

**Note**

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**Every person working with this Sorter; must have previously read and understand the user manual and, specially the safety information.**

## **Safety Information**

Always be careful in operating the Machine. To reduce the risk of fire, electrical shocks, and other injuries, keep these safety considerations in mind when installing, operating, and maintaining of your Machine.

### **Stability**

Place the Machine on a secure and stable surface on a desk. The Machine can seriously get damaged if it falls from the desk or during movement.

### **Power Supply**

Machine should always be connected to correct power as listed on this user manual and on the label located on the rear side of the Machine.

### **Grounding**

Machine must be plugged into a grounded (three-hole) outlet. Grounded plugs and outlets are designed for your safety - do not try to make a three-prong plug fit into a two-prong outlet by modifying the plug or outlet in any way. please contact your service provider or a qualified certified electrician if you are unable to plug the Machine into your electrical outlet or power stripe

### **Overload**

Do not plug too many electrical Machines into a wall outlet or into a power strip. Do not use an extension cord in any situation. An overloaded outlet could be a reason of a fire and electrical shock hazard, further could damage the Machine severely

### **Cleaning**

Before cleaning the Machine, unplug the Machine from the power outlet. Clean external surface of Machine with a soft cloth slightly dampened with water. Do not use aerosol cleaners

### **Gas Leaks**

Never place the Machine close to a gas outlet nor operate the Machine around the outlet. In case of a gas leak, it could spread into electrical part of the Machine causing spark resulting in fire or explosion

### Precaution

1. Never push any objects of any kind onto the Machine side covers or insert any object through any opening of the Machine.
2. Do not operate your Machine in any wet location, or outdoors or if you are wet. Always keep liquid away from the Machine. If water spills occur, turn off and unplug the Machine immediately and contact your service provider.
3. Do not allow anything to rest on the power cord, line cord, or PC interface cable. Do not place the Machine where power cords can be damaged or unplugged by person walking or stepping on them.
4. Do not allow pets near the Machine or to chew on the power cord or PC interface cable.
5. Use supplies or cleaning materials only as directed. Keep all supplies and materials out of the way of children.
6. Make sure that the Machine is installed near an outlet and is easily accessible.
7. Never remove side covers or guards that require a tool for removal. This Machine is not designed for user or operators to service the Machine by themselves. Always refer servicing to authorized service personnel.
8. Never defeats interlock switches. This Machine is designed to restrict operator access to unsafe areas. Covers, guards and interlock switches are provided to ensure that the Machine will not operate with covers opened.
9. Risk of explosion if battery is replaced by an incorrect type. Dispose of used batteries according to the instruction.

### Managing the performance of the machine

This Machine is equipped with many sophisticated sensors. Without periodical and proper maintenance and servicing, Machine cannot perform well and last long. Please read the '**Maintenance**' section on this User manual and perform basic surface cleaning every day. Contact your service provider or sales representative to sign up with yearly maintenance plan with them..

## Safety Notes

Your machine and the supplies are designed and tested to meet strict safety requirements. Included are safety agency examination and approval and compliance to established environmental standards. Please read the following instructions carefully before operating your machine, and refer to them as needed to ensure the continued safe operation of your machine.

### WARNING

Hazardous moving parts!  
Keep fingers and other body parts away

Battery is used for 'OPE Board' in this machine. If wrong date and time are displayed on LCD after correct setting, it is necessary to change the battery of 'OPE Board' Please read the following instructions carefully before changing the battery.

### CAUTION

Risk of explosion: If battery is replaced by an incorrect type.  
Dispose of used batteries according to the instructions.



Either the symbol  , or a similar symbol, combined with the triangle shaped warning sign from ISO 3864-2, or the following statement or equivalent text shall be used:

### WARNING

Hazardous moving parts keep away from moving fan blades.

FCC Compliance Statement

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

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

This manual shows user general symbols for safety information and symbols to identify special dangers.

**Refer to the below Icons before reading Manual.**

Icon	Word	Explanation
	DANGER WARNING	This symbol with the signal word (Danger/Warning) refers to an immediate risk to life or health.
	CAUTION	This symbol is to identify safety information. Ignoring this warning can result in damage to the system or endanger data consistency.

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# 1 INSTALLATION

## Packing List

No.	Part Name	Qty	Remark
1	MACHINE	1 Unit	
2	AC Power Cord	1 pc.	
3	User Manual	1 pc.	
4	Sensor Cleaning Cloth	1 pc.	

## Work Area

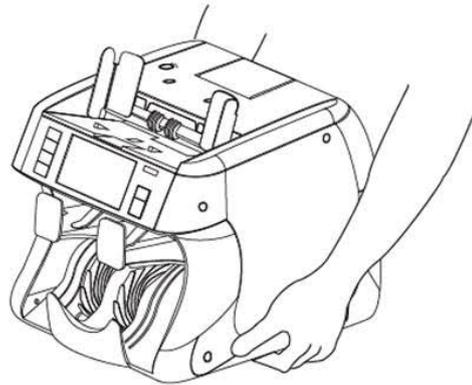
To help guarantee trouble-free operation of the machine, place it on a flat, stable surface near your workstation.

Do not place the machine:

- in direct sunlight
- Near heat sources or air conditioners vent
- In dusty or dirty environment

## Handing

When handling or moving the machine, do not lift the machine with grasping the Front Area. The picture on the right illustrates how to lift the machine correctly by holding at the bottom portion of the machine from rear end.



## Power On / Off

Plug one end of the power cord into the A/C socket at the rear side of the Machine and the other end into a standard AC power wall outlet (properly grounded) or to a power strip.

Turn the Power On or Off by pressing power Switch button located at the rear side of the Machine (See section 2.1 Description of Parts at page 10). After initializing, Machine will enter into main display and ready for operation. Confirm that all of the counting results are saved prior to powering off the Machine (ignore if you decided not to save counting results)

## Interface



MICRO SD

**[ Micro SD ]**

For optional function

USB Type A

**[ USB Type A ]**

The firmware can be upgraded with USB Memory Stick (Flash drive).

LAN

**[ LAN ]**

1. The counting results is sent to PC though LAN
2. PC can control the set though LAN
3. The machine can be upgraded through LAN

RJ11

RJ11

**[ RJ11 ]**

External Display for customer [option] can be connected with these 2 ports 1 or 2 user can make the counting result display using these ports.

RS232C

**[RS232C Serial Port]**

MACHINE has a serial interface port, which allows you to connect your printer to print out counting result. To connect your printer to the machine, follow the steps as below:

1. Make sure that both the MACHINE and the printer are turned off.
2. Connect the end of printer cable to the serial port of MACHINE.
3. Turn on the MACHINE and set parameters referring to the **Chapter 5**.



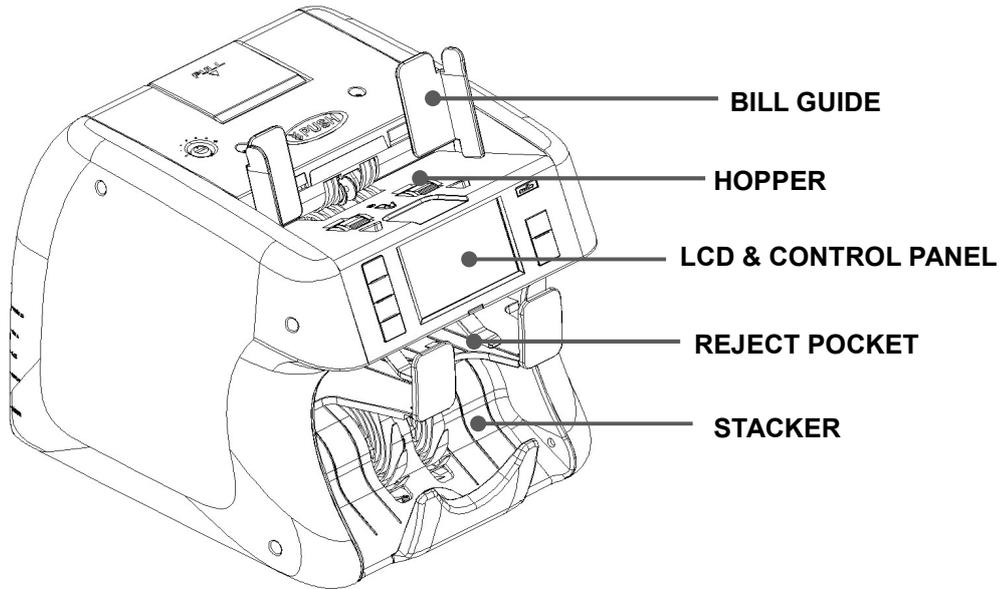
**[Warning]**

If user inserts improper cable terminal into the port, the machine could be turn off. Please, check the right port before inserting.

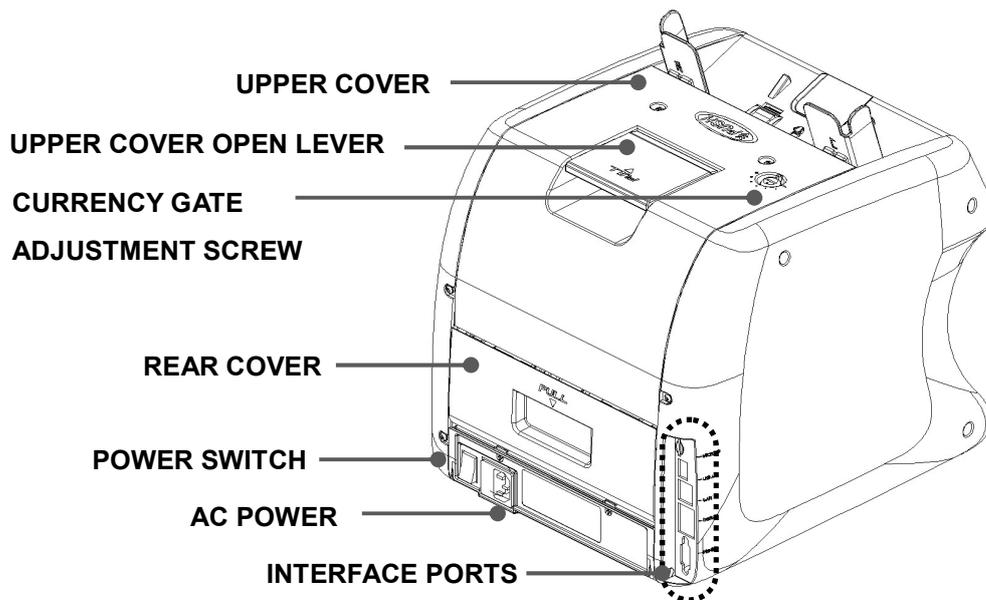
**2 OVERALL DESCRIPTION**

**2-1 Description of the Parts**

**[FRONT VIEW]**



**[REAR VIEW]**



## 2-2 Description of Control

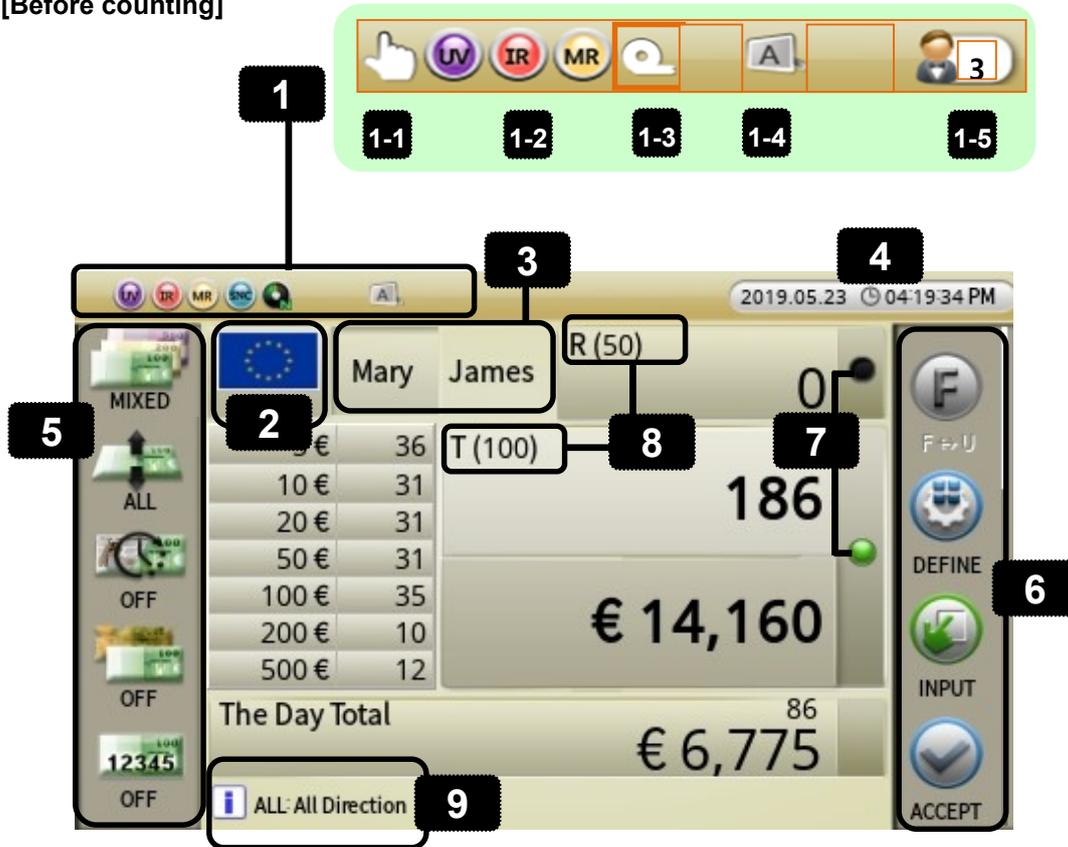
### Overview of Control panel



Indication	Description
	<ul style="list-style-type: none"> <li>- Manually START the Machine (when manual starting is set)</li> <li>- Emergency STOP &amp; START during counting.</li> <li>- Save or set the mode</li> <li>- This key represents 'OK' and 'YES.'</li> </ul>
	<ul style="list-style-type: none"> <li>- CLEAR the count result or return to previous menu screen.</li> <li>- CANCEL the present setting.</li> <li>- User can remove jammed notes by pressing this key.</li> <li>- This key represents 'Cancel', 'Close' and 'No.'</li> </ul>
	<ul style="list-style-type: none"> <li>-To change various display screens to see current count result details, rejects reasons and so on.</li> <li>- This Key is also used to change some menu or sub-menus selection</li> </ul>
	<ul style="list-style-type: none"> <li>- To Enter into User-defined mode. Up to 16 such combination of discriminating and sorting modes can be set by users in advanced and can be easily access from the control panel menu by touch.</li> </ul>
	<ul style="list-style-type: none"> <li>- To Enter into User-setting Menu (User can set various Parameters). This menu is password projected. Also, to Exit from Setting Menu</li> </ul>
	<ul style="list-style-type: none"> <li>- To print each count result if external printer is connected</li> </ul>

Overview of Touch Screen

[Before counting]



[After counting]



No.	Name	Description
<b>1</b>	Indicators	
1-1	Start mode	To show Auto or Manual start. While Auto start is default, this Icon will appear if manual start is activated
1-2	Counterfeit	To show On/Off of UV/ IR/ MR Sensors
1-3	Tape Sensor	To show Tape Sensor On / Off except for in Fitness Mode
1-4	Customer Display	To show Customer display is on operation (Display A, B)
1-5	User Define Mode	To show User Define Mode
<b>2</b>	Currency Flag Icon	To show present currency. User can change currency by touching this icon
<b>3</b>	Concurrent User (User Login)	2 persons can use MACHINE at the same time To set the user, touch the alternative button Double Touch can change the other user (User name can be edited) The user can omit this display
<b>4</b>	Date & Time	To show current Date & Time. Can be adjusted.
<b>5</b>	Mode Setting Panel	To show various selected modes
<b>6</b>	Function Setting Panel	To show various functions
<b>7</b>	Pocket LED	To show each pocket is empty/full
<b>8</b>	Batch Display	To show batch amount of stacker & reject pockets
<b>9</b>	Information	To give some information for selected modes
<b>10</b>	Denomination & number	To show the counted result by denomination The user can omit this display
<b>11</b>	Reject	Reject reason. Touch this button to see Detail view.
<b>12</b>	Stacker	Stacker Pocket count result. Touch this button to see Detail view
<b>13</b>	The Day Total	To show the Day Total amount The user can remove this information from the display if chooses.
<b>14</b>	INPUT	To correct the count result. User can add the amount of Uncounted notes or coins manually.
<b>15</b>	ACCEPT	Count result will be added to Grand Total

### 3 PREPARATION OF OPERATION



**When Upper or Rear Cover is opened, Machine will display alarm message.**

#### How to open and close 'Upper Door' and 'Rear Door'

Please refer below figures when you open and close the doors

##### [ Upper Door ]

Gently insert your fingers inside the tab and lift-up the Upper cover. Press hard on the "PUSH" area to close the cover. You will hear a locking sound ensuring cover is properly locked in placed and closed.



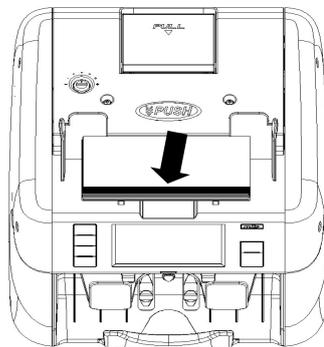
**[CAUTION] YOU HAVE TO MAKE SURE IF THE FRONT DOOR IS CLOSED WELL. OTHERWISE, MACHINE WILL SEND MANY NOTES TO REJECT POCKET**

##### [ Rear Door ]

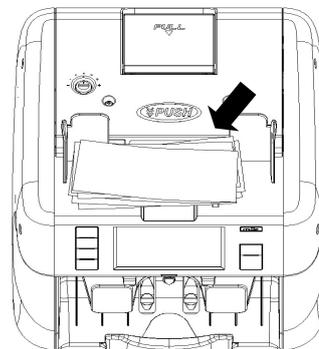


**How to place banknotes onto the Hopper.**

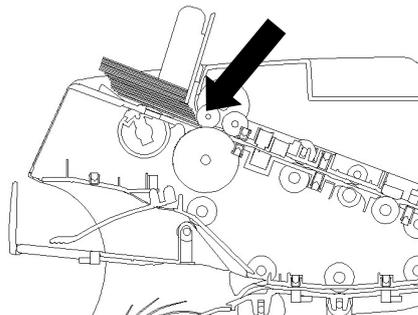
It is very important to place the banknotes on the hopper correctly and towards the end because recognition performance of the banknotes is highly affected by the arrangement of banknotes in a stack. Number of rejected banknotes can increase when banknotes are not placed towards the end and not aligned and arranged properly. Refer to the pictures below for the correct placement of banknotes onto the Machine Hopper



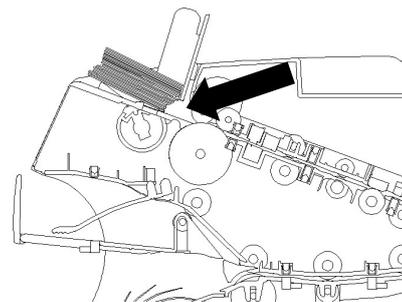
**(Good)**



**(No good)**



**(Good)**



**(No good)**

**[CAUTION]**



PLEASE MAKE SURE THAT THERE ARE NO CLIPS, BANDS OR SIMILAR FOREIGN OBJECTS ATTACHED TO BANKNOTES. FOREIGN OBJECTS CAUSES MACHINE MALFUNCTION AND MAY DAMAGE SENSORS SEVERELY.

## Counting

In AUTO mode, Machine starts to count banknotes automatically after it detects the existence of banknotes on the hopper. In MANUAL mode, the Machine will start to count banknotes only if the banknotes are placed onto the hopper and 'START'  key is pressed. While counting, the Machine will display the number of the banknotes on LCD display and it halts operation when it meets one of the below conditions;

- No bills on the hopper
- Stacker Pocket is full.
- Reject Pocket is full.
- The number of counted banknotes reached the preset batch number set in BATCH function.
- Errors have occurred.

If an error or jam occurred during operation and Machine stops as reason, then an error message will be displayed. To clear the error, press 'C'  key. The Machine will try to solve the problem automatically, however, if it fails to clear the error or jam and error message repeats on the display screen, then, user to open the Upper cover door or Rear cover door as instructed by error message that displayed on the screen. Remove jammed banknotes from jammed location and close the cover correctly. Machine will then be able to clear the error message and resume operation when user press "START".

(EMERGENCY Stoppage of the Machine during operation)

While Machine is in operation, Press 'START'  button to stop counting operation immediately in case of an emergency.

To resume counting operation, press 'START'  button.



**[CAUTION]** Stop in operation

Please 'START'  button to stop operation while the machine is counting.

To resume operation, press 'START'  button again.

**4 BASIC OPERATION**

**4-1 Procedure of Operation**



**4.1.1. Currency Selection**

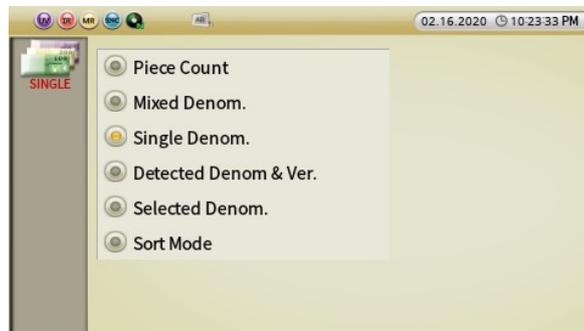
User can set up the currency by selecting the national flag. (ex>    )

'AUTO'  means that MACHINE will set up the first detected currency automatically.

**4.1.2. Mode Selection**



'DENOMINATION' : To select piece count, Mixed denominations, Single(detected or selected) denominations



'Direction' : To select the directions of the banknotes (face/back and up/down)

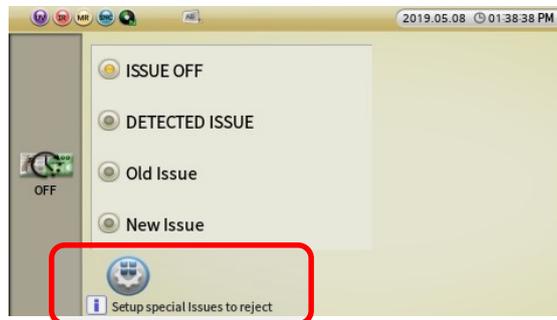
## Banknote Discrimination Counter and Fitness Sorter



'ISSUE' : To select the issue (Banknote Version of printing) separating function



(Option)



User can select 'Accept', 'Reject' for each issues per denomination

'FITNESS' : To select the fitness parameter (ATM / FIT1 / FIT2)



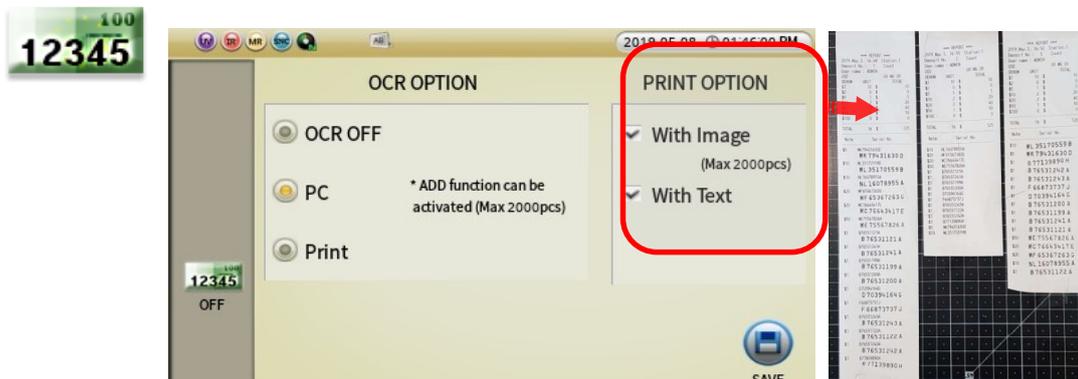
(Option)



\*\* The model name 'MIB-11V has 'SEMI Fitness Sorting' function.  
 ( 'SEMI' fitness does not includes 'Taped note' detection)



'Note Serial Number' : To select Banknote serial numbers extraction



\*PC : Machine will send scanned banknote Serial number Image to PC.

The PC application 'SDC-100' works with this option.

(Max. 2000 notes can be sent in a time)

\*Print : Machine will print out 'counting result' and(or) 'Serial Image' and(or) OCR Test.

(If select 'With Image', Max. 2000 notes can be sent in a time)

#### 4.1.3. Function Selection



'ADD'

To select ADD function.

In general situation, counting result initialize when pocket empty, but if ADD button was activated, counting result is displayed by automatically added from the previous counting result even if pocket is empty.

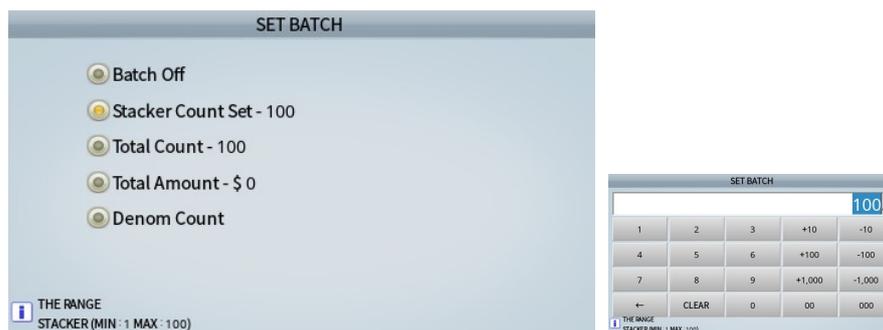
**For detail explanation, please refer "4-2 Special Mode & Functions"**



### ‘BATCH’

To select BATCH function

Batch is used when user want to count specific number of banknotes. When BATCH Function is on, the operation will be stopped after counting the number user set in advance even if banknotes still remain on Hopper. Batch size cannot exceed Stacker pocket’s maximum size.



**Batch Off:** By default, Batch is set to Off. Machine will not halt to any specific quantity of a mixture denomination count or denomination batch count. Machine will continue to count banknotes until it reaches maximum Stacker capacity set as 200 bills for Stacker in the software. If desire is to do batching, User to choose from one of the options.

**Batch Count Set:** User can set a batch number less than 200 qty (User should not set Batch number more than Stacker’s maximum capacity) under this Batch Count Set sub-menu to set up a batch count. Machine will halt when it reaches the batch quantity set.

**Total Count:** If User wishes to set up batch quantity to more than Stacker’s maximum capacity, then, User needs to set up the desire batch number under this Sub-menu and it can be set up to 9999. ADD mode must be ON for this function to be effective

## Banknote Discrimination Counter and Fitness Sorter

and if ADD is on, Machine will continue to count and keep track of the Batch number set under this Total Count sub-menu and halts when stacker reaches maximum capacity or hopper is empty or reaches the Total Count quantity.

**Total Amount:** User can set a batch by dollar amount and when Count total reaches the total dollar amount, Machine will halt. So, this function is meant for batching a count by dollar amount instead of pieces (qty). The maximum amount user can set up for batching is 8 digits.

**Denom Count:** This sub-menu refers to denomination batch count for each and every denomination. Although 100 pcs is set for all denomination according to Federal reserve Bank's requirement for strap, user can modify these batch number for each denomination manually and save into Machine software. To Activate this function, choose this Denom Count option. To modify, touch any of the denomination on touch screen and modify on the next screen that appears.



### The status for stacker

When Fitness mode is on, user can allocate the pocket for the fit notes.



'FIT On' : Fit notes will go to the stacker pocket.



'UNFIT On' : Unfit notes will go to the stacker pocket.

'Fitness Off' : Fitness function off.

(Option)



### 'DEFINE'

To create User Define mode

'User Define Mode' means that user can set up Max 16 different modes for his/her usual or specific purpose. User can set and save his/her own mode and can select

easily just touching the  button and number.

After the setting is done, press  button to save. Then, user can see the

availability of  slots. Selected the slot, MACHINE shows the defined

user number  at main screen and is ready to count.

If user wants to stop using user define mode, press the “user off”  icon. Then the defined Mode number will disappear.

If user wants to look for the list of defined modes, press “MODE” button key.

**‘MANUAL INPUT’**



[INPUT] function is designed to correct the counting result. User can add the amount of uncounted notes (because of seriously damaged notes) or coins manually.

Touching [INPUT] icon in counting result display, user can see INPUT VALUE screen and can correct the count result minutely.

INPUT VALUE				
USD	DENOM.	ST	PCS.	AMOUNT
	2 \$	0	0	0
<b>INPUT COIN</b>	5 \$	55	0	275
\$ 0.25	10 \$	54	0	540
	20 \$	53	0	1,060
<b>ALL TOTAL</b>	50 \$	48	0	2,400
\$ 10,128.25	100 \$	57	1	5,800
	<b>TOTAL</b>	320	1	10,128

**‘ACCEPT’**



[ACCEPT] To add the counting result to ‘Grand Total.’ Once a counting is completed and if nothing to add to count, user can press [ACCEPT] to add current count to Day Total Press [ C ] and check if counted result is added to the Day Total.

The Day Total		438
<b>\$ 13,648.25</b>		

User can touch ‘The total’ area and check ‘The Day tota’ and ‘Grand total’.

Also can clear ‘The Day tota’ and(or) ‘Grand total’.

**4.1.4 Main Screen Selection**

Main Screen can be changed by touching yellow area **(Keep touching for 2 sec.)**



**4.1.5 Mode change using 'MODE' key.**

Mode will be changed as below order.



Piece mode

Mixed mode

Single mode



Face mode  
(Mixed denom.)

Orient mode  
(Mixed denom.)

Fitness mode  
(Single denom.)

4.1.6 Counting Result Confirmation



If user press **CHANGE** or touch the section of result in screen, machine will show specific results.

- Touching '1' in the screen will show the 'REJECT REASON'.
- Touching '2' in the screen will show the 'DETAIL DISPLAY'.
- Touching '3' in the screen will show 'The Day Total' and 'Grand Total'



REJECT REASON (1)

NO.	REASON	DETAIL
1	SRL ERROR	IMAGE ERROR

1. Reject reason view

COUNTING DETAILS

DENOM.	STACKER	AMOUNT
5 €	27	135
10 €	30	300
20 €	29	580
50 €	24	1,200
100 €	27	2,700
200 €	7	1,400
500 €	6	3,000
Sum	150	9,315
Reject	1	Coin 0
Total	150	9,315

2. Counting detail view

CURRENCY	The Day Total	Grand Total
VND	0	0
AUD	0	0
EUR	86 € 6,775	86 € 6,775
GBP	0	0
USD	0	0
CNY	0	0

3. Day total view

Amount for current stacker and total.

DENOM.	STACKER	AMOUNT
S (100)	5	50
T	150	€ 2,130
T	150	€ 9,315

CURRENT STACKER

DENOM.	STACKER	AMOUNT
5 €	6	30
10 €	14	140
20 €	13	260
50 €	4	200
100 €	11	1,100
200 €	2	400
500 €	0	0
Sum	50	2,130
Reject	1	Coin -
Total	50	2,130

ALL OCR RESULTS (150)

NO.	DENOM.	SERIAL NUMBER
1	100 €	X13313938484
2	50 €	X93987294374
3	50 €	X93987294446
4	50 €	SC8214690981
5	50 €	X93987294365
6	50 €	SC8214691116
7	5 €	V17679601093
8	5 €	NA2136081502
9	5 €	P13150870894

Amount for each denomination

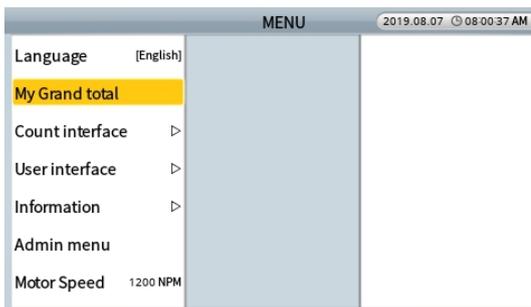
Bamknote serial number OCR (Option)

By touching 'Accept' , user can confirm counting result and it will added in 'The day total' and 'Grand total' field.

#### 4.1.7 Grand Total (GT)

'Grand Total' means the accumulation of the Day (daily) Totals whereas 'The Day Total' defines as counted banknotes that user accepted on a single day. According to current software configuration,

if user touches [ACCEPT]  icon after counting is completed or machine is in Auto-Accept mode, then each count result will then be added to 'The Day Total' as well as in Grand Total. User can view Grand Total through MENU item under 'My Grand Total'. **(For further information about Grand Total, please refer to Chapter 5-2).**



#### **Special Reminder:**

"Grand Total" may not be correct if Users double-counts any batch of monies and saves both counts to the 'The Day Total'. Both 'The Day Total' and 'Grand Total' will not be accurate.



The screen view of The Day Total and Grand Total if multiple currencies are selected

#### 4.1.8 Reject Reasons

No.	Display on Screen	Meaning
1	NO I.D	The Machine could not identify the denomination due to various reasons.
2	NO READ	The banknote was not successfully scanned and read.
3	OVER RUN	The proceeding banknote was fed too close to the first one causing OVER RUN error.
4	SUSPECT (CF)	The scanned banknote was determined to be Suspect banknotes determined by one or more counterfeit detector sensors (UV, or MR or IR or combination of sensors).
5	STAY NOTE	The banknote was mismatched to discriminating or sorting parameter set.
6	DOUBLE	Machine sensor detected two or more banknotes passed to be as one banknote.
7	CHAIN	Chain Error when few banknotes attempted to feed at the same time from hopper area.
8	HALF	Half banknote error.
9	SRL ERROR	Serial numbers are not recognized properly.
10	OVER COUNT	Over count error displays when certain banknotes stay in the bill transport path and deliver to reject pocket when machine is halted for meeting pre-set batch number or during a jam or during a denomination counting or Sort mode.

**(Caution)**



If the reject reason is double or chain, the number of the reject note displayed on LCD can be different with the actual number of notes in the reject pocket.

## 4-2 Special Mode & Functions

### ■ FITNESS Mode (Option)

'FITNESS Function' discriminates circulated bank notes between to recycle and to dispose. Therefore, unfit bank notes by stains, holes and graffiti etc. are sent to the designated pocket. There are 8 items of the Fitness standards discriminating between to recycle and to dispose coinciding with pre-set criteria.

#### 1. Fitness conditions

- ① Missing corner: Self-explanatory
- ② Stain: Localized concentration of dirty
- ③ Soiling (Dirty): General Distribution of dirt across the entire banknote
- ④ Tapes: Self-explanatory  
 (Option: 'Semi Fitness' (in MIB-11V) does not provide this function)
- ⑤ Holes: Self-explanatory
- ⑥ Tear: Self-explanatory
- ⑦ Corner folded (Dog-ears): Self-explanatory
- ⑧ Graffiti (Including stamp): Deliberate graphical alteration of the banknote



2. FITNESS mode can be set up by 3 different Sub Modes.

The icon in below figure. Then, user can select the one of Fitness Sub-Mode in the initial screen There are 3 kind of 'fitness parameter' (ATM / FIT1 / FIT2).



For detail settings of 3 parameters (ATM / FIT1 / FIT2), you can refer '5-2. ADMIN MENU'..

■ **OCR Mode (Option)**



OCR mode has Sub Modes. Touch  icon and user can select SERIAL, S-OCR or P-OCR.

1. SERIAL Mode (Serial Number Printing Mode): In SRL mode, MACHINE captures the serial No. of banknotes and prints them as an image.
2. S-OCR (SB series-Optical Character Reader Mode): In S-OCR mode, MACHINE reads & recognizes the serial No. of banknotes and prints the characters and images.
3. P-OCR (PC-Optical Character Reader Mode): In P-OCR mode, MACHINE scans serial numbers of banknotes and prints them as images and at the same time, the images are sent to the PC. By running the application program on the computer, user can store and manage the images and converted OCR data.

■ **SNC (Serial Number Comparison) (Option)**

Machine can read the serial number and can identify the both left and right serial numbers in the banknote.

In case the serial numbers are not match each other, the note will be sent to the reject pocket and indicated as "SNC ERROR"



■ User Define Modes (How to Pre-set User-Define-Mode)

Under “User-Define-Mode”, user can set up various discriminating, Fitness sorting and direction (Face / Orient) in combination to fit their specific need or purposes and up to 16 of such combination of modes can be set for quick access from ‘DEFINE’ button.

The below steps describe how to set up such preferred modes in advanced and store in the memory for quick access.

1. Quick Access

To have quick access to one of your saved preferred Mode of count operation, press the ‘DEFINE’ icon and choose the number.



2. MAKE DEFINED MODE SETTING

In order to set up a new mode or edit it,

touch  icon or  icon.



Please choose all options

Then press ‘START’  button to save.



If you want to come out from ‘user define mode’, please press ‘USER OFF’ icon.



3. Delete User Mode

In order to delete the previous User Mode, touch  icon and touch  .

To delete all preset modes, touch the  icon.

4. Export User Define mode

\*\*\* User can export these 'User define mode' to 'USB Stick' and import to other machines.



■ ADD

User can set up / activate / deactivate various accumulation function by pressing  'ADD' icon. When ADD key is pressed, user will be provided with SELECT ADD TYPE screen and options to choose from.

1. ADD

When ADD option is selected, machine is prepared to add the next count amount even when the Stacker and Hopper are empty. User can continue to count multiple stacks of banknotes and receive accumulated counts when all banknotes have been processed and counted. Touch [ACCEPT] Icon to save that count results to The Day Total and Grand Total.



2. ADT

If ADT option is selected, 'Auto printing' option will be turned on automatically. If an external printer is connected,



Machine will send data to printer to print every time banknotes are removed from the Stacker. Printer will print out instant count for banknotes on the Stacker before removal. Printer will consequently print 'Report for Current Stacker' as well as 'ADD TOTAL' amount together.

*** REPORT CUR ST ***				*** REPORT CUR ST ***			
2018, May. 23, 11:57		Station:1		2018, May. 23, 11:58		Station:1	
Deposit No.: 0		Count		Deposit No.: 0		Count	
User name : ADMIN				User name : ADMIN			
DENOM	UNIT	UV MG IR	TOTAL	DENOM	UNIT	UV MG IR	TOTAL
\$1	15 \$		15	\$1	15 \$		15
\$2	0 \$		0	\$2	0 \$		0
\$5	17 \$		85	\$5	17 \$		85
\$10	15 \$		150	\$10	21 \$		210
\$20	16 \$		320	\$20	16 \$		320
\$50	17 \$		850	\$50	19 \$		950
\$100	20 \$		2,000	\$100	12 \$		1,200
-----				-----			
TOTAL	100 \$		3,420	TOTAL	100 \$		2,780
-----				-----			
ADD TOTAL				ADD TOTAL			
-----				-----			
TOTAL	100 \$		3,420	TOTAL	200 \$		6,200
-----				-----			

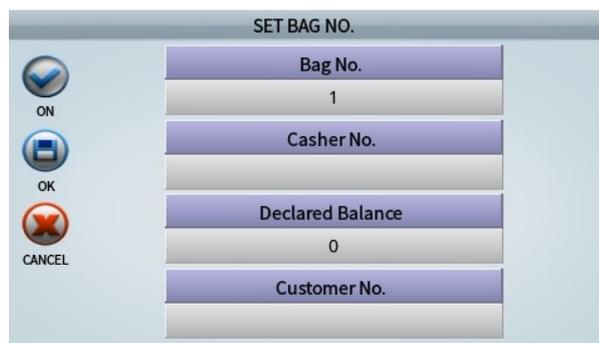
### 3. BAG

Usually Cash-in-Transit (CIT) companies use 'secure plastic packaging bag' to pick up their customers deposits and such bags labeled with unique Bar-code number for identification. If BAG option is selected, CIT companies can count each customer's deposit with Bag number (Bar-code), cashier number etc. and able to print out receipt with this information displayed



#### How to use 'Bag' function'?

Let's assume CIT company picks up 2 Cash Bags each from two different bank branches. During processing of those bags, CIT user press and choose "BAG" mode from the touch screen display. Once pressed, Machine will display the input screen as illustrated on the right.



A) Input information for 1<sup>st</sup> Bag.

- Input 'bag number' from a barcode scanner by connecting it to the machine using USB port located at the rear side (as illustrated at the below) or input bag number manually.
- Input Casher number.
- Under "Declared Balance", input expected total amount of the 'bag' that were declared by customers. (verification of counting result)
- Input Customer Number.



B) Press 'OK' or 'START' button to confirm input.

C) Count all the banknotes from the first BAG. (**Add function will always work in this mode**)

D) Counting is done.

E) There are 2 options for users to choose from: ① User can press 'Accept' icon or ② press PRINT button.

- ① **'Accept' icon:** User can use this option when user wants to strap by 100 banknotes. **After counting of 1<sup>st</sup> Bag, user should leave remaining unstrapped banknotes in the stacker and start counting the 2<sup>nd</sup> Bag.** During counting of 2<sup>nd</sup> Bag, machine will stop when a strap of 100 banknotes count is completed. Resume operation by pressing START key after removing the banknotes from stacker. Once count is completed, the Machine will only display the amount for newly counted banknote from 2<sup>nd</sup> Bag. (**This function is known as 'Complete'**)
- ② **Print button:** If Print button is pressed, printer will print the count results ('Complete' function will not work). **After printing is completed, user should remove all banknote from the Stacker Pocket.**

Input the information for 2<sup>nd</sup> Bag (repeat steps described in section 'A'). Then press 'OK' or 'START' button to confirm. Machine will process the count for bag 2<sup>nd</sup> and print out the counting result for bag 2<sup>nd</sup> as well as bag 1<sup>st</sup> and show the differences in any amount from expected amount from these 2 bags.

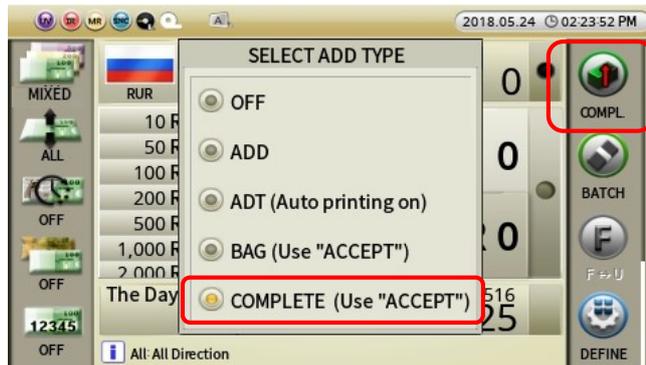
```

*** REPORT ***
2018, May.24, 11:35 Station:1
Deposit No.: 0 Count
User name : ADMIN
Bag No. : 6
Cashier ID :

          UV MG IR
DENOM  UNIT  R  TOTAL
R10    0  R    0
R50    0  R    0
R100   50  R   5,000
R200   0  R    0
R500   0  R    0
R1000  50  R   50,000
R2000  0  R    0
R5000  0  R    0
-----
TOTAL(A) 100 R   55,000
-----
REF. (B) :           56,000
-----
DIFF. (A)-(B) :       -1,000
-----
  
```

**4. COMPLETE**

If this option is selected, 'ADD' function will automatically be turned on. Please refer to 'Bag' function from 'Step 'B' to Step 'E' as described on the above.



Particularly,

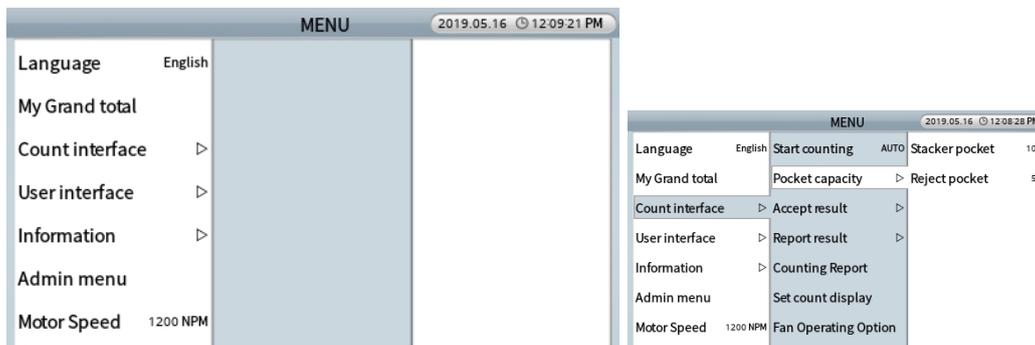
- ① **'Accept' icon:** User can press Accept icon when user wants to strap by 100 banknotes. Making sure that Stacker capacity or batch is set to 100 (refer to BATCH setting at Section 4.1.3).  

- ② **After counting of 1<sup>st</sup> Bag, user should leave remaining unstrapped banknotes in the stacker and start counting the 2<sup>nd</sup> Bag.** During counting of 2<sup>nd</sup> Bag, machine will stop when a strap of 100 banknotes count is completed. Resume operation by pressing START key after removing the banknotes from stacker. Once count is completed, the Machine will only display the amount for newly counted banknote from 2<sup>nd</sup> Bag.

## 5 SET FUNCTION AND PARAMETERS

### 5-1 USER MENU

By Pressing [MENU]  button on the Control panel, User can enter into User's Menu where user will be able to set own functions and parameters as described below:



MENU	Sub Menu	Description
Language		Set a menu language
My Grand total		Shows The Day Total & Grand Total
Count interface	Start counting	Choose Manual/automatic counting start
	Pocket capacity	Set "pockets' capacity"
	Accept result	Set 'Auto-accept' of count results or manually accept results after a count.
	Report result	Set 'Auto-Print' and other options
	Counting Report	Shows count report & error report
	Set count display	Custom configuration of entire display screen, items to view and color of font.
User interface	Set date/time	Set up system date/time
	Selection way	Set up selection method (pop-up or without a sub-menu)
	Sorting order	Set up denomination display order whether Ascendant or Descendant way.
	LCD brightness	Set up brightness of LCD
	Beep	Set up warning & button beep
	Power saving	Set up power saving mode
Information	About machine	To display machine software version & Currencies that are loaded (USD is standard).
	A/S call number	Shows After-sales service call number.

Admin menu		Access to Administration menu (password protected)
Motor speed (Counting Speed)	NPM (Note Per Minute)	Choose between Counting speed from 800/1000/1200 (1200NPM is Default) in all discriminating modes. 1500NPM max for Count – Piece count mode.

In order to move on lower menu section, it's available with "Touch Screen" or press



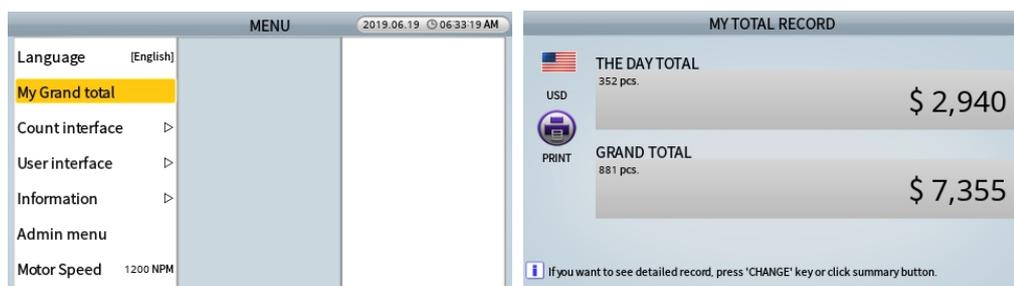
■ **Language:**

This Machine software includes multiple currencies languages. While English language is standard, user can change user-interface into another country's language if it is listed under this sub-menu.



■ **My Grand total:**

Once 'My Grand total' is selected from MENU, Machine will display "THE DAY TOTAL & GRAND TOTAL" of current user on the display screen.



By touching 'The Day Total' or "Grand Total", of MY TOTAL RECORD screen, user can see 2 different types of display screen as illustrated below:

- ① By touching "The Day Total" area once, user will see "MY TOTAL RECORD \_ THE DAY TOTAL" information.

## Banknote Discrimination Counter and Fitness Sorter

**MY TOTAL RECORD**

THE DAY TOTAL		DENOM.	COUNT	AMOUNT
 USD   PRINT	1 \$	0	0	
	2 \$	0	0	
	5 \$	288	1,440	
	10 \$	24	240	
	20 \$	28	560	
	50 \$	10	500	
	100 \$	2	200	
Coin			\$ 0	
<b>Total</b>			<b>352</b>	<b>\$ 2,940</b>

 If you want to see detailed record, press 'CHANGE' key or click summary button.

② By touching “GRAND TOTAL” area, user will see “MY TOTAL RECORD \_ GRAND TOTAL” information.

**MY TOTAL RECORD**

GRAND TOTAL		DENOM.	COUNT	AMOUNT
 USD   PRINT	1 \$	0	0	
	2 \$	0	0	
	5 \$	721	3,605	
	10 \$	60	600	
	20 \$	70	1,400	
	50 \$	25	1,250	
	100 \$	5	500	
Coin			\$ 0	
<b>Total</b>			<b>881</b>	<b>\$ 7,355</b>

 If you want to see detailed record, press 'CHANGE' key or click summary button.

③ User can print out each screen information by pressing  or touching  icon at each screen.

**MY TOTAL RECORD**

 USD   PRINT	<b>THE DAY TOTAL</b> 352 pcs.		<b>\$ 2,940</b>
	<b>GRAND TOTAL</b> 881 pcs.		<b>\$ 7,355</b>

 If you want to see detailed record, press 'CHANGE' key or click summary button.

### ■ Count Interface

1. Start counting: User can set manual or automatic start. Default is Automatic Counting Start.

In case of Manual Counting Start, indicator shows



- 2. Pocket capacity: User can set up stacker capacity of each pocket.
- 3. Accept result: User can set whether automatic "Accept" or manual "Accept" after counting.
- 4. Report result: User can set up the interface for printing out.

5. Counting report: User can see the counting report and error report.

COUNTING REPORT			
COUNT REPORT		8464	
ERROR REPORT			
JAM	3	COVER	0
FEEDING	0	FEED MOTOR	0
MAIN MOTOR	0		

6. Set count display: User can choose his(her) prefer display as following examples.

Set count display

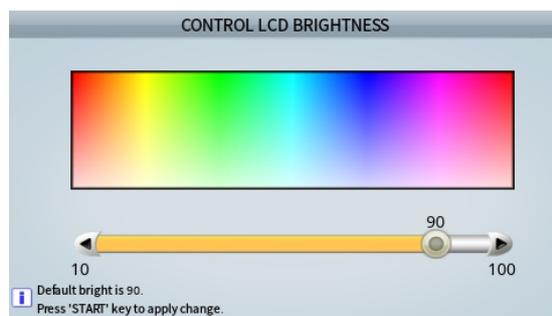
- Display count detail view
- Display currency symbol(\$...)
- Display the day total.
- Display mixed count detail view
- Red Font (for counting result)





■ **User Interface**

1. Setting of date/ time
2. Selection way : User can set up the Selection method of items ('Pop-up' type or without 'Pop-up' type)
3. Sorting order: shows the denominations by descending or ascending order
4. LCD brightness: user can adjust the brightness of color LCD
5. Beep: user can turn on/off warning and button beep
6. Power saving: can select Waiting time and saving type



■ **Information**

1. 'About machine': shows program version.
2. 'A/S call number': After Service call number

■ **Admin menu**

Administrator or trained operator can make changes to the functions and parameters at this menu with a password. See section **5-2. ADMIN MENU (Administrator Menu)**.

■ **Motor Speed**

Trained user can choose the counting and discriminating speed of the Machine from 800 / 1000 /

1200NPM (Note per a minute). This is to be noted that Machine software is defaulted at 1500NPM for COUNT mode (Piece counting) and 1200NPM for all Discriminating modes (Mix, Single, Face, Orient, Sort etc.).

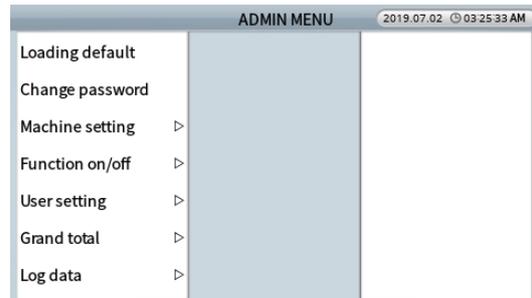
**5-2. ADMIN MENU (Administrator Menu)**

Administrator or trained operator can make changes to the functions and parameters under this menu with a password. Press



Panel and Enter [\*\*\*\*] in Password screen or simply touch 'ADMIN MENU' in the

[MENU] to access to sub-menus which are described in great details at the below:



MENU	SUB MENU	Description
Loading default		We do not recommend using of this menu item even for trained Uses. Please contact your Sales representative. If this loading default is performed, user will lose all their user-settings.
Change password		We do not recommend changing ADMIN password even for trained Uses.
Machine setting	Station ID	Set the ID number of machine
	Ethernet	Set up Ethernet connectivity
	FTP Information	Set up FTP information
	Black list (Option)	Manage suspicious banknotes list.
	Handling SRL Error (Option)	Manage the acceptable range of OCR error
	Printer	Set up External Dot or Thermal Printer
	Custom display	Set up an external customer display purchase from manufacturer.
Value setting	Way of Motor stop	Choose how to stop the motor
	CF level	Set up sensitivity level of CF detection
	Fitness (Option)	Set up Fitness function and import & export Saved fitness level

Function on/off	CF items	Turn on/off CF sensors
	Tape in count mode (Option)	Turn on/off the Tape Detection function in other modes than Fitness mode.
	SNC Setting (Option)	Turn on/off SNC function and set up the acceptable range of banknote serial numbers ( SNC : Serial Number Comparison between both serial numbers )
	Auto Default Loading	Turn on or off 'Auto Default Loading' function. If select 'On', machine will go back to default condition when off and on the power.
User setting	Concurrent User	Set up concurrent user function
	Set User Info	Input User name and Password
Grand Total	Auto clear	Set up GT saving period
	Clear Target	Select which total shall be cleared
	Initialize all	Initialize all total data
	Summary	The summary of Day/Grand Total
	Each user	Check GT for each user
Log data	Export log data	Log data can be exported to USB memory stick or screen
	Fitness Report	Fitness counting report

- Loading default: All of parameters get back to initial setting of factory

The Factory default settings are like below.

Function		Default Value
Speed (NPM)		Approx. 1200 (With all functions) MAX. 1500 (Piece count)
<b>[Count interface]</b>		
Starting counting		Auto
Pocket capacity	Stacker Pocket	100
	Reject Pocket	50
Accept result	Auto-accept	off
	After accept	Only add count-result to grand-total
Report result	Auto-print	off

	Printing Target	Select in printing
<b>[User interface]</b>		
Selection way		In list (On a pop-up menu.)
Sorting order		Ascendant
LCD brightness		90
Beep	Warning on/off	On
	Button on/off	On
Power saving	Waiting time	10 min.
	Saving type	Make the back-light of LCD darker

■ Change passwords

It is our highly commendation that only trained users or Administrator of this Machine to access to this menu and change Administrator password.



■ Machine Setting

1. Station ID: User has multiple machines at a same location and prefer to identify them by an ID number, user will be able to do so. After a unique ID number of the Machine is selected from this sub-menu, that ID number for the machine will be displayed on the print report.
2. Ethernet: Administrator can set up Dynamic / Static IP address in LAN setting.
3. FTP Information: Administrator can set FTP address, User ID, Password and Path
4. Black list: Administrator can register the serial numbers of counterfeit banknotes and catch them when they are counted by MACHINE
5. Handling SRL Error: Administrator can set how many unrecognized serial numbers shall be ignored
6. Printer: Set up Print.
  - 1) Interface: Administrator has to select a printer type before connecting the printer.



**Caution)** Needs to be discussed with the dealer about available printer

- 2) Cutting code: Contact your printer manufacturer for specific code if applies
- 3) Set Print Text: Administrator can select 'TEXT' or 'HEX code' for both Header and Footer in this menu.
7. Customer display: Administrator can select the kind of Customer Displays and connecting Port.



**Caution)** In case of concurrent user, Display A is for the user in the left and Display B is for the user in the right.

### 8. Way of motor stop

Administrator can choose option for 'Motor stop'.

- a. 'KEEP THE SPEED': If either pocket is full, some banknotes on the transport path will be sent to Reject pocket and Reject Reason will be shown as "Over count".
- b. 'STOP EXACTLY' (Factory Default): If a pocket is almost full, the counting speed will slow down and motor stops after the exact counting is completed.

### ■ Value setting

CF level: Administrator can set the levels of UV (Ultra-Violet) Sensor, MR (Magnetic Reader) Sensor and IR (Infrared) Sensor which are required to discriminate each currency.



### [How to set]

1) Select Currency & Denomination.

2) Move each circle  or  to set the levels.

3) Press  and save the level.

The lower level means the less sensitive. If the machine recognizes CF note as real notes, increase the level. If the machine takes real note as CF note, decrease the level.

If the level is '0' (Zero), the sensor will not work.

■ Fitness setting (Option)

1) Fitness parameter

In this menu, administrator can set fitness sorting level for each currency and each denomination.

- ①  : Set Fitness value to the Default
- ②  : Decide whether the said data are also applied to other denominations or not
- ③  : Save current setting (Currency, Fitness Sub-mode, Denomination)

2) Import fitness level & Export fitness level

Administrator can transfer the fitness level value from one machine into another by using 'Import fitness level' and 'Export fitness level'.

- ① Insert USB Flash Drive (or Stick) to USB port in MACHINE.



**Caution)**

**The format of Flash Drive(or Stick) must be FAT32.**

- ② Select 'Export fitness level'
- ③ Touch the  Icon. Then a file will be created in USB Flash Drive (or Stick): (File folder name: MIB-11\_Fitness\_Level)
- ④ Insert USB Flash Drive (or Stick), which has 'MIB-11\_Fitness\_Level' folder to another MACHINE that administrator wants to write previously fitness level over.
- ⑤ Select 'Import fitness level' in the menu

⑥ After checking the file which administrator wishes to apply to another MACHINE, touch  Icon.

- ⑥ Select the currencies and fitness Sub-Mode which administrator wants to apply to another MACHINE, and touch  Icon.

■ Function on/off

1. CF Items: Administrator can turn on/off CF detection or can make sensors(UV, MR, IR) on/off

individually. The indicators show their status. 

2. Tape in count mode (Option) : Administrator can set Tape Sensor ON/Off here, except for Fitness Mode. In the Fitness Mode, administrator should turn on/off Tape sensor in Fitness setting. When

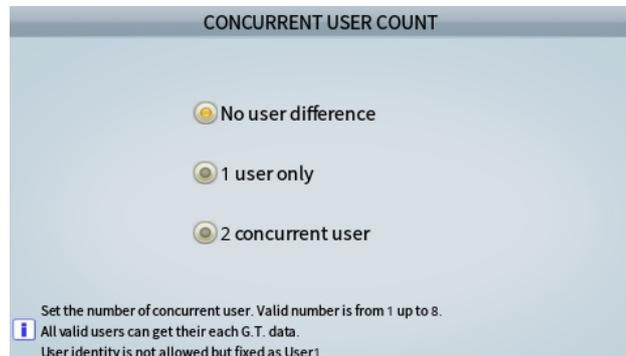
the Tape function is On, Tape indicator will be shown like .

3. SNC Setting **(Option)** : Administrator can set how many unrecognized serial numbers shall be ignored (Type1), or how many recognized serial numbers shall be accepted (Type2). Administrator can Select Currency, SNC Type and Number of digits should be ignored/accepted.
4. Auto default loading: Administrator or trained users can turn on or off the 'Auto default loading' function from this sub-menu under ADMIN MENU. If Auto Default Loading function is turned ON (default is OFF), then when Machine reboots next, Machine will load the default factory settings automatically which means, users will lose each of their customization and preferred Modes and settings from the Machine software.

■ **User setting**

Concurrent User: 2 users can use MACHINE at the same time. Setting 2 Concurrent User, the

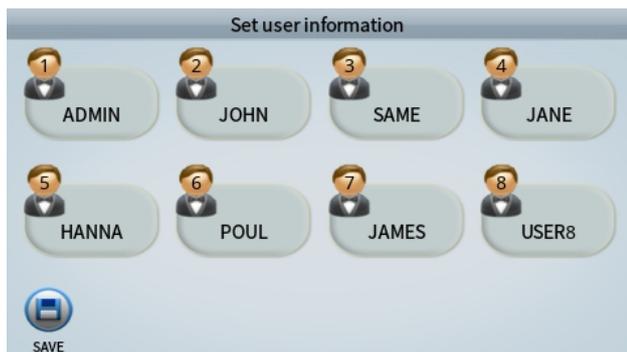
initial screen will show



1. User can select one of Concurrent User and can set modes and functions individually.
2. One of Concurrent User can use the allocated Print Port. **(MENU-Count interface-Report result-Printing Port #1,#2)** and Customer Display. **(ADMIN MENU-Machine setting-Customer display)**  
 If Concurrent User was set, the allocated Print Port and Customer Display will be shown in upper

indicator as .

3. Administrator can edit user name and password.



■ **Grand Total**

1. Auto clear: Administrator can set manual or auto Grand total clear.
2. Clear Target: Administrator can clear The Day Total or Grand total or all.
3. Initialize all: Administrator can delete the record and make The Day Total and Grand total zero.
4. Summary: Administrator can check, delete and print the summary of The Day Total and Grand Total by the user and currency.  
 [1] [2] [3] [4] THE DAY TOTAL by currency, GRAND TOTAL by currency, THE DAY TOTAL by user, GRAND TOTAL by user: Press  button, then the currency and user will be changed.
5. Each user:  
 Administrator can read, delete and print the present & previous THE DAY TOTAL and GRAND TOTAL by each user. After selecting the user and press  button, then 'Administrator' can see the details of 'The day total' and 'Grand total'.

■ **Log data**

1. Export log data: Administrator can export all Log DATA  
 e.g., Count Detail in Currency / Count Detail in User / ETC. by the format of EXCEL file.
  - ① Insert USB flash drive (memory stick) into the USB Port.
  - ② Select 'Export log data' in this menu
  - ③ Select the period and touch  icon.
  - ④ Select CURRENCY & USER and touch  icon.
  - ⑤ In USB flash drive(memory stick), Log DATA file will be created as right screen.
2. Fitness Report: Administrator can check 'Fitness counting report'



## 6 TROUBLESHOOTING

This chapter shows how to solve errors when the messages are on the operational window.

### ■ Error during counting

It shows following figure [MACHINE STATUS], when any error occurs on counting



Error Messages	Action to be taken
Jam Occurred!! Remove banknotes from path. -Detected sensor ID of Jam: '1' ~ '5'	1 <b>Jam 1~3</b> , open <b>upper cover</b> and remove the banknotes in the path. 2 Press <input type="button" value="c"/> button
Cover Opened! Please Close Cover - Upper cover - Rear cover	1 Close The Cover 2 Press <input type="button" value="c"/> button
Feeding error!! Remove notes from the hopper	1 Press <input type="button" value="c"/> button
Main motor error!! Press 'Cancel' button	
Feed motor error!! Press 'Cancel' button	
Solenoid Error!! Please Empty pocket.	1 Press <input type="button" value="c"/> button

**Notes: Please refer to the figures on 'Chapter 7' to see the position of the sensors and jam**

**7 MAINTENANCE**

**1. Sensor cleaning.**

MACHINE is built in various sensors to detect the malfunction of the machine the status of the notes in the machine and to recognize the denominations of the notes. The sensors are very delicate and if they are not cleaned correctly everyday, this may take negative effect on the performance of the machine as well as cause the machine to malfunction

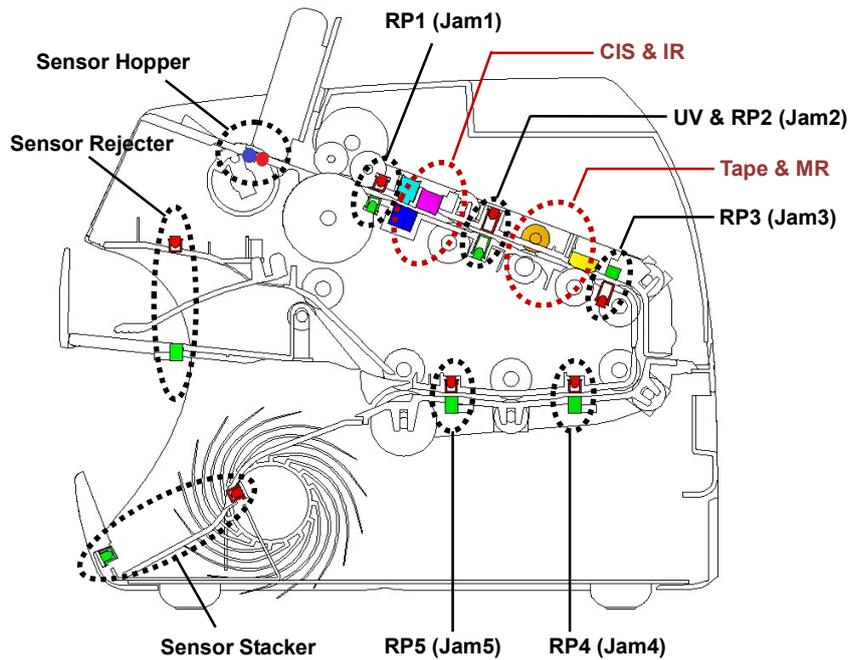
Clean the sensors as described below everyday after working.



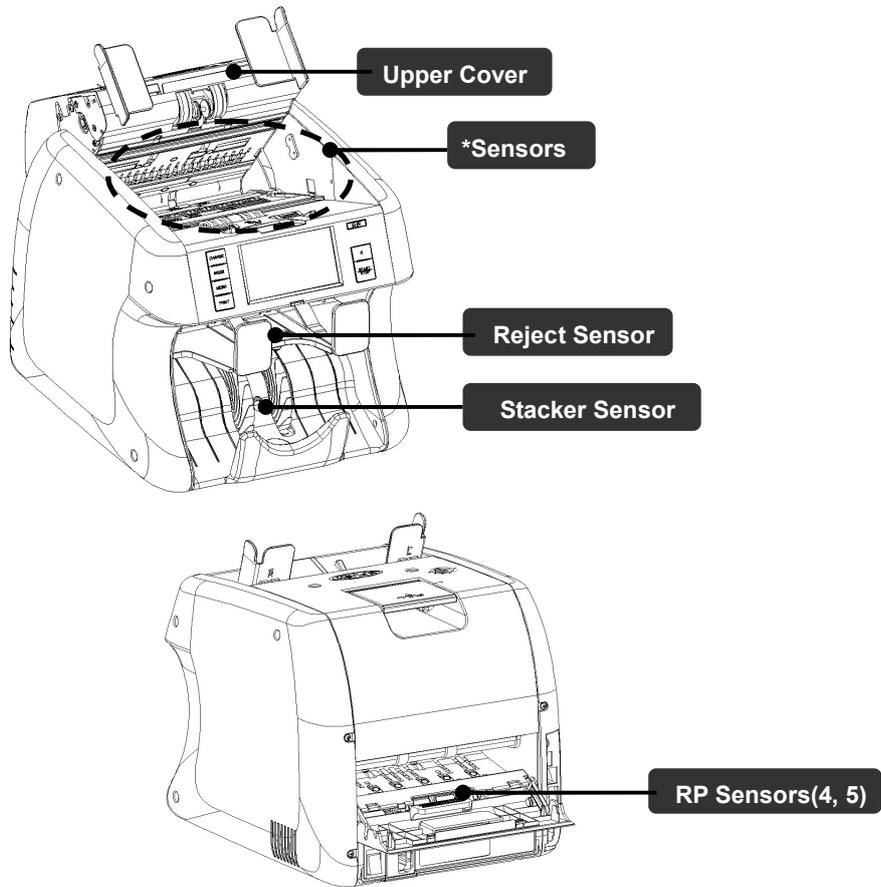
**[WARNING] Turn the power off and unplug the power cord before cleaning.**

**Do not use any harmful solvent for cleaning**

**1) Appellation and location of each Sensor**



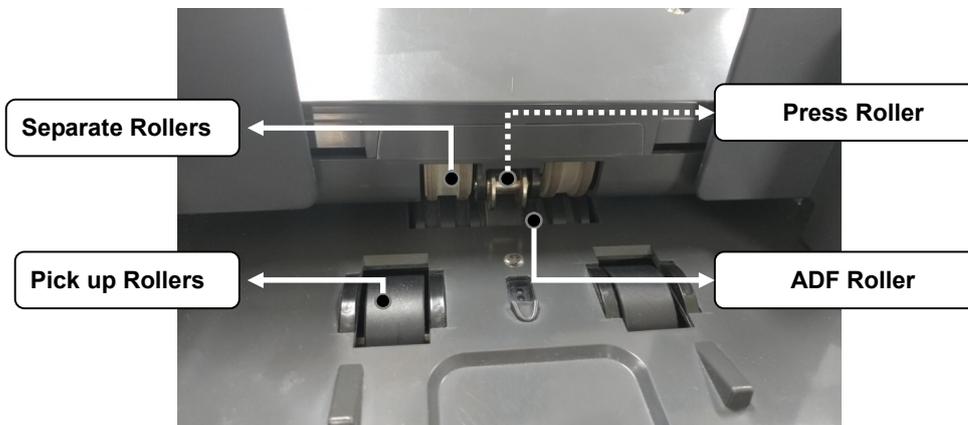
**2) Clean all sensors**



**2. Roller Cleaning**

In case of feed roller, wipe with slightly dampened cloth with alcohol. While rotating one side of the roller manually, stick the cloth into the other side of the roller.

Clean the rollers as described below everyday after Machine operation is done for the day.

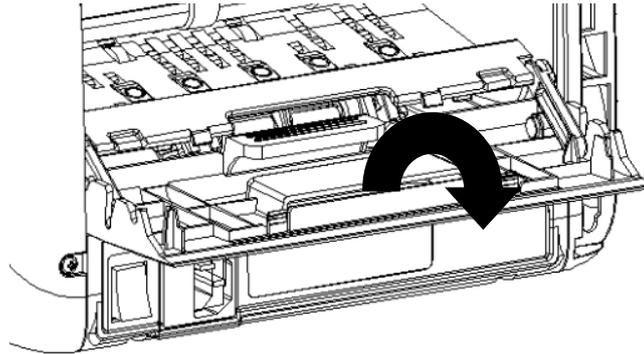


### 3. Dust tray Cleaning

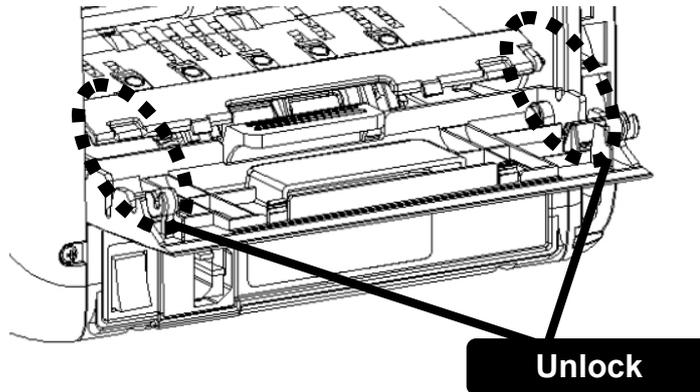
Machine has a "Dust tray" at the rear location of the Machine as illustrated at the below figure. The dust cover collects dust when the Machine is in operation for a period of time.

How to clean

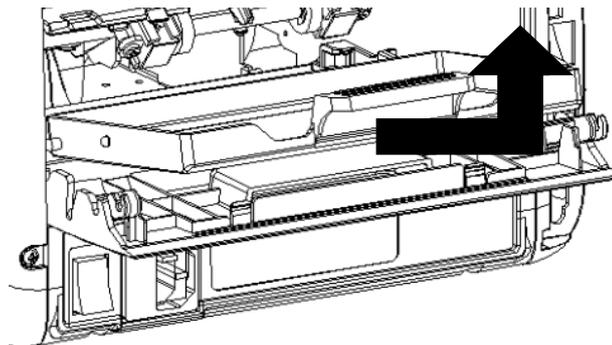
- [1] Turn off the machine and open the rear cover



- [2] Unlock the door link



- [3] Take the tray out & clean and place it back to it's original loation. Make sure to close the rear cover before turning on the Machine for operation.



8

SPECIFICATION

Item	Unit	Specification
Size (W x D x H)	mm	287[W] x 348[D] x 312[H]
Weight	Kg	Approx. 12 (Net)
Hopper capacity	Notes	MAX. 500 (optional 1,000)
Stacker capacity	Notes	100 [Max. 300]
Reject pocket capacity	Notes	50 [Max. 200]
Display Type	Dot	4.3" Color TFT (Touch Screen)
Connectivity interfaces		3 RS232C Port(9 Pin D-SUB & 2 Modular Jack), 1 USB(Type A), LAN, Micro SD
Currencies available		Up to 40
Banknote size range	mm	W: 100 ~ 185, H: 60 ~ 90
Banknote thickness range	mm	0.08 ~ 0.12
Counting Speed	Notes/ min	MAX. 1500 (Piece count) Approx. 1200 (With all functions) (800/1000/1200 NPM)
Working Mode		FITNESS / COUNT / SINGLE / FACE / ORIENT / ISSUE / DISPENSE/ OCR (Optional) / SNC (Optional)
Preset Batch Number		1 – 300
Counterfeit Detection		MR-Array, IR, UV
Power Requirements		100-240V~, 50~60Hz
Power Consumption(With Tape sensor)	W	Approx. Standby: 12, Operation: 100
Operational requirements		10~40deg/ 0~85%RH (Non Condensing)

Notes:

- This machine specification can be changed without further notice to improve its reliability, function or design.
- The contents of this user's guide can also be changed.