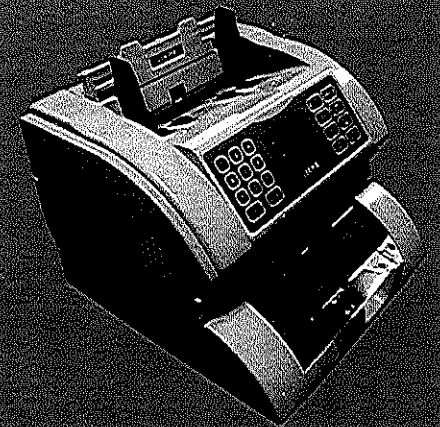


i SNIPER *User Manual*

1 POCKET CURRENCY COUNTER & DISCRIMINATOR

i SNIPER *User Manual*

- ◆ *Advanced intelligent single pocket currency counter.*
- ◆ *Reliable discriminator with excellent counterfeit detection.*
- ◆ *Easy Maintenance for cleaning sensors*



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SeeTech

Rev 2.0.0

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Introduce

Thanks for your purchase of iSNIPER.

iSNIPER is the advanced intelligent single pocket currency counter.

Depending on the variant used, it can be used to check banknotes for authenticity, denomination, value, to sort and account these accordingly and to count banknotes.


Utilizing Full IR CIS sensor, it can recognize value and count banknotes, while providing the highest level of protection against counterfeits.


iSNIPER works with External Display, Serial Printer and PC.


For Safety Use


In this section, the compliance matters are described in order to use the product safely, and to prevent you and other people from the damages brought by the product to the human bodies or properties.


Please read this instruction manual thoroughly in advance to use in the correct way.

 **Warning** It denotes the contents in which mishandling of the product by neglecting this indication may cause the people's serious injury.

 **Caution** It denotes the contents in which mishandling of the product by neglecting this indication may cause the people's light injury or only physical damage.

 This symbol indicates that the precautions for handling the product. Please read the indications well and utilize the product safely.

 This symbol indicates prohibited matters not to do. Please read the indications well and never do the prohibited matters.

 This symbol denotes that there are indication matters which should be done without fail. Please read the indicated matters thoroughly and perform the matters without fail.



Warning

Installation



1. At installation and relocation of the products, please contact our distributor near you or our designated dealers. If installation is not perfect, there is a risk of a falling accident, electric shock, fire and burn injury.
2. At installation and use of the products, keep the space sufficient for opening and closing the door, cover and operation. If a part of the product touches a human body, it may cause an accident.
3. In case of installing the product at the following places, you should confirm the Road Law, Road Traffic Law and Fire Protection Law, etc. If compliance conditions are not clear, please consult with the authorities concerned.
 - The place which may disturb traffic or accident prevention.
 - The place adjacent to the fire extinguishing and detecting apparatus.
 - The place adjacent to the road signs or traffic signals.
 - The place where combustible materials or gas are treated (gas stations, etc.)

Passages and facilities for evacuation Illegal installation may cause an accident.
4. Keep an installation space as described in the instruction manual, and do not choke up the ventilation inlet. If the ventilation inlet is choked, heat is accumulated inside and it may cause fire.
5. Depending on the installation place, mounting of an earth leakage breaker is required by Electricity Enterprises Law. Illegal installation may cause an accident.



1. Do not install the product at the place where water may spill on it. If water enters into the product, insulation performance degrades and it may cause fire and/or electric shock.
2. Do not install the product at the place where the floor cannot bear the load of the product, or at the unstable place with inclination and/or irregularity. It may cause the accidents of floor caving and sudden move of the product.
3. Installation at the following places should be avoided.

There are safety problems and deterioration of the product may be accelerated, which leads to a cause of failure.

 - 1m or less from volatile combustible materials or curtains.
 - 1m or less from heating apparatus such as stoves, heaters etc.
 - The place blown by direct winds from air conditioners, ventilating openings etc.

- The place with high temperature, high humidity, or low temperature.
- The place with direct sunlight.
- The place with much dust.

When installing the product at the following places, please contact our distributor near you or our designated dealers.

- The place exposed to salty winds or corrosive gas.
- The place with much swinging or vibration.



Grounding work should be made for safety and prevention of static electricity and noise failure. In addition, a ground wire should be installed independently without sharing the wire with other products. At grounding work, please be sure to contact our distributor near you or our designated dealers. In case of electrical leakage when grounding is insufficient or not connected, it may cause fire and/or electric shock.

The place where a ground wire can be fitted:

- Ground terminals for power receptacle.
- The copper piece etc. with a length of 65 cm or more, buried in the ground.
- The ground terminals on which grounding work is made.

The place where a ground wire must not be fitted.

- Gas pipes
- Telephone wires for exclusive use
- Lightning rods
- Water pipes or faucets with plastic materials at their intermediate part.



Do not use or put the combustible materials such as thinner, combustible gas, or a high-volatile object around/inside the product. Otherwise, it may cause explosion and/or fire due to heating from the product or flashing from power supply.

**Warning****Power Supply**

1. When using the product, connect it to the power supply specified in the instruction manual. If it is connected to the power supply, other than the product's specification, it may become a cause of fire, electric shock, and/or electrical leakage.
2. Do not use a power supply cord and the plug other than the attached ones. If a current that exceeds the rating flows in the power supply cord, it may cause fire.
3. Be sure to insert the blade part of the power supply plug into an outlet. Insufficient insertion may cause fire.



1. When the earth leakage breaker frequently operates, please contact our distributor near you or our designated dealers. If the product is used or left as it is, it may cause fire and/or electric shock.
2. Do not modify, process, or repair the power supply cord and the plug. In addition, do not convert a 3-prong power supply plug into a two-pole type. Grounding becomes insufficient and there may cause electric shock.



Please follow the items below to prevent electric shock and/or fire due to damage of the power supply cord.

- Do not pull the cord part when pulling out the power supply plug.
- Do not put anything on the cord part.
- Do not pass the cord near a source of heat.
- Do not bend or pinch the cord.
- Do not tread or twist the cord.
- Do not spill chemicals on the cord.
- Do not use it while it is bundled.
- Do not fix it with a stapler etc.



1. Do not use the power supply cord and the plug for other products or purposes. Further, when they are lost or damaged, please purchase them at our distributor near you or our designated dealers. The attached power supply cord and the plug are designed and confirmed the safety for connecting to this product to use. If they are used for other products or purposes, it may cause fire and/or electric shock.
2. The product should be used at the specified frequency. If it is used at other than the specified frequency, it may cause an accident.

**Caution****Handling**

1. The product should be used under the environment specified in the instruction manual. If it is used under the other environment of the specification, there may cause fire and electric shock.
2. When operating inside the product for error or clearing or cleaning etc., the operation should be made in accordance with the description in the instruction manual. Operation other than the description may cause an accident.



1. Do not turn off the power, pull out the power supply plug, or open the cover of the product during the operation. Otherwise, it may cause an accident.
2. Do not put a vase or glass with an object and/or water etc. on the product. Otherwise, it may cause fire, electric shock, and/or injury by spilling water or dropping.
3. Do not apply shock on the product. There is a risk of damaging the product and normal operation cannot be performed.
4. Do not use chemicals such as thinner or benzene when removing dirt of the product. Otherwise, it may cause damages.
5. Do not use a interface cable other than the attached one. When cables are other than the attachment, it may cause the interface error or machine trouble.



Do not use a combustible spray etc. around product. If spray gas etc. contacts the electrical parts inside the product, it may cause explosion and fire.



1. When touching inside the product for cleaning or parts replacement etc., be sure to turn off the power. If you work with turning the power on, it may cause electric shock and/or injury.
2. Do not touch the product and power supply plug and cord with a wet hand. There is a risk of electric shock.
3. The electrical parts inside the product should not get wet by rain or water at cleaning etc. if they get wet, it may cause electric shock and/or shock.
4. Do not turn of air heating suddenly when the product is completely cold. Moisture may adhere inside the product due to sudden air heating and it may cause electric shock.

5. There is a charging part inside. Be sure to open the cover with turning off the power. If the cover is opened without turning off the power, it may cause electric shock.



1. Do not drop any metallic piece such as a clip, staple etc. inside or in a clearance of the product. If a metallic piece drops inside the product and contacts the electric circuit, it may cause fire.
2. When the product is not use for a long time, be sure to pull out the power supply plug from an outlet for safety. Otherwise, it may cause heating and/or firing due to dust accumulation.



Do not modify the product or mount modified parts on the product. Further, do not dismount the portion which is not indicated to be opened/closed in the manual, or the cover and parts etc. fixed with screws etc. Otherwise, it may cause fire, electric shock, and/or injury.



1. Do not approach your hand or cloths during operation to moving parts of the product reachable. There may cause injury and/or pinching of a finger.
2. When closing a door, pay attention not to pinch a finger. It may cause of injury.
3. When working with a door opened, confirm it is locked. It may become a cause of injury because the door may suddenly close.



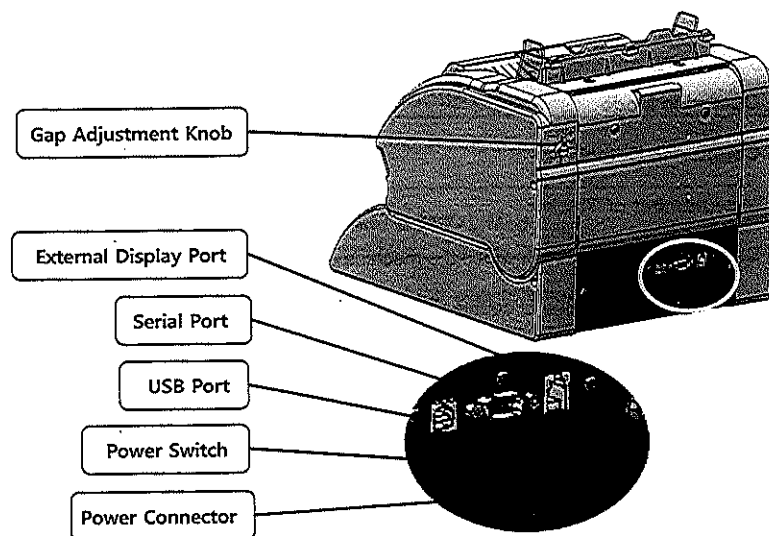
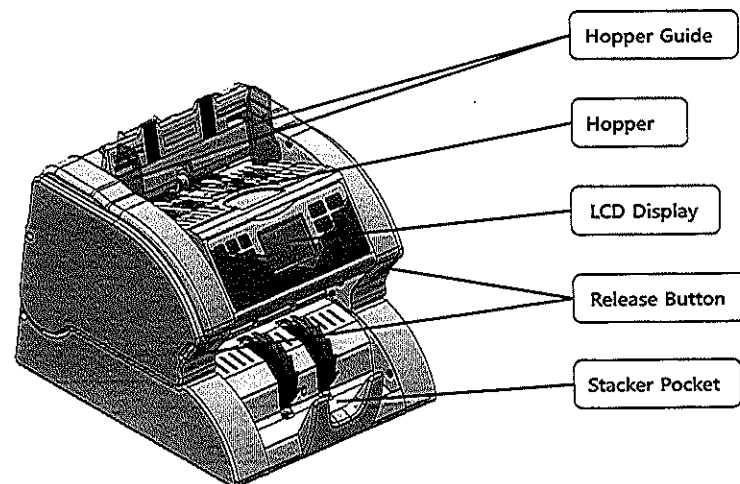
Do not touch the gear etc. It may cause injury.

**Warning****Maintenance**

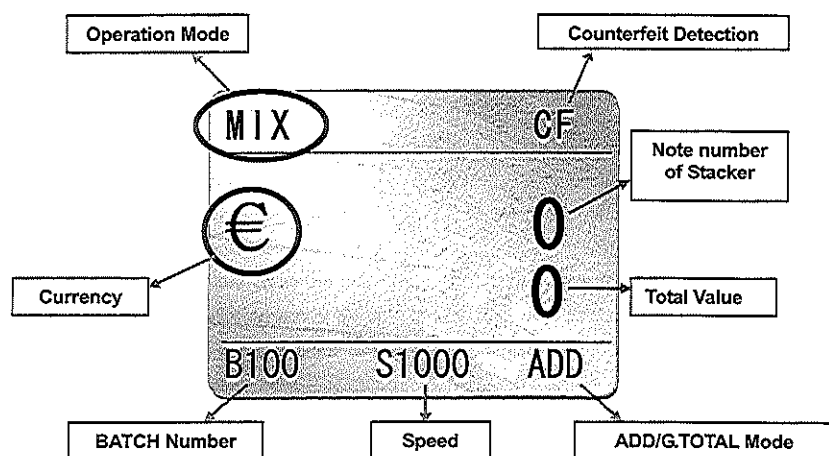
1. For repairing the product, please contact our distributor near you or our designated dealers. Insufficient repair may cause fire, electric shock, and/or injury.
2. When the product has sunk under the water due to a disaster etc., stop using it and please ask for repair/check to our distributor near you or our designated dealers. If used as it is, it may cause fire and/or electric shock.
3. Check periodically whether its installation place is unstable or not. If there is any abnormality, please contact our distributor near you or our designated dealers. If it is continuously used with insufficient installation, it may cause a falling accident.
4. Check and clean the power supply plug and the cord regularly. If the power supply plug is broken or the cord is damaged, stop using and please replace it by contacting our distributor near you or our designated dealers. It may cause fire and/or electric shock.



When smoke, abnormal smell, or abnormal sound is generated from the product, stop using it immediately, cut off power supply and pull out the plug from the outlet. Then, please contact our distributor near you or our designated dealers. If used or left as it is, it may cause fire and/or electric shock.

Appearance

Display Description



Operation Mode

Counterfeit Detection

Note number of Stacker

Currency: Currency mark which the machine can count now.

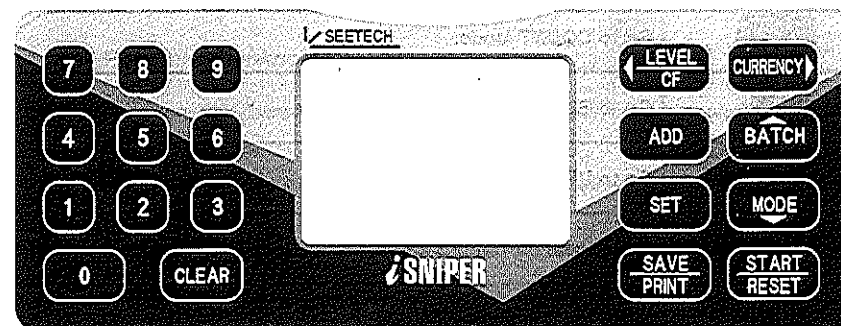
Total Value: Total value of counted notes.

BATCH Number: Selected Batch number

Speed: Counting Speed in COUNT Mode

ADD/G.TOTAL Mode

2. Key Operation Description



0 ~ 9	Number Key for selecting Batch number and Shortcut Key.
CLEAR	Clear Batch number to 0.
LEVEL CF	Counterfeit detection function key (Operation Mode) & double detection function key (COUNT Mode)
CURRENCY	Select Currency
ADD	Select ADD Mode and G.TOTAL Mode.
BATCH	Select Batch number which was selected already.
SET	1. Select Counting Speed in COUNT Mode. 2. Select denomination in SG Mode. 3. Enter Engineer Mode.
MODE	1. Select Operation Mode. 2. Enter USER Mode
SAVE PRINT	Print counting result to print or screen.
START RESET	1. Clear counting result on the screen. 2. Exit sub Mode.

Shortcut Key (Long Key Operation)

Press and hold down Number Key, you can select special currency or mode directly.

0	Go to COUNT Mode.
1	Go to EURO (local currency 1) Mode.
2	Go to USD (local currency 2) Mode.
3	Go to local currency 3 Mode.
4	Go to local currency 4 Mode.
5	Go to local currency 5 Mode.
6	Go to local currency 6 Mode.
7	Go to NORMAL COUNT Mode.
8	Go to ADD Mode.
9	Go to GRAND TOTAL Mode.

3. Basic Mode**Preparing Banknotes**

Make sure that there are not paper clips, rubber bands, staples or similar objects of the banknotes.

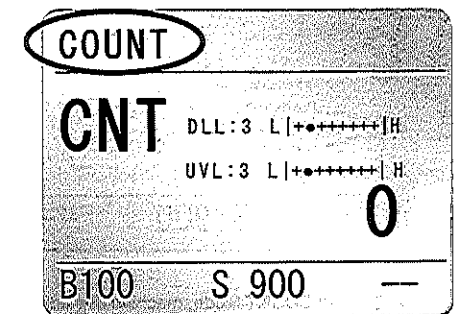
Before inserting the banknotes, sort out any banknotes with following characteristics.

- ▶ Extreme damages
- ▶ High soil levels
- ▶ Folded/bent banknotes
- ▶ Highly wrinkled banknotes
- ▶ Limp banknote

3-1. COUNT Mode

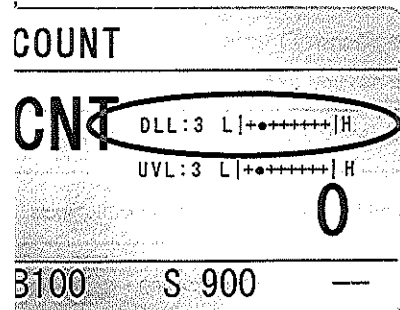
Press **CURRENCY** Key and select COUNT Mode.

Display shows as below.



User can count all currencies without recognition and detection.

Double Detection Level



When press LEVEL Key,
DDL is changed.

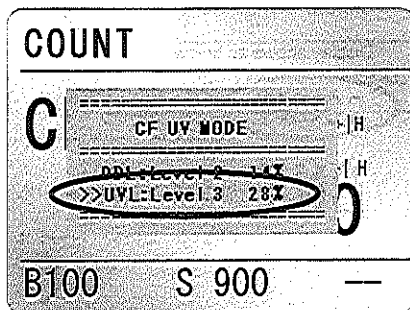


DDL means Double Detection Level in Count Mode.

User can select 1~8 levels.

- DDL 1~2 : For local currency.
- DDL 3 : For Euro
- DDL 4 : For USD
- DDL 8 : If the notes are darker than EURO or USD or the notes are so old, user can select this level to detection double notes. But when counts normal notes in this level, the machine do not detect the double notes. Please take care.

UV Level



When press and hold down
LEVEL Key, you can change
UVL.



Press MODE Key and move
cursor to UVL.



Change UVL.



Save data and exit CF UV
MODE.



In COUNT Mode, machine has adjusted UV Level function for detecting white paper.

User can select 1~8 levels.

According to thickness of notes, UV Level is different.

Before counting, please check and adjust Level first.

3-2. EURO Mode

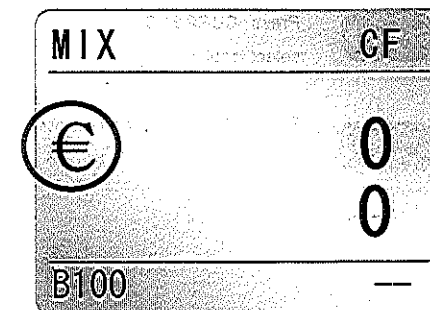


Press CURRENCY Key and
select EURO Mode.



Press MODE Key and select
Operation Mode.

Display shows as below.



In this Mode, the machine can **recognize** and
detect EURO currency.

3-3. USD Mode

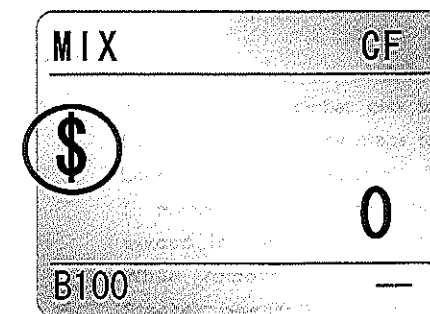


Press CURRENCY Key and
select USD Mode.



Press MODE Key and select
Operation Mode.

Display shows as below.



In this Mode, the machine can **recognize** and
detect USD currency.

3-4. Local Currencies Mode

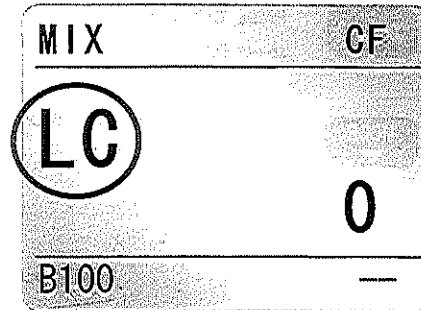
Display shows as below.



Press **CURRENCY** Key and select local currency.



Press **MODE** Key and select Operation Mode.

**Note!**

Some local currencies may be counted only.

4. Operation I

4-1. BATCH Mode



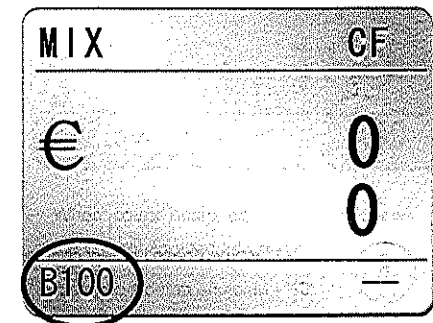
If press **BATCH** Key, user can select batch number which is registered already. (5, 10, 20, 50, 100)

When user wants to select special batch number, please use Number Key (0-9).



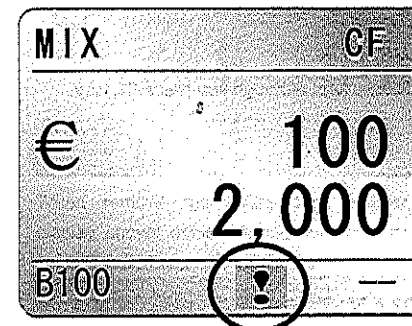
If press **CLEAR** Key, batch number will be changed to 0.

Display shows as below.

**Note!**

When counting number gets to batch number, machine stops to count and **!** mark is shown.

! means a note can be placed inside the machine. When remove notes from Stacker, one note will come out.

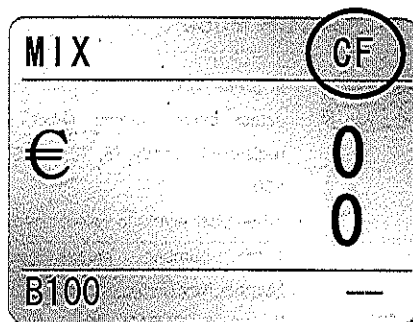


4-2. CF Mode



If you want to detect counterfeit during counting, press CF Key..

Display shows as below.



-- Machine doesn't detect counterfeits.

CF - Machine detects counterfeit with UV, MG and IR.

UV - Machine detects counterfeit with UV.

IR - Machine detects counterfeit with IR.

UV+MG - Machine detects counterfeit with UV and MG.

UV+IR - Machine detects counterfeit with UV and IR.

MG+IR - Machine detects counterfeit with MG and IR.

When you select LOCK, the previous condition is kept although you press CF Key.

4-3. ADD Mode

ADD

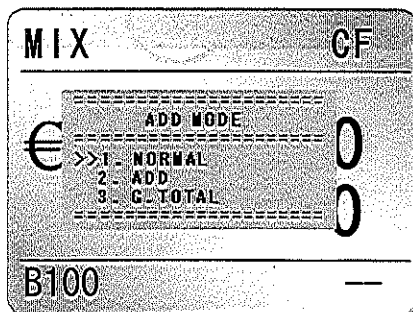
When press and hold down ADD Key, you can enter ADD or G.TOTAL Mode.

MODE

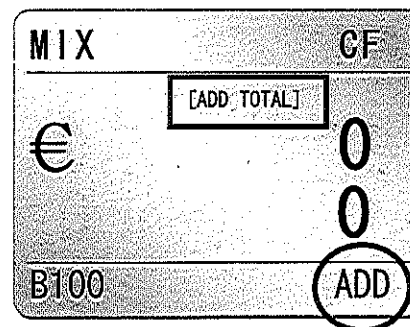
Press MODE Key to select item.

SET

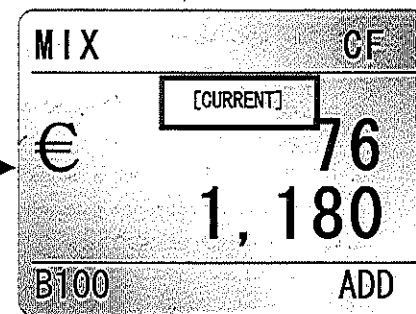
Select 2. ADD and press SET Key to enter.



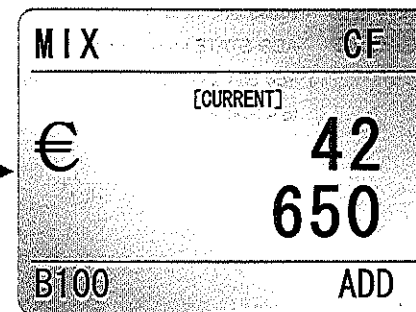
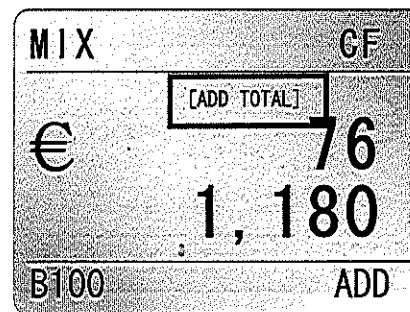
Display shows as below.



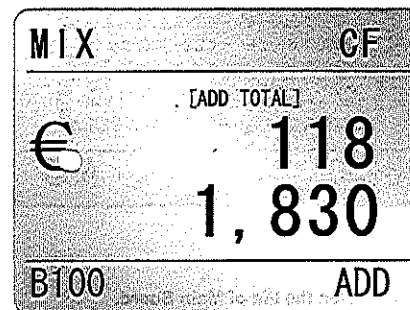
When count notes, display shows the current counted information



When count notes again, display shows the current counted information



When remove the notes from stacker, display shows added information between current and ahead counted notes.



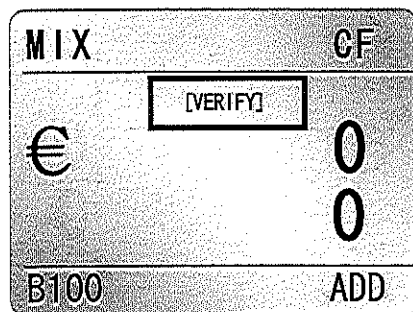
When remove the notes from stacker, display shows added information between current and ahead counted notes.

Verify Function**ADD**

In ADD Mode, press ADD Key again shortly.

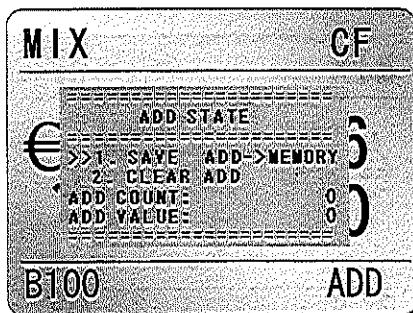
VERIFY function is activated and display shows as below.

When VERIFY function is turned on, you can count new notes which is no relation with ADD value.

**Save ADD value to MEMORY****START
RESET**

Press and hold down START Key, ADD STATE menu appears.

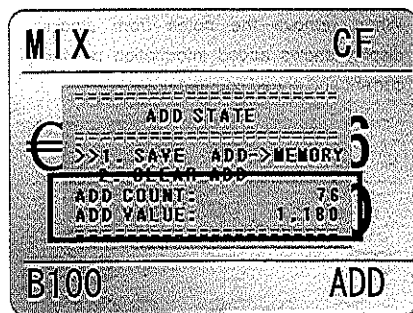
You can save or delete ADD value to MEMORY.



Select item 1. SAVE ADD and press SET Key.

The value is saved to MEMORY and exit ADD STATE menu.

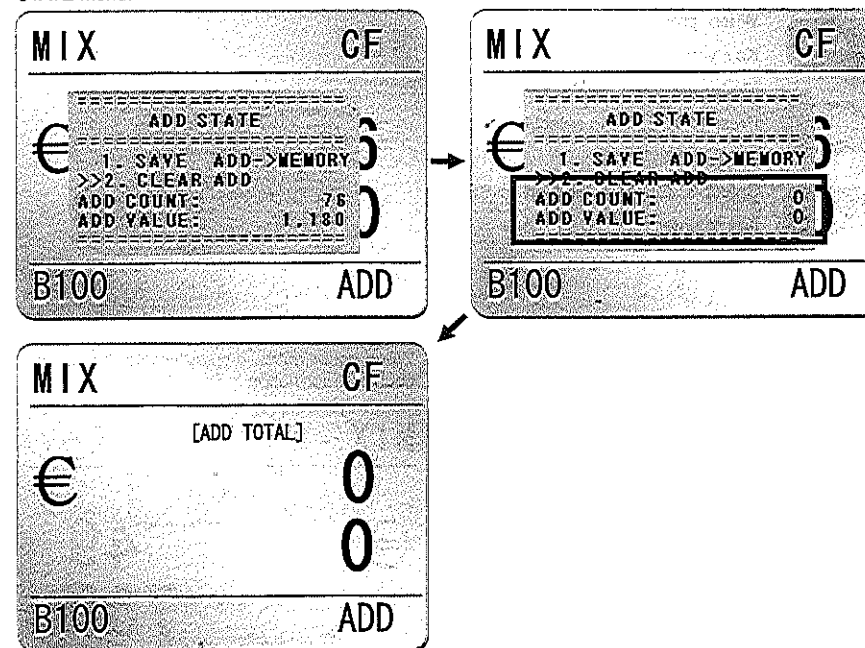
You can check it ADD STATE menu.

**Note!**

Frequent saving data to MEMORY can shorten the life of Main Board.

Delete ADD value from MEMORY

Select item 2. CLEAR ADD and press SET Key. The value is deleted from MEMORY and exit ADD STATE menu.



I. GRAND TOTAL Mode

ADD

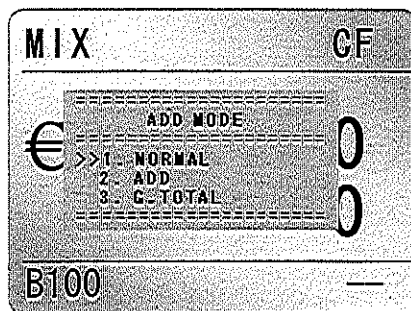
When press and hold down ADD Key, you can enter ADD or G.TOTAL Mode.

MODE

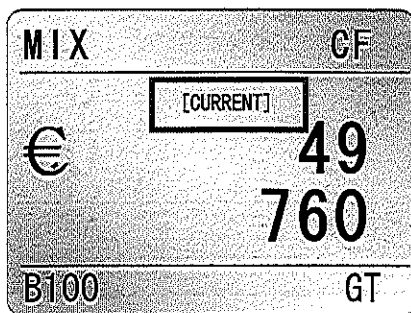
Press MODE Key to select item.

SET

Select 3. G.TOTAL and press SET Key to enter.



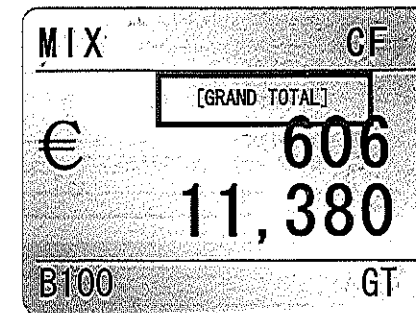
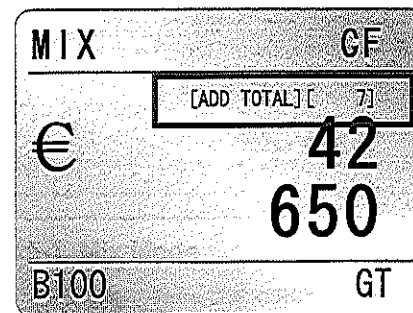
When count notes, display shows the current counted information



When remove the notes from stacker, display shows ADD TOTAL x value .

START
RESET

When press START Key, you can check ADD TOTAL and GRAND TOTAL value.



Save ADD TOTAL x to GRAND TOTAL

START
RESET

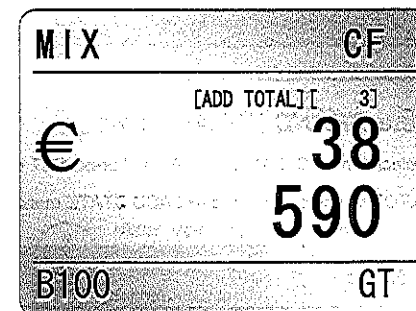
Press and hold down START Key, you can save the value to MEMORY or G.TOTAL.

MODE

Press MODE Key and select item 2. SAVE ADD->G.TOTAL.

SET

Press SET Key and save the value to GRAND TOTAL.



5. Operation Mode II

Operation Mode	
MIX Mode	Count all denomination of selected currency.
SP Mode	The machine saves denomination information from first inserted note.
SP VERS Mode	The machine saves denomination and version information from first inserted note.
SG Mode	Before counting, the user can select a specific denomination to be counted.

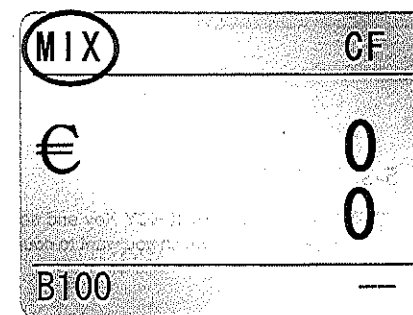
5-1. Mix Mode



Press **CURRENCY** Key and select currency which you want to count.



Press **MODE** Key and select MIX Mode.

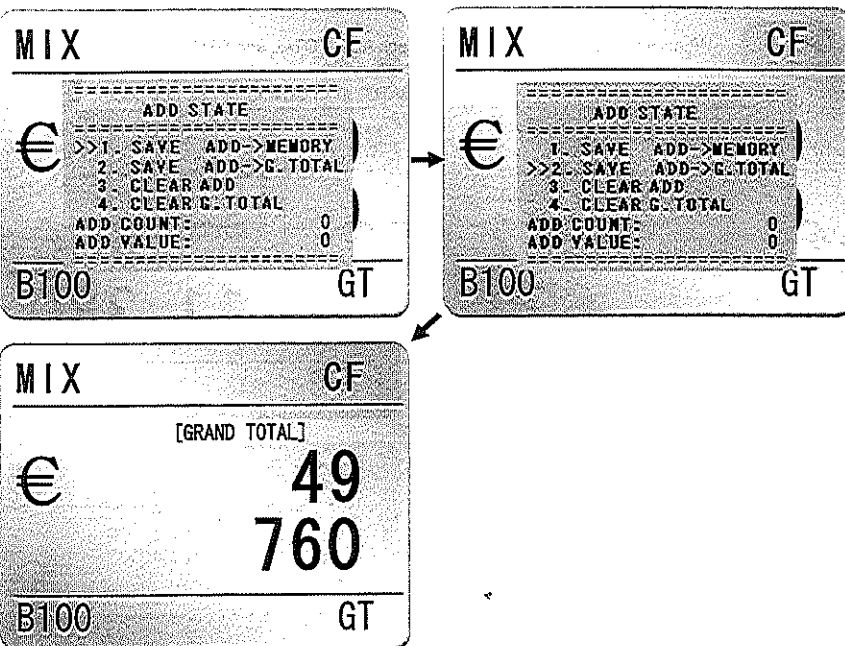


You can count all denomination of selected currency without any selection.



After counting, if you press and hold down **PRINT** Key, you can check counting result on the screen.

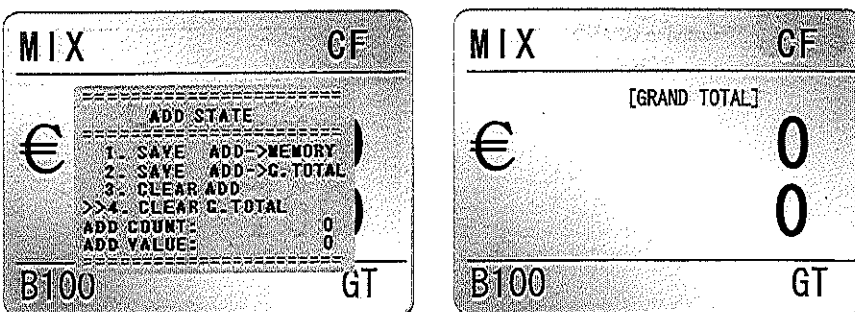
EUR VALUE COUNTING INFO			
e 5:	0	e200:	0
e 10:	5	e500:	0
e 20:	1		
e 50:	12		
e 100:	7		
TOTAL COUNT:		25	
TOTAL VALUE:		1370	



lete GRAND TOTAL value

Select item 4. CLEAR G.TOTAL and press SET Key.

3.TOTAL value is deleted exit ADD STATE menu.



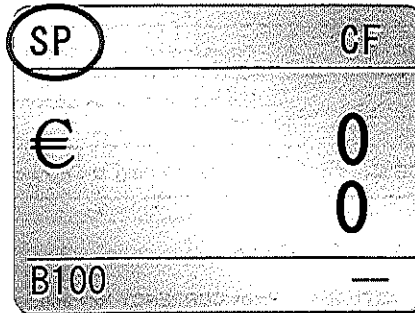
5-2. SP Mode



Press **CURRENCY** Key and select currency which you want to count.



Press **MODE** Key and select SP Mode



The machine sorts out the same denomination with first inserted note.

5-3. SP VERS Mode



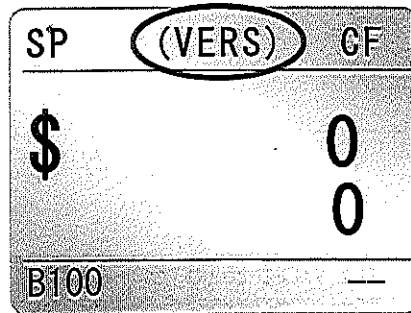
Press **CURRENCY** Key and select currency which you want to count.



Press **MODE** Key and select SP Mode



Press **SET** Key.



The machine sorts out the same denomination and version with first inserted note.

5-4. SG Mode



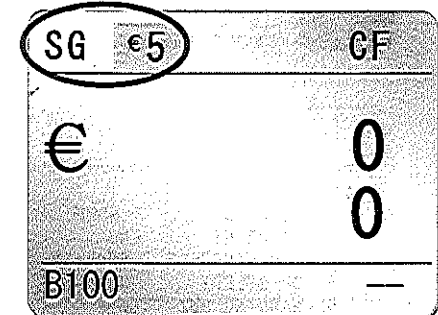
Press **CURRENCY** Key and select currency which you want to count except USD.



Press **MODE** Key and select SG Mode.



Press **SET** Key and select denomination.



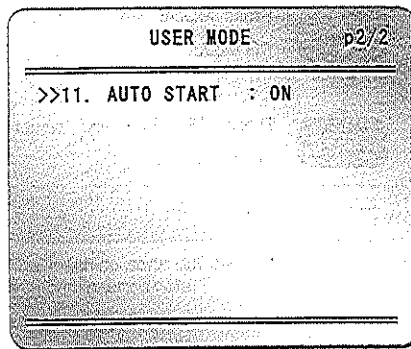
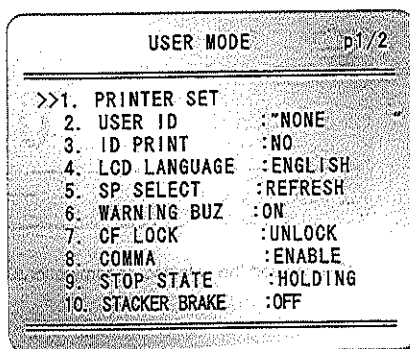
You can sort the selected denominations.

6. USER Mode

MODE

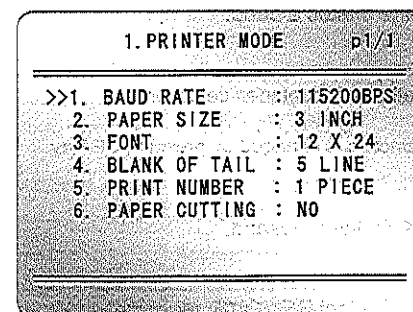
 Press and hold down **MODE** Key.

USER Mode is shown.



MODE 	BATCH 	Move cursor to upside or downside.
SET 		Enter item.
LEVEL CURRENCY 		Move cursor to left or right and go to next page.
START RESET 		Go to higher mode or exit User Mode

1. PRINTER SET



1. BAUD RATE	Set up the baud rate between machine and printer.
2. PAPER SIZE	Set up the size of printer paper.
3. FONT	Set up the font size
4. BLANK OF TAIL	User set up the blank of tail.
5. PRINT NUMBER	Set up number of receipt.
6. PAPER CUTTING	Set up cutting paper automatically or manually.

2. USER ID:

Enter user ID to machine.

LEVEL and CURRENCY Key: Move position.

ADD and SET Key: Select characters.

3. ID PRINT

Select to print ID to receipt or not.

4. LCD LANGUAGE

Select displayed language on screen.

5. SP SELECT

In SP Mode, machine recognized first note continuously or not.

REFRESH: After stop, machine remembers next inserted note again.

CONTINUE: Machine memorizes the first note continuously.

6. WARNING BUZ

If select ON, when error is caused, machine makes a beep.

7. CF KEY

If you select UNLOCK, you can select the method of counterfeit detection.

After select UNLOCK, counterfeit detection function is changed by pressing CF Key.

8. COMMA

If select ENABLE, display shows COMMA by the thousand.

9. STOP STAGE

When ! appears and hopper has nothing, if select REMOVE, machine works again to remove a note from inside. If select HOLD, machine doesn't work before remove notes from Stacker.

10. STACKER BRAKE

If select ON, when error appears, machine stops the stacker before the error note goes to Stacker pocket.

11. AUTO START

If select OFF, machine start to count banknotes when operator press START Key.

SPECIFICATION**-Technical Specification**

Available currencies	EURO, USD, LOCAL		
Dimension(mm)	296(W)×325(L)×280(H)	Display	3.1" Graphic LCD (192x128 dot)
Weight	Approx. 10 Kg	Denomination Detection	Full Line Image Sensor, Color Sensor
Countable Notes Size	W: 100 × 180mm H: 60 × 90mm	Counterfeit Detection	UV, FL, MG (Magnetic Thread Detection), IR
Countable Note Thickness	0.08 ~ 0.12mm	Speed	Recognition Count 900 notes/min
Hopper Capacity	500 notes		Piece Count Max. 1400 notes/min
Stacker Capacity	200 notes	Feed System	Roller friction type
Power Supply	100 ~ 240V AC, 50/60Hz	Power consumption	Approx. 140 Watts

-Features

Local Currency	Max. 4 currency
IR Detection	Full Line IR CIS Sensor
External Display	LCD type for customer
Bill Printout	With RS232C Interface for PC and external printer. Print user name.

Error Code List

No	Error Code	Description
1	Chain 1 error	The gap between two notes is under 100mm.
2	Chain 2 error	After note passes counter sensor, note length is over 100mm.
3	JAM 1 error	Encoder value isn't increased although motor turns.
4	JAM 2 error	Because note places on Counter sensor and motor is kept turning ticking over, length information is increased.
5	JAM 3 error	Note is not moved to upside when motor turns counter direction.
6	Motor error	Motor isn't controlled properly.
7	Double error	Thickness by measuring IR is lower than the standard.
8	Half error	Only half of note is recognized.
9	MinSize error	Note size is smaller than the minimum size.
10	SKEW error	The difference between R and L is over 10 mm.
11	Rotate error	Note is rotated over an angle of 20 degrees.
12	XSize error	X size of note is not matched. (CIS sensor information)
13	YSize error	Y size of note is not matched. (Cnt sensor information)
14	IR 1 error	IR error
15	IR 2 error	IR error
16	IR 3 error	IR error
17	Color 1 error	Color error
18	Color 2 error	Color error
19	UV 1 error	UV error
20	UV 2 error	UV error
21	MG 1 error	MG error
22	MG 2 error	MG error
23	MG 3 error	MG error
24	Image 1 error	Image error

25	Image 2 error	Image error
26	Image 3 error	Image error
27	Differ value	Counted note is not matched with the selected denomination.
28	Differ version	Version is different with the set version.
29	Sliding error	After error is caused or Batch is completed, a note comes out together successively.
30	Check Inner	Note is inside of machine.
31	Dog Ear error	Edges of note are folded.
32	Scratch error	Image of notes is damaged and machine cannot recognize the denomination. (especially Polyer notes)

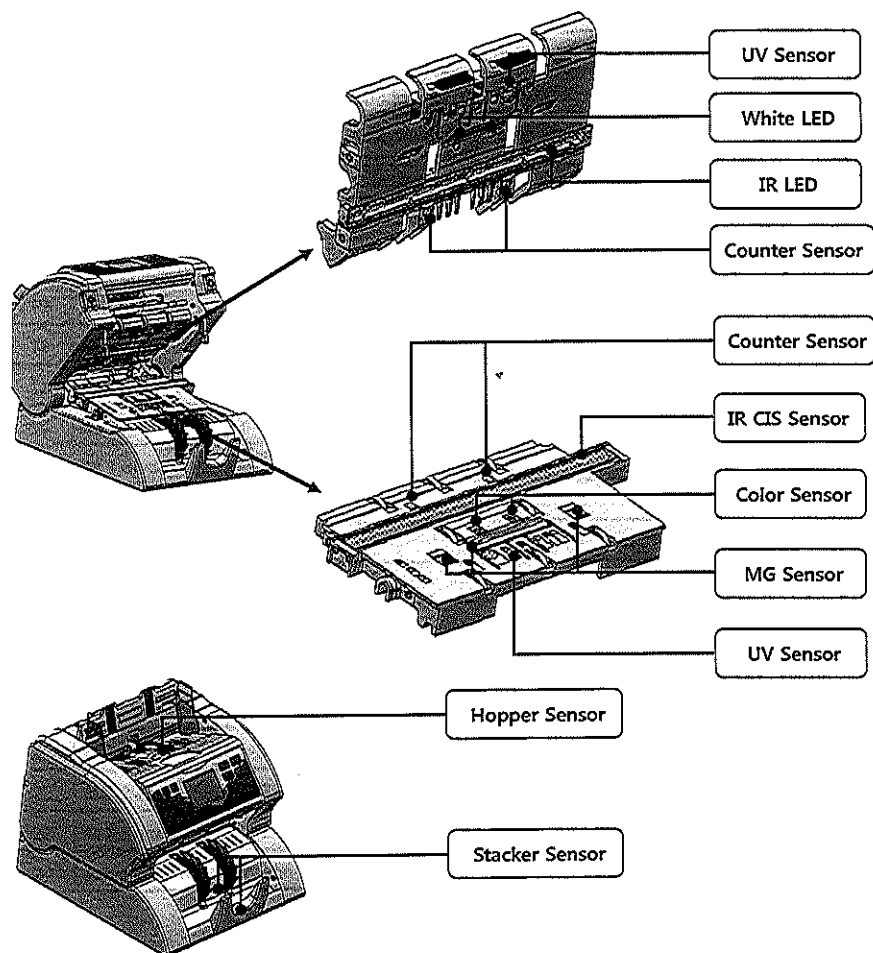
Maintenance

The machine has many sensitive sensors to perform high technology functions, for example counterfeit detection, denominations, etc.

Users are recommended to clean the machine sensors at least once a day.

Refer to following section and clean the machine regularly.

Please turn the power off before cleaning the machine.



Simple Trouble Shooting

No.	Problem	Solution
1	Power is not turned on.	1) Check Power Cable connection and turn on Power switch. 2) Check USB cable is connected. If connected, remove USB cable.
2	Machine is not count notes properly - Stop to counting - Chain or Double error occurs frequently	1) Put banknotes on Hopper regularly. 2) Adjust Insert GAP by turning Gap Adjustment Knob.
3	Double error is caused frequently	1) See Case 2, Machine is not count notes properly. 2) Clean machine. (Follow Maintenance)
4	Machine makes a loud noise	1) Check inside of machine whether there are foreign object or not.
5	Machine doesn't start to count when put banknotes on Hopper.	1) After complete Batch, banknotes are in Stacker. Remove the notes from Stacker. 2) Check Stacker Sensor.
6	Machine makes many kinds of error frequently	1) Clean machine. (Follow Maintenance) 2) Problem is not solved, contact our distributor near you or our designated dealers