

# MoniMax 5100T Operator Manual



**Nautilus**  
HYOSUNG

## Revision Record

Date	Page	Version	Description of Change
November 2005	All	1.0	New Publication
October 2006	Chapter 5	1.1	Change of display screens and addition of operator function with NDC
November 2007	All	1.2	Changing Model Name (NH-5040 → MoniMax 5100T)
January 2008	Chapter 5	1.3	Updating "Chapter 5. Operator Function" <ul style="list-style-type: none"> <li>- Host Setup (page 5-8)</li> <li>- Host IP Setup (page 5-9)</li> <li>- Remote Monitor (page 5-11)</li> <li>- RMS IP Setup (page 5-12)</li> <li>- RMS Call Back Option (page 5-15)</li> <li>- Customer Setup (page 5-19)</li> <li>- Select Host (page 5-23)</li> <li>- Communication (page 5-24)</li> <li>- Message Format (page 5-26)</li> <li>- EOT Option (page 5-27)</li> <li>- TCPIP Type (page 5-28)</li> <li>- STANDARD 3 Option (page 5-29)</li> <li>- Advertisement Setup (page 5-31)</li> <li>- Advertisement X Setup (page 5-31)</li> <li>- Coupon (page 5-33)</li> <li>- Coupon X Setup (page 5-34)</li> <li>- System Setup (page 5-36)</li> <li>- ATM IP Setup (page 5-43)</li> <li>- ATM Static IP Setup (page 5-44)</li> <li>- RCOPY (page 5-49)</li> <li>- Log RCOPY (page 5-50)</li> </ul> Adding "Option B. MoniMax 5100T H-SPL QUICK USER GUIDE" (page 5-61)

Date	Page	Version	Description of Change
February 2008	Chapter 5	1.4	Updating "Option A. Operator Functions with NDC" (page 5-51)
March 2008	Chapter 5 Chapter 6	1.5	Adding NDC Supervisor Screen Map Modifying screen and description of Chapter 5. - 22.1 of 5-61 page - 22.2 and 22.3 of 5-62 page Deleting NDC S/W Setup menu
April 2008	Chapter 6	1.6	- Updating "Error Code Table" in Chapter 6. (Addition of error code : D00C100, D00C200, D410000, D410100)
May 2008	Chapter 6	1.7	- Adding "I. Software Installation Guide for Dial-up" in the Chapter 6. - Updating "Error Code Table" in Chapter6." (Addition of error code : 7000100, 7000200, 7000300)
June 2008	All	1.8	Changing the specification - Control Electronics, Receipt printer, Power Supply, Rear operator panel
June 2008	Chapter 3, 6	1.9	Adding dimensions for adjustor type in Chapter 3, 6.
July 2008	Chapter 5,6	2.0	- Updating description and images for each menu in Chapter 5. - Adding "Option A. New Operator Function for NDC Emulation." in Chapter 6. - Adding "Option A. Diagnostics_STD" (This chapter is to explain "5.6 Diagnostics" in Chapter 5 particularly) - F. Key Management in Chapter 6    Option B. Key Management. - Adding "Option C. Operator Function of H-SPL" - Updating "Error Code Table" in Chapter 7.
January 2009	Chapter 5, Option D.	2.1	-Modifying Chapter 5. (See 5-2, 5-15 pages) - Adding "Option D. T-SPL"

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# Chapter 1. Introduction

## 1. Introduction

### 1.1 About the MoniMax 5100T

The MoniMax 5100T (Through-The-Wall Type) is designed to meet higher transaction as well as low maintenance components. Whether installed as a walk-up or drive-through, MoniMax 5100T offers solid, weatherized construction while its compact architecture allows flexibility in mounting. The MoniMax 5100T is easy to use, easy to service and is able to support customer's needs.

### 1.2 Basic Features

Important features of the MoniMax 5100T ATM is highlighted in the following list:

- UL 291 Business hour listed or complied with safe
- UL 291 Level 1 listed or complied with safe (optional)
- KABA MAS Cencon lock
- Electronic combination lock or mechanical combination lock (optional)
- Normal bright 10.4" TFT LCD (400cd/m<sup>2</sup>)
- Sunlight visible 10.4" TFT LCD (1,500cd/m<sup>2</sup>) (optional)
- User-friendly keypad and display interface
- Operating system with Windows XP Professional
- 256 Memory, 80GB HDD, high speed CD-ROM
- Support PCI 3 expansion slot, USB 4 ports
- PCI certified Encryption PIN Pad
- Supporting LAN communications, using TCP/IP
- Complying with Americans with Disabilities Act (ADA) for height and access
- Supporting multiple serial interface up to 8 ports



- Function key compatible with NDC
- Supporting enormous bill capacity up to 8,000 notes in cash dispenser (Optional)
- Supporting U.S. and international currency types
- Dip card reader
- Semi-automated receipt paper loading for operator's convenience
- Support a rear operator panel for operator's convenience
- Modular design for easy maintenance
- Quick setup feature
- Advertisement feature for bank promotion
- Rear access cabinet and rear access available for easy service

### 1.3 What is in this manual

This MoniMax 5100T Manual contains all information needed for normal operational use.

This manual contains Unit Specifications, Opening & Closing Procedures, Operator Functions(Supervisor Screen), Error Recovery, etc.

Some of the information in this manual may be subsequently updated based on the customer's needs or the improvement by Nautilus Hyosung.

## 1.4 Terminologies

- CE : Control Electronics
- LCD : Liquid Crystal Display
- PNC : Panel Control Board
- AD board : Analog Digital Board
- OSD board : On Screen Display Board
- OPL : Operation Panel and Handling Screen for Customer
- SPL : Service Panel and Handling Screen for Operator (= Rear Operator Panel)
- EPP : Encryption PIN Pad
- MCU : Magnetic Card Reader Unit
- MS Head : Magnetic Stripe Head
- B/D : Control Board
- I/F : Interface
- H/W : Hardware
- S/W : Software, Switch
- P/N : Part Number
- D/L : Download
- TM : Test mode (= Diagnostic Program)
- SPR : Slip Printer (=Receipt Printer)
- TPH : Thermal Printer Head
- CDU : Cash Dispensing Unit
- F/M : Feed Module in Cash Dispenser
- Assy : Assembly
- CST : Cassette
- Rj/Rt : Reject/Retract
- P/S : Power Supply
- ADA : The Americans with Disabilities Act
- BATT : Battery
- Earphone Jack : Voice Converter for Visually Disabled Persons
- AP : Application Program
- SP : Service Provider
- EP : Elementary Program

## Chapter 2. Precautions for Safety

## 2. Precautions for Safety

### 2.1 Overview

#### Common Precaution for Safety









Precautions outlined in this manual provide information on safe and proper handling of the product. Non-compliance of the precautions may result in injury or damage to the product.


This precaution symbol with sample term tells you safety warnings during equipment handlings.

#### **Please read the following instructions before operating equipment.**

- Operate equipment in the order outlined in this manual.
- Follow precautions indicated in this manual, as well as the equipment itself.  
Failure to properly address these precautions may lead to injury or damage to the product.
- Avoid operations not addressed in this manual.
- If you cannot remedy system problems using the methods outlined in this manual, please refer to contact information listed in the manual.

## 2.2 Description of Precaution Symbols

Symbol	Description
	<p><b>Electrical Shock</b></p> <ul style="list-style-type: none"> <li>• Do not remove cover. Only a maintenance engineer is allowed to open the cover.</li> <li>• Do not touch. You may receive electric shock.</li> <li>• Make sure to turn off the power when servicing the equipment.</li> </ul>
	<p><b>High Temperature</b></p> <ul style="list-style-type: none"> <li>• Do not touch the equipment when it is running.</li> <li>• The equipment can get extremely hot and may cause a burn.</li> <li>• Make sure to close the cover before running the equipment.</li> </ul>
	<p><b>Be Careful when Moving</b></p> <ul style="list-style-type: none"> <li>• The equipment is heavy. Make sure at least 2 people to lift or move the equipment.</li> <li>• Do not attempt to move the equipment alone. You may be injured by dropping the heavy equipment.</li> </ul>
	<p><b>Fire Hazard</b></p> <ul style="list-style-type: none"> <li>• Place the equipment in an area away from any combustible materials.</li> <li>• The equipment may catch on fire from overheating or short circuit of the power supply unit.</li> </ul>
	<p><b>Disassembly</b></p> <ul style="list-style-type: none"> <li>• Do not disassemble or modify the equipment unless you are a certified engineer.</li> <li>• Contact the service center for maintenance, adjustments and repairs.</li> <li>• Improper disassembly may cause fire or electrical shock.</li> </ul>
	<p><b>Fall down</b></p> <ul style="list-style-type: none"> <li>• Do not place the equipment where the floor cannot sustain the weight of the equipment, or on slanted or unstable surface.</li> <li>• Equipment may fall down and cause injury or damage.</li> </ul>

Symbol	Description
	<p><b>Unplug the Equipment</b></p> <ul style="list-style-type: none"> <li>• Stop using the equipment immediately if it smokes, emits an unusual smell, makes abnormal sounds, or if liquids or other foreign materials enter the equipment.</li> <li>• If the above-mentioned abnormalities occur, immediately turn off the power, unplug the equipment and contact the service center.</li> <li>• If you ignore these symptoms, the equipment may catch on fire or cause electric shock.</li> </ul>

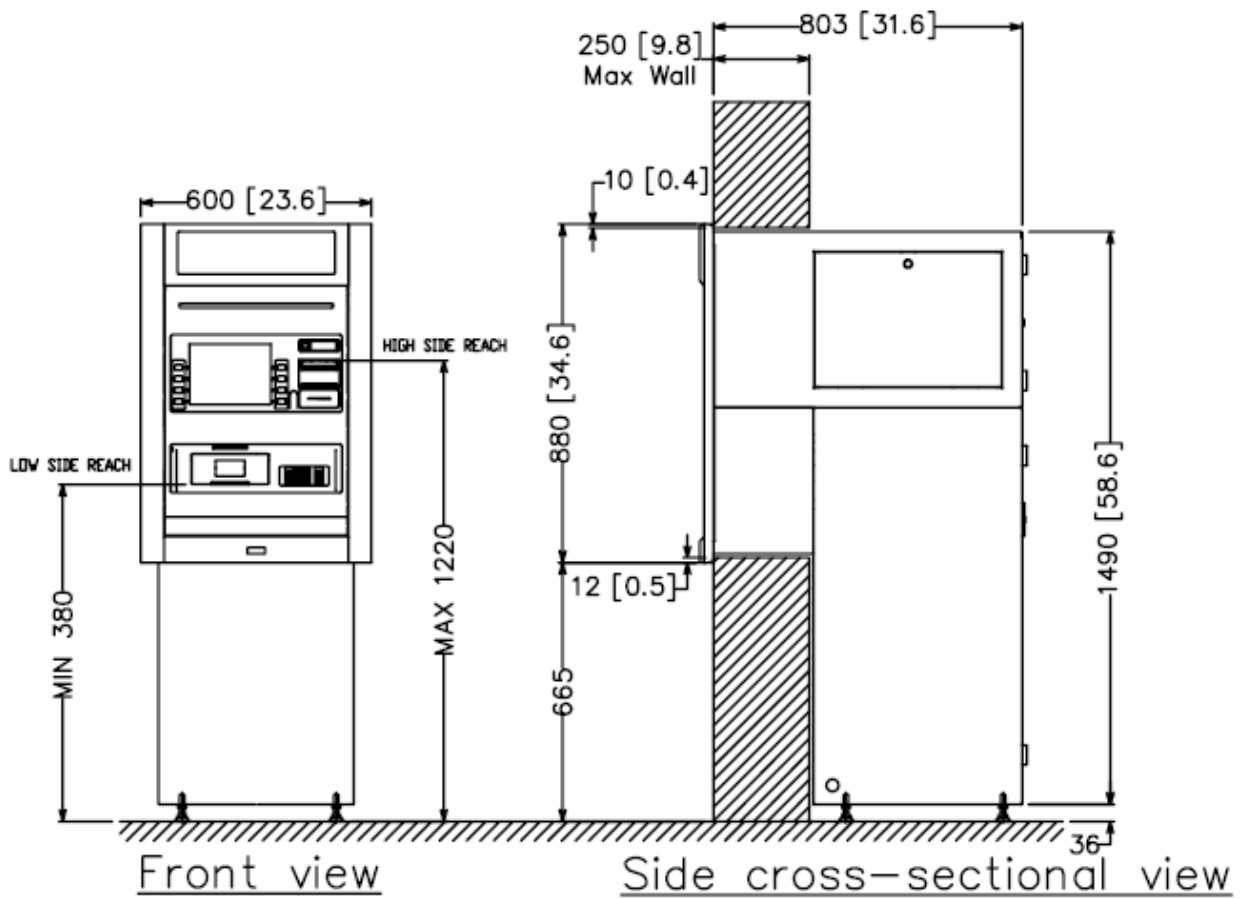
## Chapter 3. Hardware Specifications



### 3. Hardware Specifications

#### 3.1 Dimensions

(1) Adjustor Type



Note 1) The unit is millimeter and inch with [ ].

2) 1 inch equals 25.4mm

Fig. 3.1(a) Dimensions for Adjustor Type

(2) Non Adjustor Type

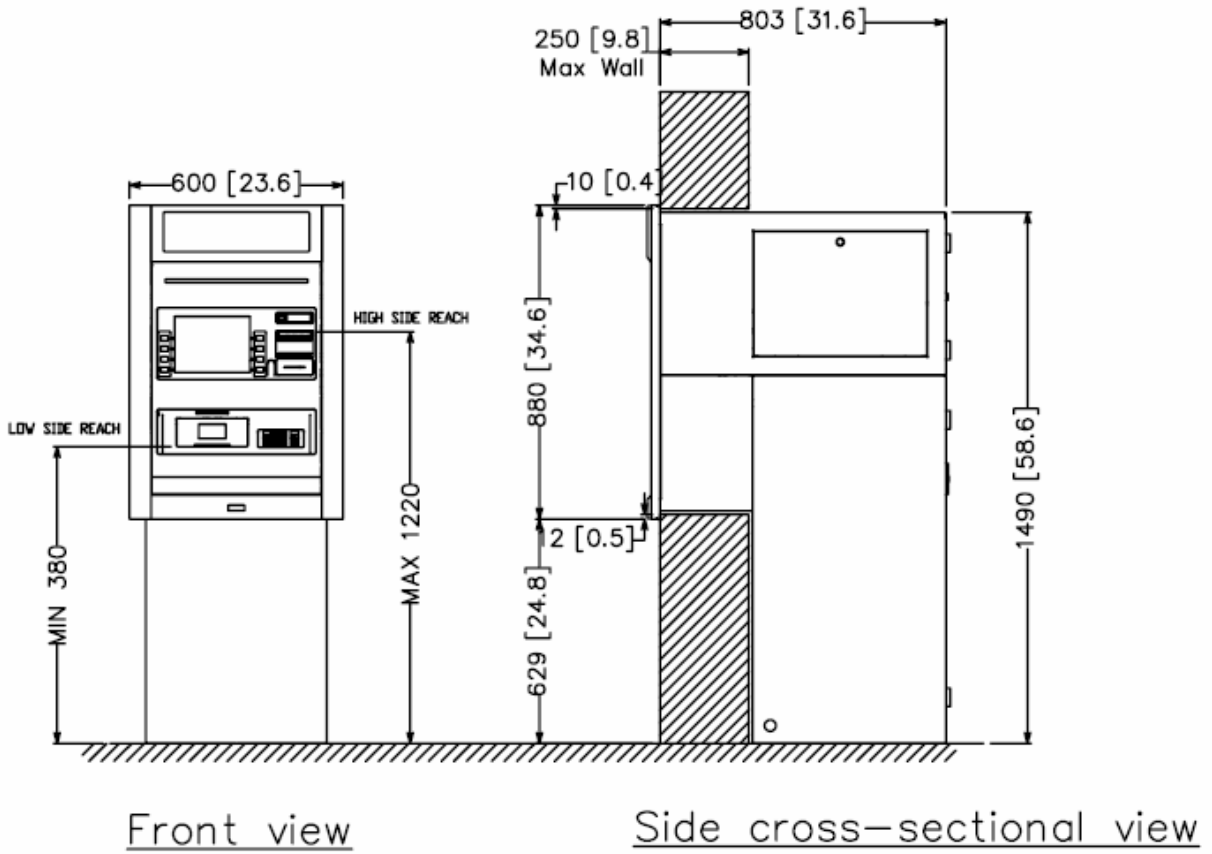


Fig. 3.1(b) Dimensions for Non Adjustor Type

### 3.2 Component Locations

Front view

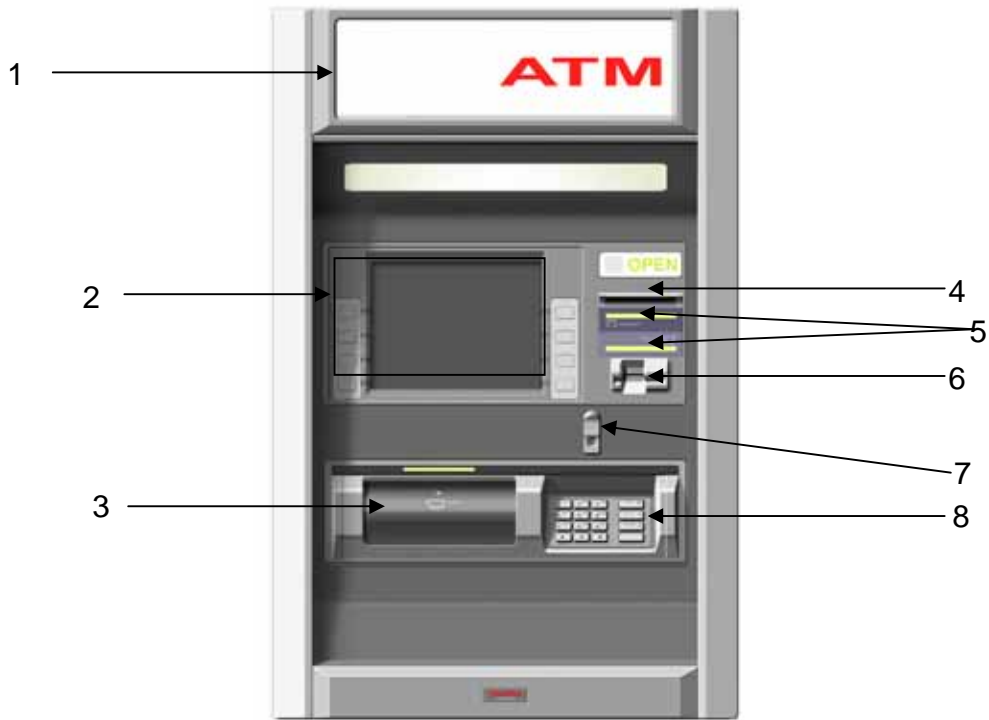


Fig. 3.2 Component Location (Front)

- |                          |                      |
|--------------------------|----------------------|
| 1. Lighted Top Panel     | 5. Flicker           |
| 2. LCD & Customer Keypad | 6. Card Reader Slot  |
| 3. Cash Tray             | 7. Earphone Jack     |
| 4. Slip Printer Slot     | 8. Encrypted PIN Pad |

**Rear view**

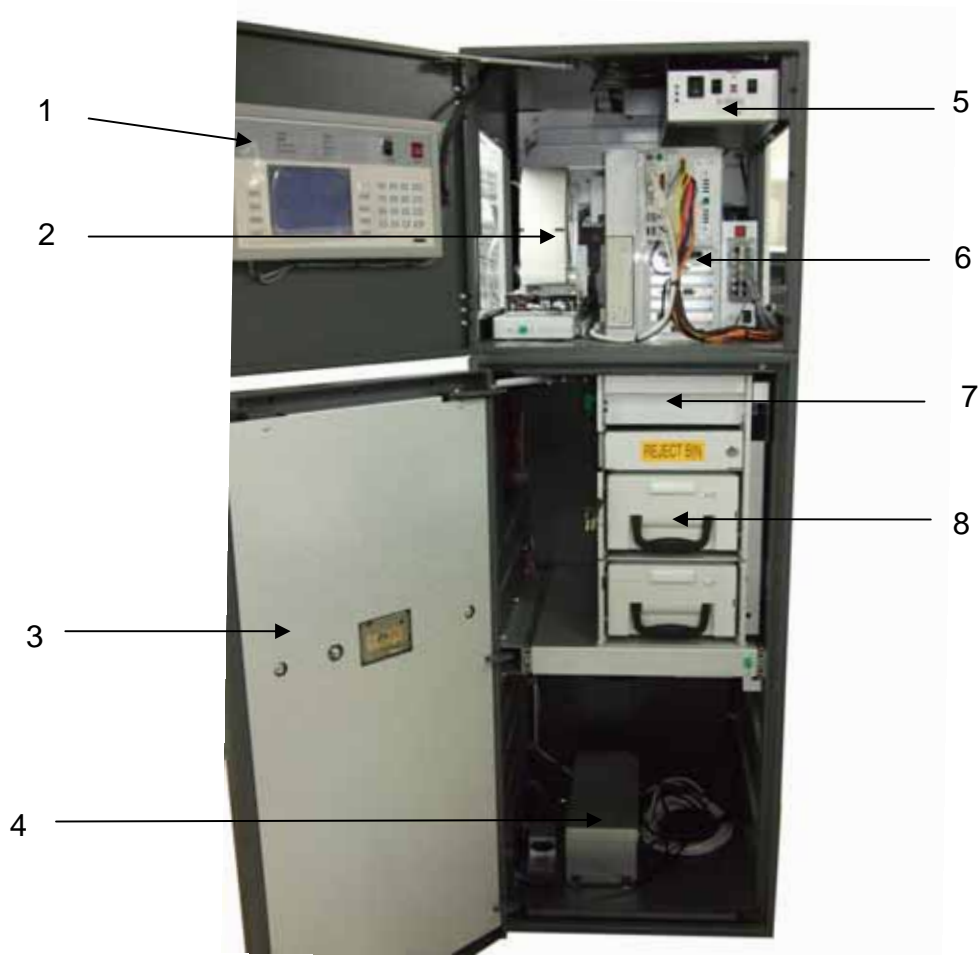


Fig. 3.3 Component Location (Back)

- 1. Rear Operator Panel
- 2. Receipt Printer
- 3. Vault Door
- 4. Battery

- 5. Power Supply
- 6. Control Electronics
- 7. Cash Dispenser
- 8. Cash Cassette

### 3.3 LCD & Customer Keypad



Fig 3.4 LCD & Customer Keypad

#### Display

- Screen Size : 10.4" TFT LCD
- Resolution : 800 × 600 pixels (SVGA)
- Brightness : 400 cd/m<sup>2</sup>, 1,500 cd/m<sup>2</sup> (Optional)
- Privacy filter optional

#### Keypad

- 10 Alphanumeric , ◀ , ▶ , CANCEL, CLEAR, ENTER, BLANK Keypads
- 8 (4X2) Function Keys
- Metal EPP with PCI certified

#### Earphone jack for the visually handicapped

- Voice assisted operation available through the earphone jack on the front bezel

### 3.4 CDU (Cash Dispensing Unit)



Fig. 3.5 CDU

#### Cash Dispenser Unit

- Friction feed cash dispensing unit
- Dispensing speed : 4 notes/second
- Capacity of 2,000 new notes per cassette.
- Reject bin with capacity of 200 notes
- Cash tray sensors
- Slides out for easy service
- Double detection/Skewed note sensors

### 3.5 SPR (Slip Printer/Receipt Printer)



Fig. 3.6 SPR (Receipt Printer)

#### Receipt Printer

- Thermal line printer with cutter
- 100 mm/second printing speed
- 40 characters/line printing
- 2,500 transactions/roll
- Semi-automatic roll paper setting
- Printing available within 80.0mm of paper width
- Support 'black mark' functionality (optional)
- Refer to Appendix C : RECEIPT PAPER SEPECIFICATIONS for more details.

### 3.6 MCU (Magnetic Card Unit)



Fig. 3.7 MCU (Magnetic Card Unit)

#### **Magnetic Card Unit**

- Dip type Card Reader (ISO Track 1 & 2)
- How to read card : Dip in card fully and take out
- Readable taking out speed : 6 inches ~ 39.3 inches/second
- MTBF : 1 million passes
- Refer to Appendix D : MAGNETIC CARD SPECIFICATIONS for more details.

MTBF : Mean Time Between Failures



### 3.7 Control Electronics



Fig. 3.8 Control Electronics

- Pentium-4 2.0 Ghz CPU
- Windows XP Professional
- 256 MB Memory, 80GB HDD, CD-ROM
- IPCI-3 Expansion slots, 8 Serial ports, 4 USB ports
- TCP/IP (LAN)
- Modem : 56kbps dial-up modem
- Support Electronic Journal

### 3.8 Power Supply

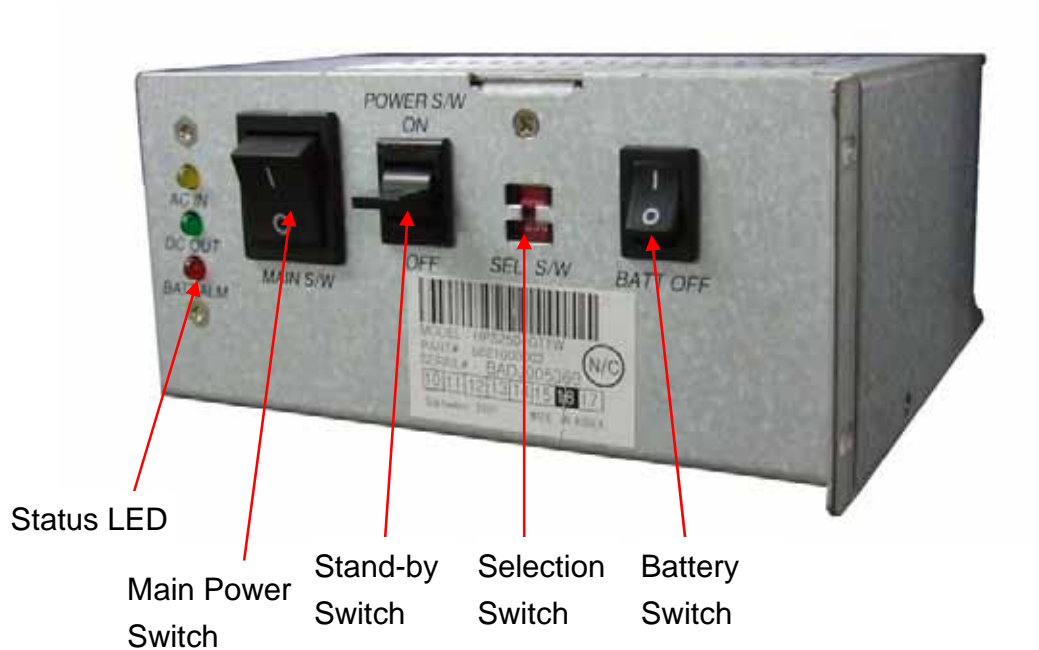


Fig. 3.9 Power Supply

- Specification

	Specification
Inlet Filter Rating	250Vac 6A
Input Voltage	110/220Vac ±20%
Frequency	47 ~ 63Hz (Normal: 50/60Hz)
Distortion	10%
Efficiency	70% MIN (at the maximum load)
Hold-up Time	16.7ms MIN
Inrush Current	60A MAX
Leakage Current	3.5mA MAX

- Turning power on

- 1) Turn on Battery Switch.

In case of power failure or blackout on ATM, this battery switch enables the customer to guarantee at least more than one transaction

- 2) Turn on Main Power Switch

- 3) Push up the Standby Switch

- Turning power off

- 1) Push down Standby Switch for 1 second and then system will be shut down automatically.

- 2) Turn off Battery Switch after shutdown is finished.

- 3) Turn off Main Power Switch

Note. Normally, you just do to push down Standby Switch in order to turn power off in ATM.

### **Warning**

**Don't manipulate Main Switch on power supply when you would like to turn off the power. It may cause damage to operate system or destabilize control electronics in ATM**

### 3.9 Rear Operator Panel



Fig. 3.10 Enhanced Operator Panel

- Controller : INTEL 80C186EB-25 ( 50MHz CLOCK)
- LCD Display : 320 X 240 (5.7 inch)
- Memory : Flash Memory 4Mbit (256K Byte),  
Flash Memory 32MBit (4Mbyte),  
SRAM 4Mbit (256K Byte)
- Key Pad : 4 X 4 keypads (numeric and function key)  
Function key 4x2, LCD display at both right and left sides.

### 3.10 Operating Environment

#### Power Requirements

100~127 Vac ±10%	5.5A	60Hz , 250 W
200~240 Vac ±10%	2.8A	50Hz , 250 W

#### Power Connections

The MoniMax 5100T ATM must be connected to a dedicated power circuit. This circuit must consist of **LINE**, **NEUTRAL** and **GROUND** leads connected directly to the power circuit breaker panel. This circuit cannot be shared with any other equipment.

#### Phone Line Requirements

The MoniMax 5100T ATM must be connected to a dedicated phone line. This line must be a direct dial “tone” or “pulse” line that is equipped with a standard telephone wall jack (RJ-11). This line cannot be shared with any other equipment at the location.

#### Temperature

- In storage : 23°F - 122°F (-5°C ~ 50°C)
- While operating : 32°F - 104°F (0°C ~ 40°C)

#### Humidity

- In storage : 10% < RH < 90%, Non-Condensed
- While operating : 25% < RH < 86%, Non-Condensed

## Chapter 4. Operating Instructions

## 4. Operating Instructions

### 4.1 Opening and Closing the Doors



- 1) Turn the Dial left (CCW) until the letters "EC" (Enter Combination) appear on the LCD



- 2) Enter the factory combination of 50-25-50 by sequentially pressing those six buttons. The LCD will display these number as they are entered.



- 3) When the combination has been correctly entered, the LCD will read :OPr" meaning "Open right."



4) Turn the Dial right (CW) until it stops. The lock's bolt is now retracted and the lock is open.



5) Turn the handle left (CCW) and open the door.



6) Turning the dial left (CCW) will extend the lock's bolt to close the door.

Please try several times until you are comfortable with the operation of the lock.

Fig.4.1 Opening and closing the Door

**Note!**

Regarding how to change the password in this lock and another optional lock (Electronic combination lock), refer to Chapter 6 'G. Electronic Combination Lock'.



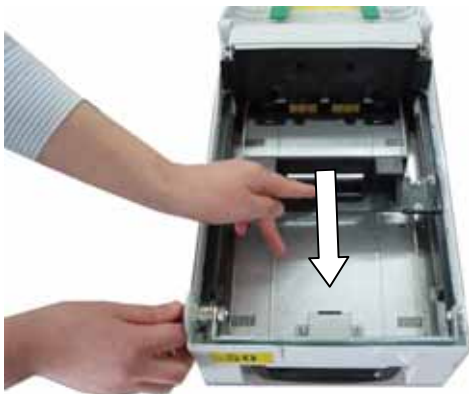
## 4.2 Replenishing the Cash Cassette



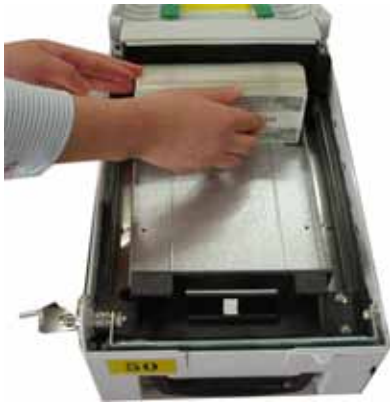
- 1) Holding the cassette handle with one hand and supporting the cash cassette from bottom with the other hand, lift it up slightly and take out carefully.



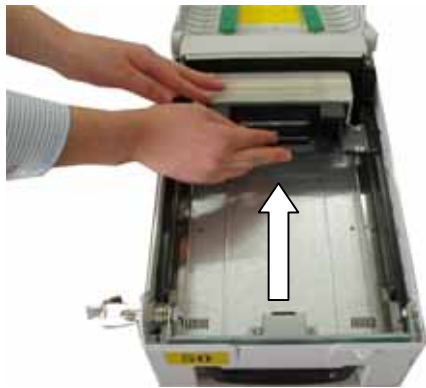
- 2) Place the cash cassette on a flat level platform and turn the cassette key clockwise to unlock the cassette. Then lift the cassette cover.



- 3) Pull the cash plate back until it is locked by the cash plate latch.



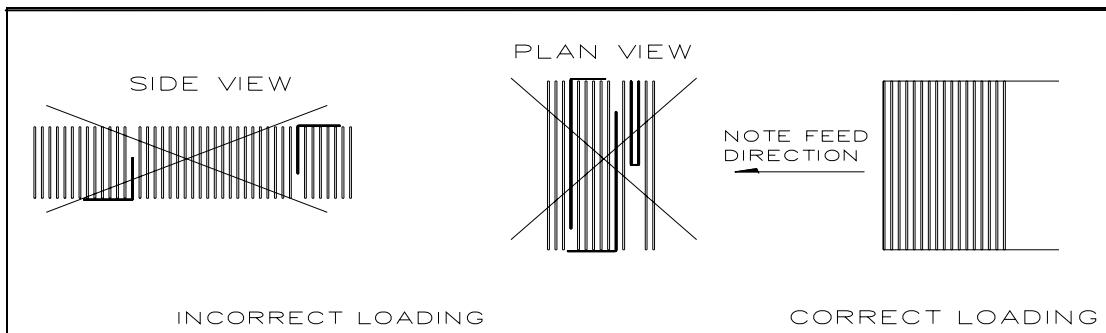
4) Replenish the cassette with notes as shown in the left picture.



5) Unlatch lock the cash plate by pulling it again the latch and release it smoothly.

NOTE :

1. Shuttle the notes so that the notes are not sticking together.
2. Remove any notes with holes or notes that are torn.
3. Unfold the folded notes.
4. Place the notes correctly.





- 6) Close the cassette cover and turn the cassette key counterclock-wise until it is locked, and remove the key when it is locked.



- 7) Holding the cassette handle with one hand and supporting the cassette from the bottom with the other hand, place the cassette carefully on the set guide of the CDU and push it in until it is locked in place.

Fig. 4.2 Replenishing the cash cassette

### 4.3 Emptying the Cash in the Reject Box



- 1) Insert the reject box key, turn it clockwise, and pull the lid to open.



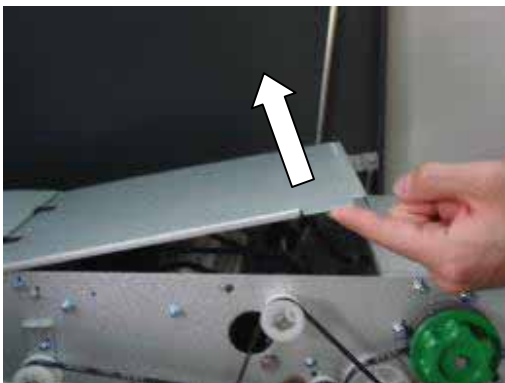
- 2) Take bills out of the reject box

Fig. 4.3 Emptying the cash in the reject box

### 4.4 Removing Jammed Bills



- 1) Pull the Cash Dispenser Unit forward while pressing the highlighted green button at the right corner of the plate.



- 2) Lift up the cover.



- 3) Check bills on the transport path of cash dispenser.



4) Take it out from the side of the belt.

Fig. 4.4 Removing Jammed Bills

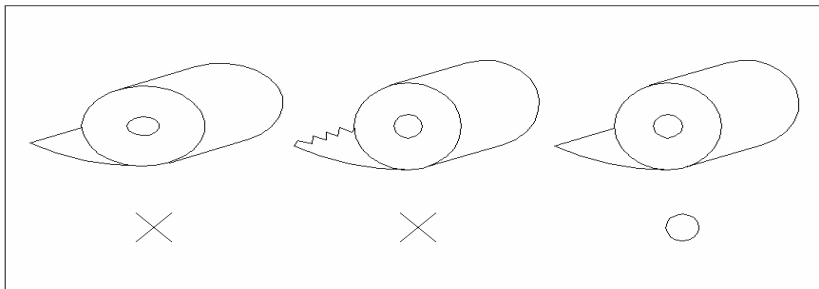
### 4.5 Loading the Receipt Paper



- 1) Pull the receipt printer unit forward while pressing the highlighted green button at the right corner of the plate.

**Notes:**

1. Load an intact paper roll. (Deformed roll may cause jamming.)



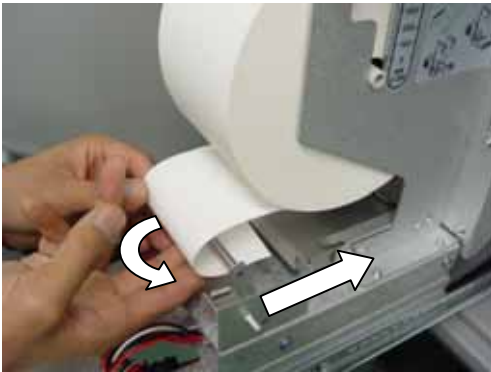
2. The leading edge of the roll shall be neatly cut prior to loading the roll.  
( Correct shape of the paper roll.)



- 2) Insert the white plastic rod into the hole of the paper roll as shown in the picture.



- 3) Mount the plastic rod onto the stand. Put Receipt paper on the guide with the printed surface facing upward



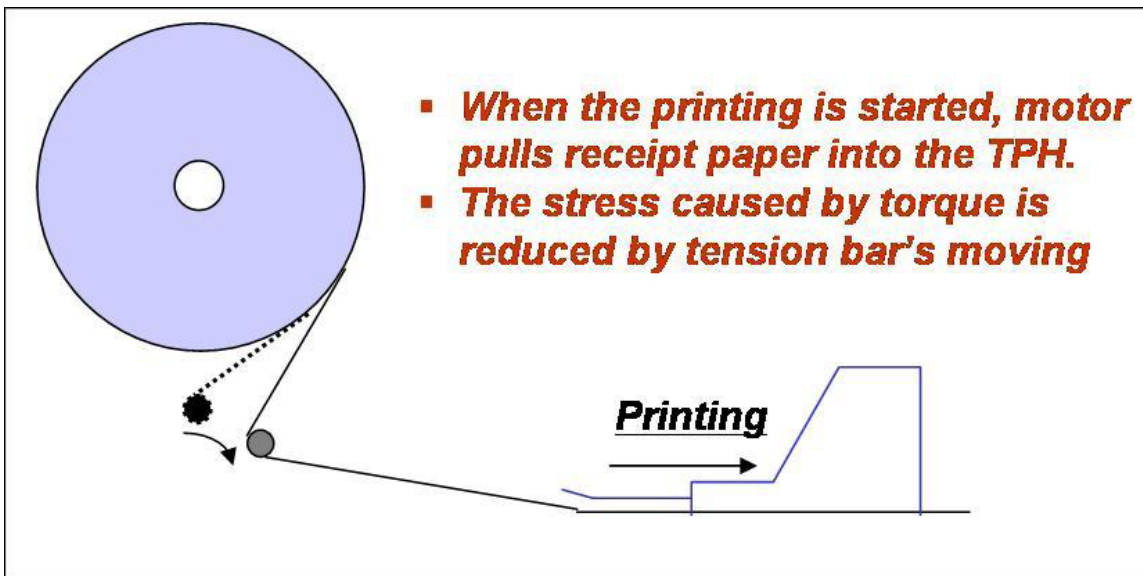
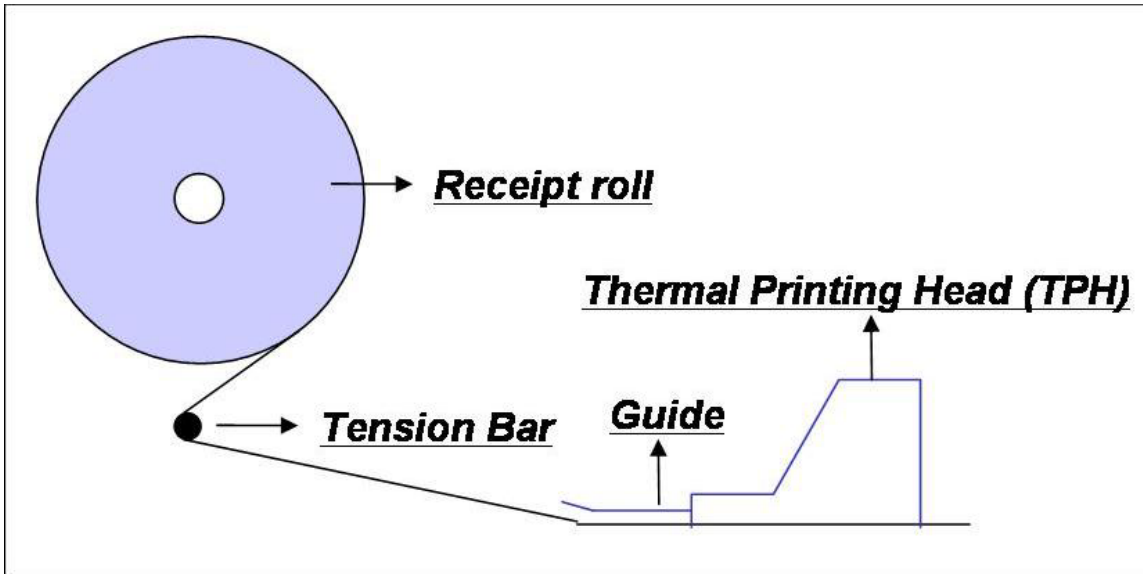
- 4) Roll up the receipt paper roll backward, as shown in the picture, and then pull it forward.



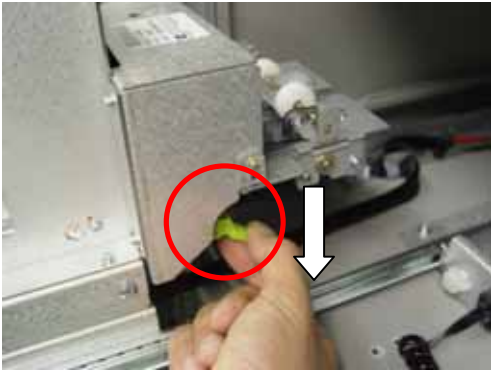
- 5) Push the receipt paper inside the supporting bracket, as shown in the picture. Then it will be set automatically if the power is turned on.

Fig. 4.5 Loading the receipt paper





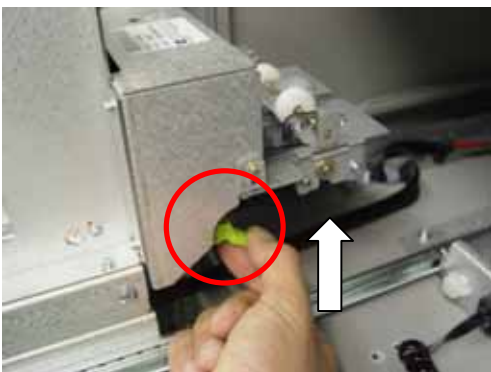
### 4.6 Removing Receipt(Slip) Paper Jammed



1) Lift down the green lever to open the head of receipt printer.



2) Remove the receipt paper jammed inside, and set the receipt paper again.



3) Lift the printer head lever upward until it is locked.

Fig. 4.6 Removing Paper Jammed.

## Chapter 5. Operator Function

## 5. Operator Function

### 5.1 PASSWORD FOR ENTERING SUPERVISOR MODE

All MoniMax machines use Operator Function. But the way to enter Supervisor mode is different depending on the Supervisor device type.)

If using front screen, you should press the ENTER, CLEAR, CANCEL 1,2 and 3 keys in order.

In case of using T-SPL, to enter Supervisor mode, input **66** option on T-SPL after changing convert switch located on the rear of ATM from IN SERVICE to SUPERVISOR status, as shown in below picture,



Lastly, if using H-SPL, to enter Supervisor mode, just input **66** option on H-SPL.

If ATM support T-SPL or H-SPL rear screen, you can use rear or front screen either to enter Supervisor mode. (Input **66** option on T-SPL/H-SPL or “**ENTER, CLEAR, CANCEL, 1, 2 and 3** on pinpad”) You just use front screen, if you enter the Supervisor mode via front screen.

Please press entry key (“**ENTER, CLEAR, CANCEL, 1, 2 and 3**” or “**66**”) on pinpad or SPL device so that you can see password screen to input password.

The default password is “555555”(6 digits). The default password is changeable in Supervisor mode. After inputting correct exact password of 4~6 digit, press **CONFIRM** key in order to enter Supervisor main menu. Pressing **CLEAR** key erases the input number and pressing **CANCEL** key goes to Application mode.

Depending on authority, there are three kinds of default password like below table.

Authority	Default Password
OPERATOR	111111 (6 digits)
SERVICE	222222 (6 digits)
MASTER	555555 (6 digits)



[Touch Machine]



[No Touch Machine]

## 5.2 SUPERVISOR MENU

The following screen below is the main screen of Supervisor mode.

Supervisor mode in this machine is largely composed of ATM Status and Function.

### A. ATM Status

- 1) Machine name
- 2) Supervisor mode
- 3) Door Status(CLOSE or OPEN)
- 4) Connection type for connect to host (Dial or TCP/IP)
- 5) ATM status(NORMAL or ERROR)
- 6) Error code
- 7) 1st Cassette : Remained notes(Denomination)  
e.g) if 1000 notes of \$20, 1000(20)
- 8) 2nd Cassette : Remained notes(Denomination)
- 9) 3rd Cassette : Remained notes(Denomination)
- 10) 4th Cassette : Remained notes(Denomination)
- 11) Cash dispenser status
- 12) Card reader status
- 13) Receipt printer status
- 14) Journal printer status
- 15) The media status of 1st cassette
- 16) The media status of 2nd Cassette

- 17) The media status of 3rd Cassette
- 18) The media status of 4th Cassette
- 19) reject box status(rejected count)
- 20) Retracted card Count (Only for Motor driven Card Reader)
- 21) The media status of Receipt Printer
- 22) The media status of Journal Printer
- 23) Terminal ID
- 24) Routing ID
- 25) Program version
- 26) Current Date and Time

B. Functions

- 04) REPLENISH
- 05) CONFIGURE
- 06) JOURNAL
- 07) DIAGNOSTICS
- 08) REPORT
- 09) RCOPY
- 23) REBOOT
- 24) SHUT-DOWN
- 33) RESET ALL
- 44) RESET
- 99) IN SREVICE

In order to move to the in-service mode, select “**IN SERVICE**” menu.(In case of using T-SPL, changing convert switch located on the rear of ATM from SUPERVISOR to IN SERVICE status)



[Touch Machine]



[No Touch Machine]

### 5.3 REPLENISH

This menu contains TOTAL, ADD CASH, and PRINT CASH . Please press each button on this menu to go to next screen. To go back to the previous screen, just press the **CANCEL** key in pinpad.



[Touch Machine]



[No Touch Machine]

#### 5.3.1 TOTAL

This menu contains DAY TOTAL, TRIAL DAY TOTAL, CASSETTE TOTAL and TRIAL CASSETTE TOTAL. You can operate the related function by pressing each button on this menu. To go back to the previous screen, just press the **CANCEL** key in pinpad.

- 1) DAY TOTAL : Do settlement with host. After settlement, clear transaction information.
- 2) TRIAL DAY TOTAL : Just do settlement with host.( Not clear transaction info.)
- 3) CASSETTE TOTAL : Show note count and then clear note count.
- 4) TRIAL CASSETTE TOTAL : Just show note count.( Not clear note count)



[Touch Machine]



[No Touch Machine]

**5.3.2 ADD CASH**

By pressing button on this menu, you can select cassette to add note count. (Cassette numbers are designated from top to bottom). Enter the note count you want to add. The each note count you enter must not exceed the maximum note count. (Max. count : 2,000/CST)



[Touch Machine]



[No Touch Machine]

After entering each note count, press CONFIRM to execute the inputted counts to the machine.

**5.3.3 PRINT CASH**

Please press this menu to print cassette information.



### 5.4 CONFIGURE

This menu contains HOST SETUP, TRANSACTION SETUP, CUSTOMER SETUP and SYSTEM SETUP. Please press each button on this menu to go to the next screen. To go back to the previous screen, just press the **CANCEL** key in pinpad.



[Touch Machine]



[No Touch Machine]

#### 5.4.1 HOST SETUP

This host setup menu contains TELEPHONE NUMBER(or HOST IP SETUP), HEALTH CHECK MESSAGE, REMOTE MONITOR, TERMINAL NUMBER, ROUTING ID, SERIAL NUMBER and TRIAL DAY TOTAL. Please press each button on this menu to go to the next screen. To go back to the previous screen, just press the **CANCEL** key in pinpad.

Display of HOST SETUP menu for supporting Dialup



[Touch Machine]



[No Touch Machine]

Display of HOST SETUP menu for supporting TCPIP



[Touch Machine]



[No Touch Machine]

### 5.4.1.1 TELEPHONE NUMBER

This menu is to set up telephone number if host uses dialup.

If you press each button on this menu, phone number of host can be input. You can input number and “,” character up to 1~20 digits by using '<' or '>’.

This function is used to enter the primary phone number and the back-up phone number of the host. When dialing to host is failure (busy, no answer or etc), ATM switches to other phone number automatically. For more accurate and safer connection, it would be better to get 2 other phone numbers from a host company and input them.



[Touch Machine]



[No Touch Machine]

5.4.1.2 HOST IP SETUP

This menu is to set up IP(or URL) and port of Host when using TCPIP and transfer to Host2 Name automatically in case of connection error.



[Touch Machine]



[No Touch Machine]

- 1) USE URL function is to set up Host address by IP or URL. If this value is “ENABLE”, use URL as Host address. Otherwise, use IP as Host address. The default option is “DISABLE”.
- 2) SSL STATUS function is to set up whether to use SSL or not during TCPIP communication. The default option is “DISABLE”.
- 3) HOST1 NAME function is to set up first host address. If “USE URL” is “ENABLE”, input URL of Host. Up to a maximum of 50 characters. Otherwise, input IP of Host. Input 15 characters such as XXX.XXX.XXX.XXX(refer to above screen for details)
- 4) HOST1 PORT function is to set up first host port. Being able to input 0 ~ 65536.
- 5) HOST2 NAME function is to set up second host address. If “USE URL” is “ENABLE”, input URL of Host. Up to a maximum of 50 characters. Otherwise, input IP of Host. Input 15 characters such as XXX.XXX.XXX.XXX.(Refer to display for the details)
- 6) HOST2 PORT functions is to set up second host port. Being able to input 0 ~ 65536.

5.4.1.3 HEALTH CHECK MESSAGE

If you press **HOST SEND** button, either "ENABLE" or "DISABLE" can be selected. ATM sends its status periodically to the host when "HOST SEND" is set up to "ENABLE". The interval is dependant on "MESSAGE SEND INTERVAL".

If you press **MESSAGE SEND INTERVAL** button, the value of SEND INTERVAL can be adjusted. (0 ~ 24). This value is saved by pressing **CONFIRM** button.



[Touch Machine]



[No Touch Machine]

5.4.1.4 REMOTE MONITOR

Remote Monitor Screen to support Dialup



[Touch Machine]

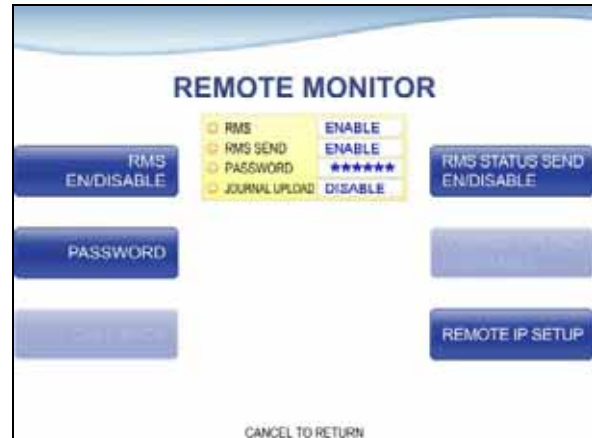


[No Touch Machine]

Remote Monitor Screen to support TCP/IP



[Touch Machine]



[No Touch Machine]

- 1) RMS EN/DISABLE function is to set up whether to connect to the RMS. The default option is "ENALBE".
- 2) RMS STATUS SEND EN/DISABLE function is used to send status message to RMS in enable or in disable. The default option is "DISABLE"
- 3) The REMOTE PHONE function is used to input the RMS primary phone number and the back-up phone number.

If you press each button on this menu, phone number of RMS will be input. You can input number and "," character up to 1~20 digits by using '<' or '>'. When dialing to RMS is failure (busy, no answer or etc), ATM switches to other phone number automatically.



[Touch Machine]



[No Touch Machine]

4) RMS IP SETUP function is to set up information of host to connect with RMS. If you press each button on this menu, you can set up various information.



[Touch Machine]



[No Touch Machine]

Below items are to set up to communicate with RMS when supporting TCP/IP

- USE URL function is to set up RMS address as IP or URL. If setting value is “ENABLE”, use URL as RMS address. Otherwise, use IP as RMS address.
- RMS CONNECTION TYPE function is to set up whether to connect from ATM to RMS, or from RMS to ATM. If setting value is “ACTIVE”, connect from ATM to RMS. Otherwise, connect from RMS to ATM.
- NAME function is to set up RMS address. If “USE URL” is “ENABLE”, input URL of RMS. Up to a maximum of 50 characters. Otherwise, input IP of RMS. Input 15 characters such as XXX.XXX.XXX.XXX.(Refer to display for the details)
- RMS SEND INTERVAL function is to set up the time to send the status of the ATM to the RMS periodically. Setting up the hours as the unit and setting up 4 hours as default. Be able to input 1~24.
- ATM LISTENING PORT function is to set up required port number when connecting from RMS to ATM. Setting up “5555” as default.
- RMS LISTENING PORT function is to set up required port number when connecting from ATM to RMS. Setting up “9999” as default.

5) The PASSWORD function is used to set the RMS password to connect to ATM from RMS.

6) RMS CALL BACK OPTION function provides a function for only permitted ATM to connect to RMS. The CALL BACK EN/DISABLE function is to set up whether to use RMS CALL BACK function. If setting value is “ENABLE”, ATM makes a call to RMS using phone number

saved on ATM when making a call to ATM by RMS and put down the call .

The RETRY COUNT function is to set up the number of times to attempt “CALL BACK”



[Touch Machine]

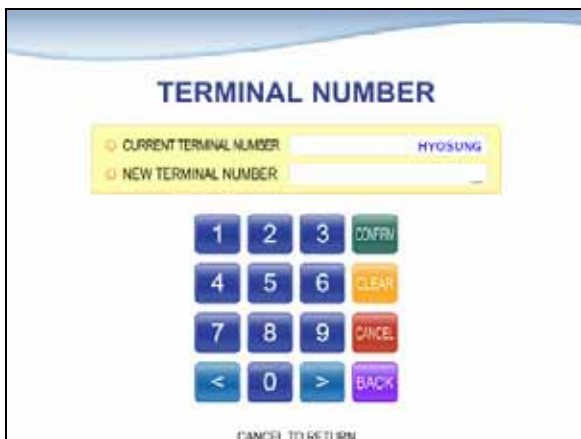


[No Touch Machine]

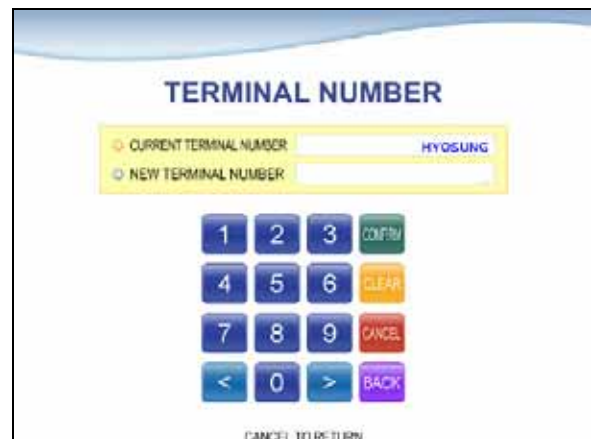
**5.4.1.5 TERMINAL NUMBER**

This function is used to set the Terminal Number of ATM.

Character, number or special symbol can be input up to 1~20 digits by using '<' or '>'. This value is saved by pressing **CONFIRM** button, on the other hand to go back to the previous screen, just press the **CANCEL** key in pinpad.



[Touch Machine]



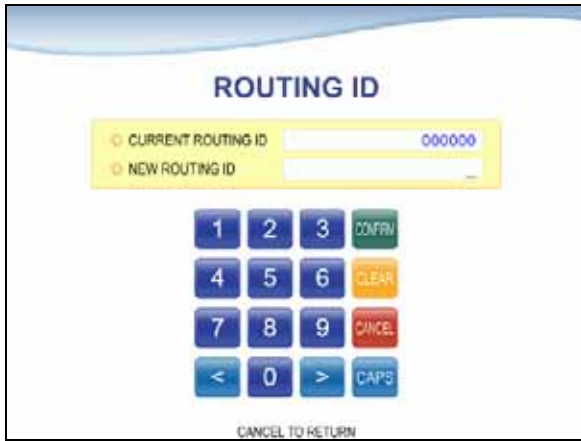
[No Touch Machine]

**5.4.1.6 ROUTING ID**

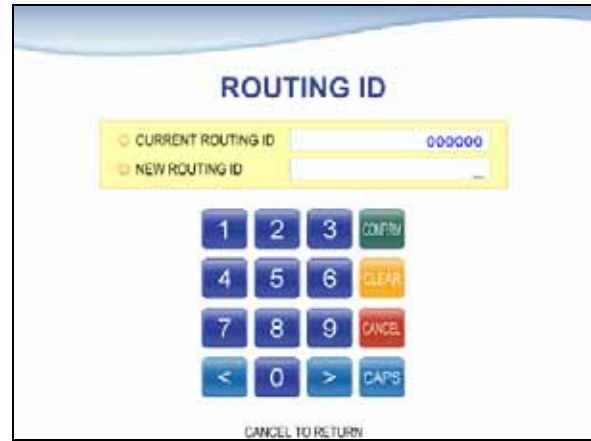
This function is used to set the Routing ID Number of ATM.

Character, number or special symbol can be input up to 1~20 digits by using '<' or '>'. This value

is saved by pressing **CONFIRM** button, on the other hand, to go back to the previous screen, just press the **CANCEL** key in pinpad.



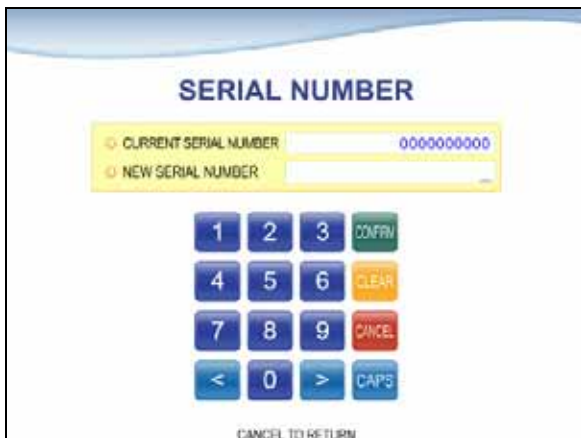
[Touch Machine]



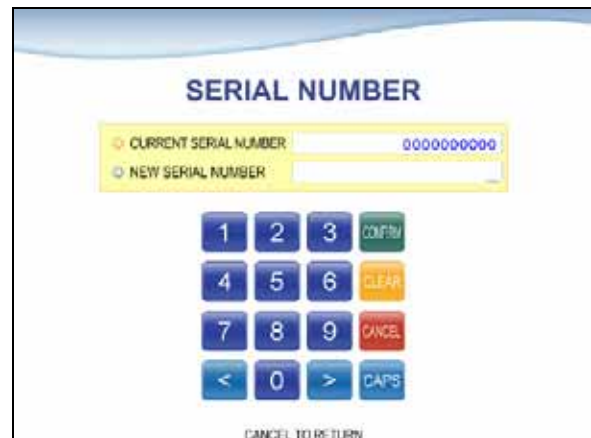
[No Touch Machine]

#### 5.4.1.7 SERIAL NUMBER

This function is used to set the Machine Serial Number. The machine serial number can be inputted up to 1~10 digits. To go back to the previous screen, just press the **CANCEL** key in pinpad.



[Touch Machine]



[No Touch Machine]



**5.4.2 TRANSACTION SETUP**

This transaction setup menu contains DISPENSE LIMIT, LOW CURRENCY CHECK, FAST CASH and DENOMINATION. You can enter each sub menu by pressing each button. To go back to the previous screen, just press the **CANCEL** key in pinpad.



[Touch Machine]



[No Touch Machine]

- 1) DISPENSE LIMIT function is used to set the maximum amount the notes that can be dispensed per transaction. The amount must be a multiple of denomination. And the maximum dispensed count a transaction must not be over a total of 40 notes.  
(You can't input over \$4000 on DISPENSE LIMIT if max denomination is \$100 on ATM.)
- 2) LOW CURRENCY CHECK function is used to set the cassette low level detect. If enabled, the machine will show the "[Unable to dispense cash:F0001]" message on bottom of screen under low note condition. And then withdrawal transaction is not available any more.
- 3) SET FAST CASH function is used to set the cash amount which is to be displayed on the FAST CASH screen. The maximum amount must be less than the dispensable limit.



[Touch Machine]



[No Touch Machine]

4) SET DENOMINATION function is used to set the denomination of note to be set in the cassette. You can set the denomination about each cassette in this menu. The menu button will be disabled if corresponding cassette is not supported.



[Touch Machine]



[No Touch Machine]

### 5.4.3 CUSTOMER SETUP

This customer setup menu contains CHANGE MESSAGE, SURCHARGE MODE, BIN LIST, ADVERTISEMENT, OPTIONAL FUNCTION, COUPON and SELECT HOST. Please press each button on this menu to go to the next screen. To go back to the previous screen, just press the **CANCEL** key in pinpad.



[Touch Machine]



[No Touch Machine]

**5.4.3.1 CHANGE MESSAGE**

CHANGE MESSAGE menu has each of six sub menu, but VFD TEXT function is supported only on Mx5100, and WELCOME, STORE, MARKETING functions are supported when STANDARD3 message format is used. If you press the **RECEIPT HEADER&TAIL** button, the current display will be changed into the RECEIPT HEADER&TAIL. And you can set the message in the **HEADER** and **TAIL** button menu of the RECEIPT. Also, If you press the **RECEIPT ADDRESS & PHONE NUMBER** button, it will be changed the RECEIPT ADDRESS & PHONE NUMBER display. You can set the information about **ADDRESS** and **PHONE NUMBE** in the RECEIPT. At last, the display can be back to the previous menu with pushing the **CANCEL** key. If you press the WELCOME button, the current display will be changed to the WELCOME and you can set the information about welcome message on main screen. If you press the STORE, MARKETING button, the current display will be changed to each screen and you can set the information about store message and marketing message.



[Touch Machine]



[No Touch Machine]

1) RECEIPT HEADER & TAIL

RECEIPT has function of guide comment and explanation in the HEADER and TAIL. If you push the HEADER1, you can enter the message on the HEADER 1, As the same as HEADER1, you can push and insert the message on the HEADER 2. And if you press TAIL, you can enter the message on the RECEIPT TAIL. When you want to erase it on currently editing, you can push the **CLEAR**.

After entering the message, press **CONFIRM** key and the command can be processed. Or, You can push **CANCEL** key if you want to go back to the previous menu.



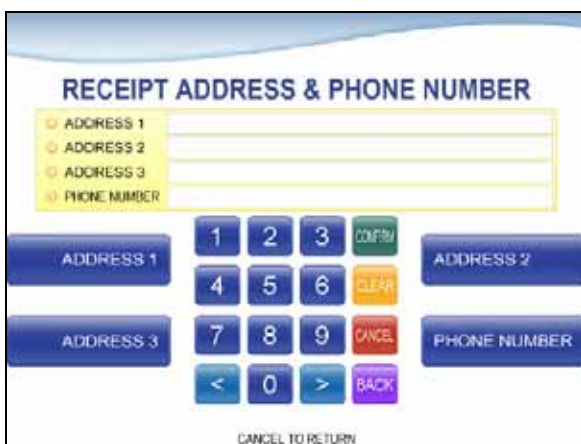
[Touch Machine]



[No Touch Machine]

2) RECEIPT ADDRESS & PHONE NUMBER

RECEIPT has function as setting the information of ADDRESS and PHONE NUMBER. You can enter the message when you push the ADDRESS 1. And in case of pushing ADDRESS 2, you can insert the message in ADDRESS 2. With same way, You can use ADDRESS 3 and enter the data in ADDRESS 3. Next, if you push the PHONE NUMBER, PHONE NUMBER can be set. While entering the information, if you want to clear it, you can push the **CLEAR**. After entering the message, push **CONFIRM** and the command can be processed. Or, You can push **CANCEL** and then you can be back to the previous menu.



[Touch Machine]



[No Touch Machine]

3) VFD TEXT

VFD TEXT has a function for setting the text displaying on VFD. This function is only supported on Mx5100. You can enter the five VFD texts when you push the **EDIT TEXT**. If you press **PREV** or **NEXT** button, you can see previous or next VFD texts which are saved on ATM.



4) WELCOME

WELCOME has a function for setting the welcome message displaying on the main screen. This function is used only on STANDARD3 message format.

You can edit the message when you push the **WELCOME1** ~ **WELCOME4**. Maximum welcome message size is 30 characters.

Also WELCOME message can be received from the host when transaction.

While entering the information, if you want to clear it, you can push **CLEAR**.

After entering the message, push **CONFIRM** and the command can be processed. Or, You can push **CANCEL** and then you can be back to the previous menu.



[Touch Machine]



[No Touch Machine]

5) STORE

STORE has a function for setting the store message printed on the receipt. This function is used only on STANDARD3 message format.

You can edit the message when you push the **STROE1** ~ **STROE 4**. Maximum store message size is 40 characters.

Also STROE message can be received from the host when transaction.

While entering the information, if you want to clear it, you can push **CLEAR**.

After entering the message, push **CONFIRM** and the command can be processed. Or, You can push **CANCEL** and then you can be back to the previous menu.



[Touch Machine]



[No Touch Machine]

5) MARKETING

MARKETING has a function for setting the marketing message printed on the receipt. This function is used only on STANDARD3 message format.

You can edit the message when you push the **MARKETING1** ~ **MARKETING4**. Maximum marketing message size is 40 characters.

Also KARKETING message can be received from the host when transaction.

While entering the information, if you want to clear it, you can push **CLEAR**.

After entering the message, push **CONFIRM** and the command can be processed. Or, You can push **CANCEL** and then you can be back to the previous menu.



[Touch Machine]



[No Touch Machine]

**5.4.3.2 SURCHARGE MODE**

The SURCHARGE MODE contains the enable/disable of the surcharge warning screen, setting the surcharge amount, surcharge owner and surcharge owner print. When the SURCHARGE MODE is disabled, the surcharge warning message will not be displayed and when the SURCHARGE MODE is enabled, the surcharge amount and owner name will be displayed in the surcharge warning screen during transaction. When the SURCHARGE OWNER PRINT is enabled, the surcharge owner will be printed on the transaction receipt. The factory default is surcharge enabled, surcharge amount is \$1.50, the surcharge owner is U.S and the surcharge owner print is enabled.



[Touch Machine]



[No Touch Machine]

**5.4.3.3 BIN LIST**

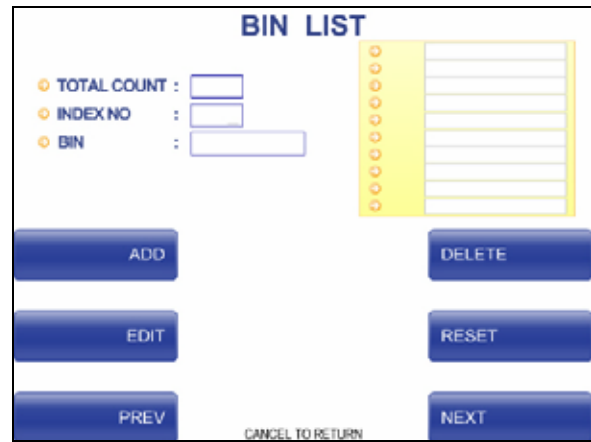
The “BIN LIST” is used to register the bank list. When the cardholders make transaction with the given BIN code, ATM doesn’t request any additional fee. However, it is necessary to confirm the connected host because host will decide whether it uses or not

You can input and edit it by using such as **ADD, DELETE, EDIT, RESET, PREV, NEXT** button.





[Touch Machine]



[No Touch Machine]

5.4.3.4 OPTIONAL FUNC

The “OPTIONAL FUNC” is used to set up PRE DIALING, BALANCE AT START and ENVELOPE NO. SCREEN. If a operator enables PRE DIALING function, the time for connection to the host server occurs earlier than normal. If BALANCE AT START is enabled, the screen with which a customer can check his/her balance will be inserted into the normal transaction flow. ENVELOPE NO.SCREEN function can be shown if ATM has deposit function. If this is enabled, you can enter the envelope number during deposit transaction. After entering the set value, push **CONFIRM** and the command can be processed. Or, You can push **CANCEL** and then you can be back to the previous menu.



[Touch Machine]



[No Touch Machine]

**5.4.3.5 SELECT HOST**

This menu is necessary to communicate with Host. It contains COMMUNICATION, MESSAGE FORMAT, EOT OPTION, TCPIP TYPE, STANDARD 3 OPTION and REVERSAL RETRY COUNT.



[Touch Machine]



[No Touch Machine]

1) COMMUNICATION

This is to set up a type of line to communicate with Host. Select DIALUP or TCPIP. In case of setting up DIALUP, communicate with host using modem. And in case of setting up TCPIP, communicate with host using LAN.



[Touch Machine]



[No Touch Machine]

If this menu is changed "TCPIP", HOST STEUP > RMS MONITOR > RMS IP SETUP > RMS

STATUS will be changed “ENABLE” automatically.

**[NOTE]**

In case of selecting “INSERVICE” on OP MAIN, if the value of COMMUNICATION is different from the value of COMMUNICATION when entering OP, exit OP and execute reboot.

2) MESSAGE FORMAT

This menu sets up message format to use during communicating with Host.

You can select one of message type to communicate with a data processing company or bank in this menu. STANDARD #1 is a HYOSUNG message type and STANDARD #2 is a CSP200 message type, STANDARD #3 is Triton 9600 message type and EPS is an extended CSP200 message type.



[Touch Machine]



[No Touch Machine]

**[NOTE]**

In case of selecting “INSERVICE” on OP MAIN, if the value of MESSAGE FORMAT is different from the value of MESSAGE FORMAT when entering OP, exit OP and execute reboot.

3) EOT OPTION

This is to select type of EOT option for transaction of WITHDRAWAL/REVERSAL, when communicating with HOST.



[Touch Machine]



[No Touch Machine]

- When the type of EOT option is set as EOT\_REQUIRED;  
This processes withdrawal/reversal as transaction error in case of not receiving EOT because of disconnection or timeout. (In case of withdrawal, sending reversal.)
- When the type of EOT option is set as LYNK, ELAN or FTPS;  
This processes withdrawal/reversal as transaction error or normal transaction according to demand of DP in case of not receiving EOT because of disconnection or timeout.  
You have to ask DP which EOT control type is set.

**[NOTE]**

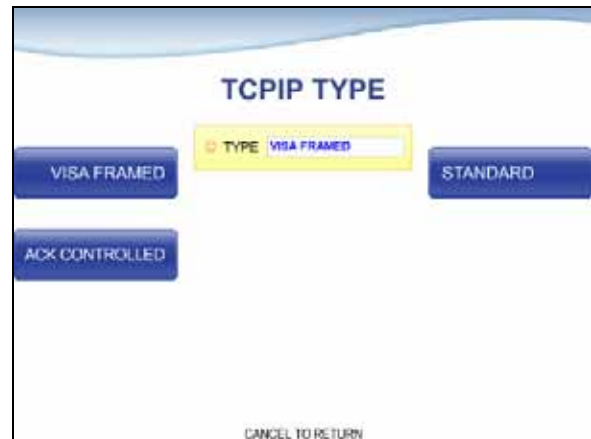
In case of selecting "INSERVICE" on OP MAIN, if the value of EOT OPTION is different from the value of EOT OPTION when entering OP, exit OP and execute reboot.

4) TCPIP TYPE

In case of supporting TCPIP, this is providing a function setting up communication flow to use when communicating with host.



[Touch Machine]



[No Touch Machine]

- VISA FRAMED is Executing communication using VISA flow when connecting to host using TCPIP.
- STANDARD is Executing communication using STANDARD flow when connecting to host using TCPIP.
- ACK CONTROLLED is Executing communication using ACK CONTROLLED when connecting to host using TCPIP.

**[NOTE]**

In case of selecting "INSERVICE" on OP MAIN, if the value of TCPIP TYPE is different from the value of EOT OPTION when entering OP, exit OP and execute reboot.

5) STANDARD OPTION #3

STANDARD OPTION #3 function is used to get the additional information when Triton message is selected.

- STATUS MONITORING function is to decide whether status monitoring field in message is sent or not .
- COMMUNICATION HEADER function is to decide whether communication header in message is included or not.
- COMMUNICATION ID function is able to save the COMMUNICATION ID. The COMMUNICATION ID has to be set if using the COMMUNICATION HEADER function.
- CRC(Cyclic Redundancy Checking) OPTION function is to set up whether CRC is used or not during communication with host.



[Touch Machine]

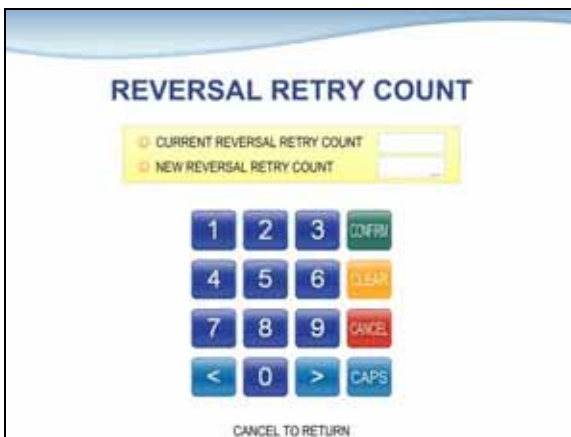


[No Touch Machine]

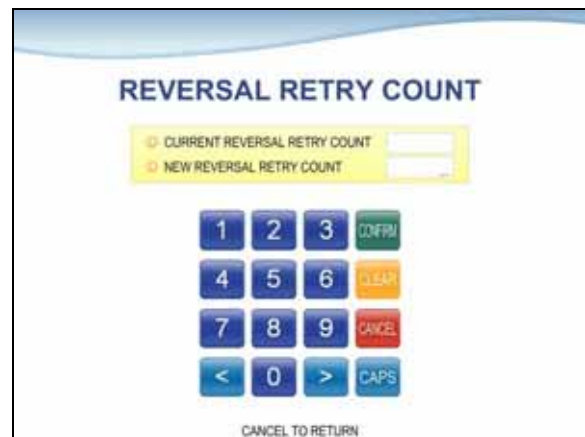
6) REVERSAL RETRY COUNT

REVERSAL RETRY COUNT function is used to set the try count of reversal transaction.

CURRENT REVERSAL RETRY COUNT displays count of current setting value. You can enter the count and then press **CONFIRM**(or **ENTER**) if you want to change try count of reversal transaction. (You should ask your DP about count of reversal transaction before change try count.)



[Touch Machine]



[No Touch Machine]

5.4.3.6 ADVERTISEMENT SETUP

This item offers setting menu for advertisement functions in main screen and transaction screen.



[Touch Machine]



[No Touch Machine]

AD FILE COPY is used for copying advertisement files, such as \*.jpg, \*.swf, from root directory of CD media or USB storage to ATM machine. If the same file is located in ATM machine, the file is replaced with new one.

The advertisement file has specific features and first one is resolution and second is the name of the file. The advertisement file for ATM having 12.1 inch monitor has 800 \* 600 resolution and 1024 \* 768 resolution for 15.1 inch monitor.

Also the name of the file have the rule as follows.

- Main AD file : ADX.jpg or ADX.swf (X refers an index of an advertisement )  
ex) AD1.jpg, AD2.jpg, AD3.swf...
- Sub AD file : SUBADX.jpg (X refers an index of an advertisement )  
ex) SUBAD1.jpg, SUB2.jpg...

MAIN AD SETTING offers menu of setting advertisements in the main service menu screen for customers.

SUB AD SETTING offers menu of setting advertisements in the transaction screen during transactions with host server.

Each button offers corresponding menu screen and CANCEL button is for the previous menu.

#### 5.4.3.7 MAIN ADVERTISEMENT MANAGEMENT

This screen offers setting properties for advertisements in the main service menu screen for customers. The maximum number of advertisements including movies and images is 6.



[Touch Machine]



[No Touch Machine]

**SWF VOLUME** is for adjusting volume of movie advertisements and **JPG RESOLUTION** is for size of ads. "FULL" value at JPG RESOLUTION item means full size of advertisements in screens and "PART" is for ads at the center position in screens.

As for image ads, both "FULL" and "PART" are supported, however, only "PART" resolution should be set for movie ads. ( If any movie ads are set in ADVERTISEMENT X, the resolution of JPG RESOLUTION changes to "PART" automatically.

Detailed properties are adjustable in each MAIN ADVERTISEMENT X SETTING related to corresponding ADVERTISEMENT1 ~ 6 buttons.



[Touch Machine]



[No Touch Machine]

ENABLE is to activate the selected advertisement and INTERVAL is for duration displaying the ad and TITLE is title of the ad and SWF/JPG USES is the type of the ad. "SWF" in SWF/JPG item is for movie ad and "JPG" is for image one. If there is no ad file related to the setting, "CAN NOT OPEN AD FILE!" displays when CONFIRM( or ENTER) button is selected.



**5.4.3.8 SUB ADVERTISEMENT MANAGEMENT**

This menu screen is to set properties for advertisements during transactions with host server. Maximum number of image ads is 6.



[Touch Machine]



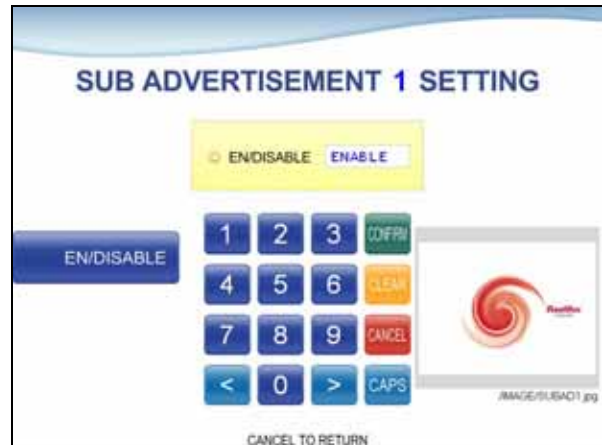
[No Touch Machine]

**INTERVAL** is for time duration of displaying each advertisement.

Detailed properties are adjustable in SUB ADVERTISEMENT X SETTING screen related to the corresponding button.



[Touch Machine]



[No Touch Machine]

Please select **CONFIRM**(or **ENTER**) button in order to activate the selected advertisement after setting the field as "ENABLE". If there is no file for the advertisement in the ATM machine, "CAN NOT OPEN AD FILE!" message displays.

5.4.3.9 COUPON

This is providing a function to set up whether to use COUPON1~COUPON6 or not.



[Touch Machine]



[No Touch Machine]

Pressing each button on this menu sets up whether to use COUPON1 ~ COUPON6 or not, and COUPON message to be shown on the receipt. Print coupon message, only for the coupon that become “ENABLE”, on the bottom of the receipt paper for the transactions of the withdrawal,



[Touch Machine]



[No Touch Machine]

**5.4.4 SYSTEM SETUP**

This system setup menu contains SET CLOCK, CHANGE PASSWORD, SPEAKER VOLUME, MODEM SETUP(ATM IP SETUP), LANGUAGE ENABLE/ DISABLE, MODEM TEST and RMS RING COUNT. Please press each button on this menu to go to the next screen. To go back to the previous screen, just press the **CANCEL** key in pinpad.

SYSTEM SETUP Screen to support Dialup



[Touch Machine]



[No Touch Machine]

SYSTEM SETUP Screen to support TCPIP



[Touch Machine]



[No Touch Machine]

5.4.4.1 SET CLOCK

You can set system date and time by pressing **YEAR**, **MONTH**, **DAY**, **HOUR**, **MINUTE** button. If you press each menu, the cursor will be positioned and you can change the value. This value is saved by pressing **CONFIRM** button, on the other hand, to go back to the previous screen, just press the **CANCEL** key in pinpad.



[Touch Machine]



[No Touch Machine]

5.4.4.2 CHANGE PASSWORD



[Touch Machine]



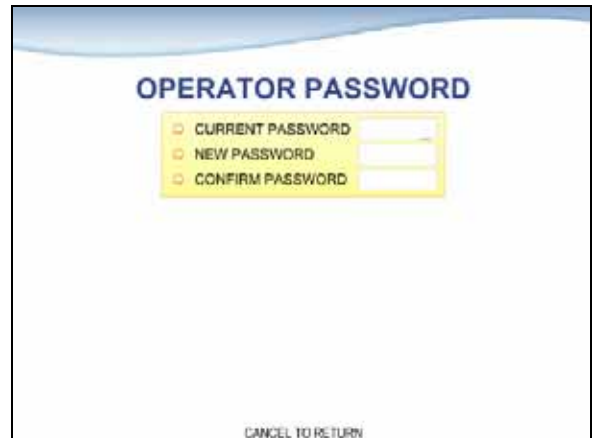
[No Touch Machine]

1) OPERATOR PASSWORD

This menu enables you to change current operator password as new one. To change the current password, you should input the proper one in current password field. The factory default value of operator password is "111111".



[Touch Machine]



[No Touch Machine]

2) MASTER PASSWORD

This menu enables you to change current master password as new one. To change the current password, you should input the proper one in current password field. The factory default value of master password is "555555".



[Touch Machine]



[No Touch Machine]

3) SERVICE PASSWORD

This menu enables you to change current service password as new one. To change the

current password, you should input the proper one in current password field. The factory default value of service password is "222222".



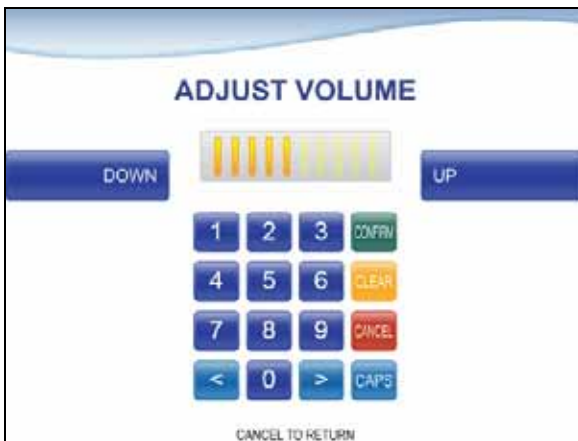
[Touch Machine]



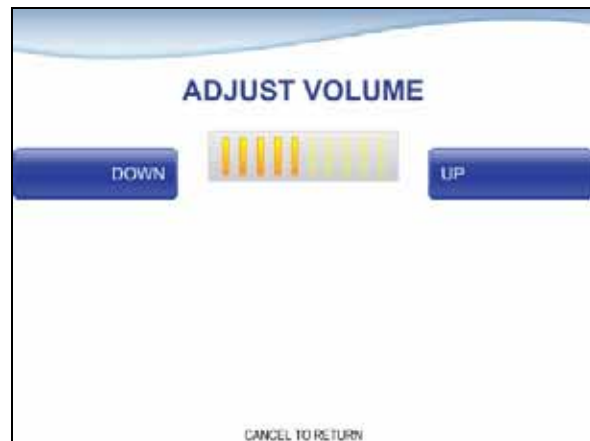
[No Touch Machine]

**5.4.4.3 SPEAKER VOL**

The SPEAKER VOLUME function is used to set speaker volume by using **DOWN** and **UP** buttons. Once the button is pressed, ATM beeps.



[Touch Machine]



[No Touch Machine]

**5.4.4.4 MODEM SETUP**

The INITIAL STRING function is used to edit the modem initial string when the special circumstance is required by a nonstandard modem initial string. Before editing the initial string, consult with service personnel.

The MODEM SPEAKER function is used to change the speaker out on or off at the modem

dialing connecting. Service personnel can check the dialing if it is normal or abnormal with this function in the speaker out on state. The factory default is “OFF”



[Touch Machine]



[No Touch Machine]

**5.4.4.5 LANGUAGE EN/DISABLE**

You can select language type to be displayed in screen. There are six types of language “English”, “Spanish”, “Japanese”, “French”, "Chinese" and “Korean”. If you press each button except ENGLISH, one of ENABLE/DISABLE will be changed. To save it, you just press the **CONFIRM** button.



[Touch Machine]



[No Touch Machine]

5.4.4.6 MODEM TEST

This function is used to set the telephone number and used to perform the modem reset test. Number and “,” character can be input up to 1~20 digits by using '<' or '>'. This value is saved by pressing **CONFIRM** button, on the other hand, to go back to the previous screen, just press the **CANCEL** key in pinpad.



[Touch Machine]



[No Touch Machine]

5.4.4.7 ATM IP SETUP

This is setting up whether to use DHCP(Dynamic Host Configuration Protocol) or not **and ATM IP SETUP information to connect to host.**



[Touch Machine]



[No Touch Machine]

If DHCP values is “ENABLE”, ATM uses dynamic IP to connect to host. Otherwise, ATM uses



static IP. If you change DHCP value from “ENABLE” to “DISABLE”, you should be setting up static IP again in the ATM STATIC IP SETUP.

ATM STATIC IP SETUP is necessary to set up ATM information to connect to host using TCPIP. Each menu is able to input up to 15 units such as XXX.XXX.XXX.XXX.



[Touch Machine]



[No Touch Machine]

**[NOTE]**

In case of selecting “INSERVICE” on OP MAIN, if the value of DHCP(or IP, SUBNET MASK, GATEWAY, DNS) is different from the original value of DHCP(or IP, SUBNET MASK, GATEWAY, DNS) when entering in OP mode, exit OP and execute reboot.

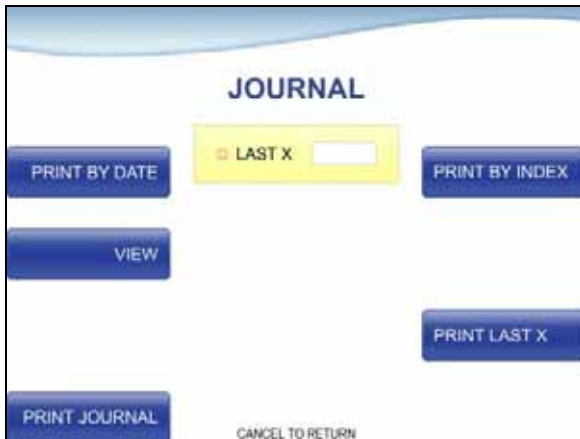
**5.4.4.8 RMS RING COUNT**

This function is used to select how many ring of RMS will be generated by inputting button and number

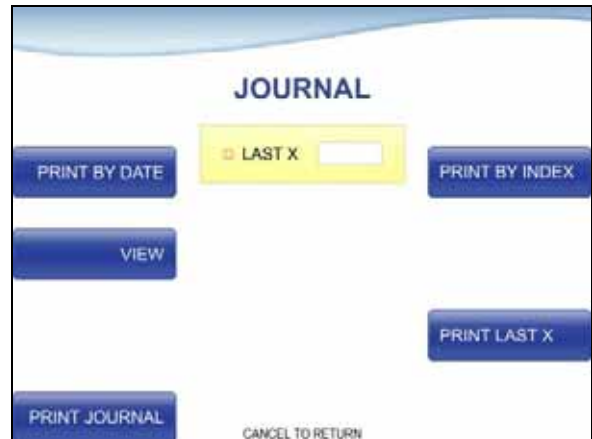
**5.5 JOURNAL**

This JOURNAL menu contains PRINT BY DATE, RPRINT BY INDEX, VIEW, PRINT LAST X and PRINT JOURNAL sub menu.

In this Journal menu, you can print it by date and index what you want to search and just take a look at it by pressing VIEW sub menu.



[Touch Machine]



[No Touch Machine]

### 5.5.1 PRINT BY DATE

Journal can be printed out to the receipt for record keeping purpose. The PRINT BY DATE function is used to print out during some periods when you want to know journal data. If you want to stop printing, you may stop it by pressing **CANCEL** key.



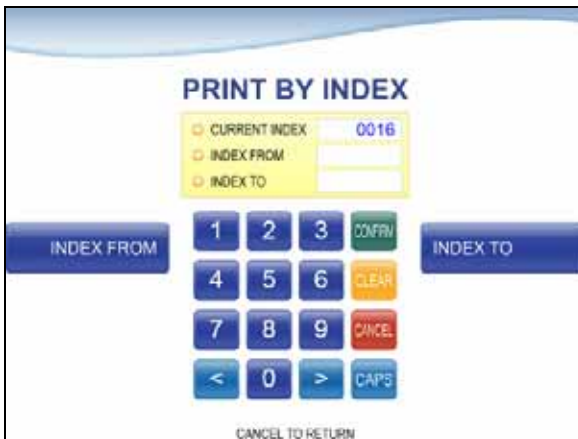
[Touch Machine]



[No Touch Machine]

### 5.5.2 PRINT BY INDEX

The PRINT BY INDEX function is used to print out journal data within index range you want to know it. Enter the index from, index to and press **CONFIRM** key. Then the data you request is printed.



[Touch Machine]

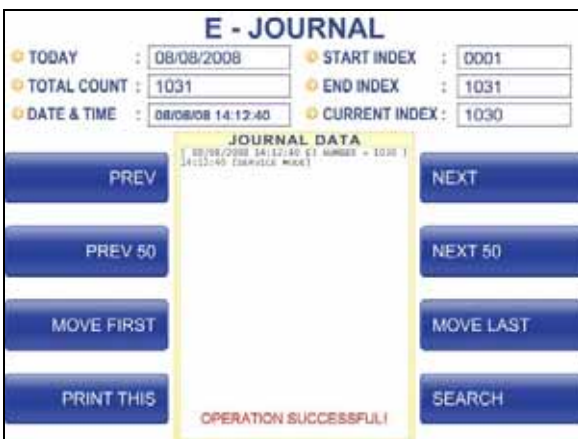


[No Touch Machine]

### 5.5.3 VIEW

You can see the various kinds of journal data by using each field and button. The VIEW function is used to display the Journal data on the customer screen. The Journal record will be displayed on the screen. Use **PREV** or **NEXT** button to show just one data before or after, and **PREV 50** or **NEXT 50** button are for data before 50 or after 50 EA. If you use **MOVE FIRST** or **MOVE LAST** button, you can see first or last journal.

Besides, you can check up journal data you would try to search by using **SEARCH** button and just print out the current journal by pressing **PRINT THIS** button.



[Touch Machine]



[No Touch Machine]



[Touch Machine]



[No Touch Machine]

### 5.5.4 PRINT LAST X

The PRINT LAST X function is used to print out recent journal data. If you want to print recent journal data, enter the count of data you want on JOURNAL main screen and then press ENTER key. Then the data you request is printed.

### 5.5.5 PRINT JOURNAL

The PRINT JOURNAL function is used to print out all saved journal data. If you want to stop printing, you may stop it by pressing CANCEL key.

## 5.6 DIAGNOSTICS

Please see the “Option A.1 DIAGNOSTICS of FRONT SUPERVISOR” section.

## 5.7 REPORT

This report menu consists of 4 sub-menu, ERROR CODE, ERROR SUM, SW VERSION and PRINT ALL SETUP. You can print out all information regarding each device as well as system value set up. If you want to go back to the upper screen, just press the **CANCEL** key.



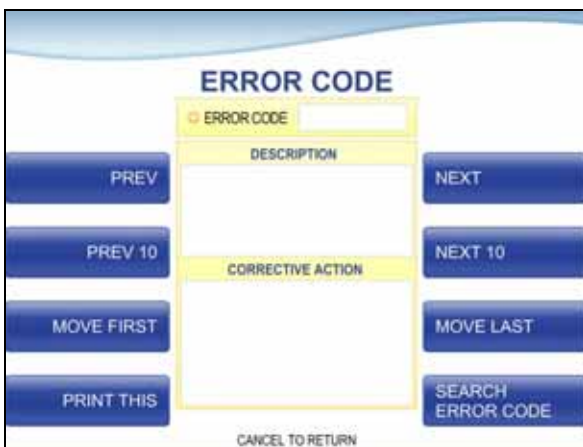
[Touch Machine]



[No Touch Machine]

### 5.7.1 ERROR CODE

ERROR CODE offers detailed descriptions of error codes and way to deal with the errors on a working ATM machine.



[Touch Machine]



[No Touch Machine]

**PREV/NEXT** buttons are to navigate previous and next error codes one by one and **PREV 10/NEXT 10** are to do by 10 EA.. **MOVE FIRST/MOVE LAST** buttons are to go to the first error code and the last one. **PRINT THIS** button is for printing information about the error code displaying in the screen.

**SEARCH ERROR CODE** button is to search for a specific error code immediately. In order to use the function, please input the specific error code in the field and select **CONFIRM**(or **ENTER**) button. If there is no result in database, "CAN NOT FIND ERROR CODE!" displays.



[Touch Machine]



[No Touch Machine]

### 5.7.2 ERROR SUM

ERROR SUMMARY menu offers a statistics of error codes on an ATM machine. The kind and number of error codes which have occurred on an ATM.



[Touch Machine]



[No Touch Machine]

**PREV/NEXT** buttons are to navigate previous and next pages and **PRINT** button prints all of error code history.

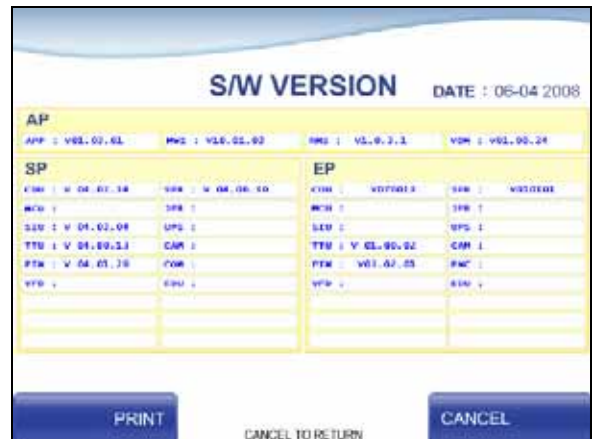
**CLEAR** button erases the history stacked in an ATM machine and set **START DATE** to the present date as well. (**START DATE** displays "01/01/2000" in ATM machines which have never done the **CLEAR** function.)

### 5.7.1 SW VERSION

This menu shows each software version. Application, SPR EP, CDU EP, SPR SP, CDU SP, MCU SP and PIN SP's versions will be displayed.



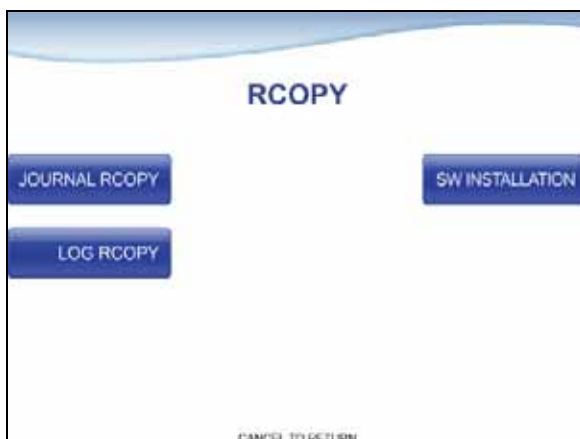
[Touch Machine]



[No Touch Machine]

### 5.8 RCOPY

You can back up journal data and log data you want in this menu. When JOURNAL RCOPY is selected, this data will copy in floppy disk or USB memory stick. When LOG RCOPY is pressed, it will be changed to the screen of LOG RCOPY and when SOFTWARE INSTALLATION is pressed, it will be changed to the screen of SOFTWARE INSTALLATION.



[Touch Machine]



[No Touch Machine]

**5.8.1 JOURNAL RCOPY**

Copy EJ.mdb saved in D:\EJR\MDB to USB.

**5.8.2 SW INSTALLATION**

You can install the software by using various storage device like floppy, USB drive, CD in this menu.



[Touch Machine]



[No Touch Machine]

**5.8.3 LOG RCOPY**

This menu provides a function to copy log for the inputted date to floppy or USB. Display local current date as default when entering this menu.



[Touch Machine]



[No Touch Machine]

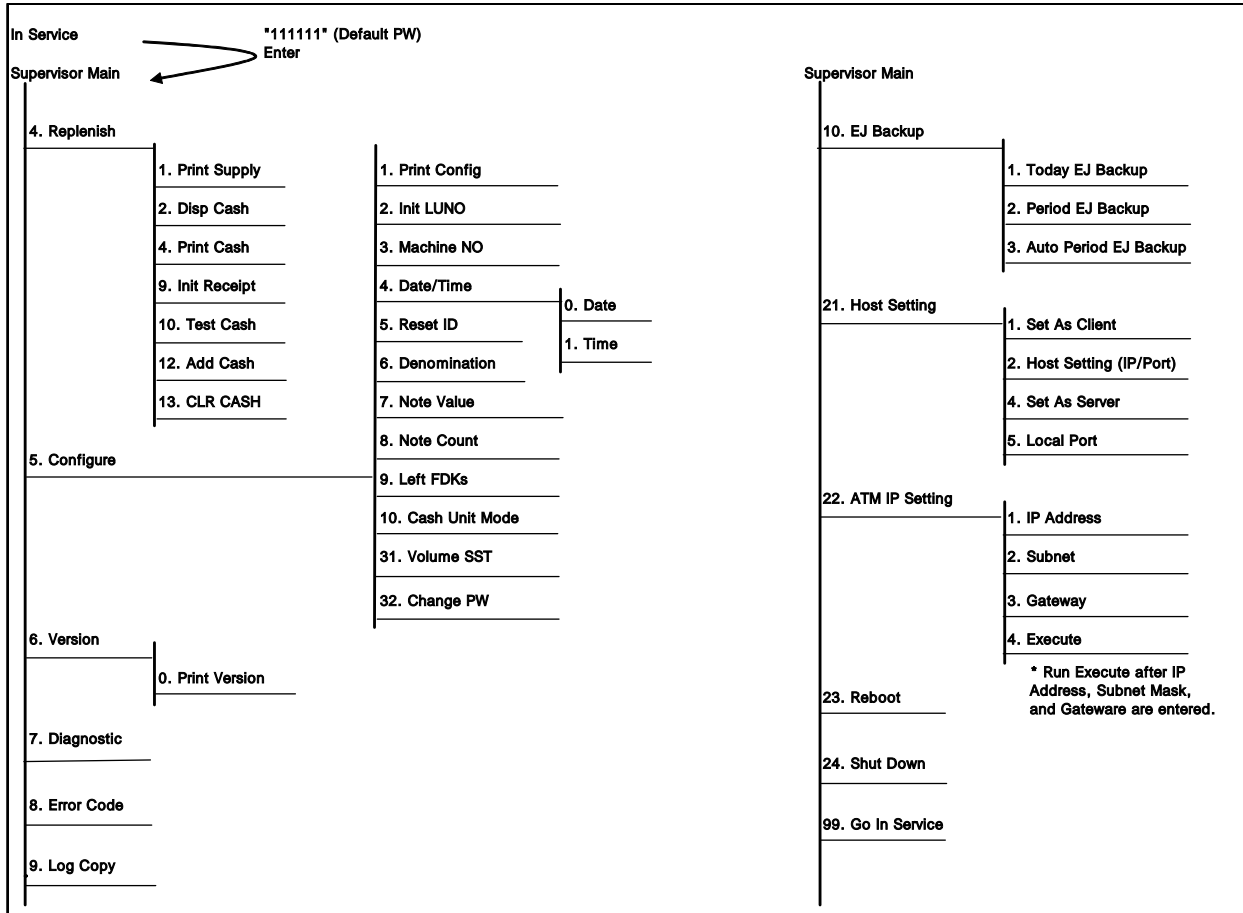
- The YEAR can input up to 4units, from 2000 to 2038.
- The MONTH can input up to 2 units, from 1 to 12.
- The DAY can input up to 2 units, from 1 to 31.



## Chapter 6. Operator Function with NDC

### 6. Operator Functions with NDC.

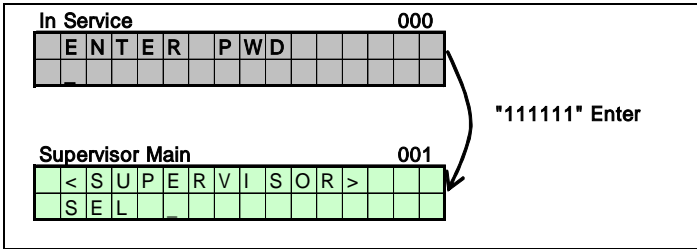
This Operator manual is for HSPL. If your ATM has TSPL, you have to see “Option D. Operator Functions for TSPL ” in this chapter.



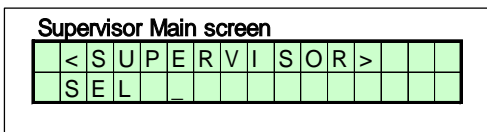
MoniMax 5100T Supervisor Screen Map

#### 6.1 Entering OP Mode (NDC Machine)

To enter the **Supervisor Main Screen** from **Service Screen**, Enter the Operator Password and then press **ENTER** button. If the wrong password is entered, the screen will remain without changing the Supervisor Main Screen. The factory default Operator Password is '111111'



## 6.2 Main Screen



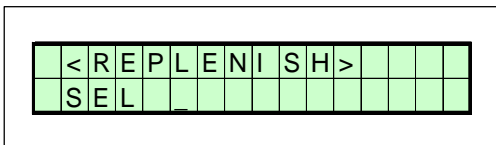
- **4. REPLENISH**

Replenish main screen.

\*The number, written before menu, is how to enter the state of operation menu.

For example, **4. REPLENISH** means “To enter **REPLENISH** menu, push 4 from supervisor’s main and then press **ENTER** button

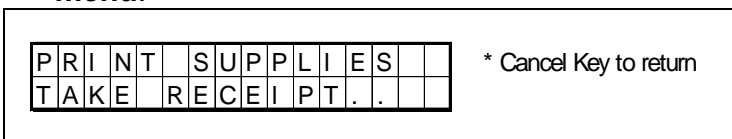
\* “cancel key to return” means you can go back to the screen, one-step-before if you push **CANCEL** button



- **4. 1 Print Supply**

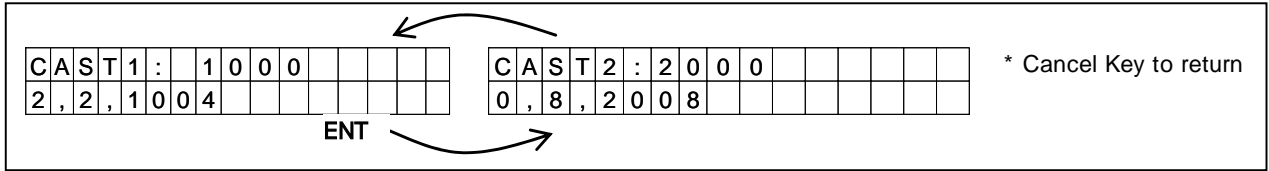
To enter the **Print Supply** sub-menu, just press 1 from **REPLENISH (4)** menu and then press **ENTER** button

**Therefore X.Y like above number means that just press Y button from X menu.**



It prints out the information of supplies status.

- 4. 2 Display Cash



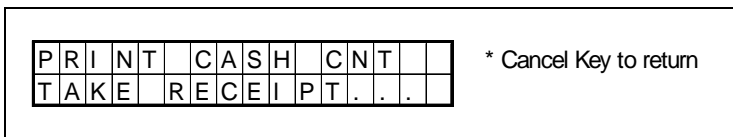
It displays cash count on NH-1000 screen. To see other cassettes, you can go back and forth by pushing “Enter” button.

First line shows current note count in the cassette.

Second line shows rejected count, dispensed count and initial count.

This menu is only enabled when “REAR ADD CASH FOR ATM” option is set by “False”. You can see “REAR ADD CASH FOR ATM” option in the 5.Configuration .

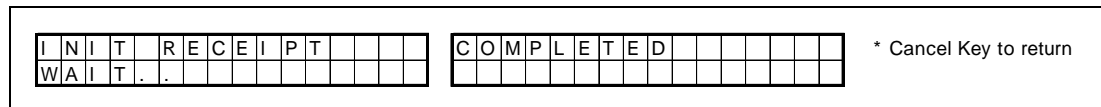
- 4. 4 Print Cash



It prints cash count on receipt.

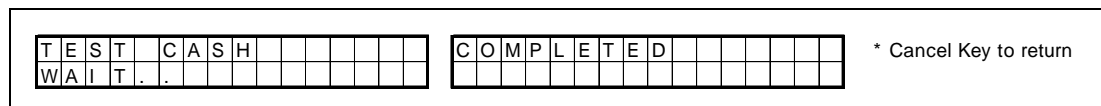
This menu is only enabled when “REAR ADD CASH FOR ATM” option is set by “False”.

- 4. 9 Init Receipt



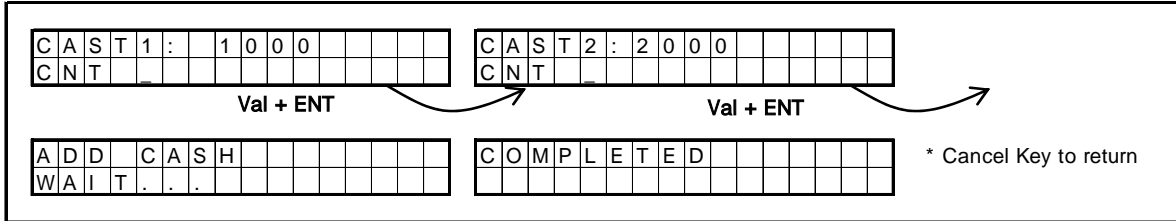
Initialize receipt printer.

- 4.10 Test Cash



Initialize cash dispenser

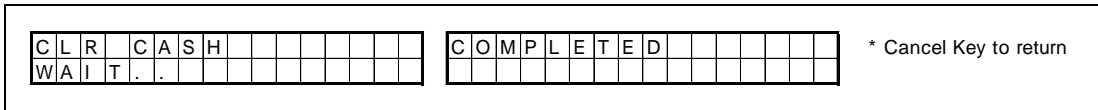
● 4.12 Add Cash



Add cash count for ATM

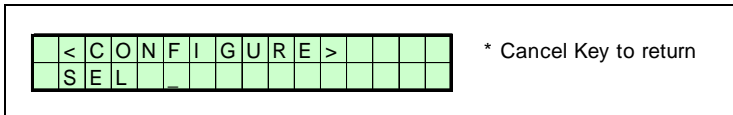
This menu is only enabled when “REAR ADD CASH FOR ATM” option is set by “False”.

● 4.13 Clear Cash



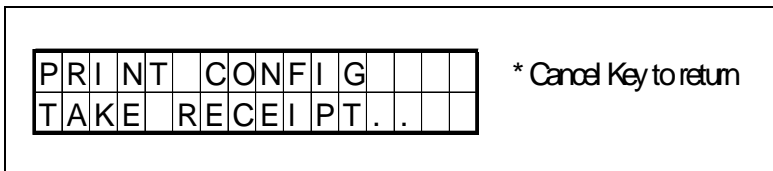
Clear cash count for ATM.

● 5. Configure



Configure main

● 5. 1 Print Config



It prints configuration – Date, Time, Left Column, Machine No, Count Printer and DES, Config As Server, Host IP, Host Port, ATM IP, ATM Subnet, ATM Gateway, CST1 Denomination, (CST1 ~ CST4) Logical Cash Unit Option, Rear Add Cash For ATM option, Idle Screen Adv. Option.

- 5. 2 Init LUNO

I N I T L U N O	C O M P L E T E D	
W A I T . . .		* Cancel Key to return

It sets LUNO value to zero.

- 5. 3 Machine No. (= Terminal ID)

M A C H I N E N O : 0 0 0 0 0 0	M A C H I N E N O : 1 2 3 4 5 6	
N E W N O . . .	C O M P L E T E D	* Cancel Key to return

ENT

It displays Machine number and gets input new Machine number.

You should input machine number as 6 digit numeric.

For example machine number is 4, you should input "000004".

- 5. 4 Date/Time

S E L D A T E / T I M E	
S E L . . .	* Cancel Key to return

It is sub main menu for entering Date or Time.

- 5. 4. 0 Date

D A T E ( D D M M Y Y Y Y )	C U R R E N T D A T E	
D A T E . . .	3 1 - 0 1 - 2 0 0 8	* Cancel Key to return

Val + ENT

You can set up new Date to follow the format(DDMMYYYY)

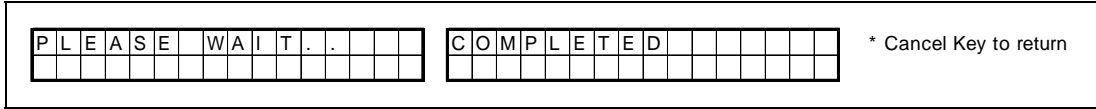
- 5. 4. 1 Time

T I M E ( H H M M )	C U R R E N T T I M E	
T I M E . . .	2 1 : 4 3	* Cancel Key to return

ENT

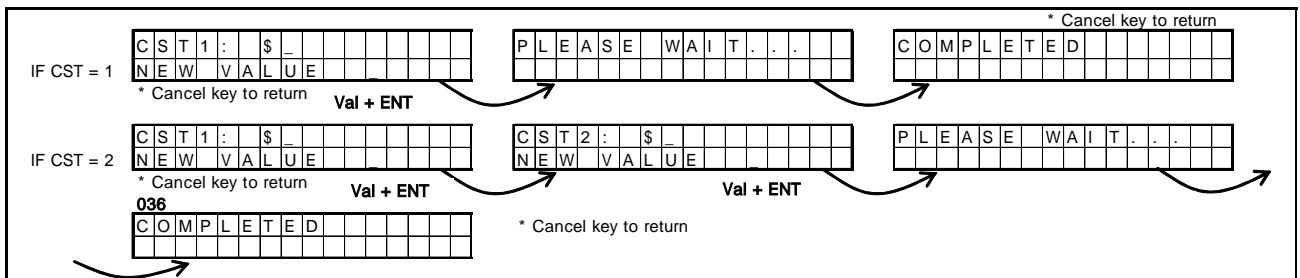
You can set up new Time to follow the format(HHMM)

● 5.5 Reset Configuration ID



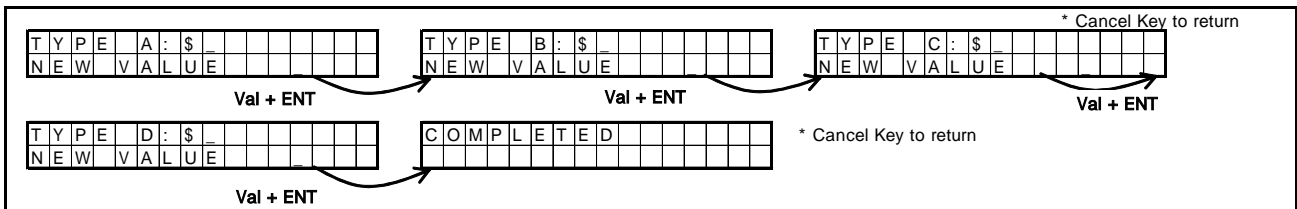
Reset configuration ID to download configuration data from host

● 5.6 Denomination



When LCU mode is used, each cassette must be set with the correct note type defined by Data Processor

● 5.7 NoteValue



There are four Note Types in NDC - NoteType1(=A), NoteType2(B), NoteType3(C), and NoteType4(D) – and 8 Note Types in Diebold 91x – A,B,C,D,E,F,G, and H. The currency and denomination must be set for each note type, and the correct information for this must be informed from Data Processor. Here are two scenarios.

**Scenario #1. A=USD 5, B=USD 10, C=USD 20, D=Not Used**

< SET NOTE VALUE >

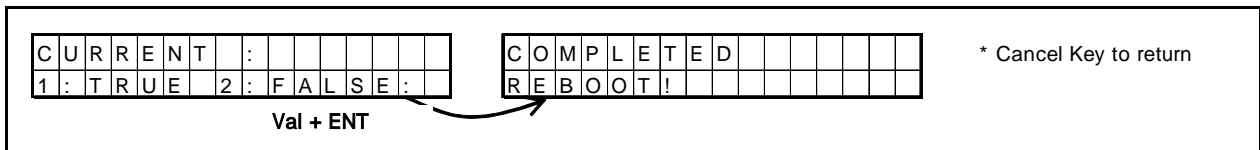
- a. Enter 5 for note type 1(=A), and press ENTER
- b. Enter 10 for note type 2(=B), and press ENTER
- c. Enter 20 for note type 3(=C), and press ENTER
- d. Press ENTER for note type 4(=D)

**Scenario #2. A=Not Used, B=Not Used, C=USD 20, D=Not Used**

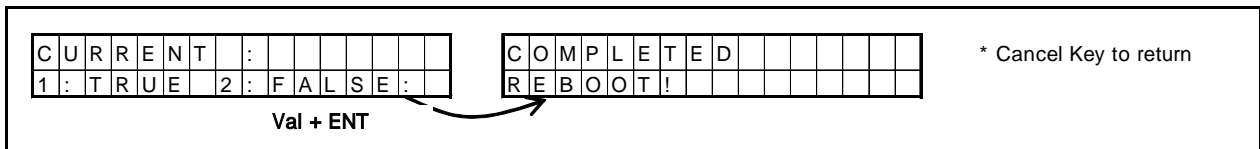
< SET NOTE VALUE >

- a. Press ENTER for note type 1(=A)
- b. Press ENTER for note type 2(=B)
- d. Enter 20 for note type 3(=C), and press ENTER
- e. Press ENTER for note type 4(=D)

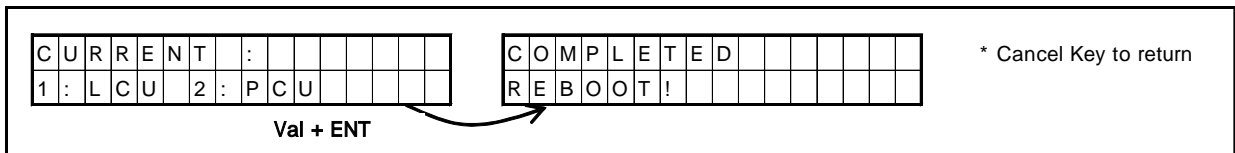
● 5.8 Note Count



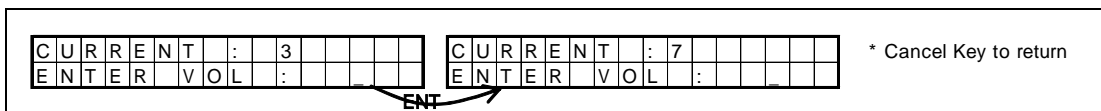
● 5.9 Left FDKs



● 5.10 CashUnitMode

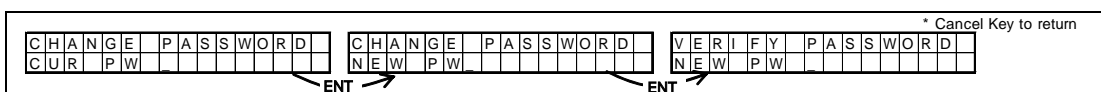


● 5.31 Volume SST



Volume Self Service Terminal. To adjust loudspeaker's volume, select number and enter

● 5.32 Change Password

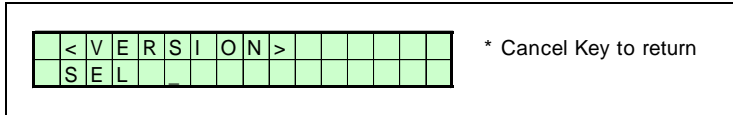


To change password, type current password. Input new password and re-enter it to verify



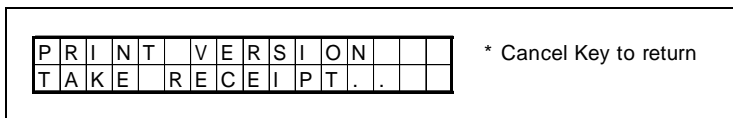
password. Please make sure that you should enter only new password of **6 -digit number**.

- 6. Version Info



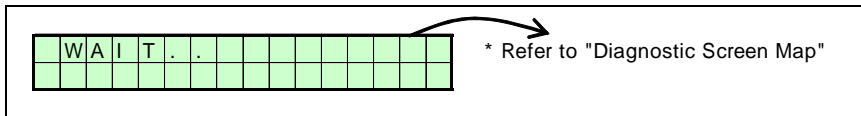
Version main

- 6.0 Print Version



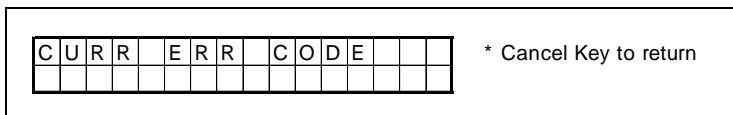
Version print – It prints S/W version on receipt. AP, SP and EP version

- 7. Diagnostic



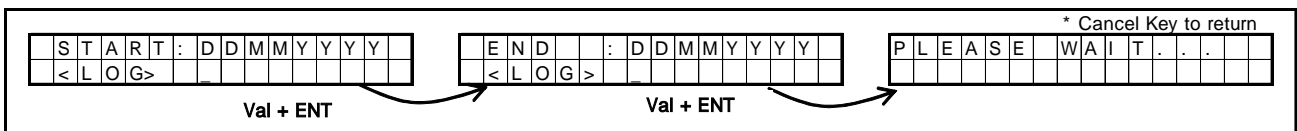
It executes VDM

- 8. Show Error Code



It displays current error code

- 9. Log Copy



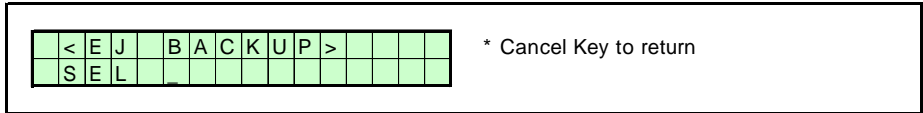
Copy logs including AP and SP log

You can copy logs for several days (but up to 31) as inputting start date and end date.

For example, when you want to copy 2 day's log 10/03/2006 ~ 12/03/2006, enter

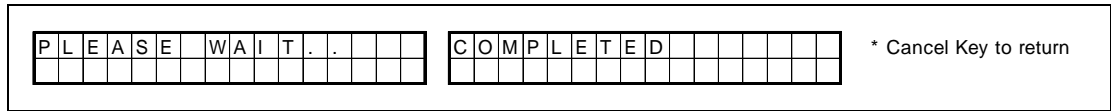
03102006 in the START screen then 03122006 in the END screen.  
You can input same END as START when you want copy for one day.

- 10. EJ Backup



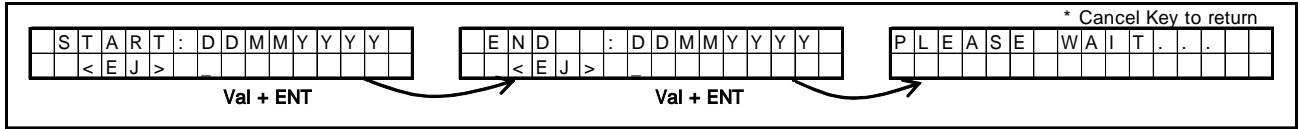
EJ Backup Main

- 10.1 Today EJ Backup



Copy eJournal to USB memory stick. You can copy eJournal for today.

- 10.2 Period EJ Backup



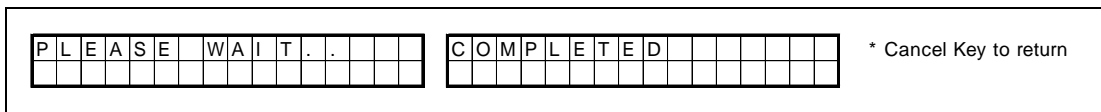
Copy eJournal to USB memory stick

You can copy eJournal for several days (but up to 5 years) as inputting start date and end date.

For example, you want to copy 2 day's log 10/03/2006 ~ 12/03/2006, input 03102006 in the START screen then 03122006 in the END screen.

You can input same END as START when you want copy for one day.

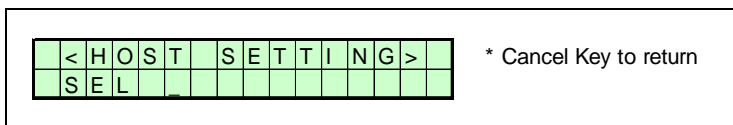
- 10.3 Auto Period EJ Backup



Copy eJournal to USB memory stick

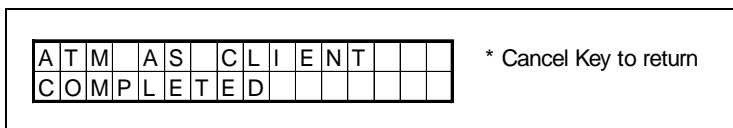
You can copy the EJ files generated since the last AUTO-PERIOD EJ BACKUP till today

- 21. Host Setting



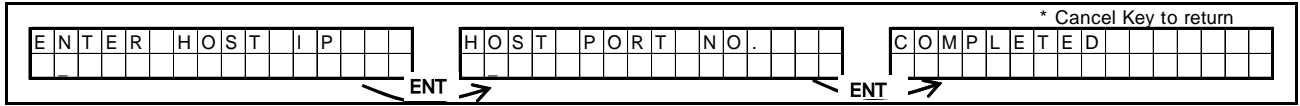
Host setting main

- 21. 1 Set as client



ATM is set as client

- 21. 2 Host setting



Set host IP and port number.

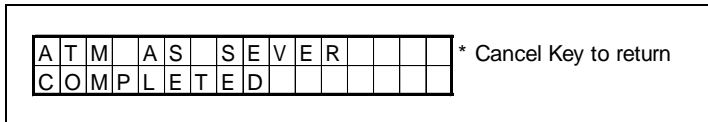
Enter 12 digit number button for setting host IP. You don't need to represent dot.

Refer to following example.

Example

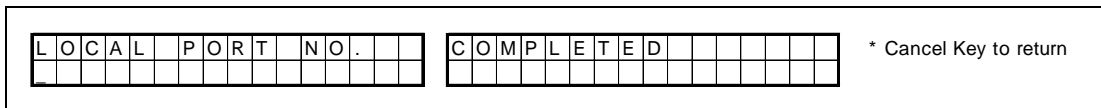
127.0.0.1 -> 127000000001

- 21. 4 Set as server



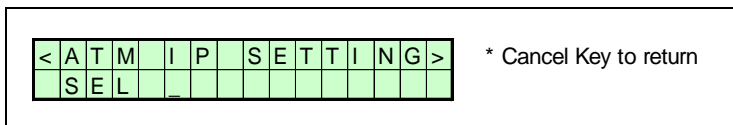
ATM is set as server. Default setting for ATM is "Set as Server".

- 21. 5 Local port



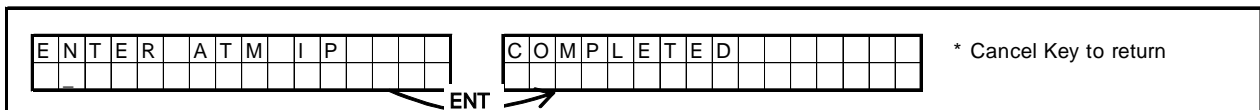
Set local port number. This is only need when ATM is set as server.

- 22. ATM IP Setting



ATM IP Setting main

- 22. 1 IP Address



Set ATM IP

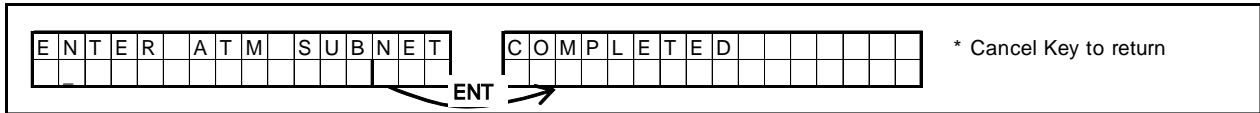
Enter 12 digit number button. You don't need to represent dot.

Refer to following example.

Example

127.0.0.1 -> 127000000001

● 22. 2 Subnet



Set Subnet mask

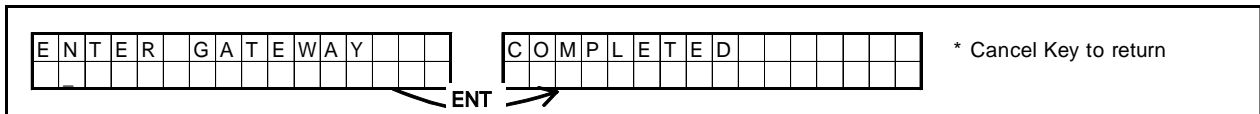
Enter 12 digit number button. You don't need to represent dot.

Refer to following example.

Example

127.0.0.1 -> 127000000001

● 22. 3 Gateway



Set Gateway

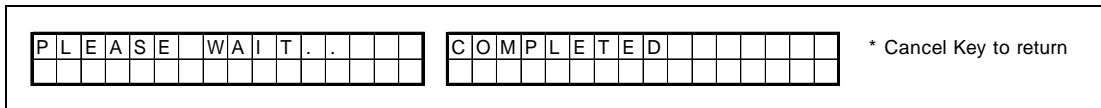
Enter 12 digit number button. You don't need to represent dot.

Refer to following example.

Example

127.0.0.1 -> 127000000001

● 22. 4 Execute



Apply the setting of ATM IP

To complete setting up ATM IP, you should do 22.1 -> 22.2 -> 22.3 -> 22.4 in order.

- 23. Reboot

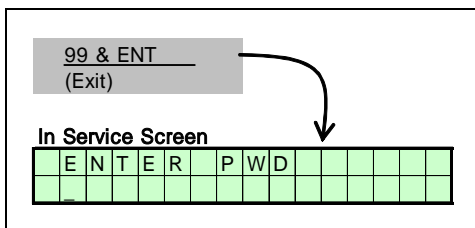
Reboot terminal, Whenever you input host IP or ATM IP you should execute "Reboot" certainly.

- 24. Shut down

Shut down terminal. After about 30 seconds switch off main power switch.

If you press shut down switch for about 2 seconds, it acts as same as 24. Shut down menu.

- 99. Exit



Go to in-service mode

## Option A. New Operator Function for NDC Emulation

### A.1 Overall Function Map

#### A.1.1 Op function step

No	OP FUNCTION STEP			CLASSIFY			
	Main	Sub1	Sub2	S	O	T	
1	CONFIGURE	DISP CONFIG		O			
		PRNT CONFIG		O			
		INIT LUNO		O			
		MACHINE NO		O			
		DATE/TIME		SET DATE	O		
				SET TIME	O		
		DENOMINATION		O			
		VOLUME		SET IDLE VOLUME	O		
				SET WARN VOLUME	O		
		SPACE LINE		O			
		SUPPORT MOVIE		O			
		MSG PROTOCOL		O			
		NOTE VALUE		O			
		MAC FLAGS		O			
		CASH UNIT MODE		O			
		LEFT-FDKS		O			
		NOTE COUNTING		O			
SCREEN		SET CRT LAYOUT	O				
		SET FONT SIZE	O				
2	VERSION INFO			O			
3	HOST NETWORK	SET ATM TO CLIENT		O			
		HOST IP ADDRESS		O			
		HOST PORT NUMBER		O			
		SET ATM TO SERVER		O			
		LOCAL PORT NUMBER		O			
		CURRENT STATUS		O			
4	ATM NETWORK	IP ADDRESS		O			
		SUBNET		O			

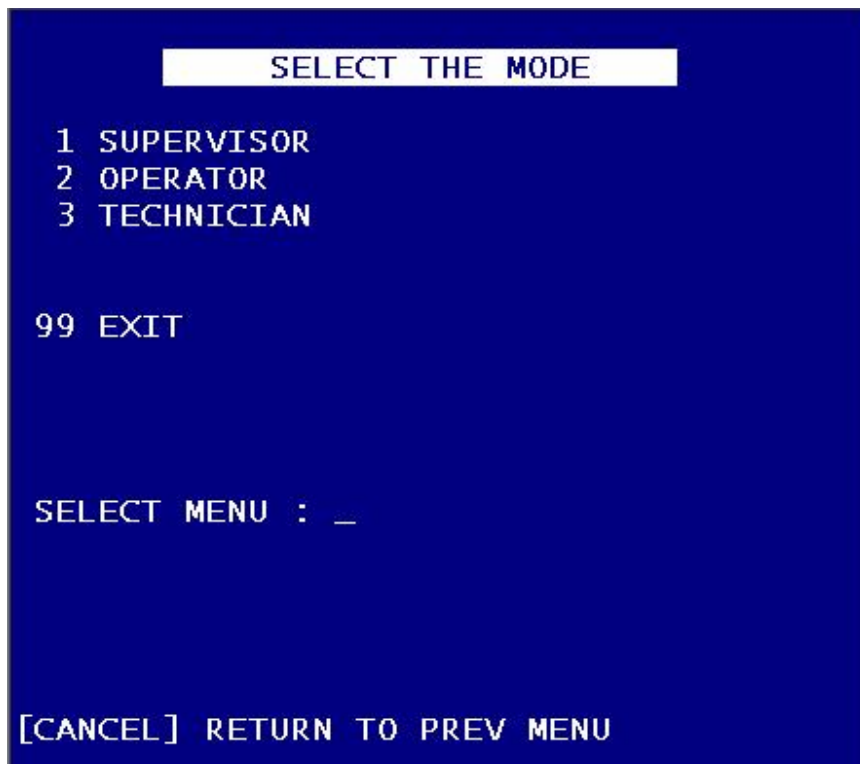
No	OP FUNCTION STEP			CLASSIFY		
	Main	Sub1	Sub2	S	O	T
		GATEWAY		O		
		EXECUTE		O		
		X.25 LOCAL ADDRESS		O		
		X.25 REMOTE ADDRESS		O		
		CURRENT STATUS		O		
		COMMUNICATION MODE		O		
		ADVANCED	MSG FORMAT	O		
			LEN SIZE	O		
			LEN FORMAT	O		
			LEN ADJUST	O		
			LEN OFFSET	O		
			LEN EMBED	O		
5	REBOOT			O	O	O
6	CHANGE PASSWORD			O	O	O
7	REPLENISH	DISP SPPLY			O	
		PRNT SPPLY			O	
		DISP CASH			O	
		PRNT CASH			O	
		CLR CARDS			O	
		CLR DIV/REJ			O	
		TEST CARD			O	
		INIT RECPT			O	
		TEST CASH			O	
		ADD CASH			O	
		CLR CASH			O	
		SPVR TRANS			O	
8	EJ BACK UP	TODAY EJ BACKUP			O	
		PERIOD EJ BACKUP			O	
		AUTO-PERIOD EJ BACKUP			O	
		TRANSACTION EJ PRINT			O	
9	VIEW ERROR CODE	CURRENT ERROR CODE			O	
		ERROR CODE HISTORY			O	



No	OP FUNCTION STEP			CLASSIFY			
	Main	Sub1	Sub2	S	O	T	
		RESET ERROR CODE HISTORY			O		
10	VFD	OP MODE SETTING			O		
		ONLINE CONNECTION SETTING			O		
		INPUT MESSAGE (LOCAL)				O	
		DISPLAY OPTION (LOCAL)				O	
		SET MODE VFD				O	
11	DIAGNOSTIC					O	

**A.1.2 Main screen**

This Operator manual is for TSPL. If your ATM has HSPL, you have to see “6. Operator Functions with NDC ”.



CONFIGURE -> 1. DISP CONFIG

1. SUPERVISOR : Input the password to go to SUPERVISOR mode.  
The default password is '11111'.

2. OPERATOR : Input the password to go to OPERATOR mode.

The default password is '22222'.

3. TECHNICIAN : Input the password to go to TECHNICIAN mode.

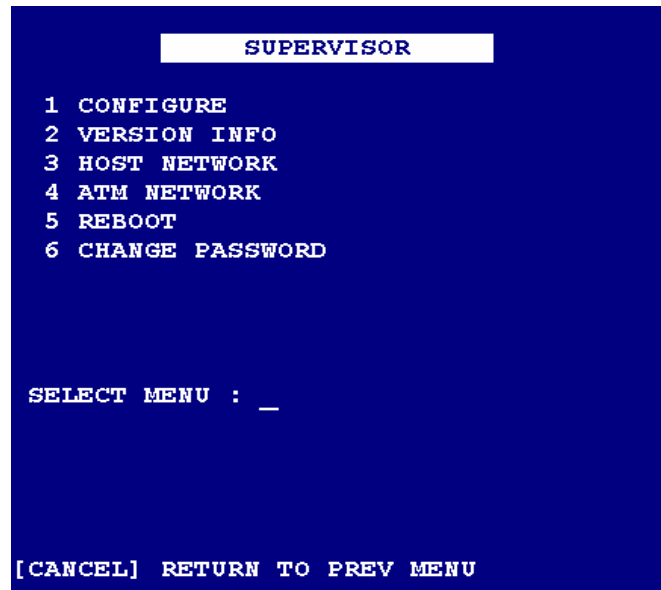
The default password is '33333'.

99. EXIT : The Exit menu takes you out of Supervisor mode.

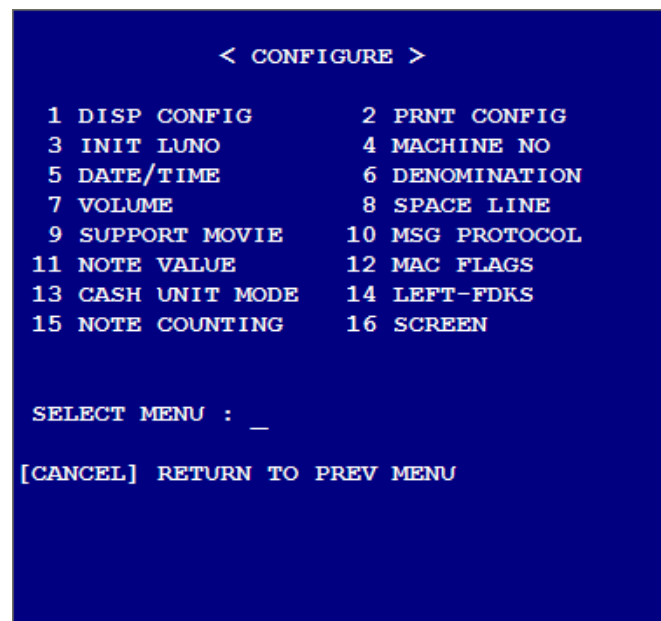
When you select this menu, the following occur :

- The current operator screen displays "SET SWITCH TO IN SERVICE MODE"
- The keyboard is disabled
- The ATM will wait for setting to In Service mode.

## A.2 Supervisor mode



### A.2.1 CONFIGURE



#### A.2.1.1 DISP CONFIG

1. SUPERVISOR -> 1. CONFIGURE -> 1. DISP CONFIG

- To display the configuration data like the screen below.
- Configuration information consists of 3 screens.
- First screen shows the information that is needed for the ATM's operation.

```

      < CONFIGURATION DATA 1/3 >

* LUNO           = 000
* MACHINE NO     = 123456
* DATE          = 23.11.2007
* TIME          = 03:43:24
* DES KIND       = SINGLEDES
* LEFT-FDK OPTION = TRUE
* MSG MODE       = DDC
* NOTECOUNTIG MODE = TRUE

PRESS '0' AND ENTER FOR MORE INFO _
[CANCEL] RETURN TO PREV MENU
    
```

- Second screen shows the network setting information for the ATM and the host.

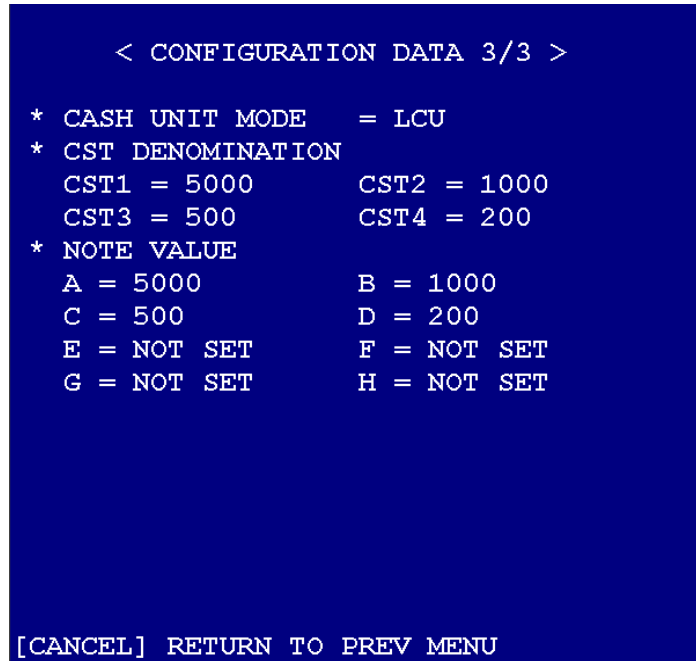
```

      < CONFIGURATION DATA 2/3 >

* COMM MODE      = TCP/IP
* ATM MODE       = SERVER
* HOST IP        = 127.0.0.1
* HOST PORT      = 9999
* LOCOL PORT     = 3333
* ATM IP         = 127.0.12.1
* ATM SUBNET     = 127.0.12.1
* ATM GATEWAY    = 111.111.111.111

PRESS '0' AND ENTER FOR MORE INFO _
[CANCEL] RETURN TO PREV MENU
    
```

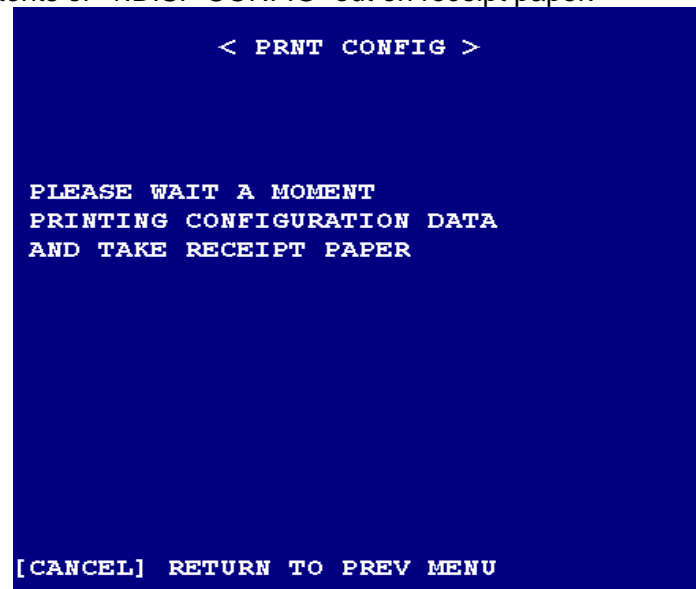
- Third screen shows the denominations and the note values.



**A.2.1.2 PRNT CONFIG**

1. SUPERVISOR -> 1. CONFIGURE -> 2. PRNT CONFIG

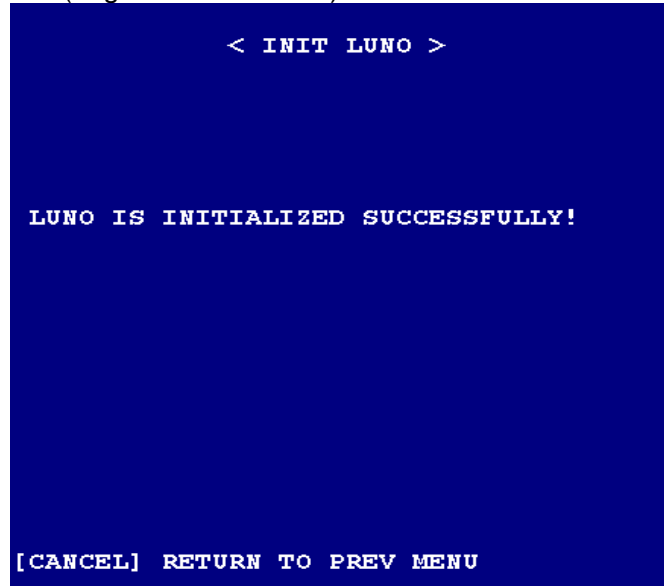
- To print the contents of "1.DISP CONFIG" out on receipt paper.



**A.2.1.3 INIT LUNO**

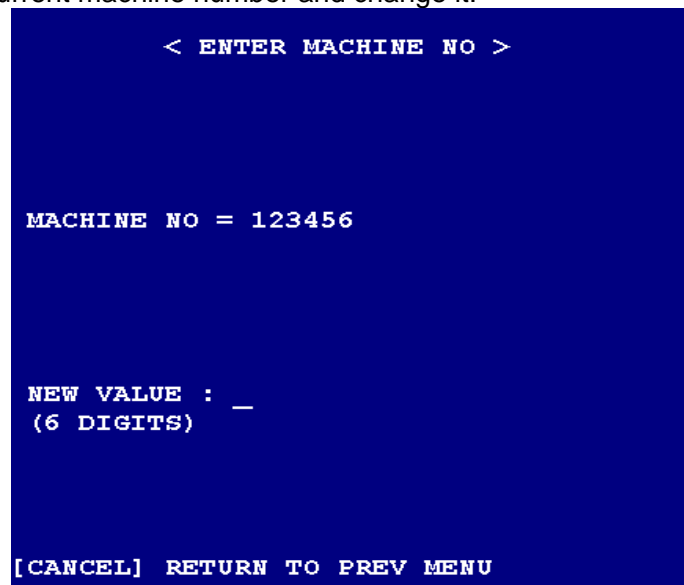
1. SUPERVISOR -> 1. CONFIGURE -> 3. INIT LUNO

- To Initialize the 'LUNO'(Logical Unit Number).

**A.2.1.4 MACHINE NO.**

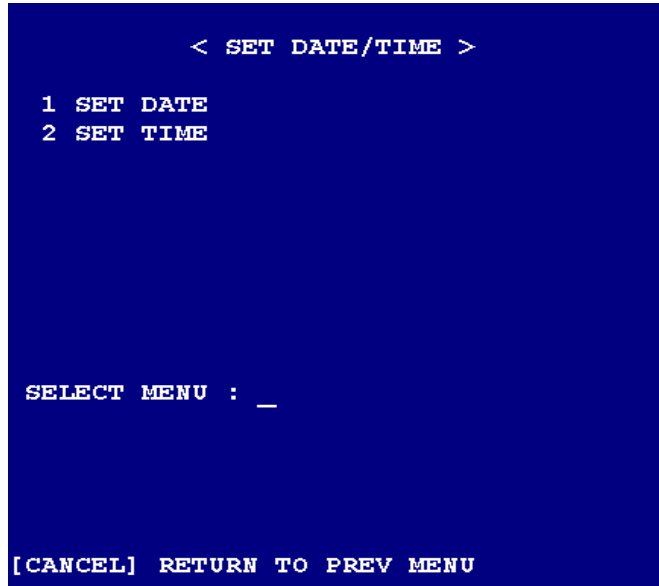
1. SUPERVISOR -> 1. CONFIGURE -> 4. MACHINE NO

- To display the current machine number and change it.



**A.2.1.5 DATE/TIME**

1. SUPERVISOR -> 1. CONFIGURE -> 5. DATE/TIME

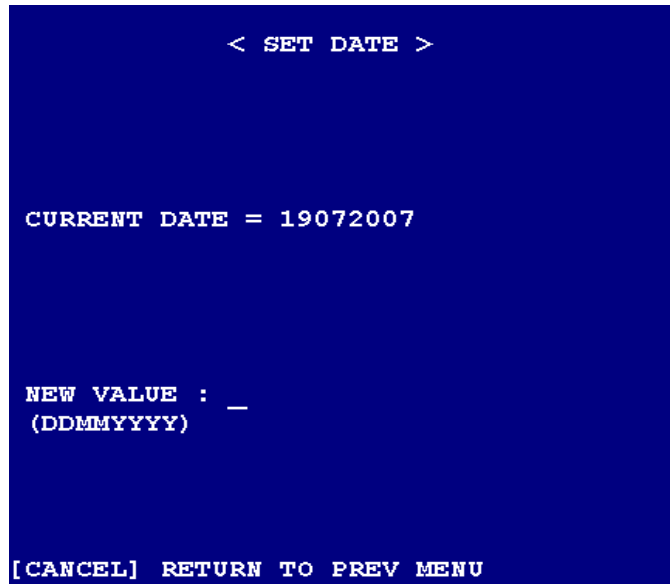


**1) SET DATE**

1. SUPERVISOR -> 1. CONFIGURE -> 5. DATE/TIME -> 1. SET DATE

- You can change the date in the Supervisor mode for the terminal.

But most of servers send the Terminal the date data of Host.



## 2) SET TIME

1. SUPERVISOR -> 1. CONFIGURE -> 5. DATE/TIME -> 2. SET TIME

- You can change the time in the Supervisor mode for the terminal.

But most of servers send the Terminal the time data of Host.

```
          < SET TIME >

CURRENT TIME = 1411

NEW VALUE : _
(HHMM)

[CANCEL] RETURN TO PREV MENU
```

### A.2.1.6 DENOMINATION

1. SUPERVISOR -> 1. CONFIGURE -> 6. DENOMINATION

- Set up the each cassette denomination. Select the value among the list.

The value of list can be configured in "11. NOTE VALUE".

```
          < SET DENOMINATION >
CURRENT CST 1 = USD 10

1. A = USD 100
2. B = USD 50
3. C = USD 20
4. D = USD 10

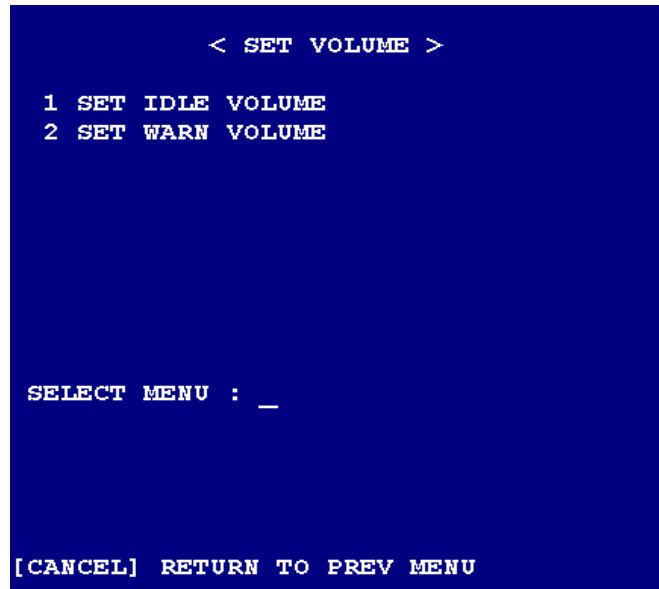
SELECT :

[CANCEL] RETURN TO PREV MENU
```



A.2.1.7 VOLUME

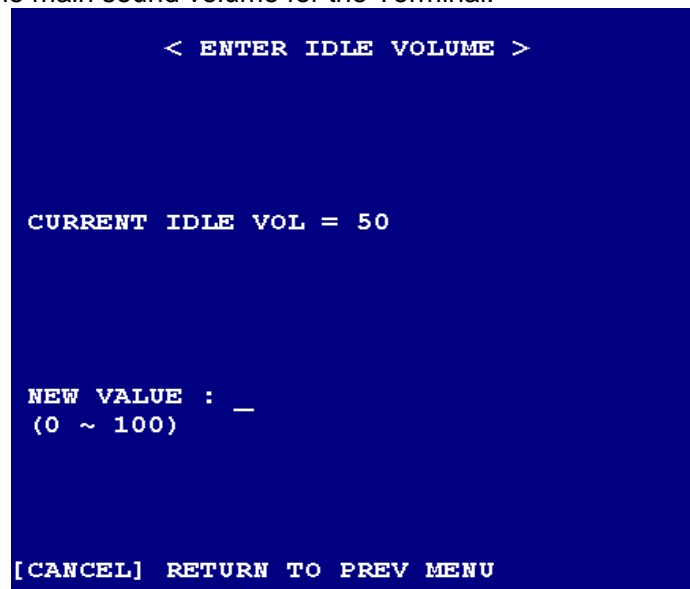
1. SUPERVISOR -> 1. CONFIGURE -> 7. VOLUME



1) VOLUME -> 1.SET IDLE VOLUME

1. SUPERVISOR -> 1. CONFIGURE -> 7. VOLUME -> 1. SET IDLE VOLUME

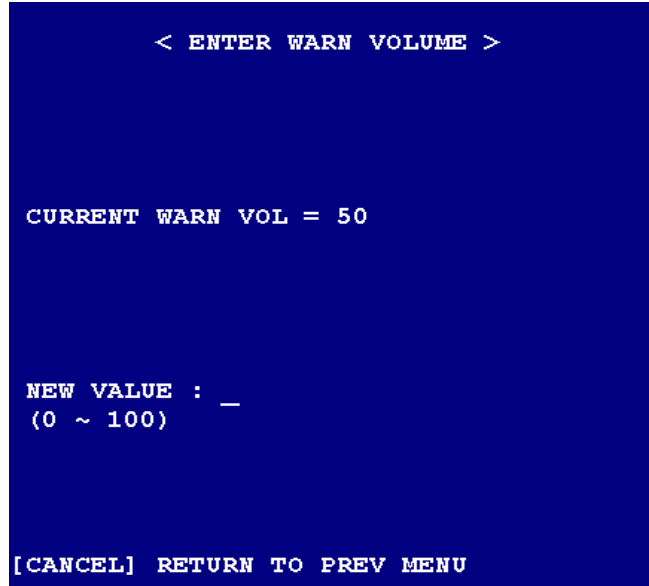
- The Idle Volume is the main sound volume for the Terminal.



**2) VOLUME -> 2.SET WARN VOLUME**

1. SUPERVISOR -> 1. CONFIGURE -> 7. VOLUME -> 2. SET WARN VOLUME

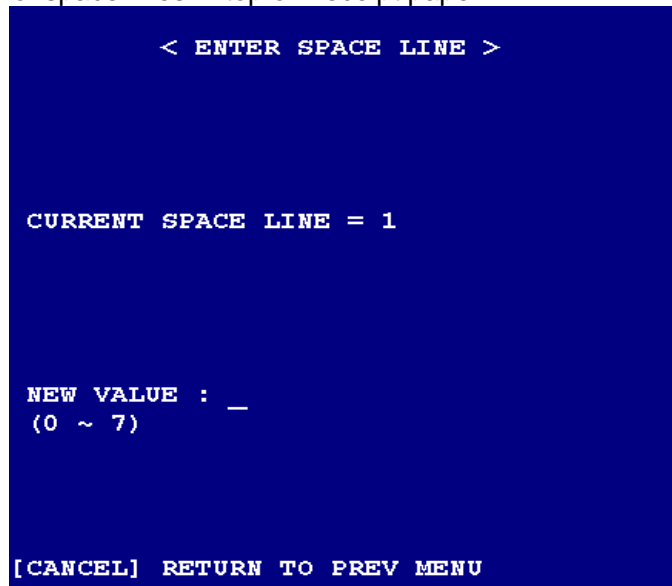
- The Warn Volume is concerned with an alarm of the Terminal.



**A.2.1.8 SPACE LINE**

1. SUPERVISOR -> 1. CONFIGURE -> 8. SPACE LINE

- Adjust the number of space lines in top of Receipt paper



**A.2.1.9 SUPPORT MOVIE**

1. SUPERVISOR -> 1. CONFIGURE -> 9. SUPPORT MOVIE

- Set the display type for playing image or movie files during the idle state.

. ATM : Display image and/or movie files only defined in the reserve.

. ADD : Display image and/or movie files defined in both of Host data and the reserved screen.

. TRUE : Display only the movie file defined in the parameter MOVIEPATH in AtmApp.ini file.

. FALSE : Display image and/or movie files only defined Host data.

```
< SET MOVIE FLAG >

CURRENT MOVIE FLAG = ATM
1 ATM
2 ADD
3 TRUE
4 FALSE

SELECT MENU : _

[CANCEL] RETURN TO PREV MENU
```

**A.2.1.10 MSG PROTOCOL**

1. SUPERVISOR -> 1. CONFIGURE -> 10. MSG PROTOCOL

- Decide the emulation type : NDC or DDC

```
< SET MSG PROTOCOL >

CURRENT MSG PROTOCOL = NDC
1 NDC
2 DDC

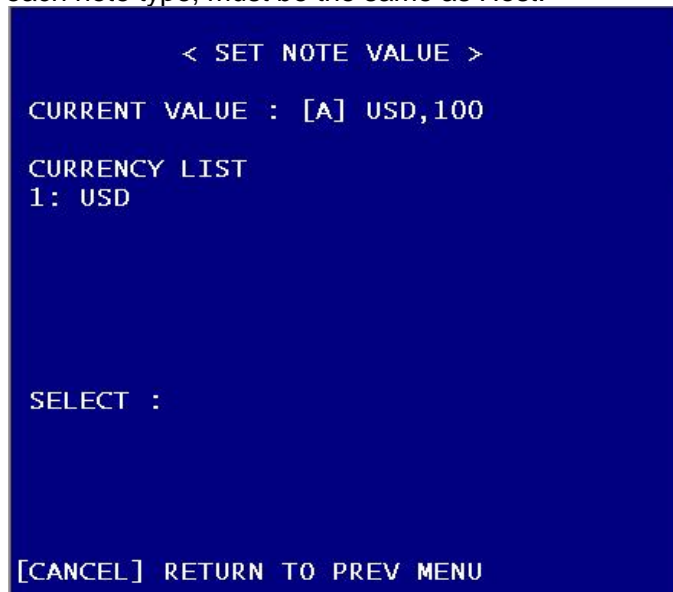
SELECT MENU : _

[CANCEL] RETURN TO PREV MENU
```

**A.2.1.11 NOTE VALUE**

1. SUPERVISOR -> 1. CONFIGURE -> 11. NOTE VALUE

- To select the Note value among the currency list. Make sure that these value, currency and denomination for each note type, must be the same as Host.



- Input the Note value to set. Make sure that this value must be the same as the Note value of Host.



### A.2.1.12 MAC FLAGS

1. SUPERVISOR -> 1. CONFIGURE -> 12. MAC FLAGS

- To set up the MAC flags

```
< ENTER MAC FLAGS >

CURRENT MAC FLAGS: 0000000000

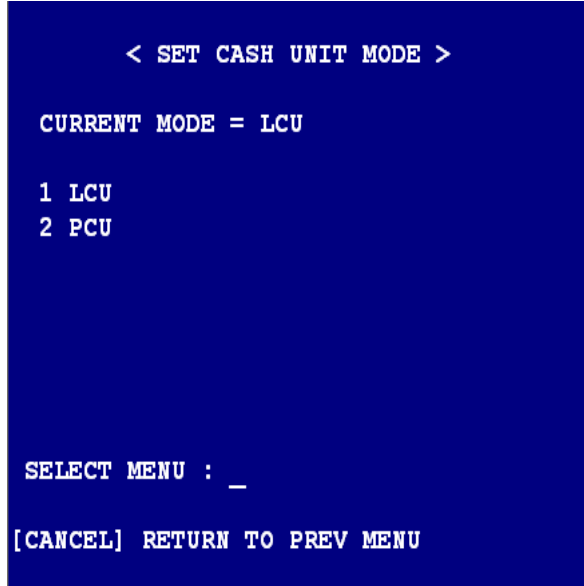
NEW VALUE : _
(10 DIGIT BINARY)

[CANCEL] RETURN TO PREV MENU
```

- This MAC flags are exactly the same as NCR's
- We support only Full MACing at the moment. Our recommendation for setting this value is as follow.
- . MAC Flags (10-digit binary)
- 0000000000 for no MACing
- 0100000001 for Full MACing on sending msg; transaction request, solicited msg.
- 1100000001 for Full MACing on sending msg and checking transaction reply msg.

**A.2.1.13 CASH UNIT MODE**

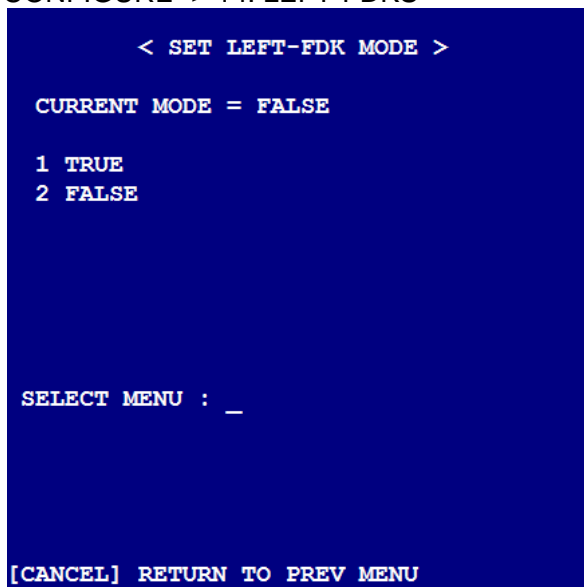
1. SUPERVISOR -> 1. CONFIGURE -> 13. CASH UNIT MODE



- Select either 1(LCU) or 2(PCU). If you select 1, cash unit mode will be set to the logical cash unit. If you choose 2, it will be set to the physical cash unit.

**A.2.1.14 LEFT-FDKS**

1. SUPERVISOR -> 1. CONFIGURE -> 14. LEFT-FDKS



- Select either 1 or 2. If you select 1(TRUE), LEFT-FDKs will be enabled. If you select 2(FALSE), LEFT-FDKs will be disabled.

**A.2.1.15 NOTE COUNTING**

1. SUPERVISOR -> 1. CONFIGURE -> 15. NOTE COUNTING

```
< SET NOTE COUNTING MODE >

CURRENT MODE = FALSE

1 TRUE
2 FALSE

SELECT MENU : _

[CANCEL] RETURN TO PREV MENU
```

- Select 1(TRUE) to use Note Counting mode. Select 0(FALSE) Otherwise.
- Operators don't need to know about this menu.

**A.2.1.16 SCREEN**

1. SUPERVISOR -> 1. CONFIGURE -> 16. SCREEN

```
< SCREEN SETTINGS >

1 SET CRT LAYOUT
2 SET FONT SIZE

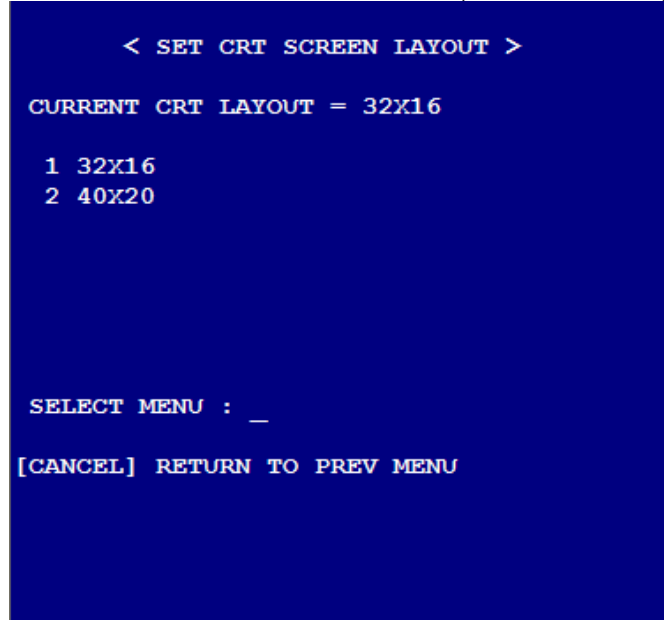
SELECT MENU : _

[CANCEL] RETURN TO PREV MENU
```

**1) SCREEN -> 1.SET CRT LAYOUT**

1. SUPERVISOR -> 1. CONFIGURE -> 16. SCREEN -> 1. SET CRT LAYOUT

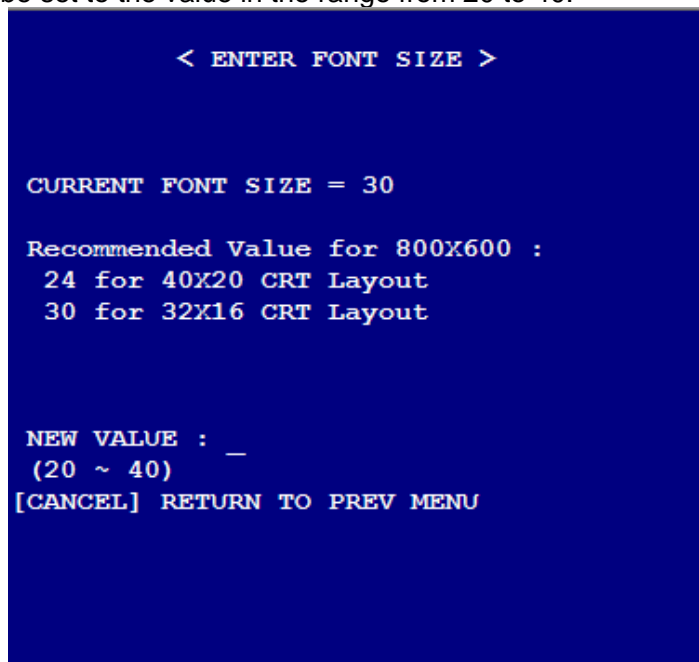
- CRT Screen Layout can be set to either 32X16 or 40X20. (Default : 32X16)



**2) SCREEN -> 2.SET FONT SIZE**

1. SUPERVISOR -> 1. CONFIGURE -> 16. SCREEN -> 2. SET FONT SIZE

- The size of font can be set to the value in the range from 20 to 40.





### A.2.2 VERSION INFO

- It shows SP & EP (Firmware) version number.
- If you press '0' ENTER, it prints out the version information on receipt paper.

```
< VERSION INFO >

AP : V 4.0.0
      SP          EP
CDM: V 04.00.22   V020304
IDC: V 04.00.06   2607-01B
PTR: V 04.00.25   V010302
PIN: V 04.01.21   V03.02.01
SIU: V 04.02.03
TTU: V 04.02.05   V 01.02.01
VFD: V 05.00.01

CAM: V 04.01.02
PRESS '0' BUTTON TO PRINT

[CANCEL] RETURN TO PREV MENU
```

### A.2.3 HOST NETWORK

```
< HOST NETWORK SETTING >

1 SET ATM TO CLIENT
2 HOST IP ADDRESS
3 HOST PORT NUMBER
4 SET ATM TO SERVER
5 LOCAL PORT NUMBER
6 CURRENT STATUS

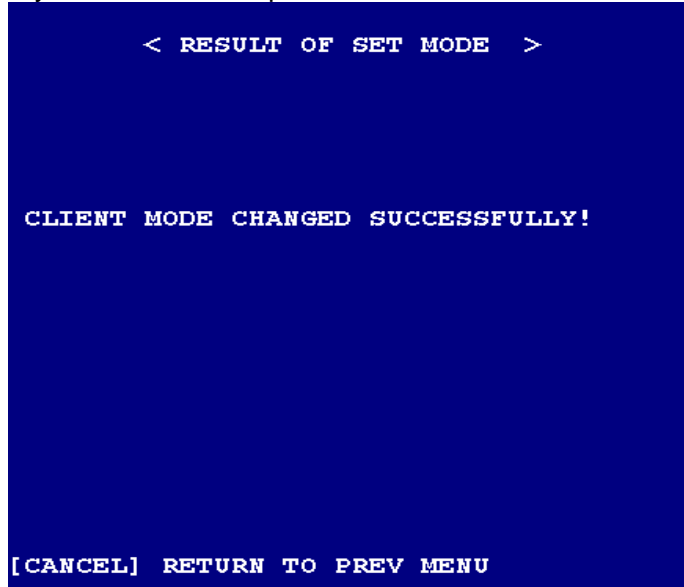
SELECT MENU : _

[CANCEL] RETURN TO PREV MENU
```

**A.2.3.1 SET ATM TO CLIENT**

1. SUPERVISOR -> 3. HOST NETWORK -> 1. SET ATM TO CLIENT

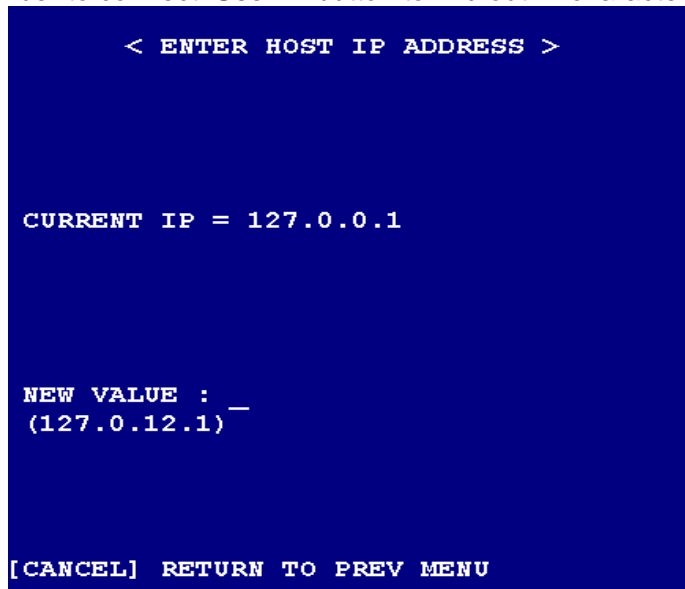
- Enable this option if you would like to operate ATM as Client mode.



**A.2.3.2 HOST IP ADDRESS**

1. SUPERVISOR -> 3. HOST NETWORK -> 2. HOST IP ADDRESS

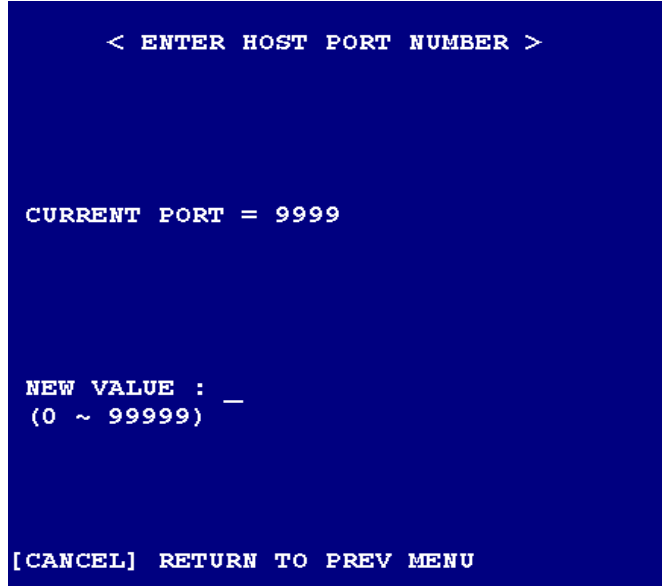
- To set host IP number to connect. Use ">" button to find out "." character



**A.2.3.3 HOST PORT NUMBER**

1. SUPERVISOR -> 3. HOST NETWORK -> 3. HOST PORT NUMBER

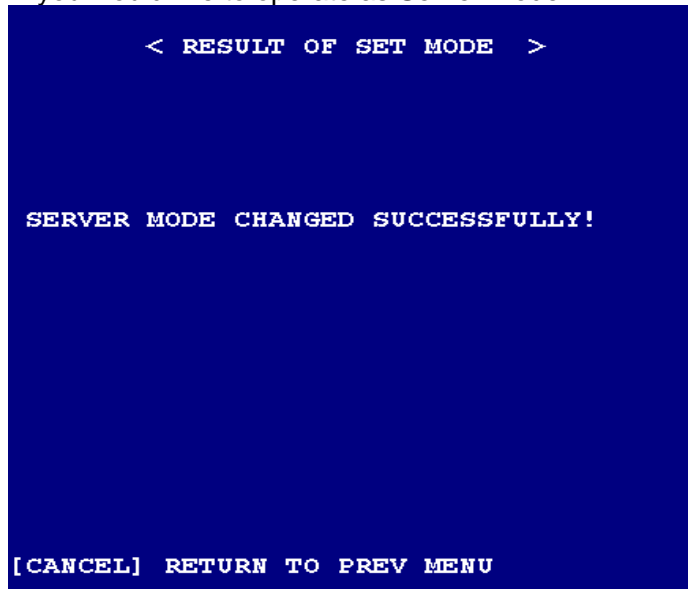
- To set host port number.



**A.2.3.4 SET ATM TO SERVER**

1. SUPERVISOR -> 3. HOST NETWORK -> 4. SET ATM TO SERVER

- Enable this option if you would like to operate as Server mode



### A.2.3.5 LOCAL PORT NUMBER

1. SUPERVISOR -> 3. HOST NETWORK -> 5. LOCAL PORT NUMBER

- To set host port number.

```
< ENTER LOCAL PORT NUMBER >

CURRENT PORT = 9000

NEW VALUE : _
(0 ~ 99999)

[CANCEL] RETURN TO PREV MENU
```

### A.2.3.6 CURRENT STATUS

1. SUPERVISOR -> 3. HOST NETWORK -> 6. CURRENT STATUS

- It shows current setting info of Host.

```
< CURRENT HOST INFO >

1 HOST IP      = 127.0.0.1
2 HOST PORT    = 9999
3 REMOTE PORT  = 9000
4 ATM MODE     = SERVER

[CANCEL] RETURN TO PREV MENU
```

## A.2.4 ATM NETWORK

```
< ATM NETWORK SETTING >

1 IP ADDRESS
2 SUBNET
3 GATEWAY
4 EXECUTE
5 X.25 LOCAL ADDRESS
6 X.25 REMOTE ADDRESS
7 CURRENT STATUS
8 COMMUNICATION MODE
9 ADVANCED

SELECT MENU : _

[CANCEL] RETURN TO PREV MENU
```

### A.2.4.1 IP ADDRESS

1. SUPERVISOR -> 4. ATM NETWORK -> 1. IP ADDRESS

- To set up Terminal IP number to connect. Use ">" button to find out "." character.

```
< ENTER NEW ATM IP ADDRESS >

CURRENT IP = 127.0.0.1

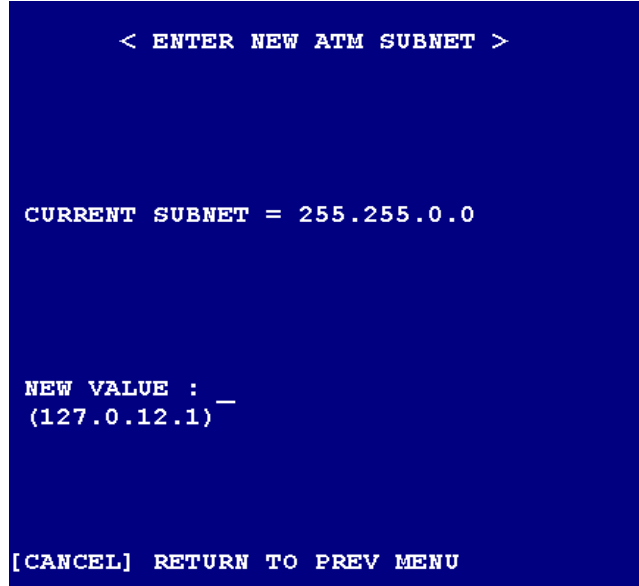
NEW VALUE : _
(127.0.12.1) _

[CANCEL] RETURN TO PREV MENU
```

**A.2.4.2 SUBNET**

1. SUPERVISOR -> 4. ATM NETWORK -> 2. SUBNET

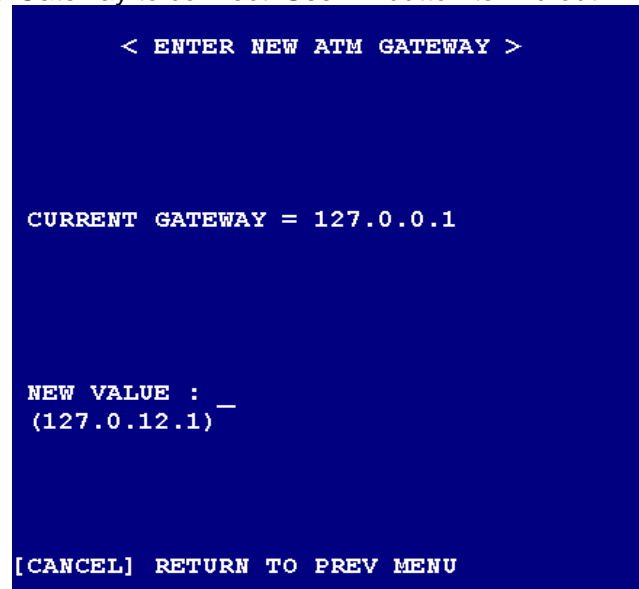
- To set up Terminal Subnet mask to connect. Use ">" button to find out "." character.



**A.2.4.3 GATEWAY**

1. SUPERVISOR -> 4. ATM NETWORK -> 3. GATEWAY

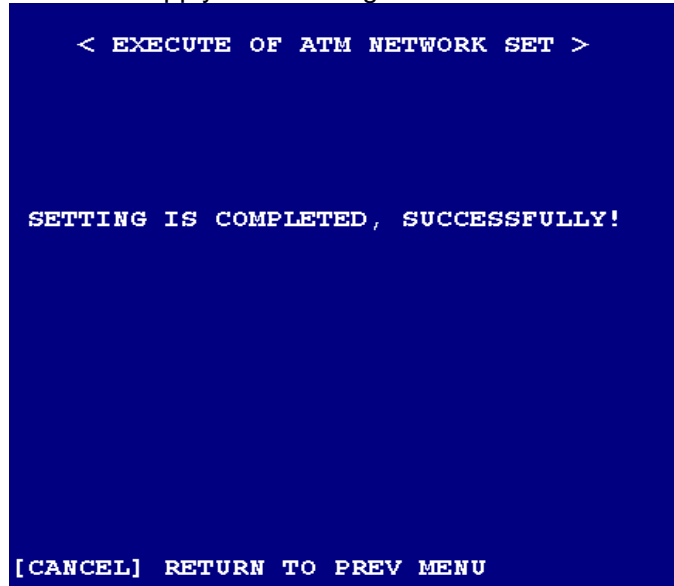
- To set up Terminal Gateway to connect. Use ">" button to find out "." character.



#### A.2.4.4 EXECUTE

1. SUPERVISOR -> 4. ATM NETWORK -> 4. EXECUTE

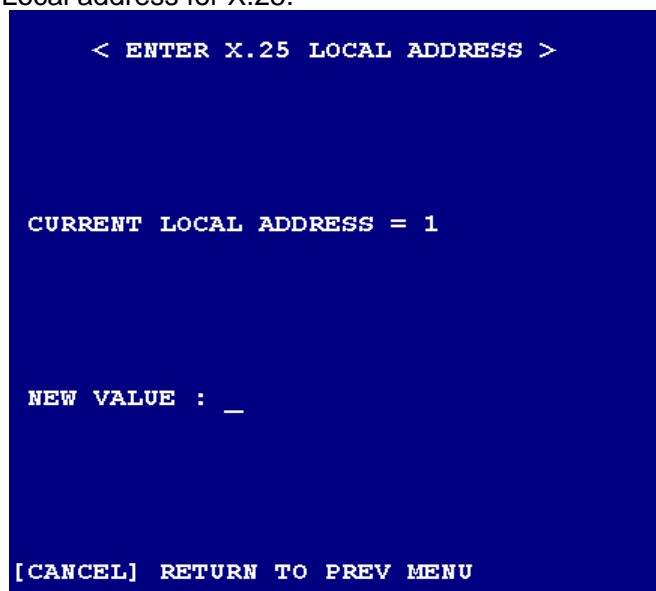
- Do necessarily this menu to apply all IP settings of Terminal.



#### A.2.4.5 X.25 LOCAL ADDRESS

1. SUPERVISOR -> 4. ATM NETWORK -> 5. X.25 LOCAL ADDRESS

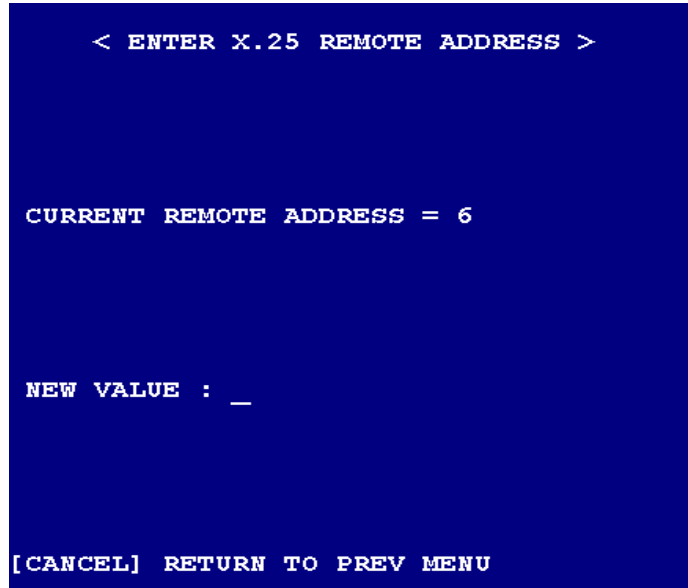
- To set up terminal Local address for X.25.



**A.2.4.6 X.25 REMOTE ADDRESS**

1. SUPERVISOR -> 4. ATM NETWORK -> 6. REMOTE ADDRESS

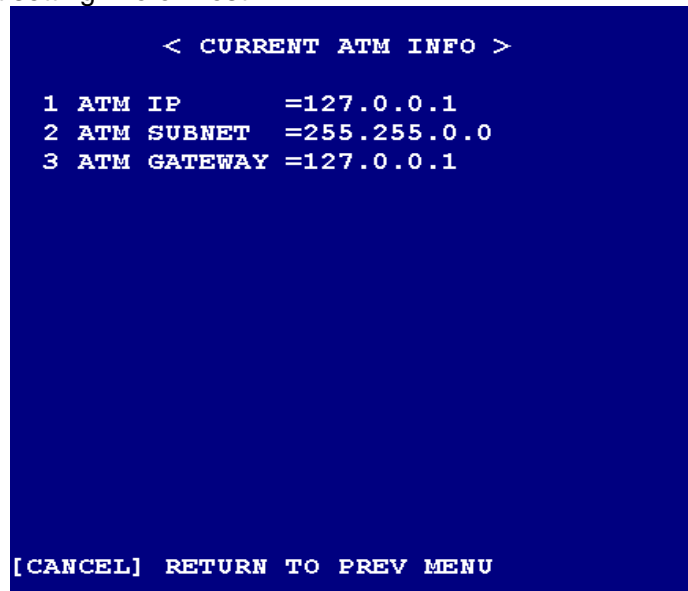
- To set up terminal Remote address for X.25.



**A.2.4.7 CURRENT STATUS**

1. SUPERVISOR -> 4. ATM NETWORK -> 7. CURRENT STATUS

- It displays current setting info of Host.





**A.2.4.8 COMMUNICATION MODE**

1. SUPERVISOR -> 4. ATM NETWORK -> 8. COMMUNICATION MODE

- To select the Protocol type to connect the Host.

```
< COMMUNICATION MODE >

CURRENT COMM MODE = X.25
1 TCP/IP
2 X.25

SELECT : _

[CANCEL] RETURN TO PREV MENU
```

**A.2.4.9 ADVANCED**

1. SUPERVISOR -> 4. ATM NETWORK -> 9. ADVANCED

```
< ADVANCED TCP/IP CONFIG >

1 MSG FORMAT
2 LEN SIZE
3 LEN FORMAT
4 LEN ADJUST
5 LEN OFFSET
6 LEN EMBED

SELECT MENU : _

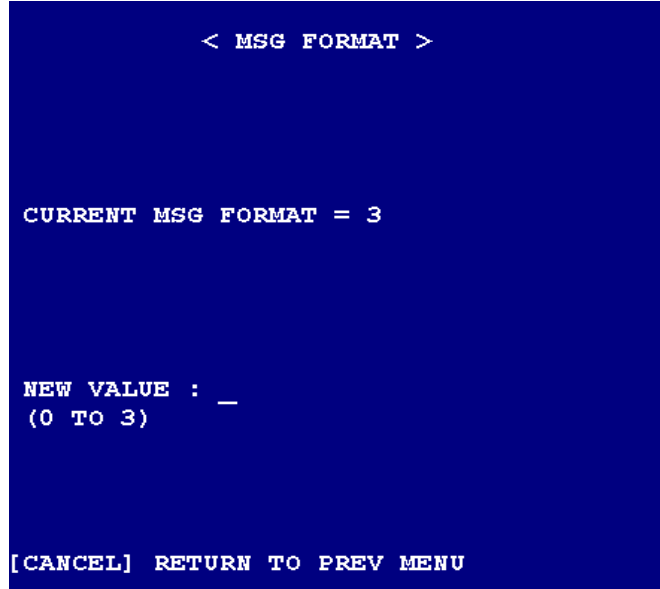
[CANCEL] RETURN TO PREV MENU
```

- The values for these are exactly the same as NCR.

Item	Default Value	Description
		1 - Only received messages will be formatted 2 - Only transmitted messages will be formatted 3 - Both received and transmitted messages will be formatted.
MSGFORMAT	3*	0 - Neither received nor transmitted messages will be formatted; 1 - Only received messages will be formatted 2 - Only transmitted messages will be formatted 3 - Both received and transmitted messages will be formatted.
LENSIZE	2*	The number of bytes in the length field where the length information is located.
LENFORMAT	1*	0 – [Intel] Length in byte-reversed notation: 0300 will be represented as 00 03. 1 – [Network Order] Length in byte notation: 0300 will be represented as 03 00. 2 – [Byte ASCII] Length will be stored as ASCII: 0300 will be represented as 30333030.
LENADJUST	0*	This field is used in conjunction with the size in Length Size. For example, in a received message, if the length field does not include the length of the header, this one-byte integer may be set to the number of bytes in the header. Alternatively, in a transmitted message, if TX Message Length Option is set to 00, this field may be used to calculate the actual length of the message to be transmitted.
LENOFFSET	0*	The number of bytes from the start of the header of a received message to where the length information is located
LENEMBED	0*	Not used

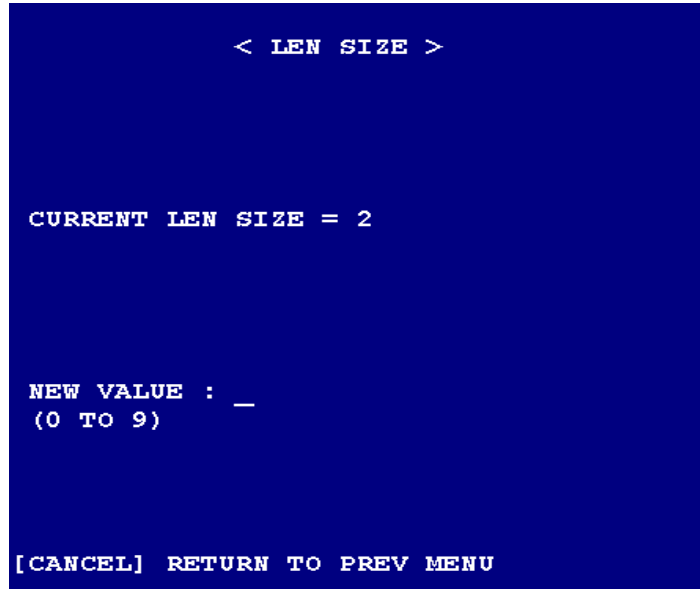
1) **ADVANCED -> 1. MSGFORMAT**

1. SUPERVISOR -> 4. ATM NETWORK -> 9. ADVANCED -> 1. MSG FORMAT



2) **ADVANCED -> 2. LEN SIZE**

1. SUPERVISOR -> 4. ATM NETWORK -> 9. ADVANCED -> 2. LEN SIZE



**3) ADVANCED -> 3. LEN FORMAT**

1. SUPERVISOR -&gt; 4. ATM NETWORK -&gt; 9. ADVANCED -&gt; 3. LEN FORMAT

```
< LEN FORMAT >

CURRENT LEN FORMAT = 1

NEW VALUE : _
(0 TO 2)

[CANCEL] RETURN TO PREV MENU
```

**4) ADVANCED -> 4. LEN ADJUST**

1. SUPERVISOR -&gt; 4. ATM NETWORK -&gt; 9. ADVANCED -&gt; 4. LEN ADJUST

```
< LEN ADJUST >

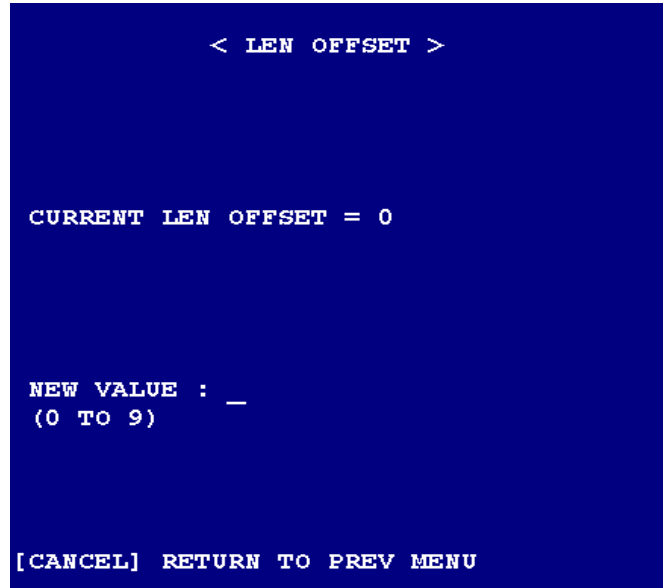
CURRENT LEN ADJUST = 0

NEW VALUE : _
(0 TO 9)

[CANCEL] RETURN TO PREV MENU
```

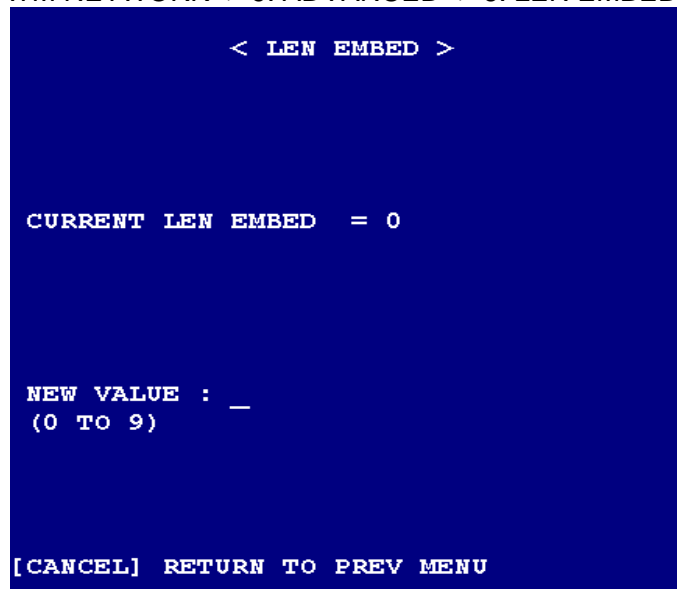
5) **ADVANCED -> 5. LEN OFFSET**

1. SUPERVISOR -> 4. ATM NETWORK -> 9. ADVANCED -> 5. LEN OFFSET



6) **ADVANCED -> 6. LEN EMBED**

1. SUPERVISOR -> 4. ATM NETWORK -> 9. ADVANCED -> 6. LEN EMBED

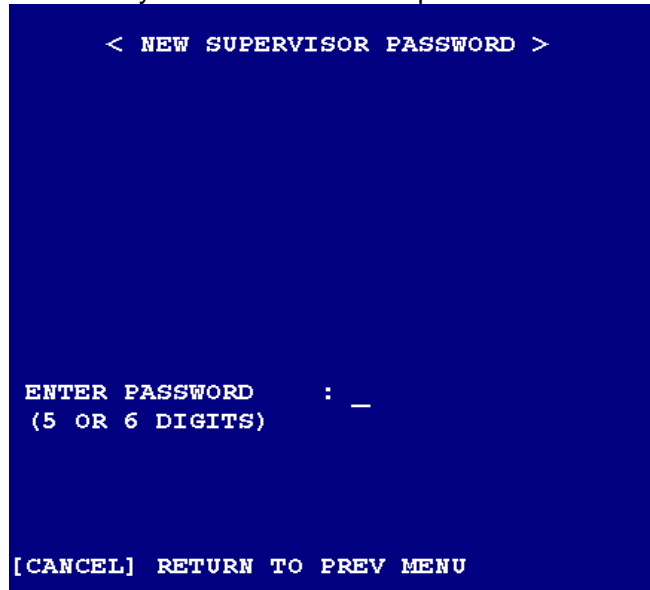


### A.2.5 REBOOT

SYSTEM WILL BE REBOOTED

### A.2.6 CHANGE PASSWORD

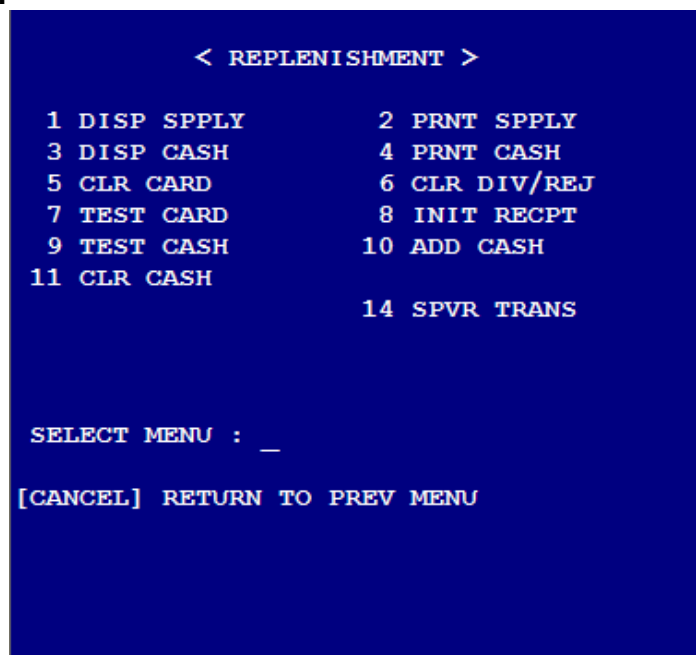
- Change the current password if you want. The default password is 's0987'.



A.3 Operator mode



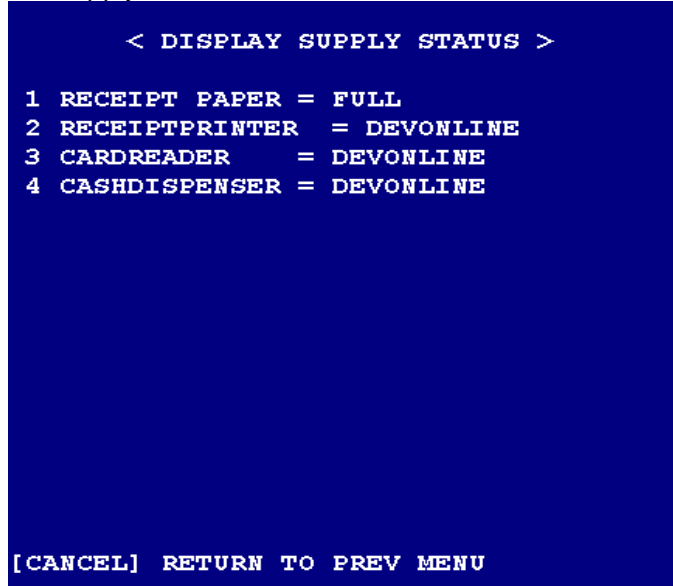
A.3.1 REPLENISH



**A.3.1.1 DISP SPPLY**

2. OPERATOR -> 1. REPLENISH -> 1. DISP SPPLY

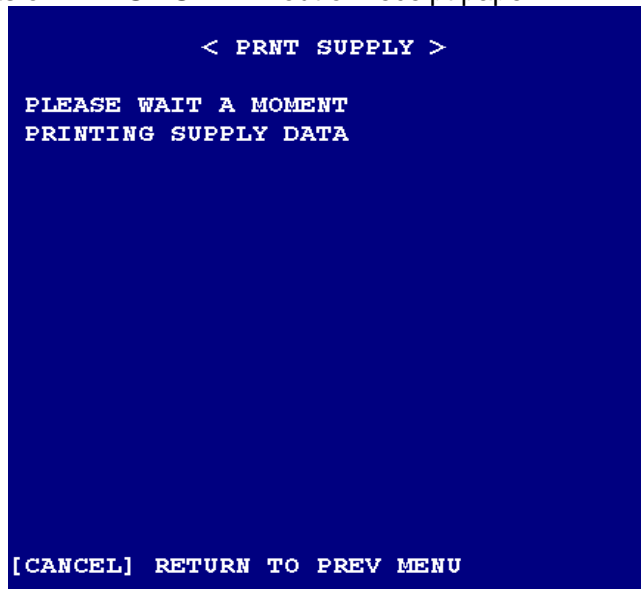
- It displays the current Supply status.



**A.3.1.2 PRNT SPPLY**

2. OPERATOR -> 1. REPLENISH -> 2. PRNT SPPLY

- To print the contents of "1. DISP SPPLY" out on receipt paper.





**A.3.1.3 DISP CASH**

2. OPERATOR -> 1. REPLENISH -> 3. DISP CASH

- It displays both the current each cassette denomination and counter.

```
          < DISPLAY CASH >

CST NO DENOMINATION COUNTER
1ST    0020000      3000
2ND    0020000      2589
3RD    0050000       300
4TH    0050000      1000

[CANCEL] RETURN TO PREV MENU
```

**A.3.1.4 PRNT CASH**

2. OPERATOR -> 1. REPLENISH -> 4. PRNT CASH

- To print the contents of "3. DISP CASH" on receipt paper.

```
          < PRNT CASH >

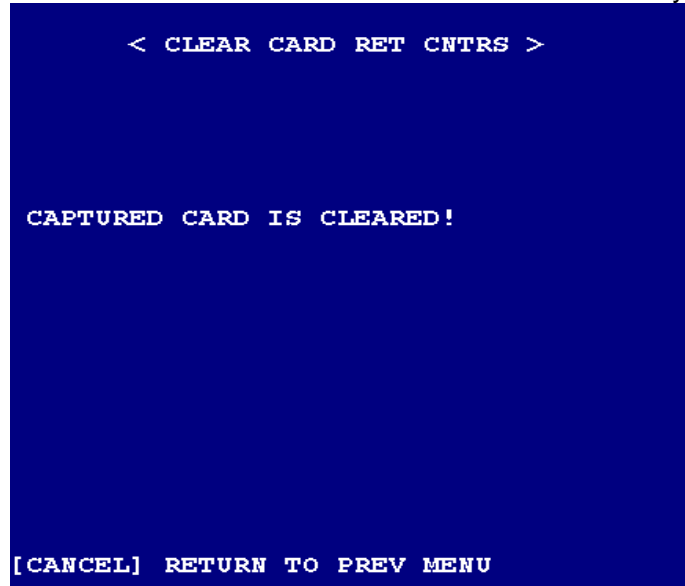
PLEASE WAIT A MOMENT
PRINTING CASH COUNT DATA

[CANCEL] RETURN TO PREV MENU
```

**A.3.1.5 CLR CARDS**

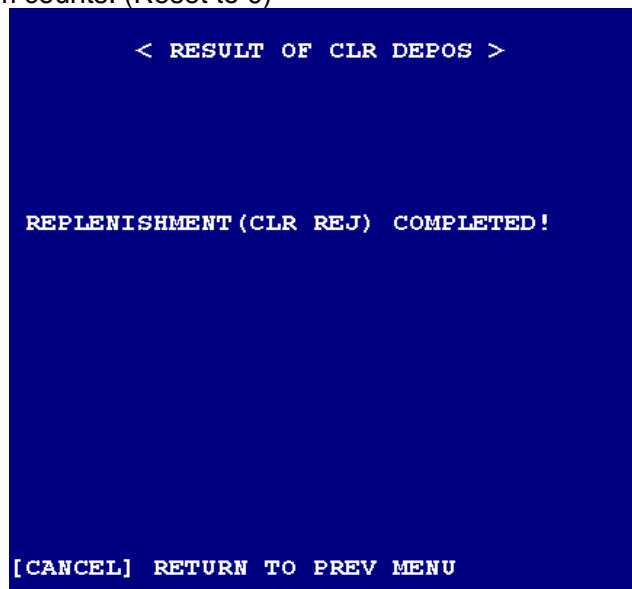
2. OPERATOR -> 1. REPLENISH -> 5. CLR CARDS

- Clear captured card item counts if the card reader of terminal is motor type. (Reset to 0)

**A.3.1.6 CLR DIV/REJ**

2. OPERATOR -> 1. REPLENISH -> 6. CLR DIV/REJ

- Clear deposited item counts. (Reset to 0)



**A.3.1.7 TEST CARD**

2. OPERATOR -> 1. REPLENISH -> 7. TEST CARD

- Initialize the Card reader

```
          < INIT CARDREADER >

RESET COMPLETED.
RESULT          = SUCCESS!
DEVICE STATUS = DEVONLINE

[CANCEL] RETURN TO PREV MENU
```

**A.3.1.8 INIT RECPT**

2. OPERATOR -> 1. REPLENISH -> 8. INIT RECPT

- Initialize the Receipt printer.

```
          < INIT RECEIPTPRINTER >

RESET COMPLETED.
RESULT          = SUCCESS!
DEVICE STATUS = DEVONLINE

[CANCEL] RETURN TO PREV MENU
```

**A.3.1.9 TEST CASH**

2. OPERATOR -> 1. REPLENISH -> 9. TEST CASH

- Initialize the Cash Dispenser.

```
          < TEST CASH >

RESET COMPLETED.
RESULT          = SUCCESS!
DEVICE STATUS  = DEVONLINE
CST 0 STATUS   = OK
CST 1 STATUS   = EMPTY
CST 2 STATUS   = EMPTY
CST 3 STATUS   = EMPTY
CST 4 STATUS   = EMPTY

[CANCEL] RETURN TO PREV MENU
```

**A.3.1.10 ADD CASH**

2. OPERATOR -> 1. REPLENISH -> 10. ADD CASH

- Manage the cash balance in ATM.

- Input the valid value less than the defined range to set up the cash count and then press "ENTER" to set up the next cassette.

```
          < CASH ENTRY >
          ADD CASH-CST1

CURRENT COUNT = 0

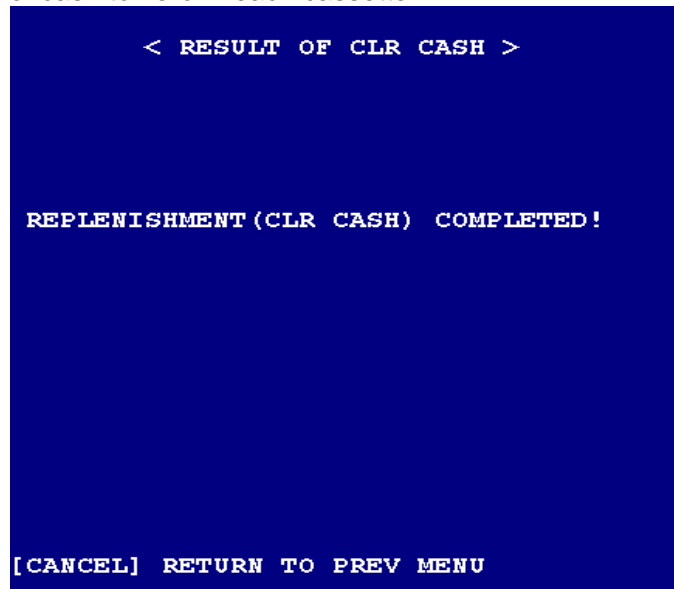
NEW VALUE :  _
(0 ~ 3000)

[CANCEL] RETURN TO PREV MENU
```

**A.3.1.11 CLR CASH**

2. OPERATOR -> 1. REPLENISH -> 11. CLR CASH

- Reset the amount of cash to zero in each cassette.

**A.3.1.12 SPVR TRANS**

2. OPERATOR -> 1. REPLENISH -> 14. SPVR TRANS

- Perform the admin transaction only if any configuration data are received from HOST. The admin transaction will be done in the sequence of following steps.

Press 14(SPVR TRANS) in 1.REPLENISH and press "ENTER".

The "Function done" message is displayed on the rear screen.

Go to "in Service mode" by pressing the "Enter In Service Mode" button and selecting "99 EXIT" menu.

If the PIN entry from Host is enabled, the "PIN- " will be displayed on the rear screen. Input the PIN for the admin transaction.

Then the "FUNC- " will be displayed on the rear screen. Enter the transaction number customized by Host.

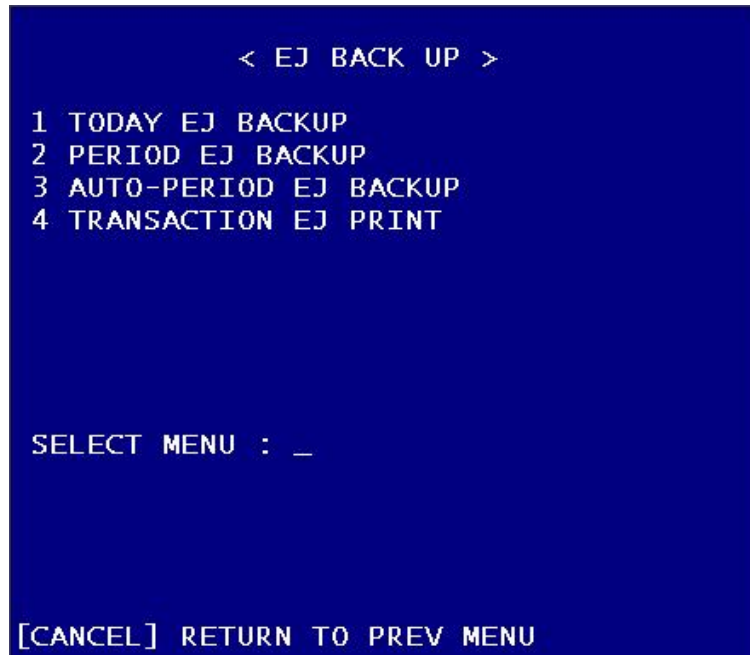
Depending on the transaction number you enter, the next message will be displayed as "CASH-", "BUFFB- ", or "BUFFC- ".

Input the valid value to continue the admin transaction.

The "WAIT..." message will be displayed.

Depending on the reply from Host, the ATM will print the receipt paper, display the next screen, or wait for the operator.

### A.3.2 EJ BACK UP



#### A.3.2.1 TODAY EJ BACKUP

EJ BACK UP -> 1. TODAY EJ BACKUP

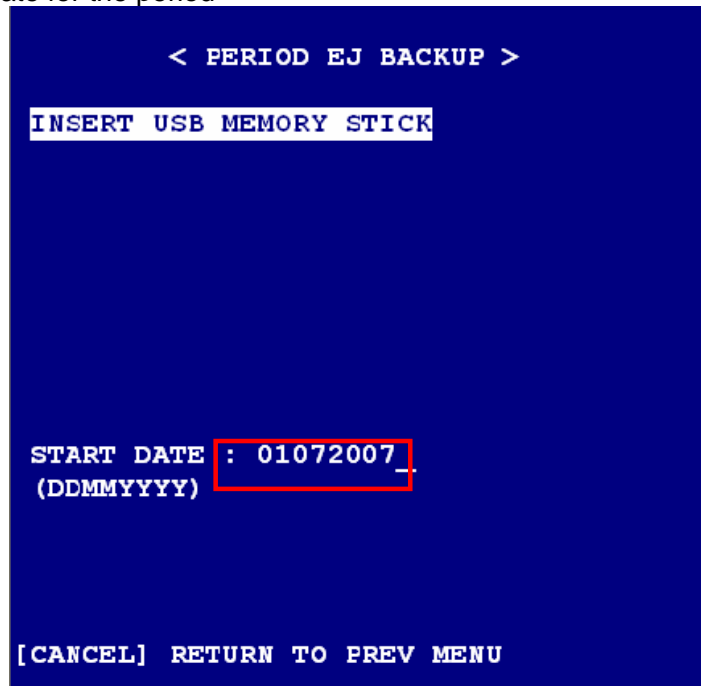
Copy the EJ file generated today into the inserted USB memory stick.

#### A.3.2.2 PERIOD EJ BACKUP

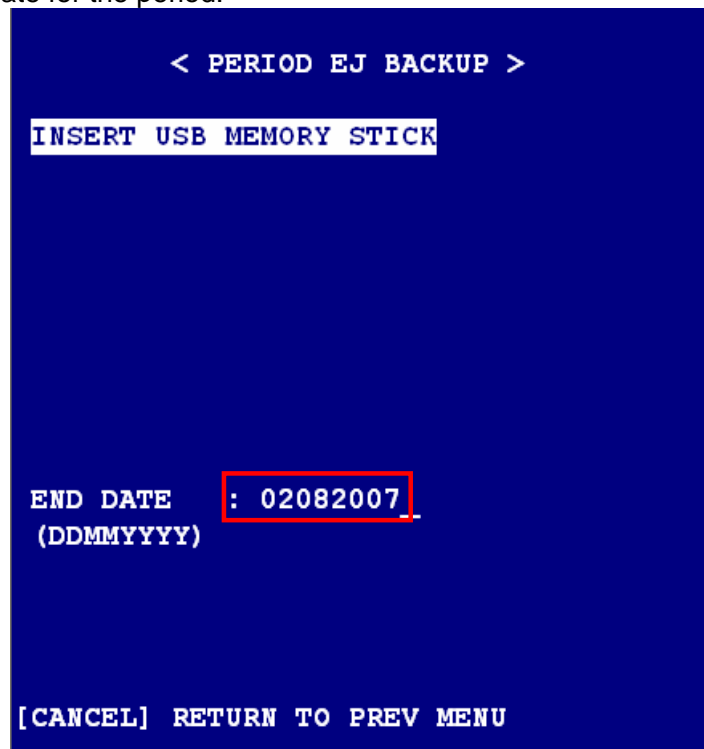
EJ BACK UP -> 2. PERIOD EJ BACKUP

Copy the EJ files, which generated for some period specified by a user, into the inserted USB memory stick

a. Enter the start date for the period



b. Enter the end date for the period.



**A.3.2.3 AUTO-PERIOD EJ BACKUP**

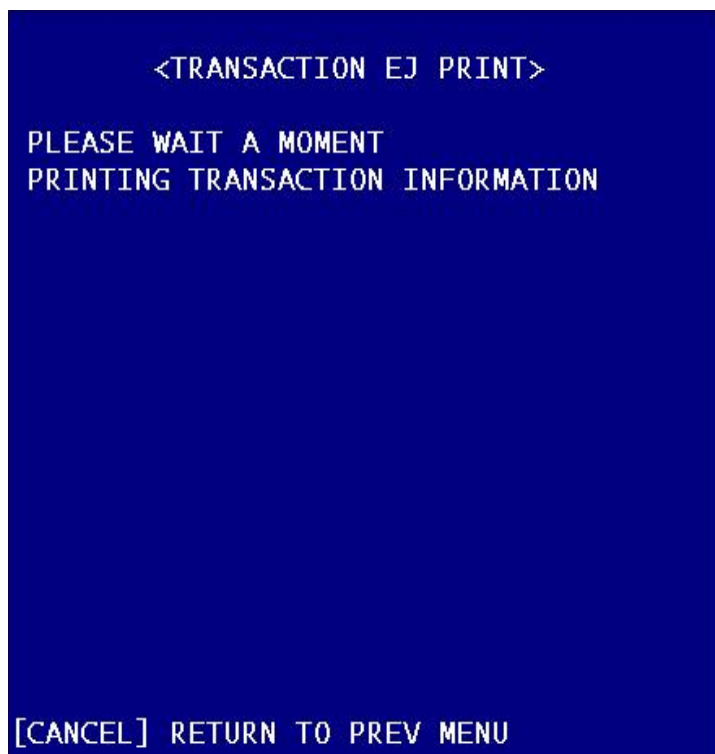
EJ BACK UP -> 2. AUTO-PERIOD EJ BACKUP

Copy the EJ files, which generated since the last AUTO-PERIOD EJ BACKUP till the day before current day, into the inserted USB memory stick.

**A.3.2.4 TRANSACTION EJ PRINT**

EJ BACK UP -> 4. TRANSACTION EJ PRINT

Print all previous transaction datas onto Receipt. All print datas will be deleted only if the printing is completed.



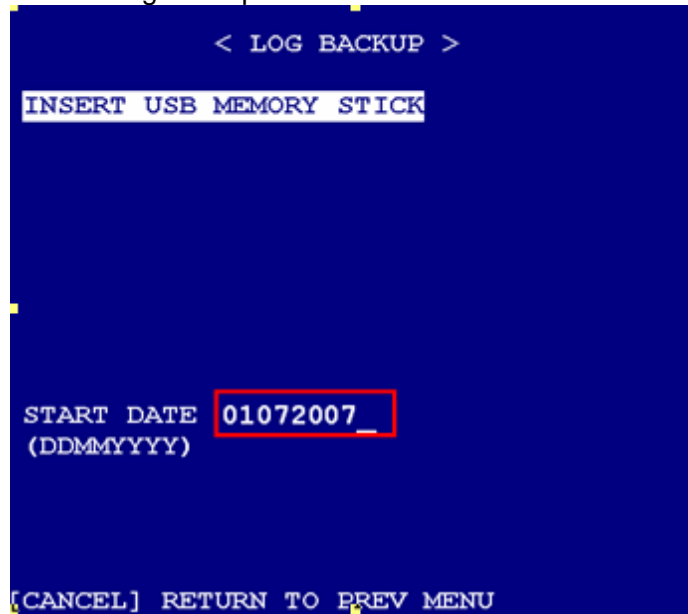


### A.3.3 LOG BACK UP

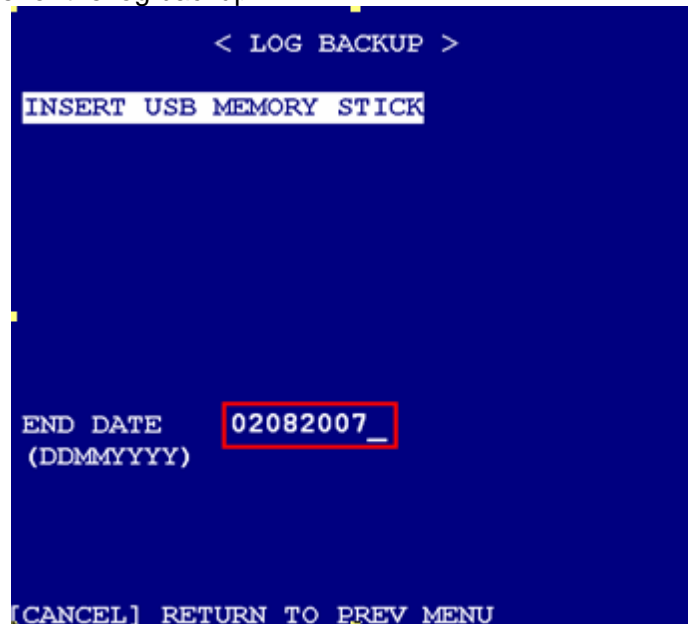
2. OPERATOR -> 3. LOG BACK UP

Copy the log files, which were generated for some period specified by a user, into the inserted USB memory stick

a. Enter the start date for the log backup

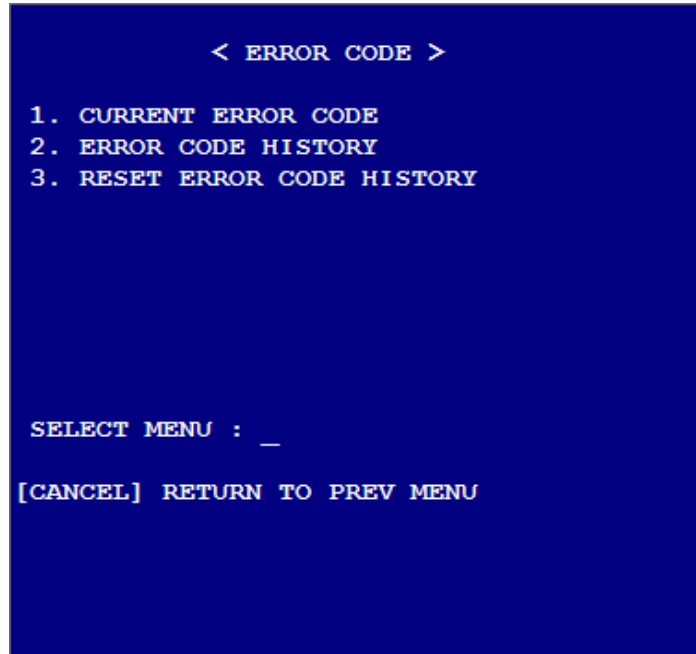


b. Enter the end date for the log backup



**A.3.4 VIEW ERROR CODE**

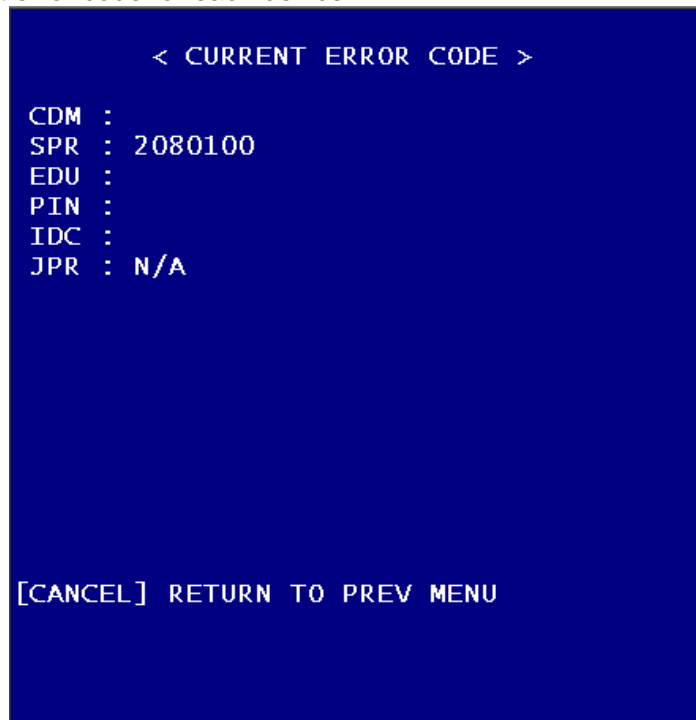
2. OPERATOR -> 4. VIEW ERROR CODE



**A.3.4.1 CURRENT ERROR CODE**

VIEW ERROR CODE -> 1. CURRENT ERROR CODE

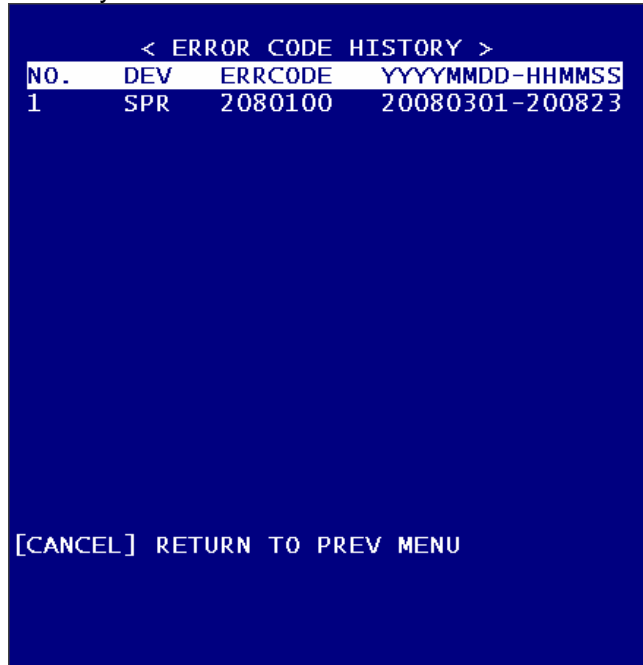
Display the current error code for each device.



**A.3.4.2 ERROR CODE HISTORY**

VIEW ERROR CODE -> 2. ERROR CODE HISTORY

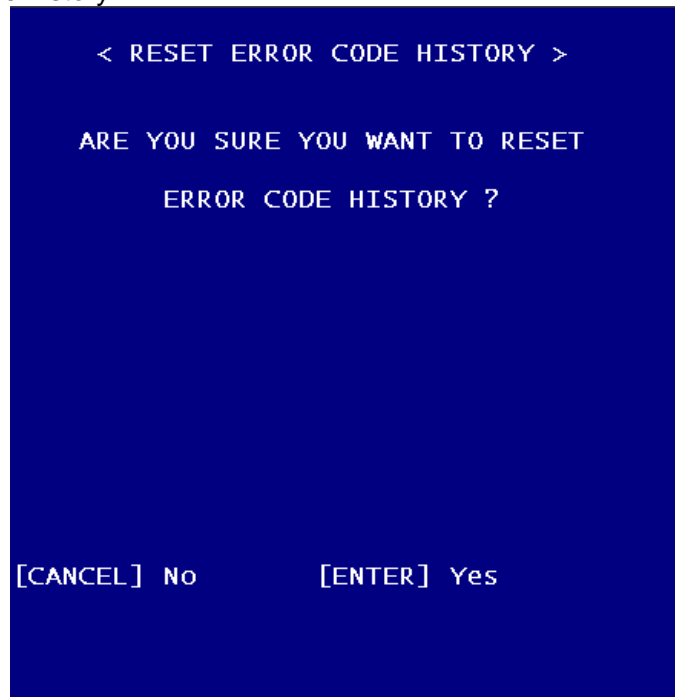
Display the error code history.



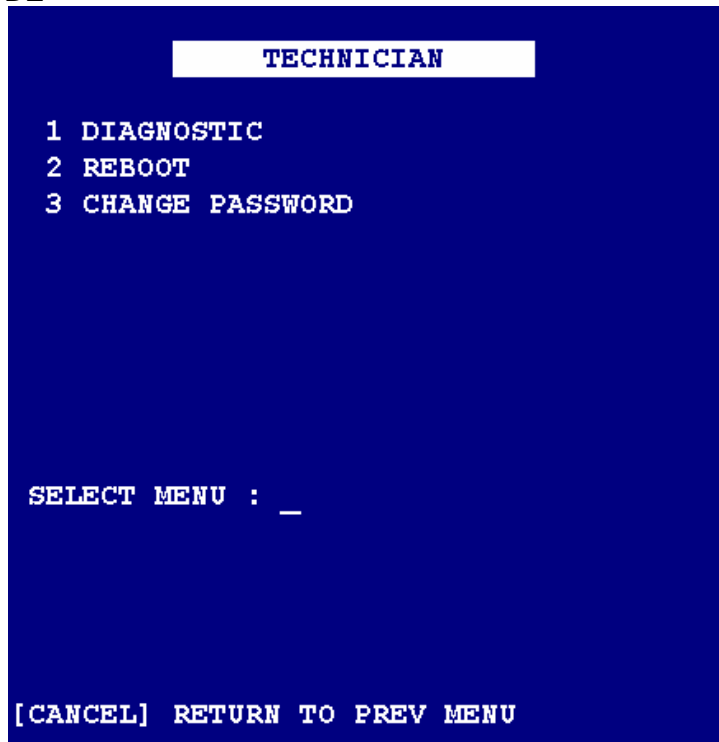
**A.3.4.3 RESET ERROR CODE HISTORY**

VIEW ERROR CODE -> 3. RESET ERROR CODE HISTORY

Reset the error code history.



### A.4 TECHNICIAN MODE



#### A.4.1 DIAGNOSTIC

- To execute the VDM

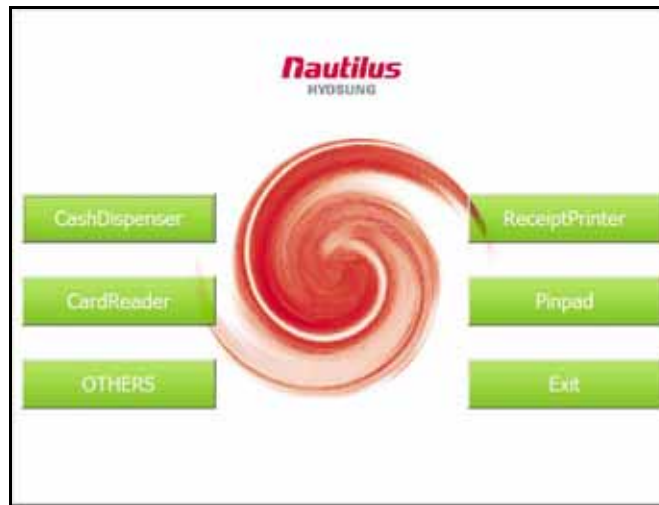
## Option A. DIAGNOSTICS

## Option A. DIAGNOSTICS

### A.1 DIAGNOSTICS of FRONT SUPERVISOR

#### A.1.1 DIAGNOSTIC MAIN

From the select menu, press 7(Diagnostics) and press **ENTER**. Wait until diagnostics menu screen appears as the below picture.



You can easily check the status of each device like cash dispenser, card reader, receipt printer, pinpad, others. When you exit this mode, system will be rebooted.

#### A.1.1.1 TEST CASH DISPENSER

On the diagnostics menu, select "**CashDispenser**" button(**F1**). Wait until Cash Dispenser menu screen appears as the below picture.

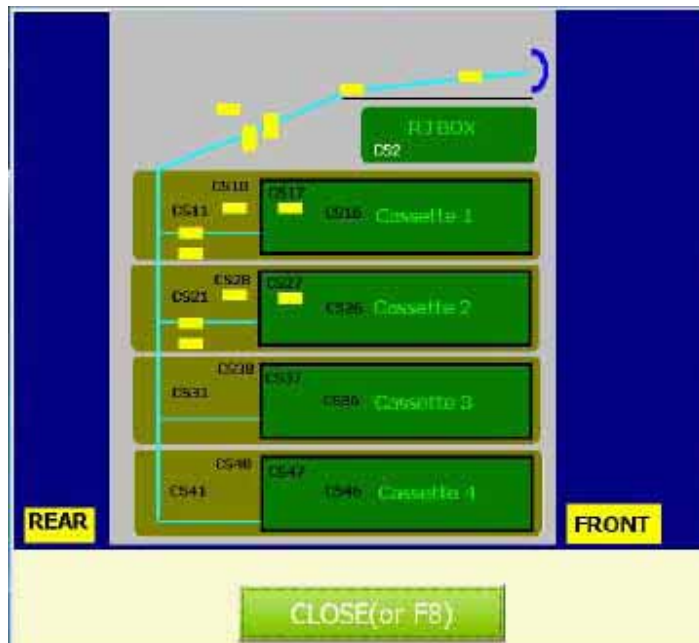


1) INITIALIZE

To initialize Cash Dispenser , just select “**Initial**” button(**F1**) in Cash Dispenser TEST.

2) STATUS

To Status Cash Dispenser , just select “**Status**” button(**F2**) in Cash Dispenser TEST. Wait until Cash Dispenser Status screen appears as the below picture.



Show the Cash Dispenser Sensor position. And It will get back upper menu which is Cash Dispenser Menu if you select “**Exit**” button(**F8**).

### 3) DISPENSE

To Dispense bills from Cash Dispenser, just select “**Dispense**” button(**F3**) in Cash Dispenser TEST.

### 4) EXIT

To finish Cash Dispenser, just select “**Exit**” button(**F8**) in Cash Dispenser TEST. And It will get back Main Screen.

#### A.1.1.2 TEST RECEIPT PRINTER

On the diagnostics menu, select “**ReceiptPrinter**” button(**F2**). Wait until Receipt Printer menu screen appears as the below picture.



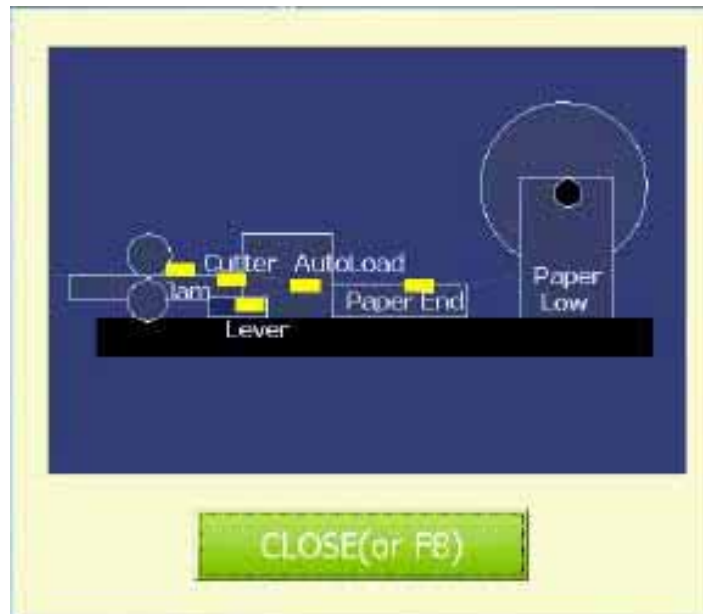
### 1) INITIALIZE

To initialize Receipt Printer, just select “**Initialize**” button(**F1**) in Receipt Printer TEST.

### 2) STATUS

To show Status Receipt Printer, just select “**Status**” button(**F2**) in Receipt Printer TEST. Wait until Receipt Printer Status screen appears as the below picture.





This screen shows you the position of sensor on Receipt Printer. And It will get back Receipt Printer Menu if you select “**Close**” button(**F8**).

### 3) TEST PRINT

To Test Print Receipt Printer, just select “**Test Print**” button(**F3**) in Receipt Printer TEST.

### 4) TEST EJECT

To Eject Receipt Printer, just select “**Eject**” button(**F4**) in Receipt Printer TEST.

### 7) EXIT

To finish testing about Receipt Printer, just select “**Exit**” button(**F8**) in Receipt Printer TEST.  
And It will get back Main Screen.

#### A.1.1.3 TEST CARD READER

On the diagnostics menu, select “**CardReader**” button(**F3**). Wait until Card Reader menu screen appears as the below picture.



1) TEST READ

To read card on card reader, just select "**Read**" button(**F7**) in Card Reader TEST.

2) EXIT

To finish testing about Card Reader, just select "**Exit**" button(**F8**) in Card Reader TEST. And It will get back Main Screen.

#### A.1.1.4 TEST PINPAD

On the diagnostics menu, select "**Pinpad**" button(**F4**). Wait until PinPad menu screen appears as the below picture after input key manager password(Default password is "000000". Please refer to "Option B. KEY MANAGEMENT" chapter.)



1) EXIT

To finish testing Pinpad, just select “Exit” button(F8) in Pinpad TEST. And It will get back Main Screen.

A.1.1.5 TEST OTHERS

On the diagnostics menu, select “Others” button(F5). Wait until OTHERS menu screen appears as the below picture.



1) TEST SENSOR

On the OTHERS menu, select “Sensor” button(F1). Wait until Sensor menu screen appears

as the below picture.



- ENABLE EVENT : To check the status of sensor, just select “**Enable Event**” button(F5).
- DISABLE EVENT : To turn the sensor to be disable, just select “**Disable Event**” button(F6).
- EXIT : To finish testing sensor, just select “**Exit**” button(F8). And It will get back OTHERS screen.

2) TEST LAMP

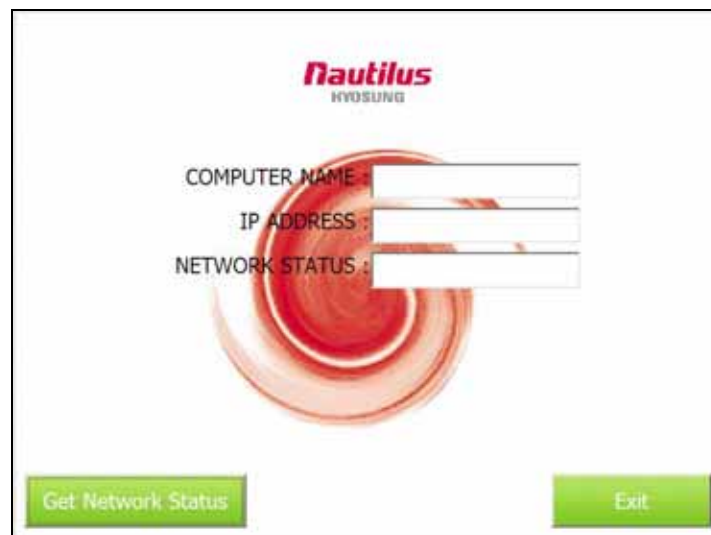
On the OTHERS menu, select “**Lamp**” button(F2). Wait until Lamp menu screen appears as the below picture.



- UP.DOWN.SELECT.ALL : To check the status of lamp, just select one of “UP”, “DOWN”, “SELECT”, “ALL” menu.(F1, F2, F3, F4)
- ON : To turn the lamp on, just select “ON” button(F5).
- OFF : To turn the lamp off, just select “OFF” button(F6).
- FLICKER : To turn the lamp to blink, just select “FLICKER” button(F7).
- EXIT : To finish testing lamp, just select “Exit” button(F8) in Lamp. And It will get back OTHERS screen.

### 3) TEST NETWORK

On the OTHERS menu, select “Network” button(F4). Wait until Network menu screen appears as the below picture.



- Get Network Status : To check Get Network Status, just select “Get Network Status” button(F7).
- EXIT : To finish testing Network, just select “Exit” button(F8) in Network. And It will get back OTHERS Screen.

To finish OTHERS, just select “Exit” button(F8) in OTHERS. And It will get back Main Screen.

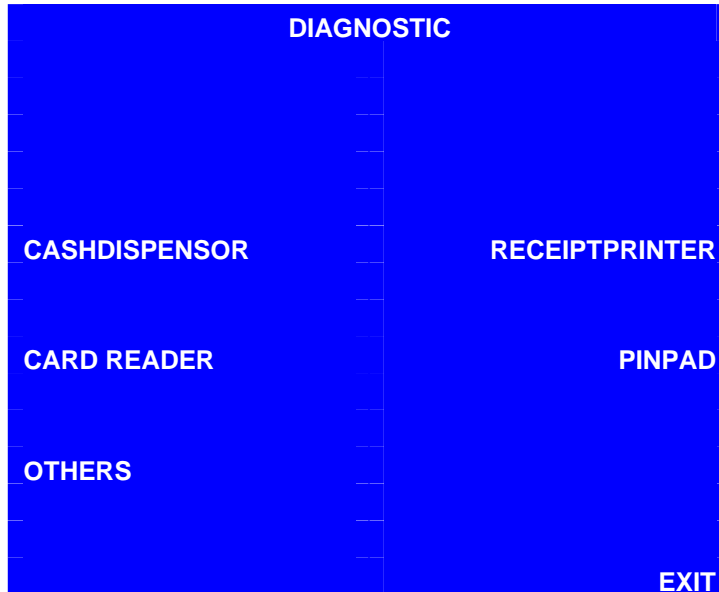
#### A.1.1.6 EXIT DIAGNOSTIC(VDM)

On the diagnostics menu, select “Exit” button(F6). And this diagnostics will be terminated.

## A.2 DIAGNOSTICS of T-SPL SUPERVISOR

### A.2.1 DIAGNOSTIC MAIN

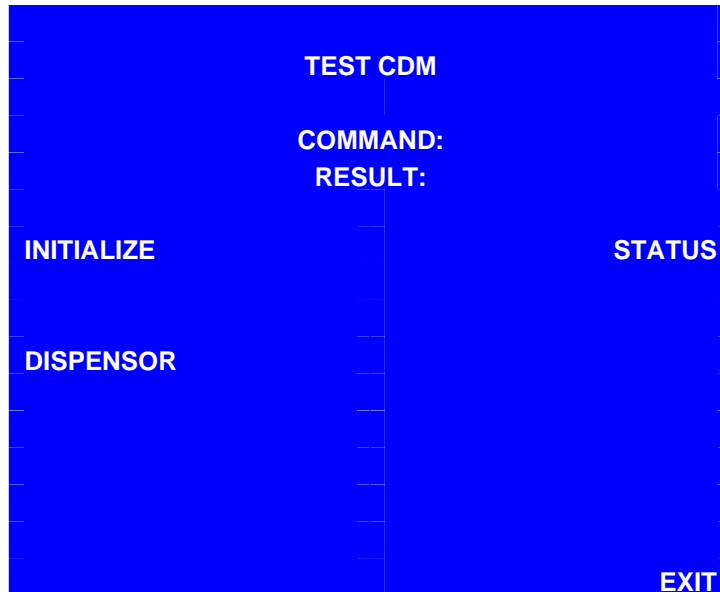
From the select menu, press **7**(Diagnostics) and press **ENTER**. Wait until diagnostics menu screen appears as the below picture.



You can easily check the status of each device such as cash dispenser, card reader, receipt printer, pinpad and others. When you exit this mode, system will be rebooted.

#### A.2.1.2 CASHDISPENSOR

On the diagnostics menu, you can enter CASHDISPENSOR menu by pressing **F1** function key. Wait until Cash Dispenser menu screen appears as the below picture. If you want to finish CASHDISPENSOR, just press **F8** function key. And It will get back Main Screen.

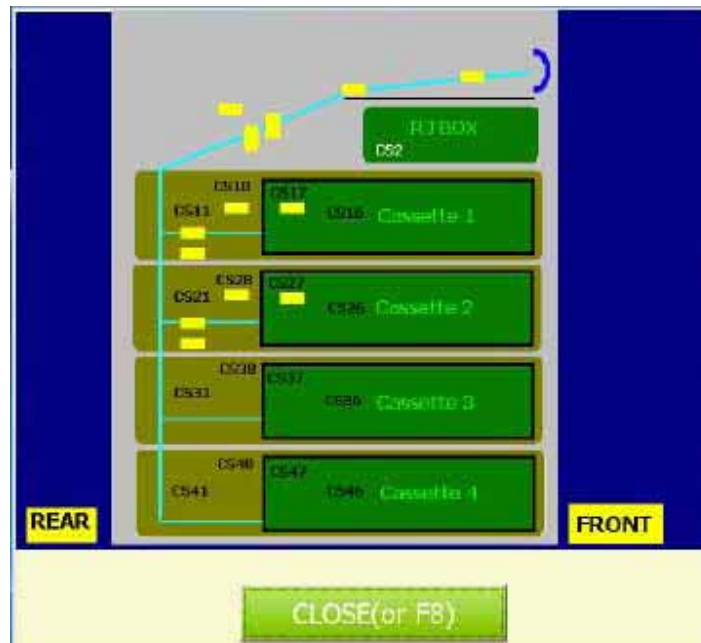


1) INITIALIZE

To initialize Cash Dispenser , just press **F1** function key in TEST CDM. The test results will appear on screen, e.g. RESULT: NORMAL.

2) STATUS

To Status Cash Dispenser , just press **F2** function key in Cash Dispenser TEST. Wait until Cash Dispenser Status screen appears as the below picture at the front screen.



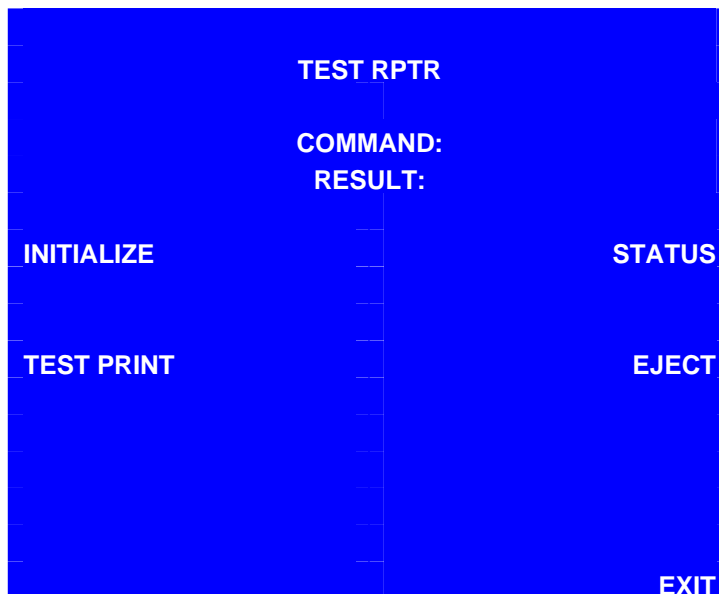
Show the Cash Dispenser Sensor position. And It will get back upper menu, in other words Cash Dispenser Menu if you press **F8** function key.

3) DISPENSE

To dispense bills from Cash Dispenser, just press **F3** function key **3** in TEST CDM. The test results will appear on screen, e.g. RESULT: NORMAL.

**A.2.1.3 RECEIPTPRINTER**

On the diagnostics menu, press **F2** function key. Wait until Receipt Printer menu screen appears as the below picture.



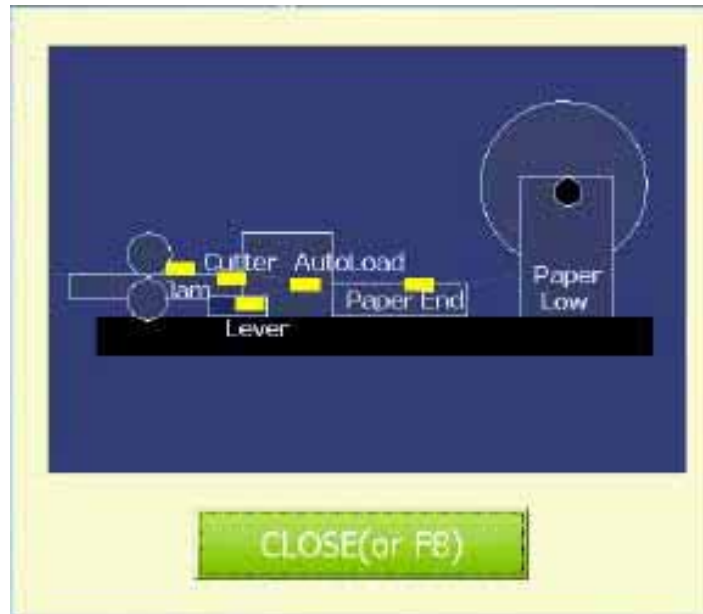
1) INITIALIZE

To initialize Receipt Printer, press **F1** function key in Receipt Printer TEST. The test results will appear on screen, e.g. RESULT: NORMAL.

2) STATUS

To Status Receipt Printer, press **F2** function key in Receipt Printer TEST. Wait until Receipt Printer Status screen appears as the below picture.





This screen shows you the position of sensor on Receipt Printer. And It will get back Receipt Printer Menu if you press **F8** function key.

### 3) TEST PRINT

To Test Print Receipt Printer, press **F3** function key in Receipt Printer TEST. The test results will appear on screen, e.g. RESULT: NORMAL.

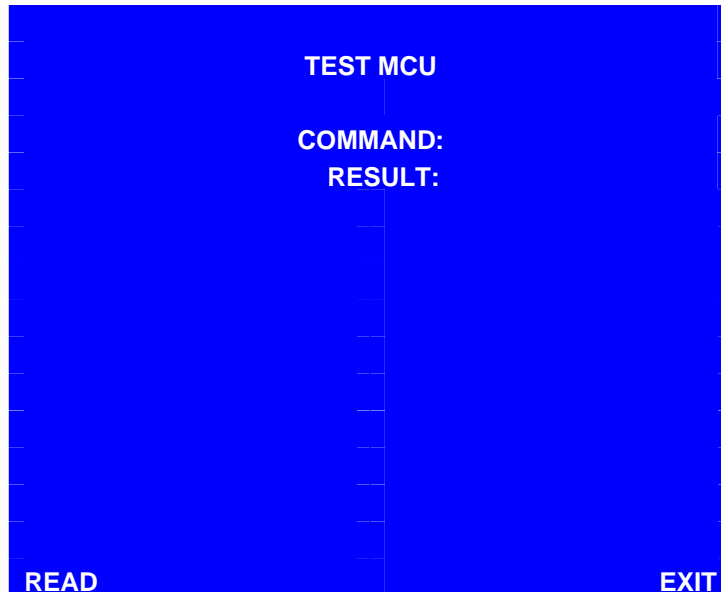
### 4) TEST EJECT

To Eject Receipt Printer, press **F4** function key in Receipt Printer TEST. The test results will appear on screen, e.g. RESULT: NORMAL.

If you want to finish TEST RPTR, just **F8** function key in TEST RPTR. And It will get back Main Screen

#### A.2.1.4 CARDREADER

On the diagnostics menu, press **F3** function key in main menu of DIAGNOSTIC. Wait until Card Reader menu screen appears as the below picture.



2) READ

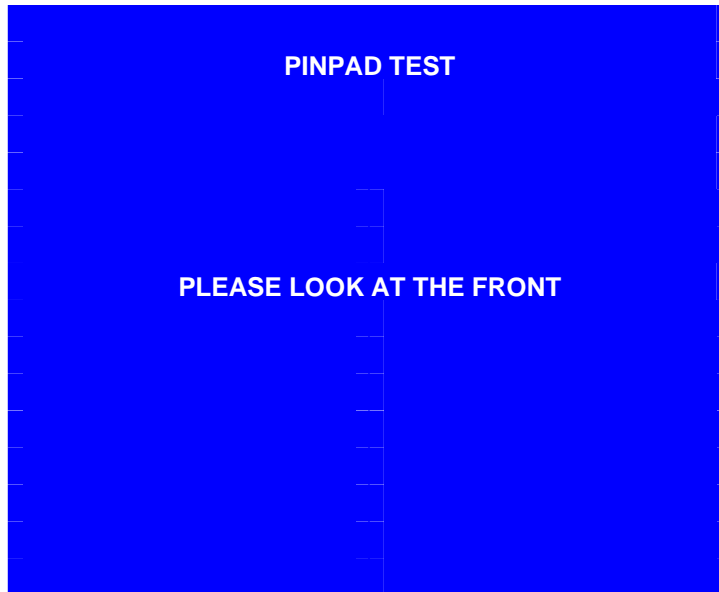
To read card on card reader, press **F7** function key in TEST MCU.

2) EXIT

To finish testing about TEST MCU, just press **F8** function key in TEST MCU. And It will get back Main Screen.

#### A.2.1.5 TEST PINPAD

On the diagnostics menu, press **F4** function key in main menu of DIAGNOSTIC. Wait until information screen appears as the below picture. Access the key management utility on the Front Screen. For further instructions, please see "KEY MANAGEMENT" section of [6.Appendix chapter](#) (Option B. Key Management).

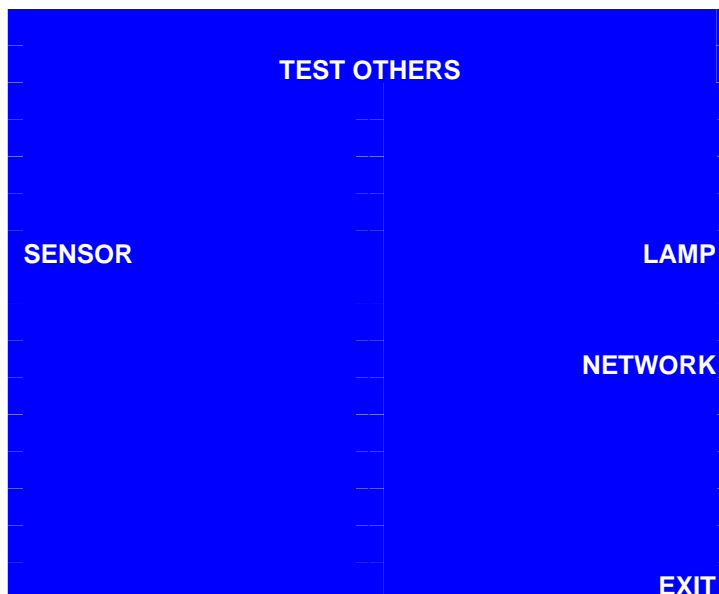


2) EXIT

To finish testing Pinpad, just press **F8** function key in Pinpad TEST. And It will get back Main Screen.

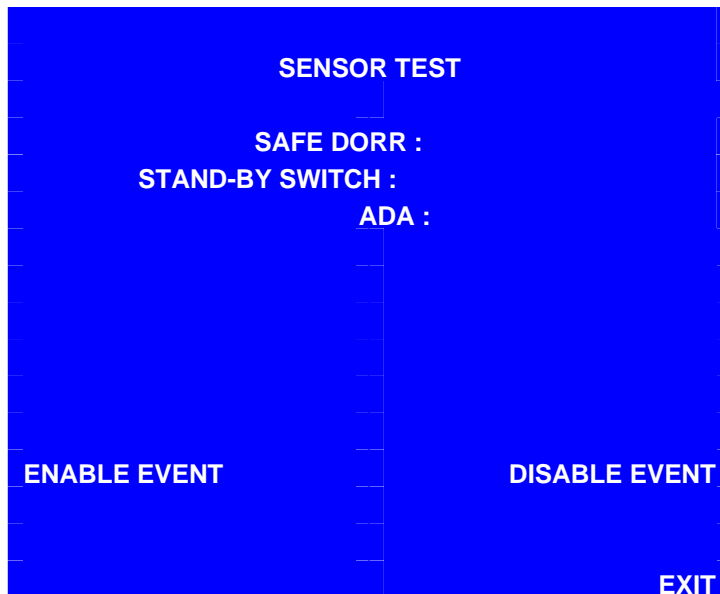
**A.2.1.6 TEST OTHERS**

On the diagnostics menu, press **F3** function key. Wait until OTHERS menu screen appears as the below picture.



### 3) TEST SENSOR

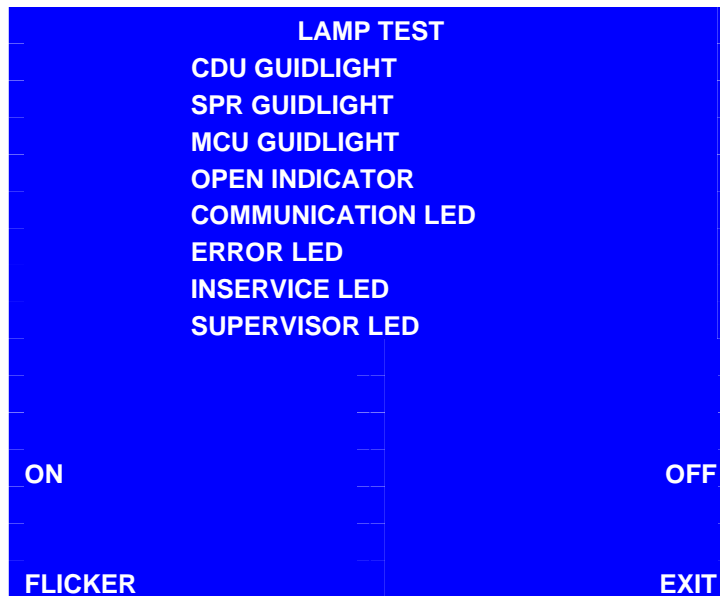
On the OTHERS menu, press **F1** function key. Wait until Sensor menu screen appears as the below picture.



- ENABLE EVENT : To check the status of sensor, just press **F5** function key.
- DISABLE EVENT : To turn the sensor to be disable, just press **F6** function key.
- EXIT : To finish testing sensor, just press **F8** function key. And It will get back OTHERS screen.

### 4) TEST LAMP

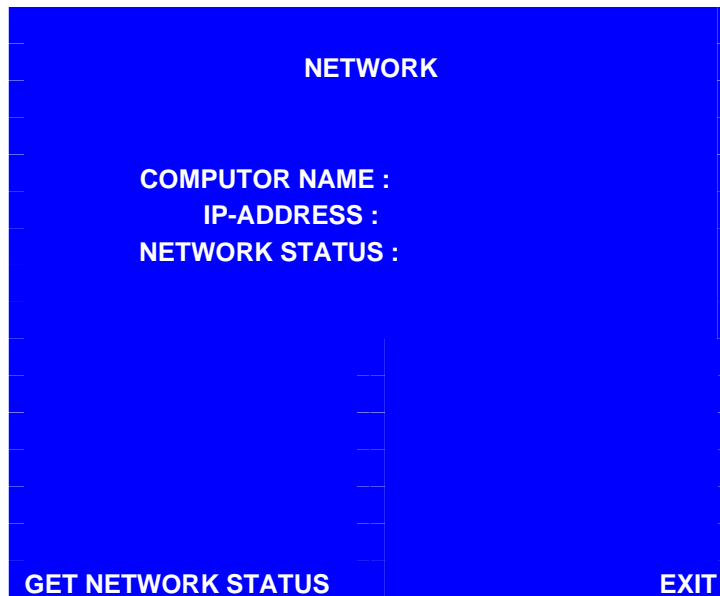
On the OTHERS menu, press **F2** function key. Wait until Lamp menu screen appears as the below picture.



- ON : To turn the all guide light on, just press **F5** function key.
- OFF : To turn the all guide light off, just press **F6** function key.
- FLICKER : To turn the all guide light to blink, just press **F7** function key.
- EXIT : To finish testing lamp, just press **F8** function key. And It will get back OTHERS screen.

### 3) TEST NETWORK

On the OTHERS menu, press **F4** function key. Wait until Network menu screen appears as the below picture.



- Get Network Status : To check Get Network Status, just press **F7** function key in NETWORK.
- EXIT : To finish testing Network, just press **F8** function key in NETWORK. And It will get back OTHERS Screen.

To finish OTHERS, just press **F8** function key in OTHERS. And It will get back Main Screen.

#### A.2.1.7 EXIT DIAGNOSTIC(VDM)

On the diagnostics menu, press **F8** function key. And this diagnostics will be terminated.

## Option B. KEY MANAGEMENT

## B. KEY MANAGEMENT

### B.1 Start Screen



Fig.B.1 Start Screen (Enter Password)

- Press 'Start' button and enter the 1st password to execute program.  
(Default password is '000000')
- Press 'Start' button and enter the 2nd password to execute program.  
(Default password is '000000')
- If you enter 2 passwords correctly, program would start like below screen.



## B.2 Main Screen



Fig. B.2 Main Screen

- **Change Password**  
To change password for execution program;
- **Set Key Mode**  
This ATM supports the capability for DES (Single-DES, Dual-DES, Triple-DES, MAC, and Unique Key). You can select DES mode by entering this function.
- **Set Key Index**  
You can enter multiple master keys and have to select one of them. For security issue, DP may change key index when they need to change master key.
- **Enter Key**  
The authorized persons by bank or DP will enter the master key(s) with this menu.
- **Clear EPP**  
Initialize all data in the EPP device. Injected all keys are deleted, and key mode becomes 0.
- **Check Key Status**  
The authorized persons can verify the injected key(s) with this menu after key injection.

### B.3 Setting the Key Mode



Fig.B.3 Set Key Mode Screen

1. Enter mode number(See “Key Mode Information” on screen)
2. Enter “PIN Format” (Default is “0”)
3. Enter ‘Part Number” (Default is “0” and do not need consider this field.)
4. Enter “PIN Pad Data”
5. Submit by touching “EXECUTE”. If submission is successful, “EXECUTION SUCCESS” message will be displayed on the screen. If not, “EXECUTION FAILURE” message will be displayed.
6. If you want to see help, press ‘Help” button.

To move the field after entering data, touch “Move Field”

### B.4 Key Injection



Fig.B.4 Inject Master Key Screen

1. Enter “1” at “Part number” field. (Part A : 1, Part B : 2)
  - ⇒ The cardholders can not make the financial transaction until the injection of Part A and Part B is finished.
  - ⇒ The way how to enter Part B data is same to Part A except Part number “2”
2. Enter the Key Index.
3. Submit by touching “Execute” button.
4. “Input Key” field will be activated on the screen with a cursor blinking. Enter the left half of the Part A key.
5. The message, “PART A Key (LEFT) input finished! Please press execute button to verify.” will be displayed on the screen. Submit by touching “Execute” button.
6. The message, “Verify Key” will be displayed on the screen with a cursor blinking. Enter the left half of the Part A key again.
7. The message, “Part A Key (LEFT) input success!” will be displayed on the screen followed by “Press the execute button to input Part A key (RIGHT)”. Submit by touching “Execute” button.
8. “Input Key” field will be activated on the screen with a cursor blinking. Enter the right half of the Part A key.
9. The message, “PART A Key (RIGHT) input finished! Please press execute button to verify.” will be displayed on the screen. Submit by touching “Execute” button.
10. The message, “Verify Key”, will be displayed on the screen with a cursor blinking. Enter the right half of the Part A key again.
11. The message, “Part A Key (RIGHT) input success!” will be displayed on the screen. Submit by touching “Execute” button.
12. Exit by touching “Exit” button.

### B.5 Confirmation of the injected keys

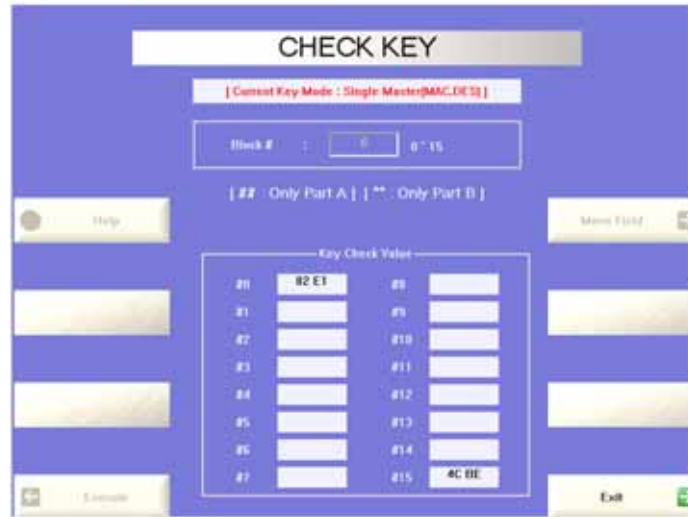


Fig.B.5 Check Key Screen

Use the Check Key menu to determine which index keys (or partial keys) have been installed on. As shown above, there are full keys installed on positions 1, 5 and 12. Only the index which has been set in the Key Index menu will be used, the other keys are only stored.

If an authorized person has entered a partial key (only his/her half) then the ##### or \*\*\*\* is used to tell you which partial key was entered. Once both keys have been properly entered a check digit will be assigned to the index to let you know both halves have been installed.

## B.6 Change password for execution program



Fig.B.6 Change Password Screen

If you want to change password for executing program, press 'Change password' button in the main screen. And press 'Password #1' and "Password #2" button to change password;.

### DES Key Injection

To make card holder's transaction, DES key injection is necessary.

- **Entering to DES Key Injection**



- 1) Press "Key Management" button.  
Key Management Starting Screen will be displayed. Enter 2 passwords (Default password is '000000')

Fig.B.7 Key Management Starting Screen

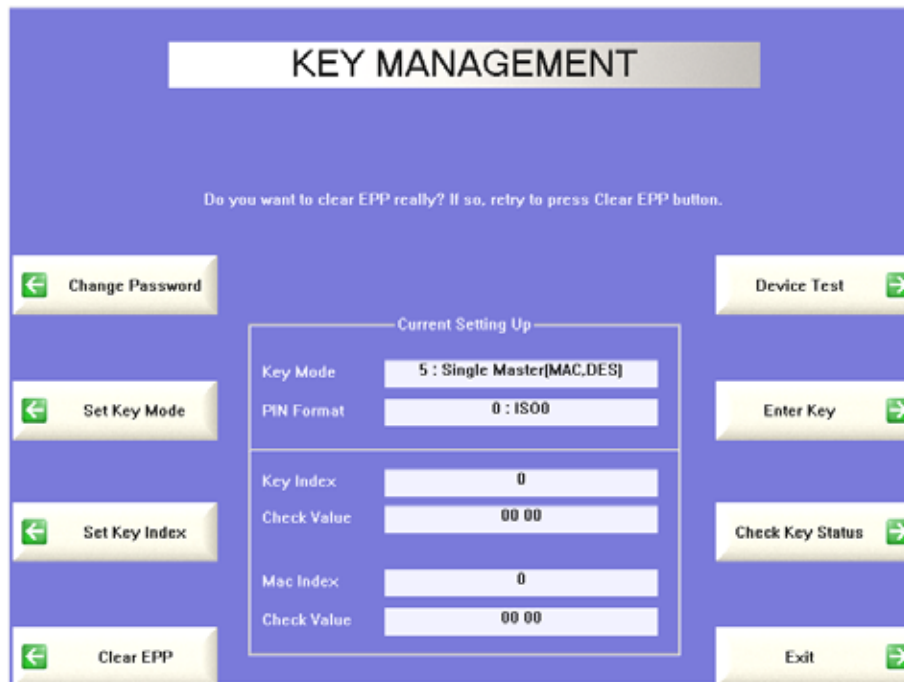


Fig. B.8 Key Management Main Screen

Device Test : You can test the normal state of customer keyboard (EPP) by pressing keys.

The key value will be displayed on screen whenever you press a key.

Set Key Mode : Before DES key injection, you have to enter some values (key mode and PIN format) at this screen.

Set Key Index : You can enter multiple master keys and have to select one of them. For security issue, DP may change key index when they need to change master key.

Enter Key : After key mode setting at Set Key Mode, the only authorized persons can enter keys

Check Key Status : The authorized persons can verify the key enter after key injection

Clear EPP : All data in EPP will be cleared.

DES Key Mode Setting



Fig.B.9 DES Key Mode Setting Screen

- 1) Enter Key Mode, PIN Format and PIN Pad Data.
- 2) Submit by pressing "Execute" button
- 3) Return to main screen by pressing "Exit" button

"Key Mode" defines the type of DES key (8 : Single DES, 9 : Triple DES).

"PIN Format" defines the type of algorithm (0 : ISO-0, 1 : Diebold). Nautilus Hyosung recommends strongly no changes. Default value is "0".

"PIN Pad Data" is a padding data in EPP itself. Nautilus Hyosung recommends strongly no changes. Default value is "0".



● DES Key Injection



1) Select “Enter Key”, “Master Key”, “Unique Key”, “Mac Key” sequentially

Master Key : Single DES

Unique Key

Mac Key

Master Key (Triple) : Triple DES

Unique Key (Triple)

Mac Key (Triple)



2) Enter “Part Number”, “Block #”, “Key Index” and “Execute” button following Part number “1” or “2”.

‘1’ : Part A

‘2’ : Part B



Fig.B.10 DES Key Injection Screen

- 3) Enter 16 left half digits for Part A using customer keyboard(EPP) and press "Execute" button to submit.

Please enter same values one more time to verify what you entered is correct.

- 4) Enter 16 right half digits for Part A using customer keyboard(EPP) and press "Execute" button to submit.

- 5) Enter Part B keys with same manner to Part A.

Mapping table to enter DES keys

Number	Customer Keyboard (EPP)	DES Key
1	0	0
2	1	1
3	2	2
4	3	3
5	4	4
6	5	5
7	6	6
8	7	7
9	8	8
10	9	9
11		A
12		B
13	Space (Blank)	C
14	Cancel	D
15	Clear	E
16	Enter	F

**Table B.1 Key Mapping Table**

There are 2 kinds of customer keyboard(EPP). The difference is the position of 'Enter', 'Clear' and 'Cancel' keys. The memory is efficient that 'Enter' key is always mapped to 'F'.

● **Verification of DES Key Injection**



Fig.B.11 Verification Screen of Key Injection

- 1) Go into Verification screen by pressing "Check Key Status" button on Key Management Main Screen.  
The setup data will be displayed.

## Option C. Operator Function of H-SPL





## C.1 OPERATOR FUNCTION OF H-SPL

### C.1.1 DISPLAY ATM INFO

The following items are information about ATM. You can confirm just by pressing “77” on H-SPL. If pressing “77”, H-SPL shows below information in order.

0	<	OP	STATUS	>		
1	88	(66)	OP	SEL	NN	
2	MACH	INE	ATM	STA		
3	DOOR	STATUS				
4	ATM	MESSAGE				
5	ERROR	CODE				
6	CST1	: 9999	(1000)			
7	CST2	: 9999	(1000)			
8	CST3	: 9999	(1000)			
9	CST4	: 9999	(1000)			
10	CDU	: NOR	MCU	: NOR		
11	SPR	: NOR	JPR	: NOR		
12	C1B	: NOR	C2B	: NOR		
13	C3B	: NOR	C4B	: NOR		
14	TERM	ID	: 12345678			
15	88	: HSPL	66	: FRONT		

### CONTENTS

- Show ATM's status information in the screen
- ATM's status, door status, error code
- Cassette #1,2,3,4 information, CDU, MCU, SPR, JPR, C1B, C2B, C3B, C4B and Terminal ID information
- Press **66**, move to Front OP mode
- Press **88**, move to H-SPL OP mode
- Press **77**, move to next line
- Press **74**, move to previous line

- 1) ATM STATUS(INIT/ERROR/CLERK/READY/CUSTOM/TRAN/DOWN)
- 2) DOOR STATUS(CLOSE or OPEN)
- 3) ERROR CODE
- 4) CST1 COUNT : Remained notes(Denomination)  
e.g) if 1000 notes of \$20, 1000(20). If not supported, N/A(-)
- 5) CST2 COUNT : Remained notes(Denomination)
- 6) CST3 COUNT : Remained notes(Denomination)
- 7) CST4 COUNT : Remained notes(Denomination)
- 8) CDU/MCU STATUS(NORMAL/AUTO-OFF/OFF/MISSING/N/A)
- 9) SPR/JPR STATUS(NORMAL/AUTO-OFF/OFF/MISSING/N/A)
- 10) CST1/2 STATUS(NORMAL/LOW/EMPTY/MISSING/N/A)
- 11) CST3/4 STATUS(NORMAL/LOW/EMPTY/MISSING/N/A)
- 12) TERMINAL ID
- 13) 88: HSPL    66: FRONT

**C.1.2 REPLENISH(04)**

This menu contains TOTAL, ADD CASH, and PRINT CASH . Pressing “77” shows sub menu. To go back to the previous screen, just press the CANCEL key on H-SPL.

0	<	REPLENISH	>																	
1																				
2	1	)	TOTAL																	
3	1	2	)	ADD	CASH															
4	4	>	PRINT	CASH																
5																				
6																				
7																				
8																				
9																				
10																				
11																				
12																				
13																				
14																				
15																				

**CONTENTS**

There are TOTAL, ADD CASH, PRINT CASH functions

Press **04**, print CASH information

Press **01**, move to TOTAL screen

Press **12**, move to ADD CASH screen

Press **CANCEL**, move to SUPERVISOR screen

Press **77**, move to next line

Press **74**, move to previous line

**C.1.2.1 TOTAL (01)**

This menu contains DAY TOTAL, TRIAL DAY TOTAL, CASSETTE TOTAL and TRIAL CASSETTE TOTAL. Pressing sub menu number key in H-SPL operates related function. To go back to the previous screen, just press the **CANCEL** key on H-SPL.

- DAY TOTAL : Do settlement with host. After settlement, clears transaction information.
- TRIAL DAY TOTAL : Just do settlement with host.( Not clear transaction info.)
- CASSETTE TOTAL : Show note count and then clear note count.
- TRIAL CASSETTE TOTAL : Just show note count.( Not clear note count)



0		<	TOTAL	>		
1					SEL:NN	
2	1)	DAY	TOTAL			
3	2)	TRIAL	DAY	TOT		
4	3)	CST	TOTAL			
5	4)	TRIAL	CST	TOT		
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						

**CONTENTS**

There are DAY TOTAL, TRIAL DAY TOTAL CASSETTE TOTAL, TRIAL CASSETTE TOTAL functions

Press **01**, print DAY TOTAL

Press **02**, print TRAIL DAY TOTAL

Press **03**, print CASSETTE TOTAL

Press **04**, print TRIAL CASSETTE TOTAL

Press **CANCEL**, move to REPLENISH screen

Press **77**, move to next line

Press **74**, move to previous line

**C.1.2.2 PRINT CASH (04)**

Please press this menu to print cassette information.

**C.1.2.3 ADD CASH (12)**

To add note count, select cassette by pressing sub menu number key. (Cassette numbers are designated from top to bottom). Enter the note count you want to add. The total note count you enter must not exceed the maximum note count. (Max. count : 2,000/CST)

0		<	ADD	CASH	>	
1					SEL:NN	
2	1>	#1	(9999)	:	9999	
3	2>	#2	(9999)	:	9999	
4	3>	#3	(9999)	:	9999	
5	4>	#4	(9999)	:	9999	
6	1~2	:	LINE	INPUT		
7	11	:	ADD	CASH		
8						
9						
10						
11						
12						
13						
14						
15						

**CONTENTS**

Input Cash in Cassette #1,2.

Press **01~04**, Input amount of cash in each cassette.

If you input more than maximum value, it cannot be executed.

Press **11**, save your input.

Press **CANCEL**, move to REPLENISH screen.

Press **77**, move to next line.

Press **74**, move to previous line

**C.1.3 CONFIGURE**

0	<	C	O	N	F	I	G	U	R	E	>		
1								S	E	L	:	N	N
2	2	)	T	R	A	N	S	E	T	U	P		
3													
4													
5													
6													
7													
8													
9													
10													
11													
12													
13													
14													
15													

**CONTENTS**

There is TRANSACTION SETUP Menu.  
 If you press **02**, move to next screen.  
 Press **CANCEL**, move to SUPERVISOR screen  
 Press **77**, move to next line  
 Press **74**, move to previous line

**C.1.3.1 TRANSACTION SETUP**

This transaction setup menu contains DISPENSE LIMIT, LOW CURRENCY CHECK and FAST CASH. You can enter each sub menu by pressing each sub menu number. To go back to the previous screen, just press the **CANCEL** key on H-SPL.

- 1) DISP LIMIT function is used to set the maximum amount the notes that can be dispensed per transaction. The amount must be a multiple of denomination. And the maximum dispensed count for one transaction must not be over a total of 40 notes.

0			<	T	R	A	N	S	E	T	U	P	>		
1								S	E	L	:	N	N		
2	1	>	D	I	S	P	L	I	M	I	T				
3	2	>	L	O	W	C	H	E	C	K					
4	1	2	)	F	A	S	T	C	A	S	H				
5	1	3	)	D	E	N	O	M	I	N	A	T	I	O	N
6	1	~	2	:	L	I	N	E	I	N	P	U	T		
7	1	1	:	S	A	V	E								
8	S	E	T	0	:	(	D	I	S	A	B	L	E	)	
9	S	E	T	1	:	(	E	N	A	B	L	E	)		
10															
11															
12															
13															
14															
15															

**CONTENTS**

Press **01**, input DISPENSE LIMIT value.  
 Press **02**, check LOW CURRENCY CHECK.  
 (ENABLE : 1 /DISABLE : 0)  
 Press **12**, move to FAST CASH screen.  
 Press **13**, move to DENOMINATION screen.  
 Press **11**, save your input.  
 Press **CANCEL**, move to CONFIGURE screen.  
 Press **77**, move to next line.  
 Press **74**, move to previous line.

- 2) LOW CHECK function is used to set the cassette low level detection. If enabled, the machine will show the “[Unable to dispense cash:F0001]” message on bottom of front screen under low note condition. And then withdrawal transaction can not be used any more.
- 3) FAST CASH function is used to set the cash amount which is to be displayed on the FAST CASH screen. The maximum amount must be less than the dispensable limit.

0	<	FAST	CASH	>															
1										SEL	:	NN							
2	1	>	LB0	:	999														
3	2	>	RB0	:	999														
4	3	>	LB1	:	999														
5	4	>	RB1	:	999														
6	5	>	LB2	:	999														
7	6	>	RB2	:	999														
8	1~6	:	LINE		INPUT														
9	11	:	SAVE																
10																			
11																			
12																			
13																			
14																			
15																			

**CONTENTS**

Press **01~06**, Input 3 Left Button(LB0, LB1, LB2) and 3 Right Button(RB0, RB1, RB2) value  
 Press **11**, save your input  
 Press **CANCEL**, move to TRAN SETUP screen  
 Press **77**, move to next line  
 Press **74**, move to previous line

- 4) SET DENOMINATION function is used to set the denomination of note to be set in the cassette. You can set the denomination about each cassette in this menu.

0	<	DENOMINATION	>																
1										SEL	:	NN							
2	1	>	CST1	:	999														
3	2	>	CST1	:	999														
4	3	>	CST1	:	999														
5	4	>	CST1	:	999														
6	1~4	:	LINE		INPUT														
7	11	:	SAVE																
8																			
9																			
10																			
11																			
12																			
13																			
14																			
15																			

**CONTENTS**

Set DENOMINATION of Cassette #1, 2  
 Press **01**, input Cassette #1 denomination.  
 Press **02**, input Cassette #2 denomination.  
 Press **11**, save your input.  
 Press **CANCEL**, move to TRAN SETUP screen.  
 Press **77**, move to next line.  
 Press **74**, move to previous line.

**C.1.4 REPORT**

This report menu consists of 2 sub-menu. You can print out all the information related to each device as well as setting-up system value and S/W version. If you want to go back the upper screen, just press the CANCEL key.

0			<	R	E	P	O	R	T	>		
1									S	E	L	: N N
2	1	)	S	W	V	E	R	S	I	O	N	
3	2	)	P	R	I	N	T	A	L	L	S	E
4												
5												
6												
7												
8												
9												
10												
11												
12												
13												
14												
15												

**CONTENTS**

- Press **01**, move to SW VERSION screen.
- Press **02**, print PRINT ALL SETUP.
- Press **CANCEL**, move to CONFIGURE screen.
- Press **77**, move to next line.
- Press **74**, move to previous line.

**C.1.4.1 S/W VERSION**

This menu shows each software version. Application, SPR EP, CDU EP, SPR SP, CDU SP, MCU SP and PIN SP's versions will be displayed.

0			<	S	W	V	E	R	S	I	O	N	>
1									S	E	L	: N N	
2	1	)	P	R	I	N	T						
3													
4													
5													
6													
7													
8													
9													
10													
11													
12													
13													
14													
15													

**CONTENTS**

- Press **01**, print SW VERSION.
- Press **CANCEL**, move to REPORT screen.
- Press **77**, move to next line.
- Press **74**, move to previous line.

**C.1.4.2 PRINT ALL SETUP**

This menu prints out all information regarding each device as well as system value setup.

**C.1.5 RCOPY**

You can back up journal data and log data you want in this menu. RCOPY JOURNAL or RCOPY LOG is selected, this data will copy in floppy disk or USB memory stick. IF SOFTWARE INSTALLATION is entered, it will be changed to the screen of SOFTWARE INSTALLATION.

0				<	R	C	O	P	Y	>					
1									S	E	L	:	N	N	
2	1	1	:	R	C	O	P	Y	J	O	U	R	N	A	L
3	1	2	)	R	C	O	P	Y	L	O	G				
4	1	3	)	S	W	I	N	S	T	A	L	L			
5															
6															
7															
8															
9															
10															
11															
12															
13															
14															
15															

**CONTENTS**

- Press **11**, copy JOURNAL to USB.
- Press **12**, move to RCOPY LOG screen.
- Press **13**, move to SW INSTALL screen.
- Press **CANCEL**, move to REPORT screen.
- Press **77**, move to next line.
- Press **74**, move to previous line.

**C.1.5.1 RCOPY JOURNAL**

Copy EJ.mdb saved in D:\EJR\MDB to USB.

**C.1.5.2 RCOPY LOG**

This menu provides a function to copy log for the inputted date to floppy or USB. Display local current date as default when entering "11) RCOPY LOG". You select "1) INPUT DATE" and input wanted date if you want to change saved date.

0	<	LOG	RCOPY	>																
1									SEL	:	NN									
2	1	>	DATE		:	YYYY	MM	DD												
3	1	:	INPUT		DATE															
4	11	:	RCOPY		LOG															
5																				
6																				
7																				
8																				
9																				
10																				
11																				
12																				
13																				
14																				
15																				

**CONTENTS**

- Press **1**, set date to RCOPY.
- Press **11**, copy LOG to USB.
- Press **CANCEL**, move to REPORT screen.
- Press **77**, move to next line.
- Press **74**, move to previous line.

**C.1.5.3 SW INSTALL**

You can install the software by using various storage device like floppy, USB drive, CD in this menu.

0	<	SW	INSTALL	>																
1									SEL	:	NN									
2		2	:	CD					3	:	USB									
3																				
4																				
5																				
6																				
7																				
8																				
9																				
10																				
11																				
12																				
13																				
14																				
15																				

**CONTENTS**

- Press **02**, SW INSTALL will be executed by CD.
- Press **03**, SW INSTALL will be executed by USB
- Press **CANCEL**, move to REPORT screen.
- Press **77**, move to next line.
- Press **74**, move to previous line.

## C.2 MoniMax 5100T H-SPL QUICK USER GUIDE

### C.2.1 ADD CASH

<	OP	STATUS	>		
77	:	NEXT		SEL:	88



I	N	P	U	T	P	A	S	S	W	O	R	D
					[	*	*	*	*	*	*	]



<	S	U	P	E	R	V	I	S	O	R	>	
77	:	NEXT				SEL:	04					



<	R	E	P	L	E	N	I	S	H	>	
77	:	NEXT				SEL:	12				



<	A	D	D	C	A	S	H	>	
77	:	NEXT				SEL:	01		



1	>	#	1	(	0	0	0	0	)	:	1	0	0	0
77	:	NEXT				SEL:								



11	:	A	D	D	C	A	S	H			
77	:	NEXT				SEL:	11				

- a. Press **88** in OP STATUS screen.  
Then show INPUT PASSWORD screen.
- b. In INPUT PASSWORD screen,  
Press correct password.
- c. in SUPERVISOR screen,  
Press **04**, then show REPLENISH screen.
- d. in REPLENISH screen,  
Press **12**, then show ADD CASH screen.
- e. in ADD CASH screen,  
Press **01**, then possible to enter amount of cash.
- f. Press amount of cash you want to add  
then press **ENTER**.
- g. Press **11** in ADD CASH screen  
then it will be successfully saved.

**C.2.2 TOTAL**

<	OP	STATUS	>		
77	:	NEXT		SEL:	88



	I	N	P	U	T	P	A	S	S	W	O	R	D
						[	*	*	*	*	*	*	]



<	S	U	P	E	R	V	I	S	O	R	>		
77	:	NEXT									SEL:	04	



<	R	E	P	L	E	N	I	S	H	>		
77	:	NEXT								SEL:	01	



<		T	O	T	A	L	>					
77	:	NEXT								SEL:		

1	)	D	A	Y	T	O	T	A	L				
77	:	NEXT								SEL:	01		

2	)	T	R	I	A	L	D	A	Y	T	O	T	
77	:	NEXT								SEL:	02		

3	)	C	S	T	T	O	T	A	L				
77	:	NEXT								SEL:	03		

4	)	T	R	I	A	L	C	S	T	T	O	T	
77	:	NEXT								SEL:	04		

- a. Press **88** in OP STATUS screen.  
Then show INPUT PASSWORD screen
- b. In INPUT PASSWORD screen,  
Press correct password.
- c. in SUPERVISOR screen,  
Press **04**, then show REPLENISH screen.
- d. in REPLENISH screen,  
Press **01**, then show TOTAL screen.
- e. TOTAL screen
- e-1. in TOTAL screen,  
Press **01**, then execute DAY TOTAL
- e-2. in TOTAL screen,  
Press **02**, then execute TRIAL DAY TOTAL
- e-3. in TOTAL screen,  
Press **03**, then execute CASSETTE TOTAL
- e-4. in TOTAL screen,  
Press **04**, then execute TRIAL CASSETTE TOTAL



**C.2.3 PRINT CASH**

<	OP	STATUS	>		
77	:	NEXT		SEL:	88



I	N	P	U	T	P	A	S	S	W	O	R	D
					[	*	*	*	*	*	*	]



<	SUPERVISOR	>			
77	:	NEXT		SEL:	04



<	REPLENISH	>			
77	:	NEXT		SEL:	04

- a. Press **88** in OP STATUS screen.  
Then show INPUT PASSWORD screen
- b. In INPUT PASSWORD screen,  
Press correct password.
- c. in SUPERVISOR screen,  
Press **04**, then show REPLENISH screen
- d. in REPLENISH screen,  
Press **04**, then execute PRINT CASH.

**C.2.4 SET DISPENSE LIMIT & LOW CURRENCY CHECK**

<	OP	STATUS	>		
77	:	NEXT		SEL:	88



INPUT PASSWORD					
[*****]					



<	SUPERVISOR	>			
77	:	NEXT		SEL:	05



<	CONFIGURE	>			
77	:	NEXT		SEL:	02



<	TRAN	SETUP	>		
77	:	NEXT		SEL:	01



1	>	DISP	LIMIT:	800	
77	:	NEXT		SEL:	



2	>	LOW	CHECK:	0	
77	:	NEXT		SEL:	



11	:	SAVE			
77	:	NEXT		SEL:	11

- a. Press **88** in OP STATUS screen.  
Then show INPUT PASSWORD screen
- b. In INPUT PASSWORD screen,  
Press correct password.
- c. in SUPERVISOR screen,  
Press **05**, then show CONFIGURE screen
- d. in CONFIGURE screen,  
Press **02**, then show TRAN SETUP screen.
- e. in TRAN SETUP screen,  
Press **01**, then set DISPENSE LIMIT value
- f. Then you can set DISPENSE LIMIT value
- g. After set DISPENSE LIMIT,  
You can set LOW CHECK 1 or 0  
(ENABLE : 1 / DISABLE : 0)
- h. Press **11** in TRAN SETUP screen  
then it will be successfully saved

**C.2.5 FASH CASH**

<	OP	STATUS	>		
77	:	NEXT		SEL:	88



INPUT	PASSWORD				
		[	*	*	*



<	SUPERVISOR	>			
77	:	NEXT		SEL:	05



<	CONFIGURE	>			
77	:	NEXT		SEL:	02



<	TRAN	SETUP	>		
77	:	NEXT		SEL:	12



<	FAST	CASH	>		
77	:	NEXT		SEL:	01



1	>	LB0	:	200	
77	:	NEXT		SEL:	



11	:	SAVE			
77	:	NEXT		SEL:	11

- a. Press **88** in OP STATUS screen.  
Then show INPUT PASSWORD screen
- b. In INPUT PASSWORD screen,  
Press correct password.
- c. in SUPERVISOR screen,  
Press **05**, then show CONFIGURE screen
- d. in CONFIGURE screen,  
Press **02**, then show TRAN SETUP screen.
- e. in TRAN SETUP screen,  
Press **12**, then show FAST CASH screen.
- f. in FAST CASH screen,  
Press **01~06**, then set FAST CASH
- f-1. -
- g. Press **11** in FAST CASH screen  
then it will be successfully saved

**C.2.6 DENOMINATION**

<	OP	STATUS	>		
77	:	NEXT		SEL	: 88



INPUT	PASSWORD				
		[	*	*	*



<	SUPERVISOR	>			
77	:	NEXT		SEL	: 05



<	CONFIGURE	>			
77	:	NEXT		SEL	: 02



<	TRAN	SETUP	>		
77	:	NEXT		SEL	: 13



<	DENOMINATION	>			
77	:	NEXT		SEL	: 01



1	>	CST	1	:	20
77	:	NEXT		SEL	:



11	:	SAVE			
77	:	NEXT		SEL	: 11

- a. Press **88** in OP STATUS screen.  
Then show INPUT PASSWORD screen
- b. In INPUT PASSWORD screen,  
Press correct password.
- c. in SUPERVISOR screen,  
Press **05**, then show CONFIGURE screen
- d. in CONFIGURE screen,  
Press **02**, then show TRAN SETUP screen.
- e. in TRAN SETUP screen,  
Press **13**, then show DENOMINATION screen.
- f. in DENOMINATION screen,  
Press **01~04**, then set DENOMINATION
- f-1 -
- g. Press **11** in DENOMINATION screen  
then it will be successfully saved

**C.2.7 SW VERSION**

<	OP	STATUS	>		
77	:	NEXT		SEL:	88



I	N	P	U	T	P	A	S	S	W	O	R	D
					[	*	*	*	*	*	*	]



<	S	U	P	E	R	V	I	S	O	R	>		
77	:	NEXT						SEL:	08				



<	R	E	P	O	R	T	>				
77	:	NEXT						SEL:	01		



<	S	W	V	E	R	S	I	O	N	>		
77	:	NEXT						SEL:	01			

- a. Press **88** in OP STATUS screen.  
Then show INPUT PASSWORD screen
- b. In INPUT PASSWORD screen,  
Press correct password.
- c. In SUPERVISOR screen,  
Press **08**, then show REPORT screen
- d. In REPORT screen,  
Press **01**, then show SW VERSION screen.
- e. In SW VERSION screen,  
Press **01**, then print SW VERSION.

**C.2.8 PRINT ALL SETUP**

<	OP	STATUS	>		
77	:	NEXT		SEL:	88



I	N	P	U	T	P	A	S	S	W	O	R	D
					[	*	*	*	*	*	*	]



<	S	U	P	E	R	V	I	S	O	R	>		
77	:	NEXT						SEL:	08				



<	R	E	P	O	R	T	>				
77	:	NEXT						SEL:	02		

- a. Press **88** in OP STATUS screen.  
Then show INPUT PASSWORD screen
- b. In INPUT PASSWORD screen,  
Press correct password.
- c. in SUPERVISOR screen,  
Press **08**, then show REPORT screen
- d. in REPORT screen,  
Press **02**, then print PRINT ALL SETUP.

**C.2.9 JOURNAL RCOPY**

<	OP	STATUS	>		
77	:	NEXT		SEL	: 88



INPUT	PASSWORD				
		[*	*	*	*



<	SUPERVISOR	>			
77	:	NEXT		SEL	: 09



<	RCOPY	>			
77	:	NEXT		SEL	: 11

- a. Press **88** in OP STATUS screen.  
Then show INPUT PASSWORD screen
- b. In INPUT PASSWORD screen,  
Press correct password.
- c. in SUPERVISOR screen,  
Press **09**, then show RCOPY screen
- d. in RCOPY screen,  
Press **11**, then copy JOURNAL to USB.

**C.2.10 LOG RCOPY**

<	OP	STATUS	>		
77	:	NEXT		SEL	: 88



INPUT	PASSWORD				
		[*	*	*	*



<	SUPERVISOR	>			
77	:	NEXT		SEL	: 09



<	RCOPY	>			
77	:	NEXT		SEL	: 12



<	LOG	RCOPY	>		
77	:	NEXT		SEL	: 01



1	>	DATE	:	20071211	
77	:	NEXT		SEL	:



11	:	RCOPY	LOG		
77	:	NEXT		SEL	: 11

- a. Press **88** in OP STATUS screen.  
Then show INPUT PASSWORD screen
- b. In INPUT PASSWORD screen,  
Press correct password.
- c. in SUPERVISOR screen,  
Press **09**, then show RCOPY screen
- d. in RCOPY screen,  
Press **12**, then show LOG RCOPY screen.
- e. in LOG RCOPY screen,  
Press **01**, then set date to RCOPY
- e-1. -
- f. in LOG RCOPY screen,  
Press **11**, then copy LOG to USB.

**C.2.11 SW INSTALLATION**

<	OP	STATUS	>
77	:	NEXT	SEL: 88



INPUT	PASSWORD
[	* * * * *



<	SUPERVISOR	>
77	:	SEL: 09



<	RCOPY	>
77	:	SEL: 13



<	SW INSTALL	>
77	:	SEL: 02

2	:	CD	,	3	:	USB
77	:	NEXT			:	SEL: 03

- a. Press **88** in OP STATUS screen.  
Then show INPUT PASSWORD screen
- b. In INPUT PASSWORD screen,  
Press correct password.
- c. in SUPERVISOR screen,  
Press **09**, then show RCOPY screen
- d. in RCOPY screen,  
Press **12**, then show SW INSTALL screen.
- e. in SW INSTALL screen,  
Press **02**, then SW INSTALL will be executed by CD
- e-1 in SW INSTALL screen,  
Press **03**, then SW INSTALL will be executed by USB

## Option D. Operator Function of T-SPL



## Option D. Operator Function of T-SPL

To enter Supervisor mode, exact password should be input after changing convert switch located on rear panel from in service status to supervisor status, as shown in below picture.



Check T-SPL(that is rear screen), and decide which Operation Mode do you want to use. To use front OP screen, put number 66 which is '66) FRONT OPMODE' in the screen, or to use rear OP screen, put number 88 which is '88) IN SUPERVISOR' in the screen.

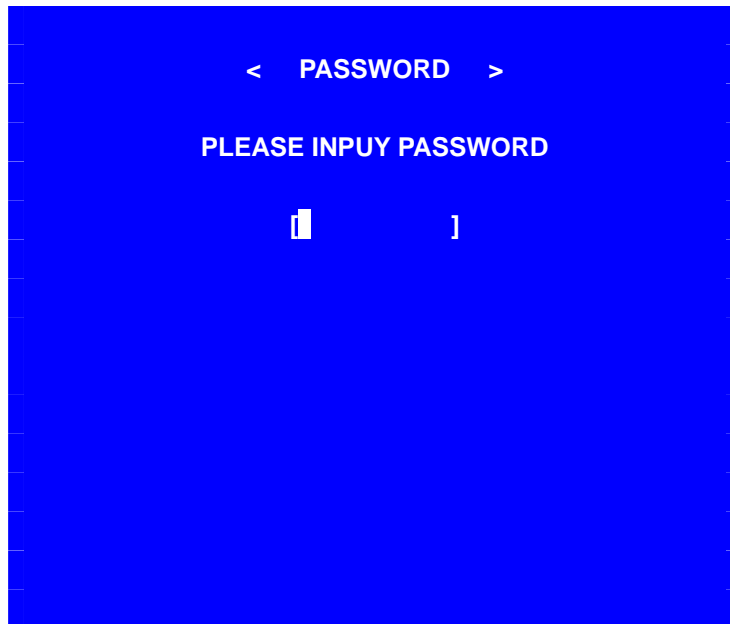
1. Description of rear OP screen : go to next page
2. Description of front OP screen : go to "OPERATOR FUNCTION".

7000D	CLERK	CLOSE	ONLINE
NORMAL		[ ] -	[0000(00)]
BOX1 :50( 5 )	BOX2 :35(20)	REJB :NOR	
BOX3 :N/A( - )	BOX4 :N/A( - )	MCU :0	
CDU :NOR	MCU :NOR	SPR :NOR	JPR :N/A
T-ID :MX7000D		R-ID :00000000	
AP VER :V01-03-01		DATE :06/10/2008	
66 )FRONT OPMODE PLEASE KEY IN NO :			

The default password is “555555”(6 digits). The default password is changeable in Supervisor mode. After inputting correct exact password of 4~6 digit, press <Confirm> key in order to enter Supervisor main menu. Pressing <Clear> key erases the input number. If you return to Application mode, you can change conversion switch from SUPERVISOR to IN SERVICE.

Depending on authority, there are three kinds of default password like below table.

Authority	Default Password
OPERATOR	111111 (6 digits)
SERVICE	222222 (6 digits)
MASTER	555555 (6 digits)



## D.1 SUPERVISOR MENU

The following screen is the main screen of Supervisor mode.

Supervisor mod in this machine is largely composed of ATM Status and Function.

### A. ATM Status

- 1) Machine name,
- 2) Supervisor mode,
- 3) Door Status(CLOSE or OPEN)
- 4) Connection status to host
- 5) ATM status
- 6) Error code
- 7) 1st Cassette : Remained notes(Denomination)  
e.g) if 1000 notes of \$20, 1000(20), If not supported, N/A(-)
- 8) 2nd Cassette : Remained notes(Denomination)
- 9) 3rd Cassette : Remained notes(Denomination)
- 10) 4th Cassette : Remained notes(Denomination)
- 11) Cash dispenser status(NORMAL/AUTO-OFF/OFF/MISSING/N/A)
- 12) Card reader status(NORMAL/AUTO-OFF/OFF/MISSING/N/A)
- 13) Receipt printer status(NORMAL/AUTO-OFF/OFF/MISSING/N/A)
- 14) Journal printer status(NORMAL/AUTO-OFF/OFF/MISSING/N/A)
- 15) reject box status(rejected count)
- 16) Retracted card Count (Only for Motor driven Card Reader)
- 17) Terminal ID
- 18) Routing ID
- 19) Program version
- 20) Current Date and Time

### B. Functions

- 04) REPLENISH
- 05) CONFIGURE
- 06) JOURNAL
- 07) DIAGNOSTICS
- 08) REPORT
- 09) RCOPY

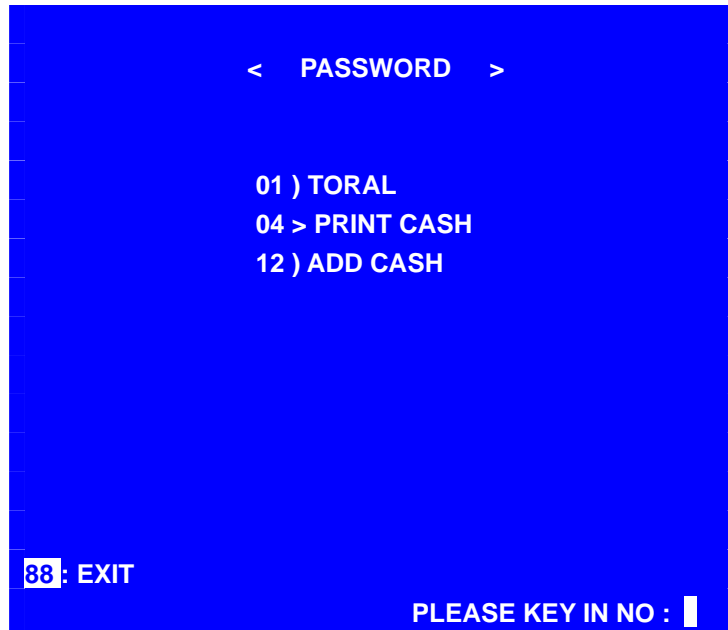
- 23) REBOOT
- 24) SHUT-DOWN
- 33) RESET ALL
- 44) RESET

In order to move to the in-service mode, please move conversion switch located on rear panel to 'IN SERVICE'.

7000D	CLERK	CLOSE	ONLINE
NORMAL		[ ] -	[00000(00)]
BOX1 :50( 5 )	BOX2 :35(20)	REJB :NOR	
BOX3 :N/A(-)	BOX4 :N/A(-)	MCU :0	
CDU :NOR	MCU :NOR	SPR :NOR	JPR :N/A
T-ID :MX7000D		R-ID :00000000	
AP VER :V01-03-01		DATE :06/10/2008	
04 )REPLENISH		23 )REBOOT	
05 )CONFIGURE		24 )SHUT-DOWN	
06 )JOURNAL		33 )RESER ALL	
07 )DIAGNOSTICS		44 )RESET	
08 )REPORT			
09 )RCOPY			
PLEASE KEY IN NO :			

## D.2 REPLENISH

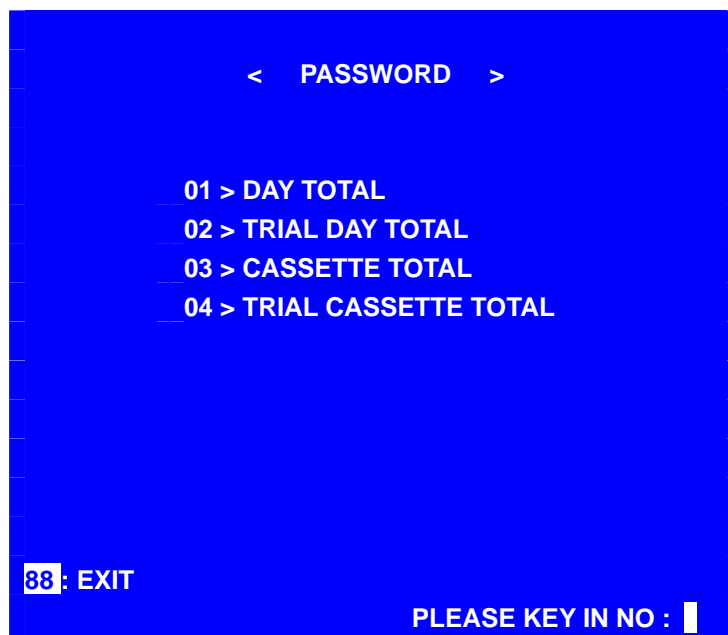
This menu contains TOTAL, PRINT CASH and ADD CASH. Pressing number in this menu goes to next screen. To go back to the previous screen, just press the <Cancel> key in pinpad.



### D.2.1 TOTAL

This menu contains DAY TOTAL, TRIAL DAY TOTAL, CASSETTE TOTAL and TRIAL CASSETTE TOTAL. By pressing number in this menu, you can operate related function. To go back to the previous screen, just press the <Cancel> key in pinpad.

- DAY TOTAL : Do settlement with host. After settlement, clear transaction information.
- TRIAL DAY TOTAL : Just do settlement with host.( Not clear transaction info.)
- CASSETTE TOTAL : Show note count and then clear note count.
- TRIAL CASSETTE TOTAL : Just show note count.( Not clear note count)



### D.2.2 PRINT CASH

By pressing this menu, you can print cassette information.

### D.2.3 ADD CASH

By pressing number in this menu, you can select cassette to add note count. (Cassette numbers are designated from top to bottom). Enter the note count you want to add. The total note count you enter must not exceed the maximum note count. (Max. count : 2,000/CST)

```
< ADD CASH >

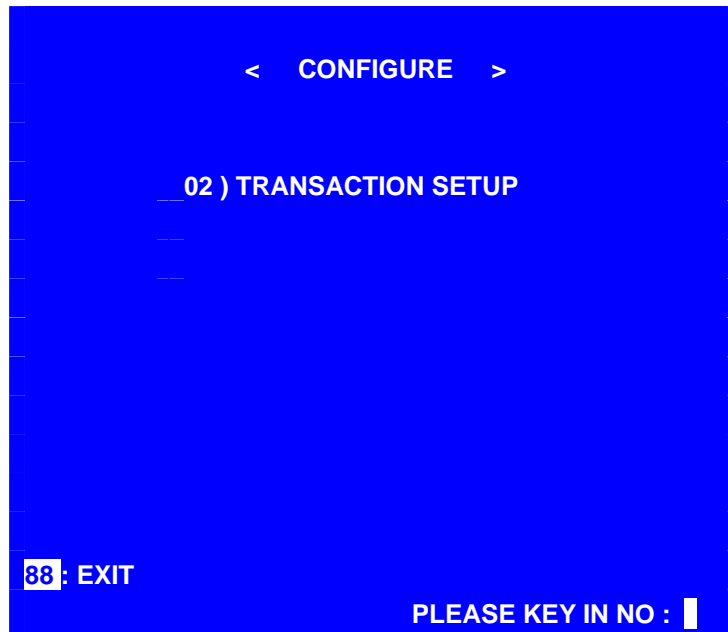
01 > BILLCOUNT1(50 ) : 0
02 > BILLCOUNT2(35 ) : 0
03 > BILLCOUNT3(N/A ) : 0
04 > BILLCOUNT4(N/A ) : 0

1~9 : LIME NO, ENTER : NEXT, CANCEL : INPUT EXIT
11 : SAVE, 88 : EXIT

PLEASE KEY IN NO : █
```

### D.3 CONFIGURE

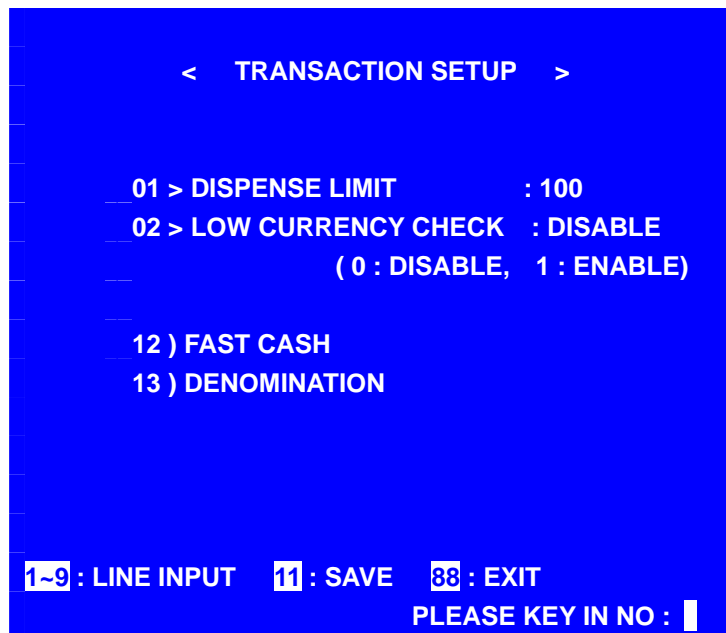
This menu contains TRANSACTION SETUP. Pressing number in this menu goes to next screen. To go back to the previous screen, just press the <Cancel> key in pinpad.





### D.3.1 TRANSACTION SETUP

This host setup menu contains DISPENSE LIMIT, LOW CURRENCY CHECK, FAST CASH and DENOMINATION. You can enter each sub menu by pressing number in this menu. To go back to the previous screen, just press the <Cancel> key in pinpad.



- 1) DISP LIMIT function is used to set the maximum amount the notes that can be dispensed per transaction. The amount must be a multiple of denomination. And the maximum dispensed count for one transaction must not be over a total of 40 notes.
- 2) LOW CHECK function is used to set the cassette low level detection. If enabled, the machine will show the “[Unable to dispense cash:F0001]” message on bottom of front screen under low note condition. And then withdrawal transaction can’t be used no more.
- 3) FAST CASH function is used to set the cash amount which is to be displayed on the FAST CASH screen. The maximum amount must be less than the dispensable limit.



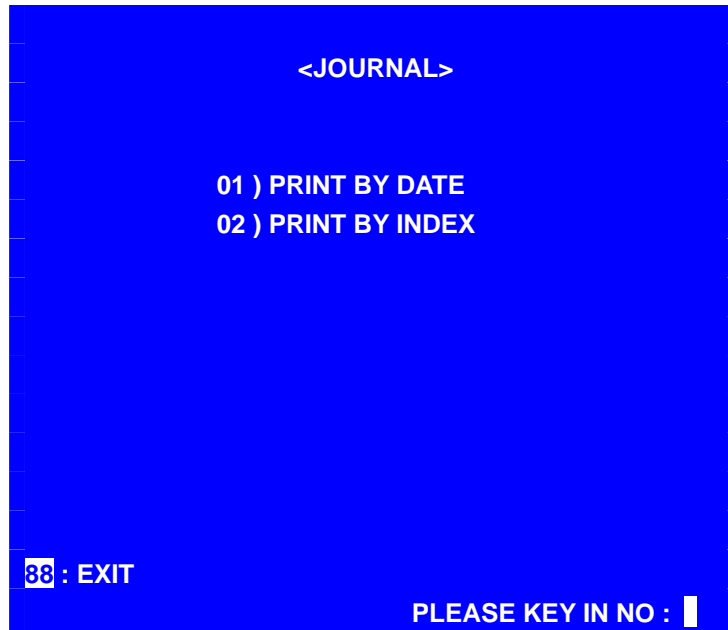
- 4) SET DENOMINATION function is used to set the denomination of note to be set in the cassette. You can set the denomination about each cassette in this menu.



## D.4 JOURNAL

This JOURNAL menu contains PRINT BY DATE and PRINT BY INDEX.

In this Journal menu, you can print it by date and index what you want to search.



### D.4.1 PRINT BY DATE

Journal can be printed out on the receipt paper for the purpose of keeping transaction record. The PRINT BY DATE function is used to print out journal data for some periods that you want to know. If you want to stop printing, you may stop it by pressing <CANCEL> key.

```
<PRINT JOURNAL>

PLEASE ENTER DATE FOR
PRINTING JOURNAL

1 > DATE : 20080610
      (YYYYMMDD)

1~9 : LINE INPUT 11 : PRINT 38 : EXIT
PLEASE KEY IN NO : █
```

#### D.4.2 PRINT BY INDEX

The PRINT BY INDEX function is used to print out journal data within index range you want to know. Enter the current index, index from, index to and press Confirm key. Then the data you request is printed.

```
<PRINT BY INDEX>

CURREN INDEX : 0170

01 > INDEX FROM :
02 > INDEX TO   :

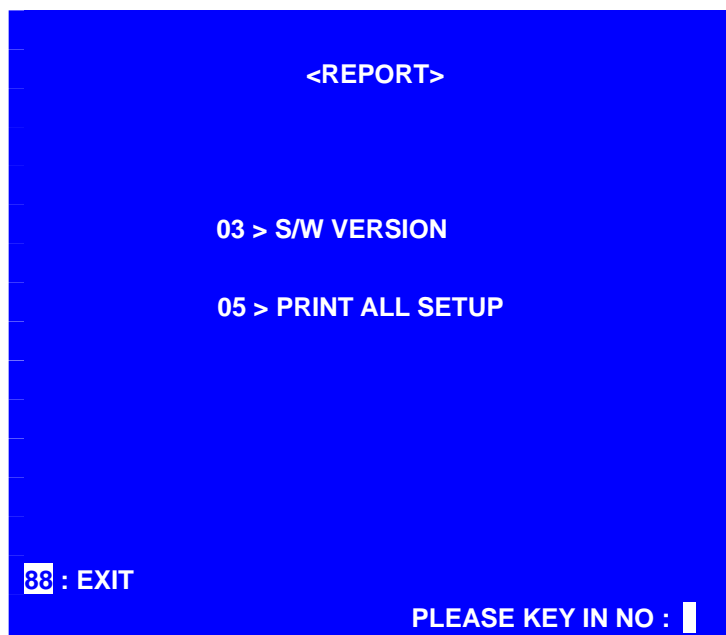
1~9 : LINE NO, ENTER : NEXT, CANCEL : INPUT EXIT
11 : PRINT, 38 : EXIT
PLEASE KEY IN NO : █
```

## D.5 DIAGNOSTICS

Please see the “Option A.2 DIAGNOSTICS of T-SPL SUPERVISOR” section.

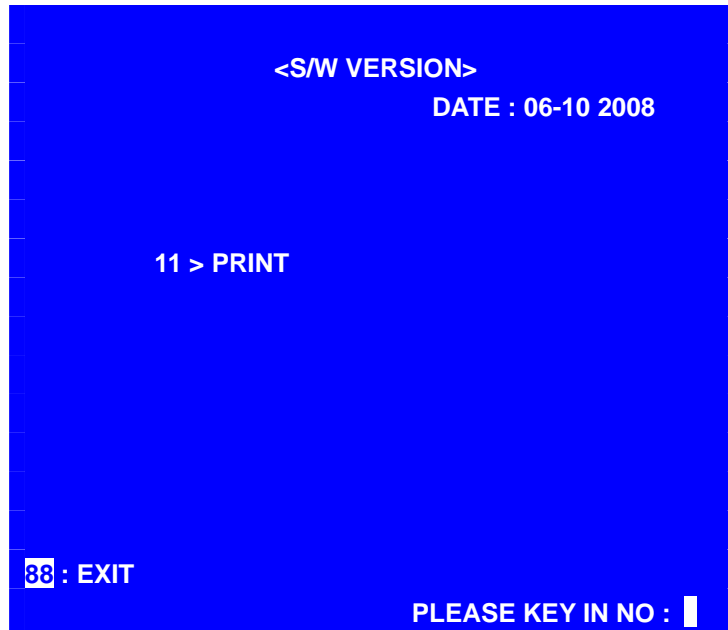
## D.6 REPORT

This report menu consists of 2 sub-menu. You can print out all information regarding each device as well as setting-up system value and S/W version. If you want to go back the upper screen, just press the <Cancel> key.



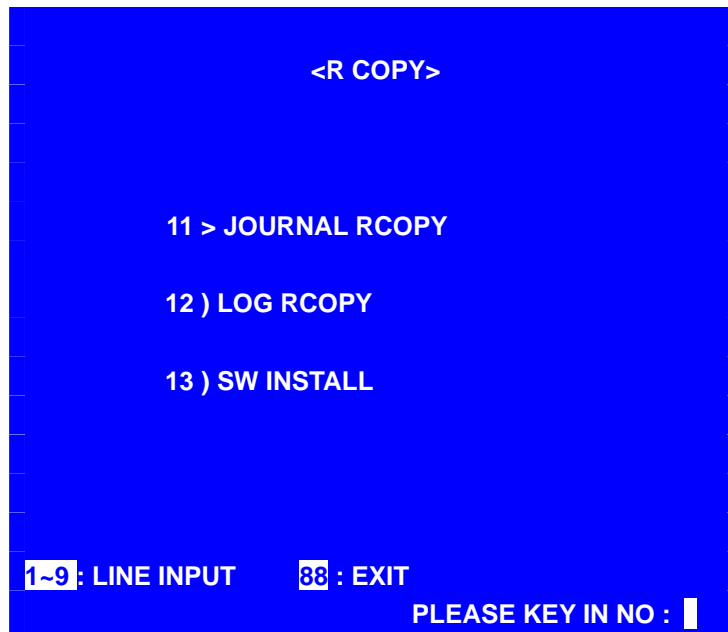
### D.6.1 SW VERSION

This menu prints each software version. Application, SPR EP, CDU EP, SPR SP, CDU SP, MCU SP and PIN SP's versions will be displayed.



## D.7 RCOPY

You can back up journal data and log data you want in this menu. If JOURNAL RCOPY or LOG RCOPY is selected, this data will be copied in floppy disk or USB memory stick. If SOFTWARE INSTALLATION is worked, the screen will be changed for SOFTWARE INSTALLATION.

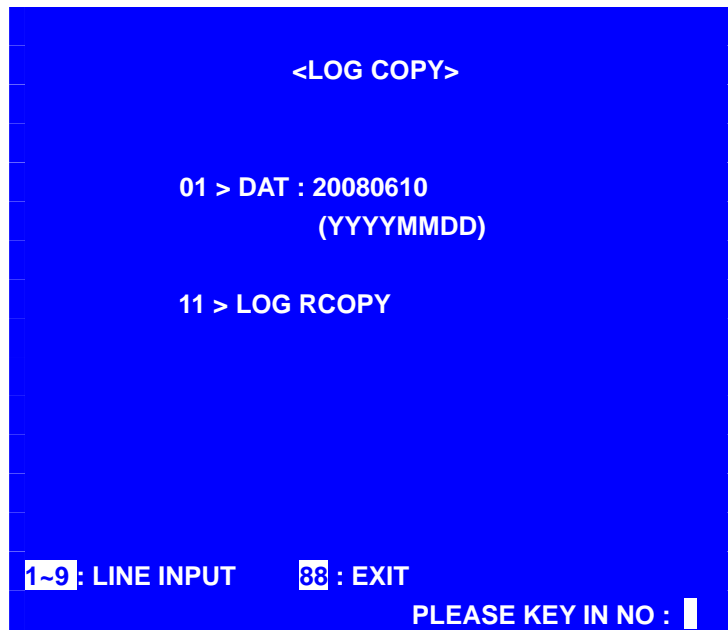


### D.7.1 JOURNAL RCOPY

Copy EJ.mdb saved in D:\EJR\MDB to USB.

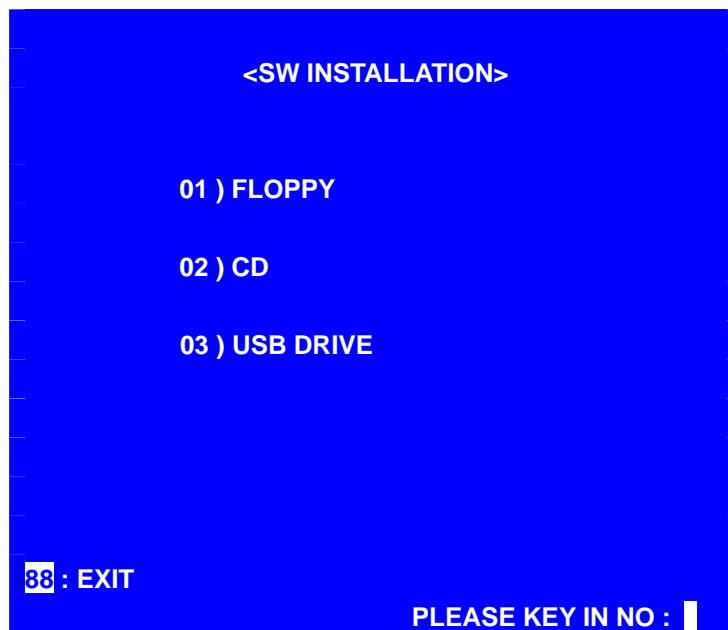
### D.7.2 LOG RCOPY

This menu provides a function to copy log for the inputted date to floppy or USB. Display local current date as default when entering "11) RCOPY LOG". You can select "1) INPUT DATE" and input wanted date if you want to change saved date.



### D.7.3 SW INSTALLATION

You can install the software by using various storage devices like floppy, USB drive, and CD-Rom in this menu.





## Chapter 7. Appendix

## 7. Appendix

### A. SUMMARY OF SPECIFICATION FOR MoniMax 5100T

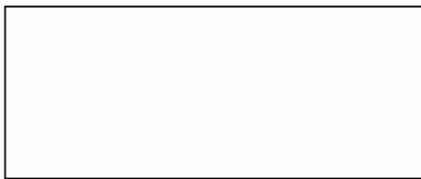
Item		Standard	Remark (Optional)	
Main Controller	CPU	Pentium-4 2.0Ghz	-	
	Memory	SDRAM	256M	
	Storage Device	HDD	80GB	-
		FDD	N/A	3.5", 1.44MB optional
		ODD	CD-ROM	-
	Operating System		Windows XP Professional	With Service Pack 1
	Expansion Slots		IPCI-3	Dual VGA Support
	Serial Port		8 Ports On-Board Serial	2 Ports Expansion Card
	USB Ports		4 Port	-
	MODEM		56Kbps Dial Up MODEM	-
	LAN		10/100Mbps On-board	-
Customer Display	LCD Module	Type	10.4" TFT LCD	
		Brightness	400 cd/m <sup>2</sup>	
	Privacy Filter		N/A	Optional
	Guide Light	Flicker	3EA (SPR/CDU/MCU)	-
		Status Window	"Open" Window	-
Input Method	Pin-Pad	EPP(with PCI approval)	-	
	Function Key	4X2(with NDC style)	-	
Supervisor Operation	LCD Module	5.7" Mono LCD	2 Line Column LCD	
	Input Method	Function Key & 16 Keys	16 Keys	
Cash Dispenser	Sutter type		Manual Shutter	
	Denomination		US \$10, \$20	
	Maximum Dispense		40 Notes/1transaction	
	Number of cassettes		1 Cassette	Maximum 4 cassettes
	Cassette Capacity		2,000 notes/1 cassettes	-
	Dispensing Speed		4 notes/sec	-
	Reject Type		Note by Note Reject	-
	Reject Bin Capacity		Maximum 200 Notes	-

Item		Standard	Remark (Optional)	
Card Reader	Type	DIP Type	-	
	Magnetic Stripe	ISO 1, 2 Read	-	
	EMV smart card reader	N/A	-	
Receipt Printer	Printing Type	Thermal Line Printing	-	
	Printing speed	100mm/sec	-	
	Printing Width	80mm Max	-	
	Paper Specific ation	Type	Thermal Roll Paper	-
		Width	Max. 80mm	-
		Outer Diameter	Max Ø180	-
	Paper Roller Capacity	2000 Transaction/Roll	-	
Black Mark paper support	N/A	Optional		
Journal Printer	Printing Method	Only Electronic Journal	Thermal Journal Printer, optional	
Power Supply	Input Power	Input Voltage	100~127 Vac±10%, 5.5A	110/220V selection
		/current	200~240 Vac±10%, 2.8A	
		Frequency	47~63 Hz	Normal: 50/60Hz
	Battery back-up	Available for 1 transaction	-	
Safety	Specification	UL 291 Business hour	UL 291 Level 1, optional	
	Locking device	KABA MAS Cencon Lock	Dial Lock or Electronic Lock, optional	
Additional function	Audio guidance	Available	With Sound Card	
	ADA Audio guidance	N/A	Optional	
	System Heater	N/A	Available (1EA)	
	Advertisement	Fluorescent lamp	-	
	Installation Method	Adjuster type	Wheel (only for sample)	
Dimension & Environment	Dimension	770(W) X 1124 (D) X 1783 (H)	-	
	Weight	Max 650Kg	-	
	Power	110V/220V selection	-	
	Operational Temperature	Operating	0°C ~ 40°C / 32°F ~ 104°F	-
		Storage	-5°C ~ 50°C / 23°F ~ 122°F	-
	Operational Humidity	Operating	25% ~ 86%	-
Storage		10% ~ 90%	-	

## B. BILL CONDITIONS

### B.1 Acceptable condition

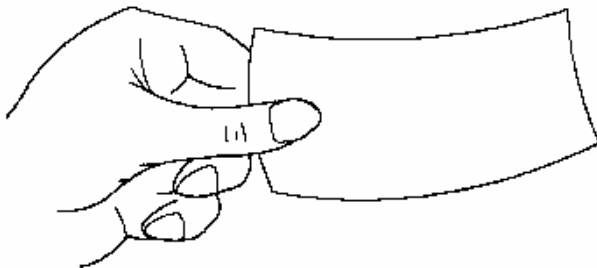
- Bill which is very clean and can readily be recognized as a true bill



- Bill has sufficient life or sizing to be handled easily



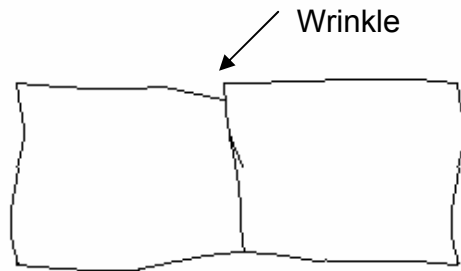
- Bill which can be manually held straightly when one end is held by a hand and the bill is slightly curved vertically



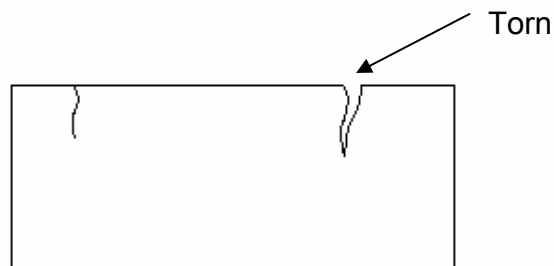
**B.2 Unacceptable condition**

- Bill having serious wrinkles, torn or broken section wherein paper fiber is broken and separation begins

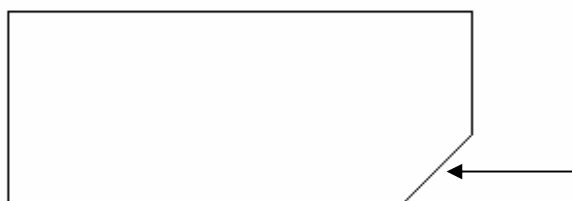
- ✓ Wrinkle



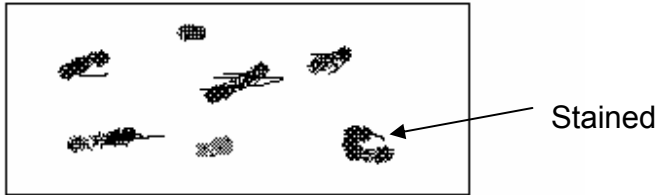
- ✓ Torn



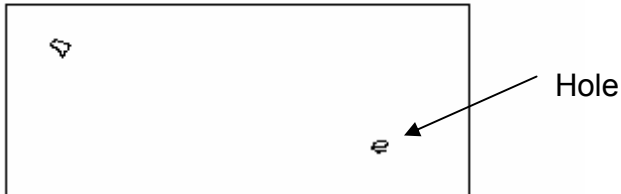
- ✓ Broken section



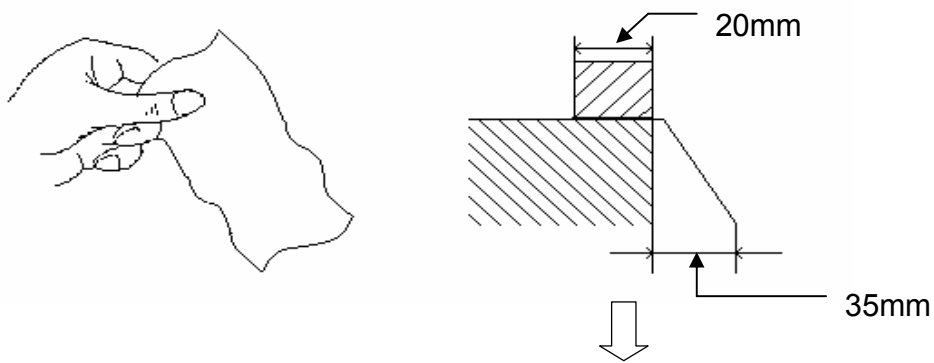
- Bill having adequate life or sizing, but stained seriously



- Bill with holes (Perforated bill)

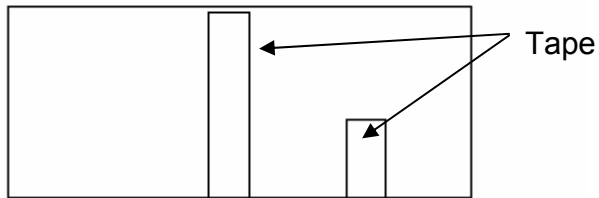


- Bill ragged and cannot be held straightly when one end is supported by a hand

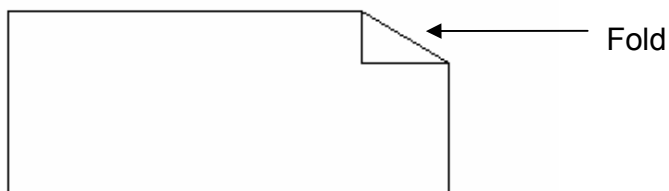


When the bill is held by 20mm and the straightness of the bill is 35mm or less, it cannot be used

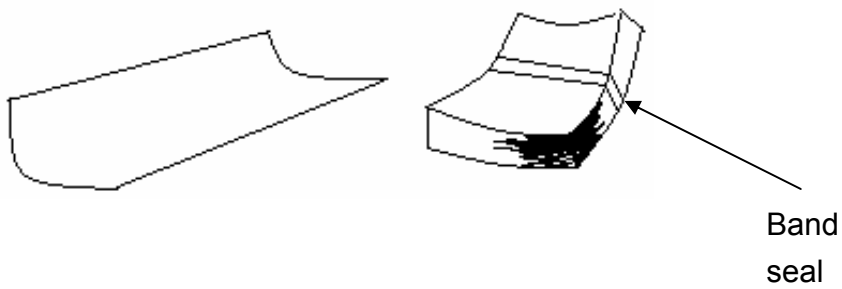
- Bill with cellophane tape, scotch tape, etc



- Bill with folds

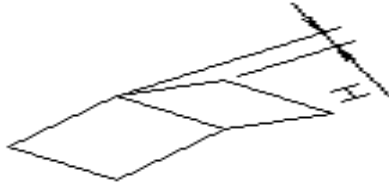


- Gradually curved bill (bills tied by hand seal, etc)



● Bill with folded lines

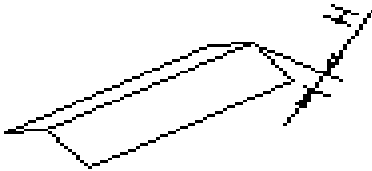
✓ Case 1



✓ Case 2



✓ Case 3



☞ Bill distortion should not exceed 10 mm



## C. RECEIPT PAPER SPECIFICATIONS

### C.1 Applicable Product

This purchase specification applies to the receipt paper of MoniMax 5100T ATM.

### C.2 Specification

C.2.1 Paper type: Thermal roll paper

C.2.2 Print color: Black

### C.3 Specification of the Receipt Paper

C.3.1 Paper type: Thermal roll paper

C.3.2 Print color: Black

C.3.3 Specification: Paper detects heat. Roll enough for 2,000 slips.

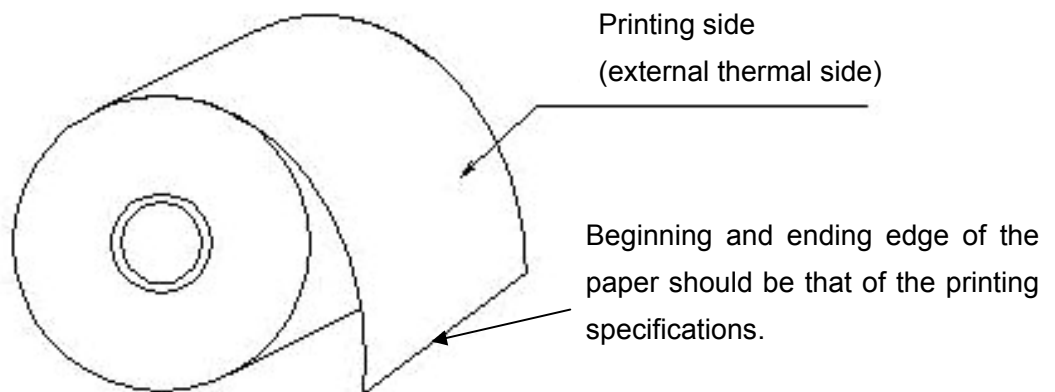


Fig. 7.1 Paper Specifications

### C.4 Roll appearance

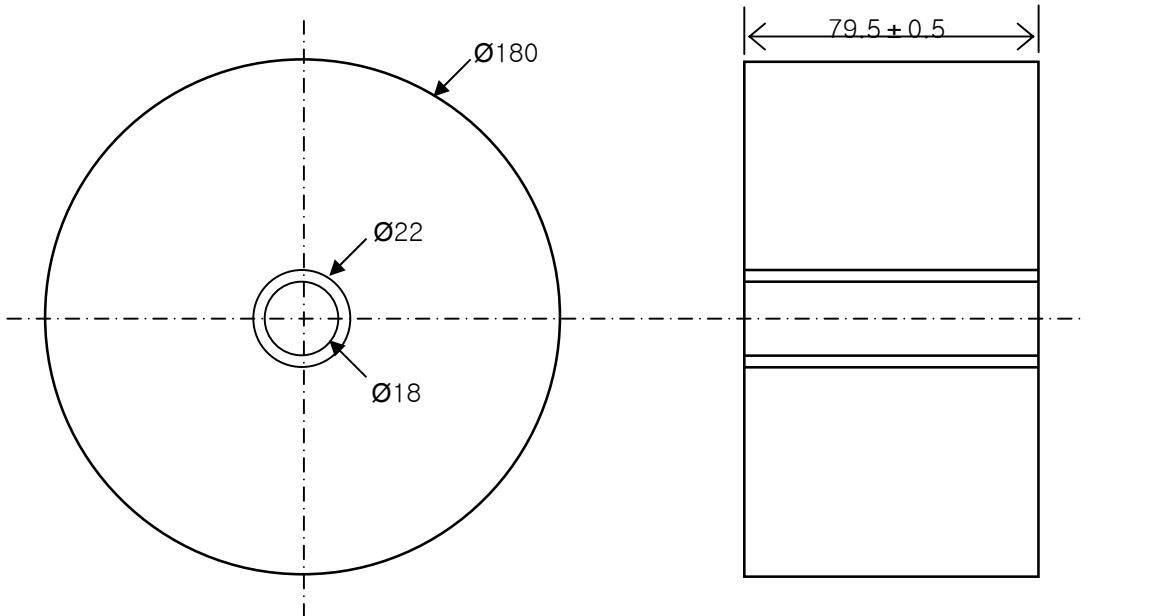


Fig. 7.2 External roll dimension

Note 1) Store the paper roll separately to prevent damage to the paper.

Note 2) Do not connect the papers with tape.

Note 3) Make sure the paper end is not attached to the paper pipe.

Note 4) Make sure the paper is rolled evenly.

### C.5 Printing Position for One Sheet and Black Mark

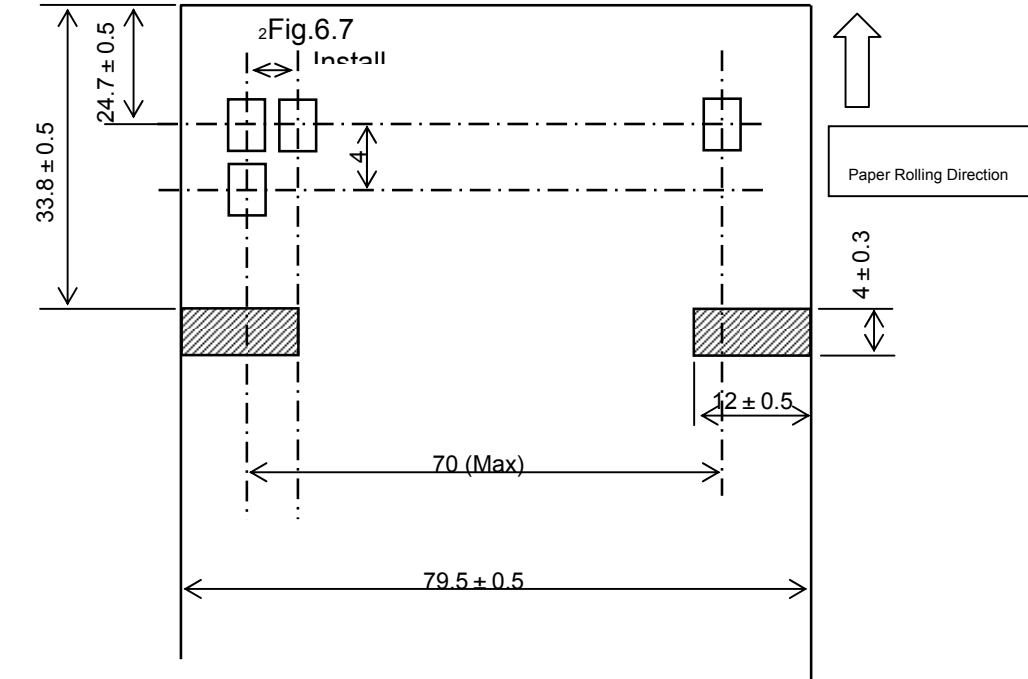


Fig. 7.3 Paper Length and Printing Position for a Transaction

Note 1) Vertical margin is  $0.6 \times 10$  mm.

Note 2) Difference of the characters in the paper rolling direction is  $\pm 0.3$ mm.

### C.6 Printing specification of the black mark

- 1) Use black without dark or bright shades.
- 2) Use the oil ink. (no surface gloss)
- 3) Permeation ratio: Less than 10%
- 4) Reflection ratio - PCS 0.9 or higher (Less than Mark GBase PCM II 900nm)
- 5) Thickness should take precedence over reflection ratio.
- 6) The slippery gap between the black mark and the rule mark should be less than 0.5mm.

### C.7 Paper Handling Precautions

1) Store it away from high temperature and humidity

If the paper is stored in a place where temperature is above 50°C or humidity is above 90% RH, the coloring capability may deteriorate or the paper surface may inflate.

2) Refrain from exposing to direct sunlight

The paper surface can be inflated if you expose it to direct sunlight or leave it under the fluorescent lamp for a long time.

3) Keep it away from the organic solvents

Paper color may change if the paper comes in contact with organic solvents or glues containing organic solvent.

4) Keep it away from plastics

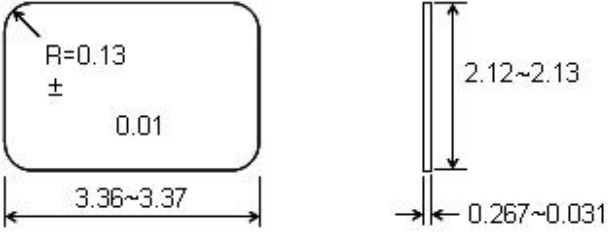

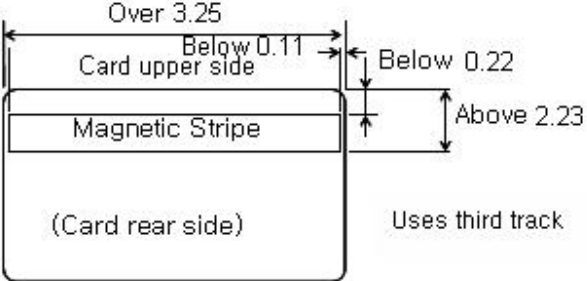
If the paper comes in contact with materials containing plastics, its coloring capability may deteriorate or de-coloring of the paper may occur.

5) Miscellaneous

If the paper comes in contact with carbon copy paper or if the paper surface is scratched with a metallic object, de-coloring may occur.

C.2.3 Specification:

### D. MAGNETIC CARD SPECIFICATIONS

Item	ISO Card (Unit : Inch)
Length	 <p>Diagram showing ISO Card dimensions (Unit : Inch):</p> <ul style="list-style-type: none"> <li>Length: 2.12~2.13</li> <li>Width: 3.36~3.37</li> <li>Radius: <math>R=0.13 \pm 0.01</math></li> <li>Thickness: 0.267~0.031</li> </ul>
Card Bending	 <p>Diagram showing Card Bending specification: Below 0.079</p>
Magnetic Stripe Position	 <p>Diagram showing Magnetic Stripe Position (Card rear side):</p> <ul style="list-style-type: none"> <li>Card upper side: Over 3.25</li> <li>Magnetic Stripe: Below 0.11</li> <li>Offset from edge: Below 0.22</li> <li>Offset from bottom: Above 2.23</li> <li>Uses third track</li> </ul>

**E. ERROR CODE TABLE****E.1 Journal Printer (Option)**

<b>Error Code</b>	<b>Cause</b>	<b>Handling</b>
9721111	Off line status (Journal Printer)	<ol style="list-style-type: none"> <li>1. Check communication cable and the connectors</li> <li>2. Check power connection</li> </ol>
9721112	On busy	<ol style="list-style-type: none"> <li>1. Check whether printer is printing or not at that time <ul style="list-style-type: none"> <li>- If printing, it is normal. After printing is finished, then try again.</li> <li>- If not, check PCB on printer</li> </ul> </li> </ol>
9721121	Hardware Error	<ol style="list-style-type: none"> <li>1. Check printing header movement</li> <li>2. Check paper jam and feeding status by pressing feed button</li> <li>3. Reboot ATM</li> </ol>
9721122	Recoverable Error	<ol style="list-style-type: none"> <li>1. Recover printer's Error</li> <li>2. Reboot ATM</li> </ol>
9721123	Unrecoverable Error	<ol style="list-style-type: none"> <li>1. Reboot ATM</li> <li>2. Replace printer</li> </ol>
9721124	Paper jammed	<ol style="list-style-type: none"> <li>1. Remove jammed paper</li> </ol>

## E.2 Card Reader

Error Code	Cause	Handling
9723010	Failed to open device	<ol style="list-style-type: none"> <li>1. Reboot ATM</li> <li>2. Test with diagnostics in supervisor mode</li> <li>3. Check communication cable and connectors of card reader</li> <li>4. Check card reader driver version</li> </ol>
9723016	Time out to receive data	<ol style="list-style-type: none"> <li>1. Reboot ATM</li> <li>2. Test with diagnostics in supervisor mode</li> <li>3. Check communication cable and connectors of card reader</li> <li>4. Check card reader driver version</li> </ol>
9723019	Polling down	<ol style="list-style-type: none"> <li>1. Reboot ATM</li> <li>2. Test with diagnostics in supervisor mode</li> <li>3. Check communication cable and connectors of card reader</li> <li>4. Check card reader driver version</li> </ol>

**E.3 Cash Dispenser**

Error Code	Cause	Handling
2000100	The Cash Dispenser Unit cassette is not installed. The Control Electronics checks if the Cash Dispenser Unit cassette is in the right position with the location sensor (LS6), and generates an error when the Cash Dispenser Unit is not in the correct position.	<ol style="list-style-type: none"> <li>1. Install the cassette again.</li> <li>2. Check if LS6 (micro switch) is fully pressed while the cassette is loaded.</li> <li>3. Check if LS6 connector has been properly inserted and if cable is cut.</li> <li>4. Check logic related to LS6 of the Cash Dispenser Unit board.</li> </ol>
2000200	Cash is not enough. This error occurs in the following cases: <ol style="list-style-type: none"> <li>1. When the number of bills is "0" after the final payment transaction is made</li> <li>2. When the low level sensor (LS5) detects that the cassettes is at a low level in "Low currency check enable" mode</li> </ol>	<ol style="list-style-type: none"> <li>1. Fill cash and set the number of bills. * In "Low currency enable" mode:</li> <li>2. Check if LS5 hole on the side of the cassettes is matching with LS5 after installing the cassette.</li> <li>3. Check if the reflection plate of the LS5 sensor is polluted in the cassette.</li> <li>4. Check if LS5 sensor is polluted, cable is cut, or the connector is wrongly inserted.</li> <li>5. Check logic related to LS5 of the Cash Dispenser Unit board.</li> </ol>
2000300	The reject box is full. This error occurs when the sum of rejected bills during the transaction and the rejected bills during the test is more than 50 after finally executing "Cassette Total".	<ol style="list-style-type: none"> <li>1. Execute "Cassette Total" after moving cash from the reject box.</li> </ol>
2000500	Cash Dispenser Unit data (country, cassette, shutter) setting error occurs during initialization.	<ol style="list-style-type: none"> <li>1. Check Cash Dispenser Unit information.</li> <li>2. Check battery back-up SRAM.</li> <li>3. Check the battery.</li> </ol>
2YY1500	Note has been detected on the return path before the Cash Dispenser Unit starts to operate. YY = Return Path Sensor ;	<ol style="list-style-type: none"> <li>1. Remove the jammed note on the return path.</li> <li>2. Check if the sensor is polluted.</li> <li>3. Check if cable is cut or the connector is wrongly inserted.</li> <li>4. Check logic related to the sensor in the Cash Dispenser Unit board.</li> </ol>
4000000	Receiving undefined command	
4001100	Detecting CS2 Dark (Front Access Type:Reject box is opened.)	
4001400	Detecting CS4A Dark	
4001500	Detecting CS2, CS4A Dark	
4001800	Detecting CS4B Dark	



Error Code	Cause	Handling
4001900	Detecting CS2, CS4B Dark	
4001C00	Detecting CS4A, CS4B Dark	
4001D00	Detecting CS2, CS4A, CS4B Dark	
4002100	Detecting CS1A Dark	
4002200	Detecting CS1B Dark	
4002300	Detecting CS1A, CS1B Dark	
4002800	Detecting CS13 Dark	
4002900	Detecting CS1A, CS13 Dark	
4002A00	Detecting CS1B, CS13 Dark	
4002B00	Detecting CS1A, CS1B, CS13 Dark	
4003000	Failed in checking the main motor echo	<ol style="list-style-type: none"> <li>1. Initialize</li> <li>2. Check Main Motor Encoder Slit</li> <li>3. Initialize after Power On/Off</li> <li>4. Check Encoder Sensor CS8 BRKT</li> <li>5. Check CS8 Sensor Cable</li> <li>6. Change Main Motor Encoder Slit Sensor CS8</li> </ol>
4003100	Reject Gate Solenoid Echo Check Error	<ol style="list-style-type: none"> <li>1. Listen to “click” sound during cash dispenser initializing                             <ul style="list-style-type: none"> <li>- If that sound occurs in 2 seconds after motor was turned, it is normal</li> <li>- If there is delayed, replace PCB on cash dispenser</li> </ul> </li> </ol>
4003200	Preset Gate Solenoid Echo Check Error	<ol style="list-style-type: none"> <li>1. Listen to “click” sound during cash dispenser initializing                             <ul style="list-style-type: none"> <li>- If that sound occurs in 2 seconds after motor was turned, it is normal</li> <li>- If there is delayed, replace PCB on cash dispenser</li> </ul> </li> </ol>
4003300	Check sum error (No information is set)	<ol style="list-style-type: none"> <li>1. Replace PCB on cash dispenser</li> </ol>

Error Code	Cause	Handling
4003400	Error of double notes detecting sensor(CS5_1) for initializing	<ol style="list-style-type: none"> <li>1. Check CS5_1 Sensor Cable</li> <li>2. Check second Dip Switch in CDU B/D</li> <li>3. Change CS5_1 Sensor</li> </ol>
4003600	Error of CS 2, CS13 sensor during initialization	<ol style="list-style-type: none"> <li>1. Check note jam at CS2 and CS13 sensor</li> <li>2. Clean CS2 and CS13 sensors</li> <li>3. Reconnect CS2 and CS13 sensors</li> <li>4. Replace CS2 and CS13 sensor</li> </ol>
4003700	Error of 2 sheets detecting sensor(CS5_1/CS5_2) for dispensing	<ol style="list-style-type: none"> <li>1. Check note jam at CS5 sensor</li> <li>2. Clean CS5 sensor</li> <li>3. Reconnect CS5 sensors</li> <li>4. Replace CS5 sensor</li> </ol>
4003800	SRAM check error	<ol style="list-style-type: none"> <li>1. Reboot ATM</li> <li>2. Replace PCB on cash dispenser</li> </ol>
4003900	Abnormal operation of the gate solenoid during initialization or before dispensing bill	<ol style="list-style-type: none"> <li>1. Initialize after removing notes or dust over Gate</li> <li>2. Check CS3 Sensor BKRT</li> <li>3. Check CS3 Sensor Cable</li> <li>4. Exchange Sensor after abnormal operating CS3 Gate detecting Sensor</li> <li>5. Exchange Reject Solenoid 1</li> </ol>
4003A00	This error occurs when the number of demanded bills are more than 5 in dispensing command for test	<ol style="list-style-type: none"> <li>1. Check command that CDU is received</li> <li>2. Check CDU EP ROM Version or specification</li> </ol>
4003B00	CS15A, CS15B dark detection error during initialization.	<ol style="list-style-type: none"> <li>1. Remove notes or dust in existence CS15A Sensor</li> <li>2. Check CS15A Sensor Cable</li> <li>3. Exchange Sensor after abnormal operating CS15A Sensor</li> </ol>
4004000	Taking out a cassette during dispensing bills.	<ol style="list-style-type: none"> <li>1. Push the cassette until making "click" sound</li> <li>2. Check the catcher inside cassette guide</li> </ol>
4004100	Error if re-driving is over 5 times during separated rejection	<ol style="list-style-type: none"> <li>1. Check notes in Reject Box</li> <li>2. Rearrange notes in Cassette</li> <li>3. Remove dust in CS15AB, CS31AB, CS41AB CS1AB Sensor</li> <li>4. Check dust existing in CS5 Sensor Guide</li> <li>5. Check dust existing in Main Motor Encoder Slit</li> <li>6. Check index value of notes each cassette</li> </ol>
4004200	This error occurs when CS13 (the number of dispensed bills) is smaller than the number of demanded bills.	<ol style="list-style-type: none"> <li>1. Check notes dispensed and rejected</li> <li>2. Remove notes jammed in CDU</li> <li>3. Remove dust in CS13 Sensor</li> <li>4. Exchange sensor after abnormal operating CS13 Sensor</li> </ol>
4004300	This error occurs when the rejected bills are more than 10 during dispensing.	<ol style="list-style-type: none"> <li>1. Check notes in Reject Box</li> <li>2. Rearrange notes in Cassette</li> <li>3. Remove dust in CS1AB, CS15AB, CS31AB,</li> </ol>

Error Code	Cause	Handling
		CS41AB Sensor 4. Check dust in existence CS5 Sensor Guide 5. Check notes index value
4004400	The bills are rejected 7 times continuously during dispensing.	1. Check notes in Reject Box 2. Rearrange notes in Cassette 3. Check dust in Main Motor Encoder Slit 4. Remove dust in CS15AB, CS31AB, CS1AB Sensor 5. Exchange CS8 Encoder Slit Sensor
4004500	The dispensed bills are more than the demanded bills. (the number of dispensed bills (CS13) > the number of demanded bills)	1. Check notes dispensed and rejected 2. Remove dust in CS13 Sensor 3. Exchange sensor after abnormal operating CS13 Sensor
4004600	Program error(Separated rejection)	1. Initialize after Reset Power 2. Upgrade CDU Firmware or Re-download 3. Exchange CDU B/D
4004700	1 cassette misfeed error (Separated rejection)	1. Check notes in 1 Cassette 2. Check Sensor(CS6) Poll 3. Check jam in 1 cassette and reload 4. Remove dust in CS1A, CS1B Sensor 5. Exchange 1 cassette box when there are many error
4004800	Error if the number of dispensed notes is not matched to the Inquired	1. Check CS13 sensor (note jam and dust) 2. Replace CS13 sensor
4004900	The number of demanded bill is zero. (from AP)	1. Check cash dispenser driver version (CDM SP)
4004A00	CS1AB ~ CS13 Time out (Jam) during dispensing bills from first cassette.	1. Remove jammed notes on CDU return path 2. Remove dust in CS1~CS4 sensor 3. Install after rearranging notes in cassette
4004B00	Bills are rejected 3 times continuously because of bill separation error during dispensing.	1. Check state of notes in reject box 2. Rearrange notes in cassette 3. Check cash dispenser configuration 4. Check foreign objects in the main motor encoder slit. 5. Replace the CS8 encoder slit sensor 6. Check and replace cassette
4004C00	In case the number of notes detected outlet sensor(CS13) is more than that of notes detected on CS1A,B sensor	1. Check CS1 sensor 2. Reconnect CS1 sensor
4004D00	Trying to dispense bills from first cassette but first cassette doesn't installed.	1. Set cassette #1 correctly 2. Check the catcher inside cassette #1 guide
4004E00	Trying to dispense bills from second cassette but second cassette doesn't installed	1. Set cassette #2 correctly 2. Check the catcher inside cassette #2 guide

Error Code	Cause	Handling
4005100	Received a Inquire for over 121 notes dispensing on the CDU from the upper unit.	1. Check cash dispenser driver version (CDM SP)
4005200	Something is detected at the CS1AB sensor before dispensing bills from first cassette. (CS1AB Dark Detection)	1. Remove the remaining notes at a sensor in front of the CST 2. Realign notes in the cassette 3. Check abnormal clutch. 4. Check abrasion of the cassette box pick unit.
4005300	Error for the double note detection during separation.	
4005400	Error in searching CS1 Sensor Table)	1. Initialize after resetting the power 2. Upgrade the CDU firmware or re-download software 3. Replace the CDU B/D
4005500	CS13 sensor time out (Jam) during dispensing bills.	1. Remove a jammed note between the tray and CDU 2. Remove a jammed note at the position of the CS13 sensor 3. Remove a dust on the CS13 sensor
4005600	Abnormal operation of the gate solenoid during dispensing	1. Remove a jammed note on the gate 2. Remove notes in the reject box and remount the reject box 3. Check if the CS3 sensor bracket is bended. 4. Check if the CS3 sensor cable is disconnected (CN10 #9~10) 5. Exchange a sensor after abnormal operating CS3 Gate detecting sensor. 6. Replace the reject solenoid 1
4005700	Cash dispenser configuration error	1. Replace cash dispenser PCB 2. Reconfigure cash dispenser setup data
4005800	Retract box position error during command reserved operation	1. Mount the retract box or open the box cover 2. Check if CS62 sensor poll is abnormal 3. Check if the CS62 sensor cable is disconnected (CDU Board CN10 #5~2).
4005900	Bill time out (jam) during initialization	1. Remove jammed notes 2. Clean the sensors (CS1~CS15) in cash dispenser
4005B00	2 Cassette Miss Feed Error (Fail to reject bill separately.)	
4005D00	Double bill detection error occurs 3 times continuously during dispensing bills.	1. Check notes' status in the reject box 2. Realign notes in the cassette 3. Check foreign objects at the position of the CS5 Sensor Guide 4. Check if the CS5 cable is disconnected (CS5_1:CDU B/D CN10 #11~12, 25~28//CS5_2:CN12)

Error Code	Cause	Handling
4006000	Something is detected in C31AB sensor before dispensing bills from 3rd cassette.	
4006100	Something is detected in C31AB sensor before dispensing bills.	
4006200	Bills are remained in CS11AB sensor after dispensing bills.	
4006300	Bills are remained in CS31AB sensor after dispensing bills	
4006A00	CS15AB ~ CS13 Time out(Jam) during dispensing bills from second cassette.	
4006B00	Something is detected on CS31A, CS31B sensor in initialization	
4007000	Something is detected on CS41AB sensor before dispensing bills from fourth cassette.	
4007200	Something is detected on CS41AB sensor during dispensing bills.	
4007300	Bills is remained in CS41AB sensor after dispensing bills.	
4007A00	CS31AB ~ CS13 Time out (Jam) during dispensing bills from fourth cassette.	
4007B00	Something is detected on CS41A, CS41B sensor in initialization	
4007C00	Missfeed error in 4th cassette	
4007D00	Trying to dispense bills from 4th cassette but the 4th cassette doesn't installed.	
4008000	Something is detected on CS15AB sensor before dispensing operation	
4008100	Something is detected in C15AB sensor during dispensing operation	
4008200	Bill is remained in CS15AB sensor after dispensing operation	
4008F00	CS13 sensor detects a bill with hole during dispensing	
4009A00	CS31AB~CS13 Time out(Jam) during dispensing from 3rd cassette.	
4009D00	Trying to dispense bills from 3rd cassette but the 3rd cassette doesn't installed.	
4009F00	3 cassette miss feed error	
400FF00	Bill jam	1. Remove the jammed notes 2. Initialize
400AC00	Something is detected on CS2 sensor after dispense operation	

Error Code	Cause	Handling
400BC00	Communication error – Command Length doesn't match.	
400BE00	Bill pickup sensor(CS1, CS15) recognized has a hole and CS4 sensor detects it or CS4 sensor detects the gap too close	
400C700	Something is detected on CS12 sensor during dispensing bills or initialization.- MB TTWn	
400C800	Something is detected on CS14 sensor during dispensing bills or initialization.- MB TTW	
400C900	Something is detected on CS14 sensor after dispense operationn	
400CC00	Bill is remained on the sensor in front of cassette during resetting.	
400D000	Bills are passed on CS13~CS12 sensor - Timeout[Jam], MB TTW	
400D100	Bills are passed on CS12~CS14 sensor - Timeout[Jam], MB TTW	
4DN0000	Cash Dispenser communication failure during sending command to cash dispenser	
4DN0100	Cash Dispenser communication failure during receiving command to cash dispenser	
4DN8100	Communication error of Shutter	
9712000	Failed to create file	1. Reboot ATM 2. Reinstall software 3. Replace hard disk drive
9712100	Failed to read file	1. Reboot ATM 2. Reinstall software 3. Replace hard disk drive
9712200	Failed to write file	1. Reboot ATM 2. Reinstall software 3. Replace hard disk drive
9712300	Failed to close file	1. Reboot ATM 2. Reinstall software 3. Replace hard disk drive
9712400	Failed to delete file	1. Reboot ATM 2. Reinstall software 3. Replace hard disk drive

Error Code	Cause	Handling
9712500	Failed to copy file	1. Reboot ATM 2. Reinstall software 3. Replace hard disk drive
9712600	Failed to create directory	1. Reboot ATM 2. Reinstall software 3. Replace hard disk drive
9719000	Failed to execute an extra command in the status of Cash Unit Exchange	1. Reboot ATM 2. Reinstall software 3. Replace hard disk drive
9719100	In case of not being the status of Cash Unit Exchange out of End Exchange	1. Reboot ATM 2. Reinstall software 3. Replace hard disk drive
9719200	In case of carrying out Cash In Start command at two times	1. Reboot ATM 2. Reinstall software 3. Replace hard disk drive
9719300	In case of not being the status of Cash In out of End Cash In	1. Reboot ATM 2. Reinstall software 3. Replace hard disk drive
9719400	Invalid Cash Unit ID	1. Reconfigure cash dispenser setup data
9719500	Invalid Cash Unit number	1. Reconfigure cash dispenser setup data
9719600	The abnormal of the number of Cash Unit	1. Reconfigure cash dispenser setup data
9719700	No. of dispensed notes that software counts is not matched to it cash dispenser responded.	
971A000	Invalid denomination	1. Reconfigure denomination at supervisor mode
971A100	Invalid currency	1. Reconfigure currency at supervisor mode
971A300	In case the number of bills dispensed exceeds the maximum dispensing bill	1. Check cash dispenser driver (CDM SP) version 2. Reconfigure the maximum dispensable count
971A400	In case the number of coins dispensed exceeds the maximum dispensing coin	1. Check coin dispenser driver version 2. Reconfigure the maximum dispensable count
971A500	Invalid mix number	1. Reconfigure cash dispenser at supervisor mode
971A600	In case automatic Retry of SP fails 3 times	
971A700	There is no setting information about automatic Retry standard	
971B000	No notes in stacker during rejecting or retracting notes	1. Check a dust in stacker 2. Reconfigure the maximum dispensable count
971C000	Undefined command is received	1. Reinstall software

Error Code	Cause	Handling
971D100	Partial dispense from cassette #1	1. Check the replenished amount and replenish 2. Check the notes in cassette #1
971D200	Partial dispense from cassette #2	1. Check the replenished amount and replenish 2. Check the notes in cassette #2
971D300	Partial dispense from cassette #3	1. Check the replenished amount and replenish 2. Check the notes in cassette #3
971DX00	In case partial bills dispensed by dispensing demand when Partial Dispense option is on. ☞ "X" means cassette number.	
9740000	Cash Dispenser communication failure during COM port open.	
9740020	Failed to create file	
9740025	Failed to copy file	
9740101	In case incorrect cassette type is set.	
9740102	In case nonexistent Note Index is set.	
9741100	When sensing CS2 Dark (Error code, 400FF00 is subdivided by location of sensor.)	
9741400	When sensing CS4A Dark (Error code, 400FF00 is subdivided by location of sensor.)	
9741800	When sensing CS4B Dark (Error code, 400FF00 is subdivided by location of sensor.)	
9742100	When sensing CS21A,B Dark (Error code, 400FF00 is subdivided by location of sensor.)	
9742800	When sensing CS13 Dark (Error code, 400FF00 is subdivided by location of sensor.)	
9743B00	When sensing CS15A,B Dark (Error code, 400FF00 is subdivided by location of sensor.)	
9744700	Cash picking-up fail while cash in cassette #1 is enough	
9745B00	Cash picking-up fail while cash in cassette #2 is enough	
9746B00	When sensing CS31A,B Dark (Error code, 400FF00 is subdivided by location of sensor.)	
9747B00	When sensing CS41A, B Dark (Error code, 400FF00 is subdivided by location of sensor.)	



Error Code	Cause	Handling
9747C00	Cash picking-up fail while cash in cassette #4 is enough	
9749F00	Cash picking-up fail while cash in cassette #3 is enough	
974FF00	When sensing bills in the Stacker (Error code, 400FF00 is subdivided by location of sensor.)	

**E.4 Receipt Printer**

Error Code	Cause	Handling
2001000	Receipt paper jam in the receipt printer. The jam detection sensor checks if there is paper before starting operation.	<ol style="list-style-type: none"> <li>1. Remove paper jam and paper scraps.</li> <li>2. Check the lever operation position in the sensor.</li> <li>3. Check if the sensor is polluted.</li> <li>4. Check if cable is cut or the connector is wrongly inserted.</li> <li>5. Check logic related to the jam detection sensor of the Slip Printer board.</li> </ol>
2001200	The feed lever of the receipt printer is open. It was detected that the feed lever was open before the receipt printer started to operate.	<ol style="list-style-type: none"> <li>1. Close the feed lever.</li> <li>2. Check if the micro switch of the feed lever normally functions.</li> <li>3. Check if cable of the micro switch is cut in the feed lever and the connector is wrongly inserted.</li> <li>4. Check logic related to the micro switch of the feed lever of the Slip Printer board.</li> </ol>
2001400	The thermal head of the receipt printer is overheated (before the receipt printer starts to operate).	<ol style="list-style-type: none"> <li>1. Check and replace the thermal printer head.</li> <li>2. Check logic related to the TPH of the PR board.</li> </ol>
2010100	Receipt printer lever opened before printing	<ol style="list-style-type: none"> <li>1. Close the lever of print head completely</li> </ol>
2010200	TPH (Thermal Printing Head) overheated before printing	<ol style="list-style-type: none"> <li>1. Wait the time until the temperature of head adequately slow down and try to initialize</li> </ol>
2010300	Paper jam before printing, cutting paper or discharging paper	<ol style="list-style-type: none"> <li>1. Remove jammed paper between printer head and rollers</li> <li>2. Check and clean sensor</li> <li>3. Replace sensor</li> </ol>
2010400	Detecting no paper before printing (No paper)	<ol style="list-style-type: none"> <li>1. Replenish receipt paper</li> <li>2. Check the status of sensor and its connector</li> </ol>
2010500	Detecting paper setting error before printing	<ol style="list-style-type: none"> <li>1. Check the status of paper setting</li> <li>2. Check the sensor status and its connector</li> </ol>
2010600	Command is received while doing self-test	<ol style="list-style-type: none"> <li>1. After terminating self-test and initialize receipt printer</li> </ol>
2010700	Detecting paper low (near end) before printing	<ol style="list-style-type: none"> <li>1. Replenish receipt paper</li> <li>2. Check the status of Near End sensor and its connector</li> </ol>
2010800	Paper cutting error	<ol style="list-style-type: none"> <li>1. Check the Cutter module</li> <li>2. Check if printer head lever is properly close</li> </ol>

Error Code	Cause	Handling
2010900	Dark sensing error before printing	<ol style="list-style-type: none"> <li>1. Check the status of dark sensor(black mark sensor)</li> <li>2. Check whether dip switch # 6 is set or not (Dip switch # 6 has to be turned on for not using dark sensing)</li> </ol>
2010A00	The size of image print data is abnormal while printing image	<ol style="list-style-type: none"> <li>1. Check the AP version and initialize</li> </ol>
2080100	Receipt printer lever opened after printing	<ol style="list-style-type: none"> <li>1. Close the lever of print head completely</li> </ol>
2080200	TPH (Thermal Printing Head) overheated after printing	<ol style="list-style-type: none"> <li>1. Wait the time until the temperature of head adequately slow down and try to initialize</li> </ol>
2080300	Paper jam after printing, cutting paper or discharging paper	<ol style="list-style-type: none"> <li>1. Remove jammed paper between printer head and rollers</li> <li>2. Check and clean sensor</li> <li>3. Replace sensor</li> </ol>
2080400	Detecting no paper after printing (No paper)	<ol style="list-style-type: none"> <li>1. Replenish receipt paper</li> <li>2. Check the status of sensor and its connector</li> </ol>
2080500	Detecting paper setting error after printing	<ol style="list-style-type: none"> <li>1. Check the status of paper setting</li> <li>2. Check the sensor status and its connector</li> </ol>
2080600	Command is received while doing self-test	<ol style="list-style-type: none"> <li>1. After terminating self-test and initialize receipt printer</li> </ol>
2080700	Detecting paper low (near end) after printing	<ol style="list-style-type: none"> <li>1. Replenish receipt paper</li> <li>2. Check the status of Near End sensor and its connector</li> </ol>
2080800	Paper cutting error	<ol style="list-style-type: none"> <li>1. Check the Cutter module</li> <li>2. Check if printer head lever is properly close</li> </ol>
2080900	Dark sensing error after printing	<ol style="list-style-type: none"> <li>1. Check the status of dark sensor(black mark sensor)</li> <li>2. Check whether dip switch # 6 is set or not (Dip switch # 6 has to be turned on for not using dark sensing)</li> </ol>
2080A00	The size of image print data is abnormal while printing image	<ol style="list-style-type: none"> <li>1. Check the AP version and initialize</li> </ol>
2DN0000	Failed to connect communication between Receipt printer and SP	<ol style="list-style-type: none"> <li>1. Check if communication cable or com port is not connected</li> </ol>
9720000	Communicate fail during opening printer driver (PTR SP)	<ol style="list-style-type: none"> <li>1. Check if communication cable or com port is not connected</li> </ol>
9722010	Communicate fail during opening printer driver (PTR SP)	<ol style="list-style-type: none"> <li>1. Check if communication cable or com port is not connected</li> </ol>
9722DN0	Failed to connect communication between Receipt printer and SP	<ol style="list-style-type: none"> <li>1. Check if communication cable or com port is not connected</li> </ol>

### E.5 Rear Operator Panel

Error Code	Cause	Handling
9704020	Failed to create file	
9704021	Failed to read file	
9704022	Failed to write file	
9704023	Failed to close file	
9704024	Failed to delete file	
9704025	Failed to copy file	
9704030	Failed to create Registry	
9704031	Failed to read Registry	
9704032	Failed to write Registry	
9704034	Failed to delete file	
9704040	Failed to create Thread	
9704043	Failed to terminate Thread	
9704050	Failed to create Process	
9704053	Failed to terminate Process	
9704060	Failed to create Memory	
9704061	Failed to read Memory	
9704062	Failed to write Memory	
9704063	Failed to close Memory	
9704068	Invalid pointer	
9704070	Failed to create Mutex	

Error Code	Cause	Handling
9704073	Failed to release Mutex	
9704076	Failed to wait time out Mutex	
9704080	Failed to create Event	
9704086	Failed to wait time out Event	
9704100	Failed to connect polling or timeout	
9704101	Failed to connect polling or line error	
9704102	Timeout to send polling	
9704103	Failed to close polling or timeout	
9704104	Failed to close polling or line error	

**E.6 Miscellaneous**

<b>Error Code</b>	<b>Cause</b>	<b>Handling</b>
1030100	Key data error from host	1. Contact to host
7000100	It's impossible to read the version after transferring to the CduSetup menu.	
7000200	It's impossible to read the version after CDU Setup.	
7000300	User's setting values are different from the actual written setting value.	
9701010	Communication fail between PIN driver (PIN SP) and pinpad	1. Check communication cable or com port is not connected
9701012	Command sending fail to pinpad	1. Check communication cable or com port is not connected
9701016	Data receiving fail from pinpad (EPP)	1. Check if communication cable or com port is not connected
9701017	Data sending fail from pinpad (EPP)	1. Check if communication cable or com port is not connected
9701031	Pinpad (EPP) configuration data reading error	1. Reboot ATM 2. Re-install software
9701040	Failed to produce Thread for pinpad (EPP)	1. Reboot ATM 2. Re-install software
9701060	Failed to create buffer for pinpad (EPP)	1. Reboot ATM 2. Re-install software
9701068	MapView of File Fail in Create ShareMemory Method for EPP	1. Initialize Pin SP. 2. Call your attendant
9701070	Create Mutex Fail for SIU(Sensor)	1. Initialize Pin SP. 2. Call your attendant
9701102	COM handle is null for EPP	1. Initialize Pin SP. 2. Call your attendant
9701111	BCC error from pinpad (EPP)	1. Reboot ATM 2. Replace pinpad
9701150	Pinpad (EPP) is down when it receives an 'Initializing' command	1. Reboot ATM 2. Replace pinpad
9701151	Pinpad (EPP) is down when it receives an 'Get Status' command	1. Reboot ATM 2. Replace pinpad
9701152	Pinpad (EPP) is down when it receives an 'Clear Func Key' command	1. Reboot ATM 2. Replace pinpad
9707082	Failed the message transmission for the fire event for VFD ex) After connection is closed, an event for the previous command is arrived.	It is a software error. On AP logic, check the event for the command executed before closing connection.

Error Code	Cause	Handling
D140100	Disconnected by unknown reason	
D140200	Disconnected by Remote Party rejected call	
D140300	Disconnected by Local phone picked up	
D140400	Disconnected by Forwarded	
D140500	Disconnected by Unreachable	
D140600	Disconnected by Congestion	
D140700	Disconnected by Incompatible	
D140800	Disconnected by Bad Reason	
D160100	Disconnected by Bad Address	1. Check the host.
D160200	Disconnected by Unavailable	1. Check the host.
D170X00	No carrier No carrir during data transmission after the modem is connected.	2. Check the host. 3. Check if the transaction card is valid. 4. Check line noise. 5. Check the modem controller and logic.
D170100	No carrier before sending data after modem connection	1. Check phone line status 2. Check ground of AC power and noise between modem cable and power cable
D170200	No carrier before receiving ENQ from host	1. Check phone line status 2. Check ground of AC power and noise between modem cable and power cable
D170300	No carrier before sending transaction Inquire data to host	1. Check phone line status 2. Check ground of AC power and noise between modem cable and power cable
D170400	No carrier after sending transaction Inquire data to host	1. Check phone line status 2. Check ground of AC power and noise between modem cable and power cable
D170500	No carrier before receiving ACK from host	1. Check phone line status 2. Check ground of AC power and noise between modem cable and power cable

Error Code	Cause	Handling
D170600	No carrier after receiving ACK from host	1. Check phone line status 2. Check ground of AC power and noise between modem cable and power cable
D320100	Outbound call is aborted	1. Check modem line 2. Replace modem if same error occurs repeatedly
D320200	Fail to dial to someone	1. Check modem line 2. Replace modem if same error occurs repeatedly
D410000	CRC mismatch	
D410100	No CRC is received	Make sure that the host is using CRC



## E.7 Host NG Code

Error Code	Cause	Handling
7710891	Host line fail	Inconsistent with the message of Host
D00B000	Terminal ID mismatched	Inconsistent with the message of Host
D00B100	Response Code Mismatched	Inconsistent with the message of Host
D00B200	First Field ID Code Mismatched	Inconsistent with the message of Host
D00B300	First Des Key Wrong Size	Inconsistent with the message of Host
DA00100	Expired card	Check the valid date of card.
DA00200	Unauthorized usage	Inquire your service provider.
DA00300	PIN error	1. Reenter the password correctly. 2. If the same problem occurs, inject master key again by diagnostics or inquire your service provider.
DA00400	Invalid PIN	1. Reenter the password correctly. 2. If the same problem occurs, inject master key again by diagnostics or inquire your service provider.
DA00500	Bank unavailable	1. Check the card whether usage or not. 2. Inquire about the problem.
DA00600	Card not supported	Check the card whether usage or not.
DA00700	Insufficient funds	Check the fund of account.
DA00800	Ineligible transaction	Inquire your service provider.
DA00900	Ineligible account	Inquire your service provider.
DA01000	Number of daily withdrawal exceeded	Inquire your service provider.
DA01100	Cannot process transaction	Inquire your service provider.
DA01400	PIN tries exceeded	1. Reenter the password correctly. 2. If the same problem occurs, inject master key again by diagnostics or inquire your service provider.
DA01500	Database problem	Inquire your service provider.

Error Code	Cause	Handling
DA01600	Withdrawal limit already reached	1. Check the limit amount of withdrawal. 2. Check the total paid money from ATM.
DA01700	Invalid Amount	Check the input amount during transaction.
DA01800	External decline	Inquire your service provider.
DA01900	System error	Inquire your service provider.
DA02200	Message edit error	Inquire your service provider.
DA02300	Transaction not supported	Inquire your service provider.
DA11100	Reversal Declined	Inquire your service provider.
DA01100	UNAUTHORIZED TRANSACTION	Inquire your service provider.
DA01200	EXPIRED CARD (RBSLynk) or INVALID SELECTED TRANSACTION (STANDARD1/2) or Amount too large (STANDARD3)	<ul style="list-style-type: none"> <li>- EXPIRED CARD Check the valid date of card.</li> <li>- INVALID SELECTED TRANSACTION Check the selected transaction</li> <li>- AMOUNT TOO LARGE <b>Check the input amount during the transaction.</b></li> </ul>
DA01300	INVALID (RBSLynk) or INVALID AMOUNT (STANDARD1/2) or ACCOUNT CLOSED (STANDARD3)	<ul style="list-style-type: none"> <li>- INVALID 1. Reenter the password correctly. 2. If the same problem occurs, inject master key again by diagnostics or inquire your service provider.</li> <li>- INVALID AMOUNT Check the input amount during transaction.</li> <li>- ACCOUNT CLOSED <b>Check the account from bank.</b></li> </ul>
DA01400	PIN ERROR (RBSLynk) or INVALID CARD (COMMON)	<ul style="list-style-type: none"> <li>- PIN ERROR 1. Reenter the password correctly. 2. If the same problem occurs, inject master key again by diagnostics or inquire your service provider.</li> <li>- INVALID CARD Check the card whether usage or not.</li> </ul>
DA01500	BANK or NETWORK UNAVAILABLE	Inquire your service provider.
DA02000	SURCHARGE DISPLAY FAULT	Inquire your service provider.
DA02100	UNAUTHORIZED USE (STANDARD1/2) or Routing lookup problem (STANDARD3)	Inquire your service provider.

Error Code	Cause	Handling
DA02200	EXPIRED CARD	Check the valid date of card.
DA02300	INVALID TRANSACTION	Inquire your service provider.
DA02400	PIN ERROR (RBSLynk) or EXCEEDS WITHDRAWAL LIMIT (STANDARD1/2) or INSUFFICIENT FUNDS (STANDARD3)	– PIN ERROR 1. Reenter the password correctly. 2. If the same problem occurs, inject master key again by diagnostics or inquire your service provider. – INSUFFICIENT FUNDS Check the fund of account.
DA03000	INELIGIBLE TRANSACTION	Inquire your service provider.
DA03100	INELIGIBLE ACCOUNT	Inquire your service provider.
DA03200	NETWORK DOWN	Inquire your service provider.
DA03900	INVALID CREDIT CARD ACCOUNT	Inquire about credit card account to bank.
DA0400	ENTER WHOLE DOLLARS ONLY	Check the denomination of your ATM.
DA04100	INSUFFICIENT FUNDS	Check the fund of account.
DA04200	NO FURTHER WITHDRAWALS	Inquire your service provider.
DA04300	LESSER DOLLAR - RETRY	Check the input amount during transaction. Except transfer transaction, user have to input more \$1
DA04400	LESSER WHOLE DOLLAR - RETRY	Check the input amount during transaction. Except transfer transaction, user have to input more \$1
DA05000	INVALID PIN	1. Reenter the password correctly. 2. If the same problem occurs, inject master key again by diagnostics or inquire your service provider.
DA05200	INVALID CHECKING ACCOUNT	Check the checking account.
DA05300	INVALID SAVINGS ACCOUNT	Check the savings account.
DA05400	EXPIRED CARD	Check the valid date of Card
DA05500	BAD PIN	1. Reenter the password correctly. 2. If the same problem occurs, inject master key again by diagnostics or inquire your service provider.
DA05700	INVALID TRANSACTION FOR THIS CARD	Check the card whether usable or not.

Error Code	Cause	Handling
DA05800	INVALID TRANSACTION FOR THIS TERMINAL	Inquire your service provider.
DA06100	EXCEEDS WITHDRAWAL LIMIT	Check the amount of withdrawal limit.
DA07000	INVALID CARD - NOT A DEBIT CARD	Check the card whether usable or not
DA07100	NO CREDIT ACCOUNT NUMBER FOUND	Check card whether usable or not
DA07500	BAD PIN (MULTIPLE TIMES)	1. Reenter the password correctly. 2. If the same problem occurs, inject master key again by diagnostics or inquire your service provider.
DA07800	NO ACCOUNT EXIST	Inquire your service provider.
DA08000	INVALID DATE	Check local date of ATM.
DA08300	NOT VERIFIED PIN	1. Reenter the password correctly. 2. If the same problem occurs, inject master key again by diagnostics or inquire your service provider.
DA08600	NOT VERIFIED PIN	1. Reenter the password correctly. 2. If the same problem occurs, inject master key again by diagnostics or inquire your service provider.
DA09000	INVALID TERMINAL TYPE	Inquire your service provider.
DA09100	INVALID TERMINAL KEY (RBSLynk) or NO BANK RESPONSE (COMMON)	Inquire your service provider.
DA09200	INVALID ABA, SIC or ACCOUNT NUMBER (RBSLynk) or NO NETWORK RESPONSE	Inquire your service provider.
DA09300	TERMINAL IS DEACTIVATED	Inquire your service provider.
DA09500	TEST TRANSACTION FOR OTHER THAN \$0.00 (RBSLynk) or MISC. PROCESSING ERROR (STANDARD3)	Inquire your service provider.
DA09700	EXCEEDING STORE DAILY CREDIT LIMIT	Check the maximum credit limit per day.
DA09800	EXCEEDING STORE DAILY DEBIT LIMIT	Check the maximum debit limit per day.
DA01110	TIME OUT	Inquire your service provider.

**E.8 Application Error Code (Including Comm. Error)**

<b>Error Code</b>	<b>Cause</b>	<b>Handling</b>
11019100	LOST CARD", DEV_MCU	
1102910	LOST WITHDRAW CASH",DEV_CSH	
1102920	LOST DEPOSIT CASH", DEV_CSH	
11039100	LOST CARD & SLIP", DEV_MCU   DEV_SPR	
11059100	LOST PB", DEV_PBM	
11069100	LOST SLIP", DEV_SPR	
2000400	Vault door opened	1. Close door 2. Check whether dip switch # 6 is set or not
2001300	Paper empty	1. Replenish receipt paper
971A200	Not dispensable from cassette	1. Reconfigure denomination 2. Reconfigure currency
991@@@91	Power off during transaction	1. Check power supply
C101000	CDU Can't Dispense (Check The Cassette)	1. Check All Cassette Status
D000100	Modem initializing error. An error is received from the modem controller after Modem Initialize command is issued.	1. Check modem 2. Reboot ATM
D000200	Reversal transaction failure. Cancellation of the transaction due to an error having occurred while notes were dispensed was notified to the host, however, the host did not receive this notification.	1. Contact to bank to refund
D000300	PIN ERROR	1. Transaction was denied by host
D000400	INVALID PIN	1. Transaction was denied by host
D000500	BANK UNAVAILABLE	1. Transaction was denied by host
D000600	CARD NOT SUPPORTED	1. Transaction was denied by host
D000700	INSUFFICIENT FUNDS	1. Transaction was denied by host

Error Code	Cause	Handling
D000800	INELIGIBLE TRANSACTION	1. Transaction was denied by host
D000900	INELIGIBLE ACCOUNT	1. Transaction was denied by host
D001000	DAILY LIMIT EXCEEDED	1. Transaction was denied by host
D001100	UNABLE TO PROCESS	1. Transaction was denied by host
D001200	1. AMOUNT TOO LARGE 2. This error code means "Invalid Transaction" at ATM connected to RBS-LYNK.	1. Transaction was denied by host
D001300	1. ACCOUNT CLOSED 2. This error code means "Invalid Amount" at ATM connected to RBS-LYNK.	1. Transaction was denied by host
D001400	1. PIN TRIES EXCEEDED 2. This error code means "Invalid Card Number" at ATM connected to RBS-LYNK.	1. Transaction was denied by host
D001500	UNABLE TO PROCESS	1. Transaction was denied by host
D001600	WITHDRAWAL LIMIT ALREADY REACHED	1. Transaction was denied by host
D001700	INVALID AMOUNT	1. Transaction was denied by host
D001800	EXTERNAL DECLINE	1. Transaction was denied by host
D001900	SYSTEM ERROR	1. Transaction was denied by host
D002000	1. CONTACT CARD ISSUER. 2. This error code means "Surcharge screen should have been displayed" at ATM connected to RBS-LYNK.	1. Transaction was denied by host
D002100	ROUTING LOOKUP PROBLEM	1. Transaction was denied by host
D002200	UNABLE TO PROCESS	1. Transaction was denied by host
D002300	TRANSACTION NOT SUPPORTED	1. Transaction was denied by host
D002400	Exceeds Issuer Withdrawal Limit	1. Transaction was denied by host
D003900	No Credit Account	1. Transaction was denied by host
D005100	Insufficient Funds	1. Transaction was denied by host

Error Code	Cause	Handling
D005200	No Checking Account	1. Transaction was denied by host
D005300	No Savings Account	1. Transaction was denied by host
D005400	Expired Card	1. Transaction was denied by host
D005500	Incorrect Pin	1. Transaction was denied by host
D005700	Transaction not Permitted – Card	1. Transaction was denied by host
D005800	Transaction not Permitted – Terminal	1. Transaction was denied by host
D006100	Exceeds Withdrawal Limit	1. Transaction was denied by host
D007500	PIN Tries Exceeded	1. Transaction was denied by host
D007800	No Account	1. Transaction was denied by host
D008000	Invalid Date	1. Transaction was denied by host
D008300	Can not Verify PIN	1. Transaction was denied by host
D008600	Can not Verify PIN	1. Transaction was denied by host
D009100	Bank Unavailable	1. Transaction was denied by host
D009200	System Unavailable	1. Transaction was denied by host
D009300	Transaction Serial Number mismatched	1. Transaction was denied by host
D009400	Record Format Mismatched. Check if a proper AP for the host has been loaded.	1. Transaction was denied by host
D009500	Routing Identification Mismatched. Check the routing Identification.	1. Transaction was denied by host
D009600	Terminal Identification Mismatched. Check the terminal Identification.	1. Transaction was denied by host
D009700	Response Type Mismatched (Reversal)	1. Transaction was denied by host
D009800	Response Type Mismatched (Day Close)	1. Transaction was denied by host
D009900	Response Type Mismatch (Config.)	1. Transaction was denied by host
D009A00	Response Type Mismatch (Withdrawal/Balance/Transfer)	1. Transaction was denied by host

Error Code	Cause	Handling
D009B00	STX missing	1. Check modem cable 2. Contact to host
D009C00	ETX missing	1. Check modem cable 2. Contact to host
D009D00	FS missing (next to Response Code)	1. Check modem cable 2. Contact to host
D009E00	FS missing(next to Retrieval Reference Number)	1. Check modem cable 2. Contact to host
D009F00	FS missing(next to System Trace Audit Number)	1. Check modem cable 2. Contact to host
D00A000	FS missing (next to Account Balance)	1. Check modem cable 2. Contact to host
D00A100	FS missing (next to Available Balance)	1. Check modem cable 2. Contact to host
D00A200	FS missing (next to Surcharge Amount)	1. Check modem cable 2. Contact to host
D00A300	FS missing (next to Authorization Response Text)	1. Check modem cable 2. Contact to host
D00A400	ETX position is not correct.	1. Check modem cable 2. Contact to host
D00A500	FS missing (next to Total Cash Dispense Amount in the Day Close message)	1. Check modem cable 2. Contact to host
D00A600	FS missing (next to Total Non Cash Dispense Amount in the Day Close message)	1. Check modem cable 2. Contact to host
D00A700	FS missing (next to Total Surcharge Amount in the Day Close message)	1. Check modem cable 2. Contact to host
D00A800	FS missing (next to Surcharge Amount in the Configuration message)	1. Check modem cable 2. Contact to host
D00A900	ETX missing (in the Configuration message)	1. Check modem cable 2. Contact to host
D00AC00	MAC MISTCHED	Inconsistent with the message of Host
D00C100	Host MAC result error	Check the key mode and MAC value
D00C200	ATM MAC result error	Check the key mode and MAC value
D011100	REVERSAL DECLINED	1. Check modem cable 2. Contact to host
D022200	PIN CHANGE DECLINED	1. Check modem cable 2. Contact to host
D030000	No response from the modem controller within a specified time after issuance.	1. Check modem cable 2. Contact to host and phone company
D100000	No connection	1. Check modem cable 2. Contact to host and phone company



Error Code	Cause	Handling
D110000	ENQ was not received from the host.	1. Contact to phone company 2. Contact to host
D120000	Transmission error : Failed to receive the whole data within 5 seconds after Inquireing the modem to send the data.	1. Contact to phone company 2. Contact to host
D130000	NAK has been sent three times or more. Failed in receiving the data due to parity or LRC error. Therefore, sent NAK to the host and Inquireed to send the data again three times or more.	1. Contact to phone company 2. Contact to host
D150000	1. Modem dial connection time-out (while dialing the modem) 2. No response from host for 60 seconds.	1. Try later 2. Contact to host and to phone company
D170X00	No carrier No carrier during data transmission after the modem is connected.	
D180000	No dial tone	1. Check modem
D190000	No Answer	1. Check phone number 2. Contact to telephone company and host
D200000	Dial(Line) busy	1. Make a transaction later 2. Check ground phone line status
D210000	Response time-out (30 seconds) for Modem Initialize command before the modem was connected.	1. Check modem
D220000	EOT was not received from the host.	1. Check phone line status 2. Contact to host
D320000	1. Dial connecting time-out (60Sec) or dial connection error 2. Host response message time-out (60Sec).	1. Check phone line status 2. Contact to host
POWERAB	UPS ABNORMAL	1. Check UPS
POWERAC	POWER OUT OR AC OFF	1. Check AC power status and environment 2. Check UPS
POWERBA	BATTERY LOW	1. Check AC power status and environment 2. Check UPS
(RBS-LYNK)	Invalid Transaction/Amount. Surcharge screen should have been displayed.	

**E.9 Application Error Code (Middleware Program Associated)**

<b>Error Code</b>	<b>Cause</b>	<b>Handling</b>
9799499	DISPENSER COUNT ERROR	
9799901	DOOR CHECK	
9799902	LIGHT ERROR	
9799903	SPL ERROR	
9799904	PIN ERROR	
9799905	SENSOR CHECK	
9799907	UPS ERROR	
9799908	SCREEN ERROR	
9799301	MCU RETRACT OVER	
9799601	PBM RETRACT OVER	
8217091	MCU EXIST	
8216091	CASH EXIST	
8218091	PBM EXIST	
97911XX	DEV_JPR Timeover Error Code	
97912XX	DEV_SPR Timeover Error Code	
97913XX	DEV_MCU Timeover Error Code	
97914XX	DEV_CDU Timeover Error Code	
97915XX	DEV_BRM Timeover Error Code	
97916XX	DEV_PBM Timeover Error Code	
97918XX	DEV_PIN Timeover Error Code	
9791AXX	DEV_FNG Timeover Error Code	

Error Code	Cause	Handling
9791BXX	DEV_VFD Timeover Error Code	
97921XX	DEV_JPR FATALERROR (WARNING)	
97922XX	DEV_SPR FATALERROR (WARNING)	
97923XX	DEV_MCU FATALERROR (WARNING)	
97924XX	DEV_CDU FATALERROR (WARNING)	
97925XX	DEV_BRM FATALERROR (WARNING)	
97926XX	DEV_PBM FATALERROR (WARNING)	
97928XX	DEV_PIN FATALERROR (WARNING)	
9792AXX	DEV_FNG FATALERROR (WARNING)	
9792BXX	DEV_VFD FATALERROR (WARNING)	

## F. Electronic Combination Lock

### F.1 Cencon Lock

#### Initial Operating Instructions

Each lock is shipped from the factory in Shelved Mode, operating on a standard combination (50-25-50). The “one time only” combination does not function when the lock is in this condition. The correct opening procedure for a new lock is :

- Turn the Dial left (CCW) until the letters “EC” (Enter Combination) appear on the LCD
- Enter the factory combination of 50-25-50 by sequentially pressing those six buttons. The LCD will display these number as they are entered.
- When the combination has been correctly entered, the LCD will read :OPr” meaning “Open right.”
- Turn the Dial right (CW) until it stops. The lock’s bolt is now retracted and the lock is open.
- Turning the Dial left (CCW) will extend the lock’s bolt

Try this several times until you are comfortable with the operation of the lock.

#### Change Shelved Mode Combination

For System 2000 Locks with a code level of 71, or greater, you may change the Shelved Mode combination. You may change the default Factory Combination of 50-25-50 to a new combination to be used while the lock is still in Shelved Mode. Once you have changed the combination for the first time, you may want to change the combination again to a different Shelved Mode combination. You can even change it back to the Factory combination of 50-25-50

Required Items: Change Key, Current Shelved Mode Combination

Note: You can only change the Shelved Mode combination while operating in Shelved Mode. Once a lock is “activated” in any mode, the Shelved Mode combination returns to the Factory Default of 50-25-50

To change the Shelved Mode combination:

1. Power Lock -> EC

Turn the Dial to the left (CCW) until “EC” (Enter Combination) is displayed.

2. EC -> Enter Shelved Mode Combination -> OPr

Enter the current Shelved Mode combination (either 50-25-50 or a changed Shelved Mode combination) by sequentially pressing those digits on the lock keypad. The numbers will be displayed on the LCD as they are entered.

3. OPr -> Retract Bolt

Turn the Dial to the right (CW) to retract the bolt

4. Open Door

5. Insert Change Key

Insert the change key into the change key socket on the back of the lock.

6. Extend Bolt

Turn the Dial to the left (CCW) to extend the bolt. Do not close the door

7. Power Lock -> ⌞ EC

Turn the dial to the left(CCW) until ⌞ EC (the Change Key symbol along with Enter Combination) is displayed

8. ⌞ EC -> Press #8 -> EcF

Press the “#” button followed by the “8” button. EcF (Enter combination, Factory) will be displayed.

9. EcF -> Enter Current Shelved Mode Combination -> EnF

Enter the current shelved mode combination, “EnF” (Enter combination, Factory) will be displayed.

10. EnF -> Enter New Combination -> Cnf

Select and enter the new combination. “CnF” (confirm new Factory combination) will be displayed

11. Cnf -> Enter New Combination -> POC

Enter new combination again to confirm. POC (Pull Out Change key) will be displayed.

12. POC -> Remove Change Key -> EOP

Remove the change key. EOP (End Operation) is displayed.

## 13. EOP -&gt; Power Lock -&gt; EC

Turn the dial to the left (CCW) until EC (Enter Combination) is displayed.

## 14. EC -&gt; Enter New Shelved Mode Combination -&gt; OPr

Enter the new shelved mode combination by pressing those digits on the lock's keypad. The numbers will be displayed on the LCD as they are entered

## 15. OPr -&gt; Retract Bolt

Turn the Dial to the right (CW) to retract the bolt.

## 16. Close Door

## 17. Extend Bolt

Turn the Dial to the left (CCW) to extend the bolt.

## F.2 Electronic Combination Lock

**Please operate the lock or change the password only after fully understanding this instruction**

### OPENING THE LOCK

- 1) Enter valid six (6) digit code at a time. (Factory default password : 123456)
- 2) The lock will signal a valid code entry with a double signal.
- 3) Within four (4) seconds, turn handle counterclockwise to the open position.
- 4) Pull door open.



### LOW BATTERY WARNING

- Repeated audio and visual signal (LED flashing and repeated beeping) during opening indicates battery low.

### AUDIO AND VISUAL SIGNAL

- Double signal (LED flashes and unit beeps) indicates entry is valid or accepted.
- Triple signal indicates invalid or not accepted.

### WRONG TRY PENALTY

- Entry of four (4) consecutive invalid codes starts a 5-minute delay period.
  - LED flashed red at five (5) second intervals.
- At the end of the delay period, two more consecutive invalid codes will restart an additional 5-minute delay period.

### CHANGING YOUR PASSWORD

- 1) Enter "zero" six times.
- 2) Enter your existing six (6) digit code one time.
- 3) Enter your NEW six (6) digit code two times.
- 4) If a mistake is made wait thirty (30) seconds and repeat steps 1. - 3.
- 5) Test lock operation several times before closing the door.
  - Valid Code Entry - Double signal after valid six (6) digit code is entered.
  - Invalid Code Entry - Triple signal and old code is still valid.



**WARNING** : ALWAYS PERFORM THIS OPERATION WITH THE DOOR OPEN

### **BATTERY LOW WARNING**

- Repeated beeping during an opening indicates that the battery is low and needs immediate replacement.
- Uses one (1) 9-Volt Alkaline Battery. LA GARD recommends the use of Duracell™ or Everready™ Alkaline batteries.  
If battery is depleted and will not allow lock to open, simply follow instructions below.

### **CHANGING YOUR BATTERY**

*Note: Some manufacturers use a small screw to secure the battery compartment cover to the keypad housing. If your model has this screw, it must be removed first before following the steps listed below.*

- 1) Remove black plastic battery compartment cover (located at the bottom of the keypad) by gently pulling downward on it's handle.
- 2) Allow the battery and it's attached leads to drop down and out of the battery compartment. If it does not drop, gently pull on the battery until it does.
- 3) The connector is easily removed by unsnapping it from the two terminals on the top of the battery. Never Pull on the Battery Leads
- 4) Connect a new 9-Volt Alkaline battery to the battery clip.
- 5) Push the battery and the leads completely up into the battery compartment.
- 6) Install the battery cover by placing one side of the cover in position and then pressing the other side into position with your finger.



## G. Installation Guide

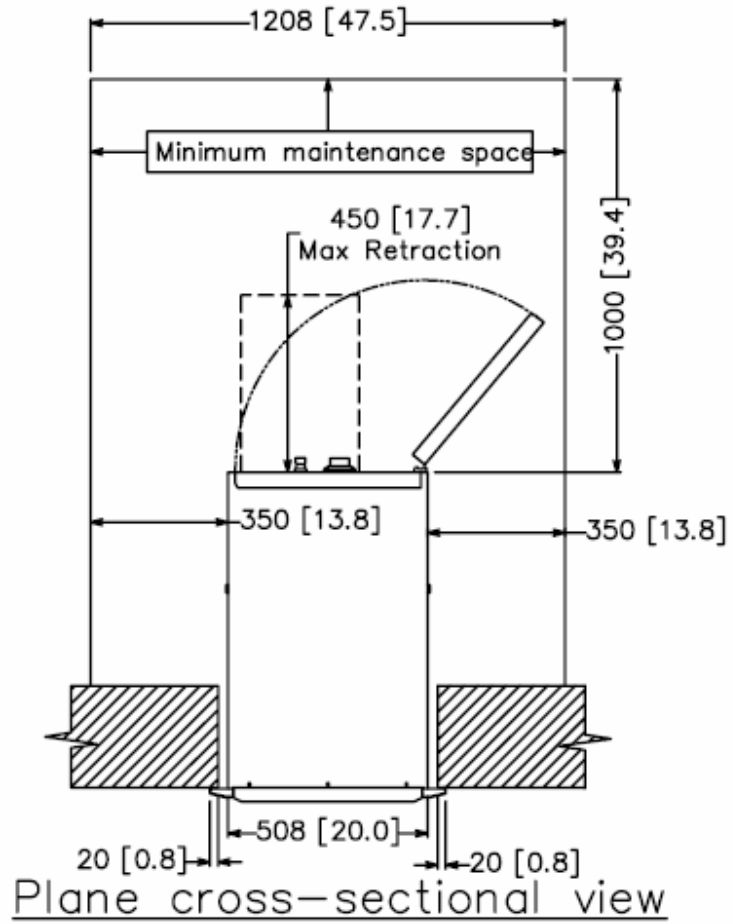
### G.1 Installation Requirements and Necessary Tools

- Installation condition and space

Following conditions should be met before installing equipment.

- 1) Temperature while operating should be between 40°F - 95°F
- 2) Relative humidity while operating should be between 15% < RH < 85%, Non-Condensed
- 3) Avoid locations where intense direct light is reflected off the LCD screen.
- 4) Avoid locations where strong static electricity can occur.
- 5) Avoid placing the product next to equipment that produce electromagnetic waves. It could interfere with data transfer.
- 6) The floor must allow easy wheelchair access from the front or the side.
- 7) Space required for servicing the machine should be considered before installation.

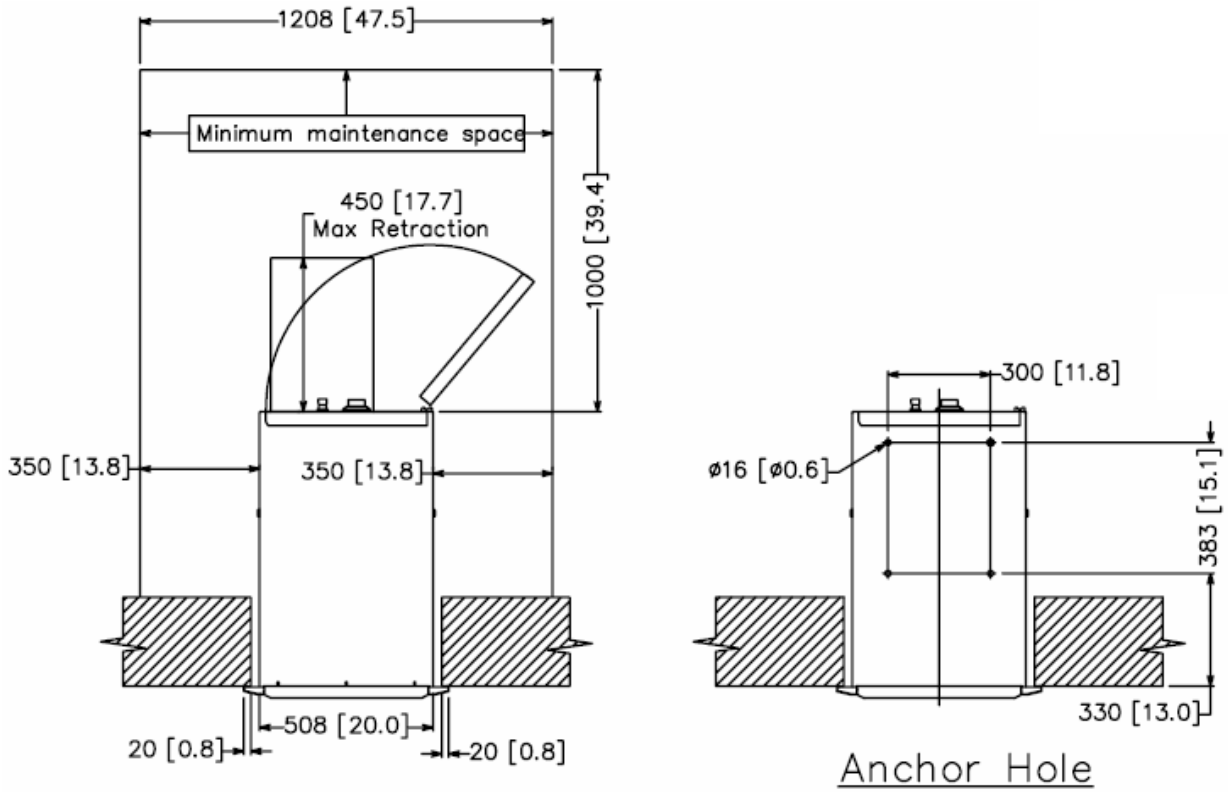
(1) Adjustor Type



Note) Described unit is millimeter and ( ) is inch.

Fig. 7.4 (a) Installation space #1 (Adjustor Type)

(2) Non Adjustor Type



Plane cross-sectional view

Note) Described unit is millimeter and ( ) is inch.

Fig. 7.4 (b) Installation space #1 (Non Adjustor Type)

### G.2 Wall Cutting preparation

The wall should be prepared according to the following guidelines before installing MoniMax 5100T.

- 1) The maximum thickness of wall that enables you to install this machine should not be exceeded 250mm (10 inch).
- 2) The height of this machine indicated on the plan is minimum height, it can be adjusted up to 30mm (1.18 inch). (Only for Adjustor Type)
- 3) The installation of this machine is based on the floor from customer’s foot of outside building.
- 4) After installation this machine, the gap between collar and wall will be waterproofed by using of silicon.
- 5) “The minimum maintenance space” should be secured in the rear of this machine.
- 6) All the measurements shown on the plan, ±5mm (0.2 inch) tolerance should be kept.

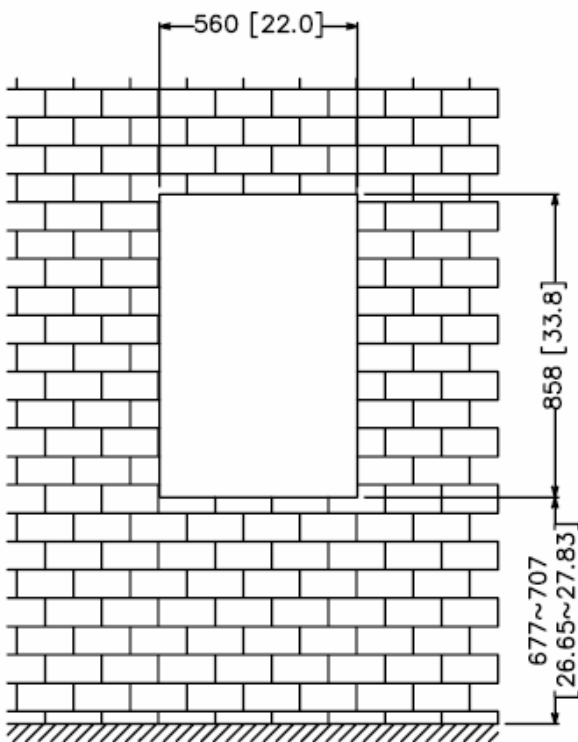


Fig. 7.5 (a) Wall construction plan (Adjustor Type)

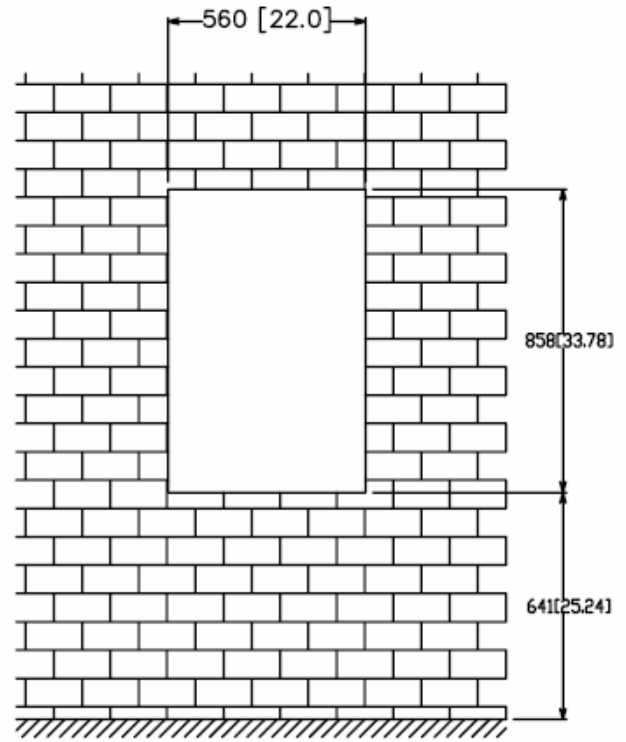


Fig. 7.5 (b) Wall construction plan (Non Adjustor Type)

Note : All the unit in the dimension is millimeter and [ ] is inch scale.

- Tools required for installation

In order to move the machine and place it in a proper location, you should seek the help of professionals trained in moving heavy equipment.

Following tools are needed to install the machine.

- Wire cutter
- Lifter
- Screw driver (Flat, Phillips)
- Wrench (Spanner)
- Leveling tool

### **G.3 How to Install this ATM at Customer Site**

- **Unpacking**

- 1 ) Unpack the machine on top of the palette.
- 2 ) Cut the straps that are fastened around the box with a knife.  
(Be careful when cutting the straps.)
- 3 ) Use an appropriate tool to remove the nails from the palette.
- 4 ) Remove the lid, then box from the top. Do not discard the packaging materials until you have verified any shipping damage claim. Contact your distributor immediately if you see any shipping damage.

Store the box in a safe place to re-use or discard of appropriately.

- 5 ) Verify the contents carefully with the packing list to be sure all items listed are included.  
Notify your distributor of any shortages.
- 6 ) If only the palette needs to be removed, lift the whole machine from the bottom and set it aside.

**● Physical Installation**

To install the Model MoniMax 5100T ATM, perform the following steps.

- 1) Height adjustor in this machine is the default type. Keep in mind that height adjustor and wheel have the same hole location at the bottom. If you want to install the anchor bolt at the installation site, place the “Anchor bolts locate sheet” at the place where the machine is to be installed. (refer to Fig. 7.6)
- 2) Place the system on a flat surface, the system has a tendency to tip over if the surface is over 5 degrees. (refer to Fig 7.7) Be careful when opening the top or bottom of the machine s it will be off balance
- 3) Place the Anchor nuts into the ground according to the anchor bolts locate sheet.  
(4 places)
- 4) Place the Model MoniMax 5100T ATM on top of the sheet.
- 5) Open the Security cover with the key provided.
- 6) Using the supplied combination (factory preset at 50-25-50) open the Security Door. This combination should be changed as soon as possible. Refer to Appendix B for instructions on changing the lock combination.
- 7) After the anchor nuts are in place according to the anchor holes on the bottom of the MoniMax 5100T ATM, tighten the anchor bolts tightly.

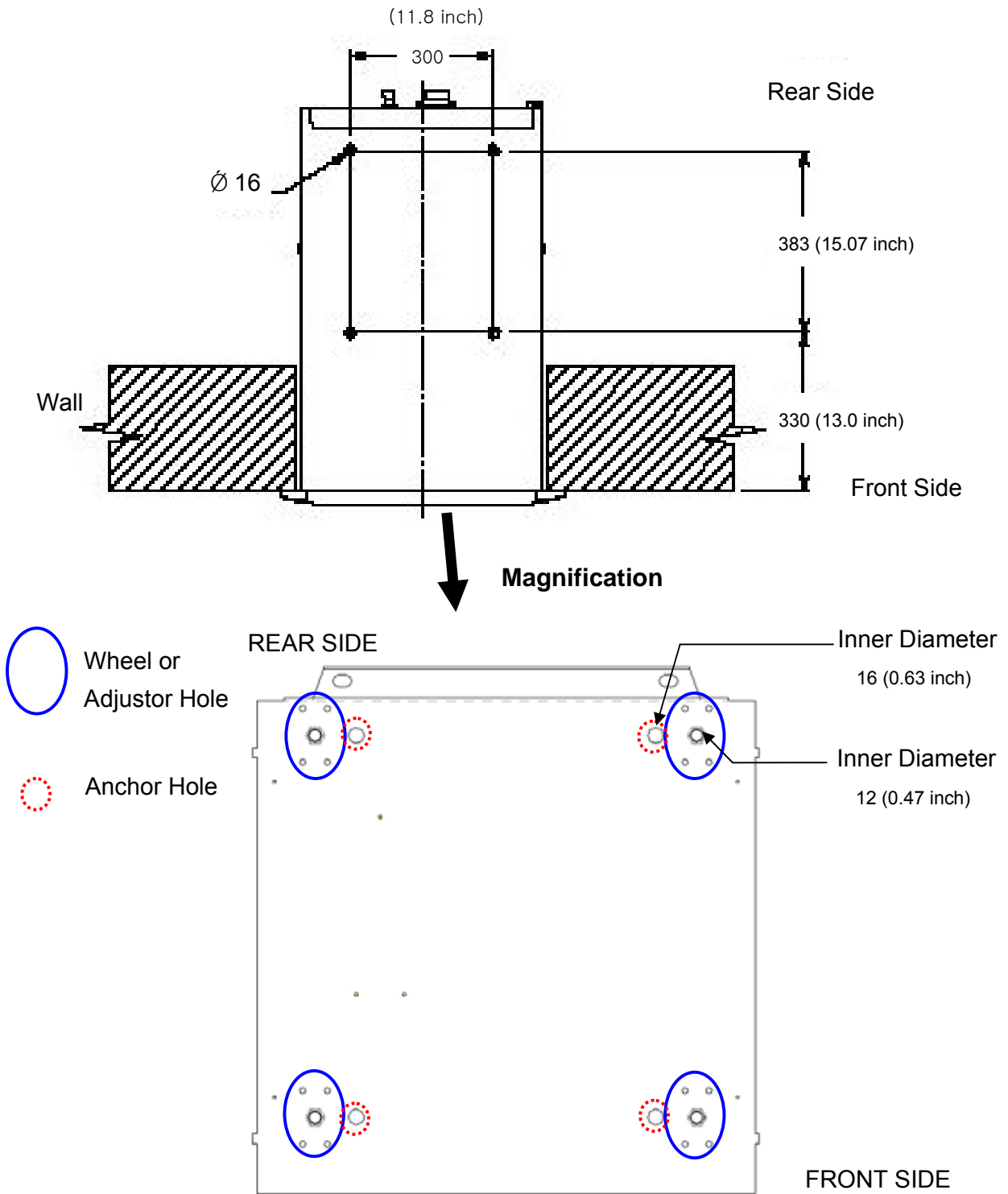


Fig. 7.6 Anchor diagram of MoniMax 5100T

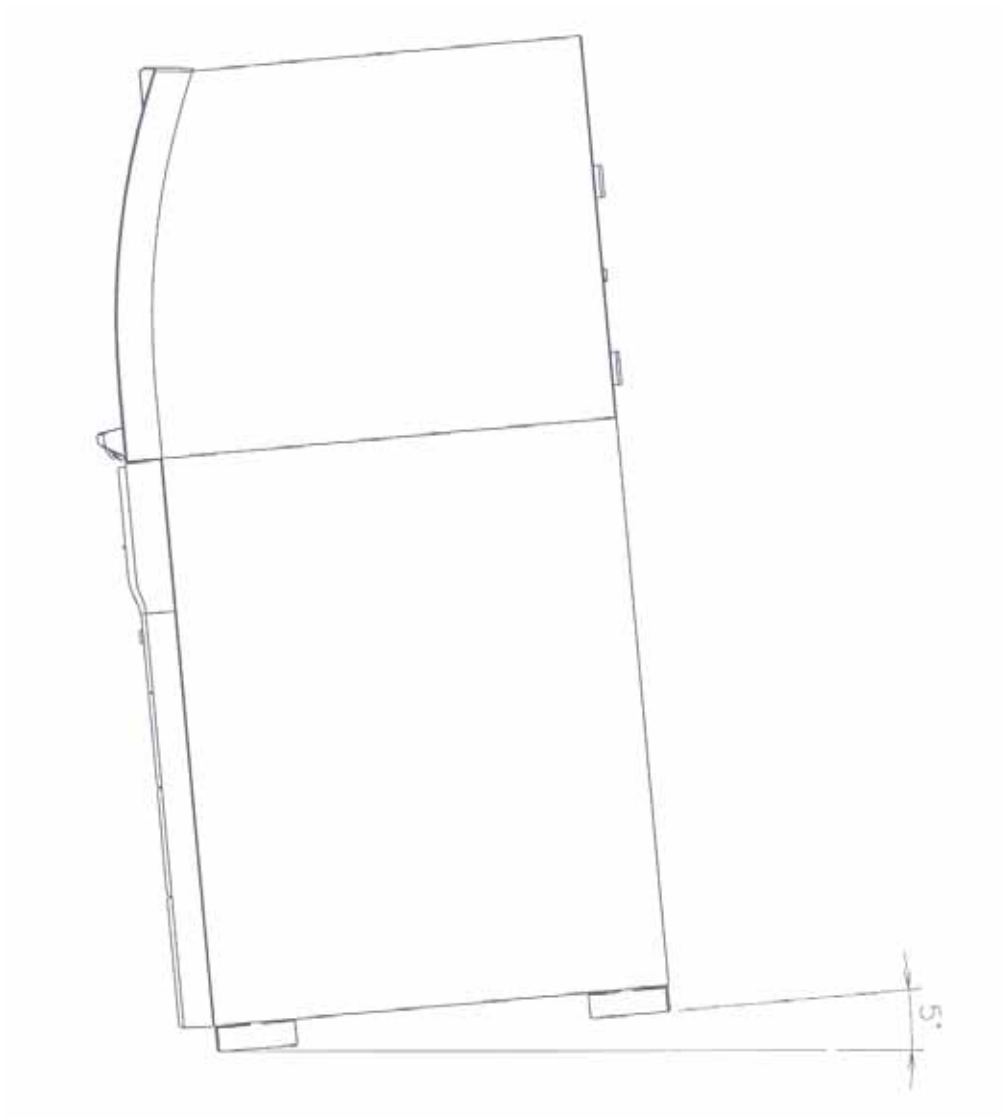


Fig. 7.7 Making a surface level of ATM



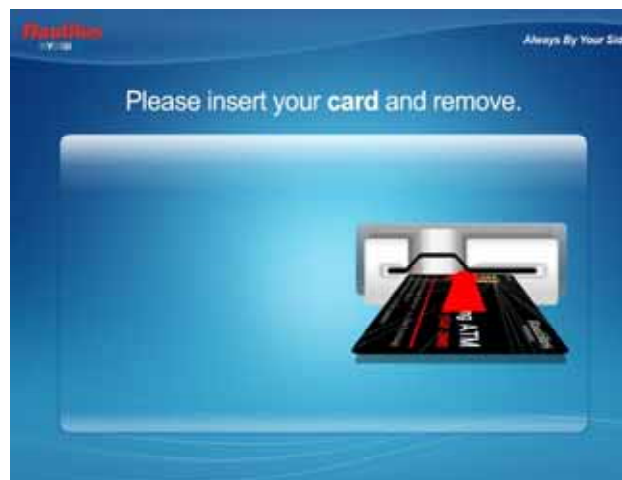
## H. Demonstration Screen

This chapter shows you the demonstration screen to test the ATM using WinXP without connecting to host for your information.

### H.1 DEMO TRANSACTION PROCESS

#### H.1.1 AP MAIN

This is a main AP screen and you can start to do transaction after inserting and quickly removing the card from the card reader.



#### H.1.2 SELECT LANGUAGE

Language a customer would like to use in transaction can be selected in this screen.



### H.1.3 INPUT PASSWORD

This is a screen to input the password of customer's card



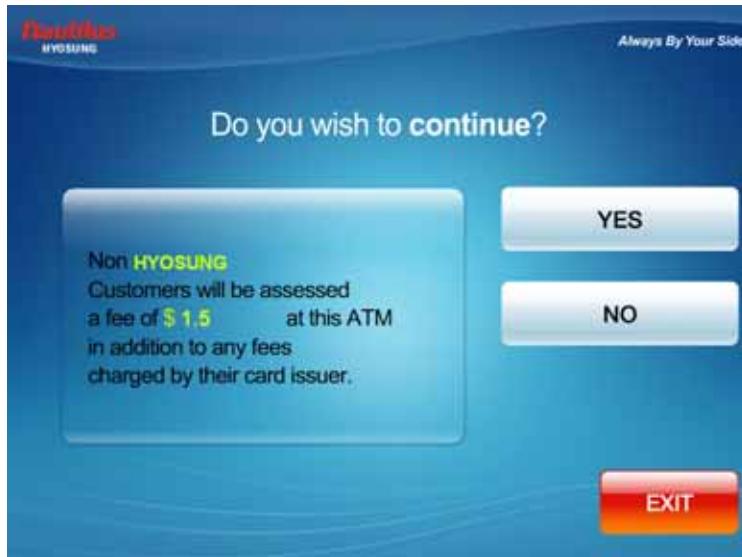
### H.1.4 SELECT TRANSACTION

Any transaction type customer wants to transact such as withdrawal, balance inquiry and transfer is selected in this screen.



**H.1.4.1 WITHDRAWAL: DISPLAY FEE**

This screen is to show a customer the information about surcharge.



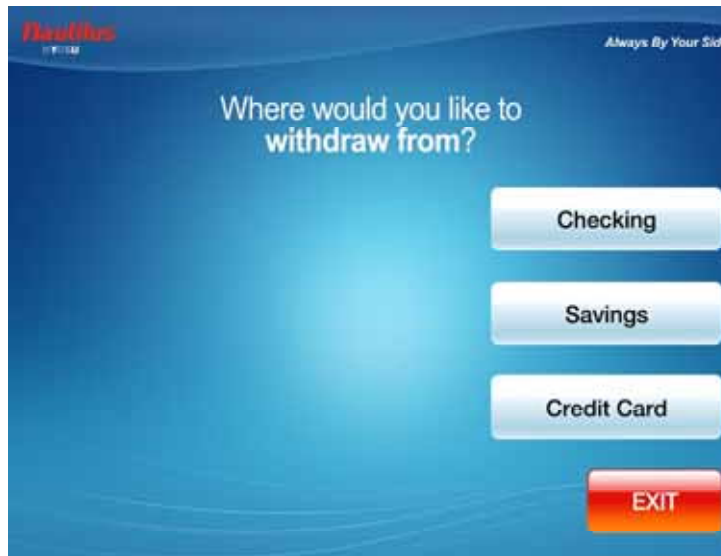
**H.1.4.2 WITHDRAWAL: SELECT TO RECEIVE RECEIPT OR NOT**

This screen is to ask a customer if he wants to get the receipt or not.



**H.1.4.3 WITHDRAWAL: SELECT TO WITHDRAW FROM**

This screen is to ask a customer where he wants to withdraw in checking, saving, credit card



**H.1.4.4 WITHDRAWAL: SELECT THE AMOUNT OF WITHDRAWAL**

This screen is to select the amount of withdrawal. If there is no any amount to withdraw, please select the OTHER key and can input the amount you would like to withdraw.





## I. Software Installation Guide for Dial-up

### I.1 General Information

The Chapter describes how field technicians can successfully apply the new Software to field ATMs avoiding mistake during installation. This manual is targeting for CSP emulation MoniMax5100T and converting from Visa-II image to NDC emulation Software because NDC only ghost image CDs are not published at this time.

#### 1) Expected Failures

During installation if there is any trouble, you may suspect one or more of following failures:

- HDD has bad sectors.
- HDD has capacity less than 80 Gbytes with enhanced IDE type specification.  
(For MoniMax5100T(NH-5040), at least 30 Gbytes HDD should be connected.)
- SATA(Serial type) HDD will not be recognized by the current mother board.
- CD-ROM driver is not cleaned to read CDs.
- CD surface has damaged or scratched tracks.
- Wrong Ghost Image CD for different mother board Types (848 or 852 main board)
- Forgotten to disable watchdog board to prevent resetting CPU every ten minutes.

#### 2) Preparation Kits

- a. VIA B/D Ghost CD Set for MoniMax5100T (NH-5040): (1 CD) , Version V01.03.01
- b. Cross type Screw Driver: 1 Ea.

#### 3) Things to know

- The current released dial-up version of Software with Triton Emulation supports pre-dialing which was demanded by customer.

**\*\* It is very important to print the current ATM's configuration before start installation with old Software because ghost image CD will delete all information at the current HDD and show default data after completion. Furthermore, you will have to do balancing to close transactions occurred by the time. Turn off the power at the end.**

## I.2 Dial-up Ghost Image CD Installation for MoniMax5100T (VIA Main Board)

### 1) Unplug watchdog board cable is not necessary for MoniMax5100T (NH-5040)

Unlike 848 and 852 boards, MoniMax5100T's Via board requires only one CD which can finish CD installation in 10 minutes. Thus, there is no necessary for you to unplug watchdog cable or find red switch on the cage.

### 2) Connecting ADA Board cable is not necessary

Unlike 9030 model, MoniMax5100T(NH-5040)'s ADA is run by playing Wav file. The text to speech ADA board is not present on MoniMax5100T(NH-5040).

### 3) PS/2 keyboard is not necessary

Because only one CD is needed to install, there is no keyboard need.

### 4) Set Receipt printer DIP Switch

Most MoniMax5100T's receipt printer DIP switch are set as picture from factory. If the setting is differed, please set No2 at off position only.



[Fig. 7.8 Receipt Printer's DIP Switch Setting]

### 5) Turn on the power and insert the 1<sup>st</sup> CD

Now you are ready to install the ghost CD. Please turn on the power and insert the CD and wait until the Ghost program is completed.

### 6) Pull the CD and reboot the system

- About over 8 minutes later, the installation is completed by displaying black screen.
- Remove the CD and turn off/on the system.
- After machine is booted up, press "66" on rear panel for entering front operator menu. Enter the password "55555" for entering operator mode.
- Enter all configurations on 5. Configure – Host Setup or – Customer Setup menu. Triton's communication ID is located under "Customer Setup" menu.
- Exit the operator menu by pressing "99" or reboot by "23".