

500ER SERIES BILL-COUNTER
OPERATING INSTRUCTIONS

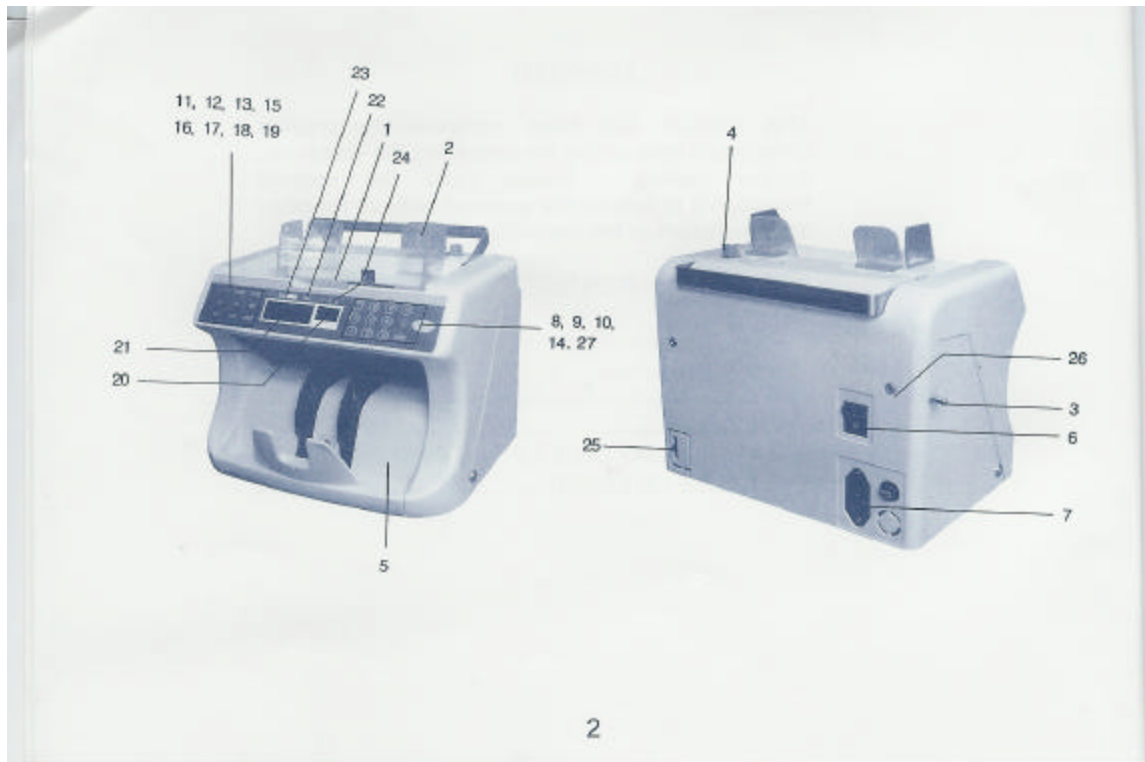


FORWARD

This manual has been compiled to provide completely instruction for operating the machine . Before starting , please read the manual thoroughly to familiarize yourself with all function and operation of the machine.

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I APPEARANCE

(1) Hopper

Notes to be counted are placed in it.

(2) Auxiliary Hopper Plates

Used for leading the notes to be feeding mechanism.

(3) UV Lamp cleaning Shaft

Used to clean the inside UV lamp.

(4) Thickness Adjustment Screw

Used to make the smooth counting operation .
The thickness adjustment dial is set at the factory for the default use (refer to IV for more).

(5) Stacker

The counted notes are stacked in it.

(6) Power Switch

Used to turn main power ON or OFF.

(7) Power Inlet

The supplied power cord should be connected to the power inlet to reliable of AC power.

(8) Restart Key

Used to initiate a counting operation or to

clear an error message.

(9) Key Pad

This is a set of numerical keys(0-9). Used to preset optional batch size (up to 3 digits).

(10) Clear Key

The clear key removes the Batch number on the Batch size display.

(11) MNL Key

By the MNL key, the AUTO starting mode or the MNL starting mode can be selected.

(12) Add Key

By this key, the Add function is selected or cleared.

(13) Density Level Key

By this key, the reference level for two sheets detection can be change according to the degree of stain of notes to be counted(refer to IV for more).

(14) Speed Key

An appropriate speed may be chosen by pressed this key, changeable in three steps (Fast, Normal, Slow).

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(15) DD Key

Used to set the machine to detect denominations in width and select the detection sensitivity

(16) UV Key(option)

By this key, the machine is make to recognize counterfeit notes by the detection of fluorescent.

(17) MG Key (option)

By this key, the machine is set to recognize the counterfeit notes without magnetism.

(18) Length Key(option)

Used to set the machine to detect denominations in length and select the detection sensitivity

(19) Cover Key(option)

By this key, the dustproof cover function can be selected or clear.

(20) Batch Number Display

Used to display the batch number and/or the messages(Up to 3 digits).

(21) Counting Number Display

Used to display the counting results (Up to 4 digits).

(22) Auto/MNL Indicator

The indicator will be illuminated when the machine works in the MNL start mode.

(23) Density Level Indicator

Used to indicating the density level you set.

(24) Speed Indicator

Used for indicating the current counting speed you set.

(25) Fluorescent Detection Sensitivity Adjustment SW

The fluorescent detection sensitivity can be change by turning this SW. (Refer to IV for more.)

(26) RS232 Interface (option)

A RS232 Interface can let you connect your Bill Counter to a External Displayer or the Computer.

II SPECIFICATION

- Ambient Temperature: $^{\circ}\text{C} \sim 40^{\circ}\text{C}$
- Ambient Humidity : 30~80%
- Feed system : Roller Friction System
- Hopper capacity : 100 sheets / old notes
200 sheets / new notes
- Stacker capacity : 100 sheets / old notes
200 sheets / new notes
- Size of countable note: $50 \times 100 \sim 100 \times 185(\text{mm})$
- Thickness of countable : 0.06~0.12(mm)
- Batch preset number display : Three Digits LED(small)
- Counting Number Display: Four Digits LED (large)
- Power Source : Single-Phase AC96V~AC260V,RAM,50~60HZ
- Power consumption : $\leq 60\text{W}$
- Dimensions : 275mm \times 227mm \times 195mm
- Weight : 7.0Kg
- Width detection sensitivity: $3/4/5 \pm 1\text{mm}$
- Length detection sensitivity: $3/4/5 \pm 1\text{mm}$
- Counting speed:
 - Fast: 1400 \pm 100 notes/min
 - Normal: 1000 notes/min
 - Slow : 700 notes/min

III FEATURES

- Convenient and easy to operate
- Fast and accurate counting
- Two starting modes(AUTO/Manual)
- Three counting speeds
- Five changeable density levels
- Batch count mode and free count mode
- Addition count mode
- Deference denomination detect
- Counterfeit note detection system(option)
- Dustproof and splitproof function(option)
- Value Count Mode (Option)
- Automatic memorize the settings

IV OPERATION

1. Turn the power switch on.

2. Check the two sheets detection level and make proper setting.

Five density levels of this model machine are changeable. Be sure to select a appropriate density level to make the machine work normally.

The density level settings should be restored as the last settings when power is up.

Change the density level by press the Density Level Key as follow in case the error message "Ed" is displayed frequently.

⊙For notes that are stained or printed dark, set the level indicator to illuminate in the darker position.

⊙For notes that are new or printed light, set the indicator to illuminate in the lighter position.

3. Select the count mode.

This model machine can work in two ways as free count mode and batch count mode.

The count mode can be selected by setting the batch number.

⊙ **Free count mode**

In this mode, the machine counts all banknote in the hopper with no stoppage.

This count mode will be set in case the 'blank' is selected on the Batch Number Display by press the Clear Key.

⊙ **Batch count mode**

In this mode, the machine counts a batch banknote you set.

This Count mode will be set by set a desires' number on the Batch Number Display(any number up to 999 except 'blank')

Before beginning the count, used the Key Pad to set the desires' number, and then begin counting normally.

Notes: The next counting will be started automatically by only removing the counted batch notes from the stacker.

If the counting stops in case the preset number has not been reached while all the banknote have been counted, just refill the hopper, the machine will continues the counting automatically.

4. Addition counting function

Under the addition function, the cumulative total is shown on the Counting Number Display. Press the ADD Key to select this function with the addition indicator lit.

To clear this function, press the ADD Key again. This clear the ADD indicator.

5. Halting and Resuming counting

To halt the machine during the counting operation, just press the Restart key.

To resuming the counting, press the Restart key again.

6. Auto/MNL starting mode

When the MNL indicator is illuminated, the machine is under the MNL stating mode. In this case, the machine will start to counting only when the Restart key is pressed.

When the MNL indicator is OFF, the machine is under the AUTO starting mode, the machine will start the counting automatically when the banknote are filled on the hopper.

7. Setting the Thickness Adjustment Dial

The Thickness adjustment Dial is set at the factory for the default use .However ,it must be changed in the case as the follows:

- ⊙ If the EC(chain) and/or Ed error occur frequently ,turn the ADJ SCREW toward "-"(thin).
- ⊙ If the feeding operation does not go on smoothing due to new notes, folded notes and/or thick paper sheets which to be counted ,turn the ADJ SCREW toward "+" (thick).

8. Select the Dustproof Cover Function

Press the Cover Key to select this function with the Cover indicator it. When this function is selected, the dustproof cover will close automatically before the counting, and will open automatically in case of the counting stops.

To clear this function, press the Cover Key again with the Cover indicator OFF.

9. Select The Detection Function

● Different Denomination Detection Function

Through these functions, the size of the first counted note in width or in length will be memorized and if a smaller one is detected the machine will stop and the message "dd" or "ddd" will be shown on the Batch Number Display.

These functions can be set or cleared by press the DD key or LENGTH key to light the indicator. The DD function codes are shown as the following table.

| code | Function | Code | Function |
|------|--|------|--|
| d-0 | DD function unavailable | d-3 | 3±1mm size sensitivity detection mode, the DD function available |
| d-2 | 2 ± 1mm size sensitivity detection mode, DD function available | d-4 | 4±1mm size sensitivity detection mode, the DD function available |

Note1: Every time you press the DD key, the function code will be displayed on the Batch Display for one second, and the DD indicator will be lit.

When the machine stops through these functions, verify the last two counted notes, take the smaller note away, press the RESTART key to clear the error message and recounting all the notes again.

To counting the bank notes with the DD or LENGTH function enabled, MUST arrange the bank notes orderly, and the folded or curled notes should be straightened before they set on the Hopper, and also be sure use the Auxiliary Hopper Plates to limit them in the central of the Hopper.

Note2: If your model machine has the Length detection function and the option of the RS232 Interface, a new counting mode called as Value Count Mode can be used when you connecting a External Displayer (Option). It means that you can counting a bundle of notes, the sheets result will be displayed in the Counting Number Display, and the value result would be displayed in the External Displayer.

● **Counterfeit Note Detection Function (Option)**

Through these functions the machine will stop when a counterfeit note is detected.

⊙ **UV Detection Function**

A counterfeit note that does generate fluorescence under the ultraviolet rays can be detected when this function is selected, the machine will stop at the error message "CF1" shown on the Batch Number Display. The UV Detection Function is selected by press the UV Key with the UV indicator lit.

Note: The service life of the internal UV lamp is about 600 hours. The brightness of the UV lamp should be low when the UV lamp is out of its service life, this moment you can select a proper fluorescent detection sensitivity to get satisfactory detection effect by slid the Fluorescent Detection Sensitivity Adjustment SW to a higher step. The fluorescent detection sensitivity is changeable in four steps.

But if you can not get the satisfactory detection effect even slid the SW to the highest step, it means that the service life of the UV lamp is ended. You must replace a new one and then set the SW back to the Normal step.

When the machine stops in case a counterfeit note is detected, take the counterfeit note away. Press the RESTART key to clear the error message and recounting all the notes again.

Ⓞ MG Detection Function (Option)

Through this function, the machine will detect the counterfeit note which without the magnet. When a counterfeit note is detected, the machine will stop at the error message "CF2".

The MG detection function is selected by press the MG key with the MG indicator lit. To clear the MG function, press the MG key again to clear the indicator.

Note: When the machine stops in case a counterfeit note is detected, take the counterfeit note away. Press the RESTART key to clear the error message and recounting all the notes stacked in the stacker.

V CLEANING AND TAKING CARE OF THE MACHINE

● As the sensors are of the optical sensor, it may cause miscounting as if paper particles, dust, dirt, stain, etc. stick to the counting sensors, and also may hard to starting the counting operation if the repeat sensor or the auto-start sensor is stucked with dust, paper particles etc. For best results, it is necessary to clean all the sensors shown on the photo below with a dry brush periodically or as needed.

● The machine uses of optical sensors, so keep the instrument out of direct sunlight.

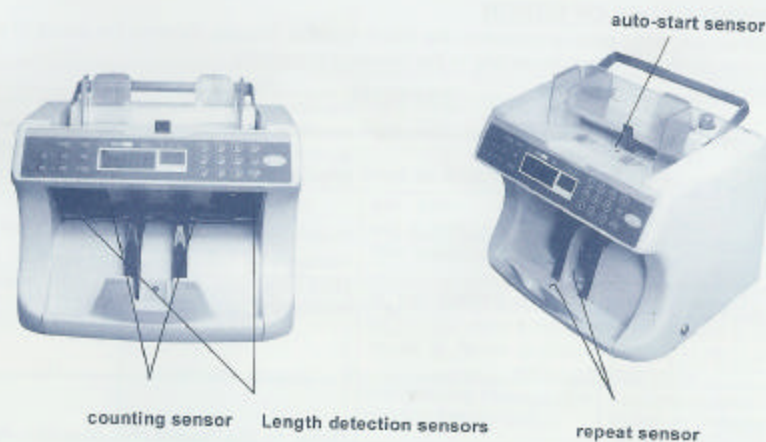
● The feed system are of roller friction system, so do keep pins, clips, necklace chains, hair away from the machine to prevent them to be taken into the machine.

● If your model machine has the Length detection function, it is also very important to clean the length detection sensor daily.

● If your model has the UV function, it is very important to clean the internal UV lamp by pulling and pushing the UV lamp cleaning shaft.

Notes: Do cleaning the machine after turning OFF the power.

Do not use the chemicals for cleaning the machine.



CLEANING ALL THE SENSORS

VI REMOVING CAUSE OF ERROR

When an error occurs, error code is shown on the Batch Number Display. Confirm the cause of error by the error code and remove the cause according to the following procedure.

| Error | Meaning | Cause | Remedy |
|-------|-----------------|--|---|
| Ej | Jam | Note is jammed in the machine | Remove the notes placed in the Hopper, the machine will remove the jammed note out automatically. Or you TURN THE POWER OFF and remove the jammed notes by hand. |
| Ed | Double | More than two notes are detected or a note that is too densely printed compare with a standard note. | Remove all the notes in the stacker, press the RESTART key to clear the error message. Do recounting all the notes. |
| Ec | Chain | More than two notes fed in chain | |
| Eo | Batch over | The counting result is larger than the batch | |
| DD | Short in width | Abnormal notes is mixed | Refer to the "select the detection function" of part IV (page 7) |
| DDD | Short in length | | |
| CF1 | CF notes | | |
| CF2 | | | |

VII Accessories

| | | |
|----------------------------|------|------------------------------|
| Power cord | 1pc. | External Displayer(Optional) |
| Operating Instructions | 1pc. | |
| UV lamp(UV function only) | 1pc. | |

NOTICE

The included Operating Instructions need an addition message for your model.

Please take notice of the following.

*An addition row in the table of Chapter VI is enclosed as the follows.

| Error | Meaning | Cause | Remedy |
|--------------|------------------|--|--|
| EH | Half note passed | Half-broken note passed. | Remove the broken Note.And recount all the notes. |
| | | Note passing through one counting sensor only. | Make sure put the notes in the centre of the Hopper. |

