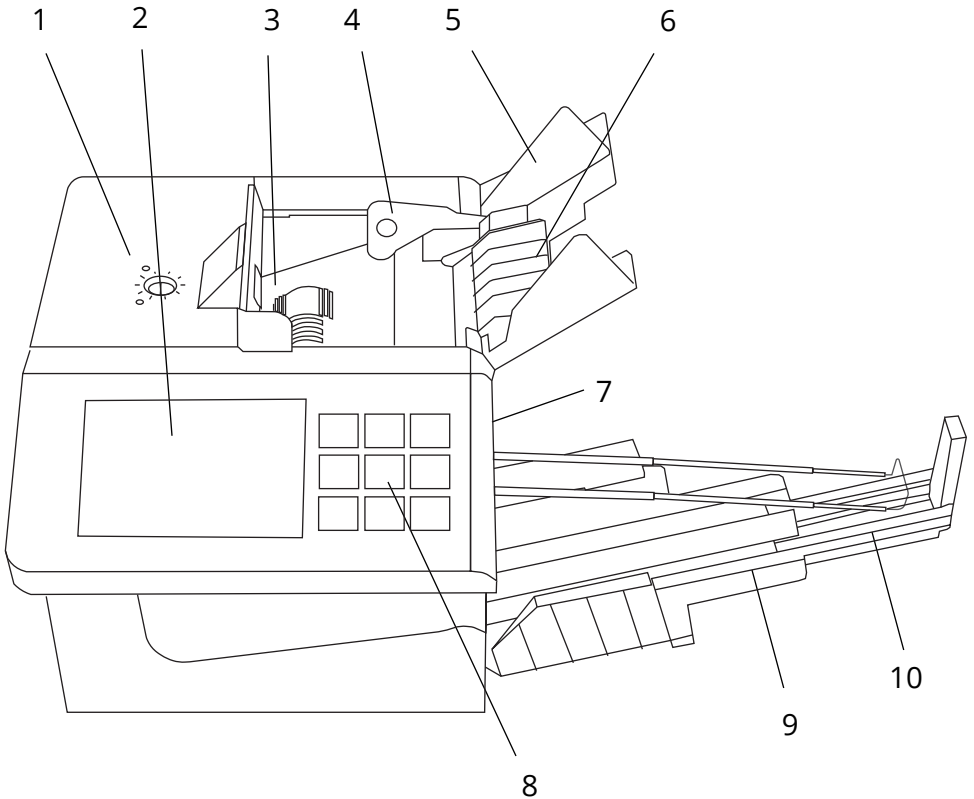
2. Equipment Overview (cont.)

11. Bill Exit Guider
12. Bill Exit Channel
13. Opening Latch
14. Serial Port for Printer
    (Printer is Optional & Sold Separately)

15. On/Off Switch
16. Power Adapter Connector
17. USB Port (Service)
18. Battery Compartment
19. Kickstand
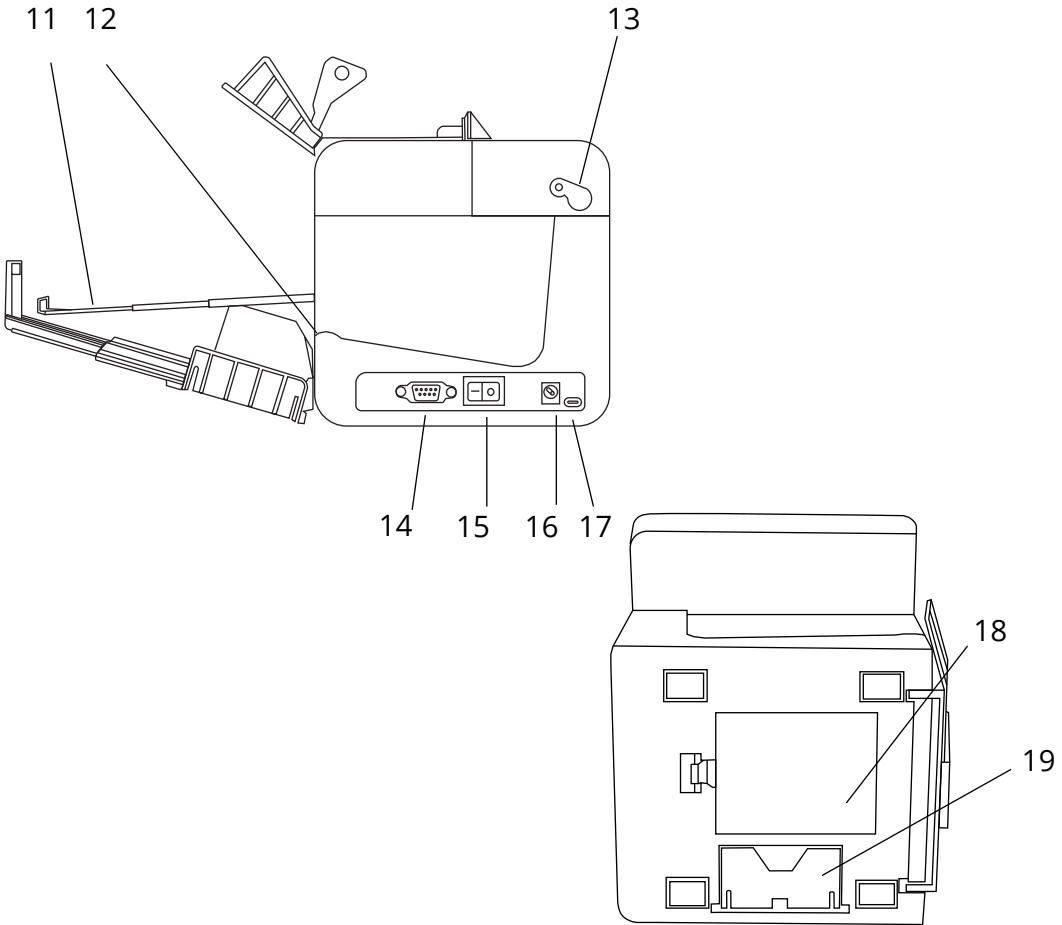
3. Getting Started

3.1 Powering On

The D700 can either be connected to a power outlet or powered by a rechargeable lithium-ion battery.

A. Power Adapter Connection

- Connect the power adapter to the back of the machine and plug it into the electrical outlet.
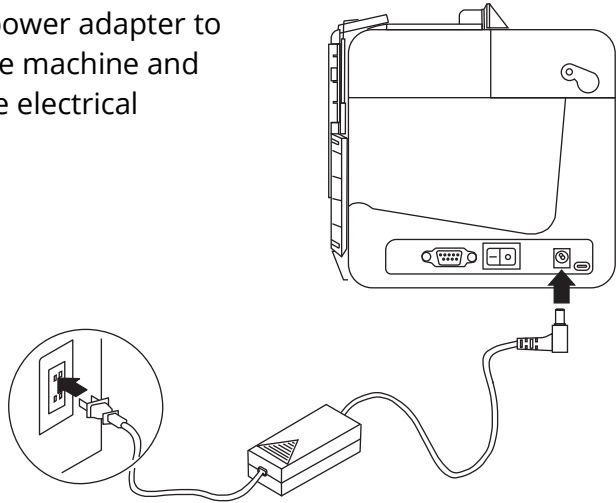
- After connecting the power adaptor turn on the power switch to start operating the equipment.
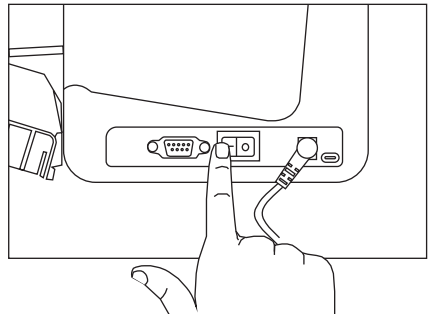
3. Getting Started (cont.)

B. Battery Installation
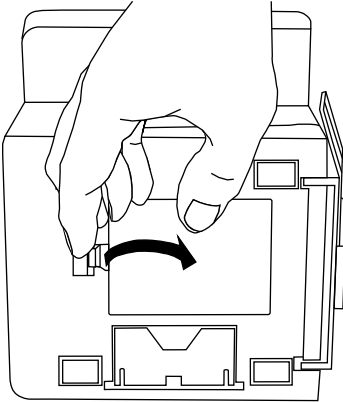
- Remove the battery compartment cover.
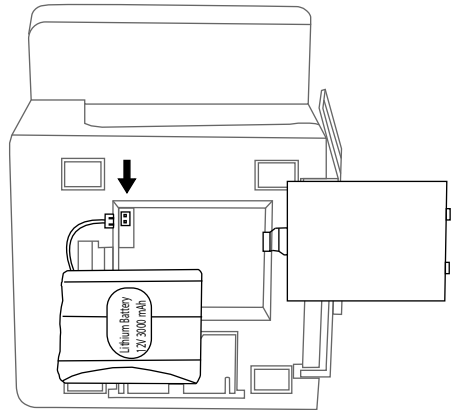
- Connect the battery cable to the machine, insert the battery into the compartment, and close the cover.

3.2 Battery Indicator

When the rechargeable battery is connected the battery indicator on the LCD display will show the life of the battery. The battery indicator will blink while charging.

Less than 30%   More than 30%   More than 70%

Note: When the equipment is working in battery mode, it will automatically turn off if it is not in use for more than 5 minutes to prolong the life of the battery. To restart the machine from the battery saver mode, you will need to turn the switch off and on again.

3. Getting Started (cont.)

3.3 Setting up the Bill Exit Tray
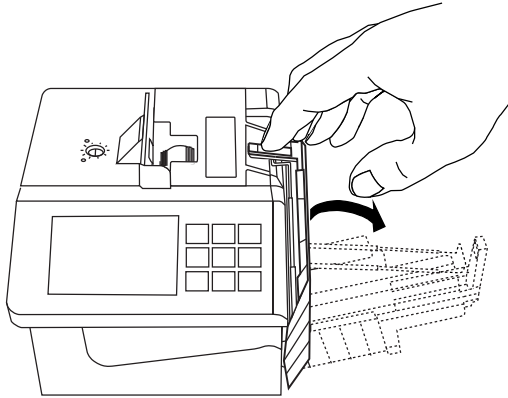
- Open the bill exit tray.

- Expand the guider and bill exit tray completely.

3. Getting Started (cont.)

3.4 Setting up the Bill Entrance Tray
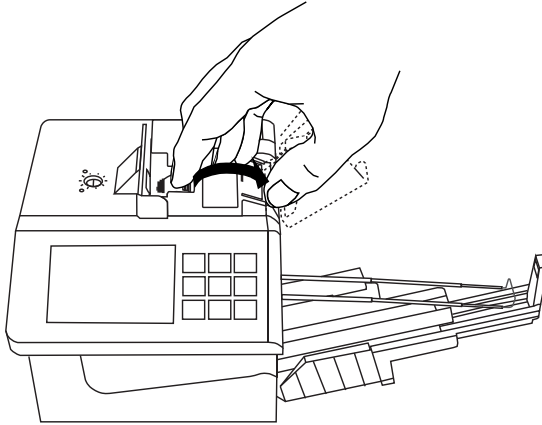
- Open the bill entrance tray.

- Adjust the guider according to the bill's width and move the extension toward the bill feeding channel.

3. Getting Started (cont.)

3.5 Setting up the Kickstand

We recommend the use of the kickstand for better support during the verification and counting of bills.

- Carefully turn the equipment on its side. On the bottom panel, you will find the kickstand.

- Flip the kickstand out and make sure it is completely open before turning the equipment over.
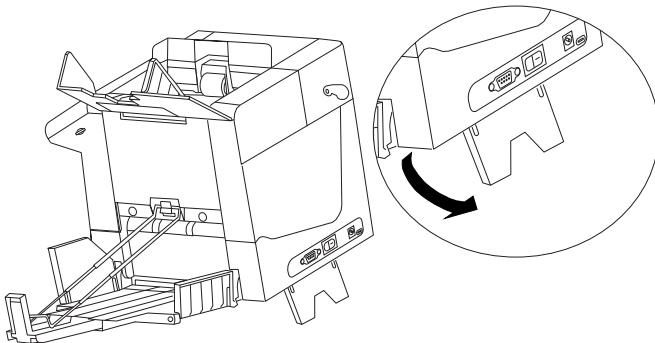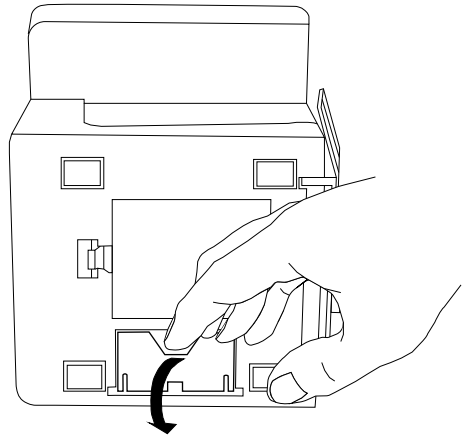
3. Getting Started (cont.)

3.6 Bill Positioning

- This detector can verify the authenticity of bills in any orientation.
- To verify the bills correctly, they must be inserted completely aligned to the left. Then, gently adjust the bill guider to fit the bills. Use Figures 1 and 2 as references.
- Do not insert the bills into the feeding channel if not properly aligned with the guider or at an angle.
- For optimal performance, when verifying bills of different sizes, such as Euros, we recommend organizing them by size before introducing the bills to the feeding channel. Use Figure 2 as a reference.
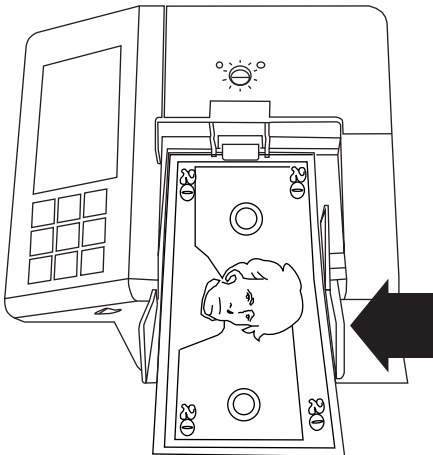
Figure 1   **Figure 2**
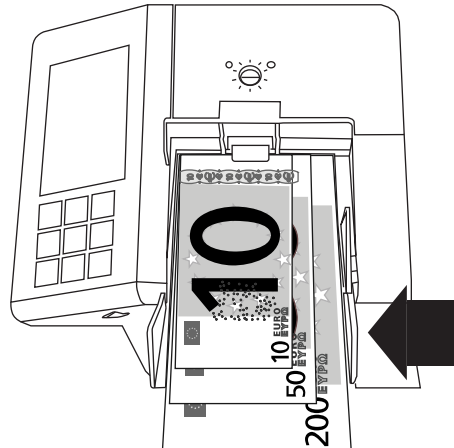
4. Control Panel

4.1 Control Panel Description
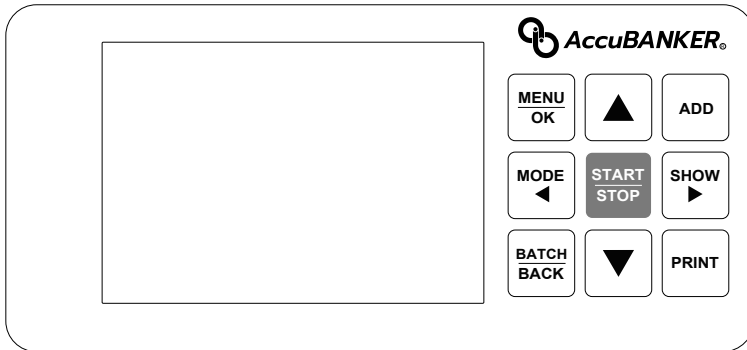
- **START / STOP**: Used to start, resume, or stop the counting operation.

- **MENU / OK:** Access the user menu to customize the unit. It also confirms changes to operations within the menu.

- **ADD:** Enables or disables the addition function. While this function is activated the total amount of the bills processed/counted will be added, as well as the total value. The add icon will light up green while the function is activated.

- **SHOW:** Displays a report with the details of the counts.
  Note: SHOW function does not work when the BATCH function is activated.

- **PRINT:** Print count report when a compatible printer is connected *(printer is optional and sold separately).* Press the button after completing a count to retrieve a printed report. The report will include the results displayed on the screen.

4. Control Panel (cont.)

- **BATCH / BACK:** Used to activate batch count selection and to move back through the User Menu. Press the button to activate the batch function and set the quantity. The default number of pieces is 100. Press the ▲ or ▼ buttons to increase or decrease the number by +/- 10.

    Press the ◀ or ▶ buttons to increase or decrease the number by +/- 1. After selecting a value for the counting batch, the counting will stop after reaching the number of pieces in the preset batch. The batch icon will light up green when the function is activated.

- **MODE:** Used to select between operating modes. Press sequentially to select the desired operating mode.

    1. *MIX:* Verify and count mixed denominations of the programmed currencies. The result is the total amount of money as well as the number of bills counted.
    2. *SORT:* In this mode, the unit memorizes the first denomination scanned, then compares the rest of the bills with this denomination. When a different denomination is found, the unit will stop counting to allow the user to remove the bill. As a result, all bills will sort into the same denomination.
    3. *COUNT:* Used for a simple count of the bills in a stack. In this mode, the unit does not verify any security features of the banknotes or recognize the denomination. The final result will only have the number of bills counted. It is highly recommended to separate the different denominations before counting. The total value of these bills would have to be manually calculated by the user.

- ▲ ▼ ◀ ▶ **:** Navigation keys.

4. Control Panel (cont.)

4.2 LCD Display Description

1. Currency Selected
2. Automatic or Manual Start Mode
3. Sensor Level
4. Batch Quantity Selected
5. Date and Time (24-hour time system)
6. Breakdown of Verified Banknote Count by Denomination
7. Total Number of Rejected Banknotes
8. Denomination of the Last Verified Bill
9. Total Number of Verified Banknotes
10. Total Amount of Verified Banknotes
11. Battery Level
12. Add Function (active when Green; inactive when White)
13. Batch Function (active when Green; inactive when White)
14. Operating Mode Selected
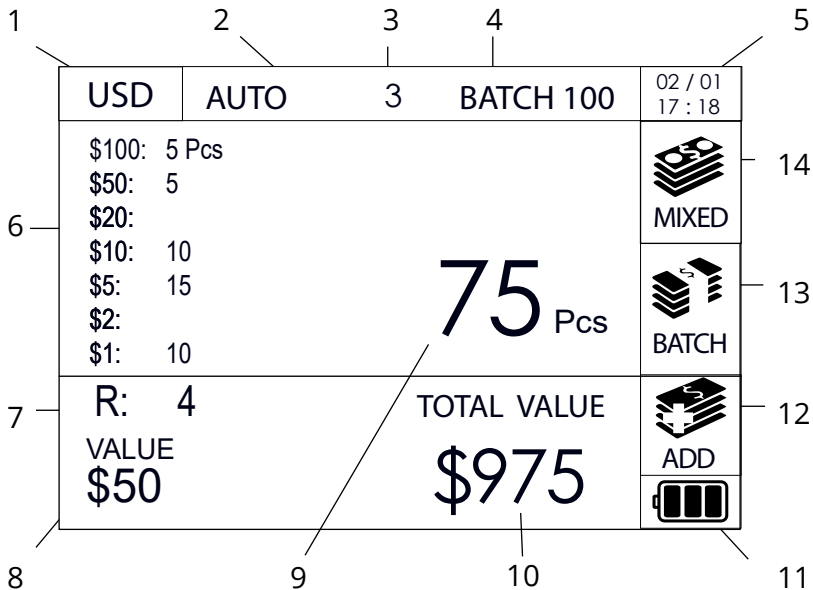
4. Control Panel (cont.)

4.3 Set Up Menu Description

```
          SETUP MENU
┌────────┬────────┬────────┬────────┐
│ COUNT  │SETTINGS│SERVICE │CURRENCY│
│ REPORT │        │        │        │
├────────┼────────┼────────┼────────┤
│ ABOUT  │ SENSOR │SOFTWARE│  DATE  │
│        │ ADJUST │ UPDATE │ & TIME │
└────────┴────────┴────────┴────────┘
```
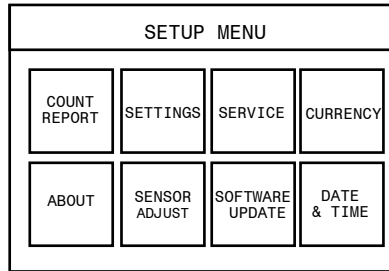
- **COUNT REPORT:** In this function, the user can see the details of the last count. While on this screen, you can also print the counting results.

  NOTE: You can access this function directly from the control panel by pressing the SHOW button.

DEN	PCS	VALUE
$100	5	$500
$50	5	$250
$20	10	$10
$10	10	$10
$5	15	$15
$2	20	$20
$1	10	$10
TOTAL	75	$975

- **SETTINGS:** Used to adjust, activate, or deactivate some of the available functions.

1. **Start Mode:** This function is used to select the start mode. The machine begins counting either automatically, when bills are placed on the hopper tray (AUTO), or manually (MANUAL). Change the mode to switch between each option.

```
               SETTINGS
┌──────────────────────────────────────┐
│ 1.Start Mode                   AUTO   │
│ 2.Show Denomination           │ ON│   │
│ 3.Show Suspicious Bill Count  │OFF│   │
│ 4.LEVEL                         3     │
│ 5.Restart Factory Settings    │OFF│   │
├──────────────────────────────────────┤
│ Press <UP> / <DOWN> key to select the item │
│ Press <LEFT> / <RIGHT> key to change setting │
│ Press <OK> key to save               │
└──────────────────────────────────────┘
```

4. Control Panel (cont.)

```
                SETTINGS

1.Start Mode              AUTO
2.Show Denomination         [ON]
3.Show Suspicious Bill Count [OFF]
4.LEVEL                     3
5.Restart Factory Settings  [OFF]
─────────────────────────────────
Press  <UP> / <DOWN> key to select the item
Press  <LEFT> / <RIGHT> key to change setting
Press  <OK>  key to save
```

2. **Show Denomination:** When activated, the denomination of the last bill processed will be displayed on the screen as it counts. Change to ON or OFF to activate or deactivate this function.

3. **Show Suspicious Bill Count:** When activated, the number of bills marked as suspicious will display on the screen. Change to ON or OFF to activate or deactivate this function.

4. **Level:** Used to adjust the intensity level for the infrared sensors, from 1-5. (This function is not available for all currencies such as USD and EUR. It is only available for certain programmed currencies. Contact us for more information.)

5. **Restart Factory Setting:** Used to restore all parameters of the unit to factory default settings. Change to ON and press OK to initiate the factory reset.

6. **Feed Sensor Level:** Reserved for technical service only.

```
                SETUP MENU

  ┌────────┐ ┌────────┐ ┌────────┐ ┌────────┐
  │ COUNT  │ │SETTINGS│ │SERVICE │ │CURRENCY│
  │ REPORT │ │        │ │        │ │        │
  └────────┘ └────────┘ └────────┘ └────────┘
  ┌────────┐ ┌────────┐ ┌────────┐ ┌────────┐
  │ ABOUT  │ │ SENSOR │ │SOFTWARE│ │  DATE  │
  │        │ │ ADJUST │ │ UPDATE │ │ & TIME │
  └────────┘ └────────┘ └────────┘ └────────┘
```

- **SERVICE:** Reserved for technical service only.
- **CURRENCY:** Used to select the currency to be verified or counted.

4. Control Panel (cont.)

- **ABOUT:** Used to view the information, specifications, and version of the software currently programmed.

- **SENSOR ADJUST:** Used to calibrate the counterfeit detection sensors. For more details on how to adjust these sensors, see section *5.4 Sensor Calibration*.

- **SOFTWARE UPDATE:** Used to update the equipment. For more details on how to update the software, see section *6. Software Update.*

- **DATE & TIME:** Use this function to set or adjust the date, time, and day. Move the selector using the navigation keys on the control panel.

    Use the keys ▲ ▼ to select the parameters to modify.

    Use the keys ◀ ▶ to increase or decrease the values.

    Use the OK key to confirm and save the new configurations.

```
┌─────────────────────────────────────────┐
│              DATE & TIME                  │
├─────────────────────────────────────────┤
│                                           │
│   DATE:      2021 / 02 /                  │
│                                           │
│   TIME:       13  : 30 : 39               │
│                                           │
│   DAY:       Tuesday                      │
│                                           │
├─────────────────────────────────────────┤
│ Press <UP> / <DOWN> key to select the item│
│ Press <LEFT> / <RIGHT> key to change the parameter│
│ Press <OK>  key to save                   │
└─────────────────────────────────────────┘
```

5. Troubleshooting and Maintenance

5.1 Suspicious Bill Warning

The D700 detector verifies the Magnetic (MG), Infrared (IR), Watermark (WM), Ultraviolet (UV), Banknote Thickness (TD), Length, and other security features present on bills. If any of these security features do not pass the banknote verification process, an error message (FAILED) will appear on the screen. The unit will also emit three audible warnings, and the count will stop so the user can remove the suspicious bill. This bill will not be included in the total amount verified, or the total of pieces counted. It will only be included in the total of rejected bills.

If a bill is detected as suspicious, it is recommended to pass the bill at least three more times, in different orientations. Bills, which are not necessarily counterfeit, can be rejected by the equipment due to different reasons:

- Bills are too wrinkled
- Bills are very stained or dirty
- Bills are damp, wet, and/or broken
- Bills are taped or stapled
- The correct currency was not selected
- Bills were not inserted correctly or using the bill guider

5. Troubleshooting and Maintenance (cont.)

5.2 Preventive Measures

To maintain optimal performance of the detector, please note the following:

1. Avoid direct exposure to powerful sources of light as well as magnetic interference (e.g. microwaves, cell phones, or Wi-Fi equipment), which will affect the sensors of the detector.

2. Keep the sensors clean.

3. Keep the equipment off when it is not being used for a long period of time.

4. To avoid jamming, please:

    - Ensure there are no foreign objects that could accidentally fall into the equipment (clips, adhesive tape, or others).
    - Make sure to position the bills correctly before inserting them into the feeding channel. See section *3.6 Bill Positioning*
    - Make sure the bill is in good condition, following the suggestions below.

5. Check the status of the bills and avoid processing the following:

    - Bills with staples
    - Bills with adhesive tape, or other glue
    - Bills that are ripped or badly damaged
    - Bills that are wet
    - Bills affected by chemical agents of any kind

Note: A new stack or bundle of bills should be fanned before counting to make sure no bills are stuck together.

5. Troubleshooting and Maintenance (cont.)

5.3 Jamming

If a bill or other object accidentally gets stuck inside the detector, follow these steps:

1. Turn off the detector immediately.
2. Use the opening latch to access the interior compartment. Open the equipment to access the interior detection channel. Please see Figure 1 for reference.
3. Carefully proceed to remove the bill or object causing the problem.
4. Close the equipment securely.
5. Turn the detector back on and verify its performance.

Figure 1
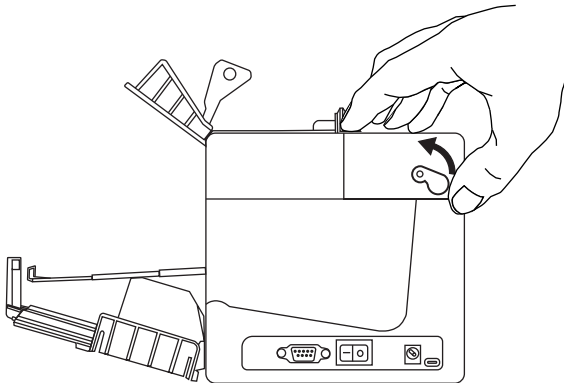
5. Troubleshooting and Maintenance (cont.)

5.4 IR Sensor Calibration

If the detector rejects an unusual number of bills, the sensors may need to be calibrated. To do this, follow these steps:

1. Use the calibration card that comes with the kit to calibrate the sensors. (Contact our technical support if you don't have your calibration card)

2. Turn on the equipment.

3. Use the opening latch to access the interior compartment. Open the equipment to access the interior detection channel. (Figure 1)

4. Place the calibration card inside the equipment horizontally, covering the sensors. (Figure 2)
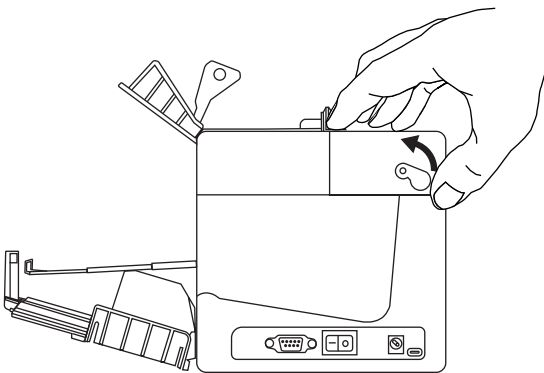
Figure 1   **Figure 2**
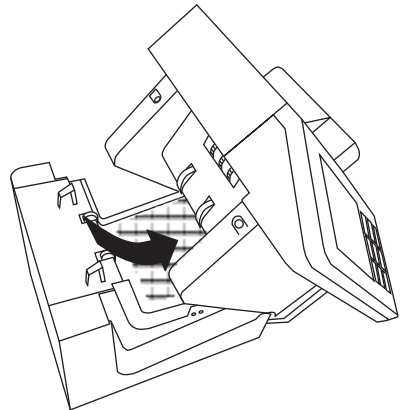
5. Troubleshooting and Maintenance (cont.)

5.4 IR Sensor Calibration (cont.)

5. Close the compartment, leaving the card inside the detection channel.

6. Press Menu to enter the set-up menu and use the navigation keys to scroll and select the sensor adjustment mode. (SENSOR ADJUST)

7. Use the navigation keys to select the "STATIC SENSOR CALIBRATION" mode and press "OK".

8. Within the sensor calibration function (SENSOR CALIBRATION) press "OK" to start the calibration. The equipment will confirm after a few seconds if the calibration was successful or not.

9. If the calibration was not successful, repeat the calibration by pressing "OK" one more time. If the error persists, check if the calibration card is properly placed over the sensors inside the equipment.

10. Turn off the equipment, open and remove the calibration card after you have finished calibrating the sensors.

*If the calibration continues to be unsuccessful or the issue persists, please contact our Technical Support team for assistance.

5. Troubleshooting and Maintenance (cont.)

5.5 Maintenance

⚠ **CAUTION:** Before performing any cleaning procedure, turn off the equipment and unplug it. Please note: problems or defects caused by lack of maintenance are not covered under the warranty.

Avoid keeping and operating the machine in dusty rooms and without adequate hygienic conditions. It is necessary to clean the interior of the unit once a month or more, depending on the use. Turn off and unplug the machine before proceeding with this operation.

5.6 Cleaning the Magnetic Heads and IR Sensors

1. Turn off the equipment and open the detection channel module using the opening latch to access the sensors.

2. Use the brush to remove the dust and, if possible, use compressed air for the best results.

3. Use an alcohol swab to remove dirt on the magnetic heads.

Visit **www.accubanker.com** to purchase a Maintenance Kit.

5. Troubleshooting and Maintenance (cont.)

5.7 Feeding Gap Thickness Adjustment

Proceed with this calibration when the bills are not fed smoothly through the machine or several error messages are occurring too often like Count Error, Length Error, etc.

Other reasons that might require readjusting the feeding gap are:
- The counting of new or mint condition bills
- The counting of poor or bad fitness condition bills
- Polymer bills and Paper-made bills counted together

Having the correct feeding gap will ensure a smooth counting as well as a trouble-free unit's operation.

Trial and error attempts are recommended before you make the final adjustment.

NOTE: For new bills, it is recommended to leave the gap narrow. For used and worn bills, it is recommended to widen the gap.

a. For new (thinner) bills, as well as Polymer notes, adjust toward "-" to reduce the gap.
b. For used (thicker) bills, adjust toward "+" to increase the gap.
c. Small adjustments towards the "+" direction work best.

0

\- +

Reduce thickness gap
rotates knob toward "-"   Increase thickness gap
rotates knob toward "+"
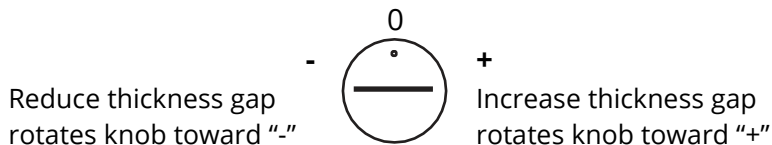
6. Software Updates

To install new software, follow these steps:

1. Visit **www.accubanker.com/pages/Support-D700** to check if a software update is available. If there is a new update, download and copy the programming software to a microSD card (16GB or less).
2. Turn off the equipment.
3. Insert the microSD card into the upgrade port on the right side of the detector.
4. Turn on the detector and wait until it finishes restarting the equipment.
5. Press the MENU key and use the navigation keys to scroll and select Software Update.
6. Press "OK" to start the software update. The update will begin to install, and the process will take approximately one to two minutes.
7. At the end of the update, the equipment will confirm if the process was successful, and then you can remove the microSD card.

7. Error Messages

During its operation, the unit may report some error messages to notify the operator of an incident or anomaly detected. The table below describes the possible error messages and possible solutions. If any issue persists, please contact our Technical Support team for further assistance.

Self-Test Error Codes		
ERROR	**CAUSE**	**SOLUTION**
S01	Start Signal Error	Place the banknotes correctly in the bill entrance tray, align properly using the bill guider.
S02	Motor Error	Turn off equipment, and open the interior compartment to access the sensors. Clean the sensors with a brush and make sure the detection channel is properly closed. Then turn on the equipment.
S03	Sensor MG-1 Error	
S04	Sensor MG-2 Error	
S05	Sensor MG-3 Error	
S06	Sensor MG-4 Error	
S07	IR-1 Transmission Sensor Error	
S08	IR-2 Transmission Sensor Error	
S09	IR-3 Transmission Sensor Error	
S10	IR-4 Transmission Sensor Error	
S11	Reflection Sensor Error IR-Up2A	
S12	Reflection Sensor Error IR-Up2B	
S13	Communication Error	Contact Technical Support.

7. Error Codes (cont.)

Detection Error Codes		
ERROR	**CAUSE**	**SOLUTION**
D01	Abnormal Length	Pass the bill one more time. If the error persists, try to pass the bill in a different orientation. Make sure the bill is in good condition. (See section 5.2 for more information) Clean the sensors. (See section 5.6 for more information)
D02	Suspicious MG Sensitivity	
D03	Suspicious IR-1 signal	
D04	Suspicious UV-1 Signal	
D05	Suspicious IR-2 signal	
D06	Suspicious IR-3 signal	
D07	Suspicious IR-4 signal	
D08	Suspicious UV-2 signal	

Count Error Codes		
ERROR	**CAUSE**	**SOLUTION**
C01	Bill Entrance Error	Place the banknotes correctly in the bill entrance tray, align properly using the bill guider.
C02	Count Sensor # 0 Error	
C03	Count Sensor # 1 Error	
C04	Emergency Stop	Remove the bill from the tray and place them again.

8. Specifications

Temperature	32° - 104°F (0° - 40°C)
Humidity	25% - 80%
Display	LCD
Counting Speed (new bills)	250 bills/minute
Feeding System	Roller Friction System
Feeding Type	Top-loading
Hopper Capacity	100 bills (new bills)
Stacker Capacity	100 bills (new bills)
Power Source (INPUT)	100 - 240 VAC 60/50 Hz
Power Consumption	7 Watts Max.
Battery Type	Rechargeable Battery Optional (Sold Separately)
Accepted Banknote Type	Paper, Polymer, etc.
Accepted Banknote Dimensions (L x W)	3.38 x 6.14 in 8.58 x 15.60 cm
Printer	Printer Compatible (Sold Separately)
Thermal Printer Paper Dimensions	Dimension: 2.25" x 125' Max. Core Diameter: 0.5"
Product Dimensions (L x W x H)	Open: 7.7 x 13.4 x 7.7 in (19.5 x 34 x 17.5 cm) Closed: 7.7 x 6.5 x 6.9 in (19.5 x 16.5 x 17.5 cm)
Product Weight	4.70 lb (2.13 kg)

Note

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