

HIGHLY CONFIDENTIAL

DRAFT!

X-1 Series

**Currency Discriminating Counter with
Stacker and Reject pocket**

Instruction Manual Vol 1.0



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Chapter 1. Introduction

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Introduction

This guide covers the installation, maintenance, and troubleshooting of X-1 Series Currency Discriminating Counter. We recommend reading this guide thoroughly before operating the Currency Discriminator. Then, as you become more familiar with X-1, use it as a reference guide to look up information when you need it.

Compliance Statement

THIS DEVICE COMPLIES WITH PART 15 OF FCC RULES. OPERATION IS SUBJECT TO THE FOLLOWING CONDITIONS:

1. THIS DEVICE MAY NOT CAUSE HARMFUL INTERFERENCE, AND
2. THIS DEVICE MUST ACCEPT ANY INTERFERENCE RECEIVED, INCLUDING INTERFERENCE THAT MAY CAUSE UNDESIRE OPERATION.

FCC Notice

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 emit radio frequency energy and, if not installed and used in accordance with the instruction manual may cause harmful interference in radio communications.

Operation of this equipment in a residence area is likely to cause harmful interference in which case the users will be required to correct the interference at their own expense.

Changes or modifications of this product not expressly approved by manufacturer, could void the user's authority to operate the equipment.

Abbreviations and Acronyms

USB	Universal Serial Bus
IR	Infrared
MG	Magnetic
MB	Megabyte
PC	Personal Computer

Safety Precautions

Please read the safety precautions below before operating X-1 Currency Discriminator Counter. These safety precautions guideline must be observed to avoid any potential hazards that could resulted in personal injuries or damage to X-1 Currency Discriminator Counter.



Electrical Safety!

To avoid the risk of electrical shock, fire, or damage to X-1 Currency Counter:

1. Do not remove the side, and bottom covers in any situation.
2. Do not disassemble X-1 by yourself.
3. Do not use damaged or worn power cords or plugs. Use the power cord supplied inside the original packaging carton and connect to a properly grounded power outlet or to a power strip. The power source for X-1 is between AC 90V~240V, 60 Hz.
4. Keep metal objects, such as paper clips, away from the hopper and stacker. If an object does fall into the unit, turn off the power and unplug X-1 immediately. Contact an authorized X-1 service provider for assistance.
5. Keep liquids away from X-1. Do not operate the Currency Counter if it is wet. Also, do not touch the Currency Counter if you are wet. If a spill occurs, turn off the power and unplug X-1 immediately. Contact an authorized X-1 service provider for help.

WARNING



The Currency Counter may start operating automatically in certain circumstances. Therefore, it is important to always follow these below precautions:

1. Do not wear loose clothing or jewelry while operating the Currency Counter.
2. Make sure that your hair does not touch the Currency Counter.
3. Do not touch banknotes that has been placed in the stacker while the motor is running.
4. Turn off the power before performing any maintenance or error corrections that require you to put your hands into the machine.
5. Keep X-1 away from magnets, activated cellular phones, electrical appliances, or speakers within 13 cm / 5 inch.



Cautions!

-
- Keep drinks, food, and other foreign objects away from the Currency Counter.
 - Placing foreign objects on or into the Currency Counter can interrupt operation of the machine.
-

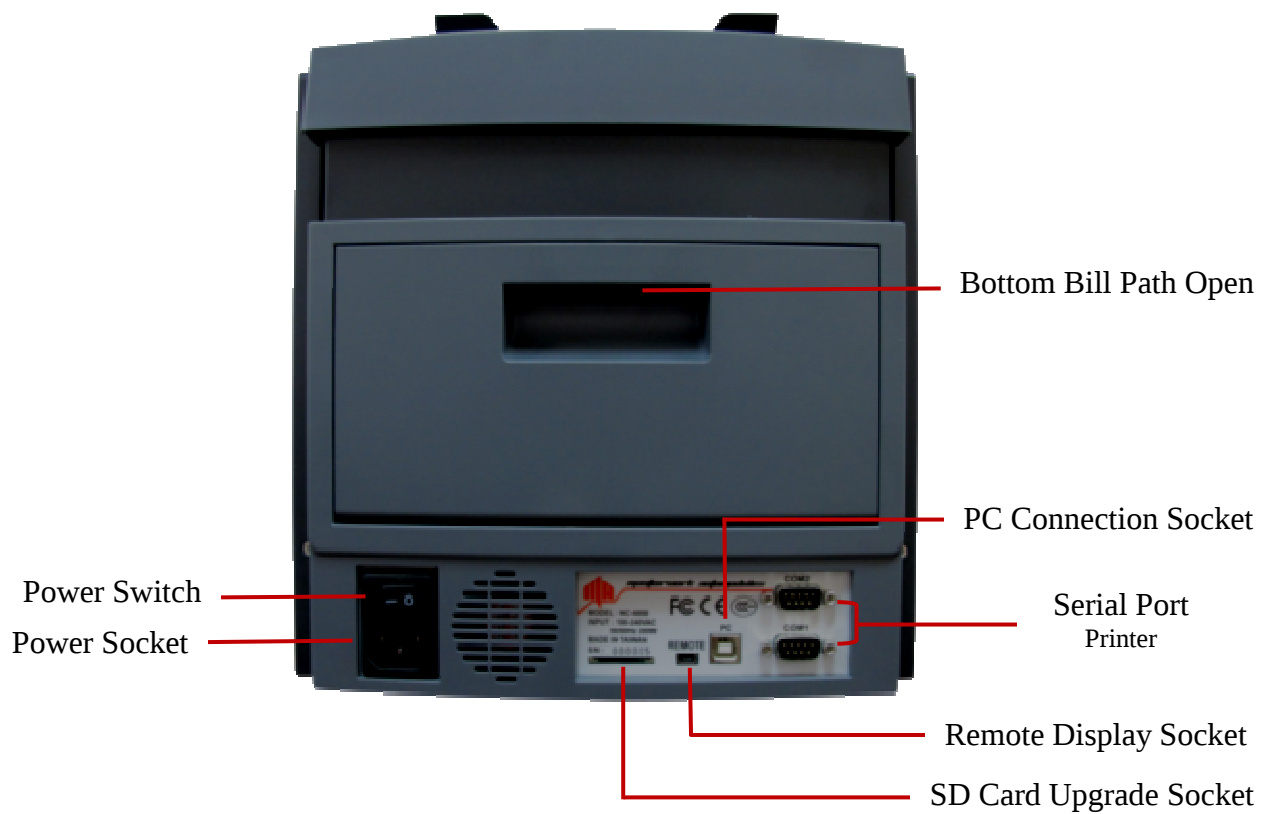
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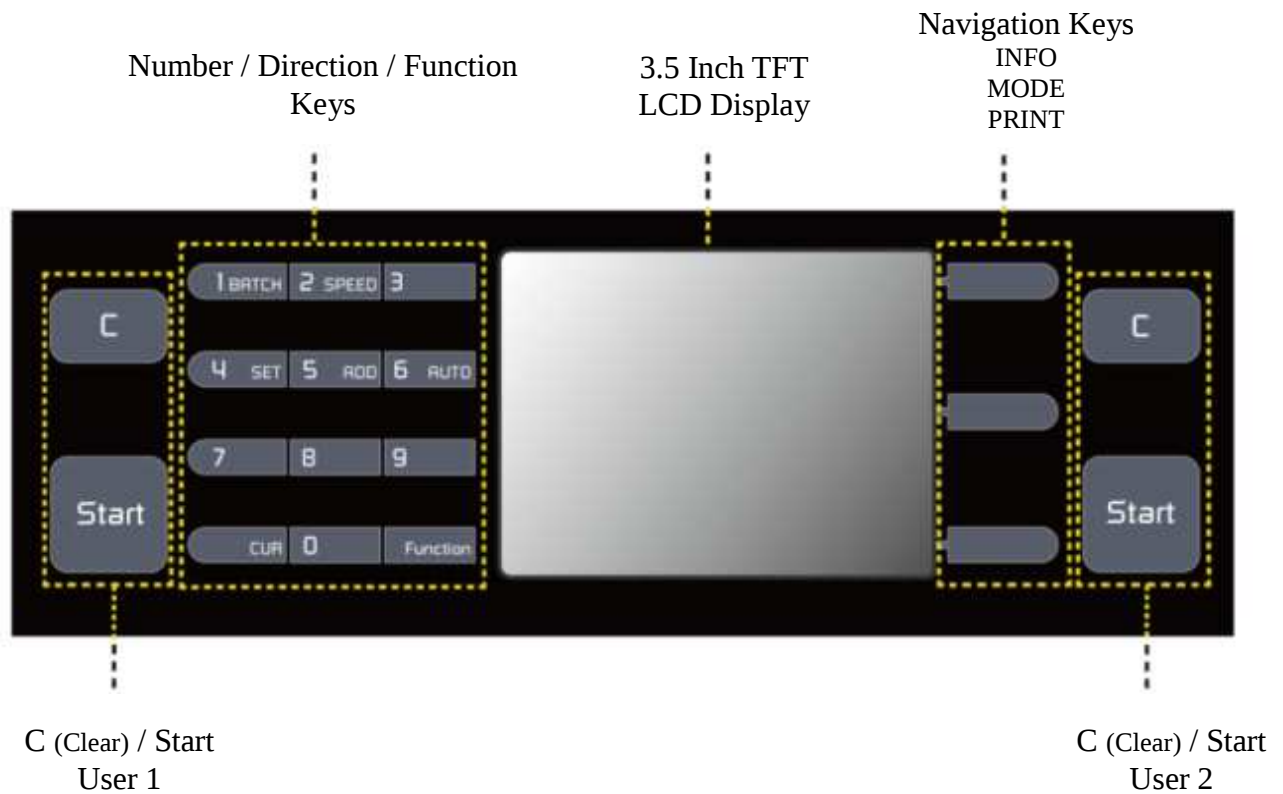
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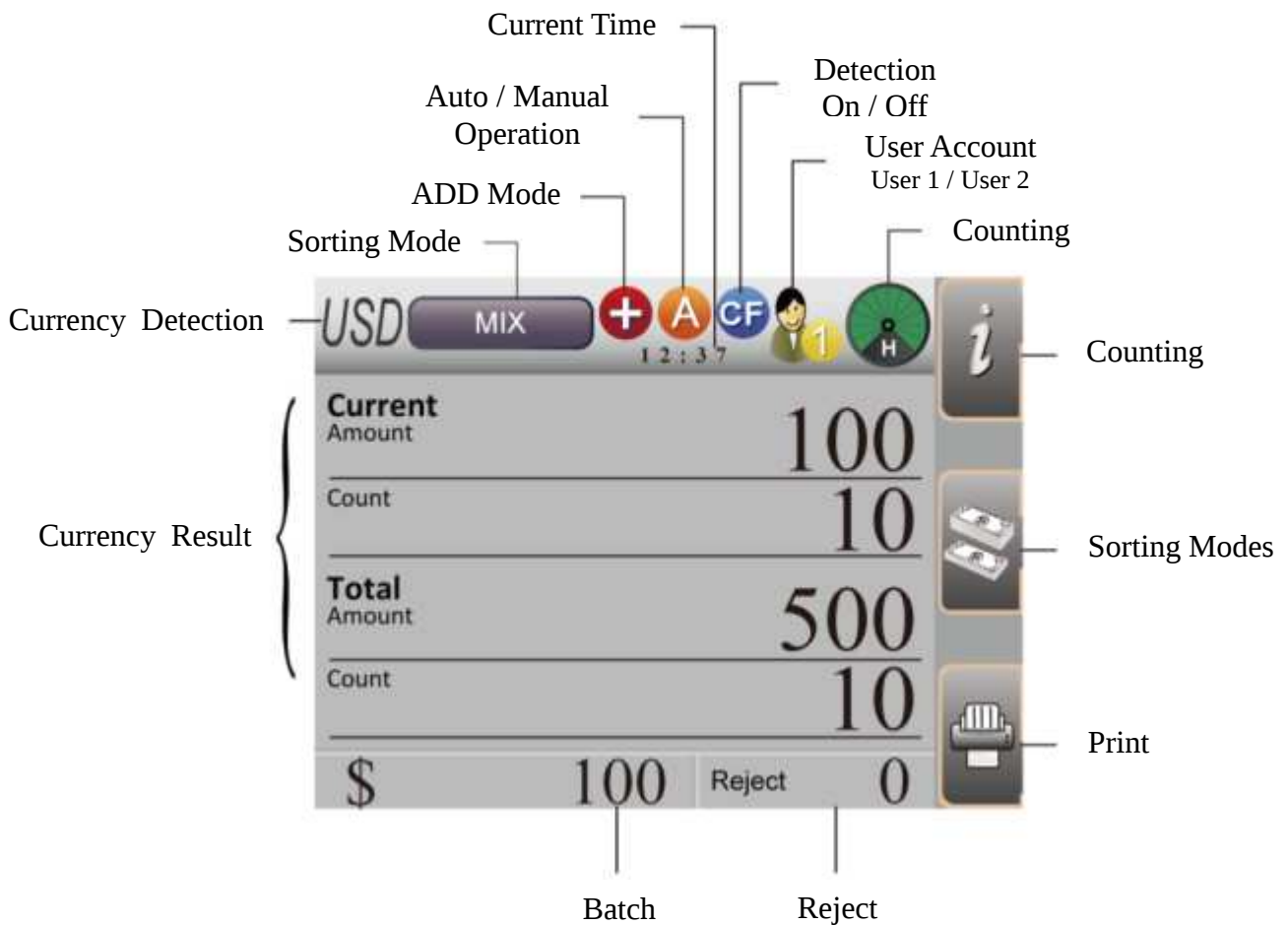
X-1 at a Glance



Overview of Control Panel



Overview of LCD Display



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Power On / Off

To Power on X-1,

- ❶ Plug one end of the power cord into the back of the machine and the other end into a standard AC power wall outlet (properly grounded) or to a power strip.
- ❷ Turn on the Power Switch button On ("I") the right side of the device.
- ❸ After initializing, X-1 will enter into main display.



To Power off X-1

- ❶ Confirm that all of the counting results are saved prior to powering off the machine.
- ❷ Turn off the Power Switch button to Off ("O").

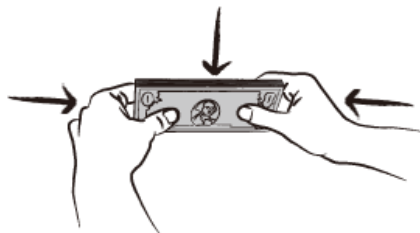
Placing Bills on the Note Hopper

To operate the device without malfunctioning, please follow the below instructions:

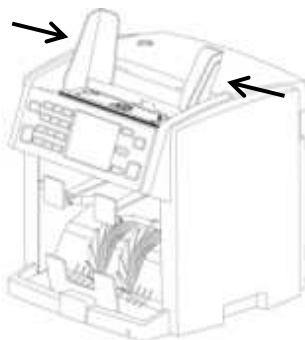
- ❶ Avoid counting wet, excessively dirty or spoiled banknotes.
- ❷ Check for foreign object mixed with banknotes, i.e.: paper chips, rubber bands, clips, dust, etc. which will jam the bill path or even may damage the sensors.
- ❸ Prior counting, remove severely folded or curled banknotes from the stack of banknotes to be counted.



- ❹ Align all the corners and edges of banknotes to avoid rejection of banknotes to reject stacker.



- ❺ Put the banknotes in the middle of the note hopper and adjust the hopper guide for better feeding of banknotes.



Dual Users Operation

X-1 supports simultaneous counting operation of two users. Two users can operate X-1 with maintaining their current preference. The results are not interfered with each other. At the end of counting operation, the counting results of the two users are saved separately. (The device has dual-RS232 ports that connect to two thermal or dot-matrix printers. Please check P.23 to see how to set thermal or dot-matrix printers for two users). To describe the Dual Users function in details,

❶ X-1 control panel is equipped with two sets of  and  keys which are used to control the operation of two users.

- The LEFT set of keys is for  (User 1).
- The RIGHT set of keys is for  (User 2)



❷  (User 1 - LEFT).

- Press the  key on the left side to start operation.
-  and  keys on the left side are used to confirm or cancel entire counting operation for the User 1.
- Press the  on the right side to switch to User 2.



❸  (User 2 - RIGHT).

- Press the  key on the right side to start operation.
-  and  keys on the right side are used to confirm or cancel the entire counting operation for the User 2.

◆ Press the  key on the left side to switch to User 1.

❹ Clearing result.

Press  to clear results of the current User ( / .

CNT Mode and Density selection:

❖ CNT - Count Mode

In CNT mode, X-1 counts number of banknotes despite of denomination in a stack and at the end of the count, displays counted quantity at the center row of the LCD display. In the process, the total counted quantity is accumulated automatically and saved to memory.

CUR key is used to select CNT mode. Press and hold **CUR** key and the CNT (Count Mode) will be shown on the left top of the LCD display as below:



- ◆ Use the direction keys **2 SPEED / 8** or the **4 SET / 5 AUTO** to highlight CNT mode.
- ◆ Press the **Start** to confirm the selection.

❖ Density Level:

In CNT mode, user has the option to select between different density level to adjust double detection. While in CNT mode,

Press [Mode] key to select between four different double detection level. If the device cannot detect double feeding error well, then set double detection level to "Lv1" represents "LIGHT"; on the contrary if the device detects double even though notes are not double fed, then set double detection level to "Lv3" or "Lv4" represents DARK or VERY DARK respectively.

- Lv1**: LIGHT
- Lv2**: NORMAL (Default)
- Lv3**: DARK
- Lv4**: VERY DARK

- ◆ Use the direction keys **2 SPEED / 8** or the **4 SET / 5 AUTO** to highlight your acceptable double detection level ("Lv_x")
- ◆ Press the **Start** to confirm the selection.

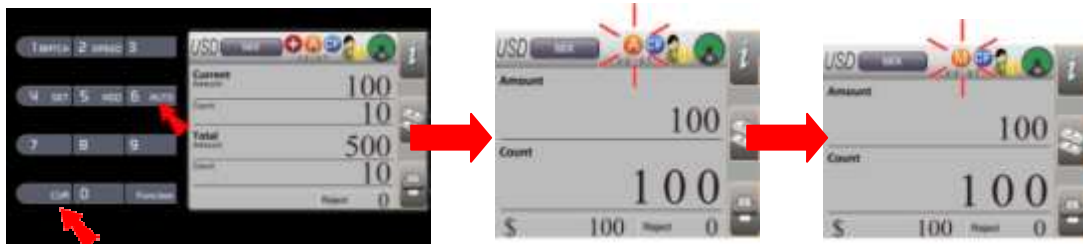


Auto / Manual Start Mode

To operate X-1 between Automatic and Manual Start counting mode,

Press the **Function** followed by **6 AUTO** to switch between Auto / Manual Start Mode.

- While **A** (Auto Start Mode), the device starts counting operation after detecting banknotes on the hopper.
- While **M** (Manual Start Mode), the device starts counting operation only after the **Start** key is pressed.



Counting Speed

At CNT mode, user has the option to adjust the counting speed, however, counting speed is fixed for all discriminating modes at ≤ 750 banknotes per minute and not adjustable. To adjust variable counting speeds in CNT mode,

- 1 Press the **Function** key followed by **2 SPEED** key
- 2 Three different counting speeds (H, M and L) are shown sequentially on the right top of the LCD display as below:

- ◆ **L** : 600 banknotes / min.
- ◆ **M**: 800 banknotes / min.
- ◆ **H**: 1000 banknotes / min.



Batch Counting

X-1 allows users to select counting of banknotes by a preset number or by a desired amount in certain discriminating modes.

- The **Function** and **1 BATCH** keys are used to select batch number or amount
- **Start** key is used to confirm the setting and to return to menu.



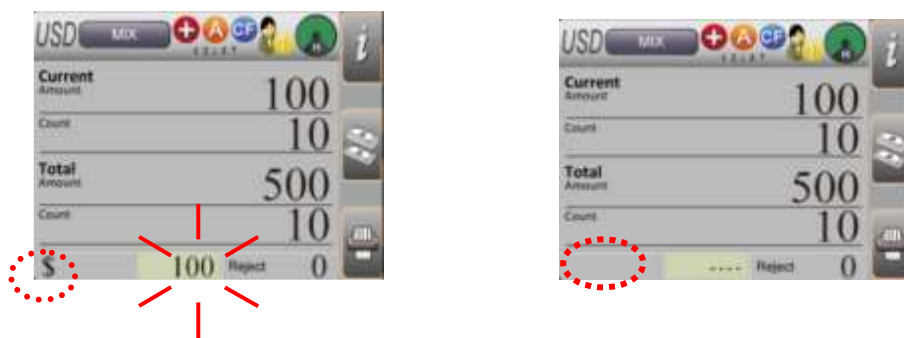
The preset batch is shown on the bottom left of the LCD display

❖ How to set a batch by pieces:

- Set a batch quantity by pressing number keys and the device counts the preset number
- The machine stops once the counted number reaches a preset quantity.

❖ How to set a batch by amount in MIX mode:

- Set a dollar amount while in MIX mode and the device counts up to the preset amount.
- Any banknotes counted after the preset amount and suspicious banknotes are delivered to the reject pocket.



❖ How to clear a batch setting:

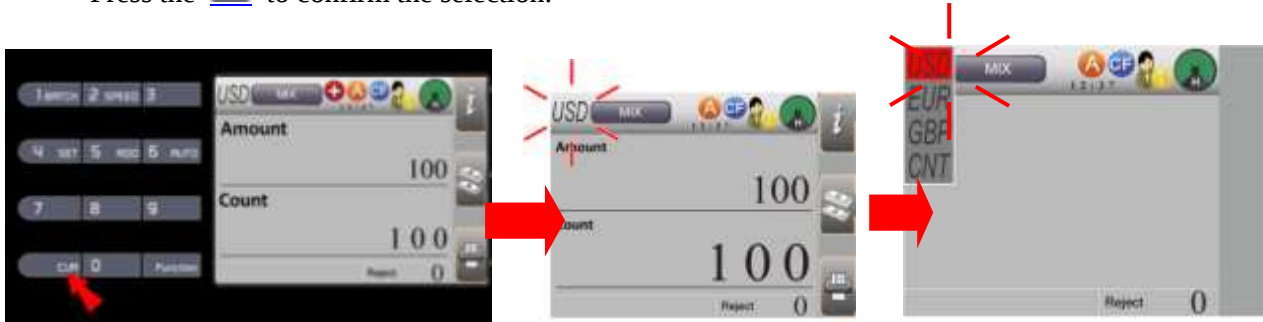
- 1 Press the **Function** and then **1 BATCH** to enter batch mode.
- 2 Press the **Function** and then **1 BATCH** again or press the **C** to clear the preset number.
- 3 Press the **Start** to confirm the setting and return to menu.

Selection of Currency

CUR key is used to select your desired currency (if multiple currencies are equipped). The available currencies and CNT (Count Mode) are shown sequentially on the left top of the LCD display.

Press and hold the **CUR**.

- ♦ A list of all the available currencies that the machine is equipped with would be displayed on LCD display.
- ♦ Use the direction keys **2 SPEED / 8** or the **4 SET / 6 AUTO** to highlight your desired currency.
- ♦ Press the **Start** to confirm the selection.



Discriminating Modes

X-1 is equipped with Five main discrimination counting modes; MIX, SINGLE, FACE, ORIENT and ISSUE modes. Furthermore, the machine provides further sorting modes to align single or mixture of banknotes with same face or same directions or issues. For details, please refer to the “Facing Sorting Mode” and “Orient Sorting Mode” described at P.30 - P.31. The main discriminating modes are changed in sequence every time the MODE key is pressed;

MIX → SINGLE → FACE → ORIENT → ISSUE (N/A for USA market)

Definition of different Discriminating Modes:

MIX

Mixed Value Mode

- Counts and denominate mixture denomination of banknotes for individual and total valuation. If a banknote failed to denominate or found to be counterfeit / suspect (if CF mode is ON), the banknote then be sent to reject pocket.

SINGLE

Single Value Mode

- Counts banknotes with the denomination of the first detected genuine banknotes as the standard and delivers banknote with different denominations and suspicious banknotes to the reject pocket.

FACE

Face Sorting Mode

- Counts banknotes with the face of the first detected genuine banknotes as the standard, and delivers banknotes with different faces and suspicious banknotes to the reject pocket.
 - *NOTE: Further sorting function for FACE mode is described under Setting Mode. Please refer to P.30.

ORIENT

Orientation Sorting Mode

- Counts banknotes with the orientation of the first detected genuine banknotes as the standard, and delivers banknotes with different orientations and suspicious banknotes to the reject pocket.
 - *NOTE: Further sorting function for ORIENT mode is described under Setting Mode. Please refer to P.31.

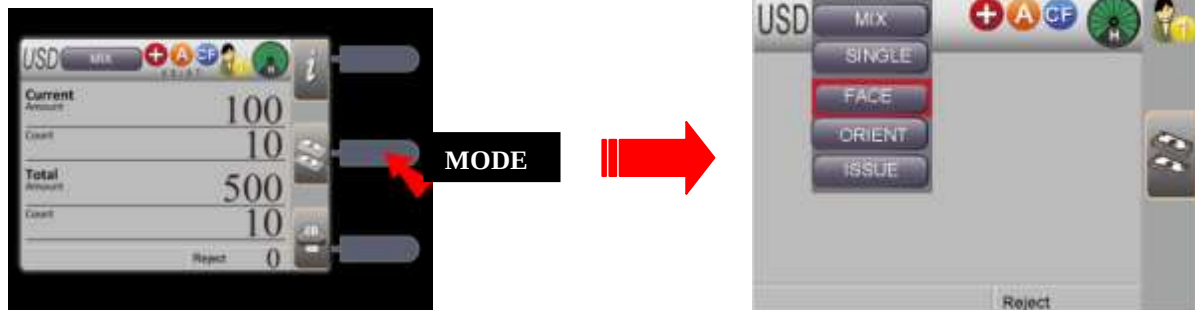
ISSUE

Issue Sorting Mode (**Not available for USA models**)

- Counts banknotes with the issue of the first detected genuine banknotes as the standard, and delivers banknotes with different issue and suspicious banknotes to the reject pocket.
 - *NOTE: Further sorting function for Issue mode is described under Setting Mode. Please refer to P.31.

❖ **To process banknotes with different Discriminating functions:**

In order to enter into discriminating modes, press and hold the [Mode] button for a second. A list of all discriminating modes will be displayed in sequence next to Currency symbol:



- Use the direction keys **2 SPEED/8** or the **4 SET/6 AUTO** to highlight a discriminating function.

➤ Press **Start** to confirm the selection.

Counting Results

Once a stack of banknotes count is completed, press navigation button [Info] to view the detailed counting results of the current count.



❖ **Changing Display Contents**

The X-1 provides various information regarding counting results. Every time pressing [Info] key, the display changes sequentially. There are 4 display modes: Display Result Mode (Detail View), Grand Total mode (Grand Accumulation View), Day Total (Total View by Day), and Reject Reasons (Reasons of Rejects). There are some examples of each Display mode.

❶ **Display Result Mode**

- The detailed result is shown with the value, quantity and subtotal of accepted banknotes.
- Direction keys **2 SPEED/8** to scroll down to go to the second page to display any remaining counted denomination not appearing on the first page.



2 Grand Total

- ◆ Grand Total feature is only available when [ADD] mode is activated.
- ◆ In Grand Total mode, all confirmed transactions are accumulated to Grand Total list.
- ◆ Press  to see Grand Total list of different counted currencies (apply to multi-currency model).

Grand Total		
USD		
1 x	20 =	20
2 x	50 =	100
5 x	100 =	500
10 x	100 =	1000
20 x	100 =	2000
50 x	100 =	5000
100 x	100 =	10000
570 =		18620

3 Day Total

- ◆ Day Total feature only available when [ADD] mode is activated.
- ◆ In Day Total mode, all confirmed transactions for the current day is accumulated to Day Total list.
- ◆ Press  to see Grand Total list of different counted currencies (for multi-currency model).
- ◆ Further, all counted results within the last 30 days are saved into X-1 memory. Use direction keys  to change the counting results for a different date of your need.

Day Total		
USD-MM-DD-YYYY		
1 x	55 =	55
2 x	100 =	200
5 x	500 =	2500
10 x	500 =	5000
20 x	500 =	10000
50 x	500 =	25000
100 x	500 =	50000
2655 =		92755

4 Reject Reasons

- ◆ Numbers of all rejected banknotes are displayed in this display mode.
 - ◆ Definition of reject reasons:
 - **Double:** Double note.
 - **Skew:** A note skewed during the count.
 - **Unknown Doc.:** An unknown image.
 - **Chain:** Chain banknotes in the bill path.
 - **Note Gate:** A gap between two banknotes is too close.
 - **IR Error:** Infrared error.
 - **MG Error:** Magnetic error
 - **IMG Error:** Image error
 - **Other Error**

Reject Reasons			
Double	1	IR Error	0
Skew	0	UV Error	0
Unknown Doc.	0	MG Error	0
Chain	0	IMG Error	1
Note Gate	0	Other Error	0
Total			2

ADD mode

ADD function is to provide a cumulative count on CNT (Count) mode. As for discriminating modes, it will accumulate each running total in all modes and save the results into memory.



① Press the **Function** and then **5 ADD** to toggle between Add On/ Off mode.

- When Add mode is turned on, an icon **+** is showed at the center top of the LCD display.

② After a count is completed, the current counted quantity is shown under [Count] and [Amount] of counted banknotes is shown under [Current Amount] column as above.



③ Press [Print] button for confirming the count result and to enter into Print mode. At this time, user has option to print the current result by pressing [Start] or **Print**.

④ Press [Print] button again to add the counting result to Grand Total showing under [Total Amount] and [Count] as above. By doing so, the current transaction is accumulated to Total Amount and Count as shown above.

The saved transaction is accumulated to Grand Total¹ and Day Total².

- Press **Function** and **5 ADD** simultaneously to deactivate the ADD function.
- When ADD mode is turned off, the icon **+** disappears from the display.

¹ Grand Total: Please refer to P.21 for further information.

² Day Total: Please refer to P.22 for further information.

Grand Total

Grand Total feature is used for accumulating different counting results to the memory. To save a transaction to Grand Total,



- ❶ After counting is completed, press navigation button [Print] as shown above.
- ❷ Press [Print] again for confirming the transaction or Print receipt by pressing .
- ❸ If counting result is confirmed, the current transaction is accumulated to the Grand Total.

- ❹ Press [Print] once again to enter into print mode where different printing options are given to users:

- ◆  : Print current transaction.
- ◆  : Print Grand Total.
- ◆  : Clear Grand Total.
- ◆  : Exit the print mode.



❖ How to view Grand Total List:

To view Grand Total list,

- ❶ Press navigation button [Info] twice.



Grand Total		
USD		
1x	20 =	20
2x	50 =	100
5x	100 =	500
10x	100 =	1000
20x	100 =	2000
50x	100 =	5000
100x	100 =	10000
570=		18620

- ❷ All confirmed transactions are accumulated in the Grand Total List as shown above.
 - ◆ Press the  to check Grand Total List of other currencies (if loaded with).
- ❸ To Print out a receipt,
Press navigation button [Print] and a receipt will be printed out if a printer is connected to X-1.

Day Total

Day Total feature is to view and print out all confirmed counting results for current day or a particular day upto past 30 days. To accumulate a total run for a given day,

- 1 Press Navigation button [Info] three times.



- 2 All the confirmed transactions of a single day is listed and viewed on the display.
 - ◆ Use the direction keys **4 SET / 6 AUTO** to change to different dates.

Day Total		
USD-MM-DD-YYYY		
1 x	55 =	55
2 x	100 =	200
5 x	500 =	2500
10 x	500 =	5000
20 x	500 =	10000
50 x	500 =	25000
100 x	500 =	50000
	2655 =	92755

- 3 Press Navigation button [Print] to print out Day Total receipts.

- ◆ **100%**: Print all the days.
- ◆ **2 SPEED**: Print one day.
- ◆ **C**: Exit.

Day Total		
USD		
1 x	20 =	20
2 x		0
5 x		0
10 x		0
20 x		0
50 x		0
100 x	100 =	10000
	570 =	18620

Print All Day : 1
 Print One Day : 2
 Exit : C

Printing the Summary

X-1 can be connected with a Thermal or Dot-Matrix printer to the RS232 serial port to print current counting result or grand total and day total that are saved in the memory.

- ❶ Connect a Dot-Matrix printer with the device.
 - ◆ The upper RS232 serial port is reserved for User 2.
 - ◆ The lower RS232 serial port is reserved for User 1.
- ❷ Once printer is connected and counting is completed,
Press the Navigation button [Print].
- ❸ Follow the display message to proceed.
 - ◆ : Print one receipt of breakdown list.
 - ◆ : Print two receipts of breakdown list.
 - ◆ : Confirm the transaction into grand total and day total
 - ◆ Press the  to cancel the operation.



❹ Receipt.

The receipt lists the “currency name”, “quantity by denominations”, “subtotal” and “total quantity and amount” of counted banknotes.

Clear error messages

If the bill path of the device is opened intentionally or accidentally, an error message will appear on the LCD Screen as below and device will stop counting. Close the bill path securely, and follow the below:



- ❶ Press the  key to clear error message.
- ❷ The motor will start running, thus removing all the foreign matters in the bill path to the reject pocket.
- ❸ The machine will resume operation in correct manner.

Message Code

Check Bill Path



- ◆ Please open the bill path and check to make sure no foreign matter inside.



- ◆ Error with top bill path: please open the bill path and check to make sure no foreign matter inside.



- ◆ Please open the bill path and remove the jammed banknote(s)



- ◆ Error with buttom bill path: please open the bottom cover and check to make sure no foreign matter inside.

Open Bill Path



- ◆ Top cover of the Bill path is open. Please close it securely before operation.



- ◆ Buttom bill path is opened. Please close it securely before operation.

Remove Banknotes



- ◆ Please remove all banknotes from the Note hopper and place them again to resume counting.



- ◆ Please remove all bankbanknotes from reject pocket. Once they are removed, the operation resumes.



- ◆ The reject pocket is full. Please remove all bankbanknotes from reject pocket.



- ◆ Please remove all bankbanknotes from the stacker. Once removed, the operation continues.



- ◆ The stacker is full. Please remove all bankbanknotes from the stacker.



- ◆ The counted quantity doesn't reach preset number. Place more banknotes to resume counting or redo from start.

Error



- ◆ Please check if the motor error occurs when power is on.
- ◆ Please make sure the encoder is working correctly.
- ◆ If the error still occurs, please contact your service provider.



- ◆ Please check if any note jammed in the bottom bill path.
- ◆ Please Remove jammed note and test again.

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Set Function and its Parameter Settings

To set a function and its parameters, firstly, enter into Setting Mode by pressing **Function** followed by **4 SET** key. After pressing these two keys, a password requirement will prompt on the screen; Enter password provided to you by your sales representative and press [Start] key to confirm.

[**Function** and **4 SET** → Password (XXXXXX) → **Start** → Setting Mode]



Once in Setting mode, the Settings screen will appear for user to select its desired function and settings. Follow the below steps to scroll through the Settings menu:



1 Highlighting menu with direction keys.

- Under the Setting Mode, the below number keys represent as the direction keys:

2 SPEED: (Up)
8: (Down)
4 SET: (Left)
6 AUTO: (Right).



- After highlighting a desired icon, press the [Start] **Start** key to confirm the selection.

2 Confirming the selection.

3 Return to main screen.

- Press the **C**.

This chapter will now describe each of the below function settings and its parameters in great length:

	Sound Setting
	Detection On/Off
	Printer Options
	Sorting Mode Setting
	Setup Device Mode

Sound Settings

To set different parameters of Sound Setting, first,

- Highlight the icon  .
- Confirm selection with the .

The Sound Setting menu will enter into a sub-menu:



Setting Key Tone

Under this menu, user has the option to turn on or off the sound appear from pressing keys (Default: ON). See below:

- ① Highlight the icon  .
- ② Confirm selection with the .
- ③ To turn key sound on or off.
 - ◆ Use the direction keys  or the  to highlight your selection.
- ④ Confirm setting.
Press the  to confirm setting and return to sub-menu.



Setting Alarm

Under this menu, user has the option to turn ON / OFF warning alarm in the event of error messages (Default setting: OFF). In order to turn ON / OFF Alarm,

- ① Highlight the icon  .
- ② Confirm Selection with the  key.
- ③ Turn alarm on or off.



- ◆ When alarm is turned on, the device sounds with a message code shown on the LCD display.

- ◆ Press the  to confirm setting and to exit.

4 Selecting a user desired mode.

- ◆ Use the direction keys  or the  for highlighting.

5 Confirm setting.

Press the  to confirm setting and return to previous screen.



Suspicious Note Alarm

Under Suspicious Note Alarm icon, user has the option to turn ON / OFF warning alarm (beep sound) in the event of suspect or counterfeit banknotes. (Default setting: OFF). In order to turn ON / OFF Suspicious Alarm sound,

1 Highlight the icon [Suspicious Note Alarm.]

2 Confirm Selection with the key.

3 Turn alarm on or off.

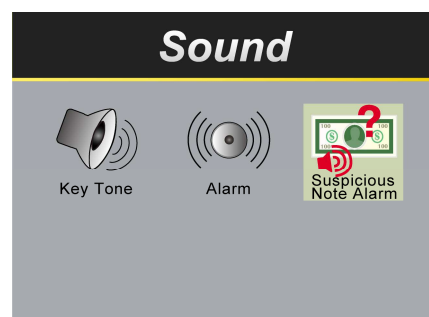
- ◆ When alarm is turned ON, the device sounds with a message code shown on the LCD display when there is a suspect or counterfeit banknote is detected.

4 Selecting a desired mode.

- ◆ Use the direction keys  or the  for highlighting.

5 Confirm setting.

Press the  key to confirm setting and return screen.



Detection On / Off

User can turn ON or OFF counterfeit detection function while in Discriminating Modes (Default: On). In order to enter into the Setting Menu,

- 1 Highlight the icon .
- 2 Confirm selection with the  key.



3 Setting detection

- ◆ : The device counts with counterfeit detection ON and delivers suspicious banknotes to the reject pocket.
- ◆ : The device discriminates banknotes without further checking counterfeit security features.

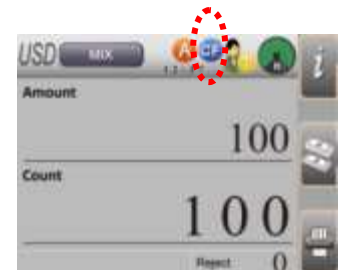
4 Selecting a desired mode.

- ◆ Use the direction keys  /  or the  /  for highlighting your selection.

5 Confirm setting.

Press the  to confirm setting and exit.

- 6 When the Counterfeit Detection is turned ON, an icon  is shown on the main display.



Printer Options

Under this menu, user has the option to select printer Port, Paper size and Baud Rate. To enter into this menu, follow the below:

❖ Printer Port

- 1 Highlight the icon .
- 2 Confirm Selection with the .

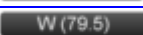


Print Paper

To setup a paper size of the connected thermal printer (Default: W(79.5))

- 1 Highlight the icon .
- 2 Confirm Selection with the .



- 3 Check the paper size of the connected thermal printer.
 - ◆ : 2 inches paper.
 - ◆ : 3 inches paper.
- 4 Select the paper size of the connected thermal printer.
 - ◆ Use the direction keys  or the  for highlighting.
- 5 Confirm setting.
Press the  to confirm setting and exit.



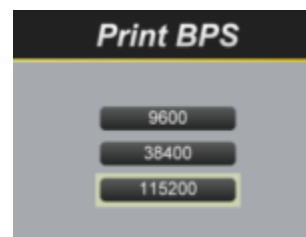
Printer Baud Rate (BPS)

To setup baud rate for printer (Default: 115200)

- 1 Highlight the icon .
- 2 Confirm Selection with the .



- 3 Find the proper baud rate.
 - ◆ :9600bps
 - ◆ :38400bps
 - ◆ :115200bps
- 4 Select the baud rate of the connected thermal printer.
 - ◆ Use the direction keys  or the  for highlighting.
- 5 Confirm setting.
Press the  to confirm setting and exit.



Sorting Mode Setting

X-1 is equipped with three main Sorting Modes for further currency sorting need. These sorting modes are: FACE Sorting, ORIENT Sorting and ISSUE Sorting which are then divided into two sub-sorting features as described below:

To enter into Sorting Mode Settings menu

- 1 Highlight the icon .
- 2 Confirm Selection with the .



◆ FACE Sorting Mode

Choose a desired mode for Face sorting. (Default:FACE-SINGLE)

- 1 Highlight the icon .
- 2 Confirm Selection with the .
- 3 Locate your desired function for face sorting.

- ◆ **FACE - ALL**: Face sorting for mixture of denominations
[Face sorting by face and Mixture of denominations]

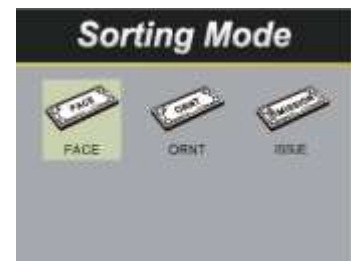
In this mode, X-1 allows you to sort mixed banknotes by face. The device reads the first note to find out the face information despite of denomination.

- ◆ **FACE - SINGLE**: Face sorting for single denomination
[Face sorting by face and single denomination]

In this mode, X-1 allows you to sort mixed banknotes by face and a certain denomination. The device reads the first note to find out the face and denomination information.

- 4 Select the desired function.
 - ◆ Use the direction keys   or the   for highlighting.

- 5 Confirm setting.
Press the  to confirm setting and exit.



◆ ORIENT Sorting Mode (ORIENT)

Choose a desired mode for Orientation sorting. (Default: ORIENT-SINGLE)



1 Highlight the icon .

2 Confirm Selection with the .

3 Locate your desired function for face sorting.

- ◆ **ORIENT-ALL**: Orientation sorting for mixture of denominations
[Orient sorting by face, direction & mixture of denominations]



In this mode, X-1 allows you to sort mixture of banknotes by certain orientation. The device reads the first note to find out the face and direction information despite of denomination.

- ◆ **ORIENT-SINGLE**: Orientation sorting for single denomination
[Orient sorting by face, direction & single denomination only]

In this mode, X-1 arranges banknotes by direction, face and denomination. The device reads the first note and find out information regarding direction, face and denomination.

4 Select the desired function.

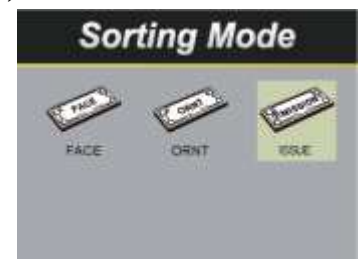
- ◆ Use the direction keys **2 SPEED / 8** or the **4 SET / 5 AUTO** for highlighting.

5 Confirm setting.

Press the  to confirm setting and exit.

◆ ISSUE Sorting Mode (Not applicable to USA model)

Choose the appropriate mode for Issue sorting. (Default: ISSUE-SINGLE)



1 Highlight the icon .

2 Confirm Selection with the .

3 Find a desired mode for Issue sorting.

- ◆ **ISSUE-ALL**: Issue sorting for mixture of denominations
[A particular issue sorting for mixture of banknote denominations]
- ◆ **ISSUE-SINGLE**: Issue sorting for single denomination banknotes.
[A particular issue sorting among same banknote denominations]



4 Select the desired mode.

- ◆ Use the direction keys **2 SPEED / 8** or the **4 SET / 5 AUTO** for highlighting.

5 Confirm setting.

Press the  to confirm setting and return.

Setup Device

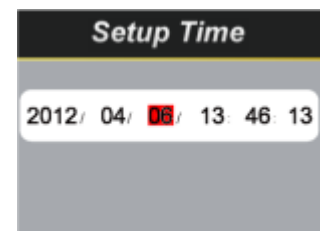
- 1 Highlight the icon .
- 2 Confirm selection with the .



Setup Time

To setup information of date and time.

- 1 Highlight the icon .
- 2 Confirm selection with the .
- 3 Change date and time setting.
 - ◆ Use the direction keys  /  or the  /  to highlight a desire zone to modify.
- 4 Press  to select and confirm the modified zone.
 - ◆ The color of the selected zone will change from pink to red.
- 5 Use number keys to change settings.
- 6 Press  to Return to previous menu.



Default Setting

Factory Default Settings

Always turn on the device with factory default setting.

- 1 Highlight the icon .
- 2 Confirm your selection with the .
- 3 Default setting On or Off.
 - ◆  : The device always turns on with factory's default setting.
 - ◆  : The device always turns on without factory's default setting.
- 4 Selecting a mode.
 - ◆ Use the direction keys  /  or the  /  for highlighting.
- 5 Confirm setting.

Press the  to confirm setting and Return to previous menu.



Chapter 5. Maintaining X-1

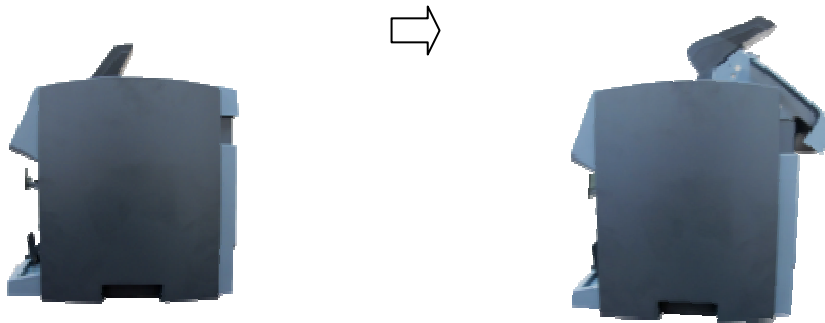
Open Bill Path 35

Cleaning X-1 35

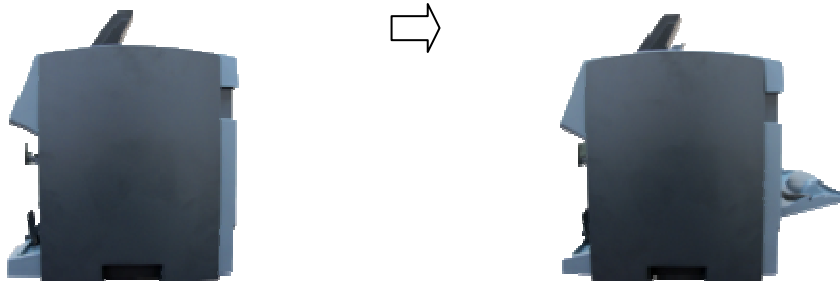
Limited Warranty, Disclaimer, Service 37

Open Bill Path

❖ Open top bill path



❖ Open bottom bill path



Cleaning X-1

Cleaning the cover of X-1

Periodically clean X-1 as follows:

- ❶ Prepare a mixture of a gentle kitchen-use detergent (one that does not contain abrasive powder or strong chemicals such as acid or alkaline.) Mix with 5 cup water with 1 cup detergent.
- ❷ Soak the sponge with the mixture of diluted detergent for couple of minutes.
- ❸ Squeeze excess liquid out from the sponge.
- ❹ Wipe the cover with the sponge in a circular motion and make sure not to let any excess liquid drips into the interior of the device.
- ❺ Wipe the exterior surface of the device to remove the detergent.
- ❻ Rinse the sponge with clean running water.
- ❼ Wipe the over with the clean sponge.
- ❽ Wipe the surface again with a dry, soft lint-free cloth.
- ❾ Wait for the surface to dry completely and remove any fibers.

Cleaning the bill path of X-1

- ❶ Open the upper bill path.
- ❷ Gently wipe it or dust the bill path with a brush or a dry, soft lint-free cloth.
- ❸ If stains or debris remain, moisten a soft lint-free cloth with water or a 50-50 mixture of isopropyl alcohol and water that does not contain impurities.
- ❹ Squeeze out as much of the liquid as you can.
- ❺ Wipe the bill path and the sensor surface again; do not let any liquid drip into the device.
- ❻ Repeat 1-5 to clean the lower bill path.

*NOTE: Avoid spraying cleaner directly on the device, and be sure to dry the bill path before closing it.

Appendix. Specification

Feed System	Roller friction system	
Counterfeit Detection	UV, IR, MR	
Counting Speed	Piece count	600, 800, 1000 banknotes/minute
Discriminating / Denominating		<750 banknotes / minute maximum
Available Currencies	USD Standard. EUR and LOCAL (OPTION)	
Denomination Detection	Contact Image Sensor	
Hopper Capacity	500 banknotes (circulated banknotes)	
Pocket Capacity	Main Pocket Capacity	200 banknotes (circulated banknotes)
	Reject Pocket Capacity	Max. 30 banknotes (circulated banknotes)
Countable Note Size	60 X 85 X 0.08mm ~ 100 X 190 X 0.12mm	
Display	3.5 Inch color TFT	
Power supply	100 ~ 240V AC, 60Hz	
Power consumption	Max. 50W	
Dimensions(mm/ Inch)	282(W) X 272 (D) X 272 (H)	
	11.2" (W) X 10.8" (D) X 10.8" (H)	
Weight	Approx. 18lbs / 8.2Kg	
Interface	RS-232 x 2	
	USB x 1	
	SD card x 1	
Accessories (optional)	External Customer Remote Display	
	Thermal Printer, Dot Matrix printer	

Limited Warranty, Disclaimer, Service:

Limited Warranty:

Congratulations on your purchase of our X-1 Series Currency Discriminator Counter. The manufacturer warrants this unit for a period of 90 days after the date of purchase against defects due to faulty workmanship or materials. This warranty does not cover normal wear of parts or damages resulting from any of the following: negligent use or misuse of the product, use on improper voltage or current, use contrary to operating instructions or disassembly, repair or alteration by any person other than an authorized AMROTEC® technician or Service Provider.

Parts repair or replacement under this warranty is only provided upon presentation of reasonable evidence that the date of the claim is within the warranty period and warranty guideline has been satisfied. To obtain warranty support, repair, servicing, you may contact your sales representative of X-1 Currency Discriminator Counter.

Disclaimer:

Warranty remedies limited to only parts repair or replacement of this product. Manufacturer, distributor, dealer or sales representatives of X-1 Series Currency Discriminator Counter shall not be liable for any incidental or consequential damages for breach of any express or limited warranty on this products or any part thereof. Except to the extent prohibited by applicable law, manufacturer, distributor, dealers, sales representatives of X-1 series Counter Discriminator Counter disclaims any implied warranty or merchantability or fitness for a particular purpose of this product or any part thereof. This warranty gives you specific legal rights, and you may also have other rights which vary from state or state of United States of America. This warranty is valid only in the United States Of America.

Service:

To obtain out of warranty repair or service on our X-1 Currency Discriminator Counter, contact your sales representative or your Service Provider you have maintenance contract with. Cost of the repair as well as any applicable shipping charges will be provided to you.

All product returned for service must contain a RMA number that will be supplied to you by your Sales Representative or your Service Provider you have maintenance contract with. NO PRODUCT WILL BE SERVICED WITHOUT A RMA NUMBER CLEARLY PLACED ON THE OUTSIDE OF THE SHIPPING CARTON. It is recommended that all products returned for service must be returned to our authorized Service Provider in the original packaging.

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