BANK NOTE COUNTER P-106A

USER'S MANUAL

NEW DESIGN

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NOTE : 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 radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

Specification is subject to change without notice.

C O N T E N T S

1. FOREWORD

Thank you for selecting a Plus Bank Note Counting Machine. This manual has been compiled to provide complete instructions for operating the machine.

Before starting, please read the instructions thoroughly to familiarize yourself with all of the machine functions.
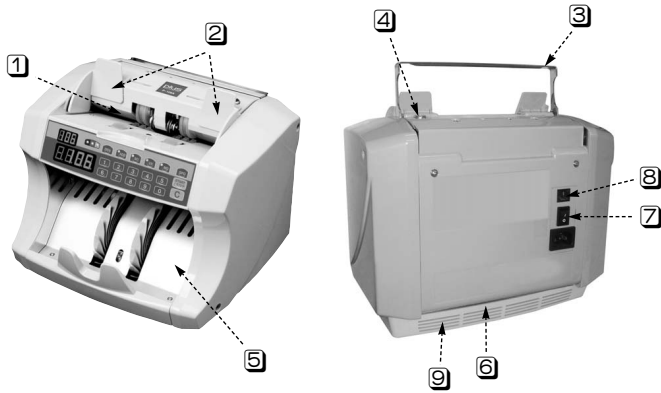
2. FEATURES

■ Patented fan built-in dust removal system.
■ Operator-variable presetting from 1 to 999. Batch setting is programmable through the 10 digit numeric keypad.
■ Enhanced self diagnostics.
■ Stops and sounds alarm for the possible errors (double, short, chain, half····.)
■ Optional Ultra-Violet or dual UV and Magnetic counterfeit Detection.
■ Optional size check detection & Customer Display.
■ Dust collector for efficient dust removal.

3. SPECIFICATIONS

|	
Dimensions	280mm(W) × 206mm(H) × 236mm(D)
Weight	Approx. 5.3 kg
Size of countable note	50mm × 100mm~100mm × 181mm, Thickness: 0.06mm~0.12mm
Counting speed	Three selectable speeds : 800, 1000, 1200 notes/min (STANDARD) 1000, 1200, 1500 notes/min (OPTION)
Feed system	Roller friction type
Hopper capacity	300sheets(Optional:500sheets)
Stacker capacity	Free Voltage(AC 86V ~ 264V, 50/60Hz)
Power source	200sheets
Power consumption	40W

4. APPEARANCE

No	NAME	FUNCTION
①	HOPPER	Notes to be counted are placed in the Hopper.
②	SELF CENTERING HOPPER PLATES	Easily adjust the hopper plates to the different width size of banknotes
③	HANDLE	Used for carrying the machine.
④	PAPER THICKNESS ADJUSTMENT SCREW	Used for the proper adjustment of gab between paper feeding rollers for smooth counting of various notes to have different paper thickness. To clear the possible errors (half, chain, double···)
⑤	STACKER	Counted notes are stacked in this stacker.
⑥	FAN	Built-in dust removal system.
⑦	POWER SWITCH	Main power on / off switch.
⑧	REMOTE DISPLAY PULG	Connector for optional remote display.
⑨	DUST COLLECTOR	User can easily remove the dust to be stacked on this dust collector.

5. OPERATION PANEL
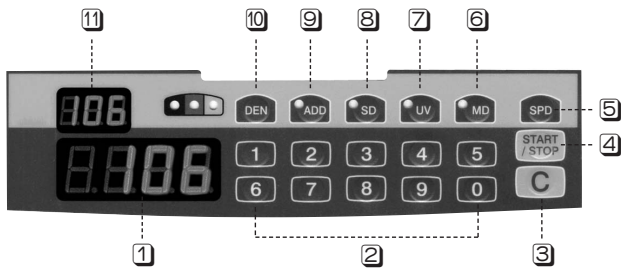
Turn the power switch ON. The counter will display the following message.
tst, *good* it is self test function.

No	NAME	FUNCTION
①	**Counter numerical display**	The number of counted notes is displayed here.
②	**Preset key**	By pressing any number key, user can freely preset the number to be counted.
③	**Clear key**	This key is used to clear errors.
④	**Restart key**	Used to stop or to restart the counting temporarily during counting operation.
⑤	**Speed key**	3 different counting speeds can be selected by simply pressing this key. SPD 1 (High speed), SPD 2 (Middle speed), SPD 3 (Low speed).
⑥	**Magnetic Detection key (OPTION)**	By pressing this key, the counting will be stopped in case a counterfeit note is detected through the magnetic features.

No	NAME	FUNCTION
7	Ultra Violet Detection key (OPTION)	By pressing this key, the counting will be stopped in case a counterfeit note is detected through UV features.
8	SD key (OPTION)	To detect the different sizes for both longer(length) and shorter(width) sides of notes from the target note by size comparison with accuracy.
9	ADD key	When pressed, the machine will provide accumulative total of all counted notes.
10	Density key (Double Detection)	Use this key to place proper density level for two-sheet detection. Proper adjustment of density level can ensure correct counting.
11	Batch number display	The selected batch number is displayed here.

6. OPERATION

1) Switch on the power, located on the back of the unit.

2) Display will default to 100 for the batch, the lower right corner should read "0"

3) Adjust the hopper width

4) If bills are placed on the hopper, the bills will start counting automatically and it will stop when last bill has cleared the top of the machine.
During counting of the bills, if you press "S" key, counting will be stopped at this moment and if you press "S" key again, counting will be resumed.

5) You may choose to enable the "SD" or "UV" or "MD" detection features, before counthing by pressing the appropriate button "SD" or "UV" or "MD" or you may enable all these functions. (OPTION)

NOTE : See page 8~10 for key descriptions, and functions

6) How to Sort bank notes

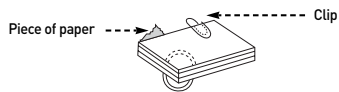Precautions to insure proper settings for counting of bank notes

■ Damp and/or badly damaged notes should be avoided.
■ Check that no foreign matter (piece of paper, paper clip, dust, etc.) is mixed in the bundle of notes.
■ Folded or curled notes should be straightened before they are set on the hopper.

Piece of paper .... Clip

Damp and/or badly damaged note

Stack of notes mixed with a paper clip or piece of paper

Curled note

Folded note

7) How to set test mode

Test mode start

① **How to select test mode**

   Push ① key for 2~3 seconds.

t	S	t
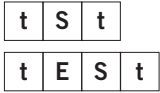
t	E	S	t

② **How to select each test mode**

   When test mode is on standby, set the objective test number on the panel by pressing key no. ①~⑨.

③ **How to finish test mode**

   Press the ⓒ key.

8) Test mode

Key No	ITEMS	CONTENTS
①	**Motor condition checking.**	Motor is operated continuously. t − 1 r u n
②	**Motor ON/OFF.**	Motor is switched ON or OFF every time. t − 2 t − 2 r u n , S t o P
③	**Indicates sensor condition.**	Each sensor name will be displayed in case the sensor condition is abnormal status. LED Display Example for Sensor condition. All Sensors are normal. t S t g o o d

Key No	ITEMS	CONTENTS

③	**Indicates sensor condition.**	Abnormal status of start & End sensor.
		`t − 3` / `S t r` , `t − 3` / `E n d`
		
		Abnormal status of Left & Right sensor.
		`t − 3` / `L E F t` , `t − 3` / `r H t`
		
		Abnormal status of encoder sensor.
		`t − 3` / `E n c o`

Key No	ITEMS	CONTENTS
④	**Indicates total number of passed notes.**	`r E c` / `0 0 0 1` , `r E c` / `6 0 0 2`
⑤	**Indicates production date.**	`P r o` / `2 0 0 3` , `P r o` / `0 7 2 2`
⑥	**Indicates serial Number.**	`S E r` / `0 0 0 0` , `S E r` / `2 7 3 6`
⑦	**Program version indication**	Indicates the Program version. `U E r` / `u − 1 5`

9) User mode

Push ⑨key for 2~3 seconds to enter into user mode. When user mode is on standby,
set the objective setting number, ① or ② on the panel.

Key No	ITEMS	CONTENTS
①	**Setting automatic start on/off**	＜Automatic Counting＞　　　＜Manual Counting＞ | S	t	r		S	t	r
A	u	t	o |,	n	n	A	n	
②	**Setting buzzer sound level**	Adjustable the buzzer sound level in the range of high, low, mute with pressing this key. | b	E	L		b	E	L
		L	o |,			o	n	

Key No	ITEMS	CONTENTS
②	**Setting buzzer sound level**		b	E	L
	o	F	F	

7. ERROR CODES

When an error occurs, error code will be displayed. Confirm the problem indicated by the error code and try to remove the error according to the following procedures.

No	DISPLAY	TYPE OF ERROR	CAUSE OF ERROR	PROCEDURE FOR REMOVING THE CAUSE OF ERROR
①	JAn	Jam	Note is jammed in the machine.	1. Remove notes placed in the hopper and / or stacker. 2. Open the upper part of the hopper and remove the jammed note(s). 3. Restart counting operation after clearing the error by ⓒ key. 4. Check the gab between feeding Rollers on the hopper position and adjust the gab with thickness adjustment screw to feed the notes smoothly.
②	HF	Half note	Abnormal note is mixed in the bundle of notes to be counted.	Remove all the notes from the hopper. Check the gab between feeding Rollers on the hopper position and adjust the gab with thickness adjustment screw to feed the notes smoothly.
③	CHn	Chained note		

No	DISPLAY	TYPE OF ERROR	CAUSE OF ERROR	PROCEDURE FOR REMOVING THE CAUSE OF ERROR
④	SH	Short note		Check the encoder sensor or Encoder Wheel.
⑤	db	Double detection error	Thickness gab or density level is not proper	Check the gab between feeding Rollers on the hopper position and adjust the gab with thickness adjustment screw to feed the notes smoothly. Change the density level.
⑥	Sd (OPTION)	Different denomination	A suspected different denomination note was detected (Sd detection)	Remove suspected note.
⑦	FC (OPTION)	FAULT CASH	A suspected counterfeit note was detected. (UV detection)	Remove suspected note.
⑧	CF (OPTION)	Counterfeit	A suspected counterfeit note was detected. (MD detection)	Remove suspected note.
⑨	Str ~ Enco	Failure of SENSOR(S)	Sensor is dirty or something is stuck on the sensor	Turn off the power and clean each sensor with enclosed brush or remove something to be stuck on the sensor

Note 1.	Sensors are used for the counting system in this machine. As these sensors are of optical construction, the system may cause miscounting if dust or dirt are stuck on the sensors. Clean the sensors with enclosed brush.
Note 2.	Pieces of paper, dust and / or trash etc. accumulated in the hopper and / or stacker may be taken into the machine: this may cause malfunctioning of the machine. Clean the hopper and stacker in the same way as above.
CAUTION	1) Before the hopper is opened, make sure to turn off the power switch. 2) Clean the machine after turning off the power. 3) Do not use chemicals for cleaning the machine.

8. TROUBLESHOOTING

If a problem occurs, please check the following "Troubleshooting Guide". By taking the corrective measures suggested, you will be able to resolve the problem. If the problem is persisted, please contact your nearest CDM service center.

No	TROUBLES	CAUSE AND TROUBLESSHOOTING
①	Power is not turned on even if the power switch is turned on.	1) The power supply cable is not inserted fully. 2) The fuse has blown. Replace it. If trouble continues after the replacement, there is an interal problem in the machine. 3) Contact your nearest CDMservice center.
②	Note feeding is not carried out smoothly. ■Notes are fed intermittently. ■ Chain, double errors occur frequently. 2 or 3 notes are caught at a time.	1) Hopper guides are not positioned properly. 2) Notes are not in a good condition. 3) Notes are not placed properly in the hopper. 4) The gap is too narrow. Turn the paper thickness adjustment screw to the direction of **clockwise** to **widen** the gap a little. 5) The gap is too wide. Turn the paper thickness adjustment screw to the direction of **counterclockwise** to **narrow** the gap a little. 6) The surface of the feeding drum or rollers is dirty. (Clean the surface)

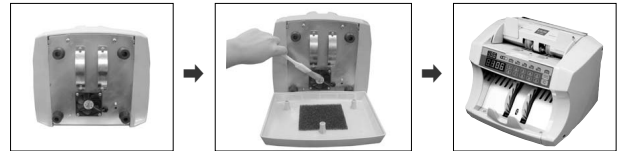| No	TROUBLES	CAUSE AND TROUBLESSHOOTING
③	Notes are not arranged properly in the stacker.	1) Same as above No ☐2 2) Stacker vane is bent or folded.
④	Double errors occur frequently.	1) See No ☐5 of Error Codes on page 21 2) Check No ☐2 of this troubleshooting guide
⑤	Abnormal sound during counting.	1) Foreign material is stuck on the feeding drum or rear guide. (Remove clips, adhesive tape, etc.)
⑥	Counting does not start automatically when notes are placed on the hopper.	1) Some notes are left in the stacker 2) When operation is stopped due to an error, remove notes from stacker and press ⓒ key.
⑦	The following error code is displayed on the LED display. Str : Start Sensor Error LEft : LEET Sensor Error rHt : RIGHT Sensor Error End : END Sensor Error Enco : Encoder Sensor Error	1) Press the ⓒ key or turn on and off the power switch to see the condition of the machine. 2) See No ☐9 of Error Codes on page 21 3) Contact your nearest CDM service center.

9. ## SELF CLEANING

1) Dust collector

The dust arose from the counting operation will be gathered in this dust collector and user can remove the dust easily with the simple disassembling of this device.

2) Cleaning method

① Before cleaning, power off completely.

② Disassemble the dust collector.

③ Clean the inside of the dust collector, Fan, cover and so on with the brush.

④ When the cleaning is over, Please assemble the dust collector.

memo

memo