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Every person working at the Fitness Sorter; SB-5000 must have previously read and understand the user manual and, specially the safety information. The Fitness Sorter; SB-5000 may only be operated by authorized personnel and may be serviced by trained and authorized personnel.

Safety Information

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

Stability

Place the machine on a secure, stable surface. The machine can be seriously damaged if it falls.

Power Supply

Provide correct power to the machine, as listed on the back of the machine. If you are not sure of the type of power that is supplied to your office, call your electric company.

Grounding

If the plug has three prongs, it 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. If you cannot insert the plug into your wall outlet easily, then a qualified electrician should inspect the outlet.

Overload

Do not plug too many electrical devices into a wall outlet or an extension cord. An overloaded outlet could be a reason of a fire and electrical shock hazard.

Cleaning

Before cleaning the machine, unplug it from the power outlet. Clean exposed parts with a soft cloth slightly dampened with water. Do not use aerosol cleaners.

Gas Leaks

Never use any machine close to a gas leak. If you think gas is leaking, call the gas company immediately. A small electrical spark in the machine could cause a fire or explosion.

Precaution

When using the machine, these precautions should always be followed:

1. Never push objects of any kind into your machine through the case or cabinet openings.
2. Do not use your machine near water, in wet locations, or outdoors.
3. Do not allow anything to rest on the power cord, line cord, or PC interface cable. Do not locate your machine where the cords can be damaged by persons' walking on them.
4. Do not allow pets 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. The power supply turns this machine on and off. Make sure that your machine is installed near an outlet and is easily accessible.
7. Never remove covers or guards that require a tool for removal. There are no operator serviceable areas inside your machine. 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 unit has many sophisticated sensors. Without proper maintenance, it cannot last its good performance. Please read the 'Chap9 Maintenance' section of this manual carefully, and do it everyday. When the performance is deteriorated on a sudden, please clean all the sensors first before calling a service.

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 ports!

Keep fingers and other body parts away

Battery is used for 'PBA POCKET' in this machine. If wrong date and time are displayed on LCD after correct setting, it is necessary to change the battery of 'PBA POCKET'. 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 UNDESIRED OPERATION.

This manual 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 ABOUT SB-5000

SB Series are the most intelligent and reliable banknotes which use Image Processing Technology to recognize banknotes and to discriminate between different denominations.

SB-5000 has various and useful functions and keeps up with growing customers' demand from all over the world. With modern design, 5" TFT color LCD and user-friendly interface, SB-5000 provides every operator with more comfortable and efficient working environment. 5 Pockets allow operator to perform daily cash processing job and sort banknotes by quality, denomination and counterfeit without any interruption.

■ Design

- Modern & Compact design (Large Color 5" TFT LCD)
- Saving working place (Size: 317[W] X 335[D] X 574[H])

■ Performance

- High accuracy for counterfeit detection; [MG/UV/IR]
- Uniform Fitness sorting level;

  [Soil (dirty), Tape, Tears, Missing corner, Hole, Corner folded, Stain, and Graffiti]
- Multi Currencies Capability: Up to 10 currencies
- Various Counting Mode [Fitness/ Mixed/ Single/ Orient/ Dispense/Mixed curr. / OCR etc]
- Enhanced Sensors; [CIS(optional: 2CIS)/Magnetic/UV/IR/ Sensor for Tape Detection]
- Applied New type of stacker system: Lift type
- Concurrent users available

■ Convenience

- Easy User Interface
- Color Touch Screen applied (Controller is detachable)
- Simply upgrading for using USB Memory Stick
- Easy maintenance
- Many kinds of report for counting results; [Day Total, Grand Total/ By Currency and user]

■ Data Interface

- Available Networking
- Various Interfaces : 3 RS232C ports / 2 USB ports (A type, B type)/ LAN

2 INSTALLATION

Packing List

No.	Part Name	Qty	Remark
1	SB-5000	1 Unit	
2	Operating Cradle	1 Unit	
3	Connection Cable (Between SB-5000 & Operating Unit)	1 pc.	
4	AC Power Cord	1 pc.	
5	User Manual	1 pc.	
6	Cleaning Kit	1 pc.	

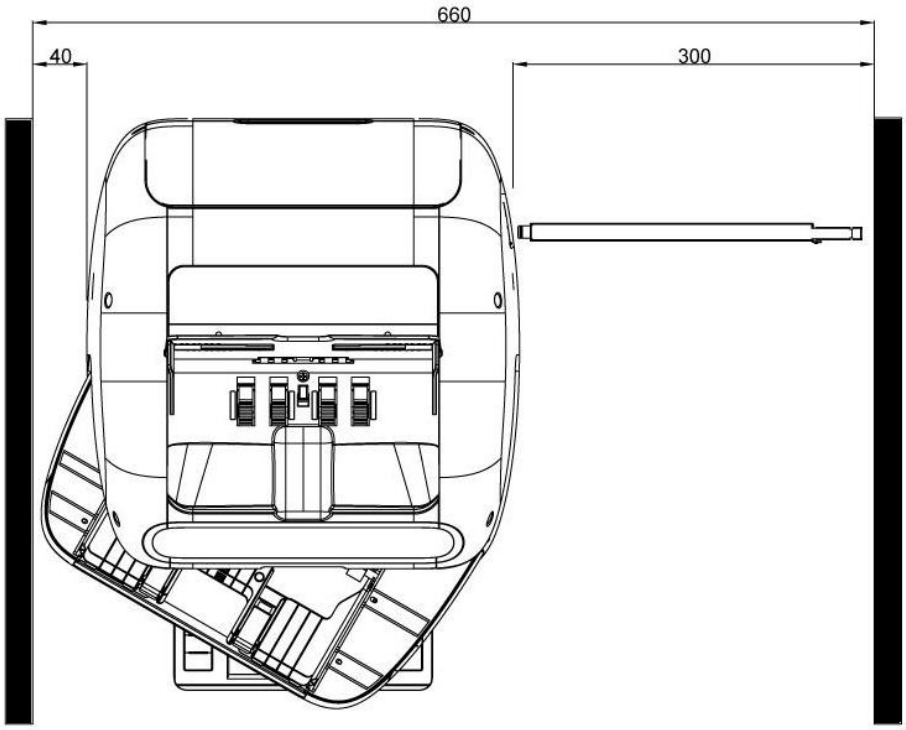
Work Area

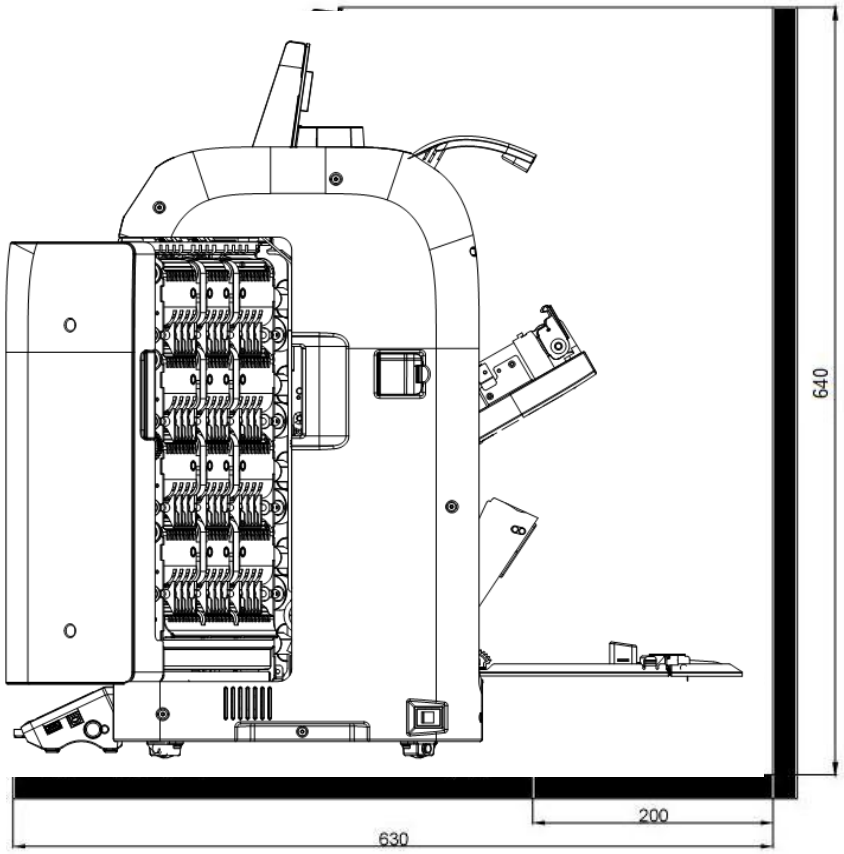
To help guarantee trouble-free operation of your machine, place it on a flat, stable surface near your workstation.

Do not place our machine:

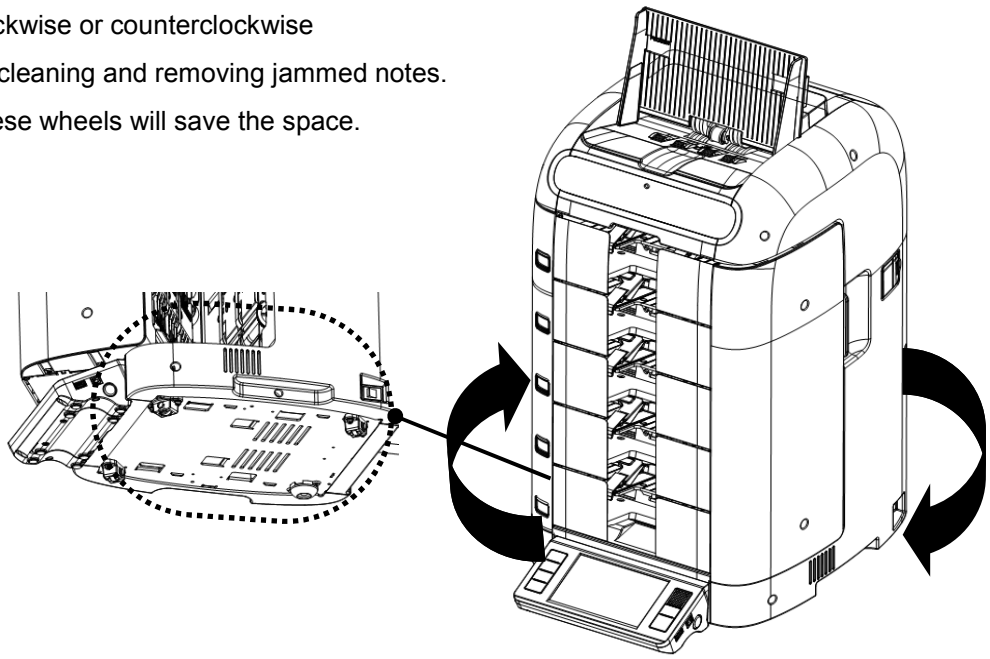
- In direct sunlight
- Near heat sources or air conditioners
- In dusty or dirty environments

Installation Space





* 4 wheels are mounted, so user can turn the machine
clockwise or counterclockwise
for cleaning and removing jammed notes.
These wheels will save the space.



[How to move]

1 Get close to the machine and bend your knees.

2 Keep your back straight.

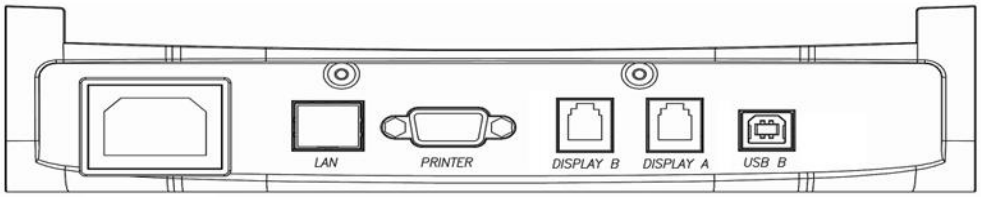
3 Check the center of weight and hold the grip tight.

4 When you turn the direction, do not twist your body but use your steps to turn.

Connection

Plug one end of the cord into the back of the machine and the other end into a standard AC power outlet.

Interface (Backside of Machine)



[LAN]

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

[Serial Pinter]

SB-5000 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 SB-5000 and the printer are turned off.
2. Plug the cable of printer into the serial port of SB-5000.
3. Turn on the SB-5000 and set parameters referring to the Chapter 9 of this manual.

[Display A] & [Display B]

External Display [option] can be connected with these 2 ports

1 or 2 user can make the counting result display using these ports.

[USB B]

The set can connect SB-5000 to PC with USB B. This port is for Service.

1. The massive data will be sent to PC with high speed.
2. If there are problems in USB A, USB B will be the alternative port

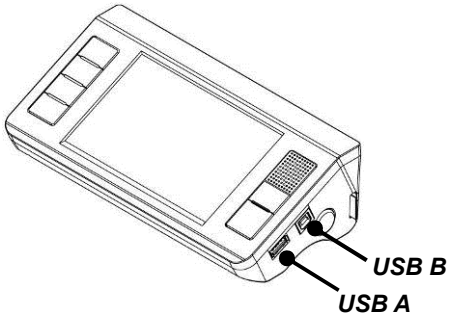
[Warning]

If user inserts USB B into [Display A] or [Display B] port, the machine could be turn off. Please, check the right port before inserting.

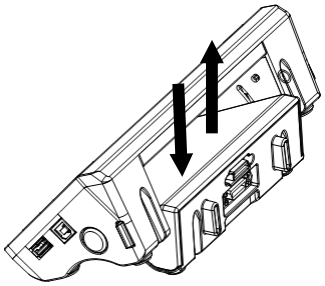
Operation Cradle

This is detachable and user can upgrade the machine with the USB A port on the right side of controller. .

The set can be upgraded the firmware with USB Memory Stick.



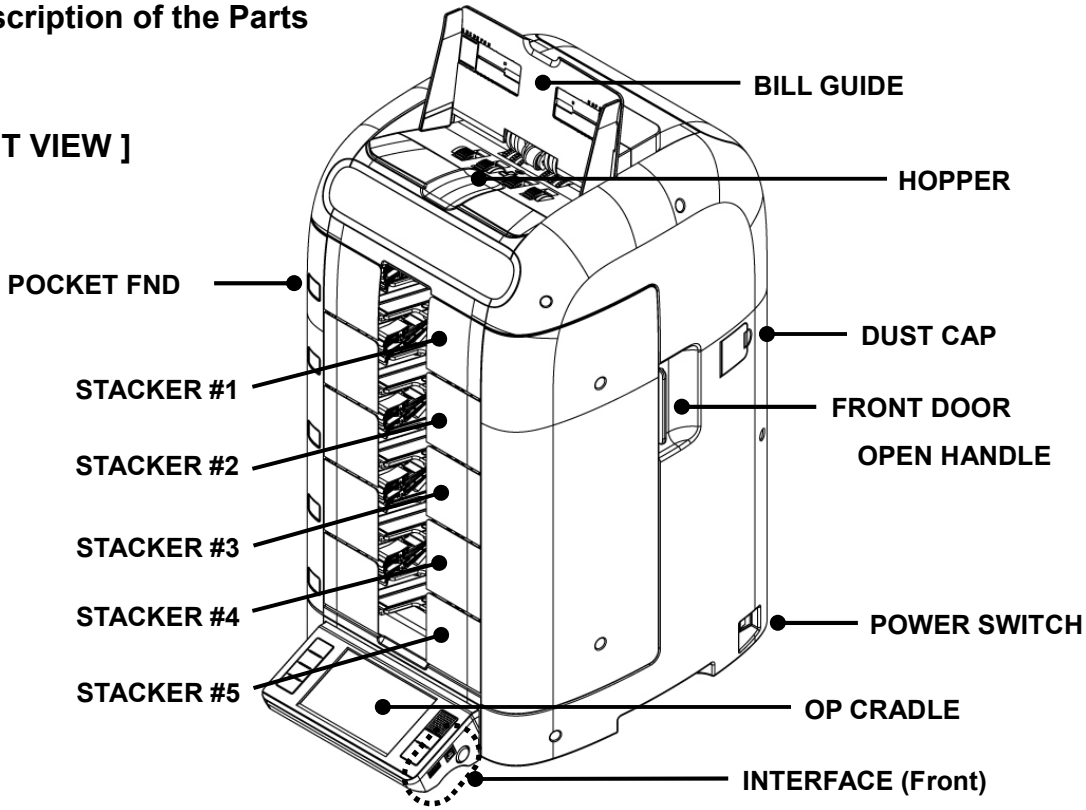
Controller has tilt function



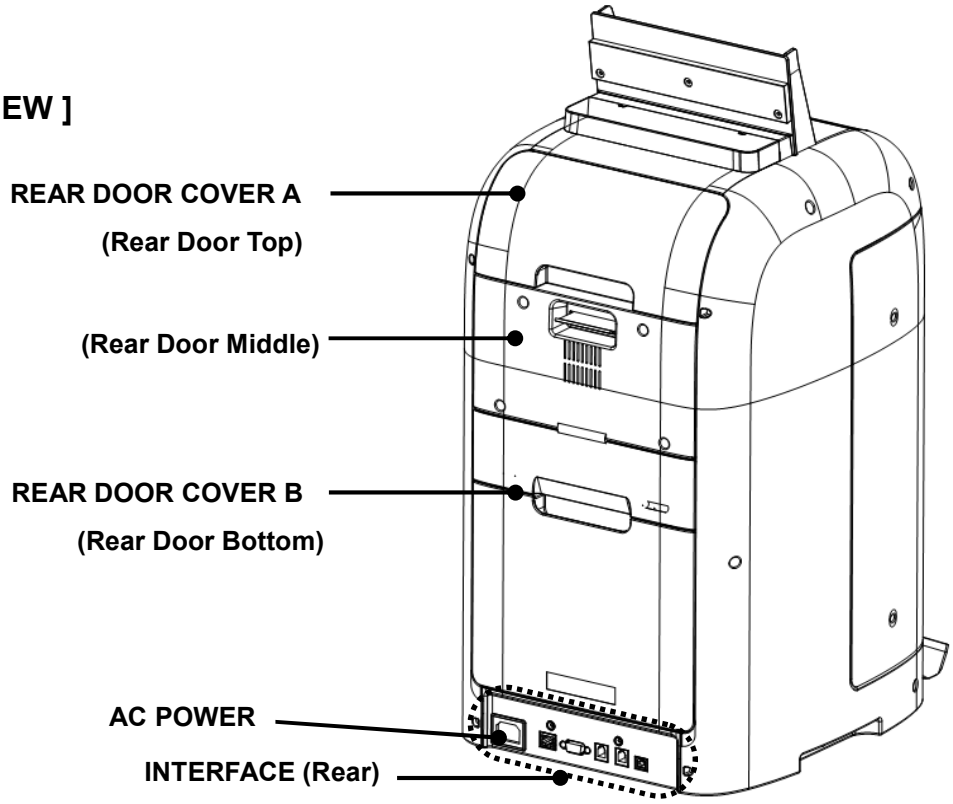
3 OVERALL DESCRIPTION

3-1 Description of the Parts

[FRONT VIEW]

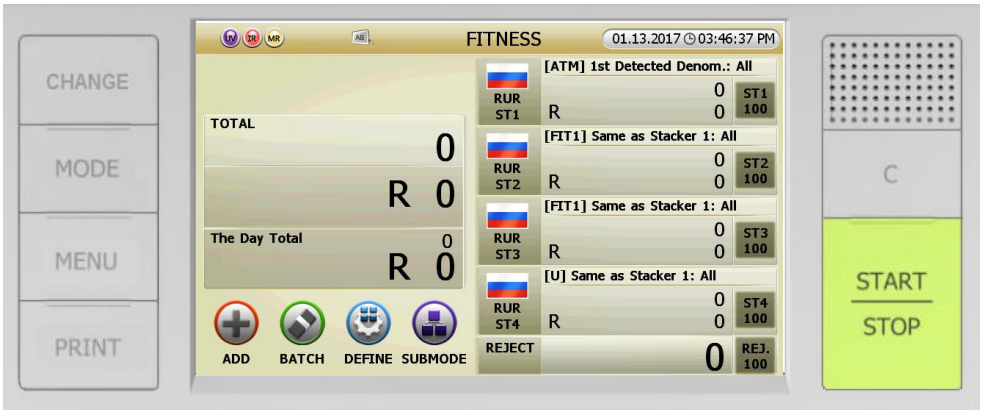


[REAR VIEW]



3-2 Description of Control

Overview of Control panel

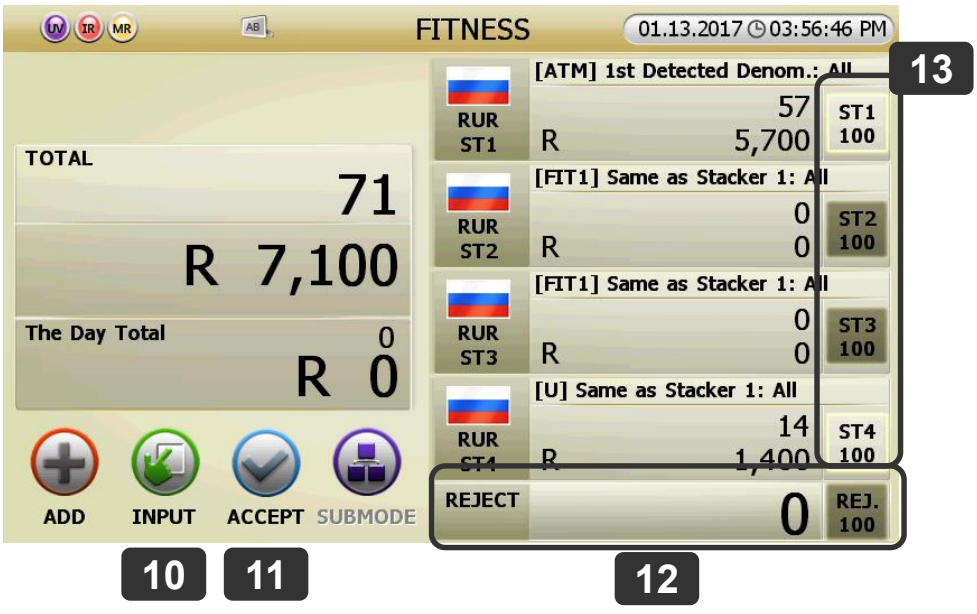


Indication	Description
START / STOP	- Manually START (when manual starting is set) - Emergency STOP & START while counting. - Save or set the mode - This key means ‘OK’ and ‘YES.’
C	- CLEAR the count result or go back to previous stage. - CANCEL the present setting. - User can remove the jammed notes. - This key means ‘Cancel’, ‘Close’ and ‘No.’
CHANGE	- To change the display form of count result. - To change the activated icon one by one - This key means CHANGE something. (In case of using [CHANGE] key, will be referred at {Help} part)
MODE	- To change the WORKING MODE. (FITNESS, COUNT, FACE, ORIENT, ISSUE, DISPENSE and OCR) - User can enter ADMIN Menu from MENU.
MENU	- To enter Setting Menu (User can set various Parameters). - To escape from Setting Menu.
PRINT	- To print the counted result.

Overview of Touch Screen

[Before counting]

[After counting]



No.	Name	Description	Note
1	Indicators		
1-1	Start mode	To show auto start or manual start Auto start is Default and in case of manual start this appears	P46
1-2	Counterfeit	To show On/Off of UV/ IR/ MR Sensors	P54
1-3	Tape Sensor	To show Tape Sensor On/Off except for in Fitness Mode	P57
1-4	PC Control	To show SB-5000 is controlled by PC or not	
1-5	Customer Display	To show Customer display is on operation (Display A, B)	
1-6	Print Port	To show the using Print Port [COM port, USB port, COM port (USB in P-OCR mode)]	
1-7	User Define Mode	To show User Define Mode	P40
2	Present Working Mode	To show present Working Mode	
3	Date & Time	To show Date & Time	
4	Total	The Total of Stacker 1, 2, 3 and 4	
5	Count result	Count result of each pocket, Currency	
6	ADD	To show ADD is On/Off	P43
7	Batch	Touch Batch button to set Batch function	P43
8	Define	User can define his/her own setting (Max. 8 settings)	P41
9	Sub Mode	Indicates [Sub Mode] icon and Activated in Fitness Mode & OCR Mode.	
10	INPUT	To correct the count result. User can add the amount of Uncounted notes or coins manually.	P23
11	ACCEPT	Count result will be added to Grand Total	P24
12	Reject	Reject Pocket result. Touch this button to see Detail view.	P22
13	Pocket Arrange	The green light is on when banknote is in the pocket. They display the batched numbers of pockets and indicate Stackers and Reject pocket.	

4 PREPARATION OF OPERATION

Banknotes Preparation

[PROCEDURE]

Step	Figure	Description
1 Step		Prepare the banknotes under the condition of below (a)
2 Step		Put one side of banknotes on the table and align them.
3 Step		And make them square horizontally and vertically.
4 Step		Now the banknotes are ready.

(a) Proper banknote preparation improves the banknote processing and increase the throughout. Before placing the banknotes into the Hopper, please sort out any banknotes as following.

- Wet notes
- Excessively dirty/ spoiled notes
- Extreme damaged notes
- Severely folded/ curled notes etc.

These banknotes as above should be placed aside and be sorted by manual.

[CAUTION]

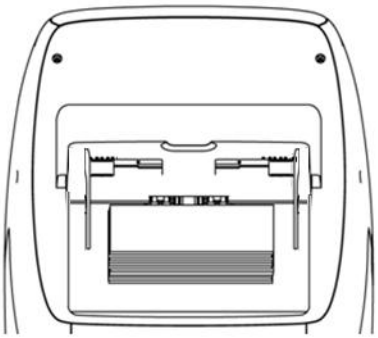
YOU HAVE TO MAKE SURE THAT THERE ARE NO CLIPS, BANDS OR SIMILAR FOREIGN MATERIALS ON THE BANKNOTES. SOMETIMES IT CAUSES MALFUNCTION OF THE MACHINE.

How to adjust the Bill Guide

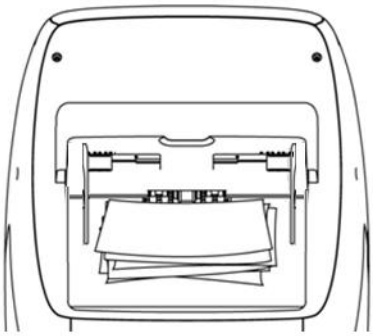
Before putting the banknotes into the Hopper, user needs to adjust the Bill Guide. Users should make sure that there is enough room on the sides for the banknotes to be pulled in the Hopper easily (banknote length + approximately 5mm)

How to place banknotes into the Hopper

It is very important to place the banknotes on the hopper correctly because recognition performance of the banknotes is highly affected by the arrangement of the banknotes. And the number of the rejected notes can be increased when they are not arranged and placed properly. Refer to the pictures for the correct placement of the banknotes.



(Good)



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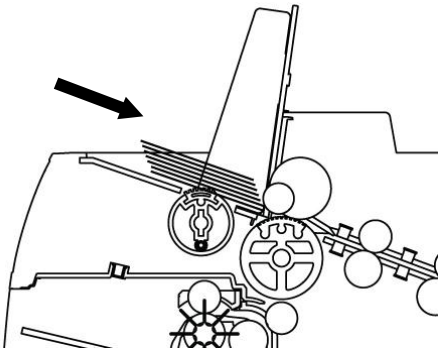
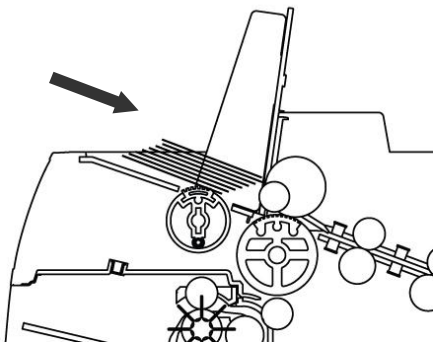


(Good)



(No good)

Counting

In AUTO mode, SB-5000 starts to count the bill automatically as it detects the existence of the banknotes in the hopper. In MANUAL mode, the machine will start to count the banknotes only if the banknotes are placed into the hopper and START key is pressed. While counting, the machine will display the number of the banknotes on LCD display and it stops working when it meets the conditions described as below;

- No bills in the hopper
- Stacker is full.
- Rejecter is full.
- The number of the bills counted is the same as the batch number to be set in BATCH function.
- Errors have occurred.

If an error is occurred during operation and the machine stops, then an error message will be displayed. To clear the error, press “C” key. The machine will try to solve the problem automatically, but if it fails to clear a jam or there are some other mechanical errors, open the rear door A (rear top) or rear door B (rear middle or rear bottom) and get rid of jammed banknotes and close the cover correctly. Then the machine can clear error message automatically.

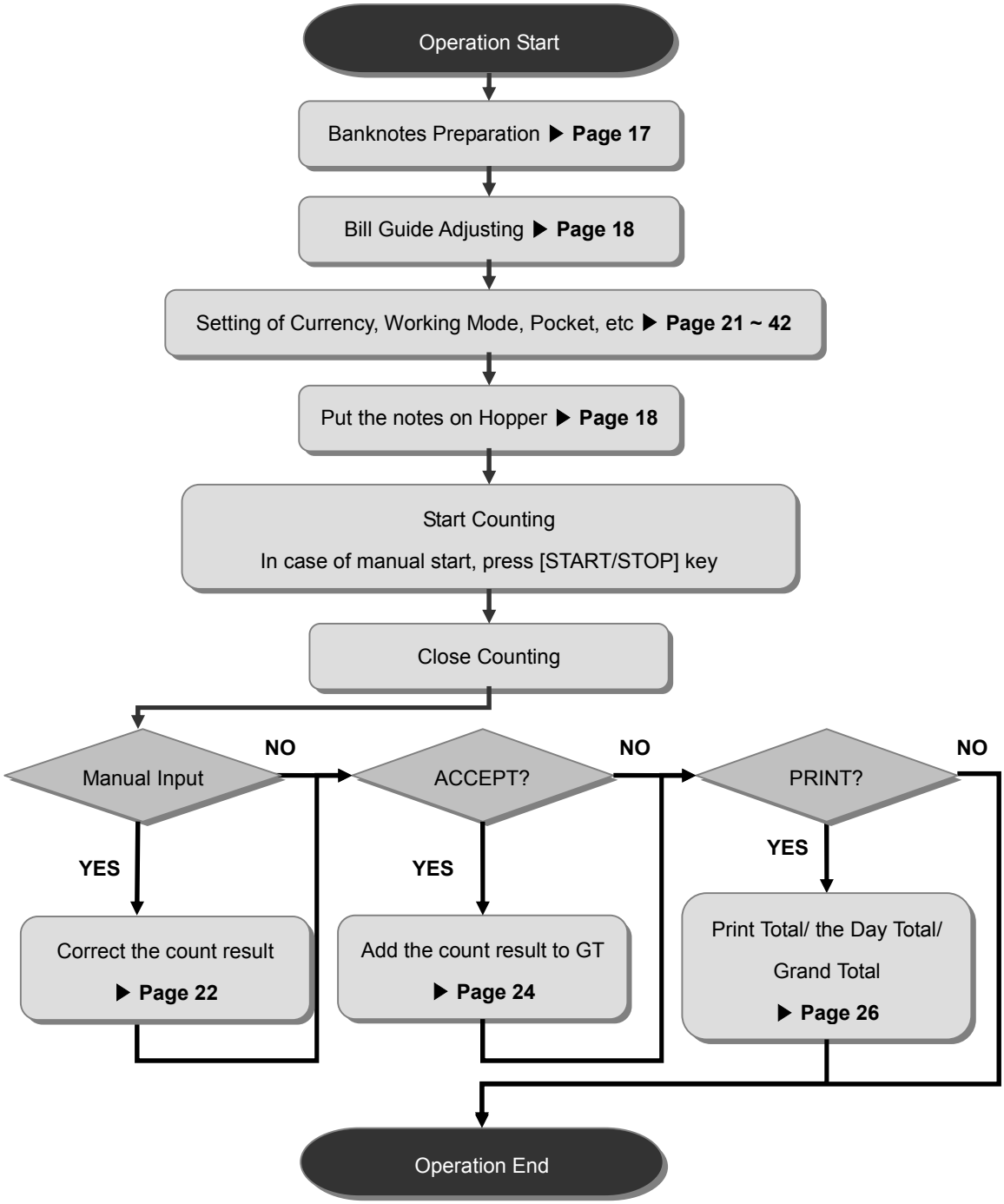
(Stop in operation)
Press [START/STOP] button to stop operation for an instant while the machine is operating. If you want to count continuously again, press [START/STOP] button.

Stop in operation Please press START button to stop operation while the machine is counting. If you want to count continuously again, press [START/STOP] button.

5 BASIC OPERATION

5-1 Procedure of Operation

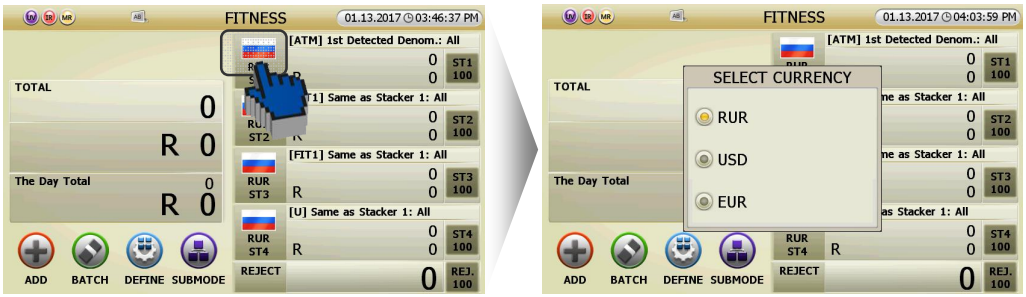
5.1.1. Flow Chart



5.1.2. Currency Setting

In order to change the Currency, touch [CURRENCY] icon.

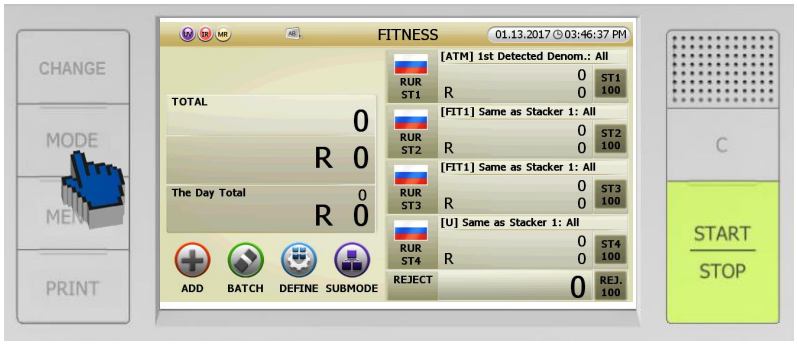
If you need to purchase more software to handle different currencies, please consult with your dealer.



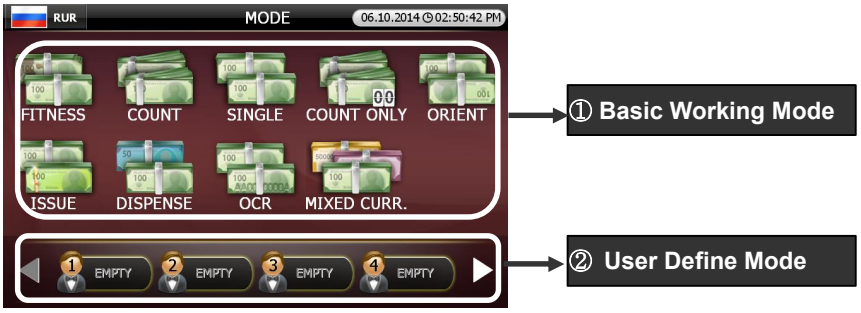
5.1.3. Working Mode Setting

■ Can set working mode as below.

[1] Pressing [MODE] button, the screen will change Mode screen like below picture.



[2] MODE selection screen display 2 windows like below.



① Basic Working Mode: Fitness, Count, Single, Orient, Dispense, Mixed currency

② User Define Mode. (Option)

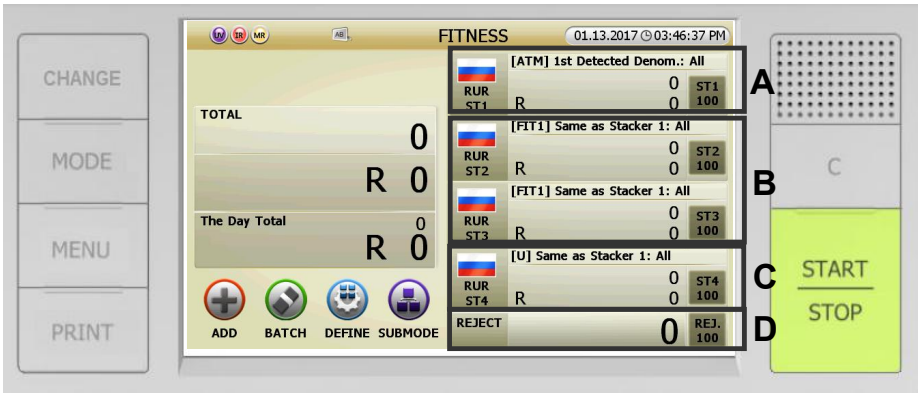
[3] Can select the 'Working Mode' by touching the icon.

[4] The screen will change into initial screen of wokring mode selected

5.1.4 Counting Result Confirmation

(Remark) Below picture are under the condition of [Fitness Mode] that Stacker 1 is [ATM], Stacker 2 and 3 is [Fit1] and Stacker 4 is [Unfit] for same 'Detected Denomination' and All direction.

[F]: Fit Note [U]: Unfit Note



1. Counting Result Confirmation in Counting Result screen

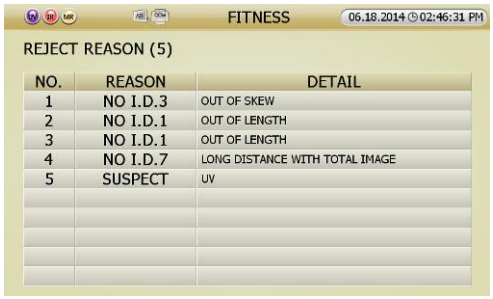
[1] Pressing [CHANGE] button consecutively after counting, can see 5 screens like below pictures.

[2] If you touch the section of result in screen, the screen will show specific results.

If you touch the section (A) in Stacker 1 and 2 the screen will show the 'COUNTING DETAILS'.

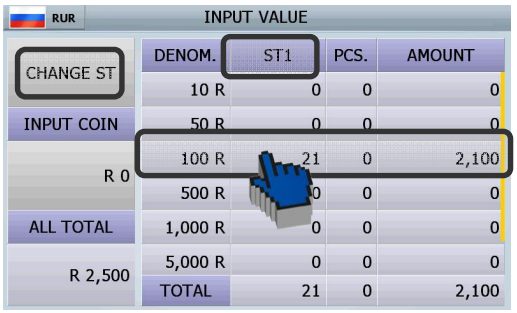
If your touch the section (B) in Stacker 3 and 4, the screen will show the 'UNFIT REASON'.

If your touch the section (C) in Reject pocket, the screen will show the 'REJECT REASON'.

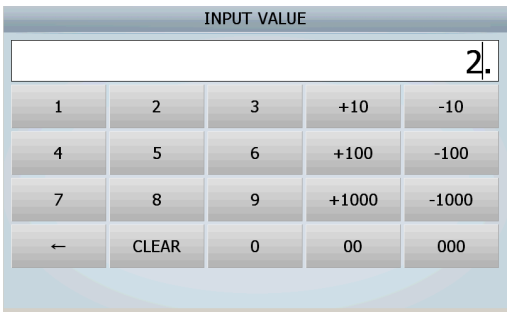


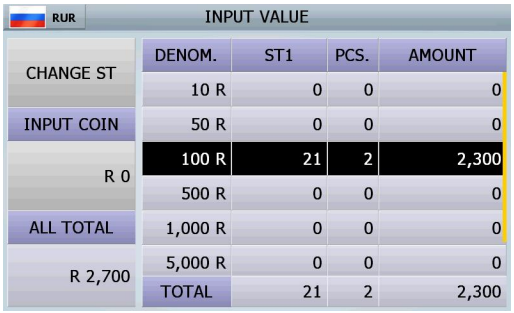
2 [INPUT] function is designed to correct the counting result.

You can add the amount of uncounted notes (because of seriously damaged notes) or coins manually. If user touch [INPUT] icon in counting result screen, you can see INPUT VALUE screen and can correct the count result manually.

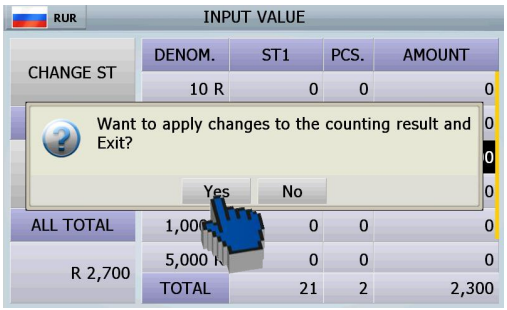


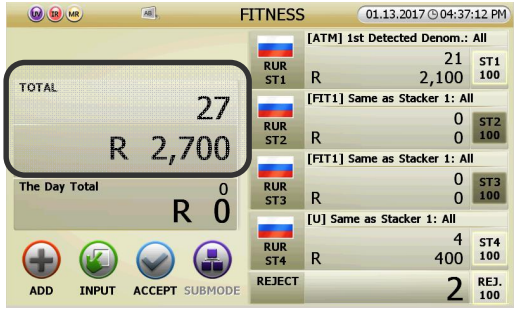
Choose stacker and touch the denom.





Enter the number of rejected note, and then Press ‘Enter’ Press ‘Enter’





Press ‘Yes’ Result

3 [ACCEPT] function means that user can add the counting result to Grand Total.

This is how to use [ACCEPT] function.

[1] If user touch [ACCEPT] icon in counting result screen,

Counting result will be added in 'The day total' If user touch 'The day total' area, machine will display below screen.

[2] Auto Accept

If you want, can set 'Auto Accept.'

But, though it is set [Auto Accept], it is switched manually when Reject occurs on the counting

5.1.5 Grand Total (GT)

Grand Total means the accumulation of counted notes that user accepted. Namely, if you touch [ACCEPT] icon after counting, the result will be added to GRAND TOTAL.

SB-5000 can show the 'Day Total,' and 'Grand Total.'

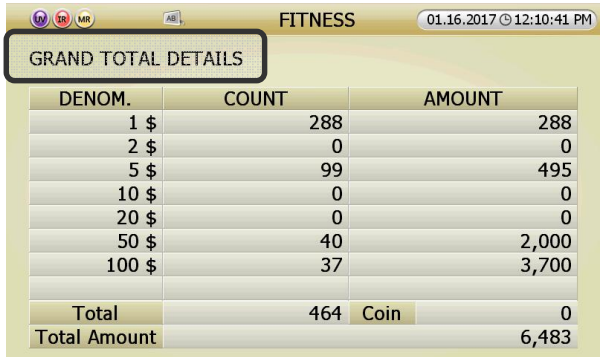
1. There are two ways how to calculate Grand Total

[1] Can touch [ACCEPT] icon in counting result screen ,

[2] Or if you touch 'TOTAL' area in counting result screen, can see GRAND TOTAL screen.

After you touch the [ACCEPT] icon, the counting result will be added to GRAND TOTAL.

2. By pressing the [CHANGE] button, user can see THE DAY TOTAL DETAILS screen and GRAND TOTAL DETAILS screen also.



3. Can control [Grand Total] at 'ADMIN.' Menu.

5.1.6 Print

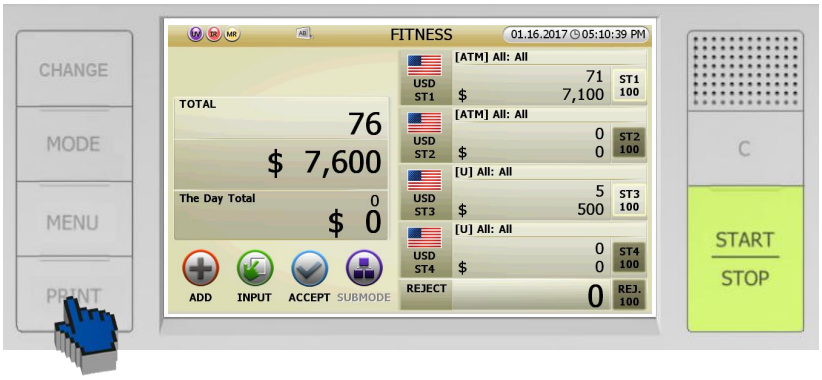
SB-5000 can print out below 3 results.

Present count result /GRAND TOTAL per user/GRAND TOTAL of SB-5000

■ **Present Count Result Printing**

Press [Print] Key after counting, and can print out as below.

.



* (Caution) In order to print out, notes in Reject Pocket must be removed.

[1] If press the PRINT key, the print report will show the result of Stacker1,2 [Fit] and Stacker 3,4 [Unfit] like right picture.

```
    *** REPORT ST1,ST2 ***
Jan.16,2017, 17:14  Station:1
Deposit No.:   1    Fitness
User ID : 1
FIT                 UV MG IR
DENOM     UNIT           TOTAL
$1           0  $              0
$2           0  $              0
$5           0  $              0
$10          0  $              0
$20          0  $              0
$50          0  $              0
$100        71  $          7,100
--------------------------------
TOTAL       71  $          7,100
--------------------------------
```

[2] If it is not under Fitness mode, the print report will show the sum of counting.

[3] In case you wants to correct the counting result by [INPUT] function.

```
        *** REPORT ***
2012,Jul.28, 17:24  Station:1
Deposit No.:  40    Count
                    UV MG IR
DENOM     UNIT           TOTAL
$1           0  $              0
$2           0  $              0
$5          11  $             55
$10         16  $            160
$20          0  $              0
$50          2  $            100
$100        11  $          1,100
--------------------------------
TOTAL       40  $          1,415
--------------------------------
```

```
    *** REPORT ST3,ST4 ***
Jan.16,2017, 17:14  Station:1
Deposit No.:   1    Fitness
User ID : 1
UNFIT               UV MG IR
DENOM     UNIT           TOTAL
$1           0  $              0
$2           0  $              0
$5           0  $              0
$10          0  $              0
$20          0  $              0
$50          0  $              0
$100         5  $            500
--------------------------------
TOTAL        5  $            500
--------------------------------
SUM TOTAL
--------------------------------
TOTAL       76  $          7,600
--------------------------------
```

[4] If you print out the corrected counting result, the print report shows the ‘Manual Input’ separately and shows the sum of counting below the ‘Manual Input.’

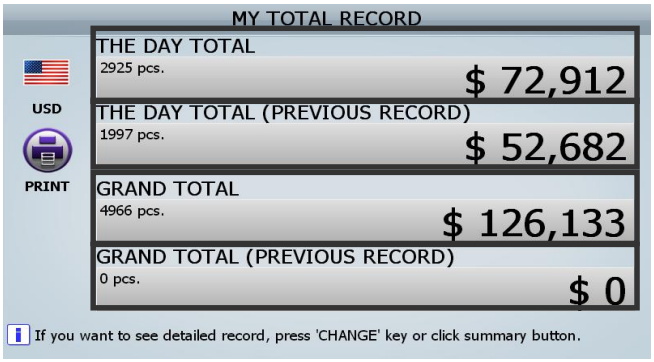
s

```
    *** REPORT ST1,ST2 ***
Jan.16,2017, 17:19  Station:1
Deposit No.:   2    Fitness
User ID : 1
FIT                 UV MG IR
DENOM      UNIT          TOTAL
$1            0  $            0
$2            0  $            0
$5            0  $            0
$10           0  $            0
$20           0  $            0
$50           0  $            0
$100         71  $        7,100
--------------------------------
A-TOT        71  $        7,100
--------------------------------

MANUAL INPUT
DENOM      UNIT          TOTAL
$10           2  $           20
--------------------------------
B-TOT         2  $           20
--------------------------------

A+B TOT
--------------------------------
TOTAL        73  $        7,120
--------------------------------

    *** REPORT ST3,ST4 ***
Jan.16,2017, 17:19  Station:1
Deposit No.:   2    Fitness
User ID : 1
UNFIT               UV MG IR
DENOM      UNIT          TOTAL
$1            0  $            0
$2            0  $            0
$5            0  $            0
$10           0  $            0
$20           0  $            0
$50           0  $            0
$100          5  $          500
--------------------------------
TOTAL         5  $          500
--------------------------------
SUM TOTAL
--------------------------------
TOTAL        78  $        7,620
--------------------------------
```

■ **Grand Total Print per user**

Up to 8 users can count banknotes with one SB-5000. And each user can print out his/her own GRAND TOTAL.

1. Can check your own counting result at MY TOTAL RECORD in USER MENU. (Press ‘Menu’ key -> ‘MY GRAND TOTAL’)



2. How to print out at MY GRAND TOTAL.

[1] Press [PRINT] button or touch [PRINT] icon in MY TOTAL RECORD screen, the inner window will appear. Each cell means as below.

① 'All records' : GRAND TOTAL 1 REPORT/ GT1 OLD REPORT/ GRAND TOTAL 2 REPORT/ GT2 OLD REPORT

② 'The Day Total' : GRAND TOTAL 1 REPORT/ GT1 OLD REPORT

③ 'Grand Total' : GRAND TOTAL 2 REPORT/ GT2 OLD REPORT

*** GRAND TOTAL1 REPORT ***
2012,Jul.28, 18:14 Station:1

DENOM	UNIT		TOTAL
$1	27	$	27
$2	135	$	270
$5	943	$	4,715
$10	810	$	8,100
$20	390	$	7,800
$50	200	$	10,000
$100	420	$	42,000
COIN	-	$	0
TOTAL	2,925	$	72,912

*** GT1 OLD REPORT ***
2012,Jul.28, 18:14 Station:1

DENOM	UNIT		TOTAL
$1	0	$	0
$2	81	$	162
$5	662	$	3,310
$10	582	$	5,820
$20	227	$	4,540
$50	113	$	5,650
$100	332	$	33,200
COIN	-	$	0
TOTAL	1,997	$	52,682

*** GRAND TOTAL2 REPORT ***
2012,Jul.28, 18:38 Station:1

DENOM	UNIT		TOTAL
$1	33	$	33
$2	216	$	432
$5	1613	$	8,065
$10	1415	$	14,150
$20	620	$	12,400
$50	317	$	15,850
$100	752	$	75,200
COIN	-	$	3
TOTAL	4,966	$	126,136

*** GT2 OLD REPORT ***
2012,Jul.28, 18:38 Station:1

DENOM	UNIT		TOTAL
$1	0	$	0
$2	0	$	0
$5	0	$	0
$10	0	$	0
$20	0	$	0
$50	0	$	0
$100	0	$	0
COIN	-	$	0
TOTAL	0	$	0

[2] Press [CHANGE] button or touch the each area of sum(ⓐ/ⓑ/ⓒ/ⓓ) in MY TOTAL RECORD screen for selecting the print item, can press [PRINT] button or touch [PRINT] icon in order to print out.

■ **How to print Grand Total of SB-5000**

Can check in 'ADMIN MENU'.

5.1.7 Reject Reasons

No.	Display on Screen	Meaning
1	NO I.D	The machine failed to identify the denomination.
2	No READ	The note was not successfully read
3	OVER RUN	The next note was fed too close to the first one.
4	SUSPECT (CF)	The note was suspected to be counterfeit by UV,MR and IR sensors
5	STAY NOTE	The note was not fit to the condition of sorting
6	DOUBLE	More than two pieces of notes were fed into machine.
7	CHAIN	Chain Error
8	HALF	Half Error
9	Over count	The note was in machine after completing the count fit to the condition of sorting.

(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.

5.2.0. Working Mode & Functions

5.2.1. Summary

■ Working Mode

[Basic Working Mode]

- FITNESS Mode:
- COUNT Mode
- SINGLE Mode
- ORIENT Mode
- MIXED CURR. Mode
- ISSUE Mode: SB-5000 can count and sort old/new issue notes. (Option)
- DISPENSE Mode: User can set batch numbers by denominations. (Option)
- OCR Mode: SB-5000 can read and print the Serial No. of banknotes. (Option)

[User Define Mode]

- User Define Mode: User can set up to 8 modes for his/her usual or specific purpose. (Option)

■ Function

- ADD Function: Counting result will be not cleared but added. After the 'ADD Function' is on, the counted result and the present result will be summed up.
- BATCH Function: SB-5000 provides the preset numbers of banknotes or the preset amount of value.

5.2.2. Basic Working Mode

■ FITNESS MODE

FITNESS MODE 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.

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

⑤ Holes: Self-explanatory

⑥ Tear: Self-explanatory

⑦ Corner folded (Dog-ears): Self-explanatory

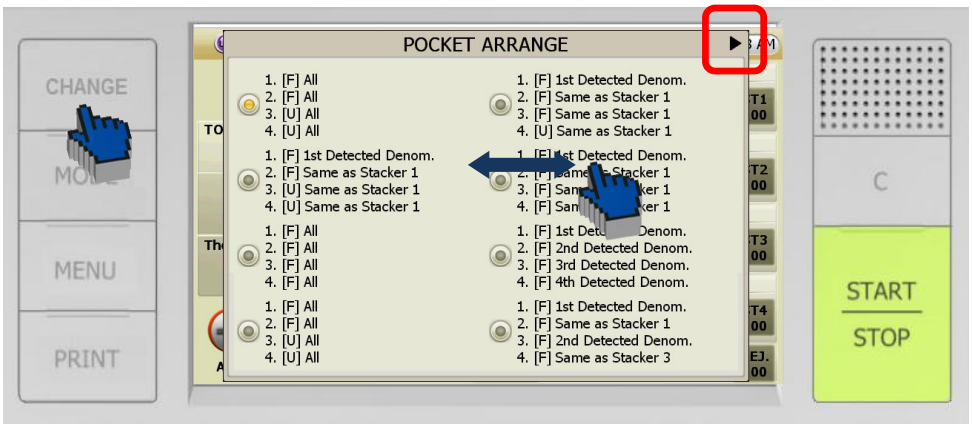
⑧ Graffiti (Including stamp): Deliberate graphical alteration of the banknote

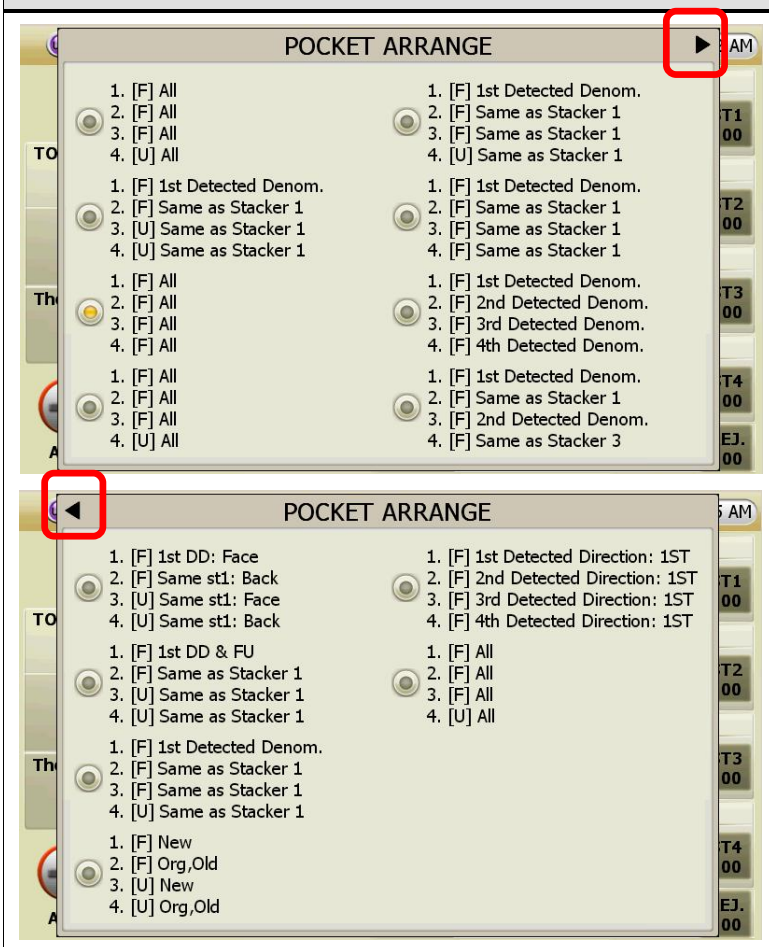
FITNESS mode can be set up by many different options.

● Pocket Arrange Designation:

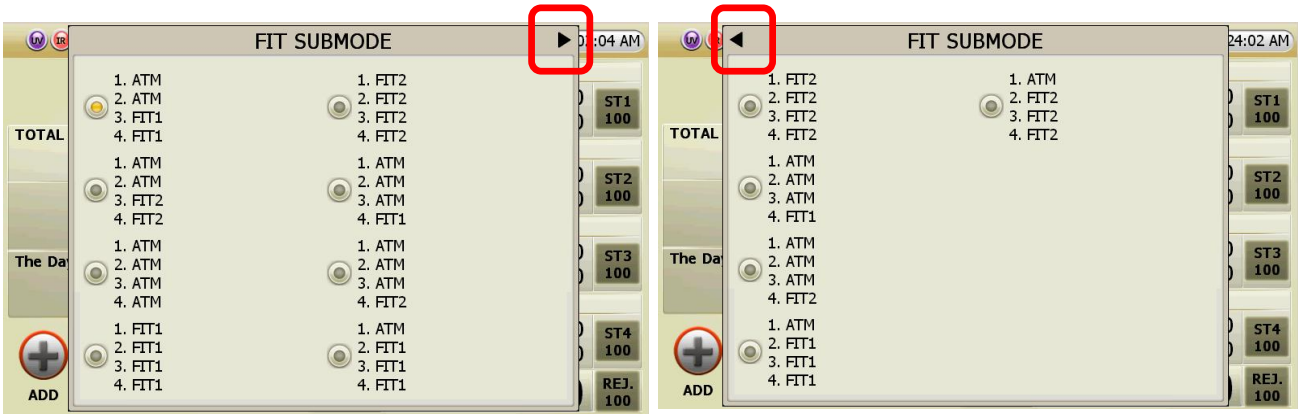
Can classify and designate previously set [Stacker 1~4] by pressing

[CHANGE] button in FITNESS Mode.(Counting result should '0')



Pocket Arrange indication	Eplanation
	1. : 1st pocket 2. : 2nd pocket 3. : 3rd pocket 4. : 4th pocket [F] : Fit note [U] : Unfit note All : All Denomination DD : Detected Denomination DO : Detected Orientation FU : Face Up Direction Face : Front side of note Back : Back side of note

After setting above ‘Pocket Arrange’, user can select the one of ‘Fitness Sub-Mode’ in the initial screen.



User can set up one of 3 different Level(ATM, FIT1, FIT2) with different value of 8 items of the Fitness standards.

Administrator can change ‘Fitness parameter for 8 items in ’Admin. MENU’.

Can allocate stacker and reject pockets in Basic Working Mode like below.

■ COUNT MODE

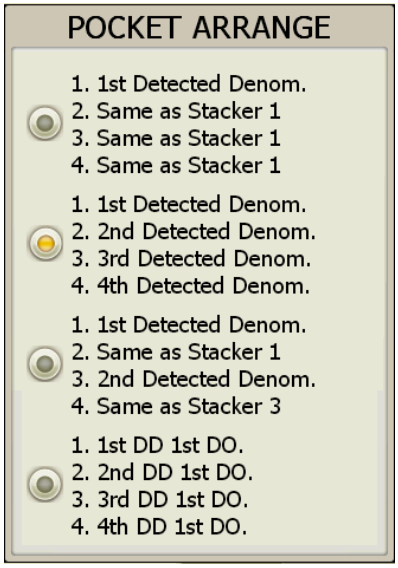
SB-5000 can count mixed denomination in COUNT mode.

■ SINGLE Mode

SB-5000 can count and sort 4 different Single Denomination per each pocket.

● Pocket Arrange Designation:

Can classify and designate previously set [Stacker 1~4] by pressing [CHANGE] button in SINGLE Mode.

Pocket Arrange indication	Explanations
	1. : 1st pocket 2. : 2nd pocket 3. : 3rd pocket 4. : 4th pocket DD : Detected Denomination DO : Detected Orientation

■ COUNT ONLY Mode

.

COUNT ONLY Mode is that the machine count only piece of note, not value.

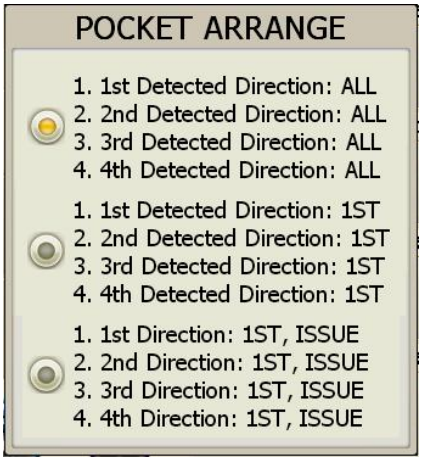
■ ORIENT Mode

.

ORIENT Mode classifies banknotes according to the directions.

● Pocket Arrange Designation:

Can classify and designate previously set [Stacker 1~4] by pressing [CHANGE] button in ORIENT Mode.

Pocket Arrange indication	Explanations
	1. : 1st pocket 2. : 2nd pocket 3. : 3rd pocket 4. : 4th pocket ALL: All Denomination 1ST : 1st Detected Denomination Issue: Issued Series.

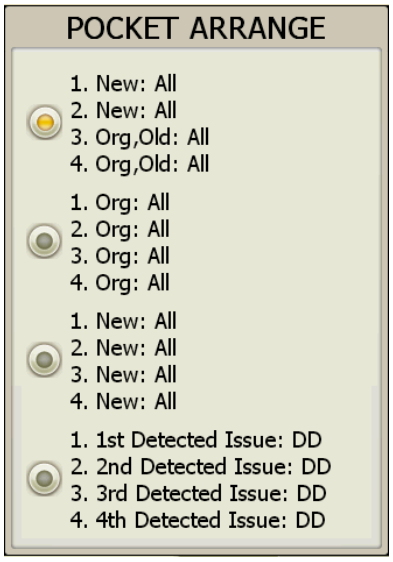
■ ISSUE Mode

.

ISSUE Mode classifies and counts bank notes by the old and new issue.

● Pocket Arrange Designation:

Can classify and designate previously set [Stacker 1~4] by pressing [CHANGE] button in ISSUE Mode.

Pocket Arrange indication	Explanations
	1. : 1st pocket 2. : 2nd pocket 3. : 3rd pocket 4. : 4th pocket New: Newly Issued note Org: Originally Issued note Old: Old Issued note ALL: All Denomination DD : Detected Denomination

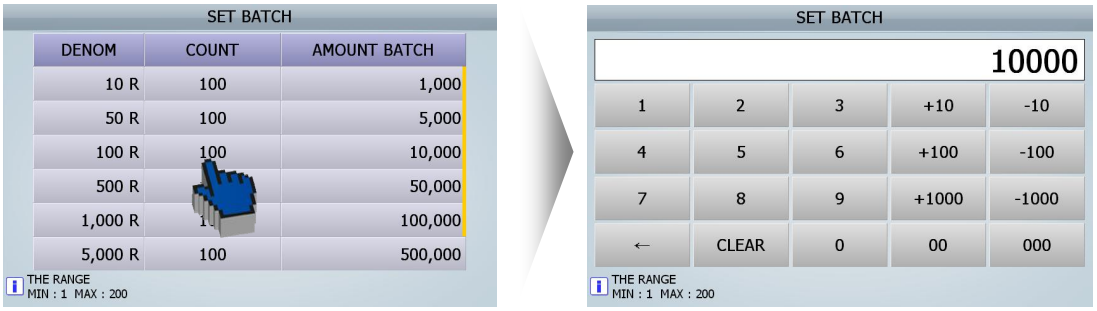
■ DISPENSE Mode

.DISPENSE Mode is a Muti- Batch function to dispense by certain q'ty of each denomination For instance, place bundles of USD 100 value in each denomination, USD 1, USD 5, USD 10, USD 20 in the hopper, This mode can dispense in 100 notes of USD 1, 20 notes of USD 5, 20 notes of USD 5 and 10 notes of USD 20

Follow below procedure to set up by each denomination.

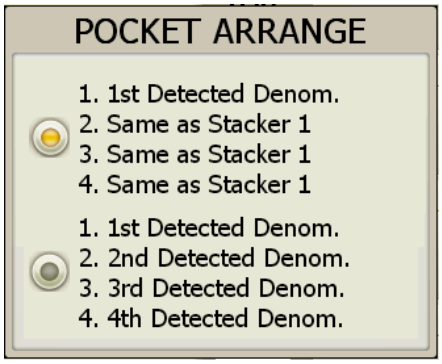
[1] Touch (BATCH) icon in DISPENSE mode

[2] Set up by each denomination in [SET DEMON, BATCH] screen.



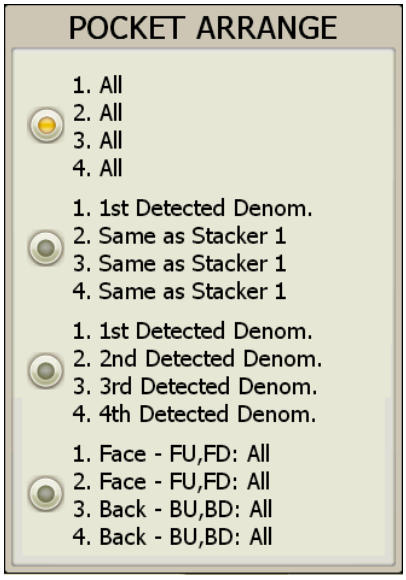
● Pocket Arrange Designation:

Can classify and designate previously set [Stacker 1~4] by pressing [CHANGE] button in DISPENSE Mode.

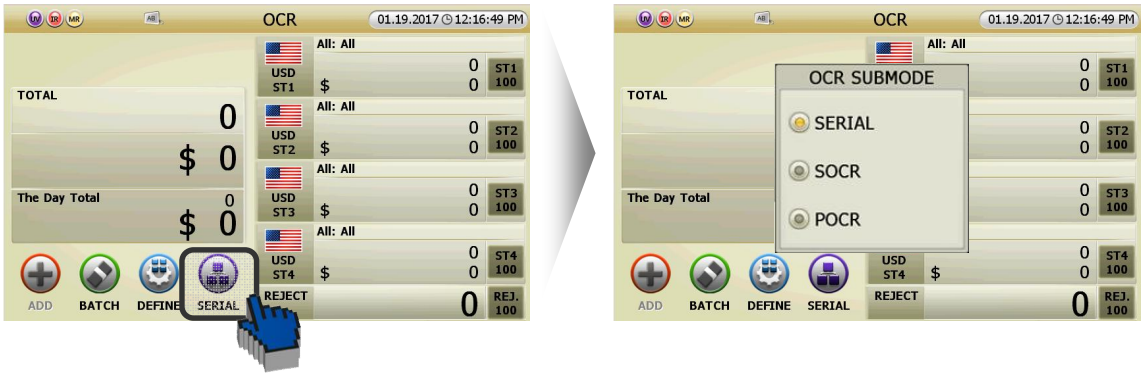
Pocket Arrange indication	Explanations
	1. : 1st pocket 2. : 2nd pocket 3. : 3rd pocket 4. : 4th pocket

■ OCR Mode(Option)

SB-5000 can read and print characters of Serial No. in banknotes

Pocket Arrange indication	Explanations
	1. : 1st pocket 2. : 2nd pocket 3. : 3rd pocket 4. : 4th pocket All : All Denomination FU : Face Up Direction FD : Face Down Direction Face : Front side of note Back : Back side of note

OCR mode has four Sub Modes. Touch [SERIAL] icon in OCR Mode and user can select SERIAL or SOCR or POCR in OCR SUBMODE



OCR Mode has four sub options as below.

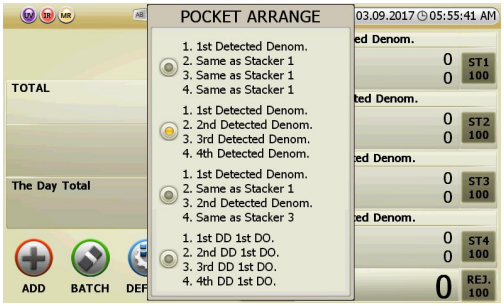
1 SERIAL Mode (Serial Number Printing Mode): In SRL mode, SB-5000 reads serial No of banknote and prints it as an image.

2 S-OCR (SB series-Optical Character Reader Mode): In S-OCR mode, SB-5000 reads the serial no. of banknotes and prints its images.

3 P-OCR (PC-Optical Character Reader Mode): In P-OCR mode, SB-5000 reads 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('SDC-100') on the computer, user can read the

image and convert it into OCR data so that user can store and manage it.

4 **[OPTION]** SNC Mode (Serial Number Comparison Mode): In SNC mode, SB-5000 can read the serial number and can identify the both serial numbers in the banknote. In case the serial numbers are not identical, the note will be sent to the reject pocket and indicated as “SNC ERROR”



● Pocket Arrange Designation:

Can classify and designate previously set [Stacker 1~4] by pressing [CHANGE] button in OCR Mode.

Below is description of designated pocket.

Pocket Arrange indication	Explanations
1. All	Stacker 1: All Denom.
2. All	Stacker 2: All Denom.
3. All	Stacker 3: All Denom.
4. All	Stacker 4: All Denom.
1. 1st Detected Denom.	Stacker 1: The first detected denomination
2. Same as Stacker 1	Stacker 2: Same as Stacker 1 Denom. notes
3. Same as Stacker 1	Stacker 3: Same as Stacker 1 Denom. notes
4. Same as Stacker 1	Stacker 4: Same as Stacker 1 Denom. notes
1. 1st Detected Denom.	Stacker 1: The first detected denomination
2. 2nd Detected Denom.	Stacker 2: The second detected denomination
3. 3rd Detected Denom.	Stacker 3: The third detected denomination

4. 4th Detected Denom.	Stacker 4: The fourth detected denomination
1. Face : All	Stacker 1: All denominations of front
2. Face : All	Stacker 2: All denominations of front
3. Back : All	Stacker 3: All denominations of rear
4. Back : All	Stacker 4: All denominations of rear

■ MIXED CURR. Mode

Can count multi currencies at the same time in MIXED CURR. mode

and user can allocate the currencies to Stacker pocket 1~4.

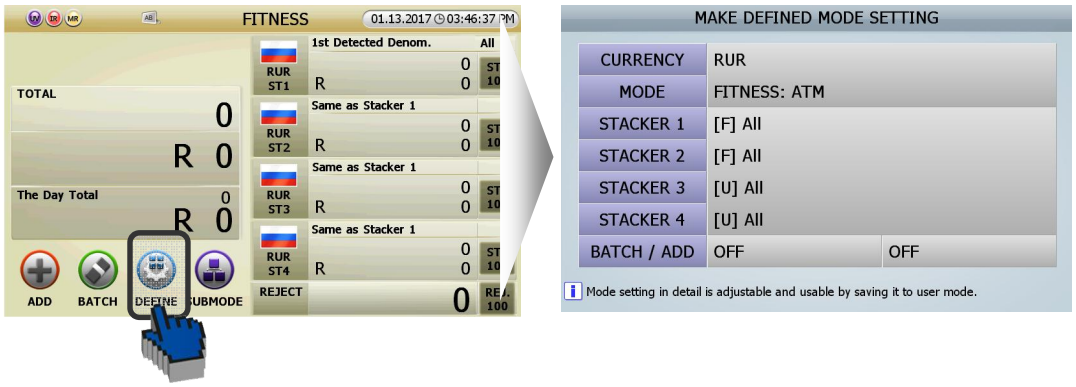
If user sets this as Auto, SB-5000 stacks the 1st, 2nd, 3rd and 4th detected currencies into each stacker.

5.2.3. User Define Mode

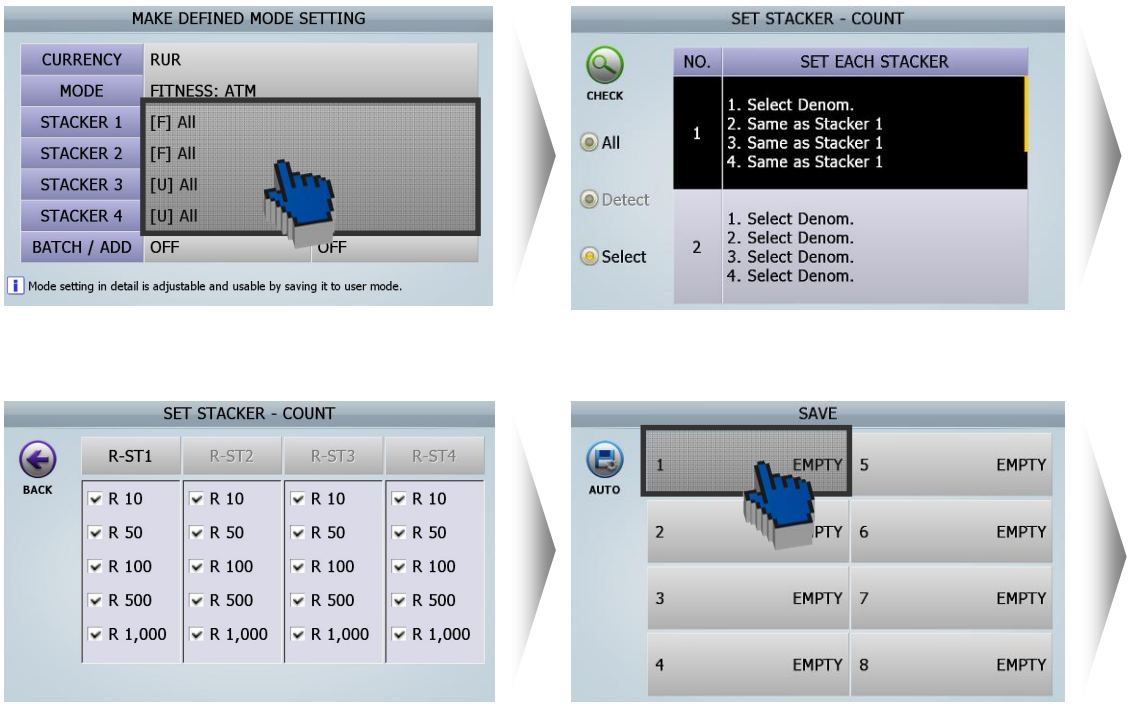
User can save at most 8 most frequent usable settings in ‘User Define mode’(User can save & export the settings thru USB stick)

● How to set User Define Mode

[1] Touch [DEFINE] icon in initial screen and can enter ‘MAKE DEFINED MODE SETTING’ Can set Currency, Working Mode, Stacker 1~4, Batch On/Off and Add function On/Off like right picture

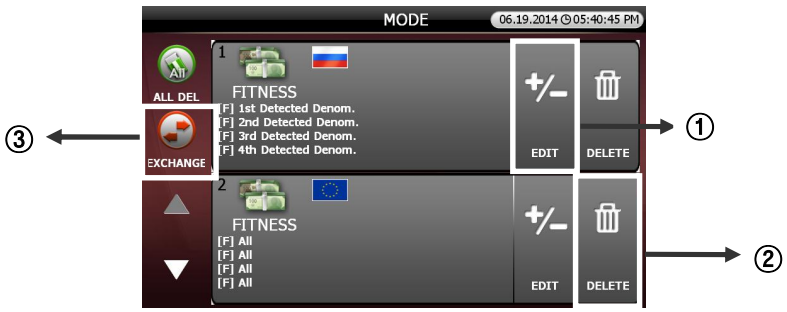


[2] Whlie selecting Stacker Pocket, user can choose denominations.



[3] Pressing [CHANGE] button in ‘MODE selection’ the screen will be changed into ‘User Define Mode’

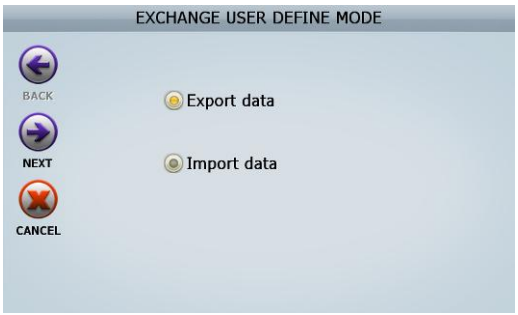
[4] Can set details in this ‘Mode’



① In order to edit previous User Mode, touch [EDIT] icon and activate ‘CHANGE DEFINED MODE SETTING’, then user can change and save the details

② In order to delete the previous User Mode, touch [DELETE] icon.

③ User can export & import the settings thru USB stick by pressing ‘Exchange’ icon



5.2.4. Functions

■ 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.

(Caution) ACCEPT function is not available when ADD is set.

● ADD is activated by touching ADD button on the screen of each mode.

■ BATCH Function

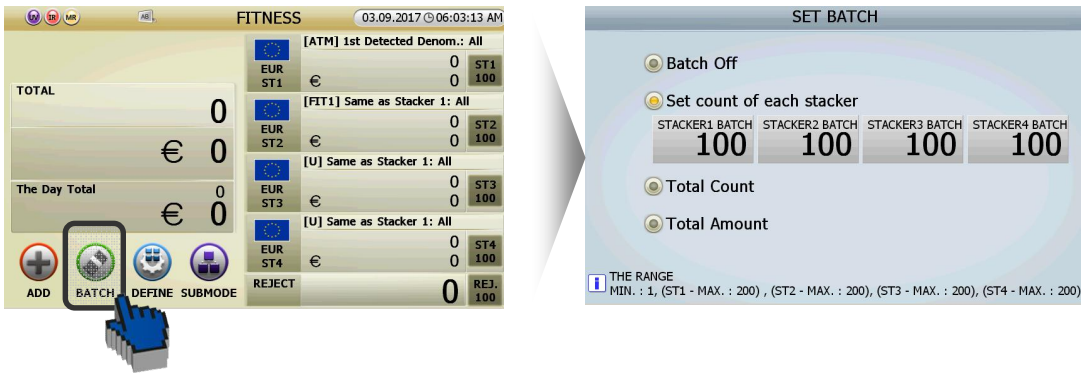
Batch is used when user want to count specific number of banknotes. For example, Batch is used when user want to count 50pcs of banknotes while Stacker pocket capacity is set to 100pcs.

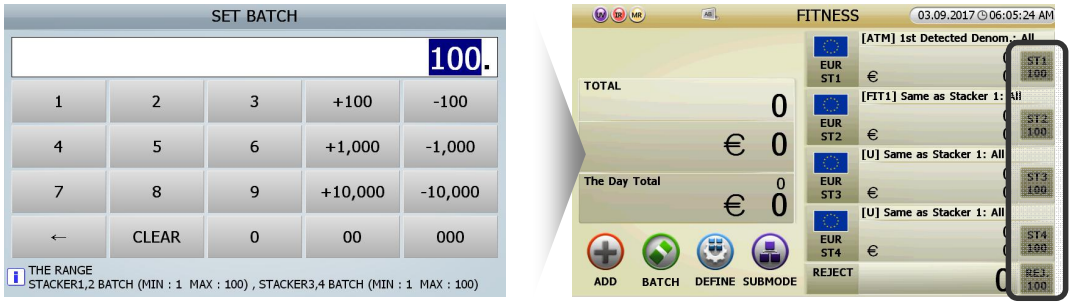
When BATCH Function is on, operation is stopped after counting the number user set in advance even if banknotes still remain on Hopper. Batch size cannot exceed Stacker pocket's maximum size.

● How to set : Set Batch screen is generated by touching Batch button on the display of each mode.

[1] Batch off: Do not use Batch function.

[2] Set Batch of stacker 1~4: Set Batch number for Stacker 1~4 respectively.





[3] Total Count : Set Batch number for Stacker 1 ~4 in total.

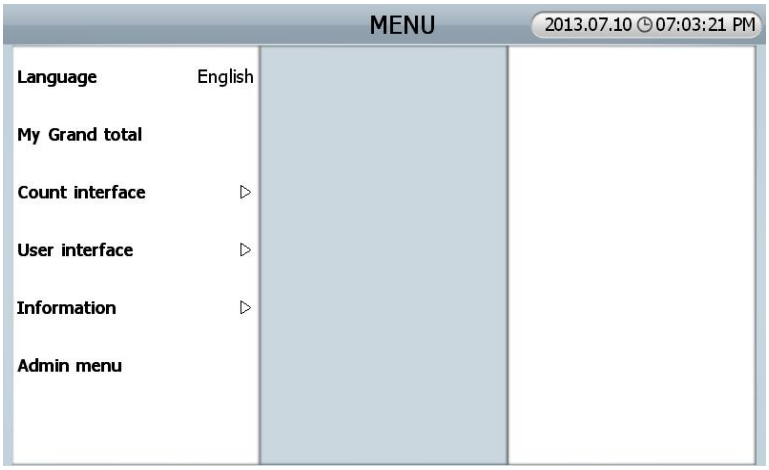
[4] Total Amount : Set Batch amount for Stacker 1~4 in total.

6 SET FUNCTION AND ITS PARAMETERS

SB-5000 has 2 kinds of Menu. One is a “User Menu” for user, and the other is “ADMIN Menu” for administrator.

6-1 USER MENU

Can alter each function and parameter. Push [MENU] key, user can move to “USER MENU” and its details by Touching the items.



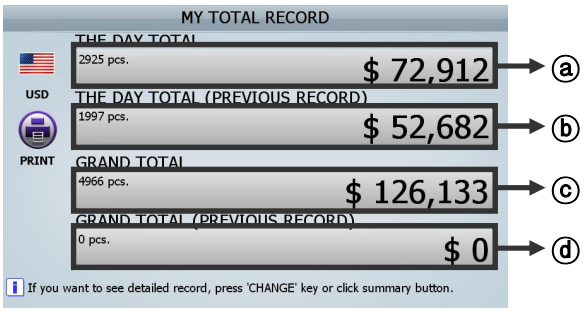
MENU	Sub Menu	Description
Language		Set a menu language
MY grand total		Checking of each User’s GT
Count Interface	Start counting	Manual/automatic counting start
	Bag No. Function	On/Off
	Pocket capacity	Set “pockets’ capacity”
	Accept result	Set “Accept result”
	Report printing	Set “Report printing”
	Set Pocket Map	Set “Pocket Map Select”
User Interface	Touch calibration	Touch calibration for screen
	Set date/time	Set up date/time
	Calendar Type	Gregorian/ Persian
	Selection way	Set up selection method
	Sorting order	Set up sorting order
	LCD brightness	Set up LCD brightness.
	Beep	Set up warning beep
	Power saving	Set up power saving

Information	About SB-5000	Set up SB-5000 inside.
	A/S call number	Check service call number.

In order to move on lower menu section, it's available with "Touch Screen" or [CHANGE] key, [START/STOP] key, and [C] key.

- **Language: Set up the language for Menu.**
- **My grand total: Instructing "The Day Total & Grand Total" of current user.**

[1] MY TOTAL RECORD



[2] At "MY TOTAL RECORD", pressing [CHAGNE] Key consecutively, or touching each section of "total result , user can change 4 types of display.

① Touching "THE DAY TOTAL" section (ⓐ), then moving onto "MY TOTAL RECORD _ THE DAY TOTAL"

② Touching "THE DAY TOTAL (PREVIOUS RECORD)" section (ⓑ), then moving onto "MY TOTAL RECORD _ THE DAY TOTAL (PREVIOUS RECORD)"

③ Touching "GRAND TOTAL" section (ⓒ), then moving onto "MY TOTAL RECORD _ GRAND TOTAL"

④Touching " GRAND TOTAL (PREVIOUS RECORD)" section(ⓓ), then moving onto "MY TOTAL RECORD _ GRAND TOTAL (PREVIOUS RECORD)"

[3] Can print out with pressing [PRINT]key or touching [PRINT] icon at each screen

- **Count Interface**

1. How to start counting: User can set up the start manu

Default is Automatic Counting Start

1) Automatic Counting Start: (None)

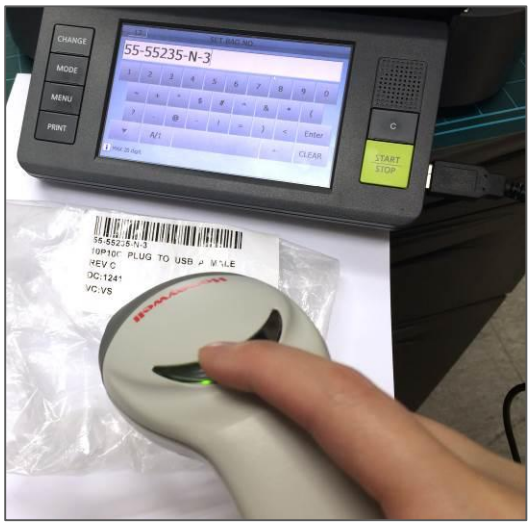
2) Manual Counting Start:

2. Bag No. On/Off :

User can register & print the banknote carrier bag no., cashier no, etc. with counting result.

1) Bag No. : Input the Bag ID number.

(User can input bag ID number by barcode scanner like below picture. USB port connection is necessary.)

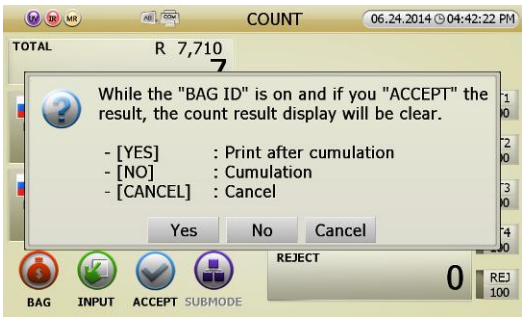


2) Casher No. : Input the Casher number manually

3) Reference : Input the expected value amount of the 'bag' will be counted. (In order to compare the value amount before counting and after counting)

4) Press 'Print' button and print 'Bag No. & Casher No'.

(If user changes currency, press ESC and alter the modes before Print, the count result will be cleared.)




```
     *** REPORT ST1,ST2***
Jul.1,2014, 10:00  Station:1
Deposit No.:   0    Fitness
User ID : 1
Bag No.    : 555
Casher ID  : 678

FIT                  UV MG IR
DENOM     UNIT            TOTAL
R10          1  R             10
R50          0  R              0
R100         0  R              0
R500         1  R            500
R1000        2  R          2,000
R5000        1  R          5,000
-------------------------------
TOTAL        5  R          7,510
-------------------------------

     *** REPORT ST3,ST4***
Jul.1,2014, 10:00  Station:1
Deposit No.:   0    Fitness
User ID : 1
Bag No.    : 555
Casher ID  : 678

UNFIT                UV MG IR
DENOM     UNIT            TOTAL
R10          0  R              0
R50          0  R              0
R100         0  R              0
R500         0  R              0
R1000        0  R              0
R5000        0  R              0
-------------------------------
TOTAL        0  R              0
-------------------------------
SUM TOTAL
-------------------------------
TOTAL(A)     5  R          7,510
REF. (B)     :           800,000
-------------------------------
DIFF.(A)-(B) :          -792,490
```

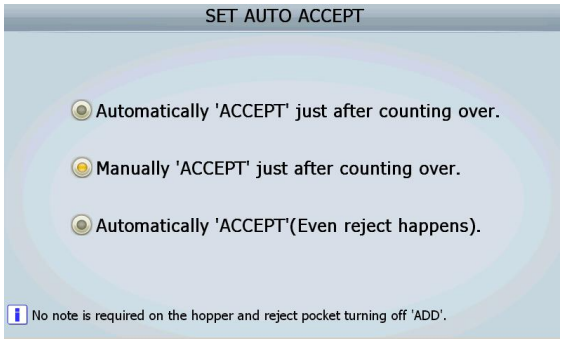
3. Pocket capacity: How to set up stacker capacity of each pocket.

   1) Stacker Pocket #1~#4: Can be selected one of 100/150/200

   2) Reject pocket: Can be selected one of 100/150/200

4. Accept result: How to set up the “Accept” in order to sum counting result to “GT”.

   1) Auto-accept: User can set whether automatic “Accept” or manual “Accept” after counting.



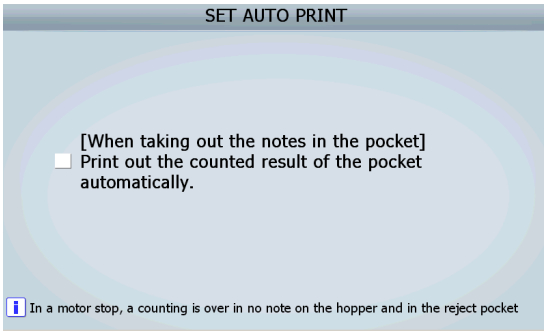
   2) After-accept: User can set manual “Accept” after checking the counting result.

      ① Add to Grand-total

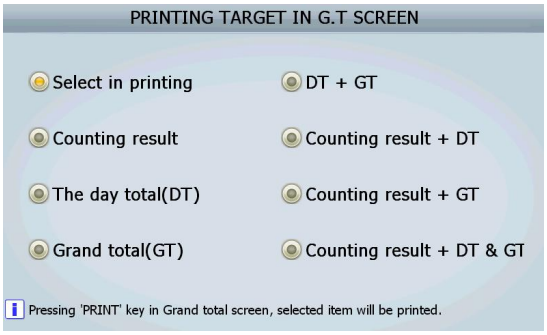
      ② Add to Grand-total and print

5. Report printing: User can set up the printing out method after counting.

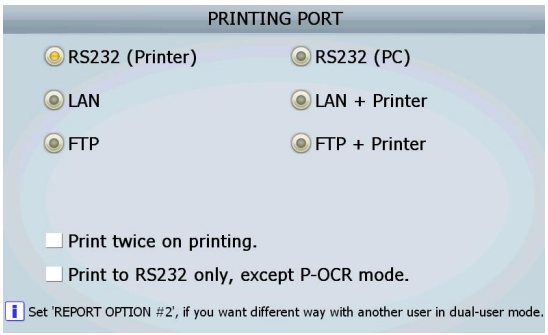
1) Auto-print: user can set automatic/manual print out.



2) Printing Target: User can set up a subject of printing out in Grand-total screen



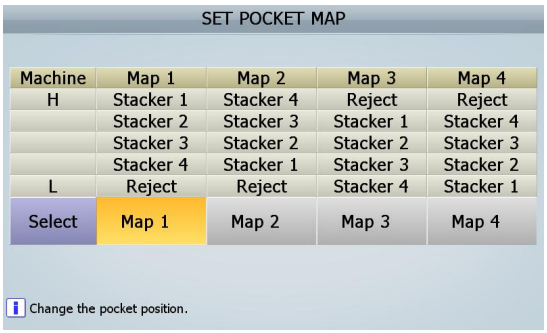
3) Printing Port: User can set Printing port. When 'P-OCR' mode selected, If user want to use 'SDC-100' application, please select 'RS232 (PC)'



6. Set Pocket Map:

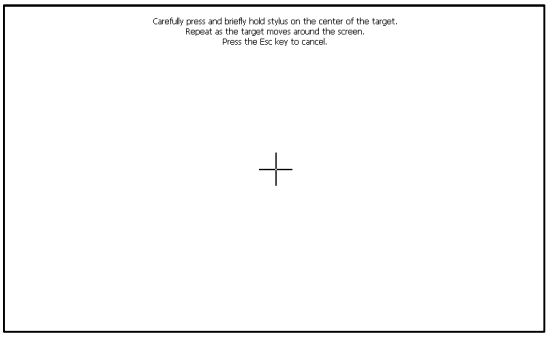
Can choose 'Reject pocket' location among

4 choices (MAP 1~4) like right picture.



■ User Interface

1. Touch screen calibration



2. Setting of date/ time

3. Calendar type

4. Selection way:

Selection method of items: can set up the Selection method of items.

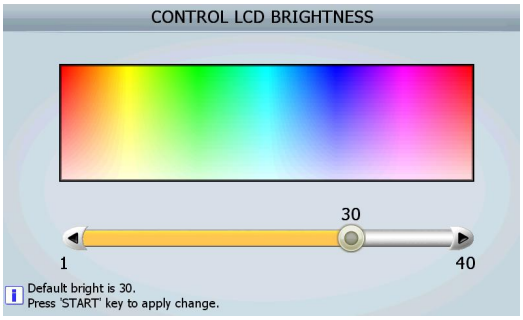
① Select an item at pop up lists.

② Select next level of item without pop up.

5. Sorting Order: can set up the arranged values on screen by descending or ascending order

6. Screen brightness:

Adjust LCD brightness

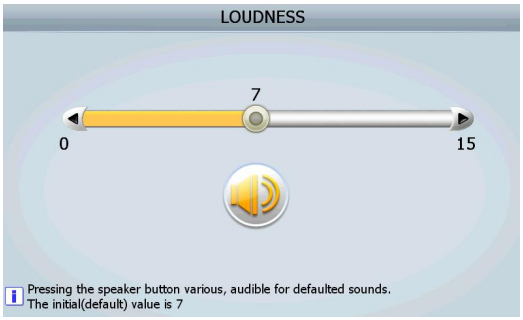


6. Beep: set up warning beep.

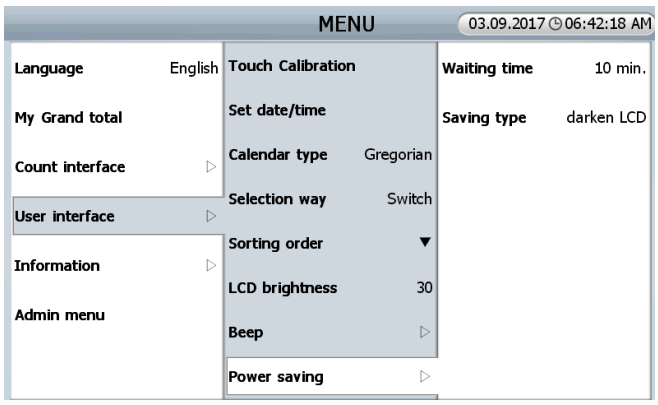
Can set 'Beep volume' ,

'Warning beep on/off' ,

'Button beep on/off'



7 Power saving mode: Setting up power saving mode in idle time



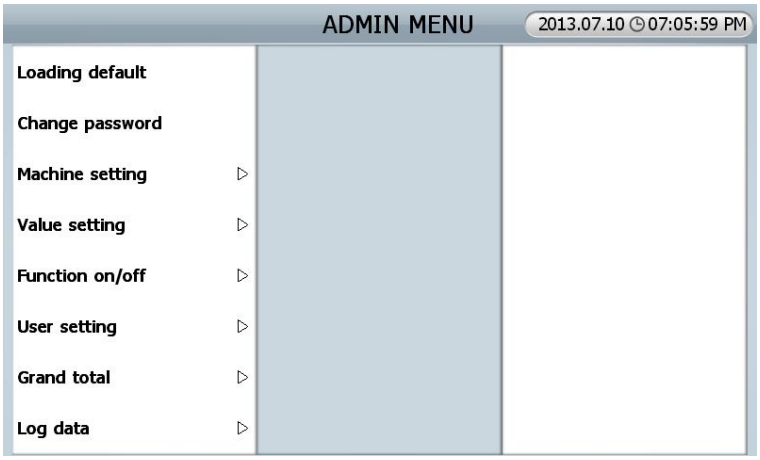
- Information
  1. About SB-5000: Machine information
  2. A/S call number: After Service call number

The Factory default settings are like below.

Function		Default Value
Speed		1000NPM (Fitness Mode: Approx. 700)
[Count interface]		
Starting counting		Auto
Pocket capacity	Stacker Pocket #1	100
	Stacker Pocket #2	100
	Stacker Pocket #3	100
	Stacker Pocket #4	100
	Reject Pocket	100
Accept result	Auto-accept	off
	After accept	Only add count-result to grand-total
Print result	Auto-print	off
	Print in GT	Select when printing
[User interface]		
Selection way		In list (On a pop-up menu.)
Sorting order		Ascendant
LCD brightness		30
Beep	Beep volume	7
	Warning on/off	On
	Button on/off	On
Power saving	Waiting time	10
	Saving type	Make the back-light of LCD darker

6-2 ADMIN MENU (Administrator Menu)

Can alter each function and parameter at this menu. Press [Mode] button and put [12345] in Password screen, and will be moved to [ADMIN MENU]. Touch the screen items, and can move to menus.



MENU	SUB MENU	Description
Loading default		
Change password		
Machine setting	Station ID	Set the ID number of machine
	Network	Ethernet
		DNS Address
		FTP Information
	Set Machine Information	Set machine serial number
	Black list	
	Printer	Interface
		Cutting code
		Edit print text
	Custom display	Set up customer display
	Motor control(Pocket full)	Set Motor control
	Handling SRL. Error	
	Change unfit to reject	
Value setting	CF level	Set up CF notes' level
	Fitness	Set up Fitness level and Export and Import this parameter to USB Memory stick
Function on/off	CF items	CF item on/off
	Tape in count mode	Tape sensor on/off

	SNC in OCR mode	On/ off
	OCR On/Off	On/ off the OCR Function for all modes.
	Reject free mode	On/ off
User setting	Concurrent User	Set up concurrent user
Grand Total	Auto clear	
	Clear Target	
	Initialize all	Initializing GT
	Summary	Check the summary of GT
	Each user	Check GT for each user
Log data	Export log data	
	Fitness counting report	
	Reject counting report	

- Loading default (Get back to initial condition)

  All of parameters get back to initial setting of factory

- Change passwords

  Administrator's password can be changed at this menu.

  In order to manage the result data and parameter in Admin Menu, strongly recommended to be accessed only authorized administrator.

  Thus it is recommended changing the initial password [12345] to specified password of its administrator.

- Machine setting

1. Station ID

   The ID number of the machines will be printed out after setting up the ID number

2. Network

   Can set up Dynamic / Static IP address in LAN setting.

   And can check DNS Address, FTP information.

3. Set machine serial number

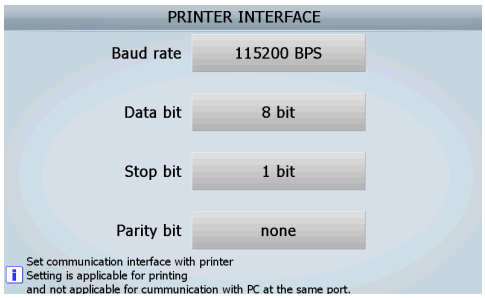
4. Black list: Can enter Black list banknote serial number using input button. (This note will rejected when the OCR function is activated)

5. Print: Set up Print.

1) Interface

Administrator has to select a printer type before connecting the printer.

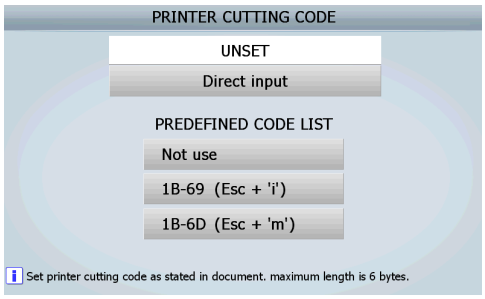
Needs to be discussed with the dealer about available printer



If, the printer type is Serial, the setting of printer in SB-5000 is like below.

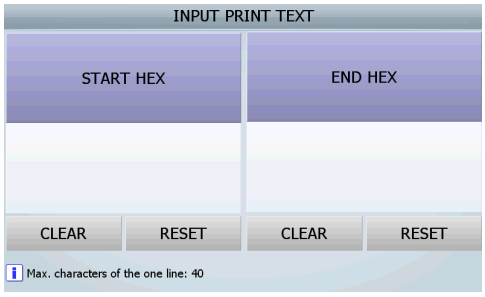
2) Cutting code

Can set up the Cutting code with reference the manual and it can apply up to 6 byte.



3) Edit print text

Can edit header and footer for printing



6. Customer display

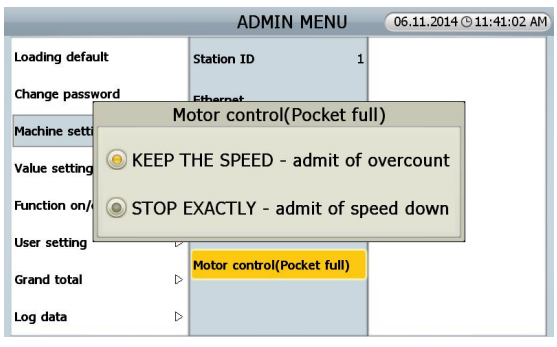
Set up the Customer Displays to be connected to Display A/ B Ports.

(Caution) In case of set up concurrent user, Display A is for left user, and Display B is for right user. This is “Default setting,” but user can set up the display for each user.

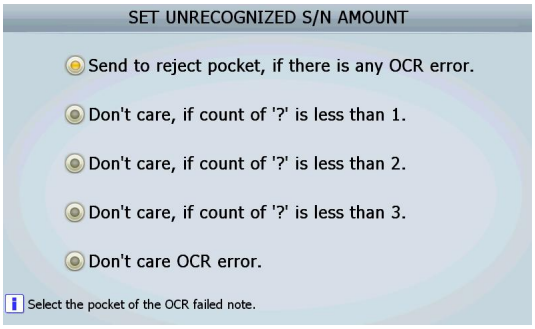
7. Motor control (Pocket full)

*KEEP THE SPEED: If a pocket is full, some banknotes on the path inside the machine will be sent to Reject pocket(Reject Reason: Over count)

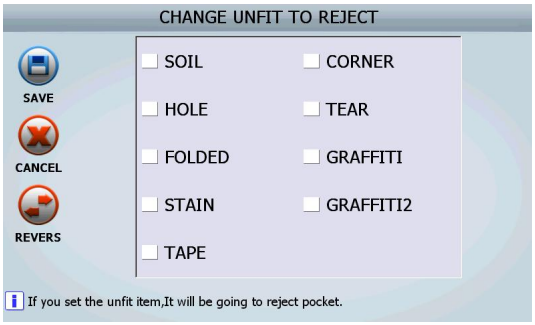
*STOP EXACTLY: If a pocket is almost full, the counting speed will be slow down and motors stop after the exact counting.



8. Handling serial number OCR error



9. Change unfit to reject: Can choose the item to send rejecter pocket



■ Value setting

1. CF level

In this menu, user can set the levels such as UV (Ultra-Violet) Sensor, MR (Magnetic Reader) Sensor and IR (Infrared) Sensor required detecting each currency. The setting method is as follows.

[How to set]

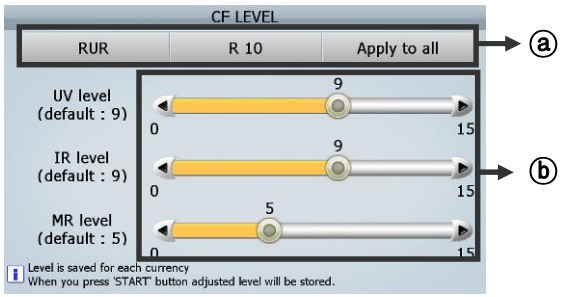
[1] Select Currency,Denom. (ⓐ)

[2] Move each circle and set the levels (ⓑ)

① Move the circle of the first bar and set UV level.

② Move the circle of the second bar and set IR level.

③ Move the circle of the third bar and set MR level.



(It is possible to set each level in detail by using "◀▶" key)

[3] Press [START/STOP] Key to save the level.

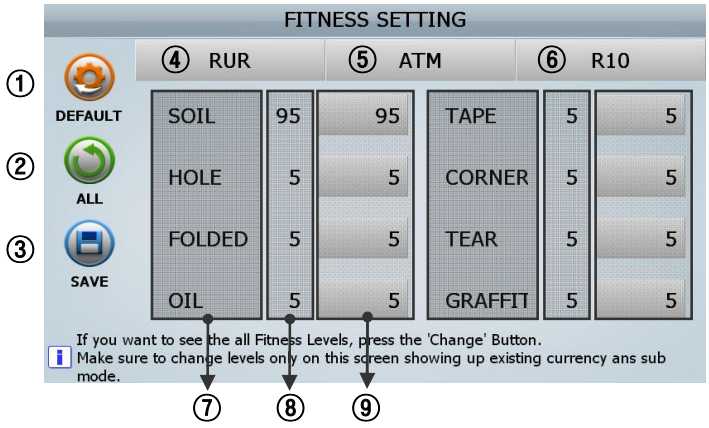
The lower number is less sensitive. If the machine detects CF note as real notes, increase level by one to set the level. If the machine detect real note as CF note, decrease level by one to set the level.

If the level is '0' (Zero), the sensor is deactivated.

2. Fitness setting

[1] Fitness parameter

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



① **[DEFAULT]**: Set Fitness value to the Default

-. [YES]: Apply to all Fitness Sub-mode

-. [NO]: Apply only to current Fitness Sub-mode

-. [CANCEL]: Do not apply

② **[ALL]**: Decide if the data below is also applied or not to another denomination.

-. Fitness Levels & On/Off set

-. Fitness Levels

-. Fitness On/Off set

③ **[SAVE]**: Save current setting (Currency, Fitness Sub-mode, Denomination)

④ [CURRENCY]: The current currency's displayed and if this is touched, another currency is set.

⑤ [Fitness Sub-Mode]: The currency Fitness Sub-Mode is displayed and if this is touched, another Fitness Sub-Mode is set.

⑥ [Denomination]: The currency denomination is displayed and if this is touched another denomination is set.

⑦ [Fitness Sorting]: Items for fitness are displayed.

⑧ [Default]: The default of each item is displayed.

⑨ [Current value]: The current value for each item is displayed/

[2] Import fitness level

[3] Export fitness level

Can put fitness level gotten from one machine into another machine by using Export fitness level menu and Import fitness level menu.

Please refer to the below to know how to do this.

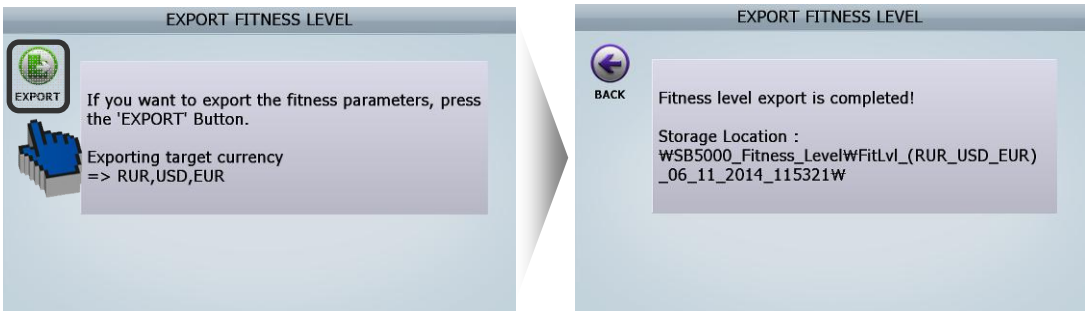
Follow the below steps

① Insert USB Memory Stick to USB port in SB-5000

② Select ‘Export fitness level’ in this menu

(ADIMN MENU _ Value setting/ Fitness/ Export fitness level)

① Touch on [EXPORT] Icon. Then LCD will be displayed as follows



④ The file is created in USB memory stick.

(File folder name: SB-5000_Fitness_Level)

⑤ Insert USB Memory Stick, which has ‘SB-5000_Fitness_Level’ folder, to another SB-5000 that supervisor want to input previously fitness level to.

⑥ Select ‘Import fitness level’ in this menu.

(ADIMN MENU _ Value setting/ Fitness/ Import fitness level)

⑦ LCD of another SB-5000 will be displayed as follows

-1. After checking the file which you want to apply to another SB-5000. And then touch [NEXT] Icon

-

2. Select the currencies and fitness Sub-Mode which supervisors want to apply to another SB-5000. And touch [IMPORT] Icon

3. Finish

⑧ Finishes

■ Function on/off

1 CF Items

Administrator can set CF On/Off and can set sensors (UV, MR, IR) individually.

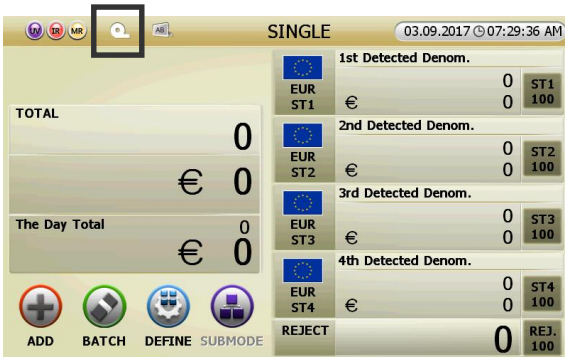
No	Sensors status	Indicator	No	Sensors status	Indicator
1	CF on (UV, IR, MR on)		5	MR off UV on, IR on	
2	CF off (UV, IR, MR off)		6	UV off, IR off MR on	
3	UV off IR on, MR on		7	UV off, MR off IR on	
4	IR off UV on, MR on		8	IR off, MR off UV on	

2. Tape in count mode

Can set 'Tape Sensor ON/Off' here, except 'Fitness Mode'

In case of Fitness Mode, should set Tape sensor in Fitness setting.

Tape function On, Tape indicator will be shown like right picture.



3. SNC in OCR mode

Can set ‘SNC(Serial Number Comparison) function on/ off.

SNC Mode: 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 identical, the note will be sent to the reject pocket and indicated as “SNC ERROR”

4. OCR On/off

Can activate or deactivate OCR function for all working mode.

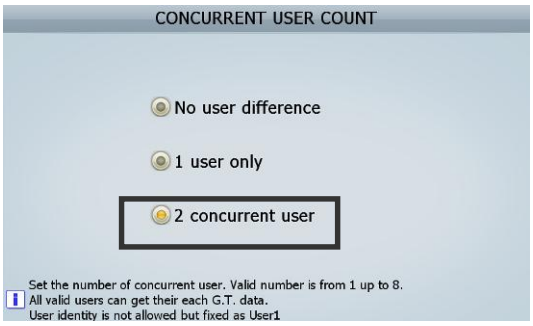
5. Reject Free Mode:

Can activate or deactivate ‘Reject free mode’ function. When this function is on, the number of rejected note will be cleared immediately when user remove reject pocket.

■ User setting

1. Concurrent User

Multi users can use SB-5000 at the same time.



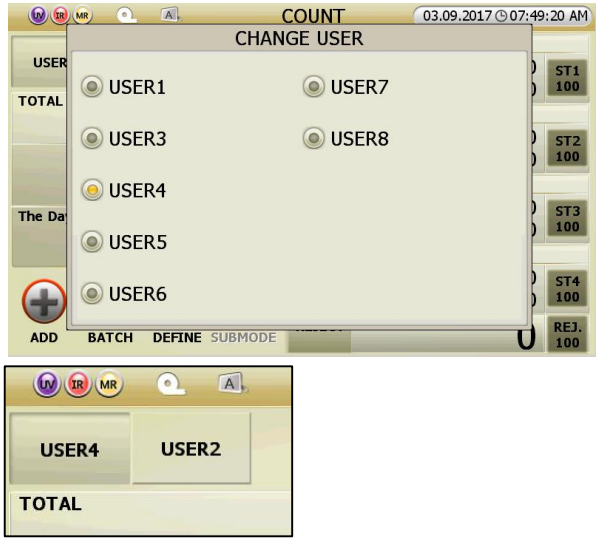
[1] USER 1 and USER 2(ⓐⓑ) can operate SB-5000 at the same time in other modes.

User can slect one of Concurrent User and can set Count modes and functions as one user does.

[2] One of Concurrent User(ⓐⓑ) can use the allocated Print Port. and Customer Display.

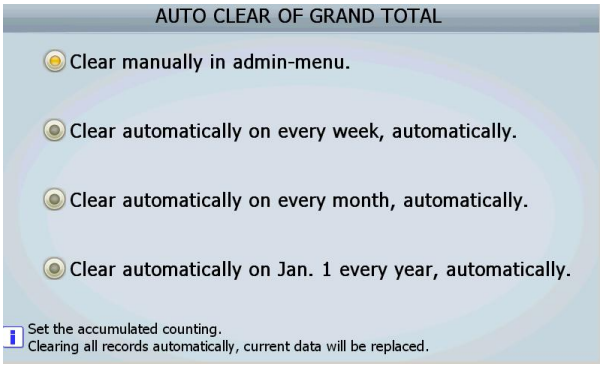
If Conccurent User was set, the allocated Print Port and Customer Display will be shown in upper indicator.

[3] While the Concurrent User was set, if user touch the Concurrent User windows(ⓐ or ⓑ), USER SETTING will be activated and user can change the Concurrent User setting.



■ **Grand Total**

1 'Auto clear' for Grand Total.



2. Clear Target

Can choose 'Clear day total', 'Clear grand total', 'Clear all'

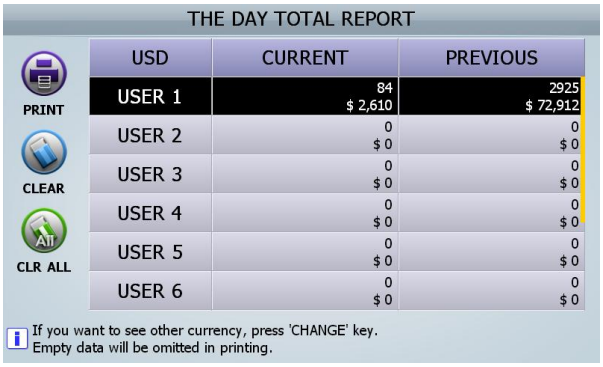
3. Initialize all: Can delete the record and make THE DAY TOTAL and GRAND TOTAL zero.

4. Summary

Can check, delete and print the summary of THE DAY TOTAL and GRAND TOTAL.

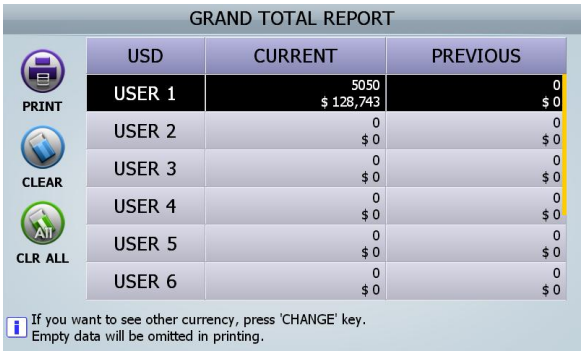
[1] THE DAY TOTAL by currency:

Pressing [CHANGE] button, the currency will be changed.



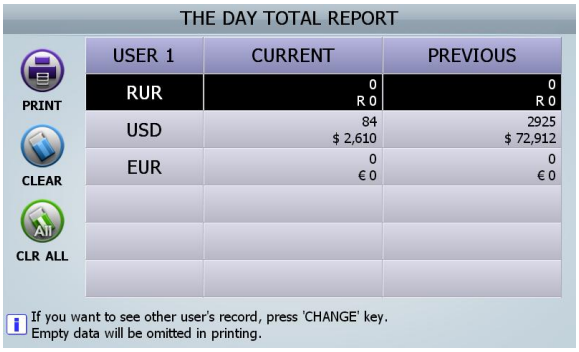
[2] GRAND TOTAL by currency:

Pressing [CHANGE] button, the currency will be changed.



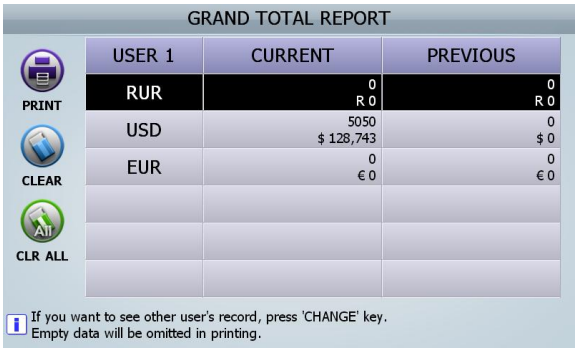
[3] THE DAY TOTAL by user:

Pressing [CHANGE] button, the users will be changed.



[4] GRAND TOTAL by user:

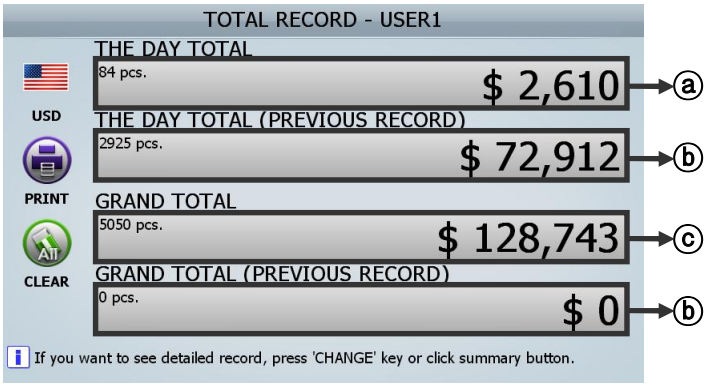
Pressing [CHANGE] button, the users will be changed.



5 Each user:

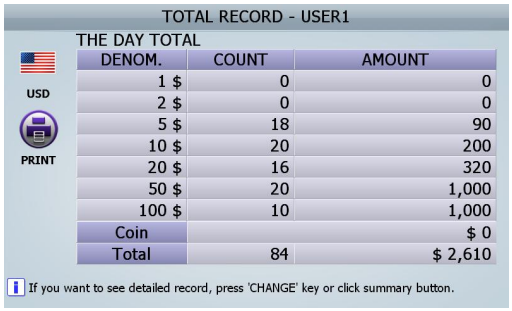
Each user can read, delete and print the present & previous THE DAY TOTAL and GRAND TOTAL.

[1] The screen of TOTAL RECORD-USER1 DISPLAY is like below.



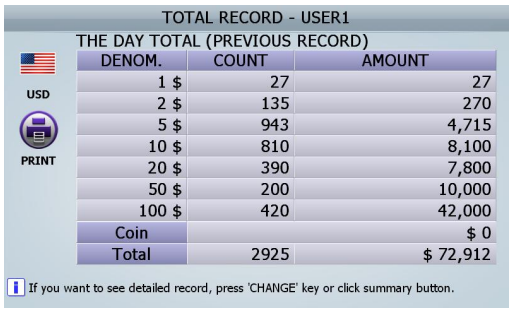
[2] If [CHANGE] button is pushed consecutively or if the section of the above screen is touched, the above screen is changed to 4 DETAIL screens.

① If the section (ⓐ) of the above screen is touched, the screen of 'The Day Total' screen as right will be changed.



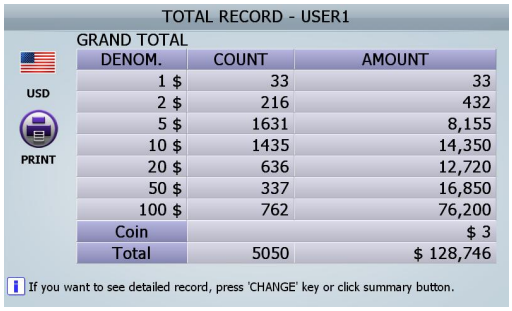
DENOM.	COUNT	AMOUNT
1 $	0	0
2 $	0	0
5 $	18	90
10 $	20	200
20 $	16	320
50 $	20	1,000
100 $	10	1,000
Coin		$ 0
Total	84	$ 2,610

② If the section (ⓑ) of the above screen is touched, the screen of 'The Day Total (Previous record)' as right will be changed.



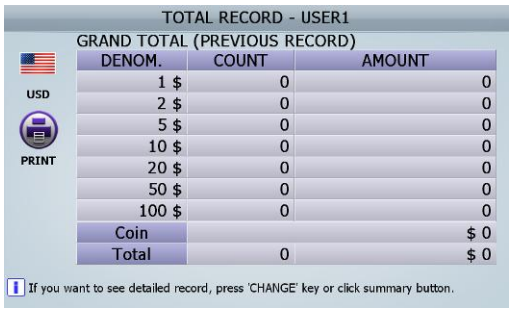
DENOM.	COUNT	AMOUNT
1 $	27	27
2 $	135	270
5 $	943	4,715
10 $	810	8,100
20 $	390	7,800
50 $	200	10,000
100 $	420	42,000
Coin		$ 0
Total	2925	$ 72,912

③ If the section (ⓒ) of the above screen is touched, the screen of 'Grand total' as right will be changed.



DENOM.	COUNT	AMOUNT
1 $	33	33
2 $	216	432
5 $	1631	8,155
10 $	1435	14,350
20 $	636	12,720
50 $	337	16,850
100 $	762	76,200
Coin		$ 3
Total	5050	$ 128,746

④ If the section (ⓓ) of the above screen is touched, the screen of 'Grand total (Previous record)' will be changed.



DENOM.	COUNT	AMOUNT
1 $	0	0
2 $	0	0
5 $	0	0
10 $	0	0
20 $	0	0
50 $	0	0
100 $	0	0
Coin		$ 0
Total	0	$ 0

[3] In every screen, can print out the result by using [PRINT] button and [PRINT] ICON.

[4] In every screen, can delete the result by using [CLEAR].

■ **Log data**

This mode supplies all Log DATA (Count Detail in Currency / Count Detail in User / ETC) and provide exporting function to EXCEL file.

The procedure of Log Data Exporting is here below,

① Insert USB Memory Stick into the USB Port of SB-5000.

② Select ‘Export log data’ in this menu

(ADIMN MENU _ Log Data/ Export log Data)

③ Select the Range of the Period.

④ Touch on [Next] ICON.

⑤ Select Currency and USER and Touch [Export] ICON

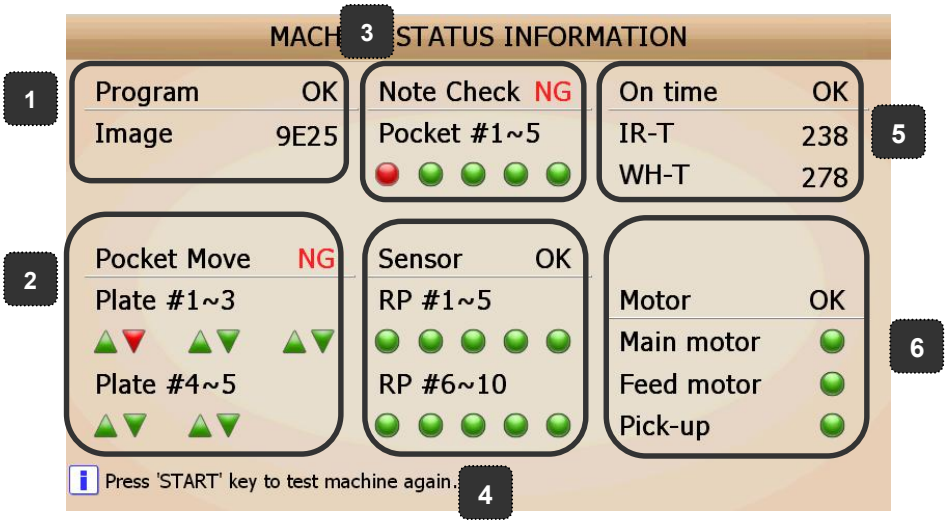
⑥ In USB Memory Stick, Log DATA file will be created as right screen

7 TROUBLESHOOTING

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

■ Initializing Running Error

When SB-5000 Power On, if there is any trouble at the sensors, pocket plates, motors and stackers and so on, it shows below figure **[MACHINE STATUS INFOMRATION]**. Green means “OK”, Red Means trouble or suspect then required check sensors described following table.



No.	Error Messages	Action to be taken
1	Program NG	Contact to Dealer
2	Pocket Plate NG	1. Check whether or not something is in the pockets 2. Check the Pocket Plates is down 3. Facing continuous trouble, contact to Dealer
3	Note Check NG	1. Check whether note(s) not. 2. Cleaning required, in case of covering dust.
4	Sensor NG	1. Check the cover is open at the instructing point(s) 2. Check each RP sensor with opening its door. 3. Cleaning required, in case of covering dust.
5	On time NG	1. Check Rear (Top, Middle, and Bottom) Cover. 2. Check CIS(s) and its vicinity. 3. Facing continuous trouble, contact to Dealer
6	Motor NG	1. Check whether opened or not Rear(Top, Middle, Bottom) Cover 2. Check amongst Rollers whether note(s) not 3. In case of “Feed Motor” NG, check whether note(s) or foreign substance on the Hopper Sensor

■ Error on counting

It shows following figure [SB-5000 STAUS], when any error occurs on counting

Error Messages	Action to be taken
Pocket Overflow!! Empty pocket - Remove banknotes in the pocket #1~ #4	1 Remove remaining note accordance with the guide on the display 2 Press 'C' button
Jam Occurred!! Remove banknotes from path. -Detected sensor ID of Jam: '1' ~ '8'	1 Remove remaining note accordance with the guide on the display 2 Press 'C' button
Cover Opened! Please Close Cover - Front cover - Rear-Top/ Middle/ Bottom cover	1 Close The Cover 2 Press 'C' button
Check Pocket!! - Remove Banknotes in the pocket #1~#4 - Remove Banknotes in the reject pocket	1 Remove remaining note accordance with the guide on the display 2 Press 'C' button
Check Hopper!! - Remove Banknote on the hopper	
Feeding error!! Remove notes from the hopper	1 Press 'C' button
Main motor error!! Press 'Cancel' button	
Feeding motor error!! Press 'Cancel' button	
Motor error!! Press 'Cancel' button	
Print error - Remove notes in reject pocket.	1 Remove remaining note in reject pocket 2 Press 'C' button
Pocket motor error! - Check pocket motor 1 ~ 4	Contact to Dealer

Notes: Please refer to the figures on 'Chapter 8' to see the position of the sensors and jam

8 MAINTENACE

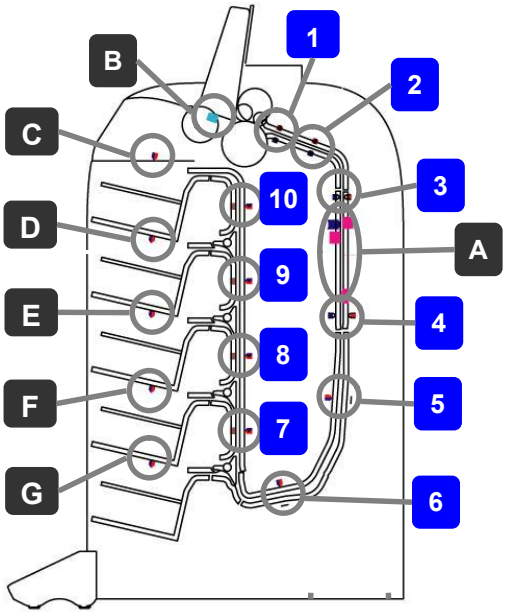
1. Sensor cleaning.

SB-5000 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 BEFOR CLEANING. DO NOT USE A VOLATILE SOLVENT FOR CLEANING.

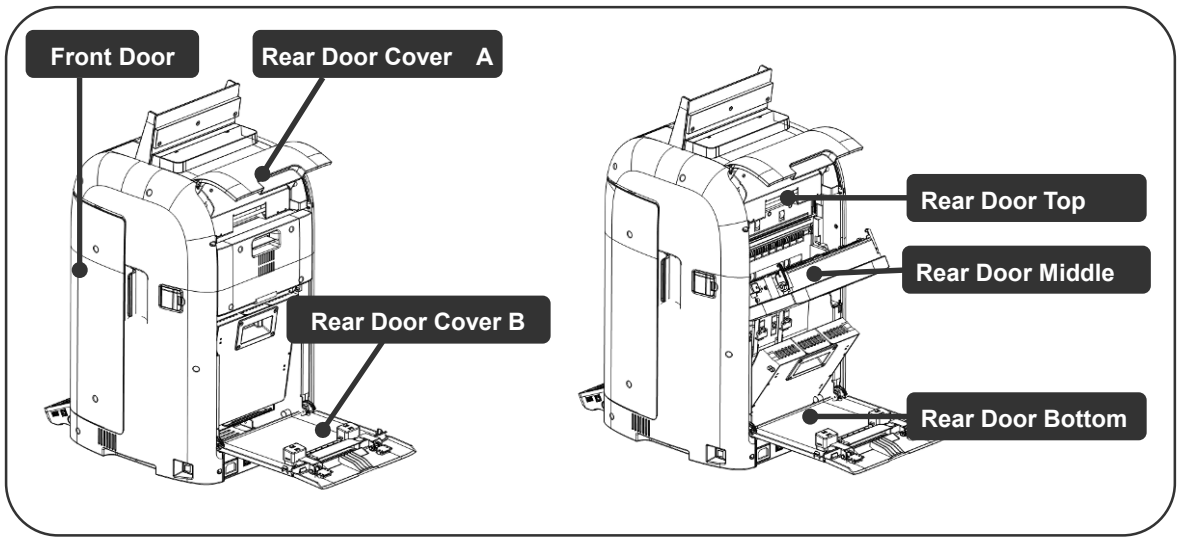
[1] Appellation and location of each Sensor



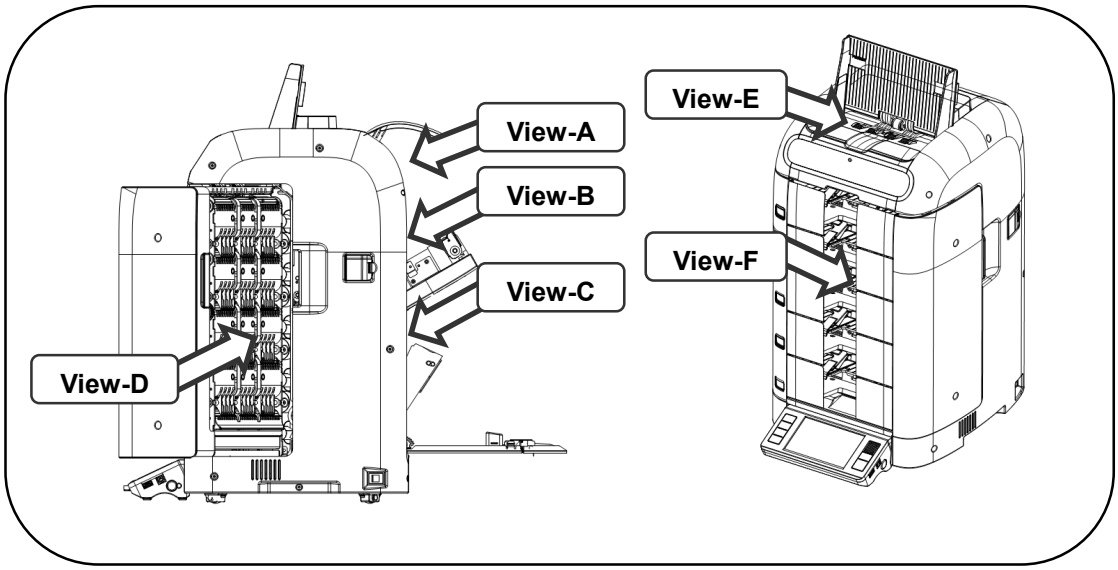
No	Description	Jam
1	RP1 Sensor	Jam 1
2	RP2 Sensor	Jam 2
3	RP3 Sensor	Jam 3
4	RP4 Sensor	Jam 4
5	RP5 Sensor	Jam 5
6	RP6 Sensor	Jam 6
7	RP7 Sensor	Jam 7
8	RP8 Sensor	Jam 8
9	RP9 Sensor	Jam 9
10	RP10 Sensor	Jam 10
A	CIS, Tape, MR, UV	-
B	Hopper sensor	-
C	Stacker 1 sesnor	-
D	Stacker 2 sensor	-
E	Stacker 3 sensor	-
F	Stacker 4 sensor	-
G	Stacker 5 sensor	-

[2] Cleaning direction of each sensor

① Particular appellation of each part



② View points



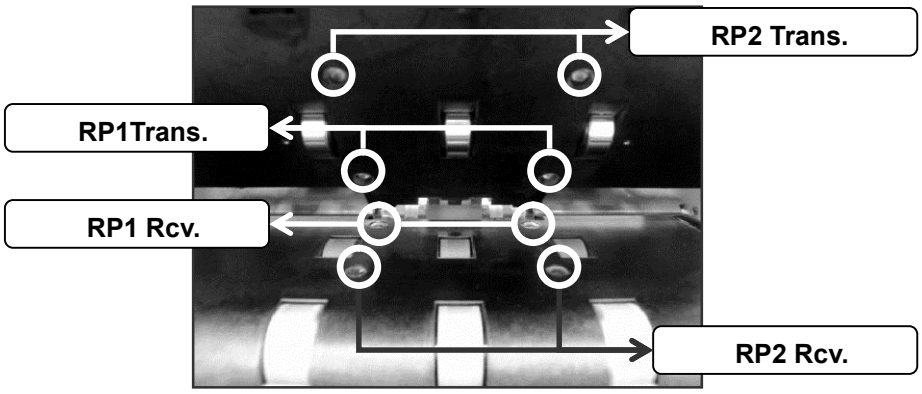
③ **Accessible sensors in each view point**

View	Accessible sensors	View	Accessible sensors
View A	RP1 Sensor	**View D**	RP7~8 Sensor
	RP2 Sensor		RP9~10 Sensor
View B	RP3 Sensor	**View E**	Hopper Sensor
	CIS,Tape,MR, UV Sensors	**View F**	Stacker 1~2 Sensor
	RP4 Sensor		Stacker 3~4 Sensor
View C	RP5 Sensor		Reject Sensor
	RP6 Sensor		

[3] Part to maintain

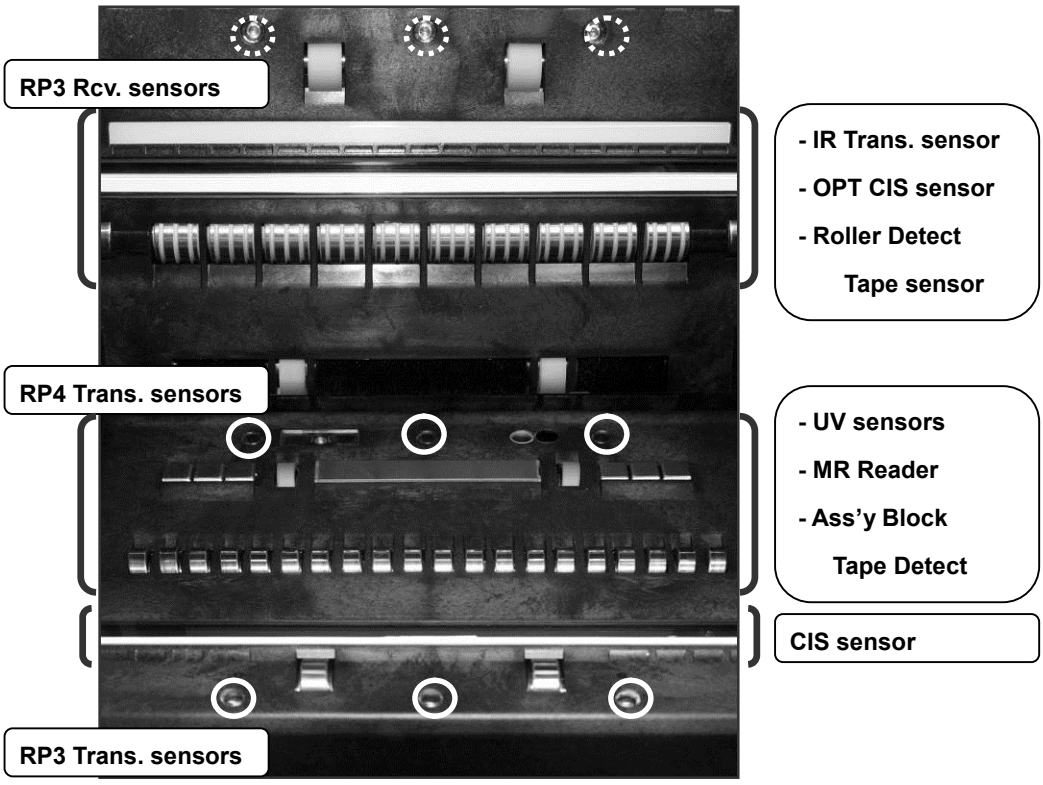
[VIEW A]

It's available to clean the Trans & Rcv sensors of RP1 & RP2 in View A



[VIEW B]

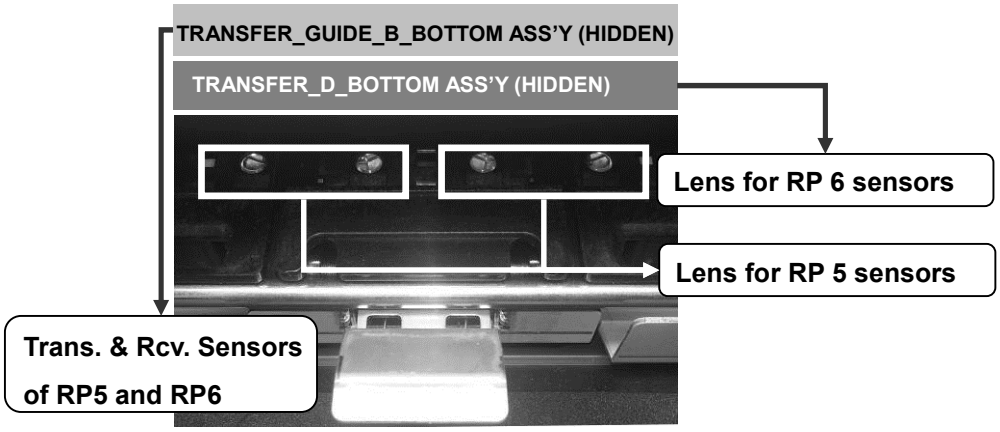
It's available to clean the Trans & Rcv sensors of RP3 & RP4, CIS, Optional CIS, Tape, MR, and UV sensors in View B



[VIEW C]

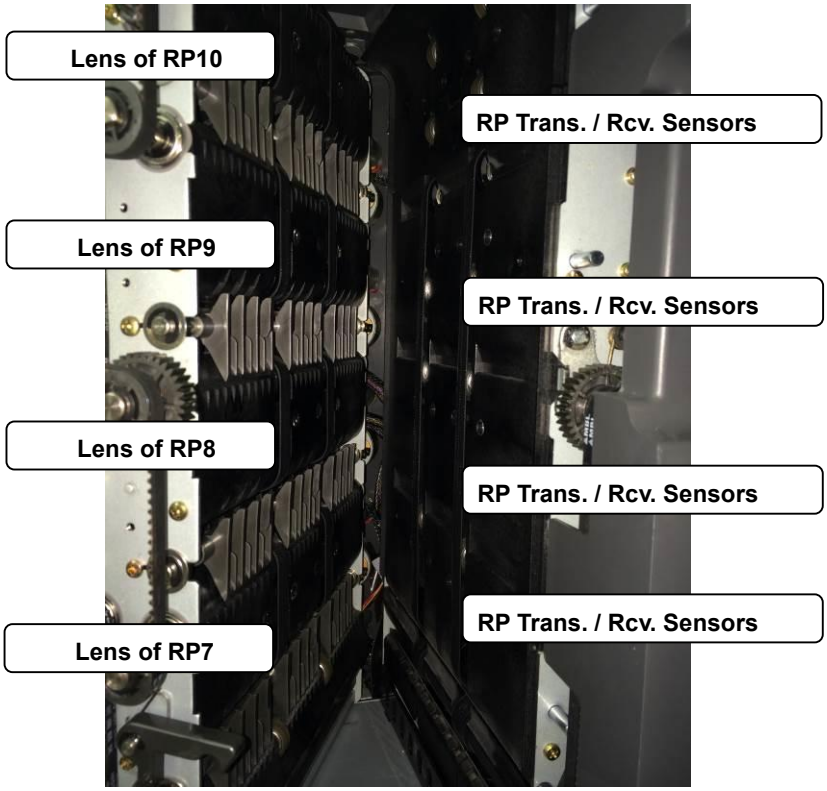
It's available to clean the Trans & Rcv sensors of RP5 & RP6 and Lens in View C.

However, it is strongly required to clean the Trans & Rcv sensors and Lens for RP6 using in cloth sice they are located in the deep inside.



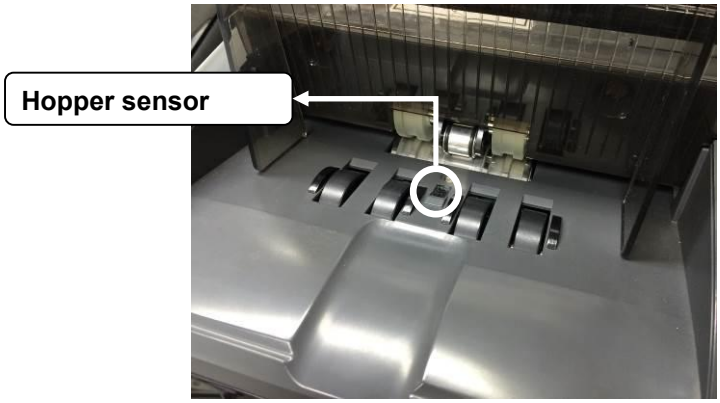
[VIEW D]

It's available to clean the Trans & Rcv sensors of RP7~RP10 and Lens in View D



[VIEW E]

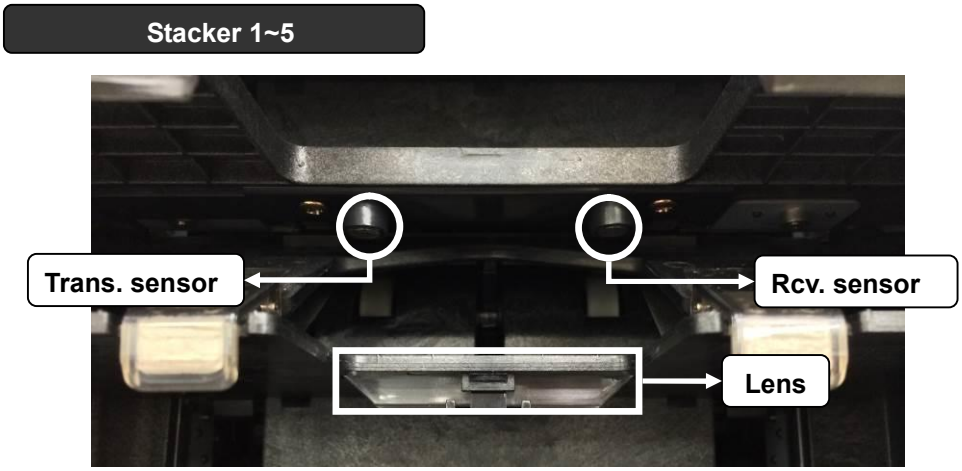
It's available to clean the Hopper sensor in View E.



[VIEW F]

It's available to clean the Trans & Rcv sensors of Stacker1, 2, 3, 4 and 5.

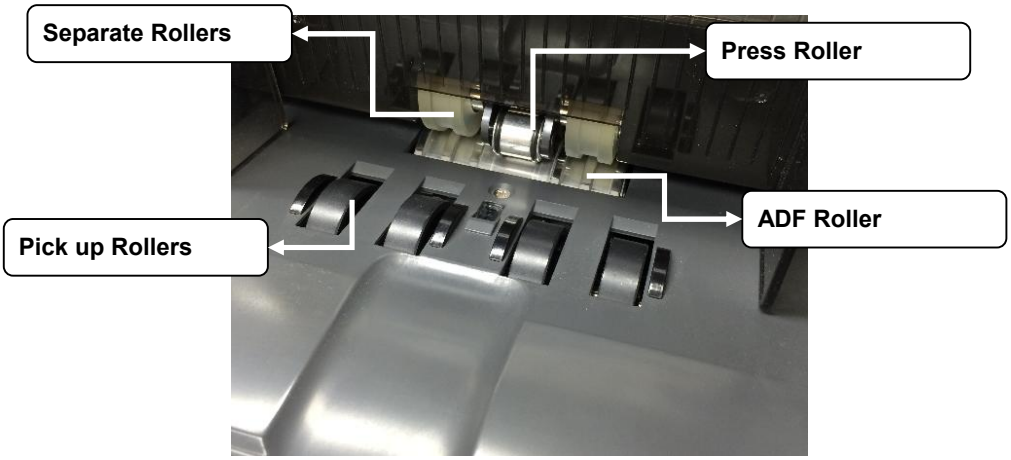
And clean the Lens in View F also.



2. Cleaning Roller

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

Clean the rollers as described below everyday after working



3. Cleaning Dust Tray

SB-5000 is designed that prevents for Misrecognition and malfunction by 5 kinds of “Dust Trays” at the locations the figure below. They collect dust when the machine is running.

As you see each locations the figure below.

it’s required wiping off the dust with a cloth putting alcohol once a month.

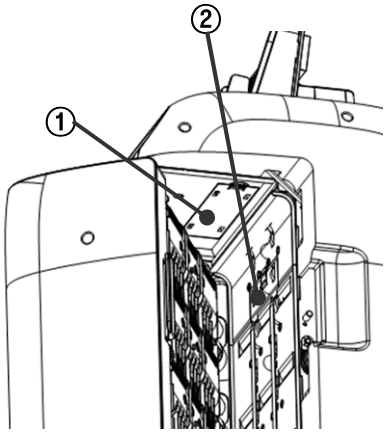
① Dust Tray A

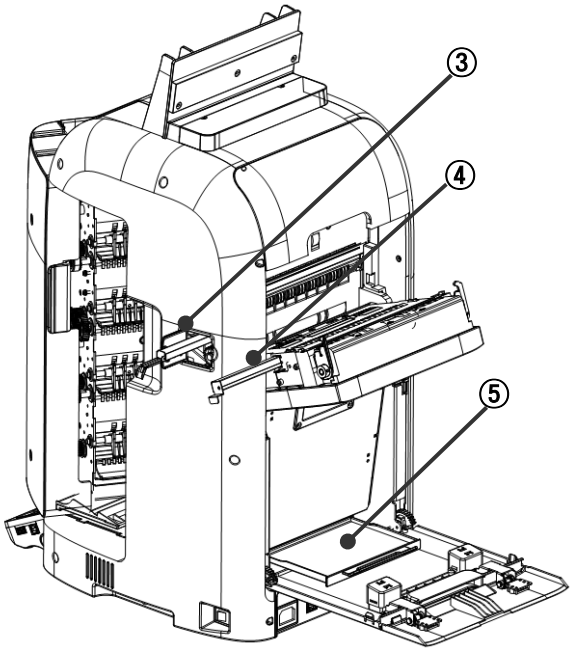
② Dust Tray B

③ Dust Tray C

④ Dust Tray D

⑤ Dust Tray E





9 SPECIFICATION

Item	Unit	Specification
Size (W x D x H)	mm	317[W] X 337[D] X 574[H]
Weight	Kg	Approx. 35
Hopper capacity	Notes	MAX. 700
Stacker1 capacity	Notes	100 [Max.200]
Stacker2 capacity	Notes	100 [Max.200]
Stacker3 capacity	Notes	100 [Max.200]
Stacker4 capacity	Notes	100 [Max.200]
Reject pocket capacity	Notes	100 [Max.200]
Display Type	Dot	800 x 480 Color LCD
Connectivity interfaces		1 X RS232C Port(9 Pin D-SUB) 2 X RS232C Port (Modular Jack) 1 X USB(Type A – 5V D.C, 0.5A) 2 X USB(Type B) LAN
Currencies available		Available up to 10
Banknote size range	mm	W: 100 ~ 185, H: 60 ~ 90
Banknote thickness range	mm	0.08 ~ 0.12
Counting Speed	Notes/min	Approx. 700/1000
Working Mode		FITNESS / COUNT / SINGLE / ORIENT / MIXED CURR. Option (ISSUE / OCR)
Preset Batch Number		Available
Counterfeit Detection		MR-Array, MG, IR, UV
Power Requirements		100-240V~, 50~60Hz, 2.5A
Power Consumption	W	Standby: 16 Operation: 200
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.