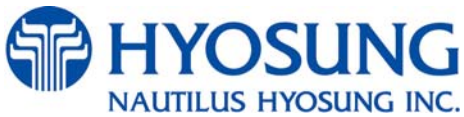
NH-2700CE

Operator Manual



Revision Record

Date	Page	Version	Description of Change
February 2011	All	1.0	New Publication
March 2011	Chapter2.	1.1	Added Caution in the Chapter 2.
April 2011	Chapter 5, 7	1.2	Updated Chapter 5, 7.

Table of Contents

Chapter 1. Introduction

1. Introduction

1.1 About the NH-2700CE

NH-2700CE is designed to meet the everyday demands of immediate cash needs for individuals with a compact size to fit in virtually any place. This Automated Teller Machine (ATM) is connected to a network processor to verify accounts and any other inquires through the insertion of a customer's card. NH-2700CE is easy to use, easy to service and able to support customer's needs.

1.2 Basic Features

Important features of the model NH-2700CE is highlighted in the following list:

Main Controller			
CPU		S5PC100 834MHz (ARM Cortex-A8)	
Memory	SDRAM	256MB	
	Flash Memory	256MB	
	NV-RAM	N/A	
Operating System		WinCE 6.0	
Serial Ports		8 Ports	
Communication		MODEM & TCP/IP Selectable	
Customer Display			
Display	Type	10.2" Wide TFT LCD	1024*600
	Brightness	200 cd/m² (LED BU)	
Privacy Filter		N/A	
Guide Light	Flicker LED	SPR/CDU/MCU/EPP	
Customer Input Method			
Pin Pad		EPP-7000M (PCI 2.0 Compliant / APCA)	
Function Key		4 x 2	NDC Compatible
Cash Dispenser			
Number of cassettes		2 cassette	3cassette Option
Denomination		AU $ 20, 50	AU $ 20,50,100 Option
Maximum Dispense		40 Notes / Transaction	
Cassette Capacity		2,000 Notes Capacity	Based on new notes of US dollars

Reject Type		Note by Note Reject (200 bills Max)	
Card Reader			
Type		DIP Type	
Magnetic Stripe		ISO 1,2,3 Read	
IC card Support		Support	
Receipt Printer			
Printing Type		Thermal Line Printing	
Printing Speed / Width		100mm/sec, 80mm Max	
Paper Setting Method		Semi-Automatic	
Black Mark Paper Support		Support	
Paper Specification	Type	Thermal Roll Paper	
	Width	Max. 80mm	
	Outer Diameter	Max. 180Φ	
Journal Printer			
Journal Printer		Electronic Journal	
Safety			
Safety		UL Business-Hour Safety	
Locking device		Electronic Lock	
Alarm/Security			Alarm Box Option Proximity Sensor Option
Camera			CCD Camera Option (/W SD Card)
Anti-Skimming Device			IR detect Sensor Option
Additional Function			
Audio guidance		Support	
ADA Audio guidance		Support	

1.3 What is in this manual

This NH-2700CE Automated Teller Machine Manual contains all information needed for normal operational use.

This manual contains Unit Specifications, ATM Opening & Closing Procedures, Operator Functions, Customer Transactions, Error Recovery and etc.

Some of the information in this manual may differ according to the network processor to be connected.

1.4 Terminologies

In this manual, the terminology listed below is used as follows:

- Customer cardholder and consumer refer to any person who makes the ATM transaction.
- Device and unit refer to the standard and optional ATM equipment, such as monitors, card readers, printers, and dispensers.
- Fascia refers to the entire front portion of the unit, including the portion where the customer transacts business.
- Module refers to a plug-in device that can be serviced or replaced.
- Note(s) and bill(s) refer to the individual documents loaded into and dispensed from the dispenser.
- Operator refers to a person who performs daily servicing and maintenance tasks, such as replenishing supplies and diagnosing certain problems.
- Screen refers to the text appearing on the customer display.
- Servicing and maintenance refer to the operator tasks performed to keep the terminal operational.

1.5 Abbreviations of ATM

NO.	Abbreviations	Description
1	AD board	Analog to Digital conversion board
2	ADA	The American Disabilities Act
3	AP	Application Program
4	Assy	Assembly
5	BATT S/W	Battery Switch
6	CAM	Camera Unit
7	CDU	Cash Dispenser Unit
8	CE	Control Electronics
9	Earphone Jack	Voice Converter for Visually Disabled Persons (ADA)
10	EMV	Europay, Mastercard, Visa

NO.	Abbreviations	Description
11	EP	Elementary Program
12	EPP	Encryption PIN Pad
13	H/W	Hardware
14	I/F	Interface
15	ISO	International Standard Organization
16	ISO 1	IATA(International Air Transaction Association)
17	ISO 2	ABA (American Banks Association)
18	ISO 3	MINTS(Mutual Institutions National Transfer Systems)
19	JPR	Journal Printer
20	LCD	Liquid Crystal Display
21	MCU	Magnetic Card Unit
22	OPL	Operation Panel for Customers to Operate
23	OSD board	On Screen Display Board
24	P/S	Power Supply
25	PIN	Personal Identification Number
26	PNC	Panel Control Board
27	PTR	Printer (mainly Receipt Printer)
28	S/W	Switch
29	SIU	Sensor and Indications Unit
30	SP	Service Provider
31	SPR	Slip Printer (Receipt Printer)
32	TTU	Text Terminal Unit (OPL or SPL)
33	VFD	Vacuum Fluorescent Display

Chapter 2. Precautions for Safety

2. Precautions for Safety

2.1 Overview

Common Precaution for Safety

Precautions outlined 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.
- Any change or modifications in construction of this device which are not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

NOTE: This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

2.2 Description of Precaution Symbols

Symbol	Description
	**Electrical Shock** • Do not remove cover. Only a maintenance engineer is allowed to open the cover. • Do not touch. You may receive electric shock. • Make sure to turn off the power when servicing the equipment.
	**High Temperature** • Do not touch the equipment when it is running. • The equipment can get extremely hot and may cause a burn. • Make sure to close the cover before running the equipment.
	**Be Careful when Moving** • The equipment is heavy. Make sure at least 2 people to lift or move the equipment. • Do not attempt to move the equipment alone. You may be injured by dropping the heavy equipment.
	**Fire Hazard** • Place the equipment in an area away from any combustible materials. • The equipment may catch on fire from overheating or short circuit of the power supply unit.
	**Disassembly** • Do not disassemble or modify the equipment unless you are a certified engineer. • Contact the service center for maintenance, adjustments and repairs. • Improper disassembly may cause fire or electrical shock.
	**Fall down** • Do not place the equipment where the floor cannot sustain the weight of the equipment, or on slanted or unstable surface. • Equipment may fall down and cause injury or damage.
	**Unplug the Equipment** • 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. • If the above-mentioned abnormalities occur, immediately turn off the power, unplug the equipment and contact the service center. • If you ignore these symptoms, the equipment may catch on fire or cause electric shock.

CAUTION:

1. To reduce the risk of fire, use only No.26 AWG or larger telecommunication list cord.
2. Risk of explosion if battery is replaced by an incorrect type. Disposed of used batteries according to the instructions.
3. For pluggable equipment, the socket-outlet shall be installed near the equipment an shall be easily accessible.
4. The equipment is to be secured to the building structure before operation.
5. This equipment shall not be set up to make automatic calls to the telecom '111' emergency service.
6. This equipment is not intended to be connected to a line in parallel with other terminal equipment.
7. This equipment should not be used under any circumstances which may constitute a nuisance to other telecom customers.
8. Some parameters required for compliance with Telecom's Telepermit requirements are dependent on the equipment (PC) associated with this device. The associated equipment shall be set to operate within the following limits for compliance with Telecom's Specifications: (a) There shall be no more than 10 call attempts to the same number within any 30 minute period for any single manual call initiation, and (b) The equipment shall go on-hook for a period of not less than 30 seconds between the end of one attempt and the beginning of the next attempt.
9. Some parameters required for compliance with Telecom's Telepermit requirements are dependent on the equipment (PC) associated with this device. In order to operated within the limits for compliance with Telecom's Specifications, the associated equipment shall be set ensure that automatic calls to different numbers are spaced such that there is no less than 5 seconds between the end of one call attempt and the beginning of another.

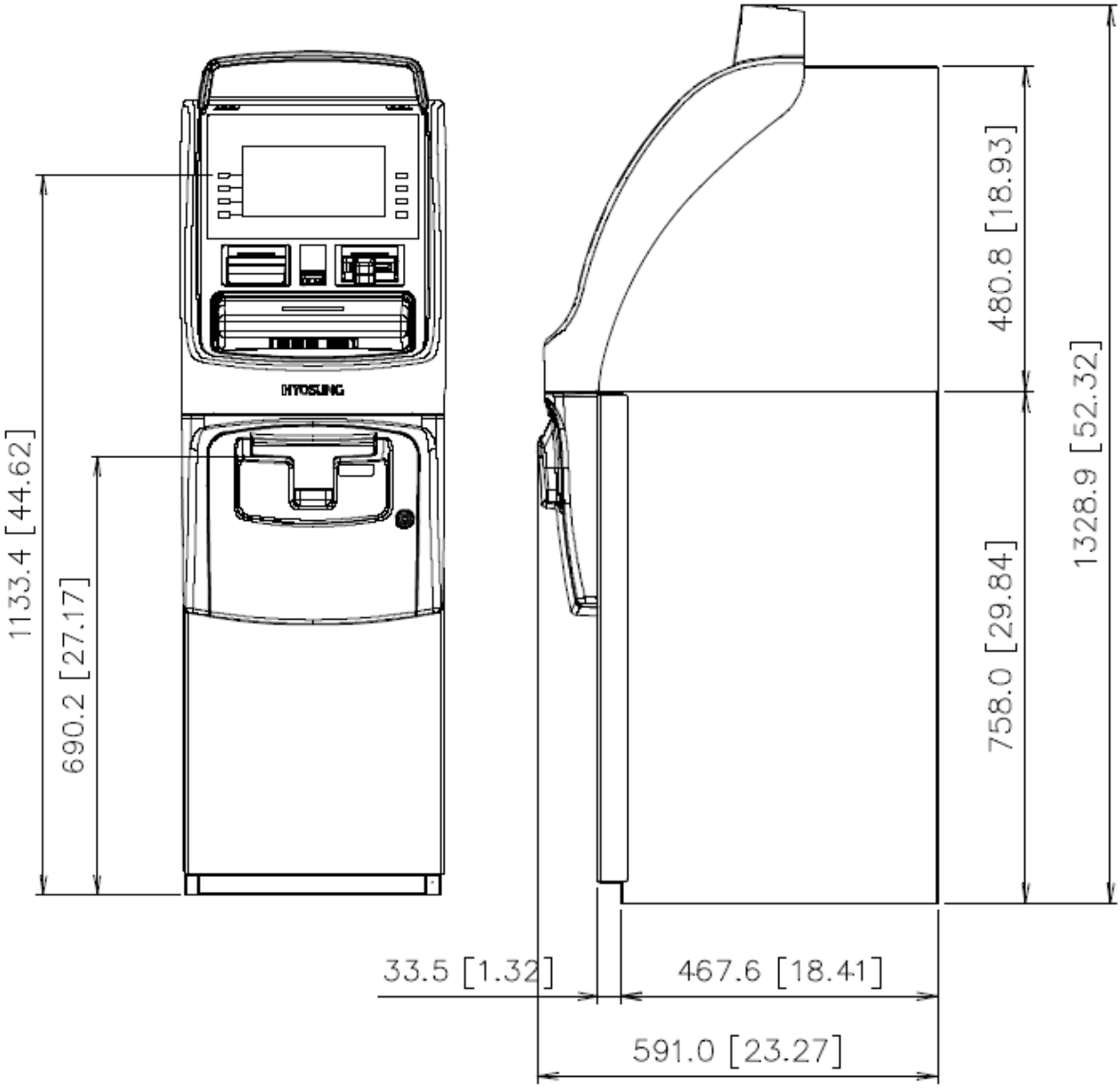
Chapter 3. Hardware Specifications

3. Hardware Specifications

3.1 Dimensions

Below figures show the overall physical dimensions of NH-2700CE.

NOTE: All the units in the dimension is mm and ( ) is inch scale.



3.2 Fascia Features

The fascia provides the interface between the customer and NH-2700CE system. The customer selects transactions and requests information at the fascia. The followings describe the appearance of NH-2700CE system and the components available on NH-2700CE system (all devices might not be included in your ATM).

1	Liquid Crystal Display	4	Function Keys
2	Receipt Printer Slot	5	Card Reader Slot (Dip Type)
3	Encryption Pin Pad	6	Cash Dispenser Slot

Customer Display

The cardholder display welcomes the customer and provides instructions for performing transactions at the terminal. An optional touch screen display eliminates the need for function keys.

Receipt Printer Slot

After the customer uses ATM, the receipt printer prints the transaction information on a form. ATM presents the form through the receipt printer slot on the upper fascia.

Encryption Pin Pad

During the transaction sequence, ATM prompts the customer to use the customer keypad to enter transaction information. The 16-key keypad uses a security module and encrypting PIN pad technology to secure the information entered by the customer at the keypad.

Function keys

The function keys are made up of four keys mounted on each side of the cardholder display. The customer selects from the choices shown on the customer display and presses the corresponding function key.

Card Reader Slot

The customer inserts (to begin transactions) and removes an card from the card reader slot.

Dip Card Reader

The dip card reader is a manually operated device mounted directly to ATM fascia. The cardholder inserts an ATM card in the card entry slot and then removes the card to begin the transaction. The dip card reader can read magnetic stripe cards and memory chip cards. The dip card reader cannot retract, capture, or retain cards.

Cash Dispenser Slot

When the cardholder requests cash, it is presented through the cash dispenser in the lower fascia.

3.3 Devices of NH-2700CE

3.3.1 LCD & Customer Keypad

The customer display welcomes the customer and provides instructions for performing transactions at the ATM.

During the transaction sequence, the ATM prompts the customer to use the customer keypad to enter transaction information. The 16-key keypad uses a security module and encryption PIN Pad technology to secure the information entered by the customer at the keypad.

The function keypads are made up of four keys mounted on each side of the customer display. The customer selects from the choices shown on the customer display and presses the corresponding function key.

Basic Specification of LCD

- Screen Size : 10.2 ″
- Wide TFT LCD
- Resolution : 1024 × 600 pixels
- 4 x 2 Function Keys (Default)
- 10.2” IR Touch

Basic Specification of Keypad

- 10 Alphanumeric , ◂ , ▸ , ENTER, CLEAR, CANCEL, BLANK Keypads

3.3.2 Receipt Printer

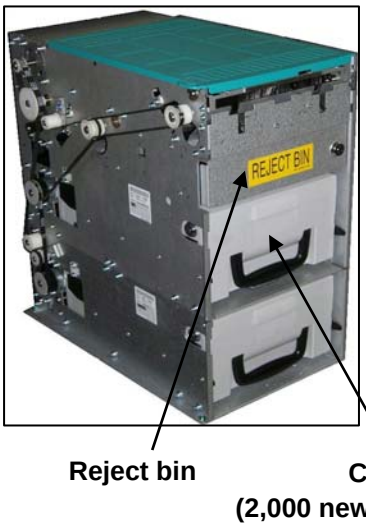
The receipt printer provides a printed receipt of the customer's transaction. The transaction information can include the customer's name, the amount, ATM number and location, and other desired information.

Basic Specification of Receipt Printer

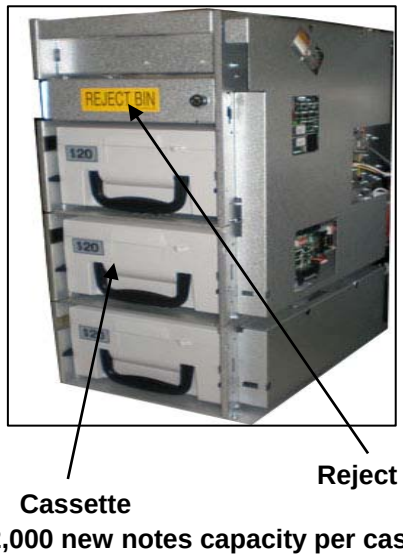
- Thermal line printing
- Thermal Roll Paper
- Black Mark Paper Support

3.3.3 Cash Dispenser Unit

The cash dispenser delivers media (currency) to the cardholder after the cardholder's request is processed by the network and the software. The media is drawn from the cassettes and transported to a slot in the fascia of the ATM, where the cardholder can receive it. If the media is too mutilated or wrinkled to dispense, or if a multiple pick occurs, the dispenser sends the notes to the reject bin.



(a) 2-Casstte Cash Dispenser



(b) 3-Cassette Cash Dispnesr (Option)

Basic Specification of Cash Dispenser Unit

- Capacity of 2,000 new notes
- 40 notes/1 transaction
- 2000/4000/6000 new notes (optional)
- Reject bin with capacity of 200 notes
- Note by note reject

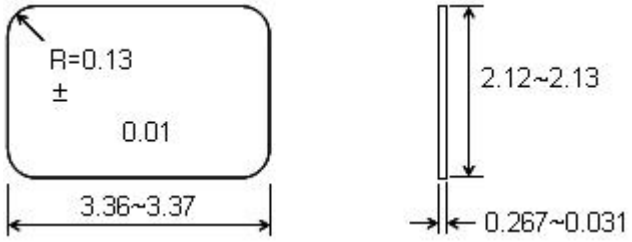
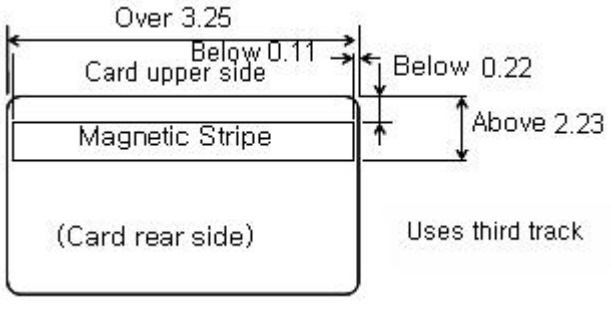
3.3.4 Magnetic Card Reader

The dip card reader is a manually operated device mounted directly to the ATM fascia. The cardholder inserts an ATM card in the card entry slot and then removes the card to begin the transaction. The dip card reader can read magnetic stripe cards and memory chip cards. The dip card reader cannot retract, capture, or retain cards.

Basic Specification of Magnetic Card Reader

- Dip type Card Reader
- ISO 1, 2, 3 Read
- IC Card Support

Magnetic Card Specifications

Item	ISO Card (Unit : Inch)
Length	
Card Bending	
Magnetic Stripe Position	

3.3.5 Main Control Board

This motherboard is applied to NH-2700CE based on Window CE.

Basic Specification of Control Electronics

- S5PC100 834 MHz (ARM Cortex-A8) CPU
- SDRAM (256 MB), Flash Memory (256 MB)
- Operating system : Windows CE 6.0
- Serial ports : 8 Ports
- Communication : Modem & TCP/IP Selectable

3.4 Operating Environment

Power Requirements

100W Free Voltage (90~264VAC)

Power Connections

NH-2700CE 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.

Temperature

- In storage: 14°F - 140°F (-10°C ~ 60°C)
- While operating : 41°F - 104°F (5°C ~ 40°C)

Humidity

- In storage: 10% < RH < 90%, Non-Condensed
- While operating: 25% < RH < 85%, Non-Condensed

Chapter 4. Operating Instructions

4. Operating Instructions

4.1 Opening and Closing the Door

4.1.1 Opening and Closing the Front Panel

1. Insert the Front Panel key and turn it clockwise.

2. Please pull the Front Panel outward.

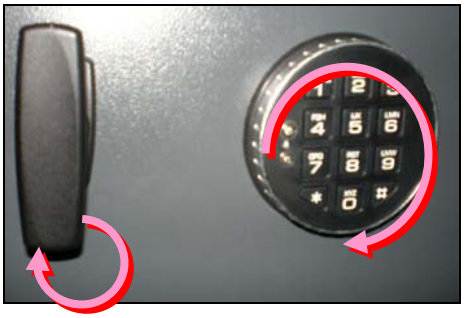
3. Use the reverse order of above description to close the Front panel.

4.1.2 How to open the security door

1. Turn the security cover key clockwise to open the security cover.

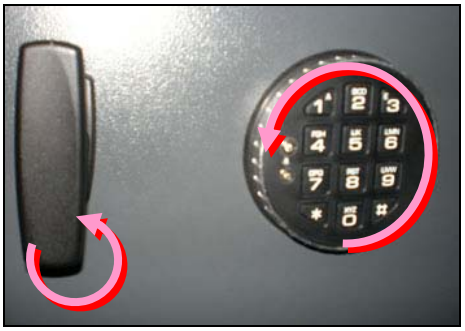
4.1.3 How to open the Electronic Lock

1. Enter the password for the electronic combination lock.
   (Default setting value : 123456)
2. Turn the electronic lock to the 90 degree clockwise as shown in left picture
3. Then turn the handle clockwise and open the safe door.



4.1.4 How to close the electronic combination lock

1. Close the Safe Door and turn the handle counterclockwise. The Safe Door will be locked in 5~6 seconds automatically.
2. Turn the electronic lock to the 90 degree counterclockwise as shown in left picture.
3. Then the safe door will be closed.



4.1.5 How to set the new password

1. Enter **0-0-0-0-0-0**, six (6) zeros, into the Electronic Lock keypad.
2. Enter in the old combination once.
3. Enter in the new combination twice. Combinations must be six digits in length.
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.

NOTE: The Electronic Lock will signal three (3) times if the new combination is invalid and the old combination has been retained

4.1.6 More information about electronic lock

This section describes the operation of the lock (electronic lock) and vault door adjustments.

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.

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.

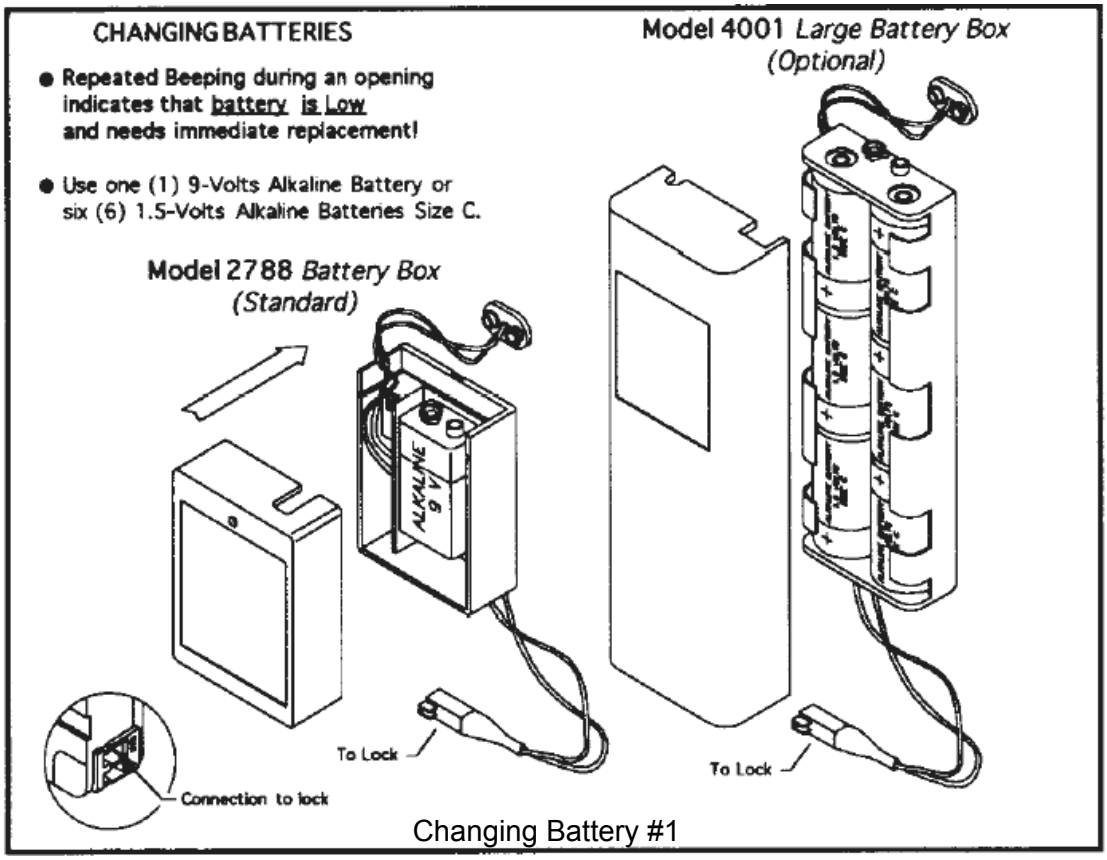
● Uses one (1) 9-Volt Alkaline Battery. LA GARD recommends the use of Duracell™ or Everready™

Alkaline batteries. If battery is depleted and will not allow lock to open, simply follow instructions below.

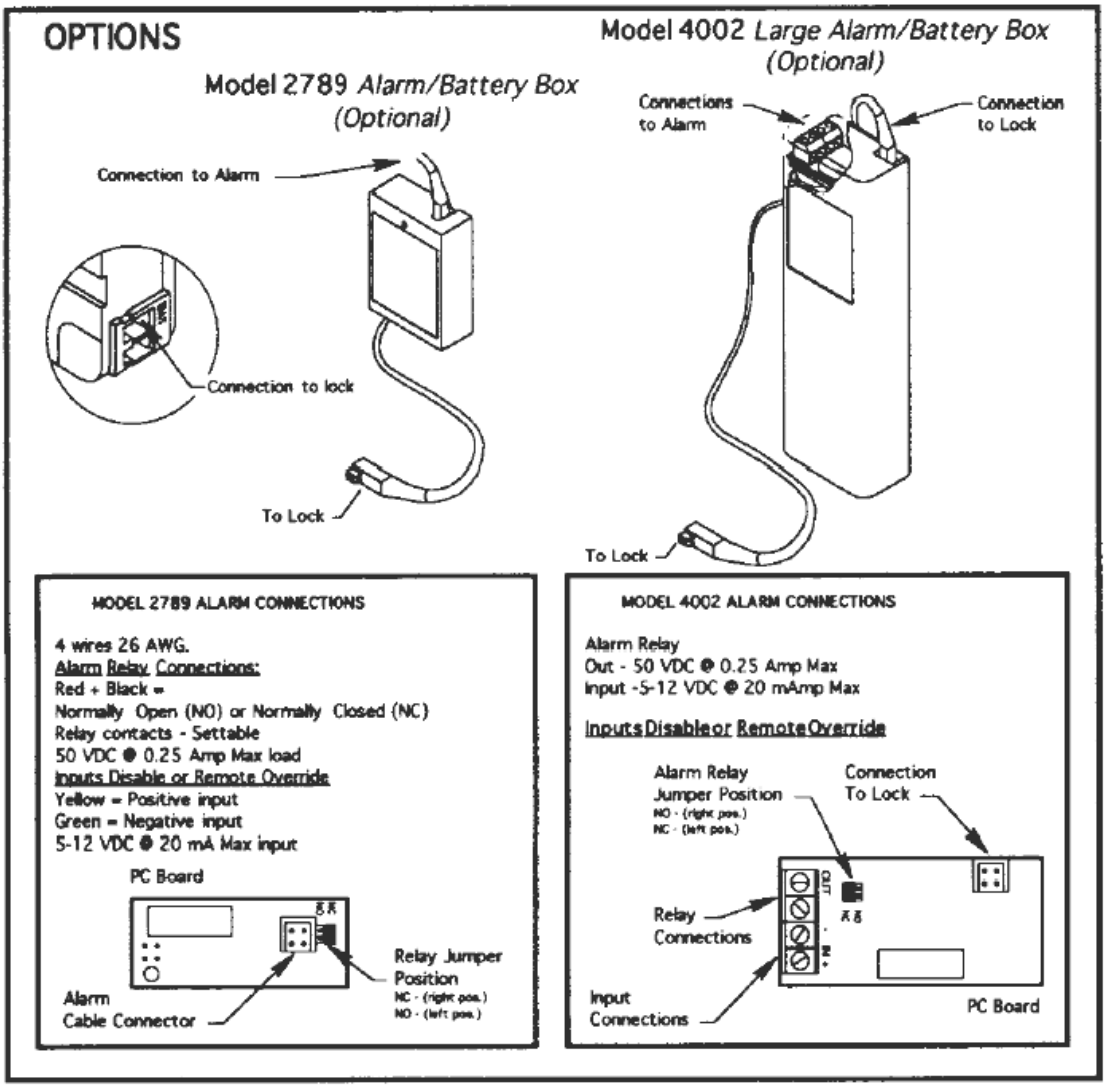
CHANGING YOUR BATTERY

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.



Changing Battery #1

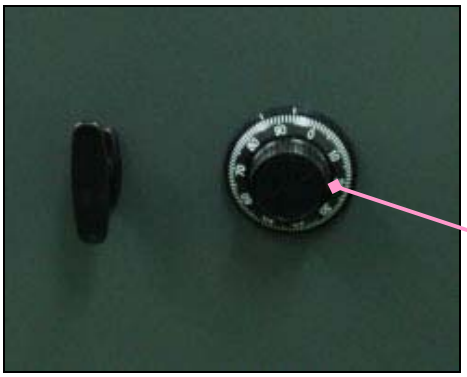


Changing Battery #2

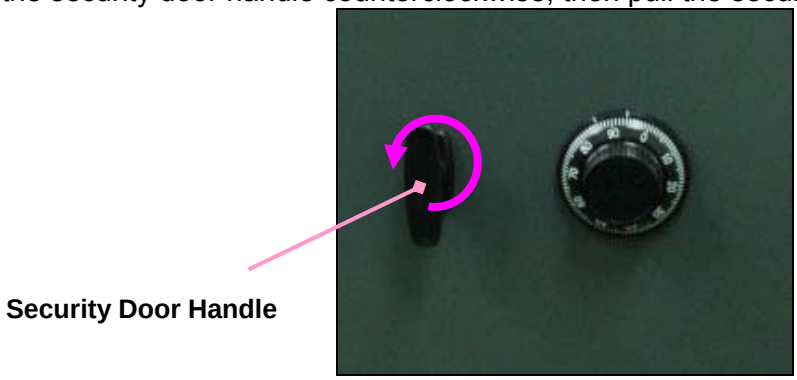
4.1.7 Optional Locking Devices

4.1.7.1 Security Door with Dial Lock

1. Unlock the dial lock referring to “4.1.2 How to open the dial lock”



2. Turn the security door handle counterclockwise, then pull the security door to open it.

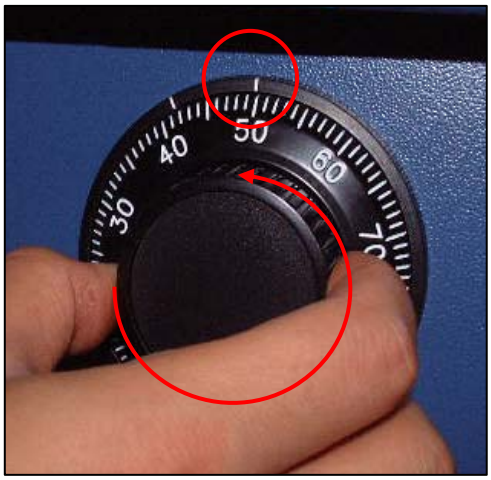


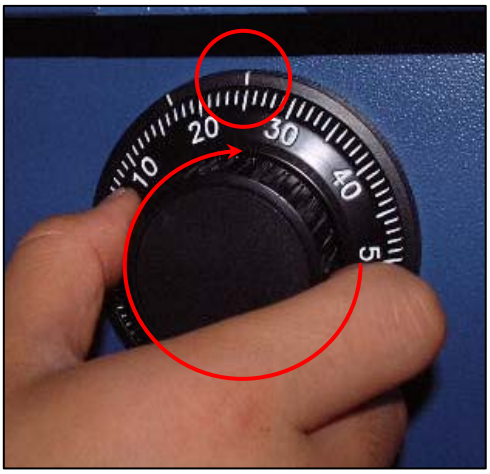
3. Use the reverse order of above description to close the security cover and door.

How to open the dial lock

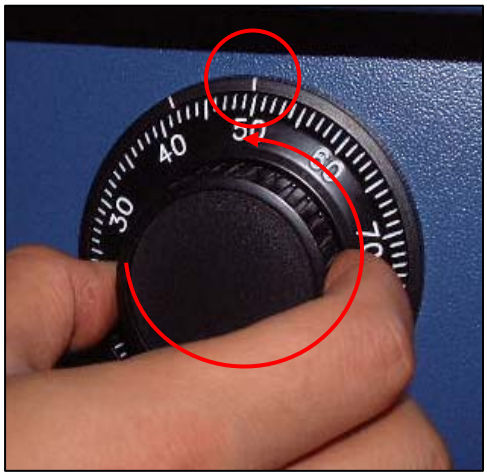
Make sure that this lock would be set 50-25-50 as factory default setting.

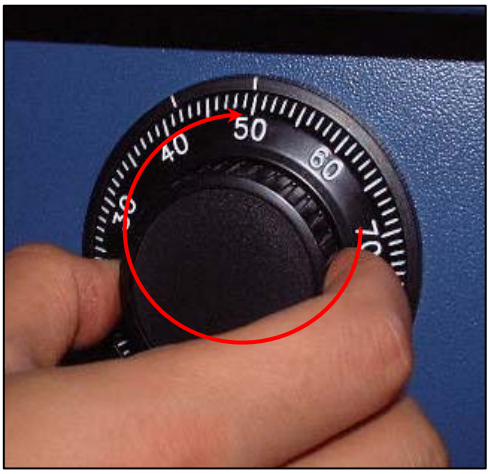
1. Turn to the counterclockwise for more than four times and set to “50.”
2. Turn to the clockwise and stop at “25” at the third times.





3. Turn to the counterclockwise and stop at “50” at the second times.
4. Turn to the clockwise until the dial does not move any more.





NOTE: The center scale mark is used to open the safe unit

5. The safe door will open when turning the handle to counterclockwise.

How to set the new password

For example, let's assume that you would like to set the following number (10-50-70)

1. Open the safe door as described in the above.
2. To close the mechanical lock, turn the handle to clockwise with the door opening
3. Turn to the counterclockwise for more than four times and set to “50” at left scale indicator as shown in the Fig.4.1.
4. Turn to the clockwise and stop at “25” at the third time as shown in the Fig.4.2.
5. Turn to the counterclockwise and stop at “50” at the second times as shown in the Fig.4.3.

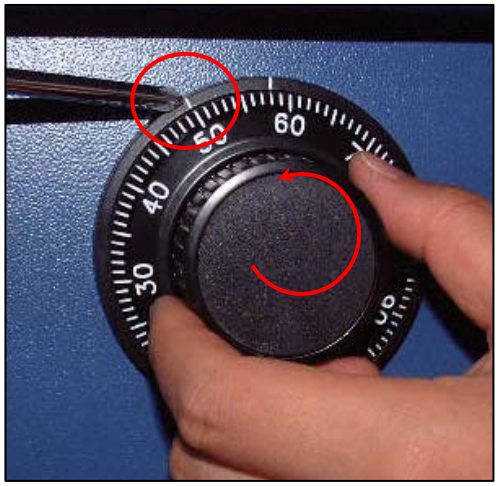


Fig.4.1

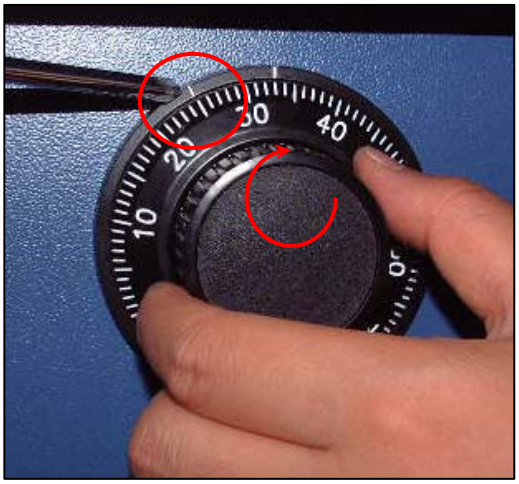


Fig.4.2

Fig.4.3

NOTE: The left scale mark is used to change the password.

6. Push the change bar completely until it is held by the dial change home (Fig.4. 4) inside the safe door and turn to the clockwise by 90 degrees (Fig.4.5).

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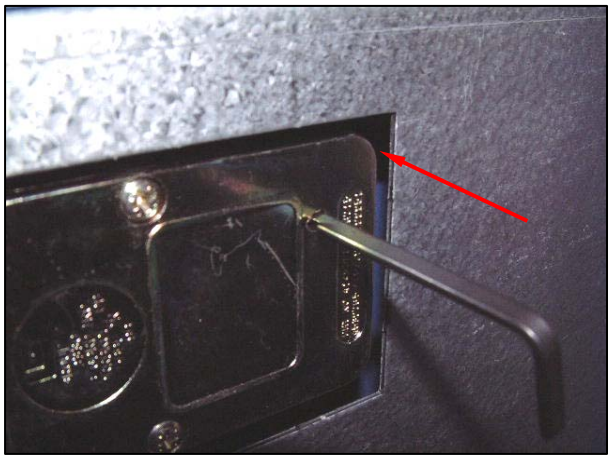


Fig.4.4

Fig.4.5

7. Turn to the counterclockwise more than four times and position at left scale indicator to “10” (target number to change).
8. Turn to the clockwise for three times and position the scale to “50” (target number to change).
9. Turn to the counterclockwise for two times and position the scale to “70” (target number to change).

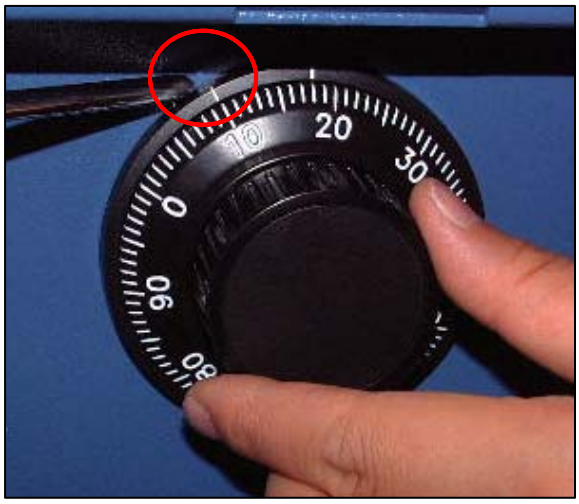


Fig.4.6

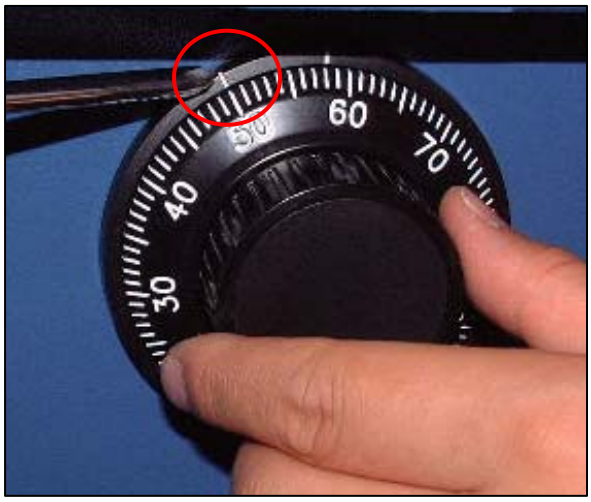


Fig.4.7

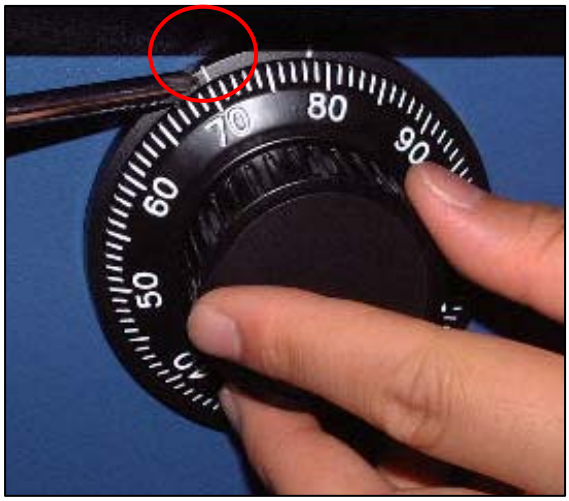


Fig.4.8

NOTE: Do NOT use number 25 – 35 as the last password number.

10. When password setting is completed, turn the change bar counterclockwise and remove it from the safe as shown in the Fig.4.9.

Fig.4.9

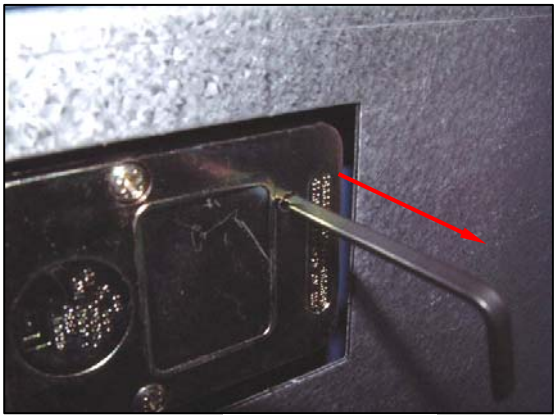


Fig.4.10

11. When password setting is completed, try to turn the dial more than a couple of times while the door is open to see if the door is opened or not. (Make sure to run the open/close test for at least two or three times.)
12. When all setting is completed, inform the password to the person in charge while paying attention to password disclosure or lost.

NOTE: Special attention must be paid and lost dial number cannot be restored.

4.1.7.2 Security Door with Cencon

The Cencon locks are highly-secured, advanced-design locks. Even though the locks are electromechanical, they require no wiring or batteries for opening the lock because they are self-powered. Power is generated by turning the dial knob on the lock to the left (counter-clockwise). After several turns of the knob, enough power is generated to allow the microprocessor in the lock to function.

Opening and closing the Security Door

Each Cencon Lock is shipped from the factory in Shelved Mode. The One Time Combination feature which requires a Smart Key is not available when the lock is shelved. Instead, the Shelved Mode combination is used to open the lock without any Smart Key. The default Factory Combination is set to 50-25-50. Practice opening the lock in shelved mode with the default factory combination until you are comfortable with its operation. The default combination may be changed, in which case the new combination would be used to open the lock while in Shelved Mode. The correct opening procedure for a shelved lock in:

1. Turn the dial to the left (CCW), using full wrist turns, until the letters “EC” (Enter Combination) appear on the LCD.

NOTE: If you are operating a Cencon lock and **–dL** appears on the display during an operation, it indicates that you should **d**ial **L**eft (Counter Clockwise). The purpose is both to give the lock additional power and to ensure the lock bolt is fully extended.

CW = Clockwise; CCW = Counter Clockwise

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. Close door after operation.

6. Turn the dial a minimum of one complete rotation to the left (counter clockwise) to extent the bolt.

NOTE: After opening and closing any lock, you should always check to ensure that the lock is physically relocked (i.e., bolt fully extended and locked in place) by turning the dial to the right. If the bolt does not retract, you can be assured the lock is secured.

Helpful Hint: At any point while entering the combination during an opening sequence, if you notice that an incorrect number was pressed on the keypad, you may clear the entire operation and start again by pressing the star (*) key. This allows you to return to the EC prompt without getting a wrong try error (lightning bolt).

Caution - Lock Out (LCO): When the combination is incorrectly entered, a lightning bolt error will flash on the display (with no other numbers following it). To clear this error and start again, press and hold the star (*) key. Even in Shelved Mode, it is important to avoid getting 5 wrong combination attempts in a row without a successful opening in between because the lock will be put into Lock-Out condition, displaying, "LCO." Clearing the LCO condition in Shelved Mode requires waiting 5 minutes and then entering the correct combination.

Changing Shelved Mode Combination

For Cencon Locks with a code level of 71[1], 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.

This is an option that is only available while the lock is in Shelved Mode and is intended only for temporary use after the ATM is deployed but before the lock is activated. It is not recommended to keep the Cencon lock in this Shelved Mode condition, due to lack of security and control.

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

[1] It is sometimes necessary to determine the level of the Cencon Lock with which you are working. This can be done by entering a command via the keypad. The lock level will then be displayed on the LCD. Use the following procedure:

1) Power the lock by turning the dial to the left (counter clockwise) until EC is displayed.
2) Enter the # 1 keypad command. Then the lock displays a string of characters on the LCD, displaying two characters at a time. The best thing to do in analyzing the lock level is to write down the entire string and then pick out the portions of it that are significant to you, or if you are experiencing a problem with the lock, report the entire string to the Tech Support group.

displayed on the LCD as they are entered. When the combination has been correctly entered, the LCD will read **OPr**, meaning "**OP**en **r**ight."

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.

WARNING:

Do not close the door. Leave the door open during this process until your are comfortable opening the lock with the new combination.

6. Extend Bolt

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

7. Power Lock -> 

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

8.  -> Press #8 -> EcF

Press the “#” button followed by the “8” button. EcF (**E**nter **c**urrent **F**actory combination) will be displayed.

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

Enter the current shelved mode combination, “EnF” (**E**nter **n**ew **F**actory combination) 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.

WARNING:

Record the new combination and store it in a secure place. If this combination is lost or forgotten, there is no alternate way to open the lock.

12. POC -> Remove Change Key -> EOP

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

13. EOP -> Power Lock -> EC

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

14. EC -> Enter New Shelved Mode Combination -> 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. When the combination has been correctly entered, the LCD will readOPr, meaning "**OP**en **r**ight."

15. OPr -> Retract Bolt

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

16. Close Door

17. Extend Bolt

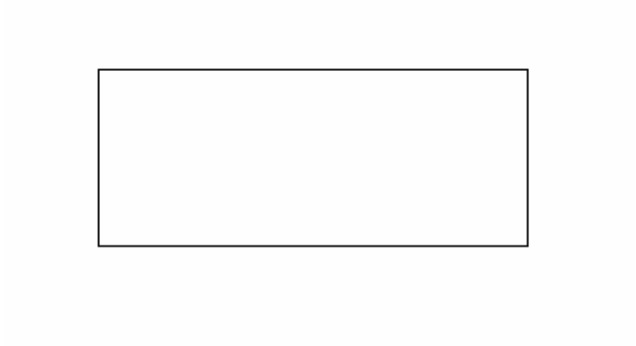
    Turn the Dial to the left (CCW) to extend the bolt.

4.2 Cash Dispenser

4.2.1 Bill Conditions

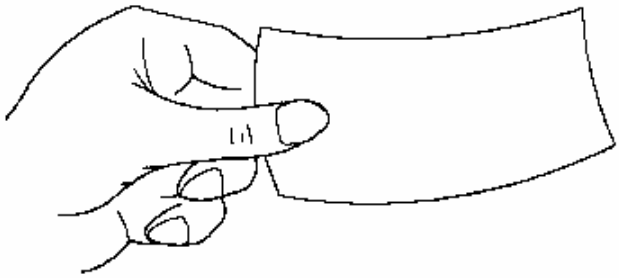
Acceptable condition

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



2. Bill has sufficient life or sizing to be handled easily

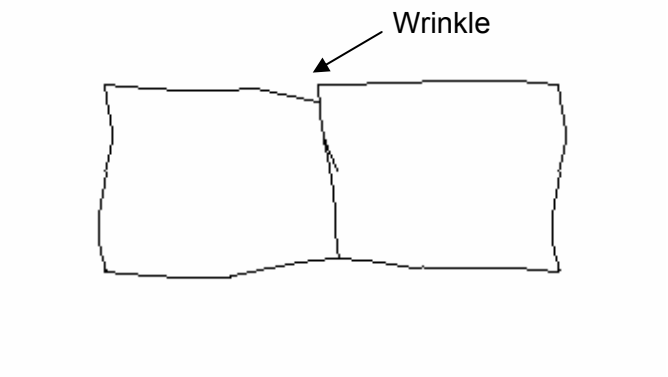
3. Bill which can be manually held straightly when one end is held by a hand and the bill is slightly curved vertically



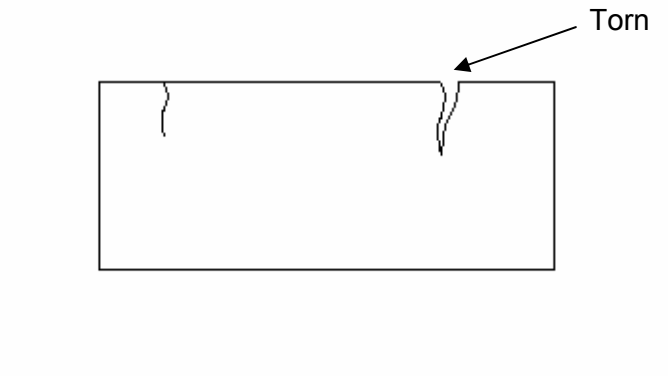
Unacceptable condition

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

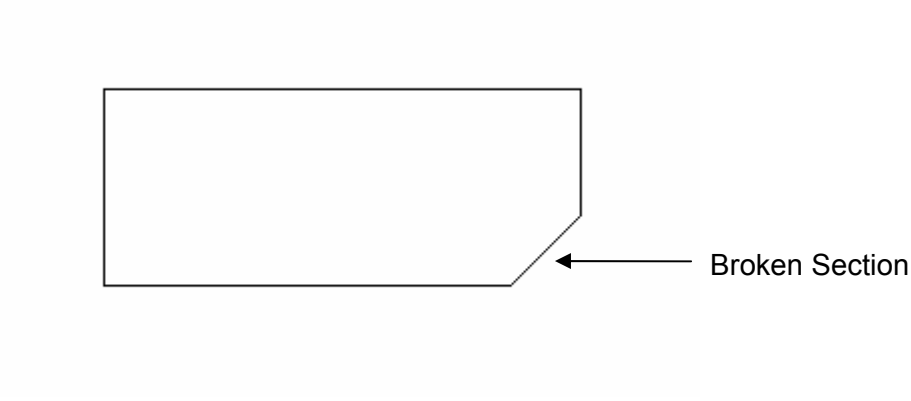
✓ Wrinkle



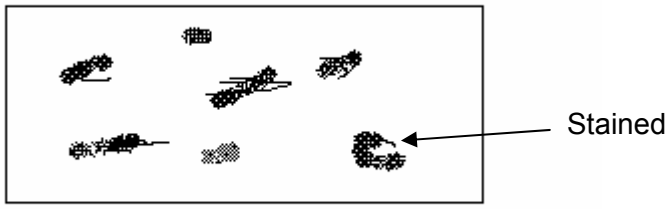
✓ Torn



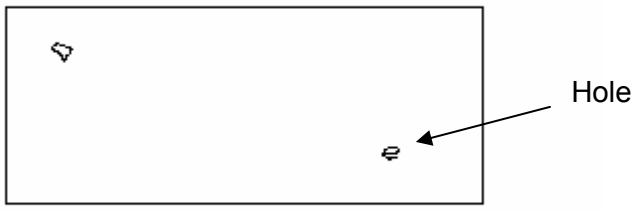
✓ Broken section



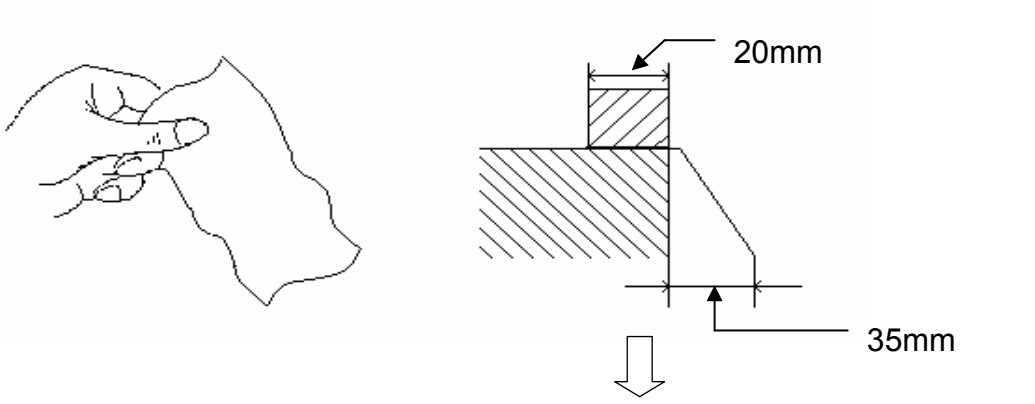
2. Bill having adequate life or sizing, but stained seriously



3. Bill with holes (Perforated bill)

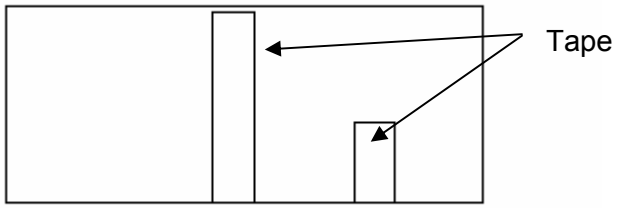


4. Bill ragged and cannot be held straightly when one end is supported by a hand

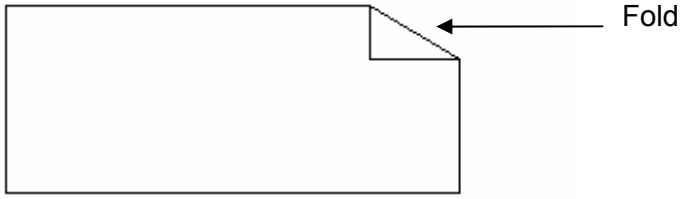


When the bill is held by 20mm and the straightness of the bill is 35mm or less, it cannot be used

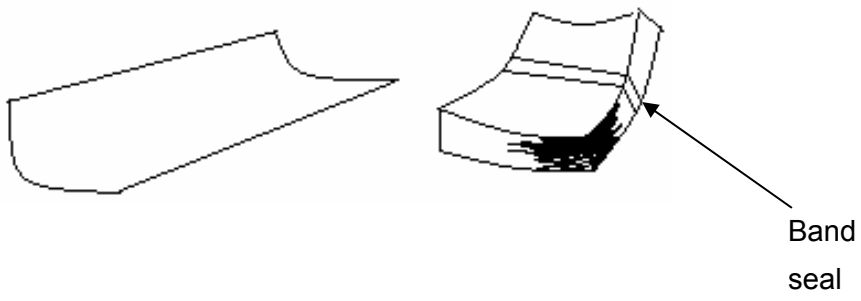
5. Bill with cellophane tape, scotch tape, etc



6. Bill with folds



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

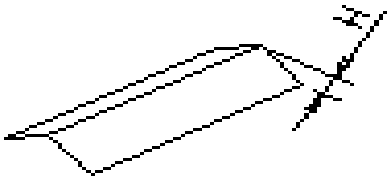


8. Bill with folded lines

✓ Case 1

✓ Case 2

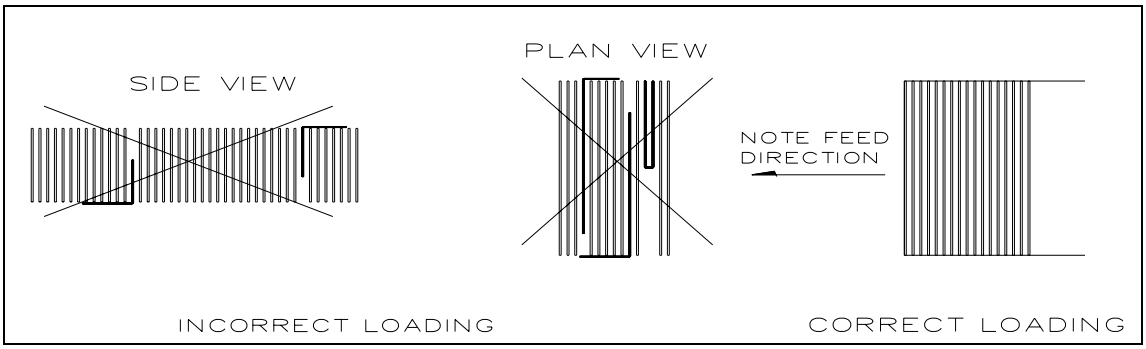
✓ Case 3



☞ Bill distortion should not exceed 10 mm

Prior to replenishing the cash cassette with the notes

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

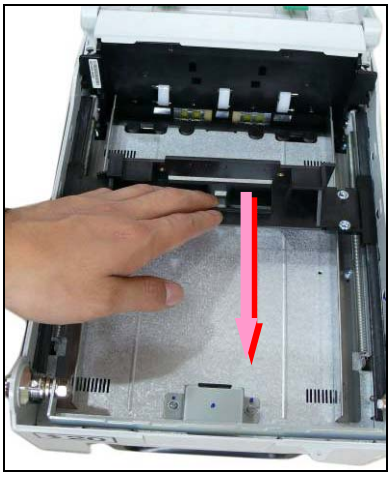


4.2.2 How to Replenish the Cash Cassette

1. With one hand holding the cassette handle and the other hand supporting the cash cassette from bottom, pull it up and out carefully.

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

3. Pull the cash plate back until it is locked against the cash plate latch.



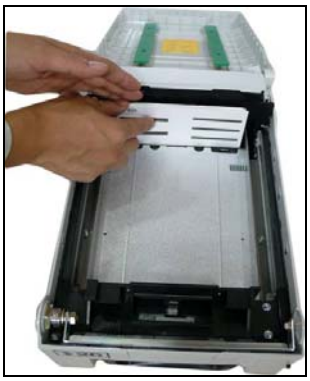
PRECAUTION:

Be careful not to hurt your hands when the black push-plate fails to get locked and suddenly recovers its positions

4. Replenish the cassette (Take note as below)

PRECAUTION:

Do NOT replenish more cash than recommended capacity. It means that it should be replenished less than 2,000 bills per cassette for new bills. Make sure that Cash Low Bracket in cassette will not be extruded outside cassette after replenishing cash.



5. Unlock the cash plate by pulling it again and move it smoothly.

6. Close the cassette cover and turn the cassette key counterclockwise until it is locked. Remove the key when it is locked.

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

4.2.3 How to Empty the Reject Bin

1. Insert the reject box key and turn it clockwise.
2. Open the lid of reject box.

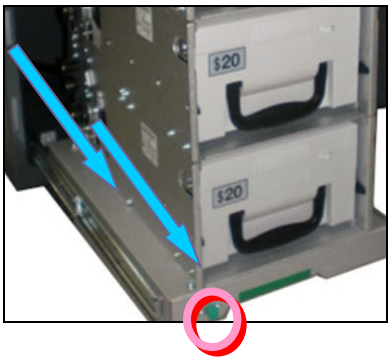
3. Take bills from the reject box and close the box with key.

PRECAUTION:

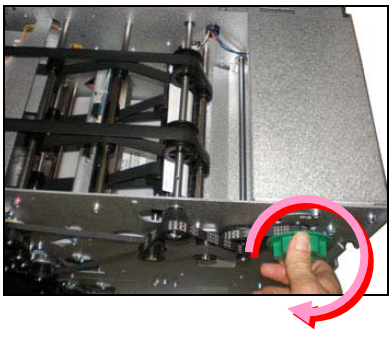
Do NOT recycle any bill in reject box into cassette. Doing so will cause not only the same reject problem, but other unexpected problems such as note jams on cash dispenser

4.2.4 How to Clear Notes Jam

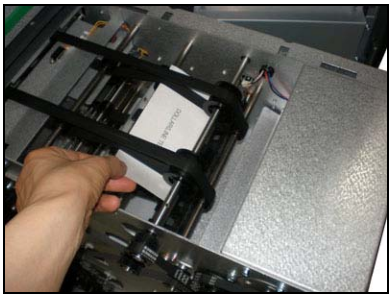
1. Turn power off first and pull the rail of CDU outward while pressing the green button on the CDU.



2. Turn the pulley located in left upper in order to move jammed note into a well removed position.



3. Take out the jammed note carefully.



4. Remove the cash cassettes to check whether there is any jammed note inside of CDU body. If so, remove the jammed note from it.

WARNING:

If the belt is detached from the Roller, the lifespan of the belt can be dramatically reduced which can result in breakage. Therefore, it is extremely important to check if the belt is positioned correctly after removing the jammed bills.

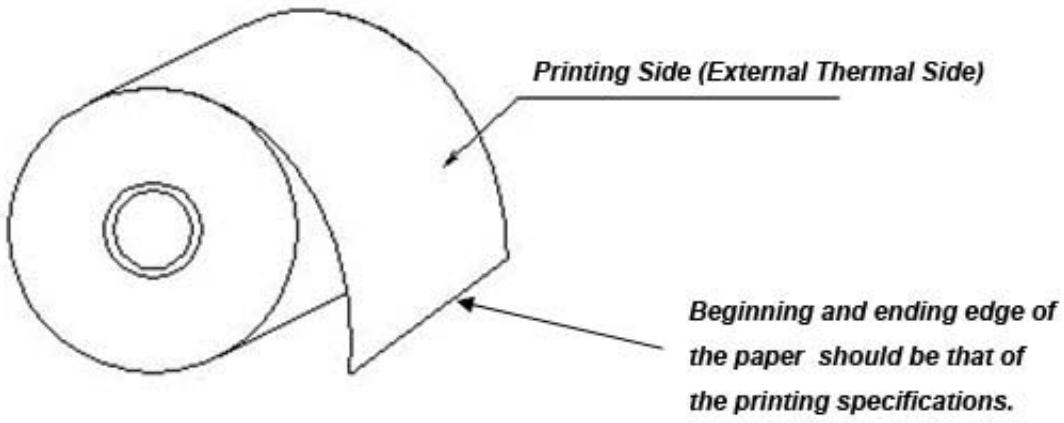
4.3 Receipt Printer

4.3.1 Receipt Paper

Specifications

Item	Specifications	Remark
Paper Type	Thermal Roll Paper	Paper detects heat.
Paper Width	79.5±0.5mm	
Paper Exterior	Ø180	
Paper basis Weight	55±3 g/㎡	
Paper Thickness	58±4 ㎛	
Print Color	Black	
Type of Paper Setting	Semi-Auto loading	

Roll appearance



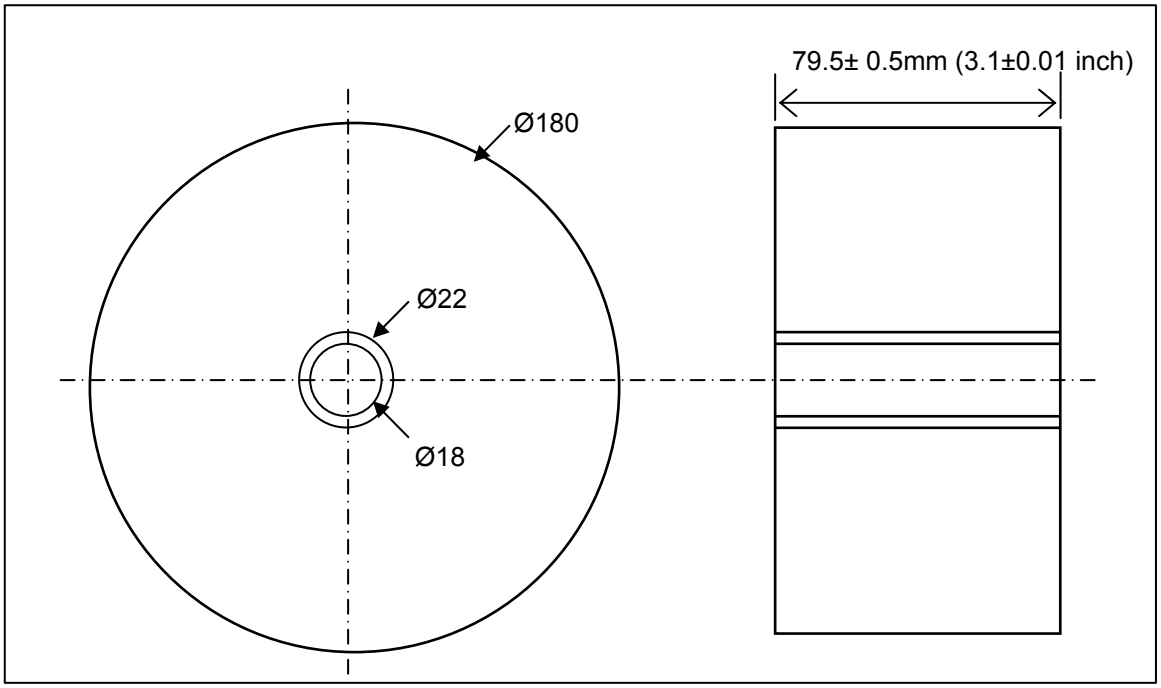


Fig. 4.11 Roll Appearance & Dimension

Paper Handling Precautions

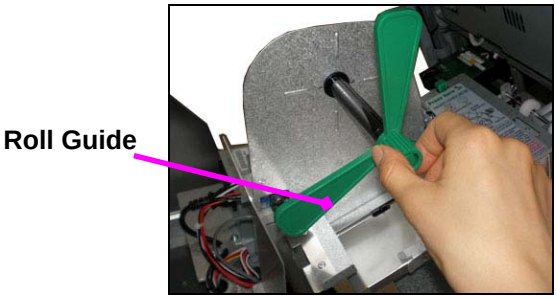
1. Store it away from high temperature and humidity:
   If the paper is stored in a place where temperature is above 50℃ or humidity is above 90% RH, the coloring capability may deteriorate or the paper surface may inflate.
2. Refrain from exposing to direct sunlight:
   The paper surface can be inflated if you expose it to direct sunlight or leave it under the fluorescent lamp for a long time.
3. Keep it away form 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. Store the paper roll separately to prevent damage to the paper.
6. Do not connect the papers with tape.
7. Make sure the paper end is not attached to the paper pipe.
8. Make sure the paper is rolled evenly.
9. 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.

4.3.2 How to load the receipt paper

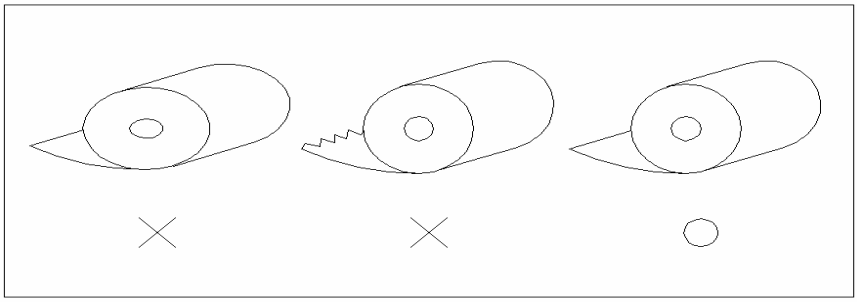
1. Open the Front Panel with key and pull this outward completely with hands.
   (Please see the Chapter 4.1.2)

2. Prepare the new paper roll. Please see the NOTE described below
3. Remove the roll guide by carefully pulling it off.



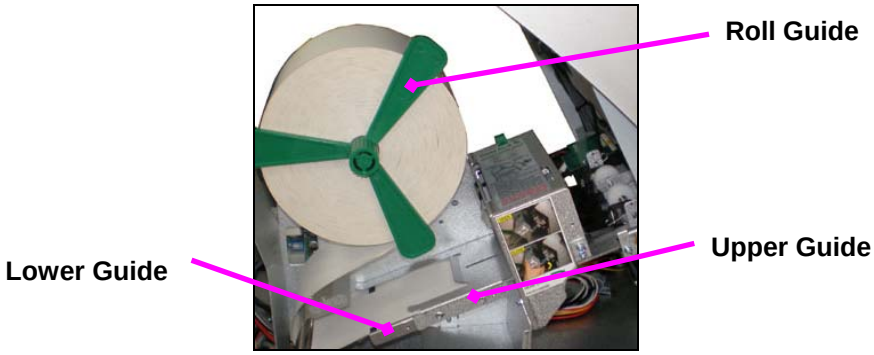
NOTE: Prior to loading the receipt paper, the following must be kept in mind.

1. Load a paper roll into the unit with the shape of the roll kept intact. (Deformed roll may cause jamming.)

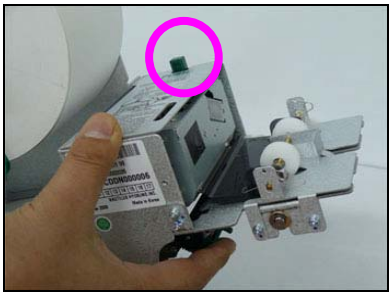


2. The leading edge of the roll shall neatly be cut prior to loading the roll. Correct shape of the paper roll

4. Add the receipt paper into the rod and then insert the roll guide tightly again to fix it.
5. The shiny side of the paper should be faced up to be printed properly and the metallic tension guide should be surrounded with paper to reduce the tension during feeding.
6. Insert the leading edge of paper between lower guide and upper guide of the receipt printer slowly. When the machine is initialized, the paper is going to start feeding.

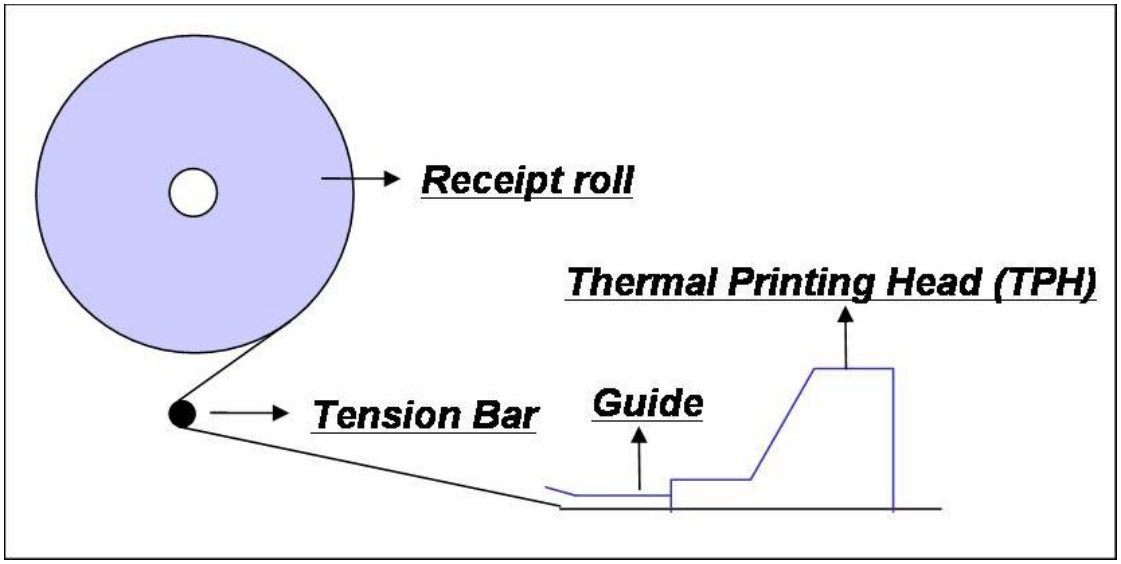


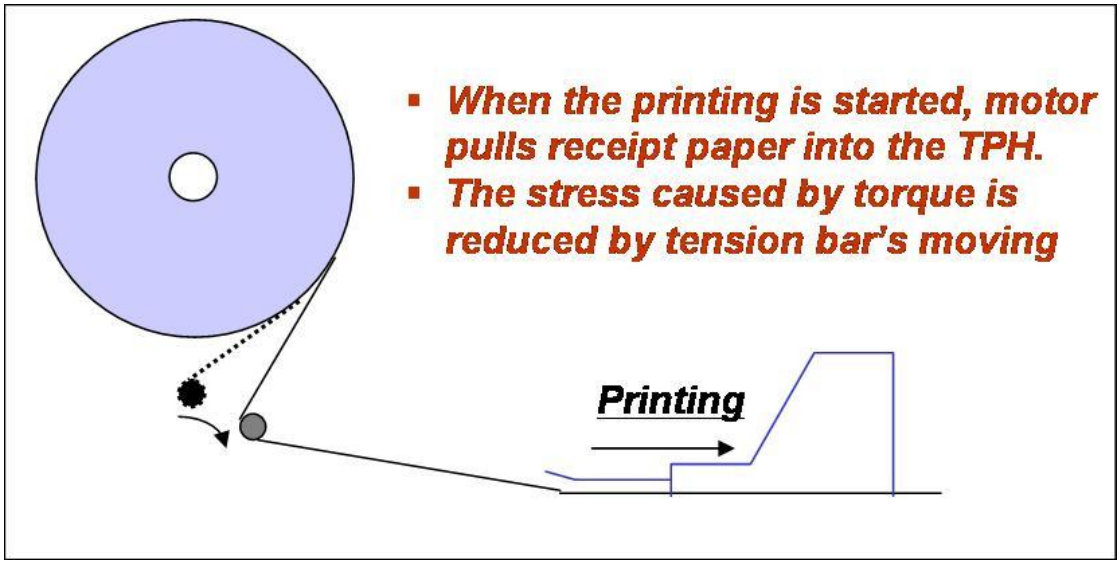
7. If the paper does not feed at all during initializing, make sure that paper has a CLEAN CUT at the end and the Thermal Print Head (TPH) is closed as shown in left picture.



8. When finished loading paper, close the Front Panel and remove the key.

NOTE: THE BASIC MECHANISM OF RECEIPT PRINTER

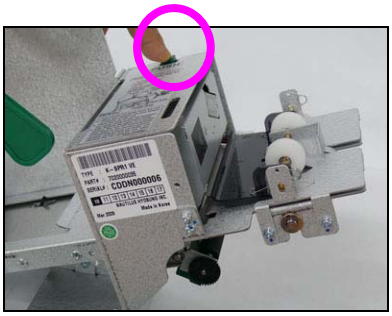




4.3.3 How to Clear a Receipt Jam

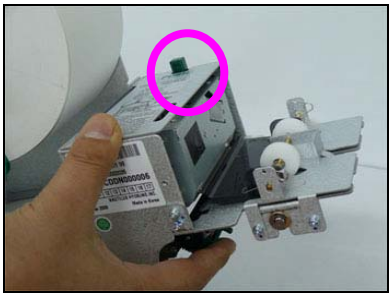
1. Open the Front Panel with key and pull this outward completely with hands.

   To remove a jammed paper inside transport path, press down the green button to release the lower roller assembly.



2. To take out a jammed paper in front of transport path, lift up the transparent window guide and remove the jamming receipt carefully.

3. After finishing clearing the receipt, load the receipt paper properly. Make sure that the Thermal Print Head (TPH) is closed. When finished loading paper, close the Front Panel and remove the key.



Chapter 5. Operator Function

5. Operator Function

5.1 BASIC SYSTEM OPERATION

5.1.1 PASSWORD FOR ENTERING SUPERVISOR MODE

- Location of Function Key on ATM –

To enter Supervisor mode press the **ENTER, CLEAR, CANCEL, 1, 2 and 3** keys in order.
The default password is “555555”(6-digit). The default password is changeable in Supervisor mode.

If the correct password is entered, the OPERATOR FUCNTION menu will be displayed.

Pressing **CLEAR** key erases the entered number and pressing **CANCEL** key goes to in-service-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)

Please make sure that the default password should be changed to a different password for your security as soon as a machine is installed at field site.

▪Authorities for each Mode

No	Working Management Function						CE Authority		
	Main	Sub1	Sub2	Sub3	Sub4	Sub5	M	S	O
1	SETTLEMENT	ADD CASH	1ST CST	-	-		O	O	O
			2ND CST	-	-		O	O	O
			3RD CST	-	-		O	O	O
			4TH CST	-	-		O	O	O
			APPLY	-	-	-	O	O	O
		DAY TOTAL	-	-	-		O	O	O
		TRIAL DAY TOTAL	-	-	-		O	O	O
		CASSETTE TOTAL	-	-	-		O	O	O
		TRIAL CASSETTE TOTAL	-	-	-		O	O	O
2	JOURNAL	CLEAR JOURNAL	-	-	-		O	O	X
		CLEAR TRANS. SEQUENCE NO.	-	-	-		O	O	X
		VIEW JOURNAL	PREV	-	-		O	O	O
			NEXT	-	-		O	O	O
			PREV 50	-	-		O	O	O
			NEXT 50	-	-		O	O	O
			MOVE START	-	-		O	O	O
			MOVE LAST	-	-		O	O	O
			PRINT THIS	-	-		O	O	O
			SEARCH JOURNAL	-	-		O	O	O
		PRINT JOURNAL	-		-		O	O	O
		LAST X PRINT	-	-	-		O	O	O
3	REPORT	ERROR CODE	PREV	-	-		O	O	O
			NEXT	-	-		O	O	O
			PREV 10	-	-		O	O	O
			NEXT 10	-	-		O	O	O
			MOVE FIRST	-	-		O	O	O
			MOVE LAST	-	-	-	O	O	O

No	Working Management Function						CE Authority		
	Main	Sub1	Sub2	Sub3	Sub4	Sub5	M	S	O
			PRINT THIS	-	-	-	O	O	O
			SEARCH ERROR CODE	-	-	-	O	O	O
		SW VERSION	-	-	-	-	O	O	O
		PRINT ALL SETUP	-	-	-	-	O	O	O
		ERROR SUMMARY	PRINT	-	-	-	O	O	O
			CLEAR	-	-	-	O	O	X
			PREV	-	-	-	O	O	O
			NEXT	-	-	-	O	O	O
		REJECT ANALYSIS	PRINT	-	-	-	O	O	O
			CLEAR	-	-	-	O	O	X
4	DIAGNOSTICS	INITIALIZE	-	-	-	-	O	O	O
		RECEIPT PRINTER	-	-	-	-	O	O	O
		CASH DISPENSER	-	-	-	-	O	O	O
		MODEM (DIAL UP)	-	-	-		O	O	O
		TCP/IP (TCP/IP)	HOST ADDRESS				O	O	O
			HOST PORT				O	O	O
			SSL EN/DISABLE				O	O	O
			-SSL VERSION	-	-	-	O	O	O
		MCU TEST							
			IC TEST	-	-	-	O	O	O
			CARD SCAN	-	-	-	O	O	O
		AUXILIARY UNIT	SENSOR	CDU SENSOR	-	-	O	O	O
				SPR SENSOR	-	-	O	O	O
			FLICKER	ALL FLICKER	-	-	O	O	O
				EPP FLICKER	-	-	O	O	O
				CDU FLICKER	-	-	O	O	O
				SPR FLICKER	-	-	O	O	O
				MCU FLICKER	-	-	O	O	O

No	Working Management Function						CE Authority		
	Main	Sub1	Sub2	Sub3	Sub4	Sub5	M	S	O
		AGING	-	-	-	-	O	O	X
5	CUSTOMER SETUP	CHANGE MESSAGE	WELCOM MESSAGE	-	-	-	O	O	X
			EXIT MESSAGE	-	-	-	O	O	X
			MARKETING MESSAGE	-	-	-	O	O	X
			STORE MESSAGE	-	-	-	O	O	X
			RECEIPT HEADER	-	-	-	O	O	X
			RECEIPT TAIL	-	-	-	O	O	X
			RECEIPT ADDRESS & PHONE NUMBER	-	-	-	O	O	X
			PROCESSOR MESSAGE	-	-	-	O	O	X
		BIN LIST	ALLOW ONLY LISTED BIN EN/DISABLE	-	-	-	O	O	X
			VIEW BIN LIST	PREV PAGE	-	-	O	O	X
				NEXT PAGE	-	-	O	O	X
				PREV 50	-	-	O	O	X
				NEXT 50	-	-	O	O	X
				ADD NEW	BIN PROPERTIES	CONFIRM BIN	O	O	X
				EDIT			O	O	X
				DELETE	-	-	O	O	X
				SEARCH	SEARCH BIN	-	O	O	X
			PRINT BIN LIST	-	-	-	O	O	X

No	Working Management Function						CE Authority		
	Main	Sub1	Sub2	Sub3	Sub4	Sub5	M	S	O
			DELETE ALL BIN LIST	-	-	-	O	O	X
		OPTIONAL FUNCTION1	MOD 10 CHECK	EN/DISABLE	-	-	O	O	X
			NEED MORE TIME	EN/DISABLE	-	-	O	O	X
			ACCOUNTS	SAVINGS EN/DISABLE	-	-	O	O	X
				CREDIT CARD EN/DISABLE	-	-	O	O	X
			SELECT RECEIPT	EN/DIABLE	-	-	O	O	X
			PRE-DIALING (DIAL UP)	EN/DISABLE	-	-	O	O	X
				AFTER CARD			O	O	X
				AFTER PIN			O	O	X
				AFTER ACCOUNT			O	O	X
		OPTIONAL FUNCTION2	DEVICE OPTION	RECEIPT PAPER LOW SENEOR EN/DISABLE	-	-	O	O	X
				CST SOUND ON/OFF	-	-	O	O	X
				EPP FLICKER ON	-	-	O	O	X
			SCREEN SERVICES	CHANGE BACKGROUND	EN/DISABLE		O	O	X
					DEFAULT SCREEN	SCREEN 1	O	O	X
						SCREEN 2	O	O	X
						SCREEN 3	O	O	X
						SCREEN 4	O	O	X
						SCREEN 5	O	O	X
						SCREEN 6	O	O	X
					SCREEN 1	EN/DISABLE	O	O	X
					SCREEN 2	EN/DISABLE	O	O	X
					SCREEN 3	EN/DISABLE	O	O	X
					SCREEN 4	EN/DISABLE	O	O	X

No	Working Management Function						CE Authority		
	Main	Sub1	Sub2	Sub3	Sub4	Sub5	M	S	O
					SCREEN 5	EN/DISABLE	O	O	X
					SCREEN 6	EN/DISABLE	O	O	X
				NOTICE	EN/DISABLE	-	O	O	X
					TITLE	-	O	O	X
					MESSAGE	-	O	O	X
		ATM OPERATOR FEE MODE	EN/DISABLE	-	-	-	O	O	X
			OWNER	-	-	-	O	O	X
			CONTACT INFO	-	-	-	O	O	X
			WITHDRAWAL AMOUNT	-	-	-	O	O	X
			BALANCE AMOUNT	-	-	-	O	O	X
		ADVERTISEMENT	COUPON	COUPON1	EN/DISABLE	-	O	O	X
					COUPON1 TEXT	-	O	O	X
					AWARD COOUPON ON BIN EN/DISABLE	-	O	O	X
				COUPON2	EN/DISABLE	-	O	O	X
					COUPON1 TEXT	-	O	O	X
					AWARD COOUPON ON BIN EN/DISABLE	-	O	O	X
				COUPON3	EN/DISABLE	-	O	O	X
					COUPON1 TEXT	-	O	O	X

No	Working Management Function						CE Authority		
	Main	Sub1	Sub2	Sub3	Sub4	Sub5	M	S	O
					AWARD COOUPON ON BIN EN/DISABLE	-	O	O	X
				COUPON4	EN/DISABLE	-	O	O	X
					COUPON1 TEXT	-	O	O	X
					AWARD COOUPON ON BIN EN/DISABLE	-	O	O	X
				COUPON5	EN/DISABLE	-	O	O	X
					COUPON1 TEXT	-	O	O	X
					AWARD COOUPON ON BIN EN/DISABLE	-	O	O	X
				COUPON6	EN/DISABLE	-	O	O	X
					COUPON1 TEXT	-	O	O	X
					AWARD COOUPON ON BIN EN/DISABLE	-	O	O	X
			WELCOME ADVERTISEMENT	TIMER	-	-	O	O	X
				SCREEN 1	EN/DISABLE	-	O	O	X
					DELETE	-	O	O	X
				SCREEN 2	EN/DISABLE	-	O	O	X
					DELETE	-	O	O	X
				SCREEN 3	EN/DISABLE	-	O	O	X

No	Working Management Function						CE Authority		
	Main	Sub1	Sub2	Sub3	Sub4	Sub5	M	S	O
					DELETE	-	O	O	X
				SCREEN 4	EN/DISABLE	-	O	O	X
					DELETE	-	O	O	X
				SCREEN 5	EN/DISABLE	-	O	O	X
					DELETE	-	O	O	X
				SCREEN 6	EN/DISABLE	-	O	O	X
					DELETE	-	O	O	X
			TRANSACTION ADVERTISEMENT	TIMER	-	-	O	O	X
				SCREEN 1	EN/DISABLE	-	O	O	X
					DELETE	-	O	O	X
				SCREEN 2	EN/DISABLE	-	O	O	X
					DELETE	-	O	O	X
				SCREEN 3	EN/DISABLE	-	O	O	X
					DELETE	-	O	O	X
				SCREEN 4	EN/DISABLE	-	O	O	X
					DELETE	-	O	O	X
				SCREEN 5	EN/DISABLE	-	O	O	X
					DELETE	-	O	O	X
				SCREEN 6	EN/DISABLE	-	O	O	X
					DELETE	-	O	O	X
		STANDARD3 OPTION	STATUS MONITORING EN/DISABLE	-	-	-	O	O	X
			COMMUNICATION HEADER	-	-	-	O	O	X
			COMMUNICATION ID	-	-	-	O	O	X
			CRC EN/DISABLE	-	-	-	O	O	X
		STANDARD1 OPTION	TERMINAL STATUS EN/DISABLE				O	O	X

No	Working Management Function						CE Authority		
	Main	Sub1	Sub2	Sub3	Sub4	Sub5	M	S	O
			HOST ERROR EN/DISABLE				O	O	X
			REASON FOR REVERSAL EN/DISABLE				O	O	X
		SELECT PROCESSOR	COMMUNICATION	DIALUP	-	-	O	X	X
				TCP/IP	-	-	O	X	X
			EOT/ENQ OPTION	GENERAL	-	-	O	X	X
				EOT OPTIONAL	-	-	O	X	X
				NO EOT REQUIRED	-	-	O	X	X
				NO ENQ REQUIRED	-	-	O	X	X
			MESSAGE FORMAT	STANDARD 1	-	-	O	X	X
				STANDARD 2	-	-	O	X	X
				STANDARD 3	-	-	O	X	X
				EPS	-	-	O	X	X
			TCP/IP TYPE	VISA FRAMED	-	-	O	X	X
				STANDARD	-	-	O	X	X
				ACK CONTROLLED	-	-	O	X	X
				SSL EN/DISABLE	-	-	O	X	X
				SSL VERSION	-	-	O	X	X
			REVERSAL RETRY COUNT	-	-	-	O	X	X
6	SYSTEM SETUP	DATE & TIME	YEAR	-	-	-	O	O	O
			MONTH	-	-	-	O	O	O
			DAY	-	-	-	O	O	O
			HOUR	-	-	-	O	O	O
			MINUTE	-	-	-	O	O	O
			APPLY	-	-	-	O	O	O

No	Working Management Function						CE Authority		
	Main	Sub1	Sub2	Sub3	Sub4	Sub5	M	S	O
		SPEAKER VOLUME	UP	-	-	-	O	O	O
			DOWN	-	-	-	O	O	O
		TERMINAL IP (TCP/IP)	IP ADDRESS		-	-	O	O	X
			SUBNET MASK	-	-	-	O	O	X
			GATEWAY	-	-	-	O	O	X
			DNS	-	-	-	O	O	X
			DHCP EN/DISABLE	-	-	-	O	O	X
		MODEM PARAMETERS (DIAL UP)	HOST INITIAL STRING	-	-	-	O	O	X
			RMS INITIAL STRING	-	-	-	O	O	X
			MODEM TEST	-	-	-	O	O	X
		CHANGE PASSWORD	OPERATOR PASSWORD	-	-	-	O	O	O
			SERVICE PASSWORD	-	-	-	O	O	X
			MASTER PASSWORD	-	-	-	O	X	X
		SERIAL NUMBER	-	-	-	-	O	X	X
		DEVICE SETUP	CDU SETUP	COUNTRY	-	-	O	O	X
				CDU TYPE	-	-	O	O	X
				CASSETTE VOLUME	-	-	O	O	X
				EXECUTE	-	-	O	O	X
			TOUCH VIBRATION (Touch Type Only)	EN/DISABLE			O	O	X

No	Working Management Function						CE Authority		
	Main	Sub1	Sub2	Sub3	Sub4	Sub5	M	S	O
		SYSTEM CONTROL	SOFTWARE UPDATE	-	-	-	O	O	X
			REBOOT	-	-	-	O	O	O
			BACKUP ALL JOURNAL TO USB	-	-	-	O	O	X
			BACKUP JOURNAL BY DATE TO USB	FROM	-	-	O	O	X
				TO	-	-	O	O	X
				SEARCH	-	-	O	O	X
			BACKUP LOG TO USB	-	-	-	O	O	X
			CLEAR NVRAM	CLEAR ALL	-	-	O	O	X
				CLEAR SETTING	-	-	O	O	X
				CLEAR JOURNAL	-	-	O	O	X
				CLEAR TRANS SEQUENCE NUMBER	-	-	O	O	X
				CLEAR LOG	-	-	O	O	X
			BACK NVRAM	-	-		O	O	X
			RESTORE NVRAM	-	-		O	O	X
7	HOST SETUP	KEY MANAGEMENT	-	-	-	-	O	X	X
		TELEPHONE NUMBER (DIAL UP)	HOST PHONE 1	-	-	-	O	X	X
			HOST PHONE 2	-	-	-	O	X	X
		HOST ADDRESS (TCP/IP)	URL EN/DISABLE	-	-	-	O	X	X
			HOST ADDRESS 1	-	-	-	O	X	X
			PORT NUMBER 1	-	-	-	O	X	X
			HOST ADDRESS 2	-	-	-	O	X	X
			PORT NUMBER 2	-	-	-	O	X	X
		TERMINAL ID	-	-	-	-	O	X	X

No	Working Management Function						CE Authority		
	Main	Sub1	Sub2	Sub3	Sub4	Sub5	M	S	O
		HEALTH CHECK MESSAGE	EN/DISABLE	-	-	-	O	O	X
			SEND INTERVAL	-	-	-	O	O	X
		KEY & CONFIG DOWNLOADS	EN/DISABLE	-	-	-	O	O	X
			KEY & CONFIG DOWNLOAD	-	-	-	O	O	X
		REMOTE MONITOR	RMS EN/DISABLE	EN/DISABLE	-	-	O	O	X
				RMS RING COUNT (DIAL UP)	-	-	O	O	X
				ATM LISTENING PORT (TCP/IP)	-	-	O	O	X
			RMS Status Send En/Disable	EN/DISABLE-	-	-	O	O	X
				URL En/Disable (TCP/IP)	-	-	O	O	X
				PHONE NUMBER1 (DIAL UP)	-	-	O	O	X
				PHONE NUMBER2 (DIAL UP)	-	-	O	O	X
				INTERVAL	-	-	O	O	X
				RMS ADDRESS (TCP/IP)	-	-	O	O	X
				RMS LISTENING PORT (TCP/IP)	-	-	O	O	X
				SCHEDULED JOURNAL UPLOAD	EN/DISABLE	-	O	O	X
					UPLOAD TYPE	-	O	O	X
					COUNT	-	O	O	X
					DAY	-	O	O	X
					HOUR	-	O	O	X
			RMS PASSWORD	-	-	-	O	O	X
		AUTO DAY TOTAL	EN/DISABLE	-	-	-	O	O	O

No	Working Management Function						CE Authority		
	Main	Sub1	Sub2	Sub3	Sub4	Sub5	M	S	O
			TOTAL TYPE	-	-	-	O	O	O
			HOUR	-	-	-	O	O	O
			MINUTE	-	-	-	O	O	O
8	TRANSACTION SETUP	DISPENSE LIMIT	-	-	-	-	O	O	X
		FAST CASH	LB 0	-	-	-	O	O	X
			LB 1	-	-	-	O	O	X
			LB 2	-	-	-	O	O	X
			RB 0	-	-	-	O	O	X
			RB 1	-	-	-	O	O	X
			RB 2	-	-	-	O	O	X
		LOW CURRENCY CHECK EN/DISABLE	-	-	-	-	O	O	X
		DENOMINATION	1ST CASSETTE	-	-	-	O	X	X
			2ND CASSETTE	-	-	-	O	X	X
			3RD CASSETTE	-	-	-	O	X	X
			4TH CASSETTE	-	-	-	O	X	X
9	IN SERVICE	-	-	-	-	-	O	O	O
10	SITE MAP	-	-	-	-	-	O	O	O
11	QUICK REPLENISH	-	-	-	-	-	O	O	O
12	QUICK CONFIGURATION	-	-	-	-	-	O	O	X

5.1.2 When an Error Occurs

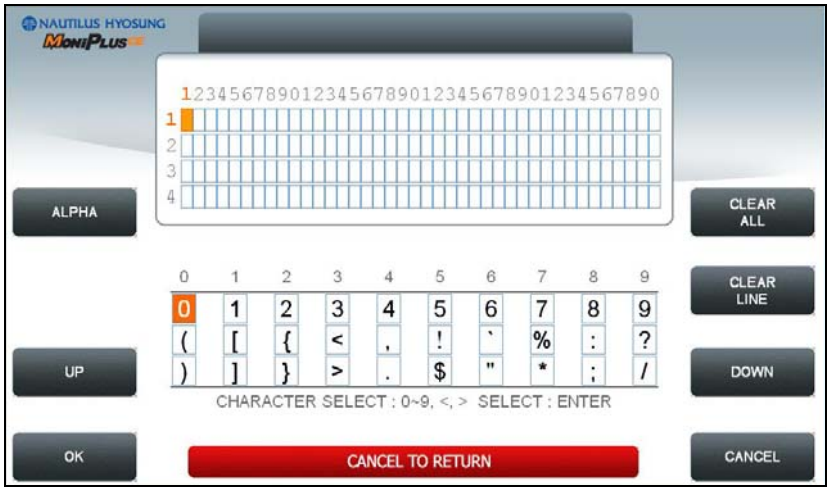
When you try to enter Supervisor Mode or go into **IN SERVICE MODE** from supervisor menu, the screen below will be displayed if there is any ERROR.

Press **DEVICE INITIALIZE** button, if the error is caused by a device so it can be cleared by initializing.
Press **OPERATOR FUNCTION** button, if you have to set up any information to clear the error. And set up the information which is missed.

NOTE: If the machine goes out of service, the error code will not always appear on the screen. If you do not see an error code, enter operator function and go to reports. Look in the error summary for error codes.

5.1.3 How to Use KeyPad (Function Key Type)

This section explains the basic operation of the KeyPad.



[Default KeyPad Character Table Screen]

Shift Status				0	1	2	3	4	5	6	7	8	9
F1	NUMBER	F3	-	0 ( )	1 [ ]	2 { }	3 < >	4 , .	5 ! $	6 ‘ “	7 % *	8 : ;	9 ? /
	ALPHA		UPPER	+ - =	Space Q Z	A B C	D E F	G H I	J K L	M N O	P R S	T U V	W X Y
			LOWER	+ - =	Space q z	a b c	d e f	g h i	j k l	m n o	p r s	t u v	w x y
	TABLE		-	The character on the current cursor position on the screen wil be selected									

How to Enter the Character

A. The Keypad Character Table will appear on the bottom of the screen in all keypad input screens.

B. F1 key gives the option for ALPHA or NUMBER, Table mode. Default is NUMBER.

C. F3 key gives the option for Upper or Lowercase characters. It is valid only in the ALPHA mode.

Default is Uppercase.

D. The input of characters is limited to the space provided.

E. Key can be changed whenever you press it to choose proper character. For example, when key “1” is pressed once it is “SPACE”, pressed twice it is “Q”, pressed third time it is “Z” in case of the Alpha mode. When the desired character is selected, press ENTER.

F. ◀,▶ keys move the cursor position in the ALPHA or NUMBER mode. In the TABLE mode ◀,▶ keys are used to select the character.

G. **F2** key is used to clear the whole screen and returns the cursor to its initial position.

H. **F4** key and **CLEAR** key in pinpad are used to clear the current line.

I. **F5** key is used to save the current changes.

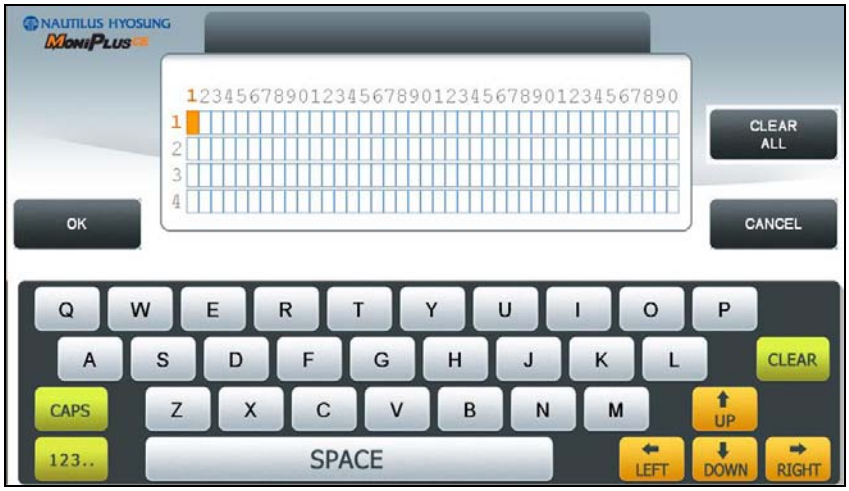
J. **F6** key and **CANCEL** key in pinpad are used to exit. (If you didn’t press F5 key after changing, the changes will be ignored.)

K. **F7** key is used to move the cursor position **UP**.

L. **F8** key is used to move the cursor position **DOWN**.

5.1.4 How to Use KeyPad (Touch Screen Type)

You can use this KeyPad in same way as a computer keyboard.



[Default KeyPad Character Table Screen]

Key	Character Table
ABC..	**Q W E R T Y U I O P** **A S D F G H J K L** **Z X C V B N M**
CAPS	**q w e r t y u i o p** **a s d f g h j k l** **z x c v b n m**
123	**1 2 3 4 5 6 7 8 9 0** **~ ! @ # $ % ^ & *** **+ - : ; < > ?**
+|/	**1 2 3 4 5 6 7 8 9 0** **( ) { } [ ] _ = “** **‘ , . / | \ £**

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 Kind and Country Code
2) Program version
3) Serial Number
4) Line Type (Dial-up, TCP/IP)
5) Message Format
6) Terminal ID
7) The Media Status of 1st Cassette
8) The Media Status of 2nd Cassette
9) The Media Status of 3rd Cassette
10) The Media Status of 4th Cassette
11) 1st Cassette : Remaining notes(Denomination)
e.g) if 1000 notes of $20, 1000($20)
12) 2nd Cassette : Remaining notes(Denomination)
13) 3rd Cassette : Remaining notes(Denomination)
14) 4th Cassette : Remaining notes(Denomination)
15) Reject Box Status(Rejected Count)
16) Error Code
17) The Status of Card
18) The Status of Pinpad
19) The Status of Cash Dispenser
20) The Status of Receipt Printer
21) Current Date and Time
22) Last Transaction Time
23) Operator User

B. Functions

1) IN SERVICE

2) SITE MAP

3) QUICK REPLENISH

4) QUICK CONFIGURATION

F1) SETTLEMENT

F2) CUSTOMER SETUP

F3) JOURNAL

F4) SYSTEM SETUP

F5) REPORT

F6) HOST SETUP

F7) DIAGNOSTICS

F8) TRANSACTION SETUP

In order to move to the in-service mode, press the **1** or **CANCEL** key in pinpad.

In order to reset terminal error, press the **CLEAR** key in pinpad.

C. Field Values

CLASS	VALUE (eg.)	Remarks
MACHINE KIND	NH-2700	
COUNTRY CODE	Australia, New Zealand	
PROGRAM VERSION	V06.00.XX	
LINE TYPE	TCP/IP DIAL-UP	
MESSAGE FORMAT	STANDARD1 STANDARD2 STANDARD3 EPS	
TERMINAL ID	NH2700	
ERROR CODE	[00000(00)]	
STATUS		
CST1(Remaining Notes)	BILLS COUNT - 1047($10) N/A	
CST2(Remaining Notes)	BILLS COUNT - 18($20) N/A	
CST3(Remaining Notes)	BILLS COUNT - 20($50) N/A	
CST4(Remaining Notes)	BILLS COUNT - 20($50) N/A	
CST1(Media Status)	MISSING NORMAL LOW EMPTY FULL	
CST2(Media Status)	MISSING NORMAL LOW EMPTY FULL	

CST3(Media Status)	MISSING NORMAL LOW EMPTY FULL	
CST4(Media Status)	MISSING NORMAL LOW EMPTY FULL	
REJECT	REJECT COUNT(CDU) – (0)	
Card	OK ERROR	
Pinpad	OK ERROR	
Cash Dispenser	OK ERROR	
Receipt Printer	OK ERRPR	

5.3 SETTLEMENT

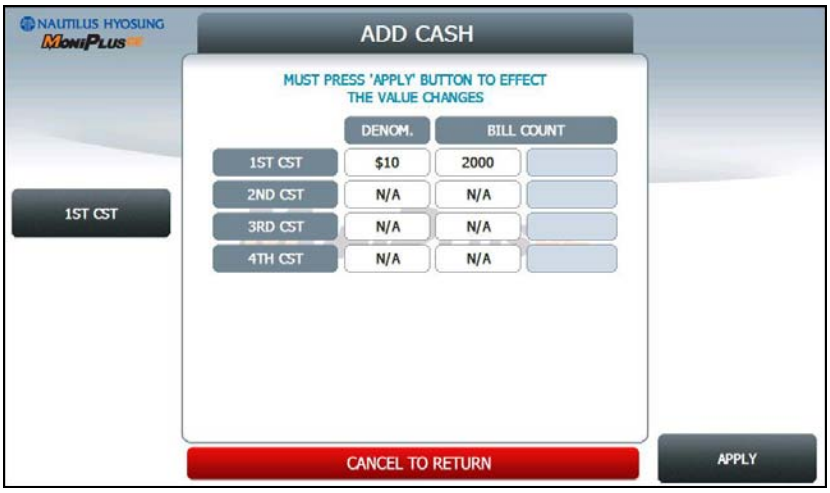
This menu contains **ADD CASH, DAY TOTAL, TRIAL DAY TOTAL, CASSETTE TOTAL** and **TRIAL CASSETTE TOTAL**. Please press each button on this menu to go to next screen or to operate the related function. To go back to the previous screen, press the **CANCEL** key in pinpad.

1) **ADD CASH** : Go to the next screen
2) **DAY TOTAL** : Do settlement with host. After settlement, clear transaction information.
3) **TRIAL DAY TOTAL** : Just do settlement with host. (Not clear transaction info.)
4) **CASSETTE TOTAL** : Show note count and then clear note count.
5) **TRIAL CASSETTE TOTAL** : Just show note count. (Not clear note count.)

5.3.1 ADD CASH

By pressing button on this menu, you can select cassette to add note count. (Cassette numbers are designated from top to bottom). Input the note count you want to add and press the **ENTER** key in the pinpad. If you completed the all cassettes, you have to press **APPLY** button to effect the value changes.

NOTE: The total note count you enter must not exceed the maximum note count.
(Max. note count : 2,000/CST)



5.4 JOURNAL

This **JOURNAL** menu contains **CLEAR JOURNAL, CLEAR TRANS. SEQUENCE NO**., **VIEW JOURNAL, PRINT JOURNAL**, and **PRINT LAST X** sub menu.

1) **CLEAR JOURNAL** : The **CLEAR JOURNAL** function is used to delete all journal data
2) **CLEAR TRANS. SEQUENCE NO** : This function will reset the journal sequence number to <0001>. This may be useful if you switch processing or switch Terminal ID numbers and want to keep new records.
3) **PRINT JOURNAL**: The **PRINT JOURNAL** function is used to print out all the journals which have not been printed from the last printed journal. If you want to stop printing, you may stop it by pressing **CANCEL** key.
4) **VIEW JOURNAL** : Go to the next screen
5) **PRINT LAST X** : Go to the next screen

5.4.1 VIEW JOURNAL

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 START** 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 JOURNAL** button and just print out the current journal by pressing **PRINT THIS** button.

5.4.1.1 SEARCH JOURNAL

You can search a specific journal with a journal index and see it if the index is valid.

5.4.2 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 will be printed.

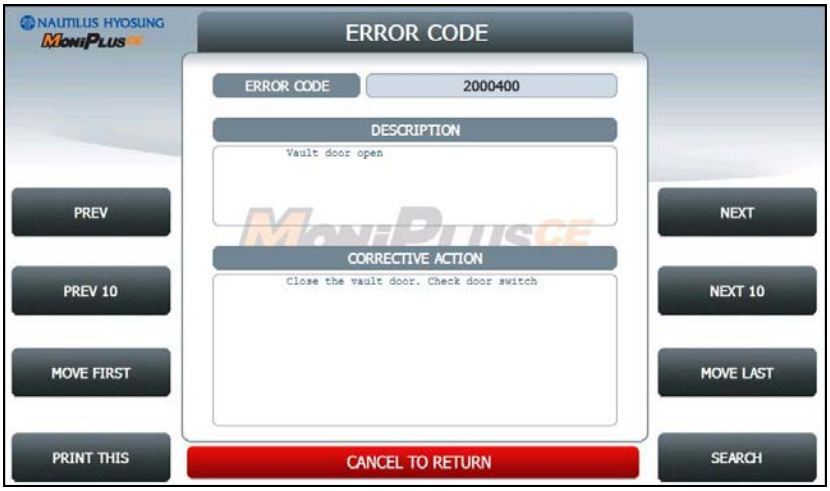
If you want to stop printing, you may stop by pressing **CANCEL** key.

5.5 REPORT

This report menu consists of 5 sub-menus. **ERROR CODE, ERROR SUMMARY, SW VERSION**, **PRINT ALL SETUP** and **REJECT ANALYSIS**. You can print out all information regarding each device as well as system value set up. If you want to go back the previous screen, press the **CANCEL** key.

5.5.1 ERROR CODE

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

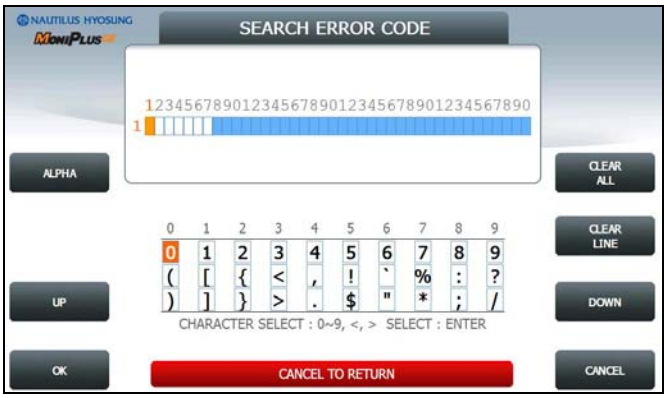


PREV/**NEXT** buttons are used to navigate previous and next error codes one by one. **PREV 10**/**NEXT 10** are available to do ones by 10 EA. **MOVE FIRST**/**MOVE LAST** buttons are to go to the first error code and the last one. **PRINT THIS** button is for printing information about the error code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

SEARCH ERROR CODE button is used to search a specific error code immediately.

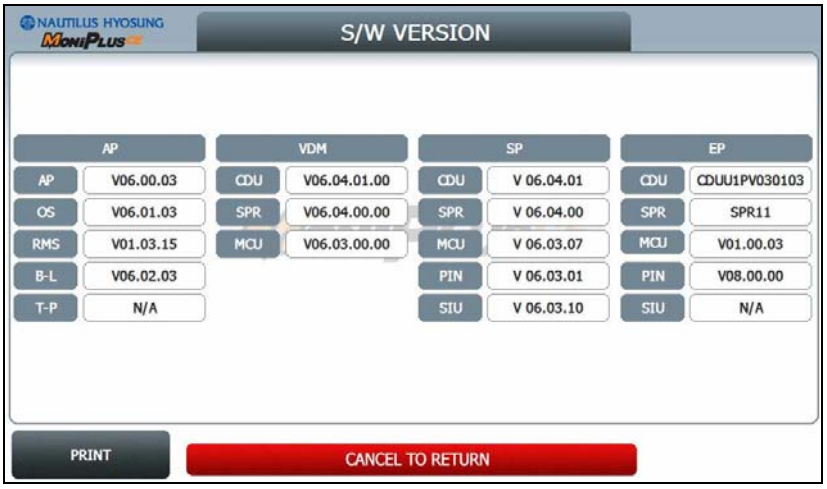
5.5.1.1 SEARCH ERROR CODE

You can search a specific error code if it exists. In order to use the function, please input the specific error code in the field and select **OK** button. If there is no result in database, "**INVALID ERROR CODE**" will be displayed.



5.5.2 SW VERSION

This menu shows each software version. Each versions will be displayed. (APPLICATION, CDU EP, CDU SP, SPR EP, SPR SP, MCU EP, MCU SP and etc.)



5.5.3 PRINT ALL SETUP List

[DIAL – UP]

NO	ITEM	DESCRIPTION	REMARKS
1	DATE	CURRENT DATE & TIME	
2	MACHINE KIND	NH-2700	
3	COUNTRY	AUSTRALIA / NEW ZEALNAD	
4	HOST PROCESSOR	HOST PROTOCOL TYPE	
5	NETWORK TYPE	DIAL-UP	
6	VISA FRAMED OPTION	EOT/ENQ OPTION	
7	VERSION INFORMATION	AP / SP / EP VERSION	
8	SYSTEM SETUP	CURRENT CASSETTE REJECT	
		CURRENT BILLS	
		SERIAL NUMBER	
		SPEAKER VOLUME	
		HOST MODEM INITIAL STRING	
		RMS MODEM INITIALI STRING	
		LANGUAGE MODE	N/A
9	CUSTOMER SETUP	WELCOME MESSAGE INFO	
		EXIT MESSAGE INFO	
		MARKETING MESSAGE INFO	
		STORE MESSAGE INFO	
		PROCESSOR MESSAGE INFO	
		RECEIPT HEADER & TAIL INFO	
		RECEIPT ADDRESS & PHONE INFO	
		OPTIONAL FUNCTION 1 INFO	
		OPTIONAL FUNCTION 2 INFO	
		BIN LIST	
		ADVERTISEMENT #n INFO	
		COUPON #n INFO	
10	TRANSACTION SETUP	DISPENSE LIMIT	
		CURRENCY ID	
		DENOMINATION	
		FAST CASH	
		LOW CURRENCY CHECK	
11	HOST SETUP	TERMINAL ID	
		STANDARD 3 OPTION	
		HOST PHONE NUMBER	
		HEALTH CHECK OPTION	

		AUTO DAY TOTAL OPTION	
		RMS OPTION	
		MASTER KEY INFO	

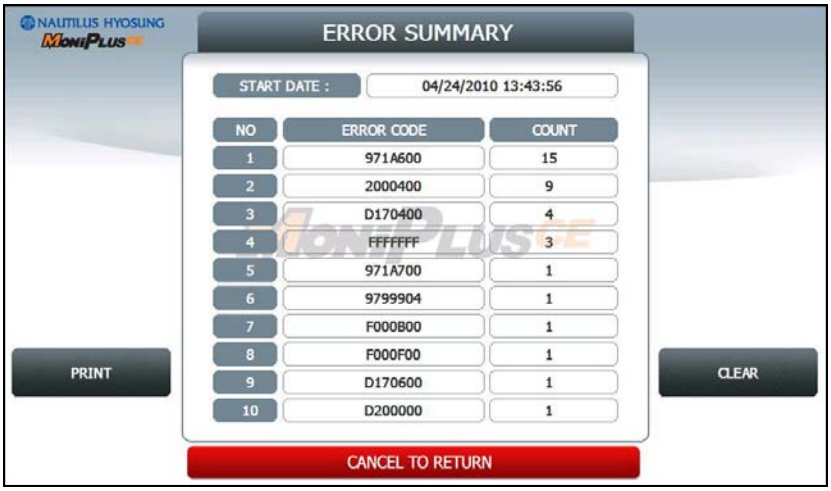
[TCP / IP]

NO	ITEM	DESCRIPTION	REMARKS
1	DATE	CURRENT DATE & TIME	
2	MACHINE KIND	NH-2700	
3	COUNTRY	AUSTRALIA / NEW ZEALNAD	
4	HOST PROCESSOR	HOST PROTOCOL TYPE	
5	NETWORK TYPE	TCP/IP	
6	TCP/IP TYPE	TCP/IP TYPE	
7	SSL MODE	SSL OPTION	
8	VERSION INFORMATION	AP / SP / EP VERSION	
9	SYSTEM SETUP	CURRENT CASSETTE REJECT	
		CURRENT BILLS	
		SERIAL NUMBER	
		SPEAKER VOLUME	
		ATM IP OPTION	
		LANGUAGE MODE	
10	CUSTOMER SETUP	WELCOME MESSAGE INFO	
		EXIT MESSAGE INFO	
		MARKETING MESSAGE INFO	
		STORE MESSAGE INFO	
		PROCESSOR MESSAGE INFO	
		RECEIPT HEADER & TAIL INFO	
		RECEIPT ADDRESS & PHONE INFO	
		OPTIONAL FUNCTION 1 INFO	
		OPTIONAL FUNCTION 2 INFO	
		BIN LIST	
		ADVERTISEMENT #n INFO	
		COUPON #n INFO	
11	TRANSACTION SETUP	DISPENSE LIMIT	
		CURRENCY ID	
		DENOMINATION	
		FAST CASH	
		LOW CURRENCY CHECK	

12	HOST SETUP	TERMINAL ID	
		STANDARD 3 OPTION	
		HOST ADDRESS INFO	
		HEALTH CHECK OPTION	
		AUTO DAY TOTAL OPTION	
		RMS OPTION	
		MASTER KEY INFO	

5.5.4 ERROR SUMMARY

ERROR SUMMARY menu offers a statistics of error codes on an ATM machine. It lists the errors by the number of times they have occurred. You can print these errors.

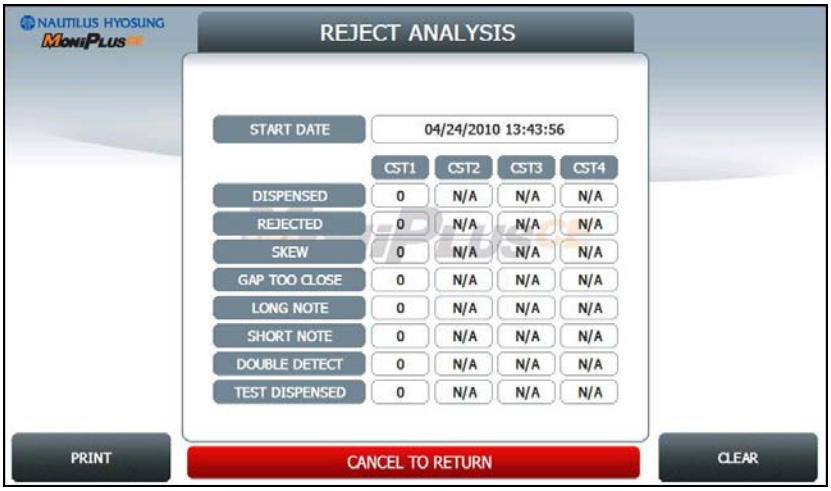


PREV/NEXT buttons are used to navigate previous and next pages and **PRINT** button prints all of error code history.

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 00:00:00” in ATM machines which have never done the CLEAR function.)

5.5.5 REJECT ANALYSIS

REJECT ANALYSIS menu offers a statistics of note reject on an ATM machine. It lists the rejects by the number of times or note counts they occurred. You can print these rejects.



PRINT button prints the reject analysis information.

CLEAR button erases the reject analysis information and set **START DATE** to the present date as well. (START DATE displays “01/01/2000 00:00:00” in ATM machines which have never done the CLEAR function.)

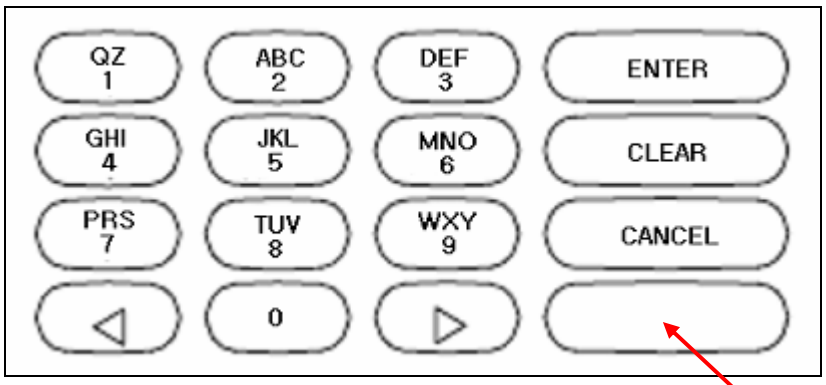
5.6 DIAGNOSTICS

This report menu consists of 7 sub-menus. **INITIALIZE**, **RECEIPT PRINTER**, **CASH DISPENSER**, **MODEM (or TCP/IP)**, **MCU TEST**, **AUXILIARY UNIT** and **AGING**. Please press each button on this menu to go to next screen or to operate the related function. To go back to the previous screen, press the **CANCEL** key in pinpad.

Changing the TEST COUNT

The **TEST COUNT** means the number of test.

If you want to change the test count, press **BLANK** key or **SET** the test count by pressing number keys 0~9 and press **ENTER** key**.** To delete the test count while inputting, press **CLEAR** key. To cancel the test while testing, press **CANCEL** key.



NOTE: TEST COUNT affects logically related procedures like testing **RECEIPT PRINTER**, **CASH DISPENSER**, and **MODEM**.

CASE:

1) If you input test count '0', the test count will be "UNLIMIT"
2) If you input test count 10, the test will perform 10 times.
3) If you cancel a test and then perform same test, the test count will be continue.
   For example, If you cancel a test when the tested count is 3, and then perform same test, the test count starts at 3.
4) If you cancel a test and then perform another test, the test count will be initialized.
   For example, If you cancel a test when the tested count is 3, and then perform another test, the test count starts at 0.

5.6.1 INITIALIZE

The **INITIALIZE** has the function of resetting each unit of the NH-2700. If an error occurs while executing, the system will stop and display an error code. Confirm the detailed error description in the ERROR CODE of REPORT MENU.

Accessing the INITIALIZE

1) Select **DIAGNOSTICS** in the OPERATOR FUNCTION
2) Select the **INITIALIZE** in the DIAGNOSTICS menu. All units will be initialized.
3) When the ATM is in the normal state, the SUCCESS message will be displayed.

5.6.2 RECEIPT PRINTER

The **RECEIPT PRINTER** has the function of printing a sample receipt and cutting out one receipt. If an error occurs while executing, the system will stop and display an error code. Confirm the detailed error description in the ERROR CODE of REPORT MENU.

Accessing the RECEIPT PRINTER

1) Select **DIAGNOSTICS** in the OPERATOR FUNCTION.
2) Select the **RECEIPT PRINTER** in the DIAGNOSTICS menu. Test String will be printed from the receipt printer.
3) When the ATM is in the normal state, the SUCESS message will be displayed.

5.6.3 CASH DISPENSER

The **CASH DISPENSER** has the function of testing the dispense mechanisms. This function will dispense one note from the cassette and dump into the reject bin. If an error occurs, the system will stop and display an error code. Confirm the detailed error description in the ERROR CODE of REPORT MENU

Accessing the CASH DISPENSER

1) Select **DIAGNOSTICS** in the OPERATOR FUNCTION.
2) Select the **CASH DISPENSER** in the DIAGNOSTICS menu. The **CASH DISPENSER** test will be performed.
3) When the ATM is normal state, the SUCCESS message will be displayed.

5.6.4 MODEM

The **MODEM** has the function of testing the modem for any errors. Input the desired PHONE NUMBER, then press **ENTER** Key for TEST DIAL. This function is used to check the function of the modem dial.

Accessing the MODEM

1) Select **DIAGNOSTICS** in the OPERATOR FUNCTION.
2) Select the **MODEM** in the DIAGNOSTICS menu.
3) The MODEM TEST will be displayed.

5.6.4.1 TCP/IP

The **TCP/IP** has the function of testing the TCP/IP for any errors. Input the desired HOST ADDRESS, HOST PORT, SSL OPTION and SSL VERSION, then select **CONNECT** for line test. This function is used to check the function of the TCP/IP.

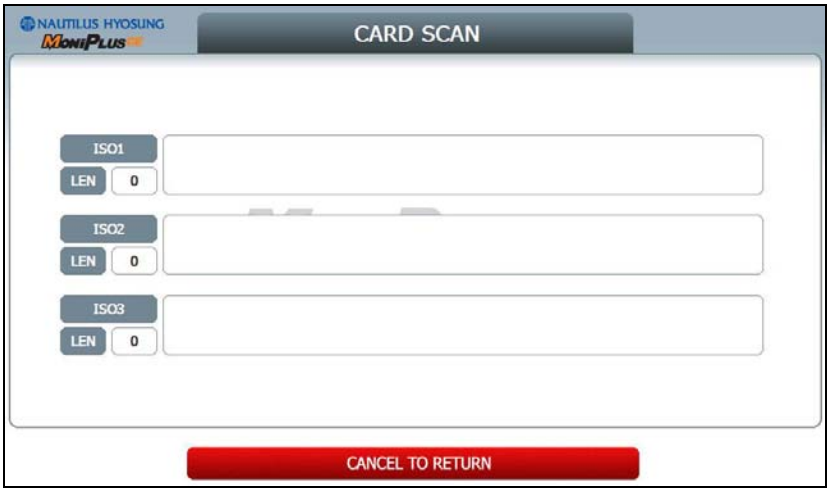
Accessing the TCP/IP

1) Select **DIAGNOSTICS** in the OPERATOR FUNCTION.
2) Select the **TCP/IP** in the DIAGNOSTICS menu.
3) The TCP/IP menu will be displayed.

However, the **TCP/IP** key is only available on the screen when you set a network type as the **TCP/IP.**

5.6.5 MCU TEST

The **MCU TEST** has the function of testing the magnetic stripe reader and the card itself.



Accessing the MCU TEST

1) Select **DIAGNOSTICS** in the OPERATOR FUNCTION.
2) Select **MCU TEST** in the DIAGNOSTICS menu.
3) After insert card, Select **IC TEST** or **CARD SCAN** in MCU TEST menu.
4) Card data or IC data will be displayed.

5.6.6 AUXILIARY UNIT

This **AUXILIARY UNIT** contains **SENSOR** and **FLICKER**. Please press each button on this menu to go to the next screen. To go back to the previous screen, press the **CANCEL** key in pinpad.

5.6.6.1 SENSOR

This **SENSOR** contains **CDU SENSOR** and **SPR SENSOR**. Please press each button on this menu to go to the next screen. To go back to the previous screen, press the **CANCEL** key in pinpad.

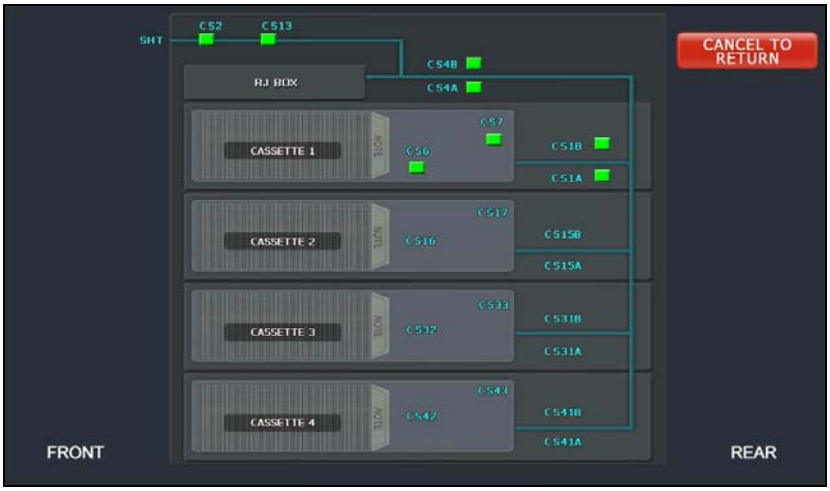
The **SENSOR** has the function of testing if all the sensors are in proper working condition.
The sensors are tested by turning the sensors on and off.

Accessing the SENSOR

1) Select **DIAGNOSTICS** in the OPERATOR FUNCTION.
2) Select **AUXILIARY UNIT** in the DIAGNOSTICS menu and then select **SENSOR** in the AUXILIARY menu.
3) DOOR STATUS and ADA JACK data will be displayed on the center. If you want to see the **CDU SENSOR** or **SPR SENSOR**, then press the button in each.

5.6.6.1.1 CDU SENSOR

The **CDU SENSOR** has the function of testing whether all the sensors are in proper working condition or not. The sensors are tested by turning the sensors on and off. If any sensor is normal, the sensor will be displayed as **GREEN COLOR**. And if any sensor detects an obstacle causing a machine to be jammed or it is in an abnormal condition, the sensor will be displayed as **RED COLOR**. Moreover, if any sensor doesn't exist, the sensor will not be displayed.

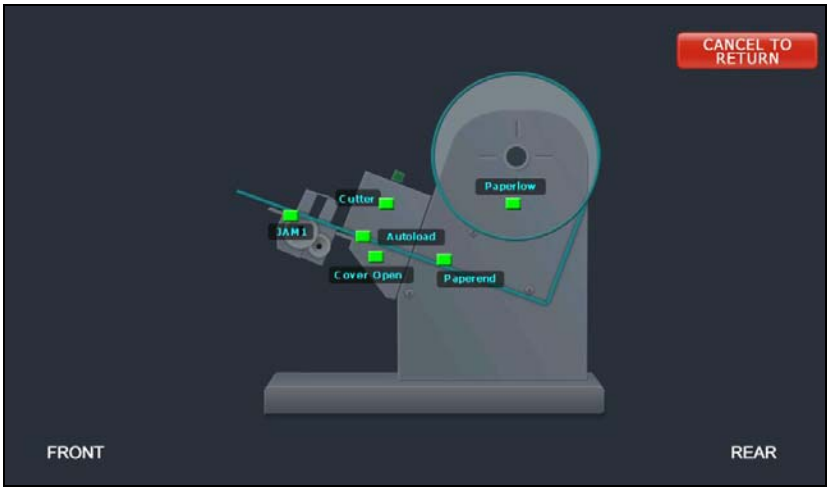


Accessing the SENSOR

1) Select **DIAGNOSTICS** in the OPERATOR FUNCTION.
2) Select **AUXILIARY UNIT** in the DIAGNOSTICS menu
3) Select **SENSOR** in the **AUXILIARY** menu and then select **CDU SENSOR** in the **SENSOR** menu.

5.6.6.1.2 SPR SENSOR

The **SPR SENSOR** has the function of testing whether all the sensors are in proper working condition or not. The sensors are tested by turning the sensors on and off. If any sensor is normal the sensor will be displayed as **GREEN COLOR**. And if any sensor detects an obstacle or it is in an abnormal condition, the sensor will be displayed as **RED COLOR**. Moreover, if any sensor doesn't exist, the sensor will not be displayed.

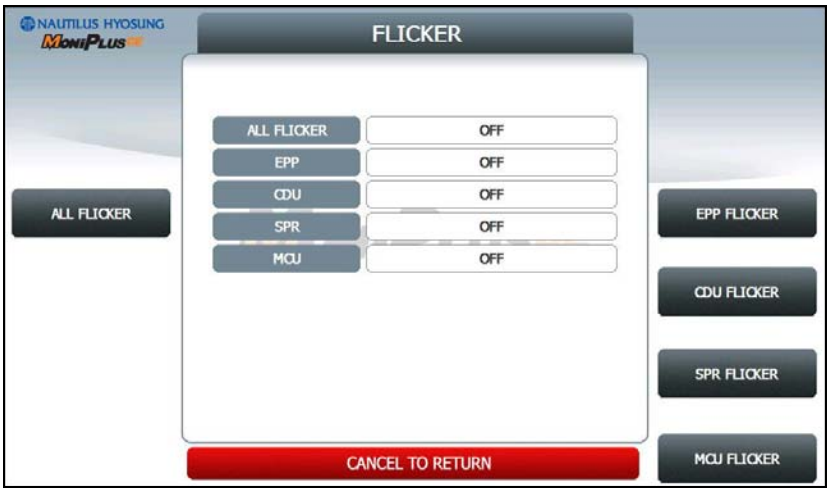


Accessing the SENSOR

1) Select **DIAGNOSTICS** in the OPERATOR FUNCTION.
2) Select **AUXILIARY UNIT** in the DIAGNOSTICS menu
3) Select **SENSOR** in the **AUXILIARY** menu and then select **SPR SENSOR** in the **SENSOR** menu.

5.6.6.2 FLICKER

This **FLICKER** contains **ALL FLICKER SENSOR, EPP FLICKER, CDU FLICKER, SPR FLICKER** and **MCU FLIKCER**. Please press each button on this menu to change test mode ON, OFF or FLICKING. To go back to the previous screen, press the **CANCEL** key in pinpad.



Accessing the SENSOR

1) Select **DIAGNOSTICS** in the OPERATOR FUNCTION.
2) Select **AUXILIARY UNIT** in the DIAGNOSTICS menu and then select **FLICKER** in the **AUXILIARY** menu.
3) Select any button to test EPP, CDU, SPR, MCU in each or ALL FLICKER..

5.6.7 AGING

The AGING function is only used at the factory and the laboratory for testing each module.

Accessing the AGING

1) Select **DIAGNOSTICS** in the OPERATOR FUNCTION.

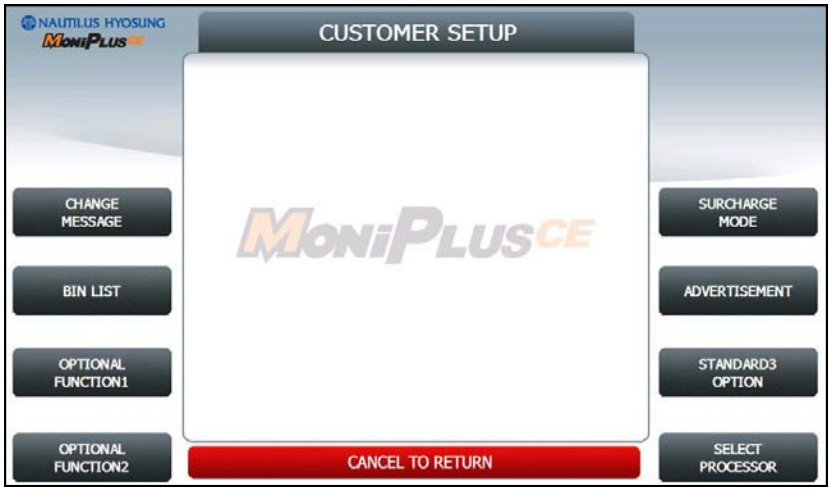
2) Select **AGING** in the **DIAGNOSTICS** menu.

3) All units will be tested unlimitedly. When you press **CANCEL** key, the testing will be stopped.

5.7 CUSTOMER SETUP

This customer setup menu contains **CHANGE MESSAGE**, **BIN LIST**, **OPTIONAL FUNCTION1**, **OPTIONAL FUNCTION2, SURCHARGE MODE**, **ADVERTISEMENT**, **STANDARD3 OPTION** and **SELECT PROCESSOR**. Please press each button on this menu to go to the next screen. To go back to the previous screen, press the **CANCEL** key in pinpad.

[STANDARD 3]



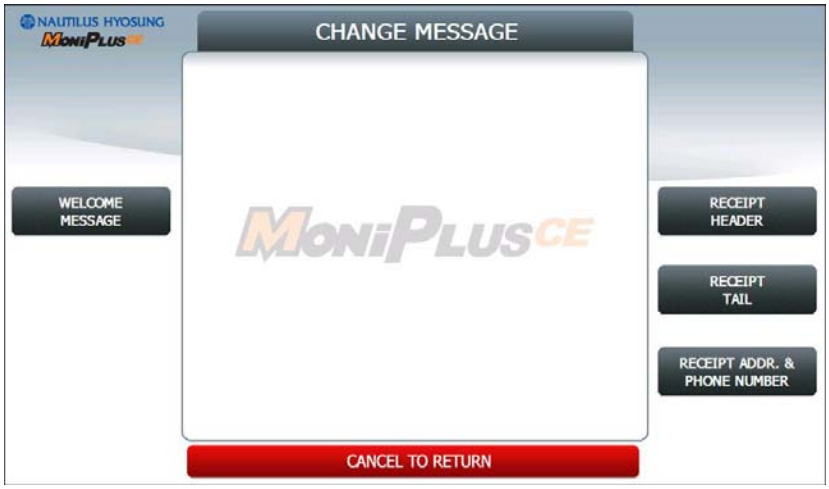
NOTE: STANDARD3 OPTION is displayed only if the message format is STANDARD3

[STANDARD 1, 2, EPS]

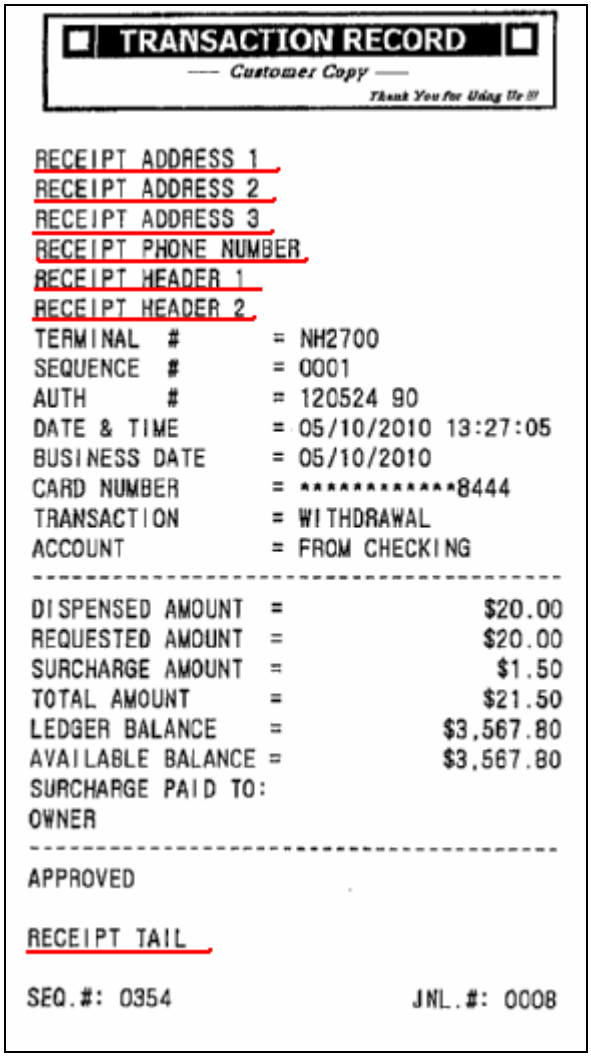
NOTE: STANDARD1 OPTION is displayed only if the message format is STANDARD1

5.7.1. CHANGE MESSAGE

CHANGE MESSAGE menu has each of 8 sub menus. The displayed menu depends on which country uses. If you press the **WELCOME MESSAGE and EXIT MESSAGE** buttons, the current display will be changed into the **each screens**. And you can change the message in the RECEIPT. If you press the **RECEIPT HEADER, TAIL, ADDRESS & PHONE NUMBER, MARKETING MESSAGE, STORE MESSAGE and PROCESSOR MESSAGE** buttons, the current display will be changed into the **each screens**. At last, the display can go back to the previous menu by pushing the **CANCEL** key in pinpad



Refer to figure of the Sample Receipt below for the location of the messages. The default receipt format will not include any messages.



TRANSACTION RECORD

Customer Copy

Thank You for Using Us !!

RECEIPT ADDRESS 1
RECEIPT ADDRESS 2
RECEIPT ADDRESS 3
RECEIPT PHONE NUMBER
RECEIPT HEADER 1
RECEIPT HEADER 2

TERMINAL # = NH2700
SEQUENCE # = 0001
AUTH # = 120524 90
DATE & TIME = 05/10/2010 13:27:05
BUSINESS DATE = 05/10/2010
CARD NUMBER = **********8444
TRANSACTION = WITHDRAWAL
ACCOUNT = FROM CHECKING

DISPENSED AMOUNT = $20.00
REQUESTED AMOUNT = $20.00
SURCHARGE AMOUNT = $1.50
TOTAL AMOUNT = $21.50
LEDGER BALANCE = $3,567.80
AVAILABLE BALANCE = $3,567.80
SURCHARGE PAID TO:
OWNER

APPROVED

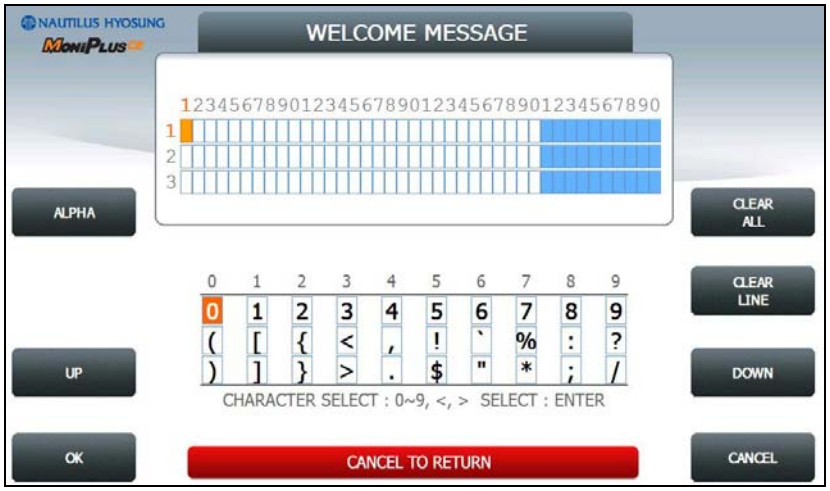
RECEIPT TAIL

SEQ.#: 0354 JNL.#: 0008

-Location of Messages on Receipt-

5.7.1.1 WELCOME MESSAGE

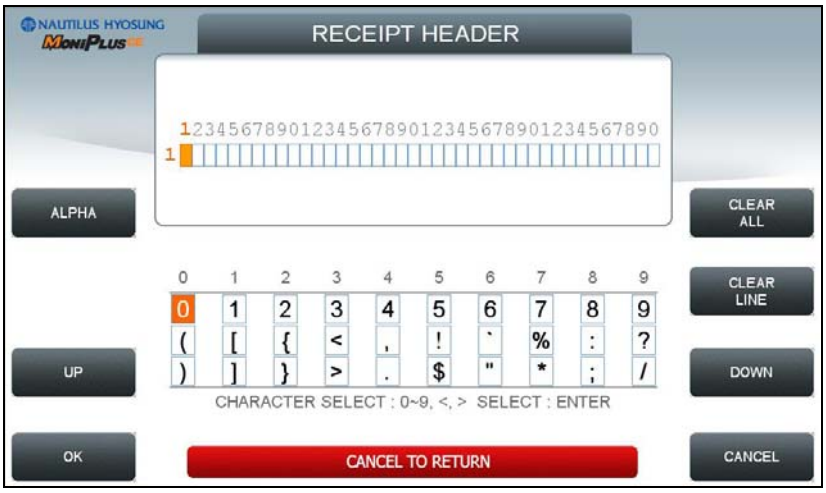
The **WELCOME MESSAGE** function is used to edit the welcome text.
Please input the welcome message in the field and select **OK** button. If it is saved successfully, "**OPERATION SUCCESSFUL!**" will be displayed.



5.7.1.2 RECEIPT HEADER

The **RECEIPT HEADER** function is used to edit the message at the header of receipt.

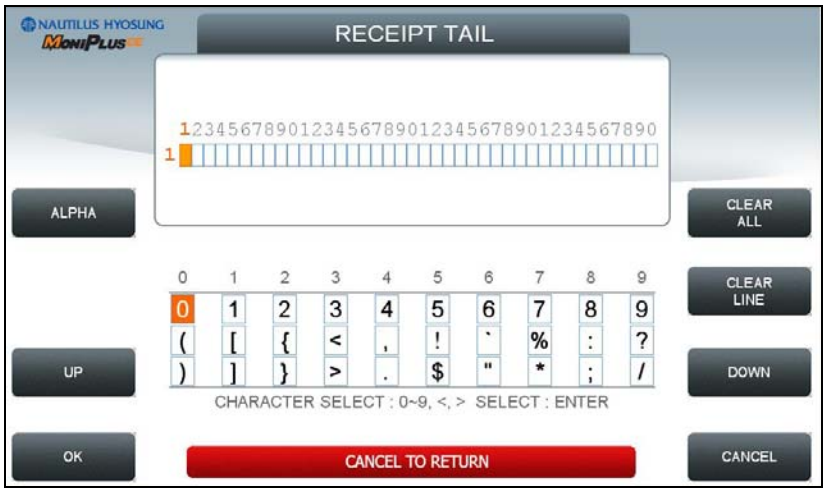
Please input the receipt header in the field and select **OK** button. If it is saved successfully, "**OPERATION SUCCESSFUL!**" will be displayed.



5.7.1.3 RECEIPT TAIL

The **RECEIPT TAIL** function is used to edit the message at the tail of receipt.

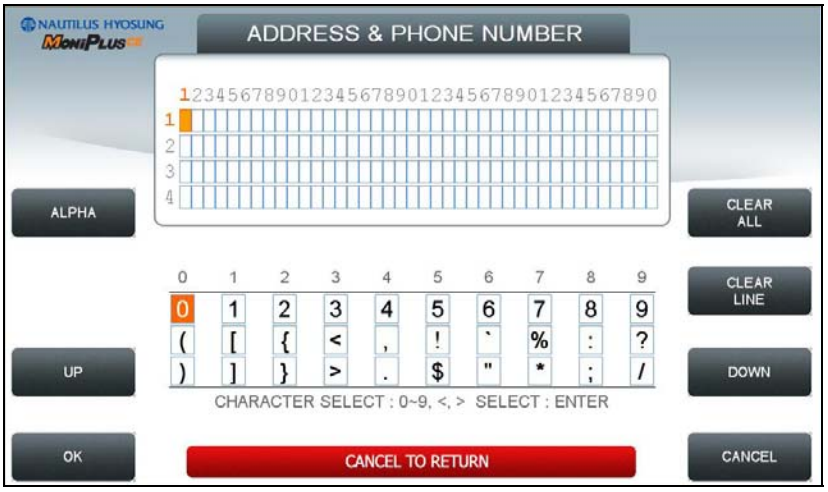
Please input the receipt tail in the field and select **OK** button. If it is saved successfully, "**OPERATION SUCCESSFUL!**" will be displayed.



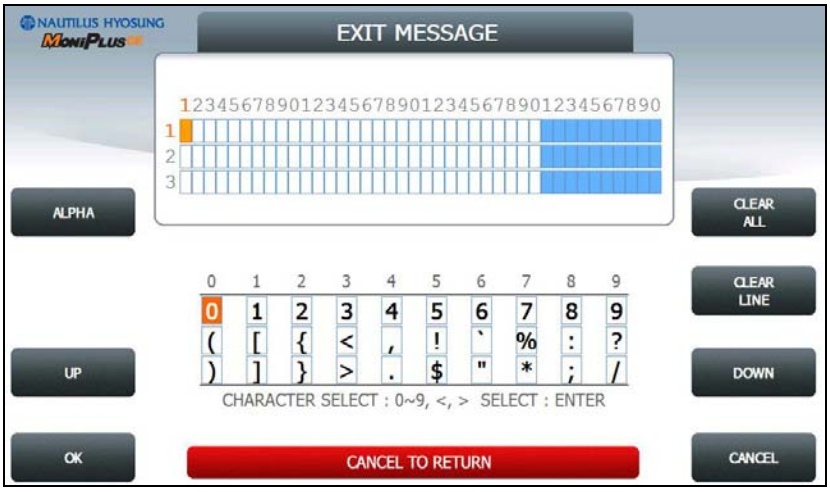
5.7.1.4 RECEIPT ADDRESS & PHONE NUMBER

The **RECEIPT ADDRESS & PHONE NUMBER** function is used to edit the message at the address & phone number of receipt.

Please input the receipt address & phone number in the field and select **OK** button. If it is saved successfully, "**OPERATION SUCCESSFUL!**" will be displayed.



5.7.1.5 EXIT MESSAGE



The **EXIT MESSAGE** function is used to edit the exit text. The message will be displayed at the end of transaction screen.

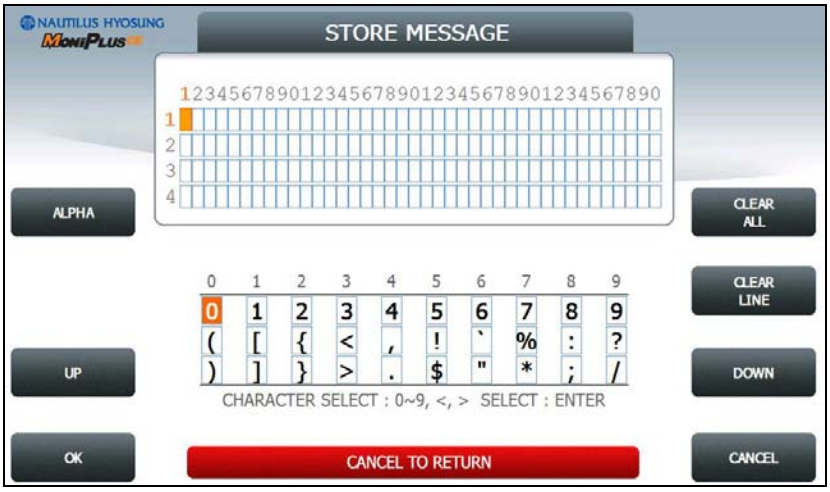
Please input the exit message in the field and select **OK** button. If it is saved successfully, "**OPERATION SUCCESSFUL!**" will be displayed.

5.7.1.6 MARKETING MESSAGE

The **MARKETING MESSAGE** function is used to edit the marketing message text on receipt.

Please input the marketing message in the field and select **OK** button. If it is saved successfully, "**OPERATION SUCCESSFUL!**" will be displayed.

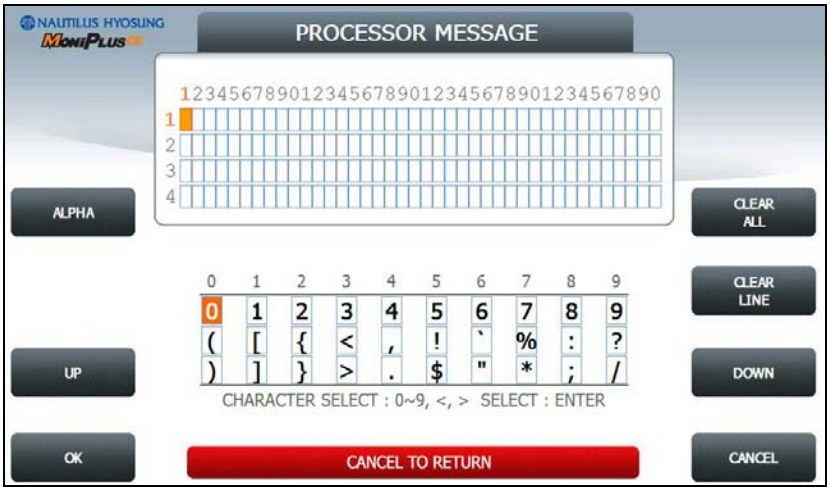
5.7.1.7 STORE MESSAGE



The **STORE MESSAGE** function is used to edit the store message text on receipt.

Please input the store message in the field and select **OK** button. If it is saved successfully, "**OPERATION SUCCESSFUL!**" will be displayed.

5.7.1.8 PROCESSOR MESSAGE



The **PROCESSOR MESSAGE** function is used to edit the processor message text on receipt.

Please input the processor store marketing message in the field and select **OK** button. If it is saved successfully, "**OPERATION SUCCESSFUL!**" will be displayed.

5.7.2. BIN(Bank Identification Number) LIST

MUTLIPLE BIN LIST menu show the BIN LIST. This function support additional 8,000 **BIN LIST** and various BIN PROPERITES like Block Surcharge, Withdrawal Surcharge, Balance Surcharge, Accept Card, Decline Card and Award Coupon.

If **ALLOW ONLY LISTED BIN EN/DISALBE** option is enabled, it ensures that only cards with BIN Numbers in BIN LIST will be accepted.

VIEW BIN LIST can show, add, edit and delete BIN LIST. **PRINT ALL BIN LIST** can print the registered BIN LIST on a receipt. And **DELETE ALL BIN LIST** can delete all BIN LIST.

5.7.2.1 VIEW BIN LIST

VIEW BIN LIST menu show the BIN LIST. BIN LIST displays 10 properties per page.

Use **PREV PAGE** or **NEXT PAGE** button to show just one page before or after, and **PREV 50** or **NEXT 50** buttons are for 50 or after 50 BIN.

To Add a BIN Property, use **ADD NEW** button. To edit or delete, use **EDIT** or **DELETE** button and Input INDEX NO and press enter key. Besides, you can check up BIN data you would try to search by **SEARCH** button.

5.7.2.2 BIN PROPERTIES

In case adding and editing BIN properties, this screen enables you to add or change

Press **BIN** button to input BIN. After entering BIN, if press enter key on pinpad, if there are other actions for same BIN, the actions are displayed at below. Press **ACTION** button to change bin action, it will be toggled block surcharge, withdrawal surcharge, balance surcharge, accept card, decline card and award coupon. If you select withdrawal surcharge or balance surcharge, press **VALUE** button to input the surcharge amount.

If all the properties you would like to input are entered, press APPLY button to finish the adding/editing job. If adding bin action is not valid as compared with previously added bin action like block surcharge and withdrawal surcharge, you can see the screen to confirm modifying BIN lists.

5.7.2.3 SEARCH BIN

The SEARCH BIN screen allows finding the registered BIN

Enter BIN and press enter key on pinpad, the screen will move the page located in BIN

5.7.3 OPTIONAL FUNCTION1

OPTIONAL FUNCTION1 menu contains **MOD 10 CHECK, NEED MORE TIME, ACCOUNTS**, **SELECT RECEIPT** and **PRE DIALING.** Please press each button on this menu to go to next screen. To go back to the previous screen, press the **CANCEL** Key in pinpad

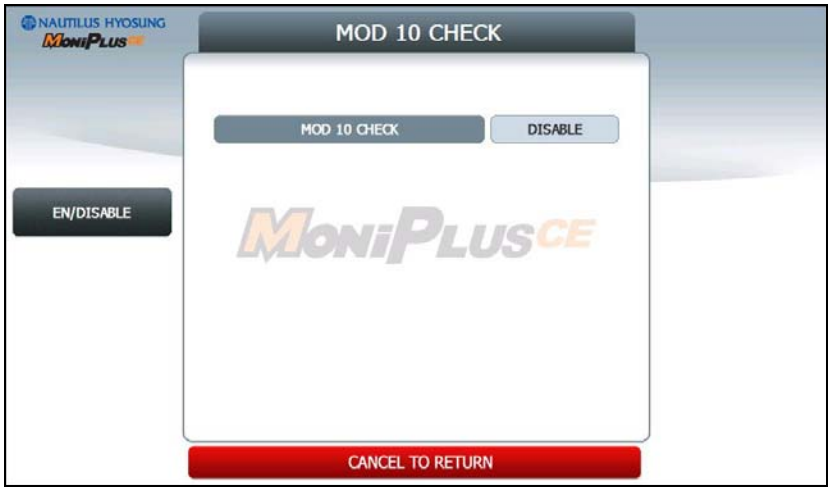
NOTE:

- **PRE DIALING** is displayed only if Network is Dial up

5.7.3.1 MOD 10 CHECK

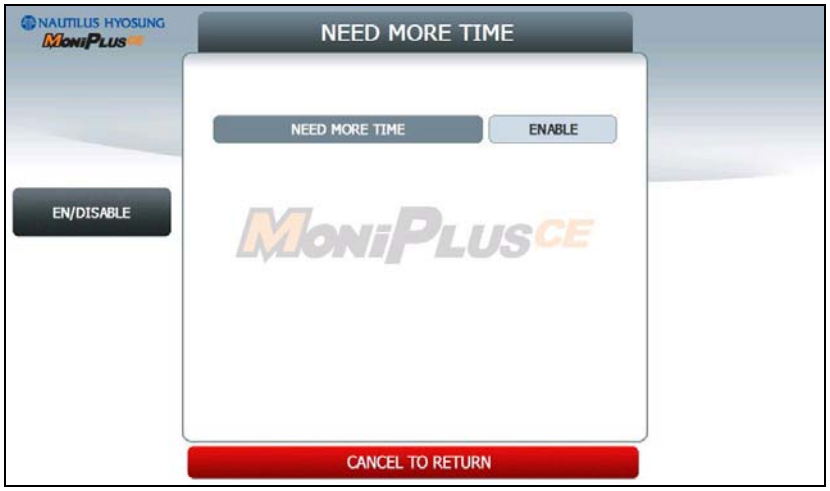
MOD 10 CHECK is to check the card data's validation.

Please press **EN/DISABLE** button to set up **MOD 10 CHECK**.



5.7.3.2 NEED MORE TIME

NEED MORE TIME is a function to ask to need more time at transaction procedure for customers when user selection timeout occurs.



Press **EN/DISABLE** button to set up. If enabled and timeout occurs, the screen message (“Do you need more time?”) will be displayed on transaction screen. If disabled timeout occurs, the transaction will be cancelled.

5.7.3.3 ACCOUNTS

ACCOUNTS is to set up the accounts which is used on transaction. You can see CHEQUE ACCOUNT, SAVINGS ACCOUNT and CREDIT CARD ACCOUNT however, only **CREDIT CARD ACCOUNT** and **SAVINGS ACCOUNT** can be set up. Because CHEQUE ACCOUNT is the default.

Please press **CREDIT CARD EN/DISABLE** button to set up **CREDIT CARD ACCOUNT**.

5.7.3.4 SELECT RECEIPT

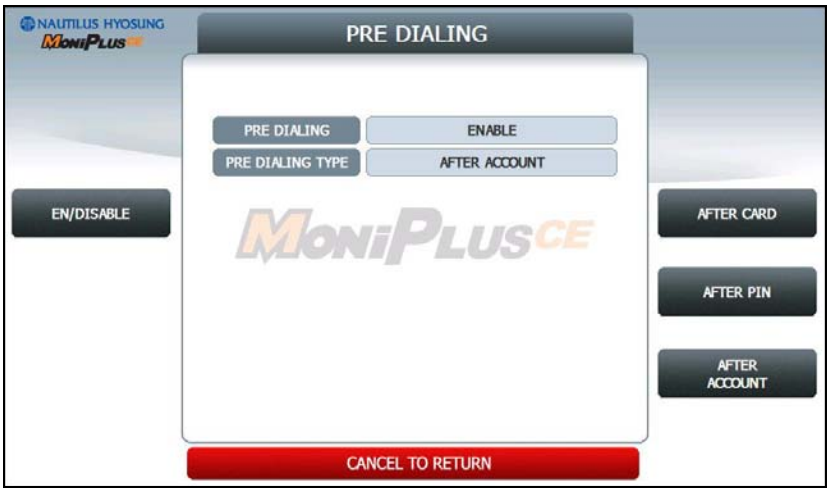
If **SELECT RECEIPT** is **ENABLED**, the ATM MACHINE will show the screen to determine whether printing the receipt after a transaction will be performed or not.
Please press **EN/DISABLE** button to set up **SELECT RECEIPT**..

If **SELECT RECEIPT** is **DISABLED**, the ATM MACHINE will print out the receipt without selection. For your guidance, the screen for selecting whether a user will receive a receipt or not is demonstrated as below

5.7.3.5 PRE DIALING

PRE DIALING is a function to improve the performance speed of transaction by making a connection to the host server earlier than normal.

Please press **EN/DISABLE** button to set up **PRE DIALING** and one of three buttons (**AFTER CARD, ATER PIN** and **AFTER ACCOUNT)** to determine the time when the ATM MACHINE makes a connection.



5.7.4 OPTIONAL FUNCTION2

OPTIONAL FUNCTION2 menu contains **DEVICE OPTION and SCREEN SERVICES.**

To go back to the previous screen, press the **CANCEL** Key in pinpad

5.7.4.1 DEVICE OPTION

DEVICE OPTION menu contains **RECEIPT PAPER LOW SENSOR EN/DISABLE, CST SOUND ON/OFF, EPP FLICKER ON OPTION**. Please press each button on this menu to set up items.

To go back to the previous screen, press the **CANCEL** Key in pinpad

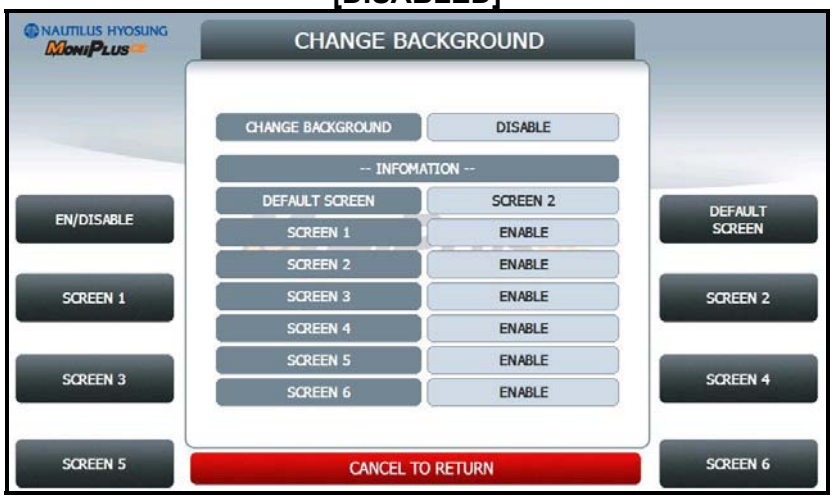
5.7.4.2 SCREEN SERVICES

SCREEN SERVICES menu contains **CHANGE BACKGROUND and NOTICE**. Please press **CHANGE BACKGROUND and NOTICE** button on this menu to go to next screen. To go back to the previous screen, press the **CANCEL** Key in pinpad

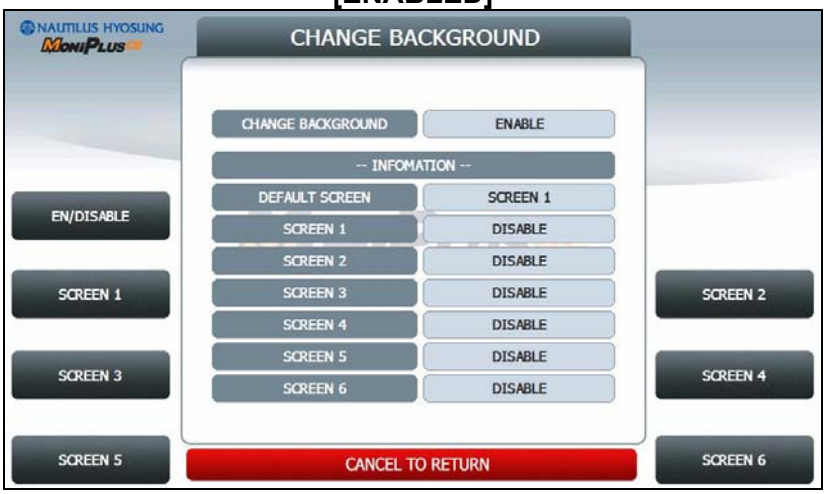
5.7.4.2.1 CHANGE BACKGROUND

CHANGE BACKGROUND function provides **SIX** different Background screens. Please press **EN/DISABLE** button on this menu to set up for **CHANGE BACKGROUND**. To go back to the previous screen, press the **CANCEL** Key in pinpad

[DISABLED]



[ENABLED]



The change background image can be updated by SW Update with JPG format images. For more information, please refer to **"Background image Update Guide**" document.

5.7.4.2.1.1 CHANGE BACKGROUND Screen n

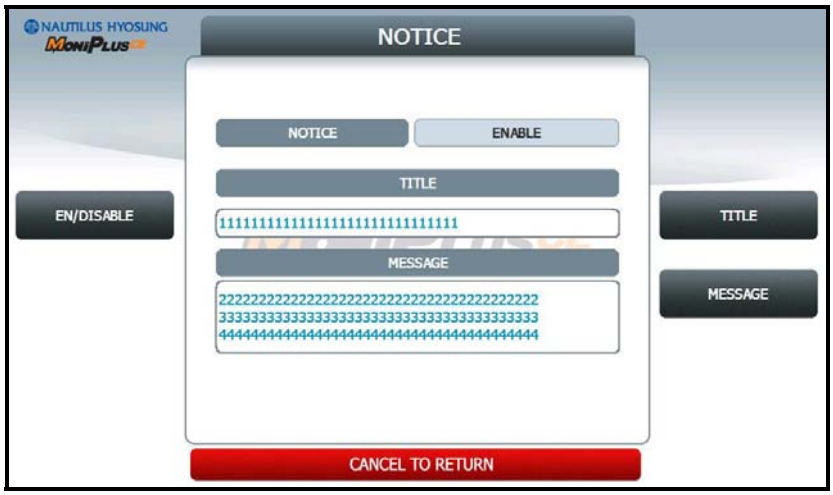
Please press **SCREEN n EN/DISABLE** button to set up SCREEN n,

5.7.4.2.2 DEFAULT SCREEN

DEFAULT SCREEN function provides **SIX** different Background screens. You can set up only one screen on the six screens. Please press **DEFAULT SCREEN n EN/DISABLE** button to set up SCREEN n,

5.7.4.2.3 NOTICE

NOTICE menu contains **TITLE** and **MESSAGE.** You can set up **TITLE(1 line 30 column)** and **MESSAGE(3 line 40 column)**. If you set up **NOTICE** ENABLE, ATM will be displayed notice information on idle screen.



5.7.5. ATM OPERATOER FEE MODE

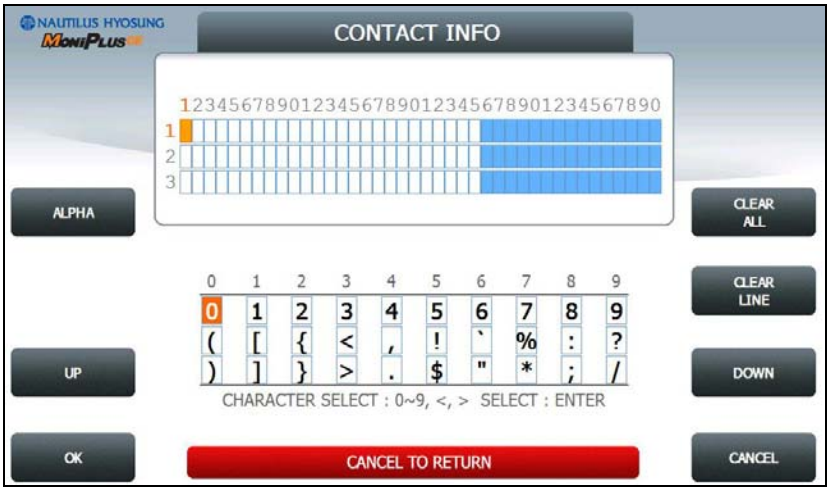
The **ATM OPERATOER FEE MODE** contains the enable/disable of the surcharge warning screen and settings of the surcharge amount and surcharge owner. When the **ATM OPERATOR FEE MODE** is disabled and also if the swiped card data contains BIN number that was entered during installation, the surcharge warning message will not be displayed. When the **ATM OPERATOR FEE MODE** is enabled, the **OWNER, WITHDRAWAL AMOUNT**, **BALANCE AMOUNT** and **CONTACT INFO** will be displayed in the surcharge warning screen during transaction..

5.7.5.1 ATM OPERATOR FEE OWNER

The **ATM OPERATOR FEE OWNER** function is used to edit the owner.
Please input the surcharge owner in the field and select **OK** button. If it is saved successfully, **"OPERATION SUCCESSFUL!"** will be displayed on the screen.

5.7.5.2 CONTACT INFO

The **CONTACT INFO** function is used to edit the surcharge contact Information at surcharge warning screen and on receipt. Please input the surcharge contact Information in the field and select **OK** button. If it is saved successfully, "**OPERATION SUCCESSFUL!**" will be displayed.



5.7.6. ADVERTISEMENT

ADVERTISEMENT function provides **COUPON, WELCOIME ADVERTISEMENT** and **TRANSACTION ADVERTISEMENT.** Please press each button on this menu to go to next screen.

5.7.6.1 COUPON

Please press **COUPON** button, **COUPON SETTING** screen will be displayed as below. **COUPON** supports 2line 40column

5.7.6.1.1 COUPON SETTING

Please press each button on this menu to go to next screen

.

5.7.6.1.1.2 COUPON n.

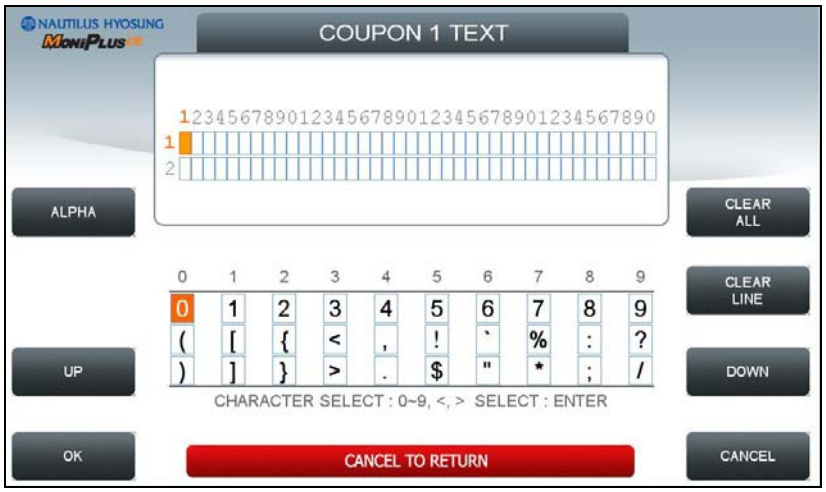
Please press **COUPON n EN/DISABLE** button to set up **COUPON n**,

Please press **COUPON n TEXT** button on this menu to go to next screen.

Please press **AWARD COUPON EN/DISABLE** button to set up **AWARD COUPON**

5.7.6.1.1.3 COUPON n. TEXT

The **COUPON n TEXT** function is used to edit the coupon n text. Please input the welcome message in the field and select **OK** button. If it is saved successfully, **"OPERATION SUCCESSFUL!"** will be displayed.



5.7.6.2 WELCOME ADVERTISEMENT

WELCOME ADVERTISEMENT function provides **SIX** different screens. If you press the **TIMER** button, you can change the advertisement display timer, which means the interval of exchanging a current advertisement for the other one in an idle state exactly. And the range of it should be between 5 and 30 seconds in welcome screen. Please press each button on this menu to go to the next screen.

The welcome advertisement image can be updated by SW Update with JPG format images. For more information, please refer to **"Image File Update Guide**" document.

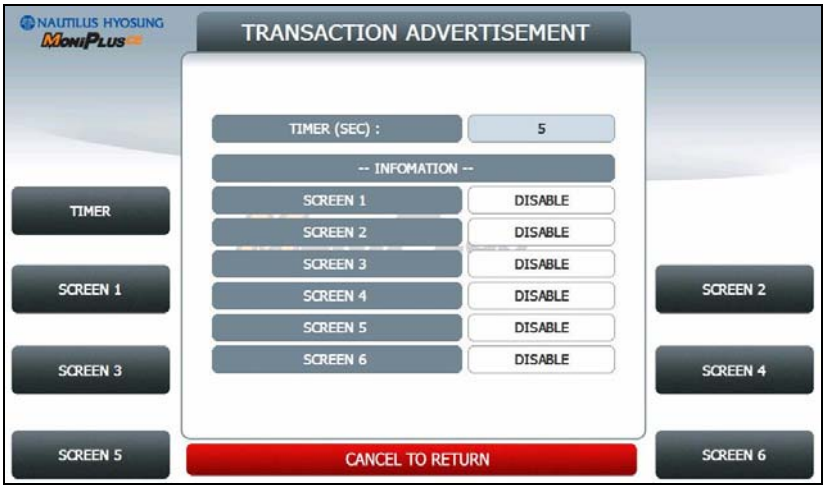
5.7.6.2.1 SCREEN n.

Please press **SCREEN n EN/DISABLE** button to set up SCREEN n,

5.7.6.3 TRANSACTION ADVERTISEMENT

TRANSACTION ADVERTISEMENT function provides **SIX** different screens.

If you press the **TIMER** button, you can change the advertisement display timer, which means the interval of exchanging a current advertisement for the other one in a transaction state exactly. And the range of it should be between 5 and 30 seconds in a transaction screen. Please press each button on this menu to go to next screen.



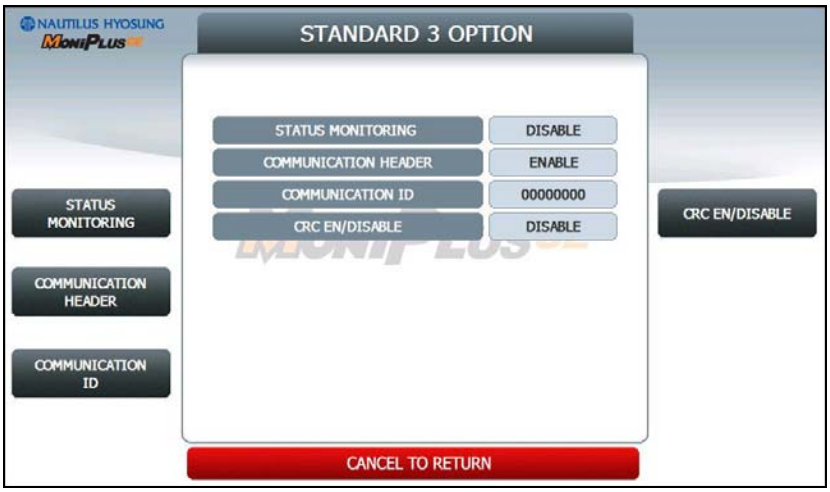
The transaction advertisement image can be updated by SW Update with JPG format images. For more information, please refer to **"Image File Update Guide**" document.

5.7.6.3.1 SCREEN n.

Please press **SCREEN n EN/DISABLE** button to set up SCREEN n,

5.7.7. STANDARD 3 OPTION

STANDARD 3 OPTION contains **STATUS MONITORING EN/DISABLE**, **COMMUNICATION HEADER**, **COMMUNICATION ID** and **CRC EN/DISABLE**.In case of **COMMUNICATION HEADER** is enabled, **COMMUNICATION ID** option will be available.



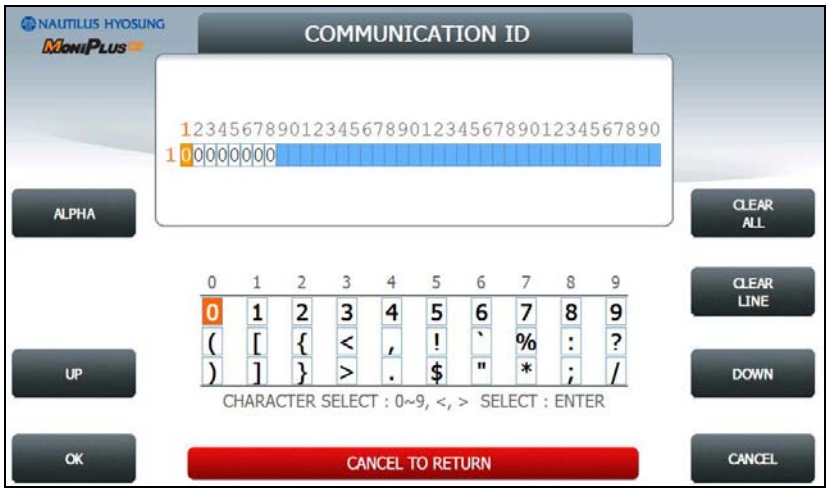
STANDARD 3 OPTION function is used to get the additional information when Triton message is selected.

1) **STATUS MONITORING** function is for deciding whether status monitoring field in message is sent to a host or not.
2) **COMMUNICATION HEADER** function is for deciding whether communication header in message is included or not during transferring a message to a host.
3) **COMMUNICATION ID** function is able to save the **COMMUNICATION ID**.
   The **COMMUNICATION ID** has to be set if using the **COMMUNICATION HEADER** function.
4) **CRC(Cyclic Redundancy Checking) OPTION** function is for setting up whether CRC will be used or not during communication with a host.

5.7.7.1 COMMUNICATION ID

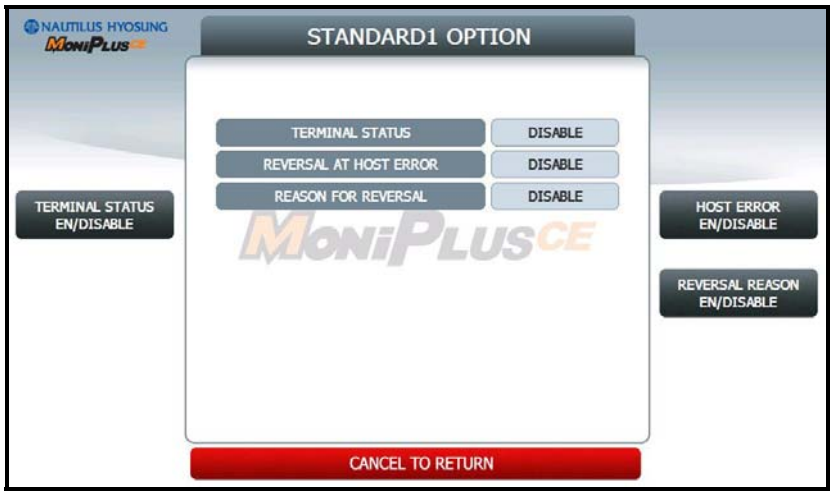
The **COMMUNICATION ID** function is used to edit the communication id.

Please input the communication id in the field and select **OK** button. If it is saved successfully, **"OPERATION SUCCESSFUL!"** will be displayed.



5.7.8. STANDARD 1 OPTION

STANDARD 1 OPTION contains **TERMINAL STATUS EN/DISABLE**, **HOST ERROR EN/DISABLE** and **REVERSAL REASON EN/DISABLE**.



STANDARD 1 OPTION function is used to get the additional information when Triton message is selected.

1) **TERMINAL STATUS** function is for deciding whether terminal status field in message is sent to a host or not.
2) **HOST ERROR** function is for deciding whether reversal message is sent to a host or not when a communication error occurs.
3) **REVERSAL REASON** function is for deciding whether reason code(“n”) is sent to a host or not when a reversal message is sent to the host.

5.7.9. SELECT PROCESSOR

SELECTHOST menu contains **COMMUNICATION, MESSAGE FORMAT, EOT/ENQ OPTION, TCP/IP TYPE and REVERSAL RETRY COUNT**

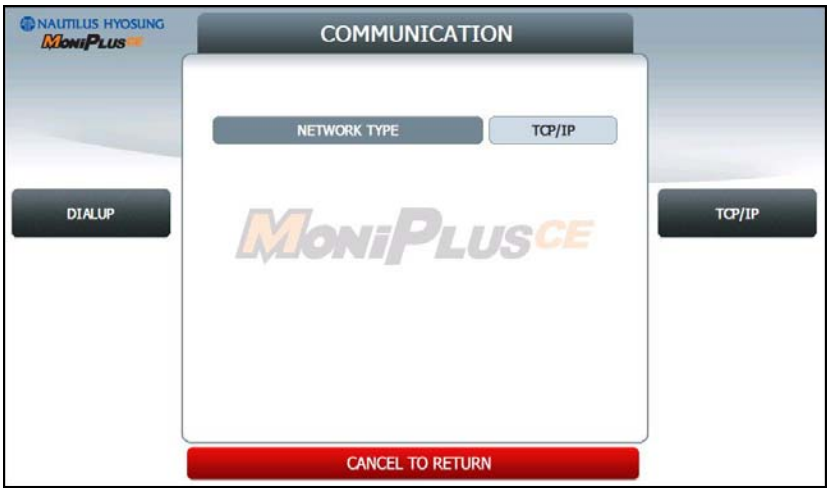
NOTE:

1) **EOT / ENQ OPTION** is displayed only if the Network is Dial up or TCP/IP Type is VISA FRAMED

2) **TCP/IP TYPE** is displayed only if Network is TCP/IP

5.7.9.1 COMMUNICATION

This is for setting up a type of line to communicate with a host. Select **DIALUP** or **TCP/IP**. In case of setting up DIALUP, communicate with a host using a modem. And in case of setting up TCP/IP, communicate with a host using LAN.



NOTE: In case of selecting “IN SERVICE” on OP MAIN, if the value is different from the original one when entering in OP mode, exit from OP and execute rebooting.

5.7.9.2 EOT/ENQ OPTION

EOT/ENQ OPTION contains GENERAL, EOT OPTIONAL, NO EOT REQUIRED and **NO ENQ REQUIRED** functions. You can select one of these options

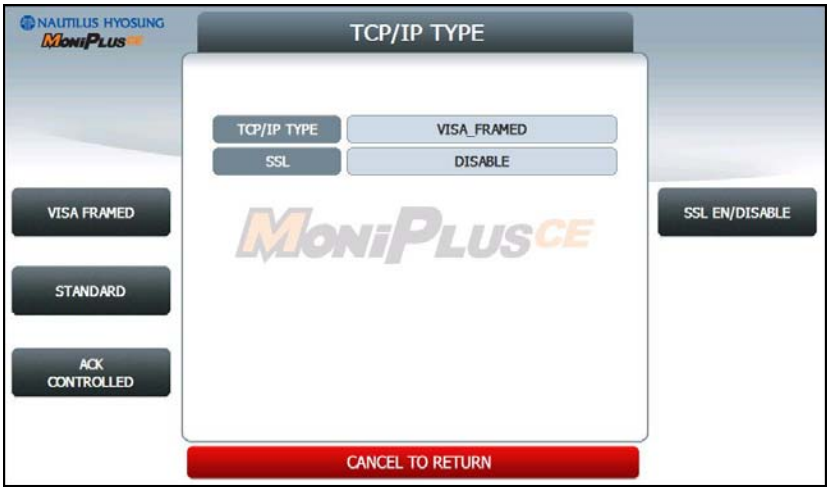
5.7.9.3 MESSAGE FORMAT

This menu sets up a message format to use during communicating with a host. You can select one of message types to communicate with data processing company or a bank in this menu (**STANDARD1, STANDARD2, STANDARD3** and **EPS**). If **STANDARD3** is selected, **STANDARD3 OPTION** button will be displayed on the **CUSTOMER SETUP** Screen.

STANDARD 1 is the HYOSUNG message type and **STANDARD 2** is the CSP200 message type, **STANDARD 3** is the Triton 9600 message type and **EPS** is the extended CSP200 message type.

5.7.9.4 TCP/IP TYPE

In **TCP/IP** supporting case, Hyosung application, MoniPlusCE, provides some options to be used as a security method and as a protocol, even at the different category, when communicating with a host. In this menu, you can change **TCP/IP TYPE** and can decide whether 'ENABLE' or 'DISABLE' **SSL OPTION**. There are three kinds of **TCP/IP** type in this TCP/IP COMMUNICATION menu.
(STANDARD TCP/IP, VISA FRAMED TCP/IP, and ACK CONTROLLED TCP/IP).



5.7.9.5 REVERSAL RETRY COUNT

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

5.8 SYSTEM SETUP

This system setup menu contains **DATE & TIME, CHANGE PASSWORD, SPEAKER VOLUME, MODEM PARAMETERS, TERMINAL IP, DEVICE SETUP** and **SYSTEM CONTROL**.

Please press each button on this menu to go to next screen. To go back to the previous screen, press the **CANCEL** key in pinpad.

NOTE:

1) **TERMINAL IP** is displayed only if the Network is TCP/IP.

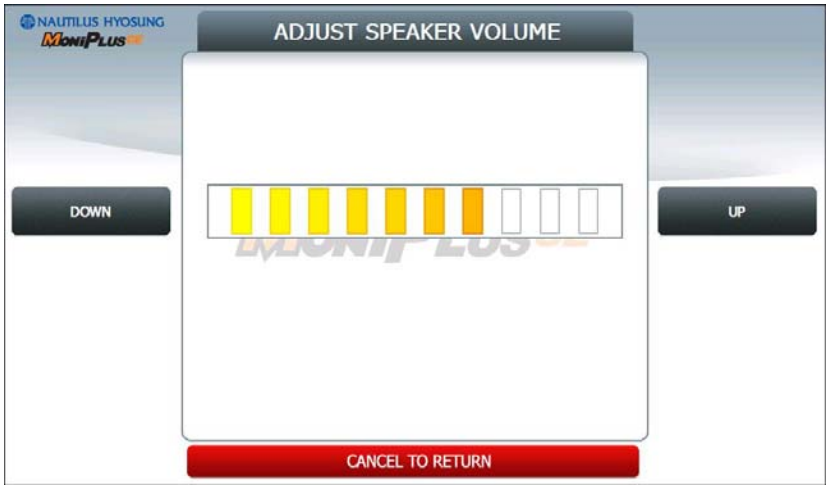
2) **MODEM PARAMETERS** is displayed only if Network is Dial up.

5.8.1 DATE & TIME

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

5.8.2 SPEAKER VOLUME

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



5.8.3 TERMINAL IP

TERMINAL IP menu contains **DHCP EN/DISABLE, IP ADDRESS, SUBNET MASK, GATEWAY** and **DNS** buttons. If you press **DHCP EN/DISABLE,** button will change DHCP status, ENABLE to DISABLE, or DISABLE to ENABLE. In case of DHCP is disabled, **IP ADDRESS**, **SUBNET MASK**, **GATEWAY** and **DNS** buttons will be displayed.

If **DHCP** value is **ENABLE**, ATM uses **DYNAMIC IP** to connect to a host. Otherwise, ATM uses STATIC IP. If you change DHCP value from ENABLE to DISABLE, you should set up STATIC IP again use **IP ADDRESS, SUBNET MASK, GATEWAY** and **DNS** buttons.

It is able to input up to 15 units such as XXX.XXX.XXX.XXX

5.8.4 CHANGE PASSWORD

You can change PASSWORD. Depending on authority, there are three passwords **OPERATOR PASSWORD, SERVICE PASSWORD** and **MASTER PASSWORD**.

5.8.4.1 OPERATOR PASSWORD

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

5.8.4.2 SERVICE PASSWORD

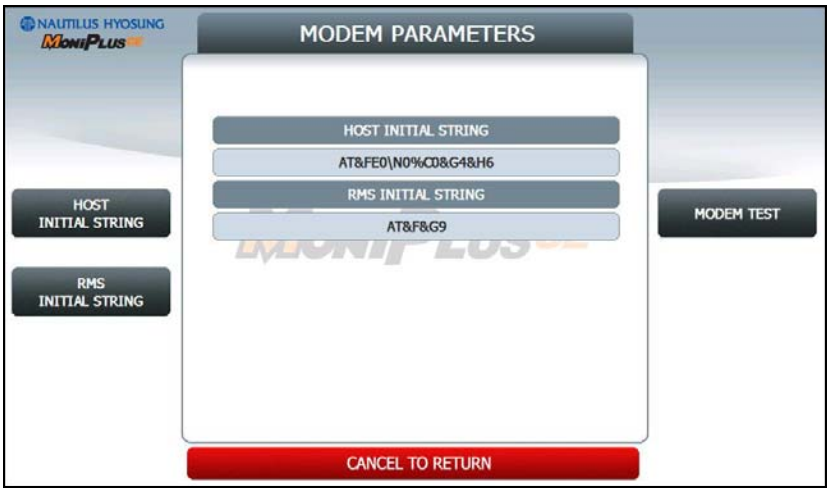
This menu enables you to change the current service password as a new one. To change the current password, you should input the proper one in current password field demonstrated as below. The factory default value of service password is "222222".

5.8.4.3 MASTER PASSWORD

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

5.8.5 MODEM PARAMETERS

This MODEM PARAMETERS menu contains **HOST INITIAL STRING, RMS INITIAL STRING** and **MODEM TEST**.



1) INITIAL STRINGs

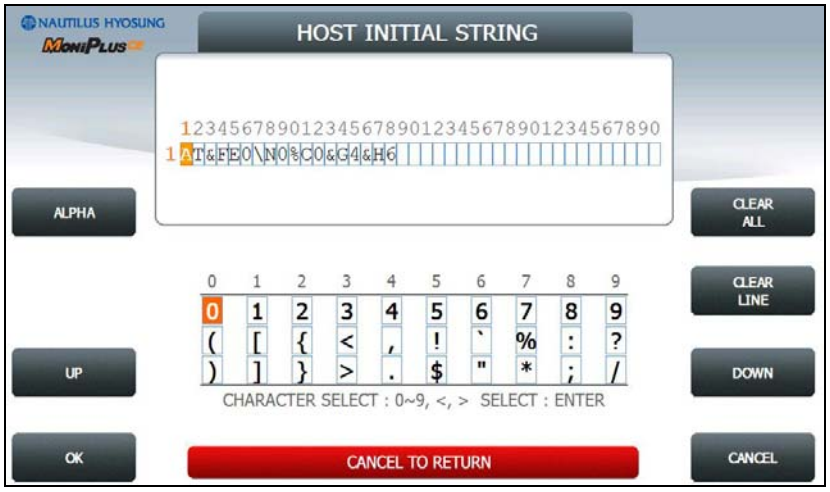
The **HOST INITIAL STRING** and **RMS INITIAL STRING** functions are used to edit the modem initial string when the special circumstance is required by a nonstandard modem initial string. Before editing the initial string, consult with service personnel.

2) MODEM TEST

The **MODEM TEST** function is used to perform the modem reset test. When an error occurs, contact the service personnel.

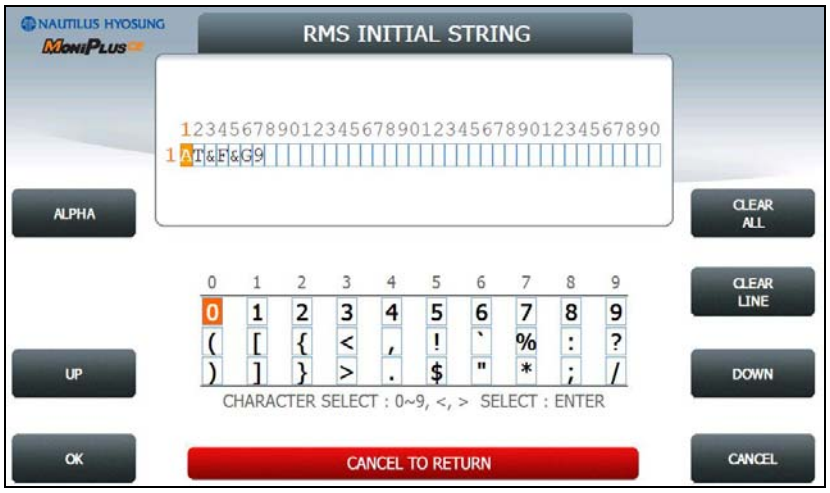
5.8.5.1 HOST INITIAL STRING

The **HOST INITIAL STRING** function is used to edit the host initial string. Please input the host initial string in the field as shown as below and select **OK** button. If it is saved successfully**, "OPERATION SUCCESSFUL!"** will be displayed.



5.8.5.2 RMS INITIAL STRING

The **RMS INITIAL STRING** function is for editing the RMS initial string. Please input the RMS initial string in the field as shown as below and select **OK** button. If it is saved successfully, **"OPERATION SUCCESSFUL!"** will be displayed.



5.8.7 DEVICE SETUP

This **DEVICE SETUP** menu contains **CDU SETUP.** Please press the **CDU SETUP** button on this menu to go to next screen.

NOTE: When you change CDU Setup Information, contact the service personnel.

5.8.7.1 CDU SETUP

This **CDU SETUP** menu contains **COUNTRY, CDU TYPE, CASSETTE VOLUME and EXECUTE.**
Please press each button on this menu to operate the related function..

Press the buttons **COUNTRY**, **CDU TYPE** and **CASSETTE VOLUME.** Then the CDU SETUP INFORMATION will be changed.
If you changed the information correctly, press the **EXECUTE** button to **APPLY**.

1) COUNTRY

USA	CANADA	MEXICO	AUSTRALIA	NEW ZEALAND	OTHER

2) CDU TYPE

00	01	03	0b
41	43	47	80
81			

3) CASSETTE VOLUME

1 CASSETTE	2 CASSETTE	3 CASSETTE	4 CASSETTE

5.8.8 SYSTEM CONTROL

This **SYSTEM CONTROL** menu contains **SOFTWARE UPDATE, REBOOT, BACKUP ALL JOURNAL TO USB, BACKUP JOURNAL BY DATE TO USB, BACKUP LOG TO USB, BACKUP NVRAM, RESTORE NVRAM** and **CLEAR NVRAM.**

Please press each button on this menu to go to next screen or to operate the related function. And if you want to go back to the previous screen, press the **CANCEL** key in pinpad.

You can back up a various kinds of journal data and log data you want in this menu. Please make sure that a USB drive is connected into the USB slot before pressing the button. When **BACKUP ALL JOURNALS TO USB, BACKUP JOURNAL BY DATE TO USB** or **BACKUP LOG TO USB** button is selected, this data will be sent into USB flash drive. When **SOFTWARE UPDATE** is entered, it will exchange the current screen as shown as above for the screen of **SOFTWARE UPDATE**. This is because Software Update functionality is supported at **SYSTEM CONTROL** menu. When **SYSTEM CONTROL** is submitted, the files in USB flash drive will be copied to the ATM.

Terminal configuration data is saved at NVRAM, so **BACKUP NVRAM** and **RESTORE NVRAM** button is to use the backup and restore terminal configurations.

NOTE:

1) How to update the software, please refer to the Appendix.

2) BACKUP NVRAM and RESTORE NVRAM Button is only displayed when a security door is opened.

5.8.8.1 REBOOT

If you press the **YES** button, the ATM will restart.

5.8.8.2 BACKUP JOURNAL BY DATE TO USB

Input the **START DATE** and **END DATE** using **FROM** and **TO** buttons**.** And press the **SEARCH** button. Then, the journal date between START DATE and END DATE will be sent to USB drive.

5.8.8.3 CLEAR NVRAM

To clear NVRAM on the NH-2700, log in the Operator Function Main Menu with the Master Password. Then enter **SYSTEM SETUP, SYSTEM CONTROL and CLEAR NVRAM** in sequence.

1) CLEAR ALL

This will delete all programmed parameters and make all setting information (including passwords) to the default settings. This does NOT include the master keys which are stored only in EPP.

2) CLEAR SETTING

This will delete all programmed parameters and make all information (including passwords) to the default settings. This does NOT include the master keys which are stored only in EPP, denomination, and journal data.

3) CLEAR JOURNAL

This will delete all journal data permanently

4) CLEAR TRANS. SEQUENCE NO.

This function will reset the journal sequence number to <0000>. This may be useful if you switch processing or switch Terminal ID numbers and want to keep new records.

5) CLEAR LOG

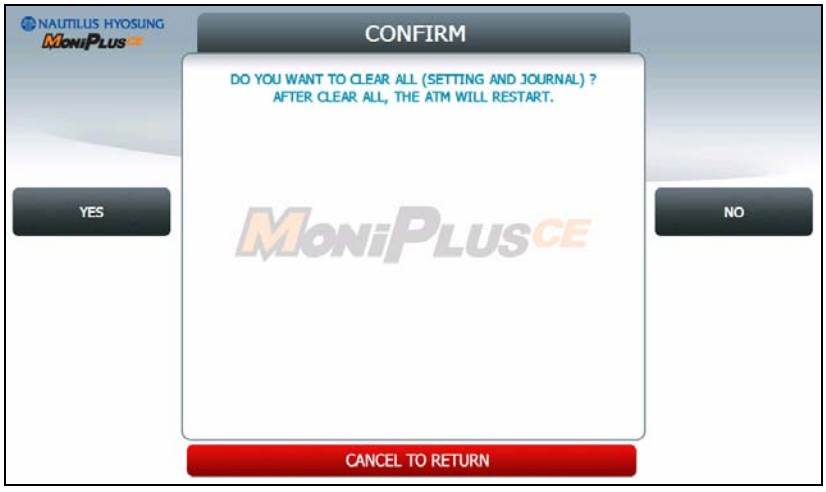
This will delete all logs permanently

NOTE: Be careful when using these features (NVRAM clearing) – The initialized data can NOT be recovered.

5.8.8.4 COUNTRY SETUP (newly added from this version)

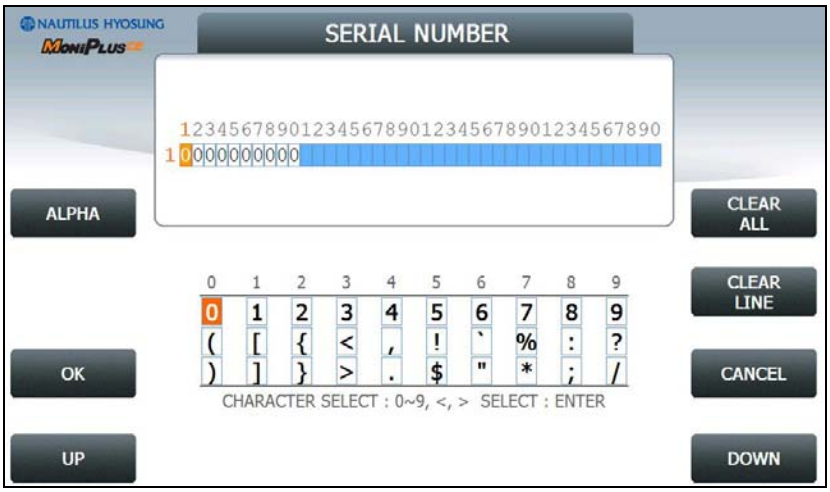
If you want to clear NVRAM, you will see the screen for selecting Australia or New Zealand. For example, if you press the “Australia” key, after all NVRAM data is cleared, the program to be installed on would be suitable for Australia. To be specific, the notes of Australia have their own properties compared with ones of the other countries. And the kinds of transactions, accounts are different from the other counties also. So after choosing “Australia”, information needed to initialize ATM would be suitable for the financial environment of Australia. The screen for selecting “Australia” or “New Zealand” is demonstrated as below.

After selecting “Australia” or “New Zealand”, you will seee the screen to confirm whether NVRAM will be cleared and at the same time the program to be installed on will be suitable for the enviornment of “Australia” or “New Zealand” respectively or not. This screen is demonstrated as below.



5.8.9 SERIAL NUMBER

The SERIAL NUMBER function is used to insert the ATM machine number for RMS.



5.9 HOST SETUP

[DIALUP] This host setup menu contains **KEY MANAGEMENT**, **TELEPHONE NUMBER**, **TERMINAL ID**, **HEALTH CHECK MESSAGE**, **REMOTE MONITOR**, **ROUTING ID** and **AUTO DAY TOTAL**
[TCP/IP] This host setup menu contains **KEY MANAGEMENT**, **HOST ADDRESS**, **TERMINAL ID**, **HEALTH CHECK MESSAGE**, **REMOTE MONITOR**, **ROUTING ID** and **AUTO DAY TOTAL**.
Pressing function key beside menu button goes to next screen. To go back to the previous screen, press the **CANCEL** key in the pinpad.

[DIALUP]

[TCP/IP]

NOTE: **ROUTING ID** is displayed only if the message format is STANDARD1, 2 and EPS

5.9.1 KEY MANAGEMENT

START SCREEN

1) Log in by entering the 1st password to execute program.
   (Default password is '000000', 6-digit number.)
2) Log in by entering the 2nd password to execute program.
   (Default password is '000000', 6-digit number.)
3) If you enter both of passwords correctly, the screen would be exchanged for the next one demonstrated in the next page..
4) If a wrong password is injected, you must wait for 30 seconds. So please be prudent.
5) The key 'clear' on EPP is recognized not as erasing a previous number but as being used like same as 0~9. So be careful not to press 'clear' key for erasing.

And from this point to the end of the explanation about 'Master Key Setting', I will call the pinpad

5.9.1.1 KEY MANAGEMENT

1) **Key Mode** - Change key mode of EPP
2) **Edit Key** – Enter the master key into EPP
3) **Change Password** - Change password to enter key manager program
4) **Check Key** - Check whether keys are properly injected into EPP or not
5) **Remote Key Info** - Show the information about keys for remote key downloading function
6) **Set EPP State** - Set state of EPP to ‘Installation State’ or ‘Authorized Removal State’. The specific explanation of each state would be provided at the part of ‘Set EPP state’

5.9.1.2 OVERVIEW OF KEY INSTALLATION.

The procedure of installing Master Key may be complex at first. However, if you comprehend the logical reason why it should be, it is so easy to keep it up. Now Let`s start the overview.

1) The first thing you have to do first is to enter 'Key Management' mode (the default password is 000000/000000, 6-digit number). And modify Key Mode suitable for your system just pressing the 'KEY MODE' key.
2) And then, the next thing you have to do next is to press 'CHANGE PASSWORD' key. This password is different from the one used later to log in 'Set EPP state'. And after saving a password, for logging in 'Key management' mode again, press 'Clear' key twice on EPP to exit 'Key management' mode. Without this procedure, you would not be able to do next one.
3) Now, you should log in 'Key management' again. The thing you have to keep in mind in logging in is that you had changed a password for entering 'Key Management' mode. So you must use a newly changed password.
4) Now, you can see the screen as above again. And the next thing you have to do is just pressing 'SET EPP STATE' key to enter set EPP state mode. And then enter default ID and password. (The default ID/password is 000000/000000, 6-digit number.)
5) Now, in this procedure you must exchange EPP current mode for the 'installation' mode. But before you change the EPP mode, you should make the pair of account ID and corresponding password granted to the men(or women) having the authority to access a 'Master Key'. So you must press 'ADD ID' key.

6) After adding more than two IDs and passwords, now you are able to access the change state mode. After entering the change state mode, you must exchange EPP current mode for 'Installation' just pressing 'CHANGE STATE' key. You are able to insert a 'Master Key only in this mode later.
7) The important thing after changing a EPP state is that you must exit from Key Management. So press 'Clear' key twice and then log in 'Key Management' mode again.
8) Now, press the 'EDIT KEY' key. And insert a bisected Master Key. The reason why more than two IDs and passwords are needed in 'ADD ID' procedure is that the Master Key is bisected for security.

Now, all of the Master Key installation has been finished. This manual will show you the details about the screens and function keys. Let`s start a specific installation. And the important procedure told above is summarized as below.

Step no.1	Press 'Key Mode' for exchanging the protocol suitable for encrypting.
Step no.2	'Change Password' for logging in 'Key Management' Mode.
Step no.3	'ADD ID' for Exchange EPP state In 'SET EPP STATE'.
Step no.4	'CHANGE STATE' for 'Installation' In 'SET EPP STATE'.
Step no.5	Exit from 'Key Management' Mode by pressing 'Cancel' Twice.
Step no.6	Log in 'Key Management' Mode again.
Step no.7	Press 'Edit Key'
Step no.8	Insert bisected 'Master Key' twice to make perfect.

The Summary of Master Key installation

5.9.1.3 KEY MANAGEMENT MODE.

Key Management Main Screen

1) This main screen will display current key mode on the middle of screen.
2) If you want to change Key Mode, Press ‘Key Mode’ button, Then, the key mode text box in the middle of screen will change to the other one.

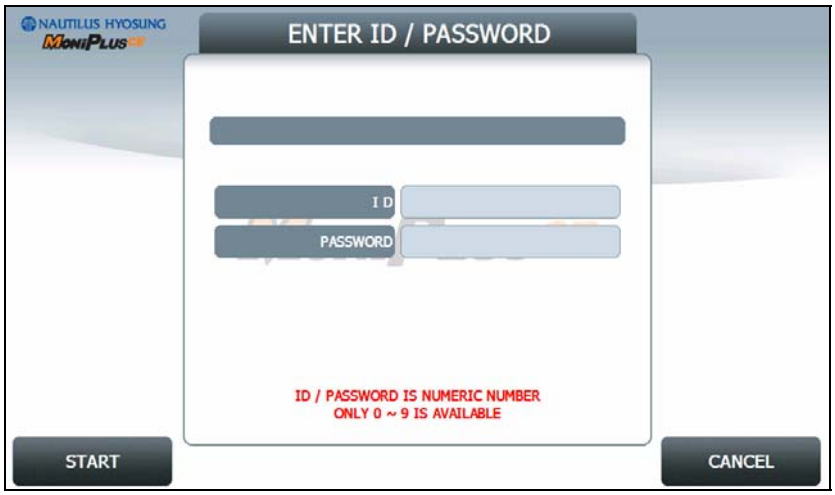
5.9.1.4 CHANGE THE PASSWORDS USED TO LOG IN KEYMANAGEMENT SCREEN.

Change Password Screen

If you want to change two passwords for executing program, press ‘Change password’ button in the main screen. And press ‘Password1’ and “Password2” button each to change the password.

1) Press ‘Password1’ or ‘Password2’ button.
2) Enter a new 6-digit number password by using customer keyboard (EPP).
3) Press ‘Password1’ or ‘Password2’ button again to confirm a password.
4) Enter a new 6-digit number password by using customer keyboard (EPP) again. If the password is correct, the password will be changed.

5.9.1.5 SET EPP STATE SCREEN



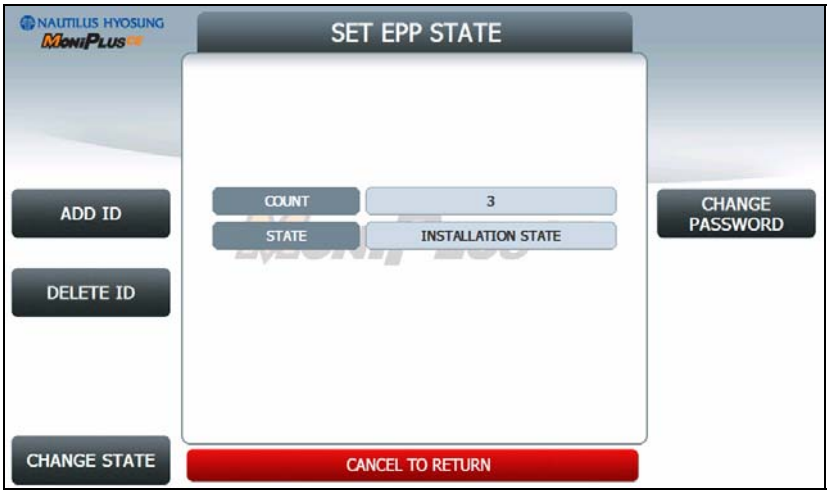
Set EPP State Log in Screen

After changing two passwords in 'Key Management' Mode, you are able to add ID by just pressing 'SET EPP STATE' in 'Key Management' Mode. The default password to enter 'SET EPP STATE' mode is set up at first as same as below.

	1st ID and password	2nd ID and password
Default ID	000000(6-digit number)	000000(6-digit number)
Default Password	000000(6-digit number)	000000(6-digit number)

And after inserting all IDs and passwords, you will face the screen as above. The purpose of this state is to make the EPP state able to accept the 'Master Key'. Now let`s begin.

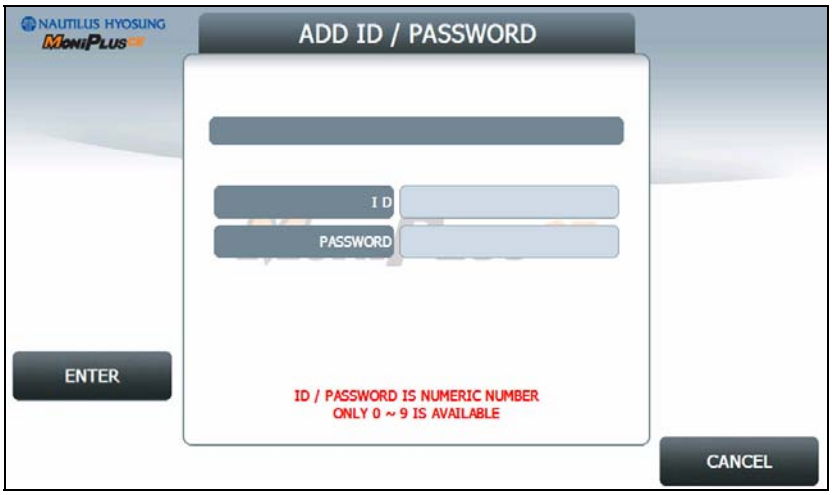
1) This screen shows an ID count and the current state of EPP. 'Delete ID' and 'Set State' buttons are disabled until the 2nd ID and password are entered.
2) Press 'Add ID' button to add an ID and a corresponding password.
3) Then the screen of next page will appear.



Set EPP State Main Screen

If a user makes a pair of IDs and passwords, the count number in the middle of screen would be as same as the number of adding ID. Most of user may be able to see the count number as '2'. And the displayed state may be 'initialization state'.

5.9.1.6 ADD ID AND PASSWORD.

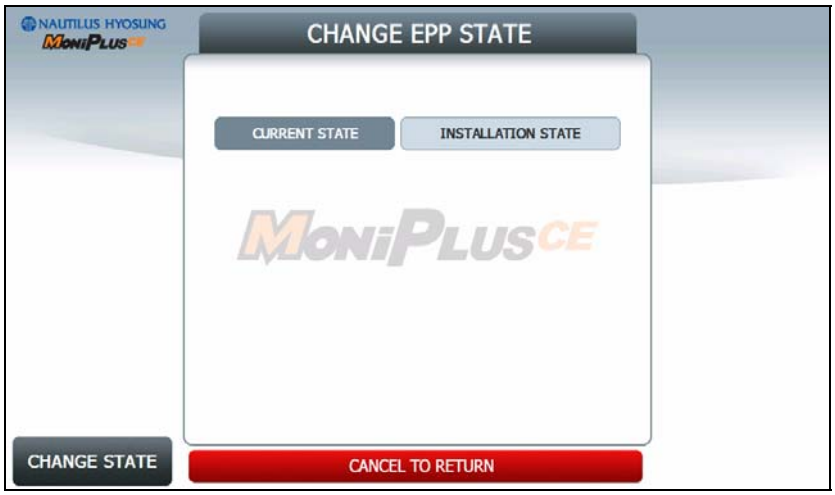


Add ID and Password Screen

The purpose of adding a pair of ID and password is for inserting IDs able to insert ‘Master Key’. Now let`s begin.

1) Press ‘Start’ button when a Host is willing to add more than two pairs of an ID and a corresponding password used to verify his (or her) authority for inserting a bisected Master Key.
2) Enter the 1st ID and password consisting of 6 sized decimal numbers by pressing EPP numeric keys. Only 0 ~ 9 keys are available.
3) Press ‘Verify’ button to verify the entered ID and password.
4) Do the sequence 2) and 3) again for adding the 2nd ID and a password.
5) If a Host wants to add the 3rd or more IDs, repeat the sequences as above.
6) If adding IDs and passwords is successful, “Adding new ID and password is success” message will appear.
7) Press ‘Cancel’ button on the EPP(pinpad) to exit from this screen.

5.9.1.7 CHANGE EPP STATE.



Change EPP State Screen

After exiting from 'ADD ID' mode, you will come back again into 'SET EPP STATE' mode. It is demonstrated as above. Now you are able to set EPP state up. Let`s begin.

1) If ID and password are entered successfully, you can check entered ID count
   ※ Caution : If limited time is passed after entering ID and password, ID count cannot display exact ID count. In this case, ID count will display 0 value. So you should Exit from this screen and re-enter ID and password to check exact ID count.
2) If ID count is more than 2, 'Delete ID' and 'CHANGE STATE' button would be enabled.
3) If you press 'Change State' button, current EPP state of 'Initialization' would be exchanged for 'Installation'. Only in 'Installation' mode can the EPP accept a Master Key.
4) After exchanging EPP state, you must exit from not only 'SET EPP STATE' mode but also 'Key Management' mode by pressing 'Clear' button on EPP twice.

5.9.1.8 SPECIFIC EXPLANATION OF EPP STATE.

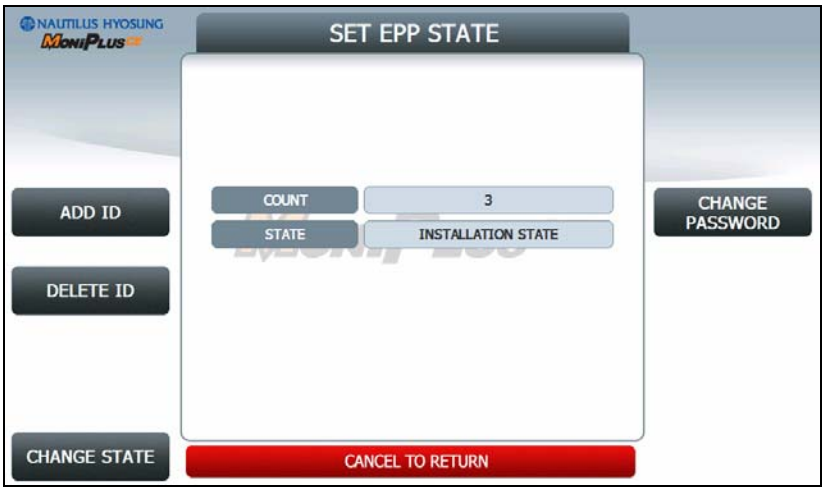


Fig.1.10 Set EPP State Screen

1) This screen will display current state of EPP. Check current state of EPP.
2) If you want to change state, press ‘Change State’ button. If current state is ‘Initialization State’ or ‘Authorized Removal State’, EPP state will be changed to ‘Installation State’. And if current state is ‘Installation State’, EPP state will be changed to ‘Authorized Removal State’.
   ※ Initialization State – EPP cannot execute GET_PIN and GET_PINBLOCK command
   ※ Installation State – EPP can execute every command.
   ※ Authorized Removal State - EPP cannot execute GET_PIN and GET_PINBLOCK command
3) Press ‘Change State’ button one more time to confirm.
4) If changed state is successfully saved, “EXECUTION SUCCESS!” message will be displayed and Current State will be changed into ‘Installation State’.
5) Press ‘Cancel’ button to exit from this screen.

5.9.1.9 LOG IN KEY MANAGEMENT AGAIN.

Start Screen (Enter Password)

1) Log in by entering the 1st password to execute program.
   (Default password had been changed. So you must insert the newly changed password.)
2) Log in by entering the 2nd password to execute program.
   (Default password had been changed. So you must insert the newly changed password.)
3) If you enter both of passwords correctly, program would start as the same as before..
4) If you enter a wrong password, you must wait for 30 seconds. So please be prudent.
5) The key ‘clear’ on EPP is recognized not as erasing a previous number but as being used like same as 0~9. So be careful not to press ‘clear’ key for erasing.

5.9.1.10 EDIT KEY.

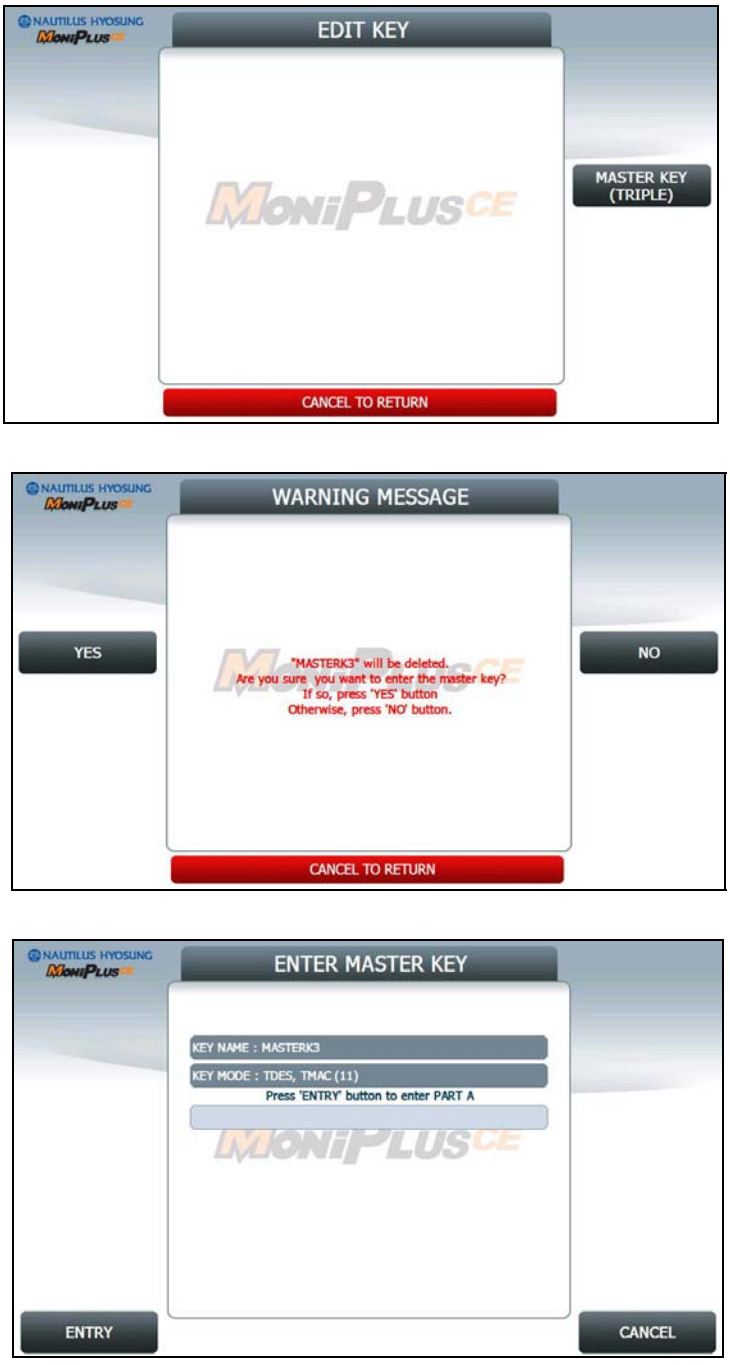


Fig.1.12 Edit Key Screen

If you press ‘Edit Key’ button in main menu, you can see this screen. You can insert master key in this screen.

1) If you want to enter master key, press ‘Master Key(Triple)’ button as shown as the previous page.
2) Press ‘Entry’ button to set secure key entry mode to enter part A of master key.
3) Enter 32 sized hexadecimal keys with EPP to inject part A of master key.
4) Press ‘Import’ button to inject entered key to EPP.
5) Press ‘Entry’ button to set secure key entry mode to inject part B of master key.
6) Enter 32 sized hexadecimal keys with EPP to inject part B of master key.
7) Press ‘Import’ button to inject entered key to EPP.
8) Press ‘cancel‘ button to exit from this screen

※ The mapping table of EPP to inject master keys is shown as below.

☞ Mapping table to inject master 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 1.1 Key Mapping Table

☞ The difference is the position of ‘Enter’, ‘Clear’ and ‘Cancel’ keys.
The memory is efficient that ‘Enter’ key is always mapped to ‘F’ and so on.

5.9.1.11 CHECK KEY.

Use the ‘Check Key’ menu to determine which keys have been installed on. As shown above, there are all the keys in the installed on. Only the index which has been set in the Key Index menu will be used, the other keys are not.

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 on.

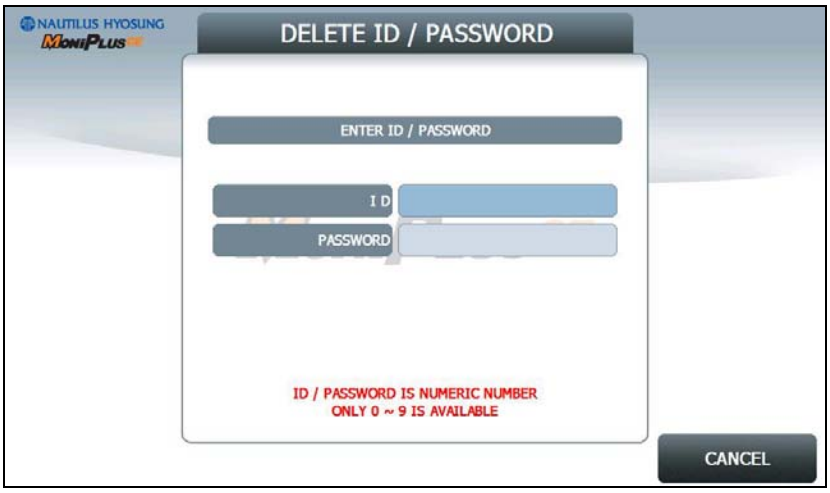
If no key is in the EPP, “There is no key in the EPP” message will be shown on the middle of top.

5.9.1.12 REMOTE KEY INFO.

If you press ‘Remote Key Info’ button in main menu, you can see this screen.

1) The information is about keys for ‘Remote Key Download’ function.
2) CA means certificate authority as VerySign Company.
3) Serial number is the unique number for each Hyosung customer keyboard (EPP) device.
4) EPP is the name of customer keyboard (EPP) device.
5) EPP download public key is the public key for download the firmware

5.9.1.13 DELETE ID



Delete ID screen

1) This screen is for deleting previously entered ID and password of EPP
2) Enter 6-digit ID and password each by pressing EPP numeric keys.
   Only 0 ~ 9 keys are available.
3) Press ‘Exit’ button to exit from this screen.

5.9.2 TELEPHONE NUMBER (Only Dial-Up)

If you press each button on this menu, phone number of host can be input. You can input character, number and special symbol up to 1~20 digit 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 a host is failure (busy, no answer or etc), ATM switches the primary number to the other phone number automatically.

5.9.3 HOST ADDRESS

HOST ADDRESS contains **URL EN/DISABLE**, **HOST ADDRESS 1**, **PORT NUMBER 1**, **HOST ADDRESS 2** and **PORT NUMBER 2**.

Press **PORT NUMBER 1** and **PORT NUMBER 2** buttons, and then the values can be input on this screen. These values can be saved by pressing **ENTER** key

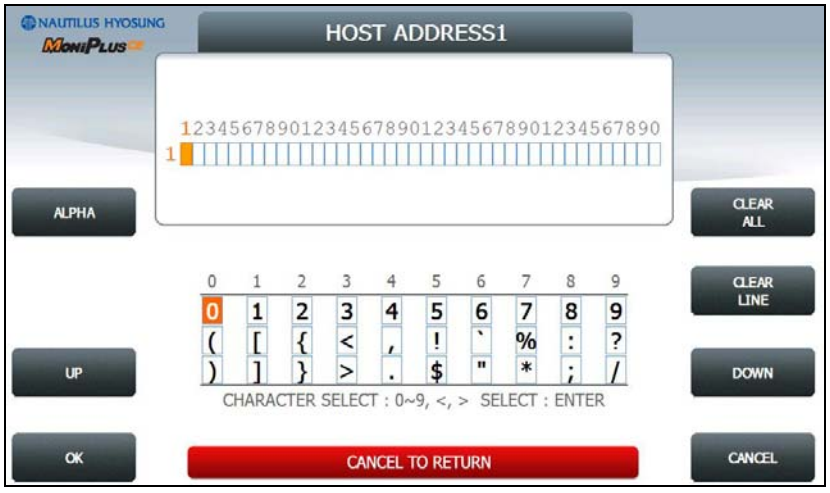
HOST ADDRESS 1 and **HOST ADDRESS 2** buttons go to the next page.

To go back to the previous screen, press the **CANCEL** key in pinpad.

5.9.3.1 HOST ADDRESS 1

The **HOST ADDRESS 1** function is used to edit the host address1.

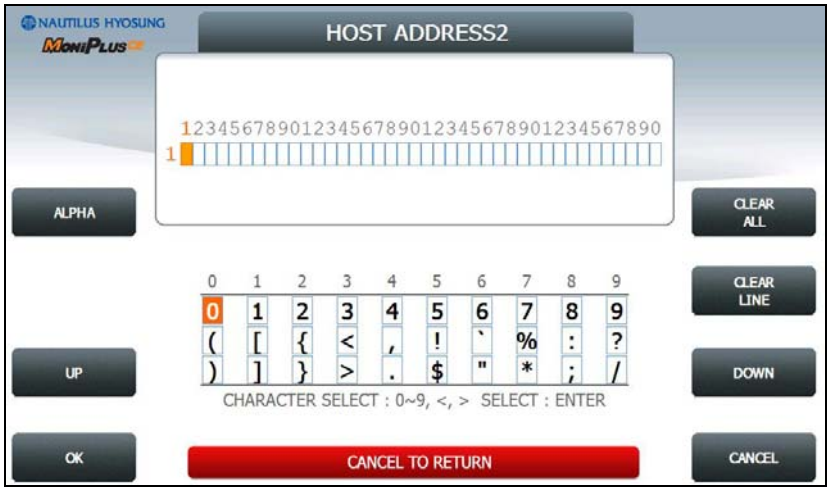
Please input the host address1 in the field and select **OK** button. If it is saved successfully, **"OPERATION SUCCESSFUL!"** will be displays.



5.9.3.2 HOST ADDRESS 2

The **HOST ADDRESS 2** function is used to edit the host address 2.

Please input the host address2 in the field and select **OK** button. If it is saved successfully, **"OPERATION SUCCESSFUL!"** will be displayed.

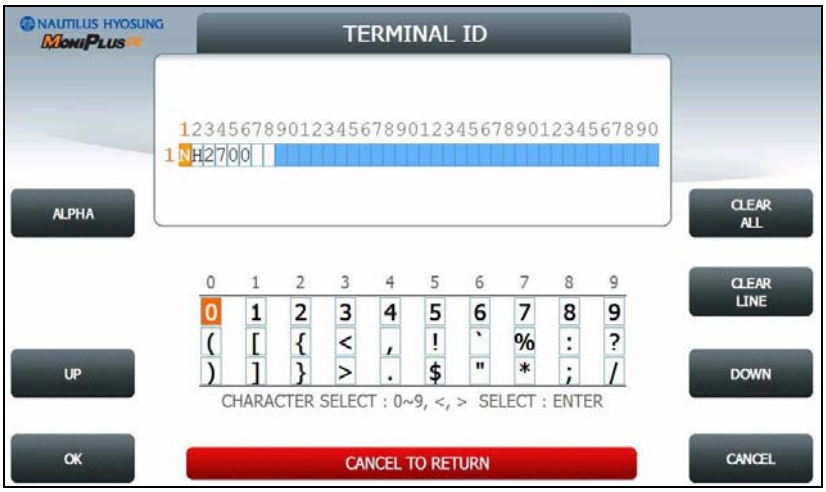


5.9.4 TERMINAL ID

The **TERMINAL ID** function is used to edit the terminal id number of ATM.

Please input the terminal id in the field and select **OK** button. If it is saved successfully, **"OPERATION SUCCESSFUL!"** will be displayed.

A host will identify ATM by looking at terminal ID. Terminal ID will be included in a host message and will be printed on the receipt.



5.9.5 HEALTH CHECK MESSAGE

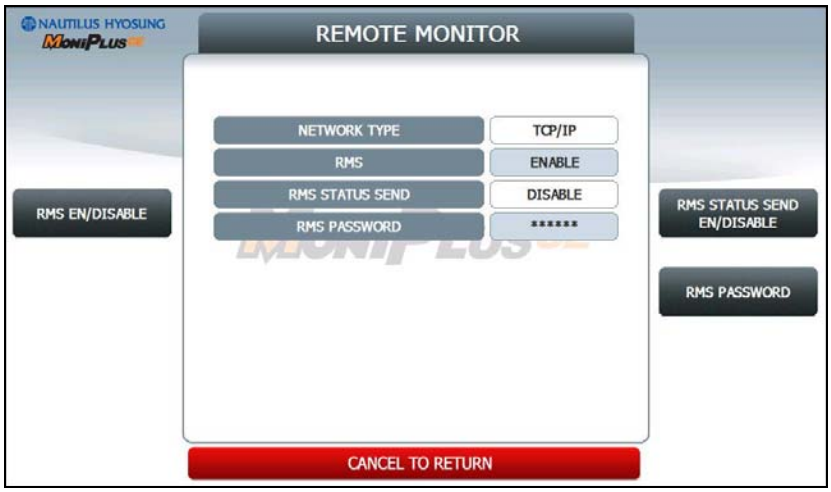
If you press **EN/DISABLE** button, either "ENABLE" or "DISABLE" can be selected. ATM sends its status periodically to the host when **HOST SEND** is set up to “Enable”. The interval is dependent on “**SEND INTERVAL**”.

If you press **SEND INTERVAL** button, the value of SEND INTERVAL can be adjusted. (1 ~ 24). This value is saved by pressing **ENTER** button.

5.9.6 REMOTE MONITOR

- Display which is to set the information for using Remote Management System (RMS)

1) **RMS EN/DISABLE** function is used to connect to the RMS mode to enable or to disable. The default option is “ENABLE”.
2) **RMS STATUS SEND EN/DISABLE** function is used to send the status message to RMS in enable or in disable.
3) The **RMS PASSWORD** function is used to set the RMS password to connect to ATM from RMS.



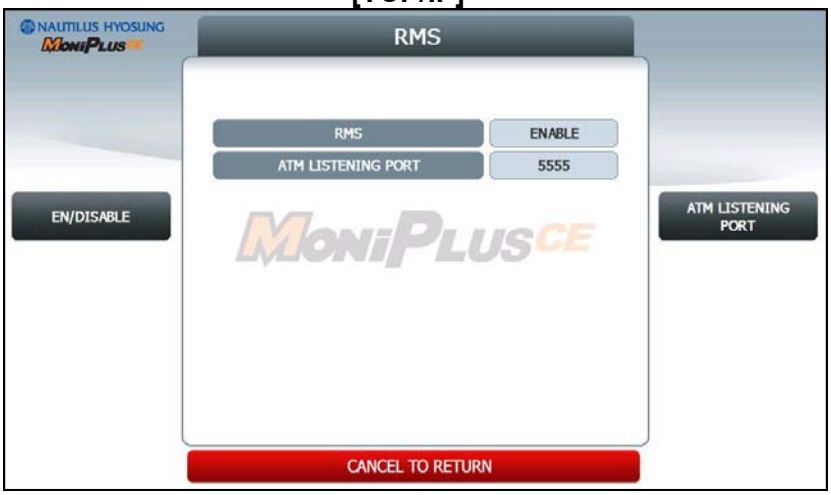
5.9.6.1 RMS EN/DISABLE

[DIALUP] Display which is to be set up in the **RMS RING COUNT** for the reception on standby of the ATM.

[TCP/IP] Display which is to be set up in the **RMS LISTENING PORT** for the reception on standby of the ATM. Default port is 5555

[DIALUP]

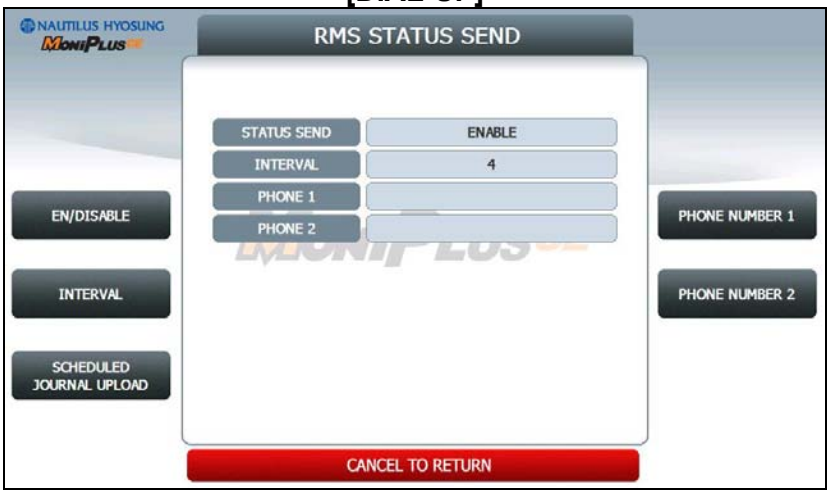
[TCP/IP]



5.9.6.2 RMS STATUS SEND EN/DISABLE

- Display which is to be set up to transfer STATUS to RMS from the ATM.

[DIAL-UP]



1) RMS STATUS SEND

- Display whether RMS STATUS SEND function is ENABLE or DISABLE.
- Set the value using **EN/DISABLE** button.

2) INTERVAL

- Display “RMS STATUS SEND” cycle (unit: hours)
- Set the value using **INTERVAL** button. (Input the number from 1 to 24.)

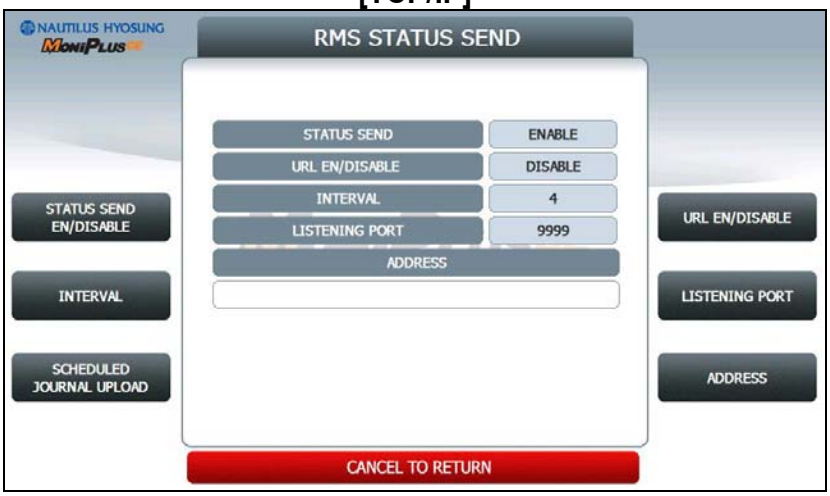
3) PHONE 1, PHONE 2

- Display RMS TELEPHONE NUMBER for RMS COMMUNICATION
- Set the values using **PHONE NUMBER 1** and **PHONE NUMBER 2**. (Input the number up to 20.)

4) SCHEDULED JOURNAL UPLOAD

- Display menu for SCHEDUED JOURNAL UPLOAD Setting.

[TCP/IP]



1) RMS STATUS SEND

- Display whether RMS STATUS SEND function is enabled or not.
- Set the value using **EN/DISABLE** button.

2) RMS INTERVAL

- Display “RMS STATUS SEND” cycle (unit: hours)
- Set the value using **INTERVAL** button. (Input the number from 1 to 24.)

3) URL EN/DISABLE

- Display whether to use URL or IP ADDRESS. If the value is ENABLE, that means the ATM uses URL ADDRESS.
- Set the value using **URL EN/DISABLE** button.

4) RMS ADDRESS

- Display “RMS ADDRESS”.
- Set the value using **RMS ADDRESS** button. If you press this button, It goes to next screen.

5) RMS LISTENNING PORT

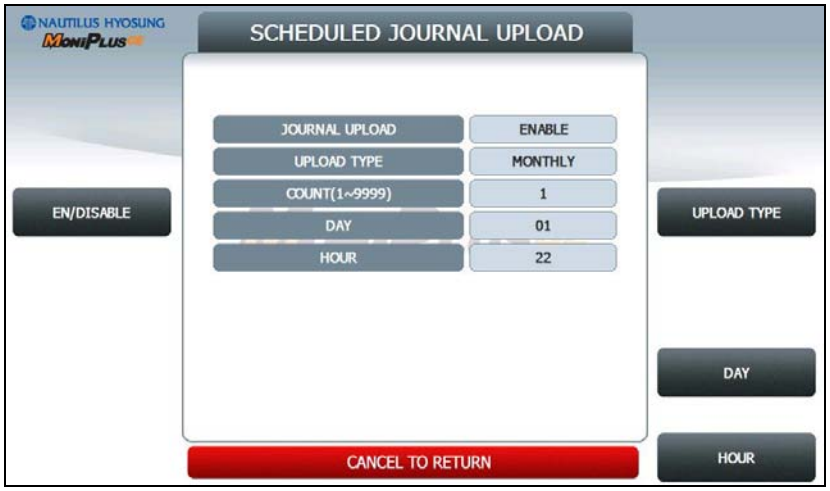
- Display “RMS LISTENING PORT”.
- Set the value using **RMS LISTENING PORT** button. (Input the number from 0 to 65535)
- Default port is 9999

6) SCHEDULED JOURNAL UPLOAD

- Display menu for SCHEDUED JOURNAL UPLOAD Setting.

5.9.6.2.1 SCHEDULED JOURNAL UPLOAD

- Display which is to set the function to upload journal to RMS from the ATM automatically



1) EN/DISABLE
 - Display whether SCHEDULED JOURNAL UPLOAD function is ENABLE or DISABLE.
 - Set the value using **EN/DISABLE** button.

2) UPLOAD TYPE
 - Display “UPLOLAD TYPE” for upload condition
 - Set the value using **UPLOAD TYPE** button. (MONTHLY, DAILY or COUNT.)

3) COUNT
 - Display COUNT for upload condition in case UPLOAD TYPE is COUNT
 - Set the values using **COUNT** button. (Input the number from 1 to 9999.)

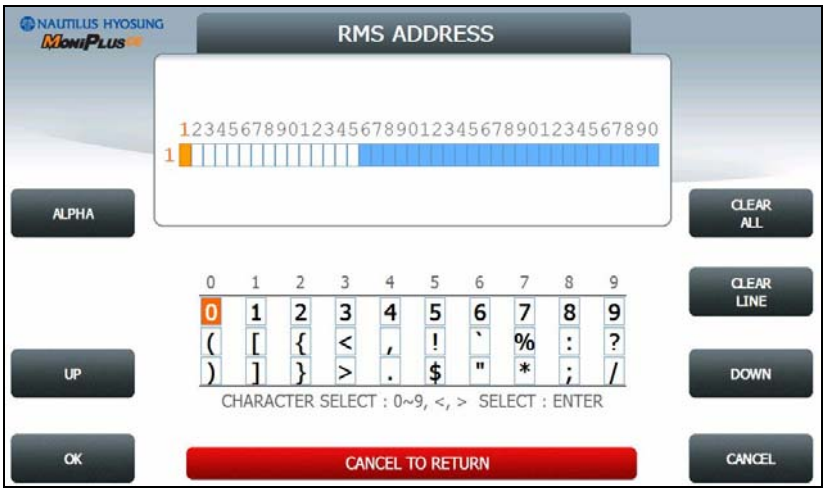
4) DAY
 - Display DAY for upload condition in case UPLOAD TYPE is MONTHLY
 - Set the values using **DAY** button. (Input the number from 1 to 31.)

4) HOUR
 - Display HOUR for upload condition in case UPLOAD TYPE is MONTHLY and DAILY
 - Set the values using **HOUR** button. (Input the number from 0 to 23.)

5.9.6.2.1 RMS ADDRESS

The **RMS ADDRESS** function is used to edit the RMS address.

Please input the RMS address in the field and select **OK** button. If it is saved successfully, **"OPERATION SUCCESSFUL!"** will be displayed.

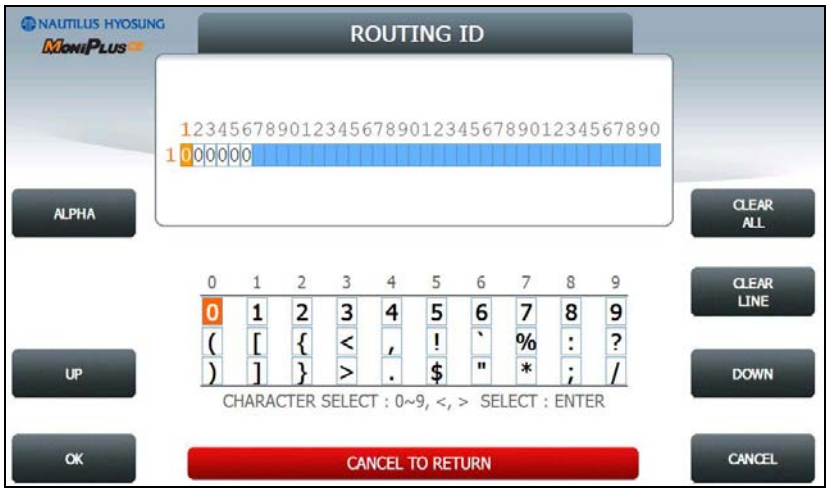


5.9.7 ROUTING ID

The **ROUTING ID** function is used to edit the Routing ID Number of ATM. Routing ID refers to the Bank ID. This field is contained to STANDARD 1, STANDARD 2 and EPS format.

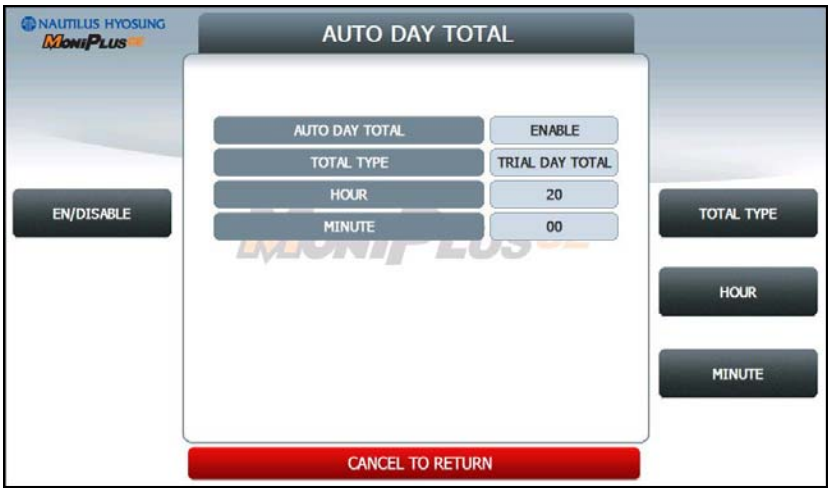
Please input the routing ID in the field and select **OK** button. If it is saved successfully, **"OPERATION SUCCESSFUL!"** will be displayed.

To go back to the previous screen, press the **CANCEL** key in pinpad.



5.9.8 AUTO DAY TOTAL

AUTO DAY TOTAL feature allows the ATM to complete a Day Total operation (Without Actually closing out the machine) at a predetermined time every day. This would be useful if you do the accounts of your ATM on a day-to-day basis. Your processor cuts off its transactions every day by the time appointed. By enabling Auto Day Total, your day's balance should match the host at the same time. This information will appear as a journal record so, you will need to access your journal to print or view the totals.



1) EN/DISABLE

- Display whether AUTO DAY TOTAL function is enabled or not.
- Set the value using **EN/DISABLE** button.

2) TOTAL TYPE

- Display AUTO DAY TOTAL TYPE
  DAY TOTAL: ATM sends total to your processor then initialize total
  TRIAL DAY TOTAL: ATM sends total to your processor
- Set the value using **TOTAL TYPE** button.

3) HOUR / MINUTE

- Display the time for the ATM to total itself
- Set the value using **HOUR** and **MINUTE** button.

5.10 TRANSACTION SETUP

This transaction setup menu contains **DISPENSE LIMIT**, **LOW CURRENCY CHECK EN/DISABLE**, **FAST CASH** and **DENOMINATION**. By pressing each button, you can execute each function or enter each sub menu. To go back to the previous screen, press the **CANCEL** key in pinpad.

1) DISPENSE LIMIT

This function is used to set the maximum amount of notes that can be dispensed per one transaction. The amount must be a multiple of denomination. And the maximum dispensed count in one transaction is 50 notes. So you must set up the DISPENSE LIMIT within the limit of the maximum denomination multiplied by 50.)

(eg. You can't withdraw more than $2500 if the maximum denomination is $50 on ATM.)

2) LOW CURRENCY CHECK EN/DISABLE

This function is used to set the detection of cassette low level (100 bills or less). If enabled, hardware will report the low condition to the software and the machine will go to "OUT OF SERVICE" mode under a low note condition.

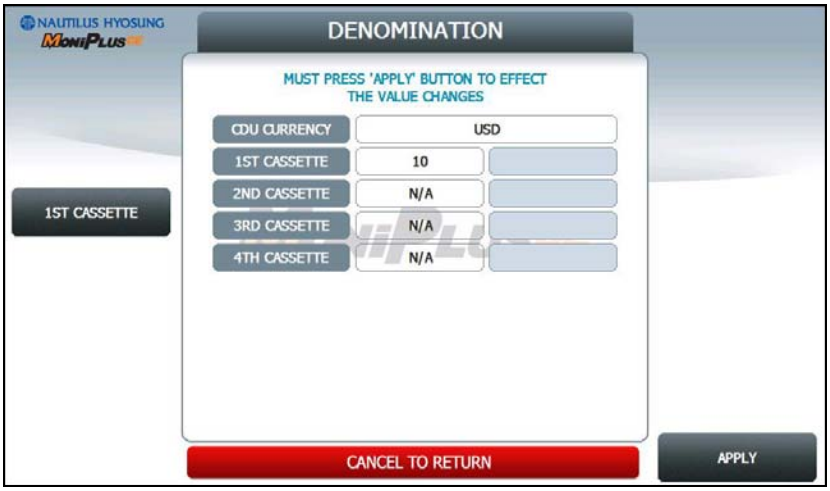
5.10.1 FAST CASH

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 **DISPENSE LIMIT.**

You can set 6 kinds of values which are frequently requested by customer using this function. By using this function, customers can withdraw the money more easily.

5.10.2 DENOMINATION

This function is used to declare the type of a note in each cassette. Because an ATM does not know what kind of note is in a cassette automatically, an owner must declare what is in it. Pressing function key beside menu button selects the cassette to set the denomination of note. Input the note value you want and press the **ENTER** key in pinpad. If you complete the all cassette settings, you have to press **APPLY** button to change the value.

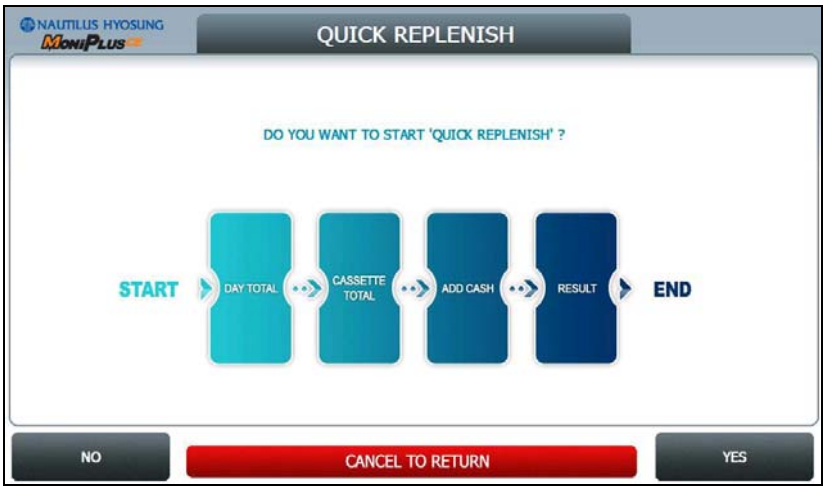


5.11 SITE MAP

This site map shows the structure of the operator menu tree to aid in searching menu. In case of touch type, if you press each menu **SETTLEMENT, JOURNAL, REPORT, DIAGNOSTICS, CUSTOMER SETUP, SYSTEM SETUP, HOST SETUP** or **TRANSACTION SETUP**, then it will enter each sub-menu.

5.12 QUICK REPLENISH

This menu provides convenience for replenishing note at once. This menu consists of **DAY TOTAL, CASSETTE TOTAL, ADD CASH** and **RESULT**.

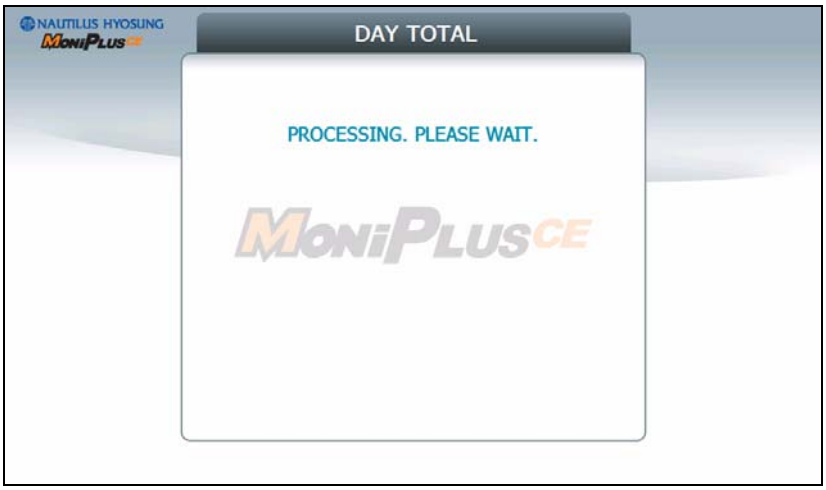


If you press **YES** button, the QUICK REPLENISH will start.

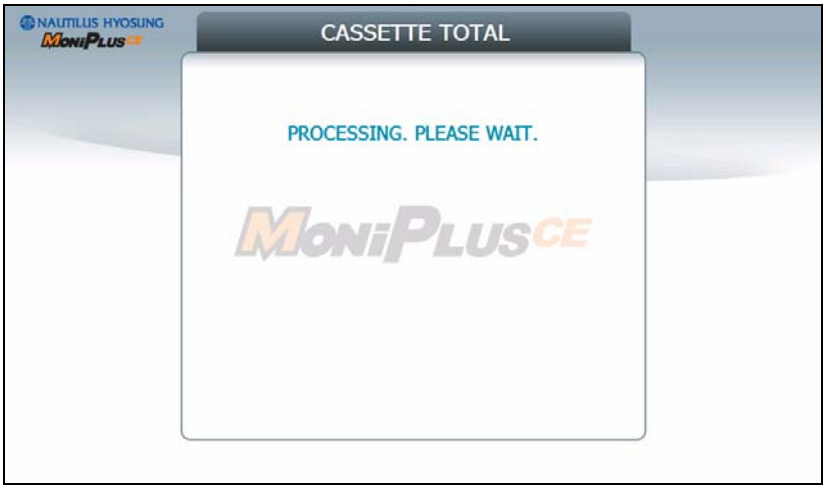
5.12.1 DAY TOTAL / CASSETTE TOTAL

It will perform **DAY TOTAL** and **CASSETTE TOTAL** first.

1) **DAY TOTAL** : Do settlement with host. After settlement, clear transaction information.



2) **CASSETTE TOTAL** : Clear note count information.



5.12.2 ADD CASH

After performing **DAY TOTAL** and **CASSETTE TOTAL**, **ADD CASH** screen will be shown as below. By pressing button on this menu, you can select cassette to add note count. (Cassette numbers are designated from top to bottom). Input the note count you want to add and press the **ENTER** key in the pinpad. If you completed the all cassettes, you have to press APPLY button to effect the value changes.

NOTE: The total note count you enter must not exceed the maximum note count.
(Max. note count : 2,000/CST)

5.12.3 RESULT

After performing **QUICK REPLENISH**, the result will be shown as below.

5.13 QUICK CONFIGURATION

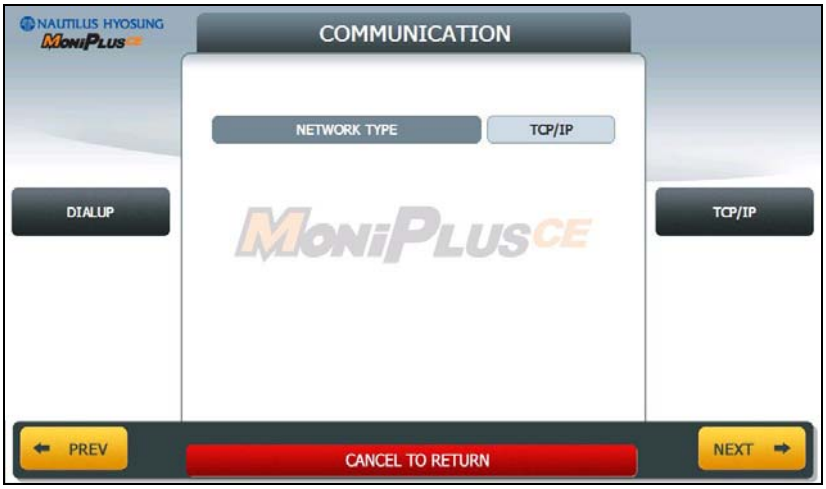
This menu provides convenience to configure **ATM Setup Information** at once. This menu consists of **NETWORK SETUP, MESSAGE FORMAT SETUP, TERMINAL ID SETUP, PASSWORD SETUP** and **RESULT CONFIGURATION**.

5.13.1 TCP/IP

This chapter shows how to configure for TCP/IP Setup Information.

5.13.1.1 COMMUNICATION

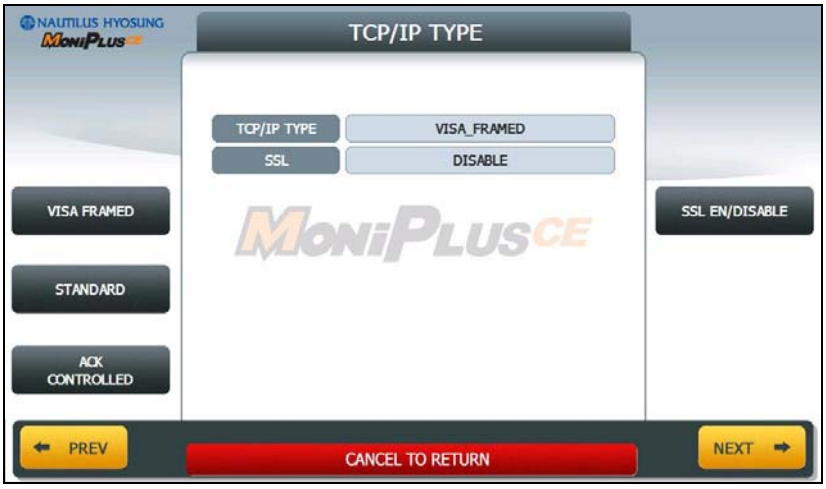
This is for setting up a type of line to communicate with a host. Select **TCP/IP**. In case of setting up TCP/IP, communicate with a host using LAN.



5.13.1.2 TCP/IP TYPE

In case of supporting **TCP/IP**, this provides a function setting up communication flow to use when communicating with host. In this menu, you can change **TCP/IP TYPE** and can decide whether 'ENABLE' or 'DISABLE' about **SSL OPTION**. There are three kinds of **TCP/IP** types in this TCP/IP COMMUNICATION menu

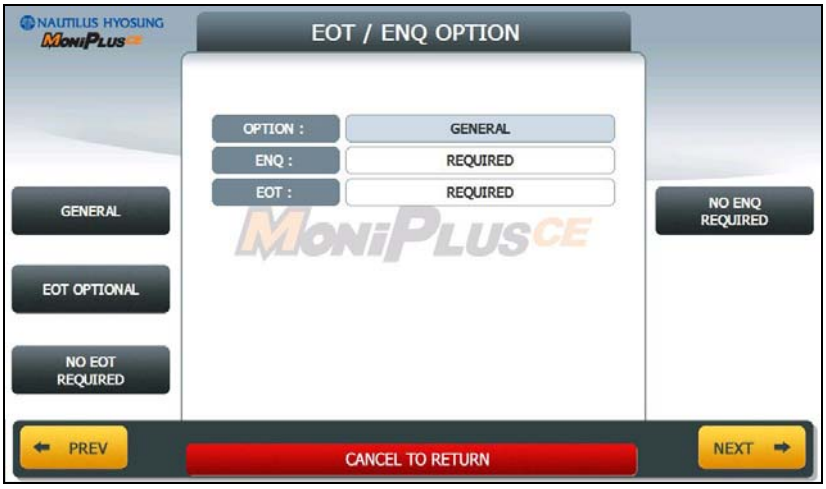
(STANDARD TCP/IP, VISA FRAMED TCP/IP, and ACK CONTROLLED TCP/IP).



NOTE: When you press **NEXT** button, if you configured TCP/IP TYPE with VISA FRAMED, then it goes to Section No 5.13.1.3. If not, then it goes to Section No. 5.13.1.4.

5.13.1.3 EOT/ENQ OPTION

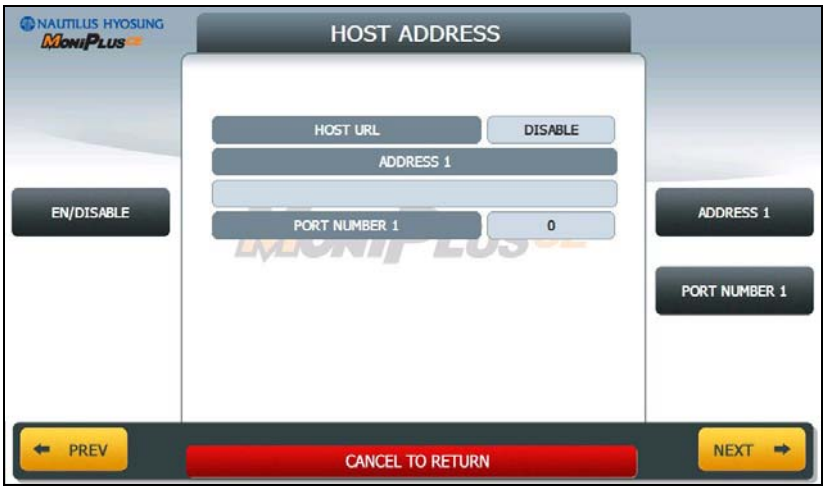
EOT/ENQ OPTION contains GENERAL, EOT OPTIONAL, NO EOT REQUIRED and **NO ENQ REQUIRED** functions. You can select one of these options.



5.13.1.4 HOST ADDRESS

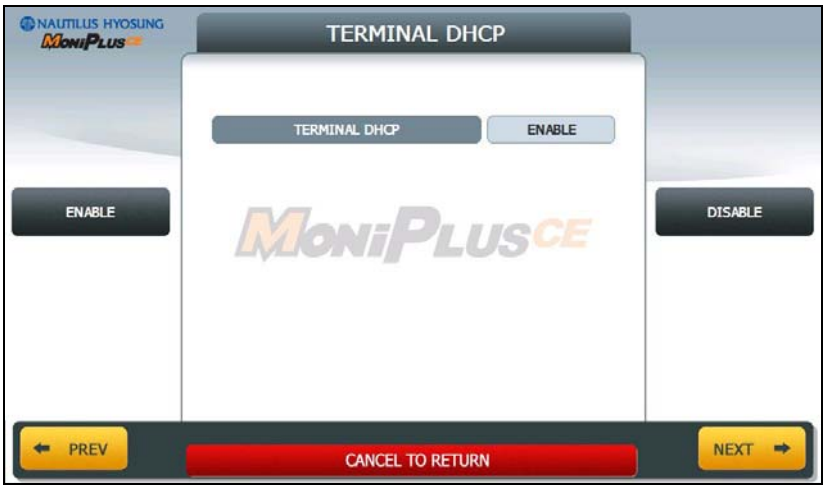
HOST ADDRESS contains **URL EN/DISABLE**, **HOST ADDRESS 1** and **PORT NUMBER 1**.

Press **PORT NUMBER 1** button, and then the values can be input on this screen. These values can be saved by pressing **ENTER** key. The **HOST ADDRESS 1** button is used to edit the host address 1. Please input the host address 1 in the field.



5.13.1.5 TERMINAL DHCP

If **DHCP** value is **ENABLE**, ATM uses **DYNAMIC IP** to connect to a host. Otherwise, ATM uses STATIC IP. If you configure DHCP value to DISABLE and press **NEXT**, it goes to TERMINAL IP SETUP Screen.



NOTE: When you press **NEXT** button, if you configured DHCP to DISABLE, then it goes to Section No 5.13.1.6. If not, then it goes to Section No. 5.13.1.7.

5.13.1.6 TERMINAL IP

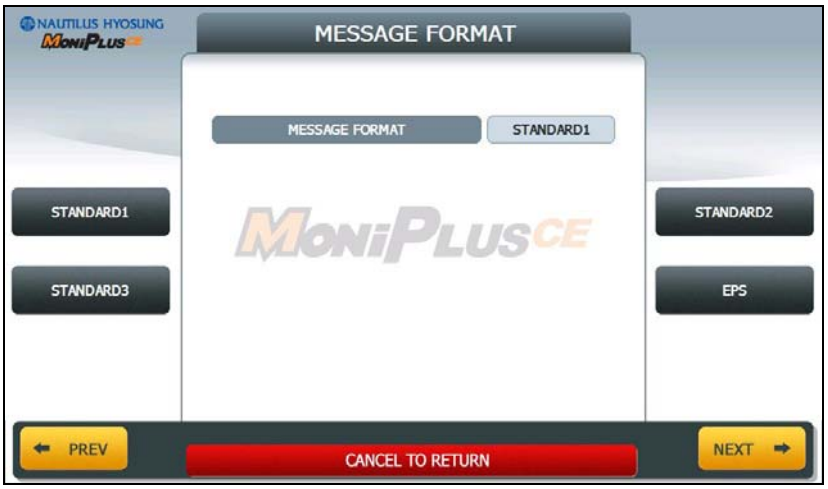
Set up STATIC IP using **IP ADDRESS, SUBNET MASK, GATEWAY** and **DNS** buttons.
It is able to input up to 15 units such as XXX.XXX.XXX.XXX

5.13.1.7 MESSAGE FORMAT

This menu is for setting up message format to use during communicating with a host.

You can select one of message types to communicate with data processing company or bank in this menu (**STANDARD1, STANDARD2, STANDARD3** and **EPS**).

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.



NOTE*:* When you press **NEXT** button, if you configured MESSAGE FORMAT to STANDARD 3, then it goes to Section No 5.13.1.9. If not, then it goes to Section No. 5.13.1.8.

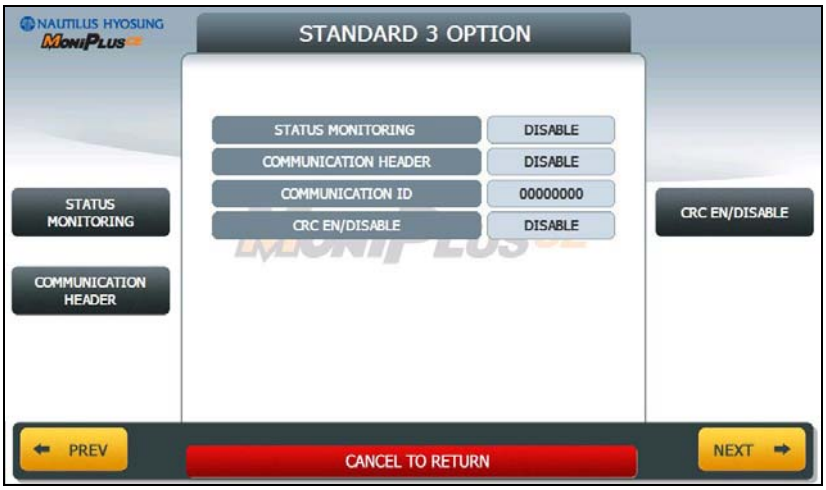
5.13.1.8 ROUTING ID

The **ROUTING ID** function is used to edit the Routing ID Number of ATM. Routing ID refers to the Bank ID. This field is contained to STANDARD 1, STANDARD 2 and EPS format.

NOTE: When you press **NEXT** button, it goes to Section No 5.13.1.10.

5.13.1.9 STANDARD3 OPTION

STANDARD 3 OPTION contains **STATUS MONITORING EN/DISABLE**, **COMMUNICATION HEADER**, **COMMUNICATION ID** and **CRC EN/DISABLE**. In case of **COMMUNICATION HEADER** is enabled, **CRC EN/DISABLE** option can be configured.



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

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

5.13.1.10 TERMINAL ID

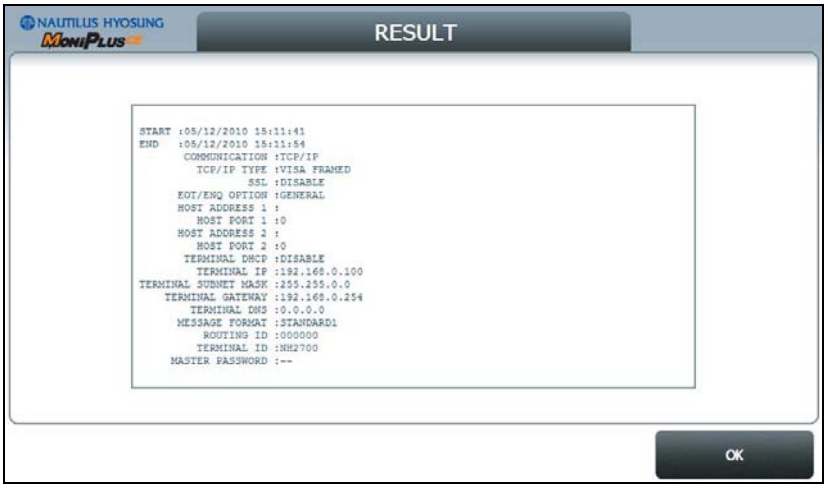
The **TERMINAL ID** function is used to edit the terminal id number of ATM. A host will identify ATM by looking at terminal ID. Terminal ID will be included in host message and will be printed on the receipt.

5.13.1.11 PASSWORD SETUP (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".

5.13.1.12 RESULT

After performing **QUICK CONFIGURATION**, the result will be shown as below.



5.13.2 DIAL UP

This chapter shows how to configure DIALUP Setup Information.

5.13.2.1 COMMUNICATION

This is to set up a type of line to communicate with a host. Select **DIALUP**. In case of setting up DIALUP, communicate with host using modem.

5.13.2.2 EOT/ENQ OPTION

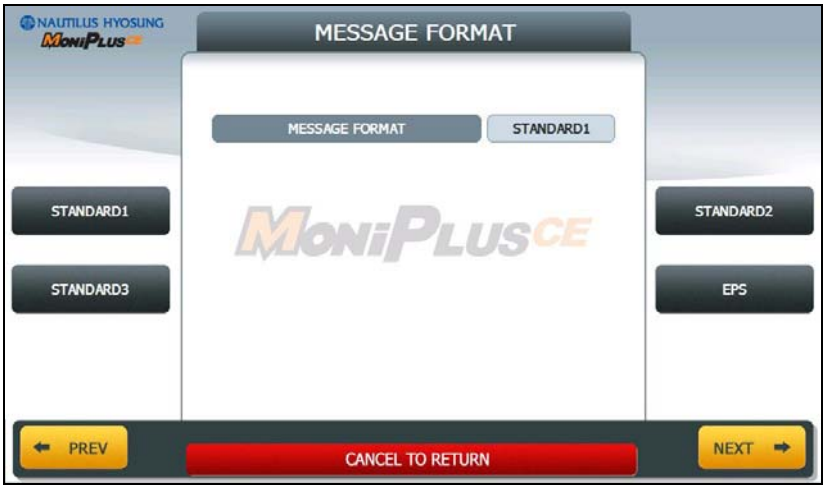
EOT/ENQ OPTION contains GENERAL, EOT OPTIONAL, NO EOT REQUIRED and **NO ENQ REQUIRED** functions. You can select one of these options.

5.13.2.3 TELEPHONE NUMBER (HOST PHONE 1)

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

5.13.2.4 MESSAGE FORMAT

This menu is for setting up message format to use during communicating with Host. You can select one of message type to communicate with data processing company or bank in this menu (**STANDARD1, STANDARD2, STANDARD3** and **EPS**). **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.



NOTE*:* When you press **NEXT** button, if you configured MESSAGE FORMAT to STANDARD 3, then it goes to Section No 5.13.2.6. If not, then it goes to Section No. 5.13.2.5.

5.13.2.5 ROUTING ID

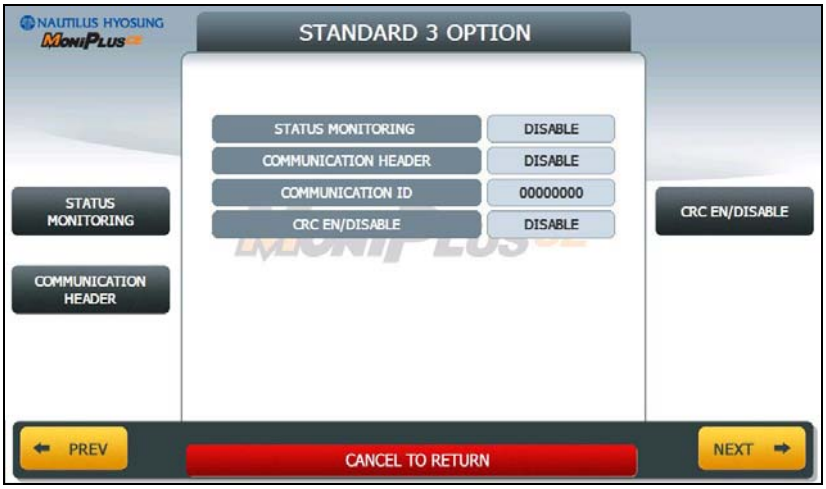
The **ROUTING ID** function is used to edit the Routing ID Number of ATM. Routing ID refers to the Bank ID. This field is contained to STANDARD 1, STANDARD 2 and EPS format.

NOTE*:* When you press **NEXT** button, it goes to Section No 5.13.2.7.

5.13.2.6 STANDARD3 OPTION

STANDARD 3 OPTION contains **STATUS MONITORING EN/DISABLE**, **COMMUNICATION HEADER**, **COMMUNICATION ID** and **CRC EN/DISABLE**.

In case of **COMMUNICATION HEADER** is enabled, **CRC EN/DISABLE** option can be configured.



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

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

5.13.2.7 TERMINAL ID

The **TERMINAL ID** function is used to edit the terminal id number of ATM.

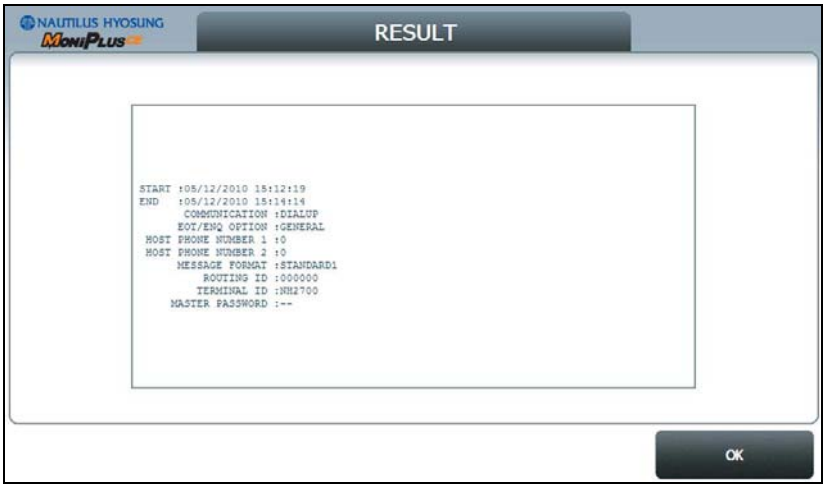
A host will identify ATM by looking at terminal ID. Terminal ID will be included in a host message and will be printed on the receipt.

5.13.2.8 PASSWORD SETUP (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".

5.13.2.9 RESULT

After performing **QUICK CONFIGURATION**, the result will be shown as below.



Chapter 6. Installation

6. Installation

6.1 Installation Information

Installation condition and space

Following conditions should be met before installing equipment.

- Temperature while operating should be between 41°F - 104°F (5°C ~ 40°C).
- Relative humidity while operating should be between 25% < RH < 85%, Non-Condensed.
- Avoid locations where intense direct light is reflected off the LCD screen.
- Avoid locations where strong static electricity can occur.
- Avoid placing the product next to equipment that produces electromagnetic waves. It could interfere with data transfer.
- The floor must allow easy wheelchair access from the front or the side.
- Space required for servicing the machine should be considered before installation.

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

6.2 System Installation

Unpacking

1. Unpack the machine on top of the palette.
2. Cut the straps that are fastened around the box with a knife. (refer to Fig. 6.1)
   (Be careful when cutting the straps.)
3. Use an appropriate tool to remove the nails from the palette. (refer to Fig. 6.2)
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.

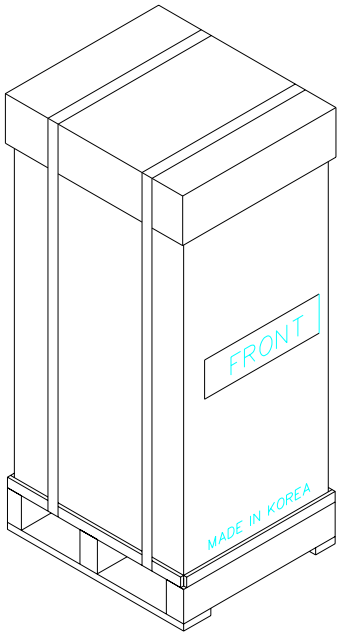


Fig. 6.1

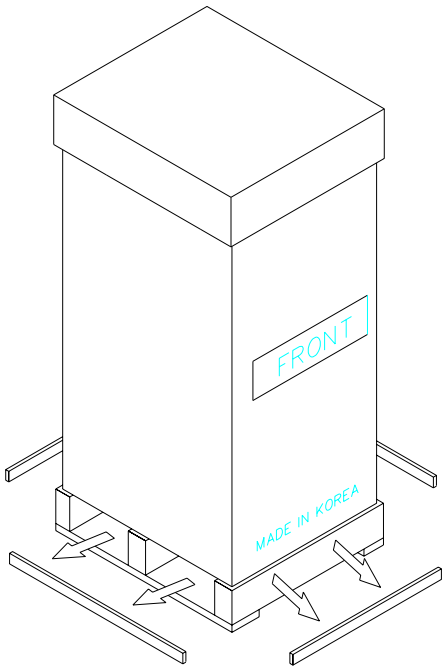


Fig. 6.2

Physical Installation by Anchor

To install NH-2700CE ATM, perform the following steps.

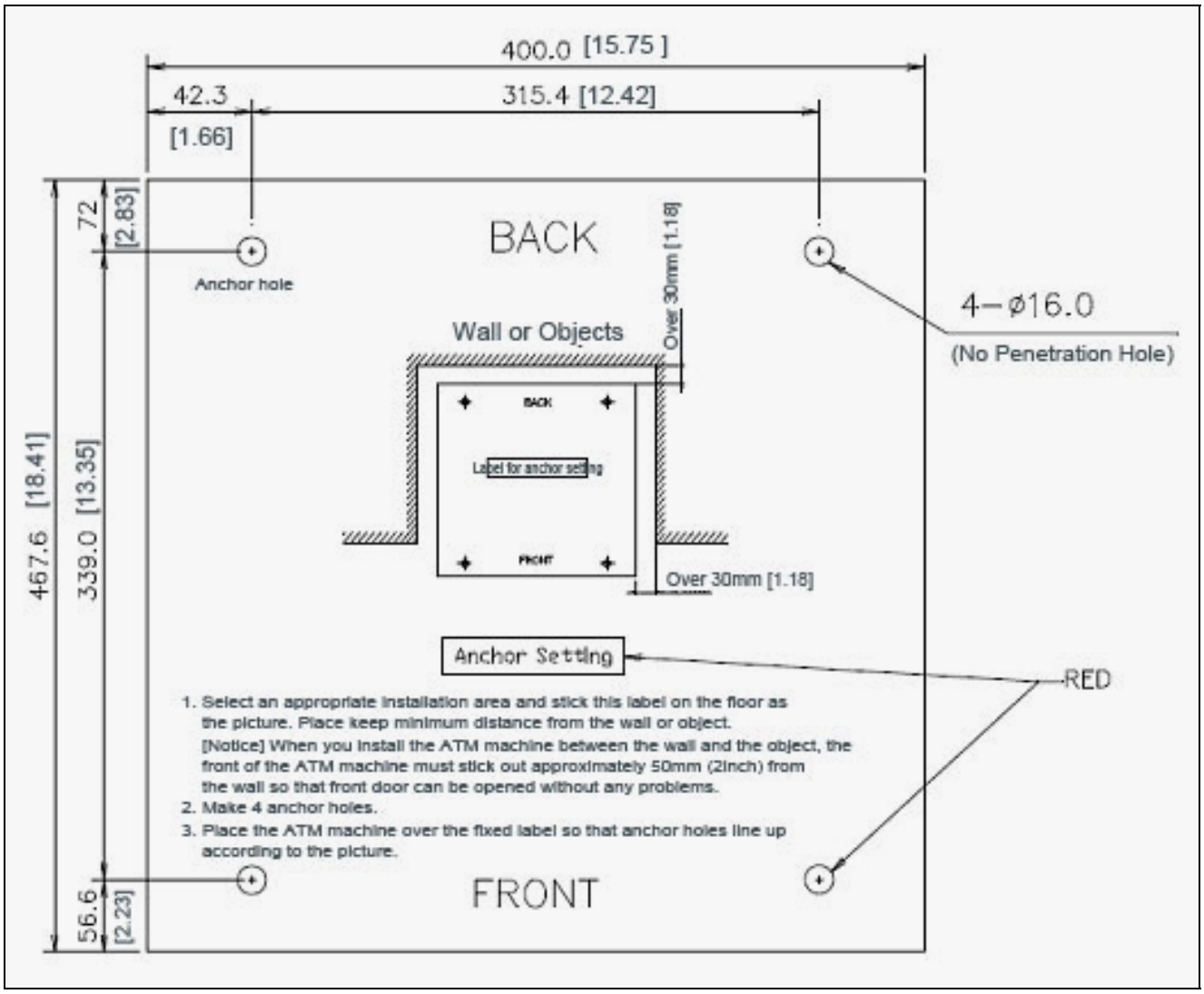
1. Place the "Anchor bolts locate sheet" at the place where the machine is to be installed. (refer to Fig. 6.3)
2. Place the system on a flat surface. Be careful when opening the top or bottom of the machine because it can be off balance
3. Place the Anchor nuts into the ground according to the anchor bolts locate sheet. (4 places)
4. Place NH-2700CE 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 for dial lock & cencon lock and 1-2-3-4-5-6 for electronic lock) open the Security Door.
   This combination should be changed as soon as possible. Refer to Chapter 4 for instructions on changing the lock combination.
7. After the anchor nuts are in place according to the anchor holes on the bottom of NH-2700CE ATM, tighten the anchor bolts tightly.

Anchor Setting

1. Select an appropriate installation area and stick this label on the floor as the picture. Place keep minimum distance from the wall or object.

   NOTICE: When you install the ATM machine between the wall and the object, the front of the ATM machine must stick out approximately 50mm (2 inch) from the wall so that front door can be opened without any problems.

2. Make 4 anchor holes.
3. Place the ATM machine over the fixed label so that anchor holes line up according to the picture.



NOTE: All the unit in the dimension is mm and ( ) is inch scale.

Fig. 6.3 Anchor diagram of NH-2700CE ATM

Installation and Service Clearance

Following diagram is describing the areas required for installing and servicing this ATM.

NOTE: All the unit in the dimension is mm and ( ) is inch scale.

Hyosung recommends it is more convenient for your service personnel to have enough maintenance space as described below to service this ATM machine

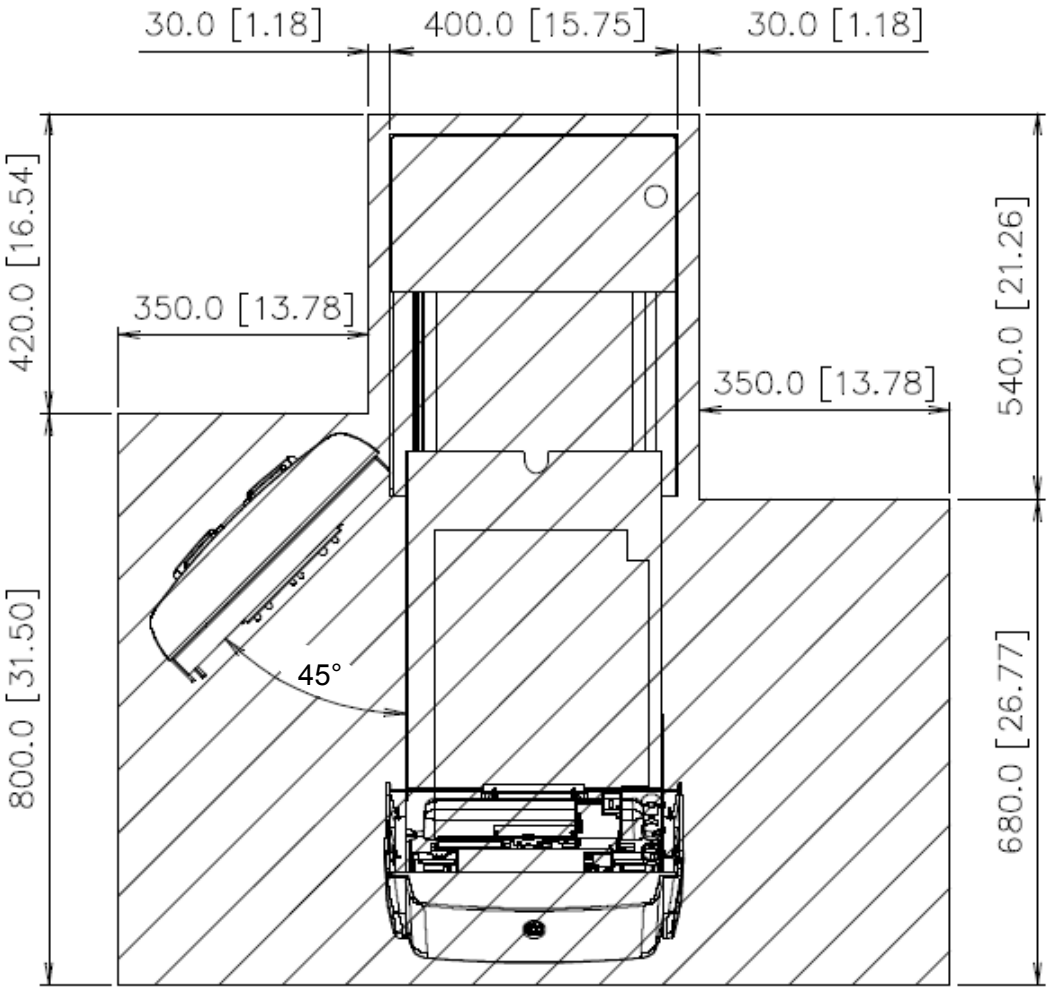


Fig.6.4 Installation space #1 (Plan view)

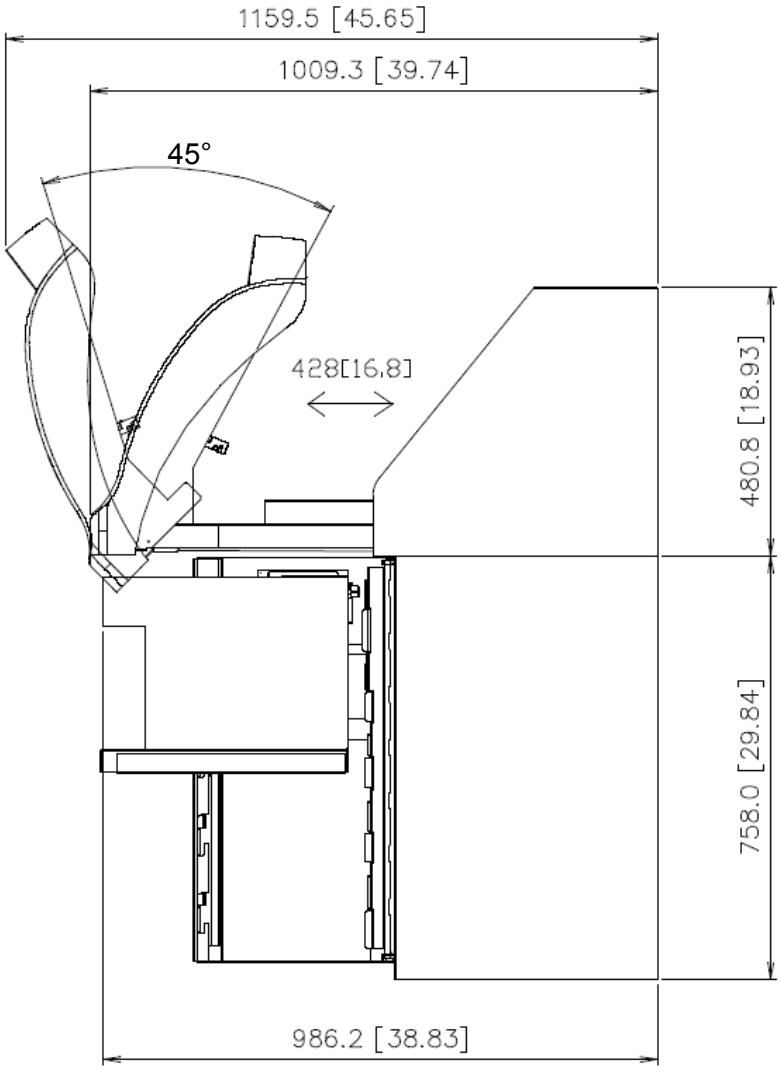


Fig.6.5 Installation space #2 (Side view)

6.3 Hardware Installation

1. Verify the power voltage (110/220V) to be used and set the appropriate voltage on the power supply.
2. Verify that the telephone line to be used for the ATM is in proper working order. Hyosung recommends the use of shielded phone line in locations with close proximity to other appliances. (For Dial-up)
3. Open the security door and remove any shipping materials and note any warning or installation instructions.
4. Remove the screw, which is set to hold the Cash Dispenser Unit platform in place.
5. Remove the cash cassette from the box, fill the cassette with the appropriate amount of notes, and place it in the Cash Dispensing Unit carefully. Place the appropriate denomination label on the front of the cassette.
6. Before closing the vault, thoroughly test the combination lock by locking and unlocking the lock several times. It is much easier to diagnose potential lock problems before shutting the door
7. Open the top of the ATM. Place the receipt paper in the Receipt Printer. The paper prints only on one side (shiny side) always check the roll when you install paper.
   Place the roll so that the coated side (shiny side) will be facing up.
8. Connect the Power cable and telephone cable to the appropriate outlets on the wall.
   (Verify once again if the power voltage is 110V or 220V)
9. Turn the power on and verify if all systems are operational. If any part of the system is not operational then an error code will be displayed. Verify with the Error Code and follow the appropriate steps. If the error is not corrected please contact your local distributor. Set all the system parameters.

Chapter 7. Appendix

7. Appendix

7.1 Error Code Table

1) Receipt Printer

Error Code	Description	Trouble shooting
1106910	LOST SLIP", DEV_SPR	
2001000	Receipt paper jam	Remove any jammed paper from the printer.
2001200	Receipt printer feed plate open	Close the feed plate.
2001300	Out of receipt (Receipt paper empty)	Replenish the receipt paper.
2001400	Receipt printer head overheated before printing	Check the printer head and change if necessary.
2010100	Receipt printer lever opened	Close the lever of print head completely
2010200	Receipt printer head overheated	Wait the time until the temperature of head adequately slow down and try to initialize
2010300	Receipt paper jam	Remove jammed paper between printer head and rollers
2010400	Receipt paper empty	1. Replenish receipt paper 2. Check the status of sensor and its connector
2010500	Receipt paper setting error	1. Check the status of setting paper 2. Check the status of sensor and its connector
2010600	Command is received while doing self-test	After terminating self-test and initialize receipt printer
2010700	No receipt paper	1. Replenish receipt paper in paper charger 2. Check the status of Near End sensor and its connector
2010800	Receipt paper cutting error	1. Check the Cutter module 2. Check if printer head lever is properly close
2010900	No sensing black mark (dark sensor)	1. Check the status of Black mark sensor 2. Check if Dip switch # 6 is correctly set (Dip switch # 6 is set by On in case of not using Black mark)
2010A00	The size of image print data is abnormal	Check the AP version and initialize

Error Code	Description	Trouble shooting
2080100	Receipt printer lever opened	Close the lever of print head completely
2080200	Receipt printer head overheated	Wait the time until the temperature of head adequately slow down and try to initialize
2080300	Receipt paper jam	Remove jammed paper between printer head and rollers
2080400	Receipt paper empty	1. Replenish receipt paper 2. Check the status of sensor and its connector
2080500	Receipt paper setting error	1. Check the status of setting paper 2. Check the status of sensor and its connector
2080600	Command is received while doing self-test	After terminating self-test and initialize receipt printer
2080700	No receipt paper	1. Replenish receipt paper in paper charger 2. Check the status of Near End sensor and its connector
2080800	Receipt paper cutting error	1. Check the Cutter module 2. Check if printer head lever is properly close
2080900	No sensing black mark (dark sensor)	1. Check the status of Black mark sensor 2. Check if Dip switch # 6 is correctly set (Dip switch # 6 is set by On in case of not using Black mark)
2080A00	The size of image print data is abnormal	Check the AP version and initialize
2080B00	Margin setting error	1. Check whether the default registry setting is changed 2. Reset the PTR SP
2080C00	Paper jammed at the exit of the slot	1. Remove the jammed paper
2080D00	Paper jammed in the path	1. Remove the jammed paper
2080F00	The firmware crashed	1. Check whether the dip switch #1 is set to “ON” position 2. Update the firmware
2DN0000	Failed to connect communication between Receipt printer and SP	1.Check if communication cable or com port is not connected
9720000	Receipt printer communication error during SP opening	Check if communication cable or COM port is not connected
9722010	Receipt Printer communication failure during COM port open	1. Do RESET at Operator Function 2. Reboot ATM
9722DN0	Receipt Printer communication failure during sending command to Receipt Printer	1. Do RESET at Operator Function 2. Reboot ATM

Error Code	Description	Trouble shooting
97912XX	DEV_SPR Time Over Error	1. Reboot ATM 2. Call your attendant
97922XX	DEV_SPR FATALERROR (WARNING)	1. Reboot ATM 2. Call your attendant
A010100	Open lever detected before executing command	Close the feed lever.
A010200	Printer thermal head overheated while executing command	Check the thermal printer head and change if necessary.
A010300	Paper jam detected before executing command	Remove any jammed paper from the printer.
A010400	Paper setting error detected before executing command	Remove and re-install the receipt paper.
A010500	Paper check error detected before executing command	Remove and re-install the receipt paper.
A010800	Paper cutter software check error detected before executing command	Check for and remove any jammed paper.
A080100	Open lever detected while executing command	Remove any jammed paper.
A080200	Receipt printer head overheated while printing	Check the thermal printer head and change if necessary.
A080300	Paper jam detected while executing command	Remove and re-install the receipt paper.
A080400	Paper setting error detected before executing command	Remove and re-install the receipt paper.
A080500	Paper check error in doing command	Remove any jammed paper.
A080800	Paper cutter software check error detected while executing command	Check for and remove any jammed paper.
ADN0100	No response detected for 30 seconds after sending command	Check cable and connection between the CE and printer.
ADN0F00	No response detected for 30 seconds after sending command	Check cable and connection between the CE and printer.
ADN1100	No response detected after 3 retries	Check cable and connection between the CE and printer.
ADN1200	No response detected between ENQ-ACK after 5 retries of ENQ	Check the cable and connection between the CE and printer.
ADN1300	No response detected after 5 retries because of timeout between STX-BCC interval	Check cable and connection between the CE and printer.

2) Card Reader

Error Code	Description	Trouble shooting
8217091	Card in card reader	Remove card
1101910	LOST CARD", DEV_MCU	
9723010	Failed to open device	Check the serial port or cable
9723011	Communication error	Check the serial port or cable
9723016	Time out to receive data	Check the serial port or cable
9723019	Polling down	Check the serial port or cable
9730100	IC CARD DENIAL	
9730200	IC CARD ONLINE DATA ERROR	
9730300	IC CARD ERROR	
97913XX	DEV_MCU Time over Error Code	1. Reboot ATM 2. Call your attendant
97923XX	DEV_MCU FATALERROR (WARNING)	1. Reboot ATM 2. Call your attendant
9799301	MCU RETRACT OVER	Clear the count of retracted card at OP mode
90001	Card Read Error	1. Check Magnetic Card 2. Check Card Read module and cable connection
90002	Invalid IC card communication	1. Power Off/On 2. Check DIP MCR 3. Check cable connection
90003	DIP MCR latch failure	1. Power Off/On 2. Check DIP MCR (Clamp Lever) 3. Check cable connection
90004	DIP MCR unlatch failure	1. Power Off/On 2. Check DIP MCR (Clamp Lever) 3. Check cable connection
90005	DIP MCR power on failure	1. Power Off/On 2. Check DIP MCR 3. Check cable connection
90006	DIP MCR power off failure	1. Power Off/On 2. Check DIP MCR 3. Check cable connection

D0006	CARD NOT SUPPORTED	Check your card
D0014	Invalid Card Number	Check your account
D0054	Expire Card	Check your card
D0057	Transaction not Permitted – Card	Check your card
IDN0X	DIP MCR connection failure	1. Power Off/On 2. Check DIP MCR 3. Check cable connection

3) Cash Dispenser

Error Code	Description	Trouble shooting
1102910	LOST WITHDRAW CASH", DEV_CSH	
1102920	LOST DEPOSIT CASH", DEV_CSH	
1103910	LOST CARD & SLIP", DEV_MCU | DEV_SPR	
2000100	No cassette	Insert or re-insert the cassette(s). Check cassette sensor.
2000200	Note shortage	Replenish the cassette.
2000300	Reject bin full	Remove notes from the reject bin and try the Cassette Total function again.
2000500	Cash Dispenser Unit data setting error	Check Cash Dispenser Unit information. (Currency, Denomination, etc)
2001600	Note detected in stacker (shutter or presenter type)	Clear any notes from the stacker.
2021500	Sensor detects note in delivery path before CDU dispenses	Remove note from the CDU delivery path.
2131500	CS4 sensor detects note in delivery path before CDU dispenses. Sensor is located along the delivery path right before the reject bin.	Remove note from the CDU delivery path.
21A1500	CS1A sensor detects note in delivery path before CDU dispenses. Sensor is located along the delivery path right after where the note exits the 1st cassette.	Remove note from the CDU delivery path.
21B1500	CSB sensor detects note in delivery path before CDU dispenses. Sensor is located along the delivery path right after where the note exits the 1st cassette.	Remove note from the CDU delivery path.
24A1500	CS3A sensor detects note in delivery path before CDU dispenses. Sensor is located along the delivery path right after where the note exits the 3rd cassette.	Remove note from the CDU delivery path.
24B1500	CS3B sensor detects note in delivery path before CDU dispenses. Sensor is located along the delivery path right after where the note exits the 3rd cassette.	Remove note from the CDU delivery path.
40000	Receive undefined command.	

Error Code	Description	Trouble shooting
4000000	Cash Dispenser(CDU) received the undefined command from AP software	1. Get the trace file and log files in D:\trace 2. Call your attendant
4001100	Detecting CS2 / LS3 Dark (Front Access Type : Reject box is opened.)	1. Remove notes on CS2 / LS3 sensor 2. Clean CS2 / LS3
40014	- Detect CS4A after initialization. - Detect CS4A before dispensing.	
4001400	CS4A / LS9 sensor detects note in delivery path before/after CDU dispenses	1. Remove note from the CDU delivery path. 2. Clean CS4A / LS9
4001500	CS2 or CS4A sensor detects note in delivery path before/after CDU dispenses	1. Remove note from the CDU delivery path. 2. Clean CS2 and CS4A
40018	- Detect CS4B after initialization. - Detect CS4B before dispensing.	
4001800	CS4B sensor detects note in delivery path before/after CDU dispenses	1. Remove note from the CDU delivery path. 2. Clean CS4B
4001900	CS2 or CS4B sensor detects note in delivery path before/after CDU dispenses	1. Remove note from the CDU delivery path. 2. Clean CS2 and CS4B
4001C	- Detect CS4A & CS4B after initialization. - Detect CS4A & CS4B before dispensing.	
4001C00	CS4A or CS4B sensor detects note in delivery path before/after CDU dispenses	1. Remove note from the CDU delivery path. 2. Clean CS4A and CS4B
4001D00	CS2, CS4A or CS4B sensor detects note in delivery path before/after CDU dispenses	1. Remove note from the CDU delivery path. 2. Clean CS2, CS4A and CS4B
40021	Detect CS1A after initialization / Detect CS1A before dispensing.	

Error Code	Description	Trouble shooting
4002100	CS1A / LS1 sensor detects note in delivery path before/after CDU dispenses	1. Remove note from the CDU delivery path. 2. Clean CS1A / LS1
40022	Detect CS1B after initialization / Detect CS1B before dispensing.	
4002200	CS1B sensor detects note in delivery path before/after CDU dispenses	1. Remove note from the CDU delivery path. 2. Clean CS1B
40023	Detect CS1A & CS1B after initialization / Detect CS1A & CS1B before dispensing.	
4002300	CS1A or CS1B sensor detects note in delivery path before/after CDU dispenses	1. Remove note from the CDU delivery path. 2. Clean CS1A and CS1B
40028	Detect CS13 after initialization / Detect CS13 before dispensing.	
4002800	CS13 sensor detects note in delivery path before/after CDU dispenses	1. Remove note from the CDU delivery path. 2. Clean CS13
40029	Detect CS13 & CS1A after initialization / Detect CS13 & CS1A before dispensing.	
4002900	CS1A or CS13 sensor detects note in delivery path before/after CDU dispenses	1. Remove note from the CDU delivery path. 2. Clean CS1A and CS13
4002A	Detect CS13 & CS1B after initialization / Detect CS13 & CS1B before dispensing.	
4002A00	CS1B or CS13 sensor detects note in delivery path before/after CDU dispenses	1. Remove note from the CDU delivery path. 2. Clean CS1B and CS13
4002B	Detect CS13 & CS1A & CS1B after initialization / Detect CS13 & CS1A & CS1B before dispensing.	
4002B00	CS1A, CS1B or CS13 sensor detects note in delivery path before/after CDU dispenses	1. Remove note from the CDU delivery path. 2. Clean CS1A, CS1B and CS13

Error Code	Description	Trouble shooting
40030	(INITIAL / DISPENSE) Motor Constant Speed Error	
4003000	Failed in checking the main motor echo	1. Initialize 2. Check Main Motor Encoder Slit 3. Initialize after Power On/Off 4. Check Encoder Sensor CS8 BRKT 5. Check CS8 Sensor Cable 6. Change Main Motor Encoder Slit Sensor CS8
40031	(INITIAL / DISPENSE) SOLENOID ECHO Error	
4003100	Failed in checking the reject gate solenoid echo	
4003200	Failed in checking the present gate solenoid echo	
4003300	Check sum error (No information is set)	1. Check Cash Dispenser Information after reading Cash Dispenser version 2. Initialize 3. Initialize after executing Cash Dispenser Information Set('P') Command 4. Change Cash Dispenser B/D
4003400	Error of two sheets detecting sensor(CS5_1) for initializing	1. Check CS5_1 Sensor Cable 2. Check second Dip Switch in Cash Dispenser B/D 3. Change CS5_1 Sensor
40036	Detect CS13 before initialization.	
4003600	Error of CS 2, CS13 / LS2 sensor during initialization	1.Remove a jammed note in CS13 / LS2 sensor. 2.Replace CS13 / LS2 sensor.
4003700	Error of 2 sheets detecting sensor (CS5_1 / CS5_2) for dispensing	1. Check Cash Dispenser Board Segment 2. Initialize 3. Read data of 'Read Double Sensor' Command
4003800	Error in checking SRAM	
40039	(INITIAL / DISPENSE) Solenoid Operation Error before motor activation	
4003900	Gate operation sensor (CS3 / LS8) error before initial recovery	1. Initialize after removing notes or dust over Gate 2. Check CS3 / LS8 Sensor BKRT 3. Check CS3 / LS8 Sensor Cable 4. Exchange Sensor after abnormal operating CS3 / LS8 Gate detecting Sensor 5. Replace Reject Solenoid 1

Error Code	Description	Trouble shooting
4003A00	When more than 5 sheets of cash dispensing is required during a test	1. Check command that Cash Dispenser is received 2. Check Cash Dispenser EP ROM Version or specification
4003B00	When CS15A or CS 15B sensor is detected as dark after initial recovery	1. Remove notes or dust on CS15A Sensor 2. Check CS15A Sensor Cable 3. Exchange Sensor after abnormal operating CS15A Sensor
40040	(DISPENSE) Reboot 5 or more times due to cassette separation	
4004000	Cassette is removed during dispensing	1. Check the cassette catcher 2. Set the cassette properly
40041	(DISPENSE) Reboot 12 or more times	
4004100	Error if re-driving is over 5 times during separated rejection	1. Check notes in Reject Box 2. Rearrange notes in Cassette 3. Remove dust in CS15AB, CS31AB, CS41AB CS1AB Sensor 4. Check dust existing in CS5 Sensor Guide 5. Check dust existing in Main Motor Encoder Slit 6. Check index value of notes each cassette
40042	(DISPENSE) The dispensed number of notes is less than requested.	
4004200	In case the number of notes detected outlet sensor(CS13 / LS2) is less than the number of required notes	1. Check notes dispensed and rejected 2. Remove notes jammed in CDU 3. Remove dust in CS13 / LS2 Sensor 4. Exchange sensor after abnormal operating CS13 / LS2 Sensor
40043	(DISPENSE) Reject more than 40 sheets.	
4004300	Error if total reject is more than 20 sheets	1. Check notes in Reject Box 2. Rearrange notes in Cassette 3. Remove dust in CS1AB, CS15AB, CS31AB, CS41AB Sensor 4. Check dust in existence CS5 Sensor Guide 5. Check notes index value
4004400	Error if continuous 5 times are rejected	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

Error Code	Description	Trouble shooting
40045	(DISPENSE) The dispensed number of notes is more than requested during/after operation	
4004500	In case the number of notes detected outlet sensor(CS13 / LS2) is more than required notes	1. Check notes dispensed and rejected 2. Remove dust in CS13 / LS2 Sensor 3. Exchange sensor after abnormal operating CS13 / LS2 Sensor
4004600	Program error(Separated rejection)	1. Initialize after Reset Power 2. Upgrade Cash Dispenser Firmware or re-download 3. Exchange Cash Dispenser B/D
40047	(DISPENSE) Reboot 5 or more times due to miss pick up	
4004700	1 cassette mis-feed 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 requested	1. Check CS13 sensor (note jam and dust) 2. Replace CS13 sensor
40049	(DISPENSE) Received the number of requirement by “0”.	
4004900	Error to dispense 0 sheets to be required (Separated rejection	1. Check received command 2. Check communication cable 3. Check Cash Dispenser Firmware Version
4004A	(DISPENSE) Jam during dispensing.	
4004A00	Error of note jam (Separated rejection)	1. Remove jammed notes on Cash Dispenser return path 2. Remove dust in CS1~CS4 sensor 3. Install after rearranging notes in cassette
4004B00	Continuous 3 times error if note is long (once tried, twice retried)=>Separated rejection	1. Check state of notes in reject box 2. Rearrange notes in cassette 3. Check Index of notes 4. Check foreign objects in the main motor encoder slit 5. Replace the CS8 encoder slit sensor
4004C00	In case the number of notes detected outlet sensor(CS13/ LS2) is more than that of notes detected on CS1A,B sensor	1. Check CS1 sensor 2. Reconnect CS1 sensor
4004D	(DISPENSE) Cassette separation before operation.	

Error Code	Description	Trouble shooting
4004D00	Error of being removed 1st cassette before separate rejection	1. Set cassette #1 correctly 2. Check the catcher inside cassette #1 guide
4004E00	Error of being removed 2nd cassette before separate rejection	1. Set cassette #2 correctly 2. Check the catcher inside cassette #2 guide
40051	(DISPENSE) Received the required number of notes 150 or more.	
4005100	Received a request for over 150 notes dispensing on the Cash Dispenser from the upper unit.	1. Check the Cash Dispenser received command 2. Check the abnormal communication cable. 3. Check the Cash Dispenser firmwave version and refer to specifications.
4005200	The remaining notes at the sensor in front of the CST after dispense operation (CS1A, CS1B)	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	Cash Dispenser EP Program Error during dispense operation (failed table search)	1. Initialize after resetting the power 2. Upgrade the Cash Dispenser firmware or download software again 3. Replace the Cash Dispenser B/D
40055	(DISPENSE) Detect CS13 during constant speed of motor / CS13 Jam during dispensing.	
4005500	Timeout due to note's length error passed through the CS13 / LS2 during dispense operation	1. Remove a jammed note between the tray and Cash Dispenser 2. Remove a jammed note at the position of the CS13 / LS2 sensor 3. Remove a dust on the CS13 / LS2 sensor
40056	(DISPENSE) Solenoid Error during dispensing.	
4005600	Abnormal operation of the gate solenoid during dispense operation.	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 / LS8 sensor bracket is bended. 4. Check if the CS3 / LS8 sensor cable is Disconnected (CN10 #9~10) 5. Exchange a sensor after abnormal operating CS3 / LS8 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

Error Code	Description	Trouble shooting
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 (Cash Dispenser Board CN10 #5~2).
4005900	Initial jam time error	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	Continuously detected 2 notes for three times or more during dispense operation	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:Cash Dispenser B/D CN10 #11~12, 25~28/ CS5_2:CN12)
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 CS1AB 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 during 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.	

Error Code	Description	Trouble shooting
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	
40088	(DISPENSE) Dispense the notes on the state of unsupported denomination setting.	
4008F00	CS13 sensor detects a bill with hole during dispensing	
40090	Decryption Error / Key Error	
40091	Receive CMD except certification on the status of non-certification.	
40092	Encryption Chip Communication Error	
40093	0xC1 Command Execution Error (Certification Fail)	
40094	0xC2 Command Execution Error (Certification Fail)	
4009A00	CS31AB~CS13 Time out(Jam) during dispensing from 3rd cassette.	

Error Code	Description	Trouble shooting
4009D00	Trying to dispense bills from 3rd cassette but the 3rd cassette doesn't installed.	
4009F00	3 cassette miss feed error	
400AC00	Something is detected on CS2 sensor after dispense operation	
400BC00	Communication error - Command Length doesn't match.	
400BD	(Set CDU Info) CDU Type Setting Error	
400BE	(DISPENSE) Jam on the transport during operation (CS4 A/B Dark)	
400BE00	Bill pickup sensor(CS1, CS15) recognized has a hole and CS4 sensor detects it or CS4 snesor detects the gap too close	
400BF	(Initialize, Dispense) No Encoder Signal 150ms or more during operation.	
400C100	Cassette Jam during dispense operation (1 CST Encoder Error).	1.Remove a jammed note in 1 Cassette. 2.Replace 1 cassette box when multiple errors occur.
400C200	Cassette Jam during dispense operation (2 CST Encoder Error).	1.Remove a jammed note in 2 Cassette. 2.Replace 2 cassette box when multiple errors occur.
400C300	Cassette Jam during dispense operation (3 CST Encoder Error).	1.Remove a jammed note in 3 Cassette. 2.Replace 3 cassette box when multiple errors occur.

Error Code	Description	Trouble shooting
400C400	Cassette Jam during dispense operation (4 CST Encoder Error).	1.Remove a jammed note in 4 Cassette. 2.Replace 4 cassette box when multiple errors occur.
400C6	Detect CS13 during initialization.	
400C600	Error of CS 2, CS13 sensor during initialization	1.Remove a jammed note in CS13 sensor. 2.Replace CS13 sensor.
400C700	Something is detected on CS12 sensor during dispensing bills or initialization.	
400C800	Something is detected on CS14 sensor during dispensing bills or initialization.	
400C900	Something is detected on CS14 sensor after dispense operation	
400CC	(DISPENSE) Detect CS1A, CS1B just before reset.	
400CC00	Bill is remained on the sensor in front of cassette during resetting.	
400D000	Bills are passed on CS13~CS12 sensor -Timeout[Jam].	
400D100	Bills are passed on CS12~CS14 sensor -Timeout[Jam].	
400D7	DIP Switch Setting Error	
400FF00	Bill jam	1. Remove the jammed notes 2. Initialize
4DN0000	Cash Dispenser communication failure during sending command to cash dispenser	1. Do RESET at Operator Function 2. Reboot ATM
4DN0100	Cash Dispenser communication failure during receiving command to cash dispenser	1. Do RESET at Operator Function 2. Reboot ATM
4DN8100	Communication error of Shutter	

Error Code	Description	Trouble shooting
8216091	Cash jammed on Cash Dispenser	1. Remove jammed notes on Cash Dispenser return path 2. Remove dust in CS1~CS4 sensor
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
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	Reconfigure cash dispenser setup data
9719500	Invalid Cash Unit number	Reconfigure cash dispenser setup data
9719600	The abnormal of the number of Cash Unit	Reconfigure cash dispenser setup data
9719700	No. of dispensed notes that software counts is not matched to it cash dispenser responded	1. Initialize after resetting the power 2. Upgrade the Cash Dispenser firmware or download software again 3. Replace the Cash Dispenser B/D
971A000	Invalid denomination	Reconfigure denomination at supervisor mode

Error Code	Description	Trouble shooting
971A100	Invalid currency	Reconfigure currency at supervisor mode
971A200	CASSETTE OFF POSITION". Not dispensable	1. Reconfigure denomination 2. Reconfigure currency
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	Denomination Not Set	Go to Transaction Setup/Denomination and set desired denominations
971A700	Denomination Not Set	Go to Transaction Setup/Denomination and set desired denominations
971B000	In case of being executed Reject or Retract command without being the bills in stacker.	1. Check a dust in stacker 2. Reconfigure the maximum dispensable count
971C000	Not supported command	Reinstall software
971D100	Partial dispense	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	1. Do RESET at Operator Function 2. Reboot ATM
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.)	

Error Code	Description	Trouble shooting
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	1. Check bill jam or no note in cassette #1 2. Check cash dispenser
9745B00	Cash picking-up fail while cash in cassette #2 is enough	1. Check bill jam or no note in cassette #2 2. Check cash dispenser
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.)	
9747C00	Cash picking-up fail while cash in cassette #4 is enough	1. Check bill jam or no note in cassette #2 2. Check cash dispenser
974FF00	When sensing bills in the Stacker (Error code, 400FF00 is subdivided by location of sensor.)	
9749F00	Cash picking-up fail while cash in cassette #3 is enough	1. Check bill jam or no note in cassette #2 2. Check cash dispenser
97914XX	DEV_Cash Dispenser Time over Error Code	1. Reboot ATM 2. Call your attendant
97924XX	DEV_Cash Dispenser FATAL ERROR (WARNING)	1. Reboot ATM 2. Call your attendant
9799499	DISPENSER COUNT ERROR	Check the sensor on cash dispenser
C004F00	The Number of dispensed notes does not match	1. Check the number of dispensed notes. 2. Perform a test on the Cash Dispenser Unit.

4) Modem

Error Code	Description	Trouble shooting
D030000	Modem is not responding	Check the modem controller.
D030100	The target call address has call blocking enabled.	1. Check modem cable 2. Contact to technician support team
D030200	The specified terminal identifier is invalid.	1. Check modem cable 2. Contact to technician support team
D030300	All call appearances on the specified address are currently in use.	1. Check modem cable 2. Contact to technician support team
D030400	The disable address parameter contains dialing control characters that are not processed by the service provider.	1. Check modem cable 2. Contact to technician support team
D030500	The specified country/region code is invalid.	1. Check modem cable 2. Contact to host and phone company
D030600	The operation failed for an unspecified or unknown reason.	Contact to technician support team
D030700	Insufficient resources to complete the operation	Contact to technician support team

5) Miscellaneous

Error Code	Description	Trouble shooting
1030100	DEV_PIN (Key data error from host)	Contact to host
2000400	Vault door open	Close the vault door. Check door switch.
9701010	Failed to connect communication between SP of PIN and EP of one	Check if communication cable or COM port is not connected
9701012	Failed to deliver to data of EPP's SP	Check if communication cable or COM port is not connected
9701016	Received data time out of EPP	Check if communication cable or COM port is not connected
9701017	Delivered data time out of EPP	Check if communication cable or COM port is not connected
9701031	Failed to read Register of EPP	Reboot ATM
9701040	Failed to produce Thread of EPP	Reboot ATM
9701060	Failed to create buffer	Reboot ATM
9701111	BCC error of EPP	Check BCC logic of EPP
9701151	EPP is down when it receives an 'Get Status' command	1. Reboot ATM 2. Replace pinpad
9701152	EPP is down when it receives an 'Clear Func Key' command	1. Reboot ATM 2. Replace pinpad
9722020	File Open Error	1. Reboot ATM 2. Call your attendant
9722060	Memory Allocate Error (PrintForm Allocate IndexBuffer Fail)	1. Reboot ATM 2. Call your attendant
9722068	Invalid Media Name	1. Reboot ATM 2. Call your attendant
97221A2	Invalid Unit	1. Reboot ATM 2. Call your attendant
97221C1	Form is not Found	1. Reboot ATM 2. Call your attendant
97221C4	Form Name is NULL	1. Reboot ATM 2. Call your attendant
97221C5	Invalid Form	1. Reboot ATM 2. Call your attendant

Error Code	Description	Trouble shooting
97221C6	PrintForm() offset is Invalid	1. Reboot ATM 2. Call your attendant
97221C7	Invalid Form (Too many Fields)	1. Reboot ATM 2. Call your attendant
97221D1	Media is not Found	1. Reboot ATM 2. Call your attendant
97221D3	Media Overflow when form size is larger than media size	1. Reboot ATM 2. Call your attendant
97221D4	Media Name is NULL	1. Reboot ATM 2. Call your attendant
97221D5	Invalid Media (Attribute for Media definition is not proper)	1. Reboot ATM 2. Call your attendant
97221D6	Invalid Media (Area size is larger than media size)	1. Reboot ATM 2. Call your attendant
97221D7	Invalid Media (Size of Media Name is exceeded to 2048 bytes totally)	1. Reboot ATM 2. Call your attendant
97221E1	Field is not Found	1. Reboot ATM 2. Call your attendant
97221E2	Field Error (This Field must have initial value)	1. Reboot ATM 2. Call your attendant
97221E3	Non-Indexed value for Indexed Field	1. Reboot ATM 2. Call your attendant
97221E4	Invalid Field	1. Reboot ATM 2. Call your attendant
97221E5	Invalid Field (This Field's width is 0)	1. Reboot ATM 2. Call your attendant
9740020	Failed to create file	1. Reboot ATM 2. Call your attendant
9740025	Failed to copy file	1. Reboot ATM 2. Call your attendant
9745500	System power off while dispensing	

Error Code	Description	Trouble shooting
97918XX	DEV_PIN Time over Error Code	1. Reboot ATM 2. Call your attendant
97928XX	DEV_PIN FATALERROR (WARNING)	1. Reboot ATM 2. Call your attendant
9799901	DOOR CHECK	1. Reboot ATM 2. Call your attendant
9799902	LIGHT ERROR	1. Reboot ATM 2. Call your attendant
9799904	PIN ERROR	1. Reboot ATM 2. Call your attendant
9799905	SENSOR CHECK	1. Reboot ATM 2. Call your attendant
9799908	SCREEN ERROR	1. Reboot ATM 2. Call your attendant
D000200	Reversal transaction failure	Check for any CDU error codes and the number of notes dispensed to customer.
D009300	Transaction Serial Number mismatch	Check the terminal setting from the host.
D009400	Record format mismatch.	Check the terminal setting from the host.
D009500	Routing ID mismatch.	Check the terminal setting from the host.
D009600	Terminal ID mismatch.	Check the terminal setting from the host.
D009700	Response Type mismatch (Reversal)	Check the terminal setting from the host.
D009800	Response Type mismatch (Day Close)	Check the terminal setting from the host.
D009900	Response Type mismatch (Config.)	Check the terminal setting from the host.
D009A00	Response Type mismatch (Withdrawal/Balance/Transfer)	Check the terminal setting from the host.
D00B000	TERMINAL ID MISMATCHED	Check the terminal setting from the host.

Error Code	Description	Trouble shooting
D00B100	TRANSACTION CODE MISMATCHED	Check host
D00B200	SECOND FIELD ID CODE MISMATCHED	Check host
D00B300	FIRST DES KEY WRONG SIZE	Check the terminal setting from the host.
D00B400	SURCHARGE AMOUNT WRONG SIZE	Check host
D00B500	Sequence Number MISMATCHED	Check host
D00B600	INVALID RESPONSE CODE ERROR	Check host
D00B700	Authorization Number Error	Check host
D00B800	BUSINESS DATE Error	Check host
D00B900	Transaction time Number Error	Check host
D00BA00	BUSINESS DATE Error	Check host
D00BB00	Balance amount Error	Check host
D00BC00	Actual Surcharge Error	Check host
D00BD00	Sequence Number MISMATCHED	Check host
D00BF00	BUSINESS DATE Error	Check host
D00C000	Settlement Error	Check 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
D150000	1. Host connection failed(time-out)	[Modem] 1. Check modem and modem cable connection 2. Check Phone Number [TCP/IP] 1. Check Lan cable connection 2. Check IP Address or Port Number
D170100	Line disconnected or Timeout before ENQ receive from host	1. Check modem or Lan cable 2. Check host
D170400	Line disconnected or Timeout before ACK receive from host	1. Check modem or Lan cable 2. Check host

Error Code	Description	Trouble shooting
D170600	Line disconnected or Timeout before receiving data from host	1. Check modem or Lan cable 2. Check host
D170700	NAK retry error.	1. Check modem or Lan cable 2. Check host
D170800	Send retry error	1. Check modem or Lan cable 2. Check host
D170900	Modem initialize fail	Check modem
D171000	Modem Comport Failed	Check modem
D180000	No Dial Tone(in Modem dial connection)	Check telephone line connection. Test Modem.
D190000	No Answer(in Modem dial connection)	Check telephone line connection. Test Modem.
D200000	Dial(Line) busy(in Modem dial connection)	Try again later. Check phone number.
D220000	not receiving EOT from HOST	1. Check modem or Lan cable 2. Check host
D410000	CRC Mismatch	Check host.
D410100	No CRC Received	Make sure that the host is using CRC
DA0xxx0	Host Denial Error	Refer to E7. Description for error code organization
F000100	Number of Bill is not inputted	Enter number of bill. (required)
F000200	Parameter is not properly set (Surcharge Owner)	Enter surcharge owner. (required)
F000300	Parameter is not properly set (Surcharge Amount)	Enter surcharge amount. (required)
F000900	Master Key Index invalid	Check Master key index.
F000A00	Master Key empty	Enter Master key. (required)
F000B00	Host Phone Number is not inputted	Enter Host phone number. (required)
F000D00	RMS Password is not inputted in RMS Enable	Enter RMS password.
F000E00	RMS Phone Number is not inputted in RMS Enable	Enter RMS phone number.

Error Code	Description	Trouble shooting
F000F00	Terminal Number is not inputted	Enter Terminal number. (required)
F001000	Routing ID is not inputted	Enter Routing ID. (required)
F001600	Default master password was not changed	
F007F00	Invalid Exchange Rate	Download the exchange rate from RMS
F00FF00	Failed to write Journal	1.Back up journal to thumb drive 2.Clear journal 3.Reboot ATM
FFFFFFF	NVRAM is broken	1. Reset Master Password 2. Clear NVRAM
9E11200	Failed to connect communication between SP of PIN and EP of one	Check if communication cable or com port is not connected
9E13100	Received data time out of EPP	Check if communication cable or com port is not connected
9E13200	Failed to deliver to data of EPP's SP	Check if communication cable or com port is not connected
9E41A00	Failed to produce Thread of EPP	Restart ATM
9EA6100	PIN Pad Self test error	Replace PIN Pad device
9EA6200	Failed to download firmware (no firmware file)	Check if firmware file is correct or not
9EA6300	Failed to download firmware (failure during downloading)	Replace PIN Pad device
9EA6400	BCC error of EPP	Replace PIN Pad device
E211300	PIN or Key entry timeout	Retry PIN or Key entry from the beginning
E217400	It is not in the sensitive mode	Enter two sensitive passwords to be sensitive mode
E217800	PIN transaction exceeded 120 within one hour	Retry PIN transaction after one hour
E221300	Password entry timeout	Retry password entry from the beginnin

Error Code	Description	Trouble shooting
E227000	Incorrect password	Enter correct passwords
E312300	Key is not found	Check if the key is loaded

6) Description for error code organization

If an error occurs, you can understand cause of error through error code and help operator to judge a situation.

An example as below is forms and contents for error code “5-40047(00)”.

1. 5 in front “-“ is a procedure number, and you can analysis the procedure that an error occurs through that number.

1) Procedure number, the number in front of “-“, is none as follow situations :

(1) Reboot the system when errors occur:

(2) Fail to restore automatically when errors occur:

(3) When transferring from Operator Mode to Transaction Mode not ruling out the error.

2) “1” – After users insert the card, procedure number is 1.

3) “3” – When sending message from ATM to a host, procedure number is 3.

4) “5” – When receiving transaction success message from a host, procedure number is 5.

5) “6” – After a host confirms a withdrawal, procedure number is 6.

6) “9” – When receiving transaction refusal message from a host, procedure number is 9.

2. “40047(00)” back of “-“ is a description for an error. (Refer to Error Code)

3. If an error occurs, below message will be displayed on the screen.

TERMINAL ID : XXXXXXXXXXXXXXX
ERROR CODE : 5-40047(00)
ERROR DESCRPITION

☞ HOST DENIAL ERROR CODE

1. When receiving HOST DENY message, the error code as below will be displayed on the screen .

TERMINAL ID : XXXXXXXXXXXXXXX
ERROR CODE : 9-DA0XX(X0)
ERROR DESCRIPTION

-When HOST DENY ERROR CODE is 2 byte, DA0XX(00) will be displayed.

(Value of XX means denial code.)

- When HOST DENIAL ERROR CODE is 3 bytes, DA0XX(X0) will be displayed.

(Value of XXX means denial code.)

7.2 Installation Guide

7.2.1 Software Quick Installation Guide

- **Clear NVRAM**

(1) NVRAM

There are many important data in the NVRAM such as journals and configuration data.
To clear all of configuration and journal data to the initial status, clear NVRAM after S/W installation.
If you upgrade ATM machine operating in the field, you must backup journal and
remember configuration information before clearing NVRAM.

(2) Clear NVRAM

1) Enter Supervisor Menu as Master Password

2) Select “SYSTEM SETUP” menu

3) Select “SYSTEM CONTROL” menu

4) Select “CLEAR ALL” menu.

5) After pressing “CLEAR ALL” button, you will see the screen for selecting Australia or New Zealand. For example, if you press the “Australia” key, after all NVRAM data is cleared, the program to be installed on would be suitable for Australia. To be specific, the notes of Australia have their own properties compared with ones of the other countries. And the kinds of transactions, accounts are different from the other counties also. So after choosing “Australia”, information needed to initialize ATM would be suitable for the financial environment of Australia. The screen for selecting “Australia” or “New Zealand” is demonstrated as below.

6) After selecting a country, you will see the screen to confirm the decision. if you press “YES” button, All NVRAM data will be cleared and ATM will be automatically rebooted.

7.2.2 Installation Guide for NH-2700

- **DIAL-UP INITIAL SETTING**

(1) DIAL-UP SETTING

1) Input Master password to enter main screen.

2) Select “HOST SETUP” menu.

3) Select “TELEPHONE NUMBER” menu.

4) Be sure to input the telephone numbers both in the HOST PHONE #1 and in the HOST PHONE #2 after selecting “HOST PHONE #1” and “HOST PHONE #2” menu and click ‘**ENTER**’ on the pinpad.

5) After above procedures, press **IN SERVICE** button or ‘**1**’ key on the pinpad in the main screen.

- **TCP/IP INITIAL SETTING**

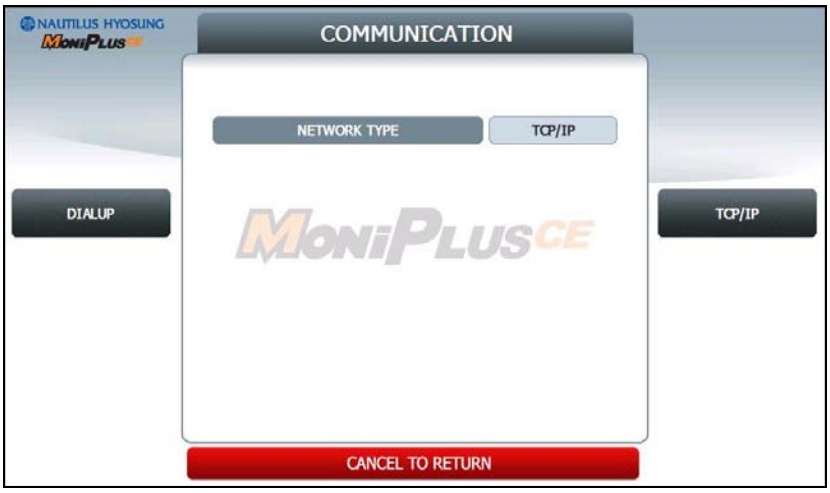
(1) TCP/IP SETTING

1) Input Master password to enter main screen.

2) Select “CUSTOMER SETUP” menu.

3) Select “SELECT PROCESSOR” menu.

4) Select “COMMUNICATION” menu.



5) Select “TCP/IP” menu and message in the COMMUNICATION box will be changed from DIALUP to TCP/IP.

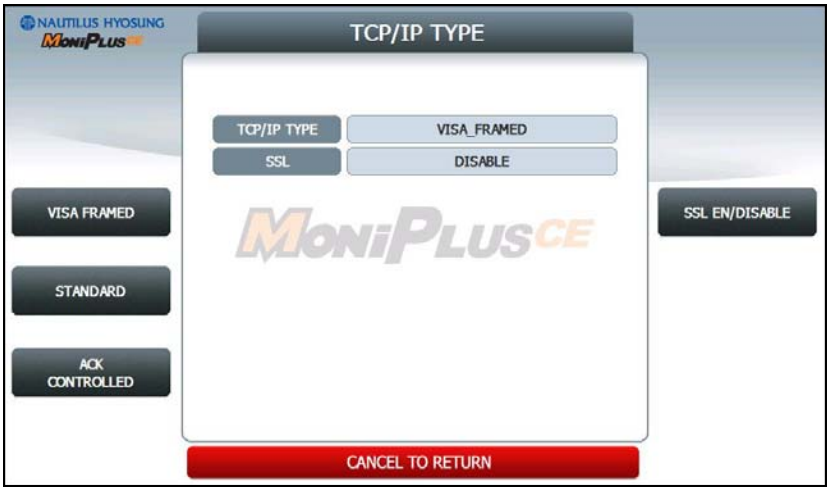
6) Click ‘CANCEL’ button and SELECT PROCESSOR screen will be back.

7) Select “MESSAGE FORMAT” menu in the SELECT PROCESSOR screen.

8) Select “STANDARD1” menu in the MESSAGE FORMAT screen. Click ‘CANCEL’ button to go SELECT PROCESSOR screen.

9) Select “TCPIP TYPE” menu in the SELECT HOST screen.

10) Set “STANDARD” in the TCP/IP TYPE menu and set DISABLE in the SSL OPTION menu. Click ‘CANCEL’ button to go SELECT PROCESSOR screen.



11) Click ‘CANCEL’ button and CUSTOMER SETUP screen will be shown. Click ‘CANCEL’ button once more to go to the OP MAIN screen. And select “SYSTEM SETUP” menu.

12) Select “TERMINAL IP” menu.

13) Set “DHCP EN/DISABLE” as DISABLE to activate buttons related with “STATIC IP”

14) Select “IP ADDRESS”, “GATEWAY”, “SUBNET MASK” and “DNS” and set the input values individually.

15) Select “HOST SETUP” menu in the OP MAIN screen.

16) Select “HOST ADDRESS” menu in the HOST SETUP screen.

17) Select “URL EN/DISABLE” menu in the HOST ADDRESS screen.

18) Select “HOST ADDRESS 1”, “PORT NUMBER 1”, “HOST ADDRESS 2”, “PORT NUMBER 2” in the HOST ADDRESS screen and set input values individually.

19) After finishing all settings up, press **IN SERVICE** button ‘**1**’ or **CANCEL** key on the pinpad in the main screen. Then ATM will be rebooted automatically with the “REBOOTING” message shown.

7.3 Transaction Screen Flow

This chapter shows you the demonstration screen for NH-2700.

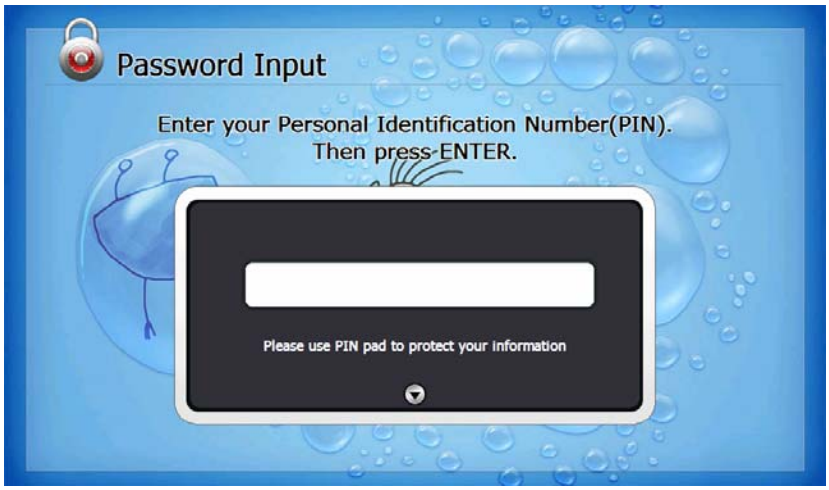
7.3.1 TRANSACTION PROCESS

7.3.1.1 AP MAIN

This is a main AP screen and the customer can start to do transaction by inserting and quickly removing the card on card reader.

7.3.1.2 ENTER PIN

This screen is for entering PIN of customer's card



7.3.1.4 SELECT TRANSACTION

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

7.3.1.4.1 WITHDRAWAL: SELECT ACCOUNT (Cheque, Saving, Credit Card)

This screen is for asking a customer which account he/she wants to withdraw.

7.3.1.4.2 WITHDRAWAL: SELECT THE AMOUNT OF WITHDRAWAL

This screen is for selecting the amount of withdrawal. If there is not any amount to withdraw, please select the “OTHER” key and can input the amount the customer would like to withdraw.

1) Amount Selection

2) Amount Input (Other)

7.3.1.4.3 WITHDRAWAL: SELECT RECEIPT PRINTING OR NOT

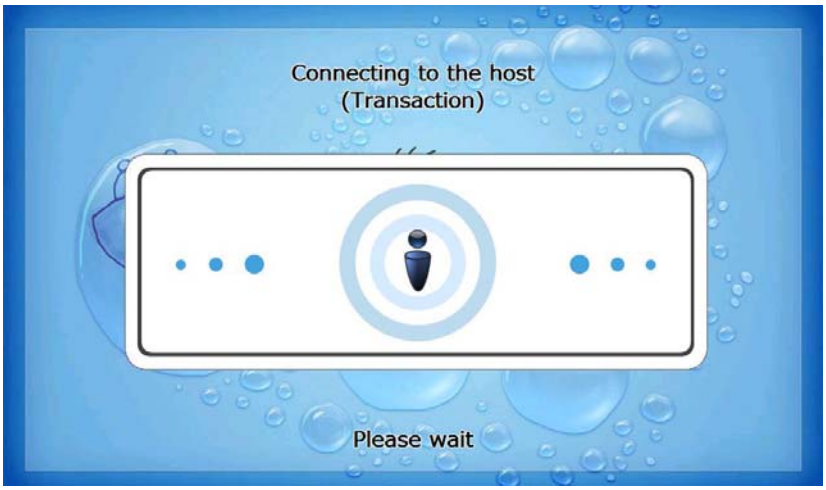
This screen is for asking a customer whether he/she wants to get the receipt or not.

7.3.1.4.4 WITHDRAWAL: FEE NOTICE

This screen shows a customer the information of surcharge.

7.3.1.4.5 WITHDRAWAL: CONNECTING HOST

This screen shows that the transaction is in progress.

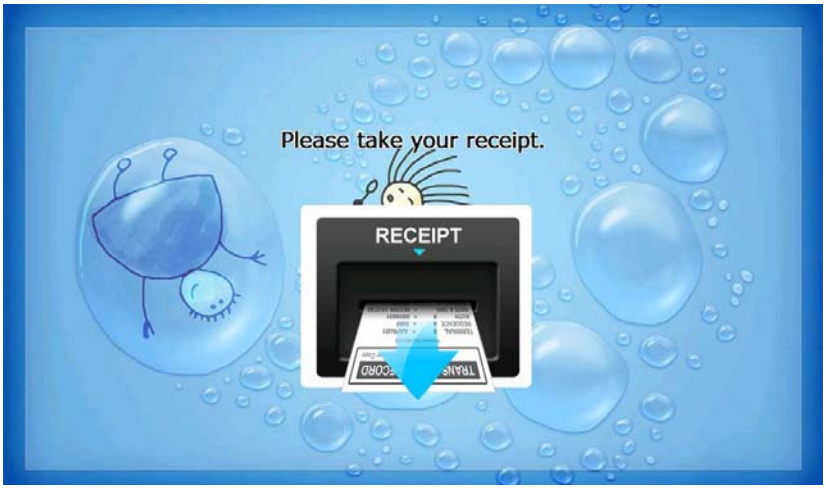


7.3.1.4.6 WITHDRAWAL: DISPENSING MONEY AND TAKE MONEY

This screen shows that his/her request amount is being dispensed and to notify the customer to take his/her money.

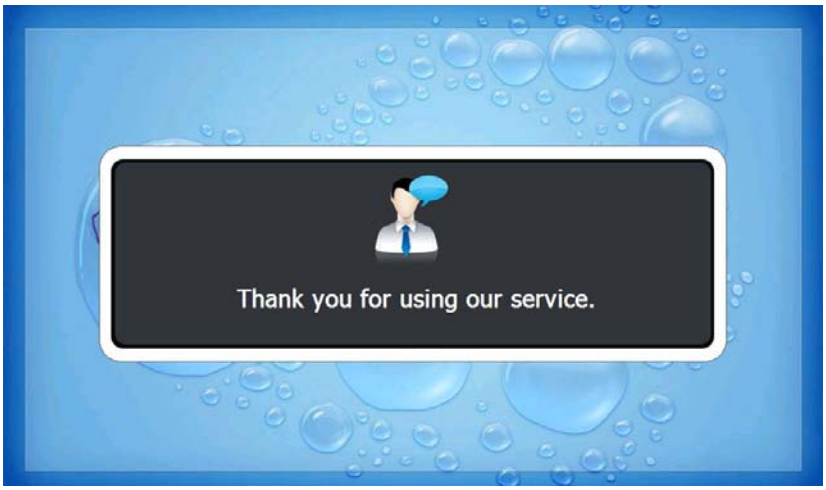
7.3.1.4.7 WITHDRAWAL: PRINTING TRANSACTION AND TAKE RECEIPT

This screen shows that his/her transaction record is being printed and to notify the customer to take his/her receipt.



7.3.1.4.8 WITHDRAWAL: THANK YOU

This screen shows that the transaction has been successfully completed.



7.3.1.4.9 INQUIRY: SELECT ACCOUNT TO INQUIRE

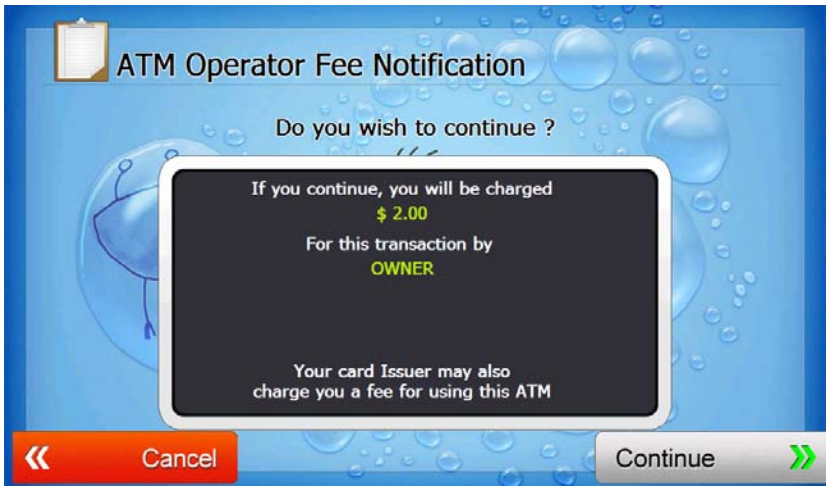
This screen is for asking a customer which account he/she wants to inquire

7.3.1.4.10 INQUIRY: SELECT RECEIPT PRINTING OR NOT

This screen is for asking a customer whether he/she wants to get the receipt or not.

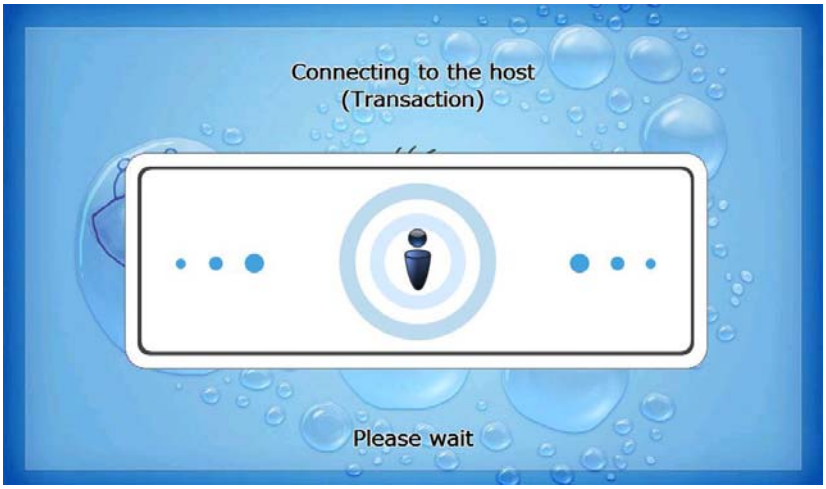
7.3.1.4.11 INQUIRY : FEE NOTICE

This screen shows the information of surcharge.



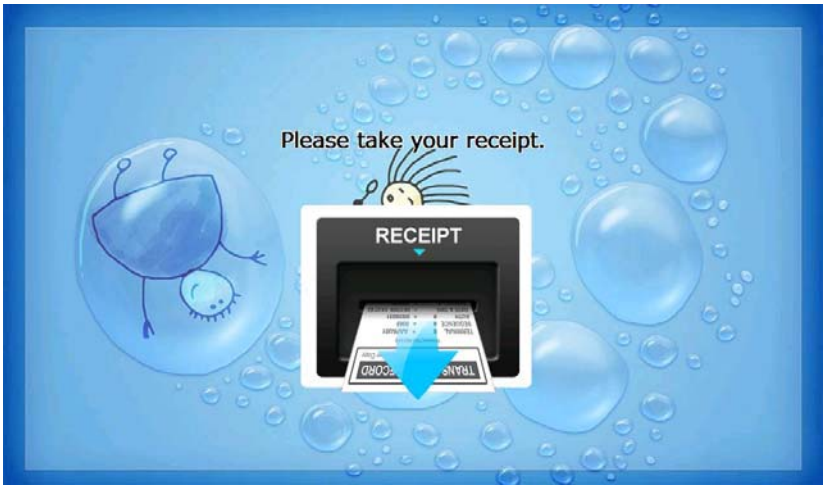
7.3.1.4.12 INQUIRY: CONNECTING HOST

This screen shows that the transaction is in progress.



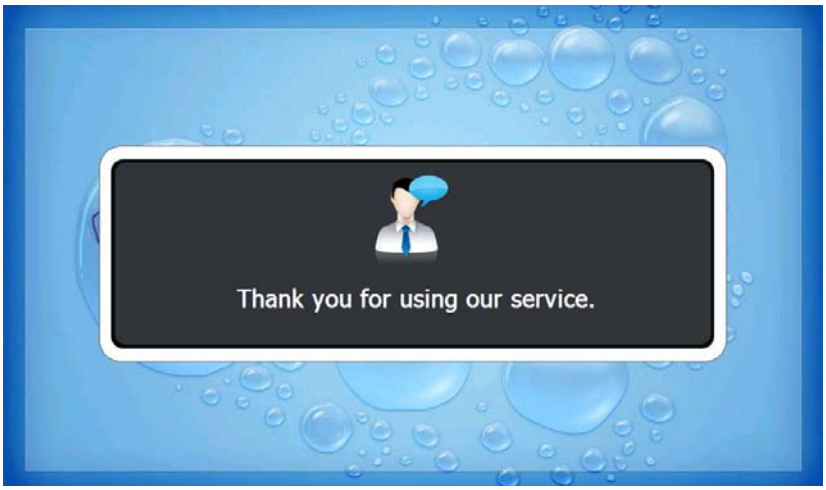
7.3.1.4.13 INQUIRY: PRINTING TRANSACTION AND TAKE RECEIPT

This screen shows that his/her transaction record is being printed and to notify the customer to take his/her receipt.



7.3.1.4.14 INQUIRY: THANK YOU

This screen shows that the transaction has been successfully completed.



7.4 Supported USB Memory and HUB

7.4.1 USB Memory

7.4.1.1 Supported USB Memory

No.	Vendor	Modem Model	Memory	Remarks
1	Sony Corporation (VID:0x054C)	Storage Media (PID:0x0243)	512MB	
2	SMI Corportation (VID:0x090C)	USB Disk (PID:0x1000)	512MB	
3	Kingston (VID:0x0951)	Data Traveler (PID:0x1603)	512MB	
4	pq1 (VID:0x3538)	USB Mass Storage Device (PID:0x0042)	512MB	
5	LEXAR Media (VID:0x05DC)	JD FIREFLY (PID:0A560)	1GB	
6	LG (VID:0x090C)	USB Driver (PID:0x1000)	1GB	
7	Memorex (VID:0x12F7)	TD Classic 003B (PID:0x1A00)	1GB	

☞ VID : Vendor ID, PID : Product ID

7.4.1.2 Supported Memory Specifications

1) File System: FAT

2) Number of supported drivers: 1

3) Memory: 2GB or below

☞ Example : 1) SANDisk 512MB is not supported because it has 2 file systems.
(CDFS and FAT)
2) Sony Storage Media is supported because it is FAT, 1 driver and 512 MB size.

7.4.2 Supported USB HUB Types

No.	Vendor	Modem Model	VID(HUB CHIP Vendor)	PID
1	Macsense Connectivity	UH-Mini4i	0x05E3(Genesys Logics inc)	0x0606
2	INLAND	Inland USB2.0 HUB	0x0409(NEC Corporation)	0x005A
3	VAKO International Inc	USB 2.0 Aluminum HUB	0x05E3(Genesys Logics inc)	0x0606
4	PPA Int'l	I.Connector(PPA 4Port HUB)	0x05E3(Genesys Logics inc)	0x0606
5	ZIO	USB 2040 Mini	0x05E3(Genesys Logics inc)	0x0606
6	DSP Inc	E-Star QU24WR	0x05E3(Genesys Logics inc)	0x0606

7.5 Advertisement Image Update Guide

7.5.1 Preparation

Software Update function in Nautilus Hyosung's Windows CE Machine is applicable to update advertisement images.

7.5.1.1 Supported Image Format

The following table describe the supporting format of welcome advertisement image

Model	Image Size	DPI	Color	File Format	Max Size (one image)
NH-2700	1024 X 600	72	24bit color	JPEG	300KB

The following table describe the supporting format of transaction advertisement image

Model	Image Size	DPI	Color	File Format	Max Size (one image)
NH-2700	690 X 225	72	24bit color	JPEG	160KB

The following table describe the file name and path of advertisement images. The path in blow table indicates image size is **1024 X 600**

Welcome Advertisement	File Name	Path
Screen #1	Adv_01.jpg	\ATM\Advertisement\1024_600
Screen #2	Adv_02.jpg	\ATM\Advertisement\1024_600
Screen #3	Adv_03.jpg	\ATM\Advertisement\1024_600
Screen #4	Adv_04.jpg	\ATM\Advertisement\1024_600
Screen #5	Adv_05.jpg	\ATM\Advertisement\1024_600
Screen #6	Adv_06.jpg	\ATM\Advertisement\1024_600

Transaction Advertisement	File Name	Path
Screen #1	TranAdv_01.jpg	\ATM\Advertisement\1024_600
Screen #2	TranAdv_02.jpg	\ATM\Advertisement\1024_600
Screen #3	TranAdv_03.jpg	\ATM\Advertisement\1024_600
Screen #4	TranAdv_04.jpg	\ATM\Advertisement\1024_600

Screen #5	TranAdv_05.jpg	\ATM\Advertisement\1024_600
Screen #6	TranAdv_06.jpg	\ATM\Advertisement\1024_600

7.5.1.2 Updating your own UpdateInfo.dat (Optional)

Advertisement images are updated using the software update program. While updating program proceeds, a line of message shows up in the main screen. If you want to change the message, just edit UpdateInfo.dat. The message length is up to 40 characters. A sample content is as follows. You can replace “A sample message.(V1.21)” to your own message.

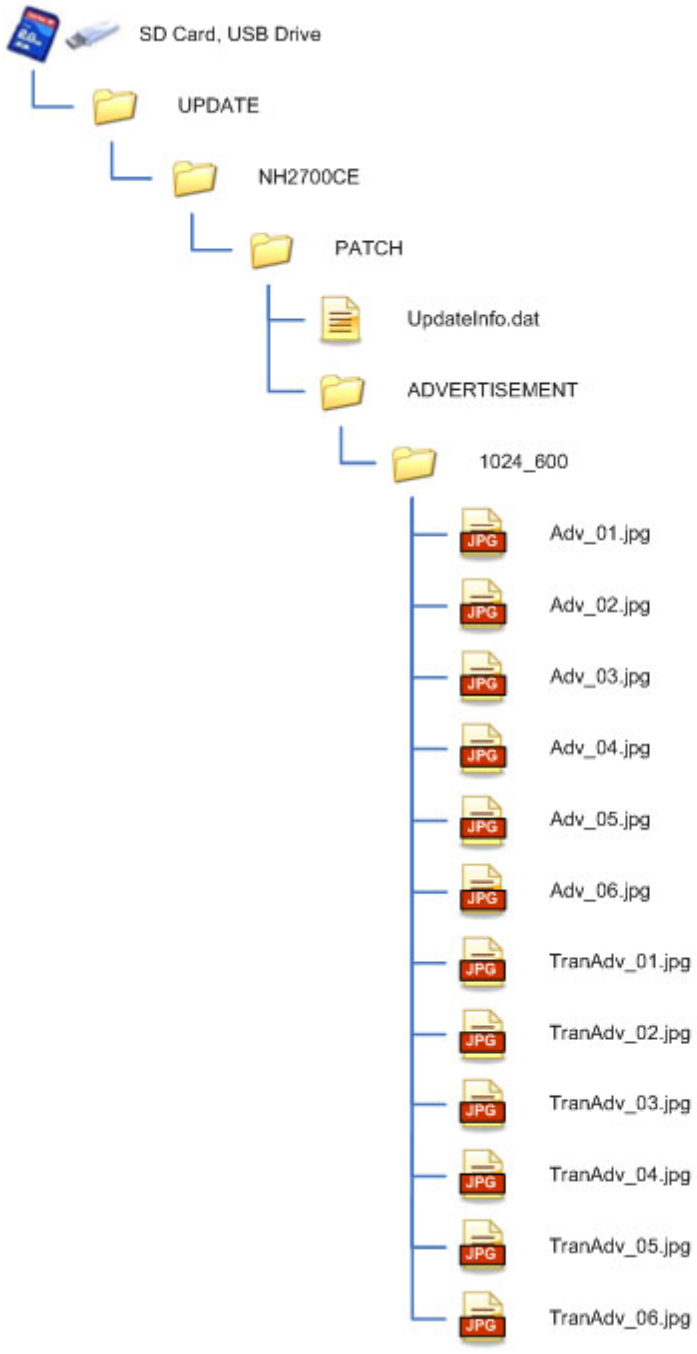
A sample message. (V1.21)

UpdateInfo.dat

7.5.1.3 Makeing SW Update media

1) Make “UPDATE” folder in the USB memory drive or the SD Card.
2) Make “NH2700CE” folder in the “UPDATE” folder.
3) Make “PATCH” folder in the “NH2700CE” folder.
4) Copy “UpdateInfo.dat” to under “PATCH” folder. (Optional)
5) Make “ADVERTISEMENT” folder in the “PATCH” folder.
6) Make “1024_600” folder in “ADVERTISEMENT” folder.
7) Copy all image files to under “1024_600” folder.(check the file name)

The following picture describes the layout of the USB Drive or SD Card.



7.5.2 Execute updating

7.5.2.1 Software Update

Advertisement images can be installed or updated by Software Update tool in supervisor menu.
You can update advertisement images by software downloading with MoinView server. Please refer to the MoinView manual for the detail downloading functionality.

1) Press SYSTEM SETUP button.

2) Press SYSTEM CONTROL button.

3) Plug the USB drive in USB slot and press left-top function key, “SOFTWARE UPDATE”.

4) Press left function key, “YES”.

When “YES” button is selected, new software in USB drive is transferred to a dedicated directory(ATM) and ATM will start to reboot automatically.

7.5.2.2 Enable Welcome Advertisement

You can enable or disable Welcomoe Advertisement in the supervisor menu.

1) Press CUSTOMER SETUP button

2) Press “WELCOME ADVERTISEMENT” button

3) Press “WELCOME ADVERTISEMENT” button

4) You can enable or disable Advertisement images to view by pressing “SCREEN” Key.

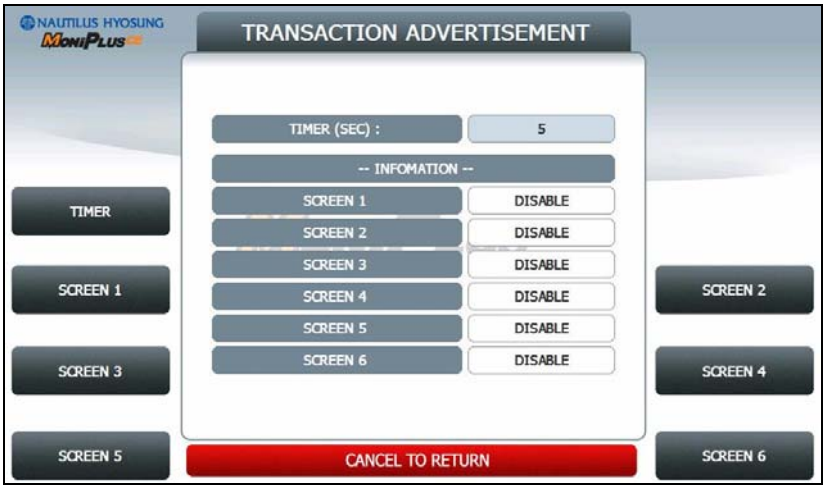
7.5.2.3 Enable Transaction Advertisement

You can enable or disable Transaction Advertisement in the supervisor menu.

1) Press CUSTOMER SETUP button

2) Press “ADVERTISEMENT” button

3) Press “TRANSACTION ADVERTISEMENT” button



5) You can enable or disable transaction dvertisement images to view by pressing “SCREEN” Key.

7.5.3 Making MoniView update media

All supported image formats refer to “Supported Image Format”

1) Make “PATCH” folder.
2) Copy “UpdateInfo.dat” to under “PATCH” folder. (Optional)
3) Make “ADVERTISEMENT” folder in the “PATCH” folder.
4) Make **“1024_600”** folder in “ADVERTISEMENT” folder.
5) Copy all image files to under **“1024_600”** folder. (check the file name)
6) Make comperessed file like the below layout.

The following picture describe the layout of Zip file

And you can download the “Patch.zip” using MoniView.

7.6 Background Image Update Guide

7.6.1 Preparation

Software Update function in Nautilus Hyosung's Windows CE Machine is applicable to update advertisement images.

7.6.1.1 Supported Image Format

The following table describe the supporting format of change background image

Model	Image Size	DPI	Color	File Format	Max Size (one image)
NH-2700	1024 X 600	72	24bit color	JPEG	300KB

The following table describe the file name and path of advertisement images. The path in blow table indicates image size is 1024 X 600

Background	File Name	Path
Screen #1	Back_1.jpg	\ATM\Screen\Backs\1024_600\Function(F/K)
Screen #2	Back_2.jpg	\ATM\Screen\Backs\1024_600\Function (F/K)
Screen #3	Back_3.jpg	\ATM\Screen\Backs\1024_600\Function (F/K)
Screen #4	Back_4.jpg	\ATM\Screen\Backs\1024_600\Function (F/K)
Screen #5	Back_5.jpg	\ATM\Screen\Backs\1024_600\Function (F/K)
Screen #6	Back_6.jpg	\ATM\Screen\Backs\1024_600\Function (F/K)

7.6.1.2 Updating your own UpdateInfo.dat (Optional)

Background images are updated using the software update program. While updating program proceeds, a line of message shows up in the main screen. If you want to change the message, just edit UpdateInfo.dat. The message length is up to 40 characters. A sample content is as follows. You can replace "A sample message.(V1.21)" to your own message.

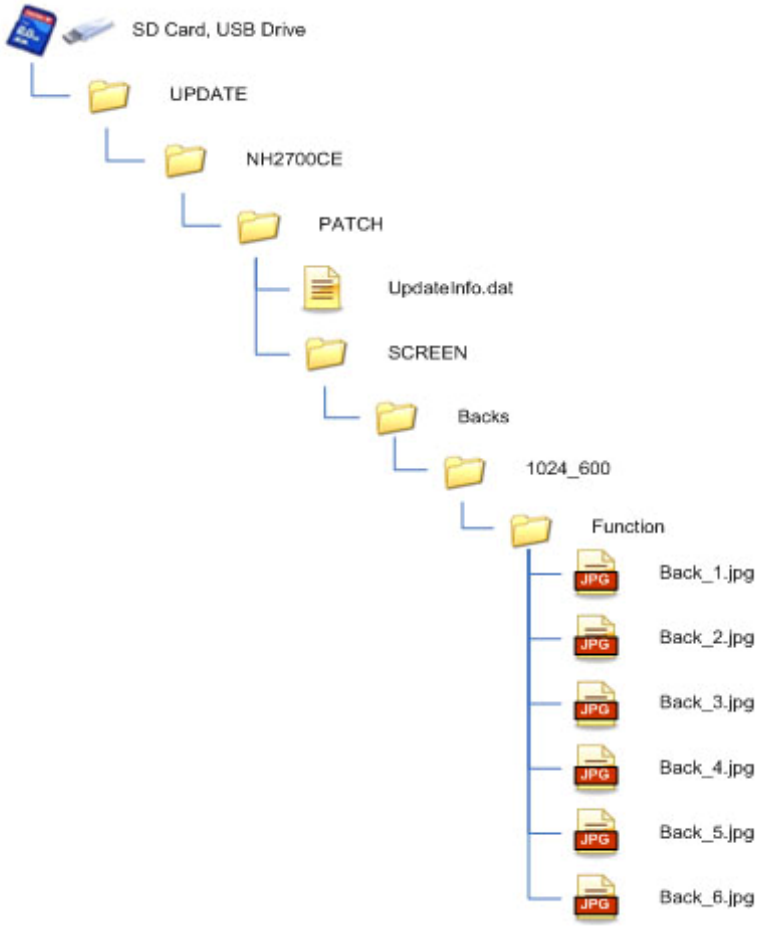
```
A sample message. (V1.21)
```

UpdateInfo.dat

7.6.1.3 Makeing SW Update media

1) Make “UPDATE” folder in the USB memory drive or the SD Card.
2) Make “NH2700CE” folder in the “UPDATE” folder.
3) Make “PATCH” folder in the “NH2700CE” folder.
4) Copy “UpdateInfo.dat” to under “PATCH” folder. (Optional)
5) Make “SCREEN” folder in the “PATCH” folder.
6) Make “Backs” folder in “SCREEN” folder.
7) Make **“1024_600”** folder in “Backs” folder.
8) If ATM is function type, make “Function” folder in **“1024_600”** folder
9) Copy all image files to under “Function” or “ Touch” folder.(check the file name)

The following picture describes the layout of the USB Drive or SD Card.



7.6.2 Execute updating

7.6.2.1 Software Update

Advertisement images can be installed on or updated by Software Update tool in supervisor menu. You can update advertisement images by software downloading with MoinView server. Please refer to the MoinView manual for the detail downloading functionality.

1) Press SYSTEM SETUP button.

2) Press SYSTEM CONTROL button.

3) Plug the USB drive in USB slot and press left-top function key, “SOFTWARE UPDATE”.

4) Press left function key, “YES”.

When “YES” button is selected, new software in USB drive will be transferred to a dedicated directory(ATM) and ATM will start to reboot automatically.

7.6.2.2 Setup change background

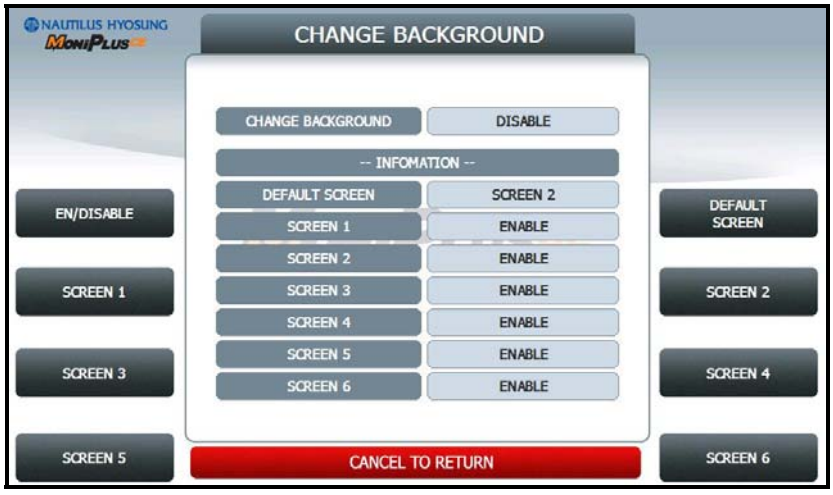
You can set up change background option in the supervisor menu.

1) Press CUSTOMER SETUP button

2) Press “OPTIONAL FUNCTION 2” button

3) Press “SCREEN SERVICES” button

4) Press “CHANGE BACKGROUND” button



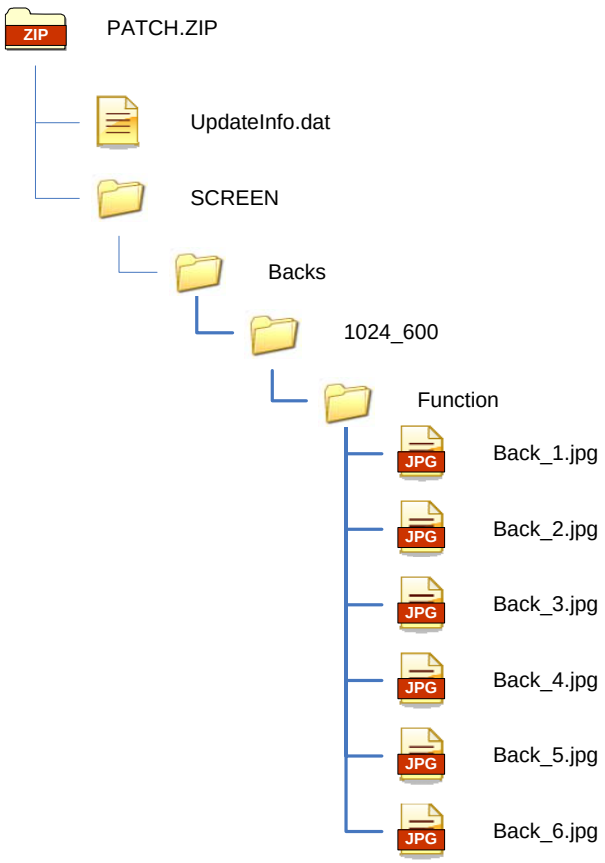
5) You can set up change background images to view by pressing “SCREEN” Key or “DEFAULT SCREEN”.

7.6.3 Making MoniView update media

All supported image format refer to “Supported Image Format”

1) Make “PATCH” folder.
2) Copy “UpdateInfo.dat” to under “PATCH” folder. (Optional)
3) Make “SCREEN” folder in the “PATCH” folder.
4) Make “Backs” folder in “SCREEN” folder.
5) Make **“1024_600”** folder in “Backs” folder.
6) If ATM is function type, make “Function” folder in **“1024_600”** folder
7) If ATM is touch type, make “Touch” folder in “1024_600” folder
8) Copy all image files to under “Function” or “ Touch” folder.(check the file name)
9) Make comperessed file like the below layout.

The following picture describe the layout of Zip file



And you can download the “Patch.zip” using MoniView.

7.7 Weather Service Guide

ATM from the idle screen, a feature that will display weather information.Weather information set up and updated only by MoniView, ATM displaying weather information for today and tomorrow that gives How to register and update detailed weather information, please see the manual of MoniView.

Ex) Weather Service Display Screen