HYOSUNG

1800 POS

Operator Manual

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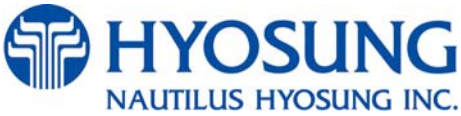
NH-1800 Operator Manual



Revision Record

Date	Page	Version	Description of Change
August 2007	All	1.0	New Publication
January 2008	Chapter 2,3,4,5,7	1.1	- Modification of pictures in Chapter 3, 4, 5. - Chapter 7 : Addition of AP Software - Updating “2.2 Description of Precaution Symbols” in the Chapter2.
July 2008	Chapter 1,3,4,6	1.2	Adding optional cash dispenser (Supporting 2000 cassette/ 2x2000cassette) and card reader (Supporting IC card)
February 2010	All	1.3	- Changing CI of Nautilus Hyosung. - Changing images in 3-4, 4-6, 5-7, 5-12, 5-13, 5-23 pages. - Changing temperature specification in chapter 3, 7.

Table of Contents

Chapter 1. Introduction

1. Introduction

1.1 About the NH-1800

The NH-1800 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. The NH-1800 is easy to use, easy to service and is able to support customer's needs.

1.2 Features

H/W Features

- Mechanical combination lock
- Electronic combination lock (optional)
- 7 inch wide TFT LCD
- 480 × 234 Resolution of back-lit LCD
- Dial-up telephone line instead of expensive leased line
- 1,000 new notes capacity (USD)
- 2,000 /4,000 (2CSTx2,000) new notes cassette (optional)
- DIP type magnetic card reader
- Support IC card (EMV Level-1, optional)
- Automated receipt printer paper loading
- Thermal receipt printer for high speed printing with graphics
- Modular design for easy maintenance

Functional Features

- Electronic journal with up to 2,000 transactions, up/down loading supported
- Supports English, Spanish, French, Korean and Japanese
- Detailed average history report feature
- Quick setup feature
- Advertisement feature for store promotion
- Error code description for easy to service

1.3 What is in this manual

This NH-1800 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.

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.

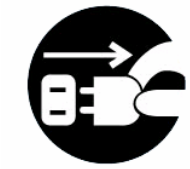
Please read the following instructions before operating equipment.

- 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.

Symbol	Description
	**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.

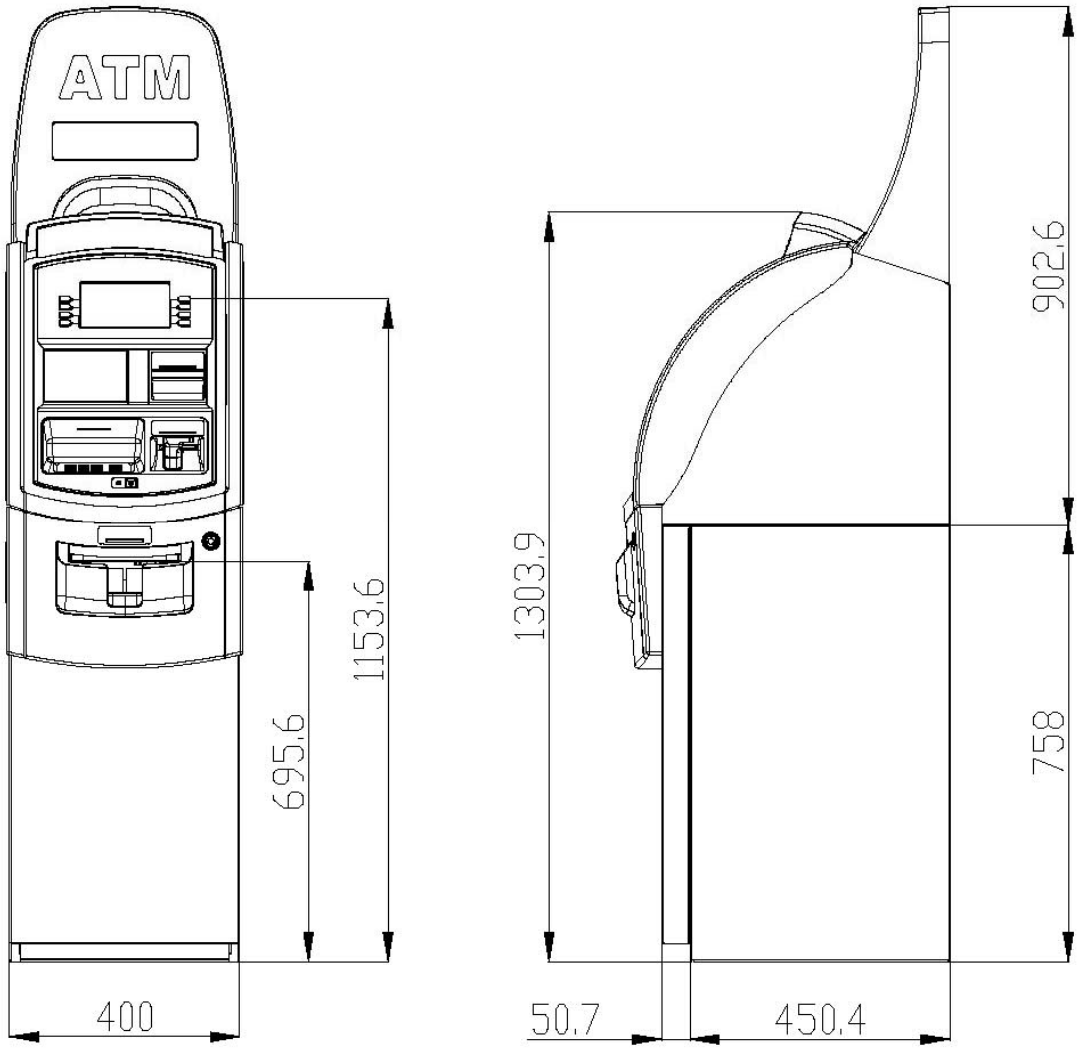
CAUTION!!

1. TO REDUCE THE RISK OF FIRE, USE ONLY No. 26 AWG OR LARGER TELECOMMUNICATION LINE 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

Chapter 3. Hardware Specifications

3. Hardware Specifications

3.1 Dimensions



Width x Length x Height : 410 x 580 x 1304 (mm)

Fig. 3.1 NH-1800 Dimension

3.2 Component Locations

➢ **Illuminated Topper**

➢ **Printer**
3” Thermal Printer
Electronic journal

➢ **Display**
7” (480 x 234) TFT Color LCD
4 x 2 Function Key(NDC)

➢ **Card Reader**
DIP Type

➢ **Keypad**
4x4 Numeric key

➢ **Voice Guidance for ADA**

➢ **Safe Security**
UL291 Business Hour
Mechanical combination lock and key lock
Optional Electronic lock and key lock Cencon 2000 lock

➢ **Cash Dispenser**
Spray tray Type

➢ **Communication**
TCP/IP, Dial-up

➢ **Front Access**

➢ **ADA Compliance**

Fig. 3.2 Component Location

3.3 LCD & Customer Keypad

Fig 3.3 LCD & Customer Keypad

LCD

- Screen Size : 7.0 ″
- Wide TFT Color
- Resolution : 480 × 234 pixels

Keypad

- 10 Alphanumeric , ◂ , ▸ , CANCEL, CLEAR, ENTER, BLANK Keypads
- 8 Function Keys
- Each Keypads has integral raised Braille symbols

ADA Port (optional)

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

3.4 Cash Dispenser Unit

1,000 notes Cash Dispenser

2000 notes x 2cassette Cash Dispenser

Fig. 3.4 Cash Dispenser Unit

Features

- Dispensing speed : 4 notes/second
- Capacity of 1,000 new notes
- Capacity of 2,000/4,000(2CSTx2,000) new notes (optional)
- Reject bin with capacity of 200 notes
- Low level cassette detection
- Double note detect module
- Dispensing way : Spray tray type

3.5 Receipt Printer

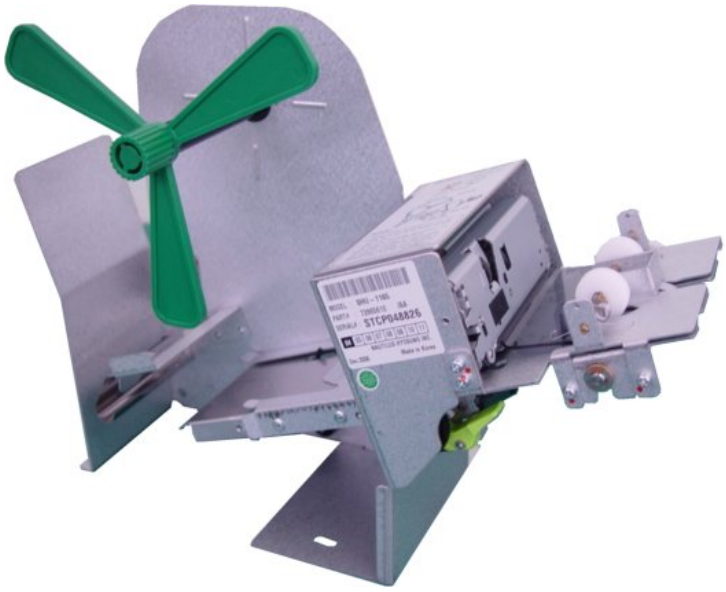


Fig. 3.5 Receipt Printer

Features

- 3" Thermal line printer with cutter
- 100mm/sec Printing Speed
- Semi-Automatic roll paper setting
- Support graphics / Bar Code printing
- See Appendix : RECEIPT PAPER SEPECIFICATIONS

3.6 Magnetic Card Reader

Dip type Card Reader

Card Reader supporting IC Card

Fig. 3.6 Magnetic Card Reader

Features

- Dip type Card Reader (ISO Track 1 & 2)
- Support IC card, EMV ready (optional)
- Card read timing : Ejection
- Readable ejection speed : 6 inches ~ 39.3 inches/second
- MTBF : 1 million passes
- See Appendix : MAGNETIC CARD SPECIFICATIONS

☞ MTBF : Mean Time Between Failures

3.7 Main Control Board

Fig. 3.7 Main Control Board

Features

- CPU : ARM-9
- Memory : SDRAM (8MB), Flash Memory (16 MB) , NV-RAM : 256 KB
- Operating system : POS
- Serial ports : 5 Ports
- SD card : 1 Port
- Modem : 56 Kbps dial-up

3.8 Operating Environment

Power Requirements

100 ~240 Vac ±10% 3.2A 50/60Hz , 100 Watt

Power Connections

The NH-1800 ATM must be connected to a dedicated power circuit. This circuit must consist of **LINE**, **NEUTRAL** and **GROUND** leads connected directly to the power circuit breaker panel. This circuit cannot be shared with any other equipment.

Phone Line Requirements

The NH-1800 ATM must be connected to a dedicated phone line. This line must be a direct dial “tone” or “pulse” line that is equipped with a standard telephone wall jack (RJ-11). This line cannot be shared with any other equipment at the location.

Temperature

- In storage : 14°F - 140°F (-10°C ~ 60°C, 15°C/H)
- While operating : 41°F - 104°F (5°C ~ 40°C, 10°C/H)

Humidity

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

Chapter 4. Installation

4. Installation

4.1 Installation Requirements and Necessary Tools

- Installation condition and space

Following conditions should be met before installing equipment.

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

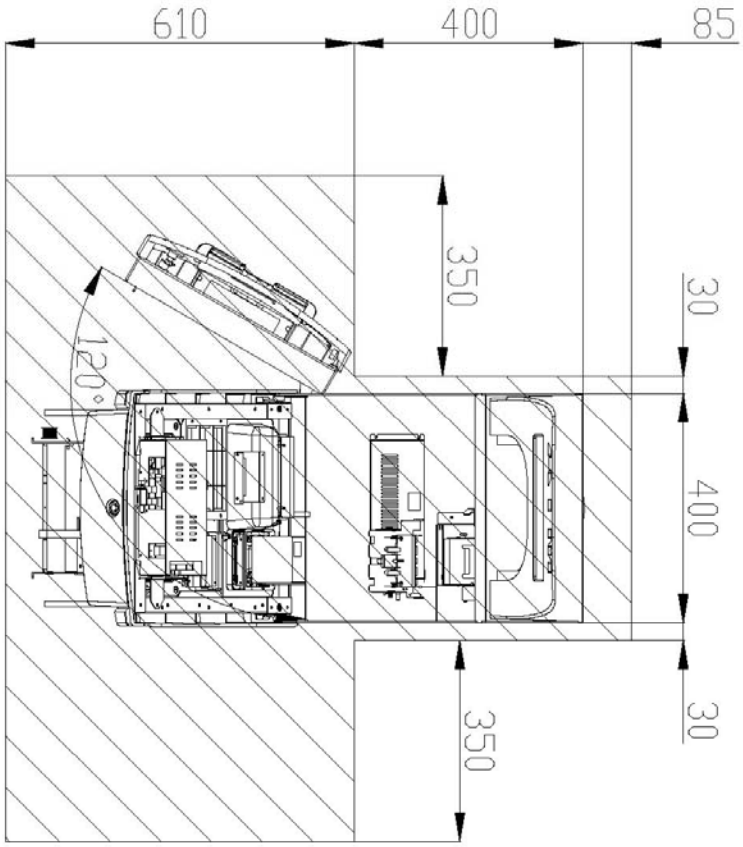


Fig. 4.1 Installation space #1 (Plane view)

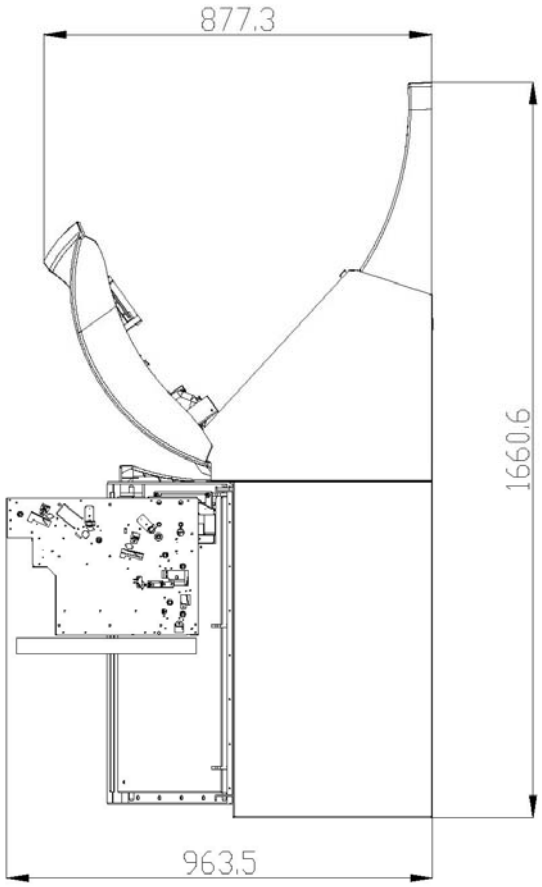


Fig. 4.2 Installation space #2 (Side view)

- 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

4.2 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. 4.3)
(Be careful when cutting the straps.)
3) Use an appropriate tool to remove the nails from the palette. (refer to Fig. 4.4)
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.

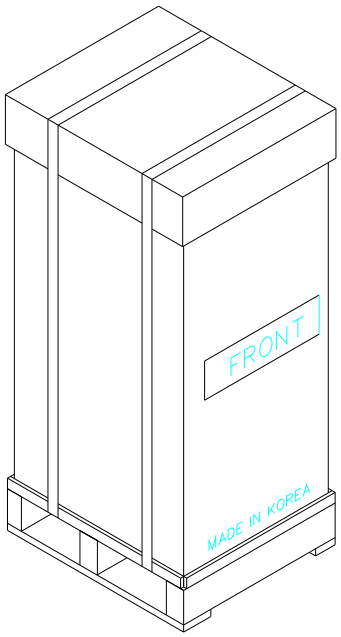


Fig. 4.3

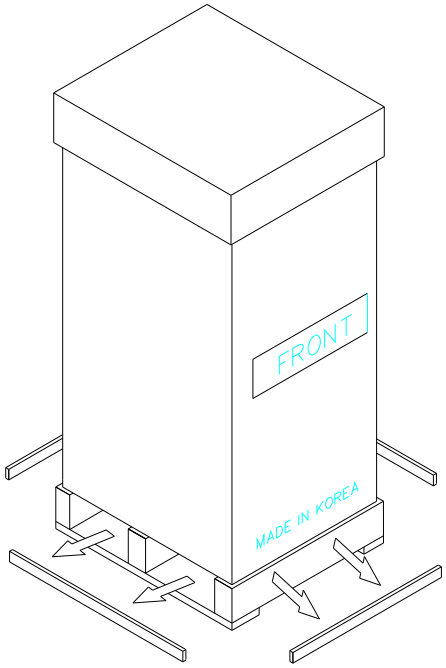


Fig. 4.4

4.3 Physical Installation

To install the NH-1800 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. 4.5)
   Place the system on a flat surface. Be careful when opening the top or bottom of the machine s it can be off balance
2) Place the Anchor nuts into the ground according to the anchor bolts locate sheet.
   (4 places)
3) Place the NH-1800 on top of the sheet.
4) Open the Security cover with the key provided.
5) Using the supplied combination (factory preset at 50-25-50) open the Security Door.
   This combination should be changed as soon as possible. Refer to Appendix B for instructions on changing the lock combination.
6) After the anchor nuts are in place according to the anchor holes on the bottom of the NH-1800, tighten the anchor bolts tightly. (refer to Fig. 4.6)

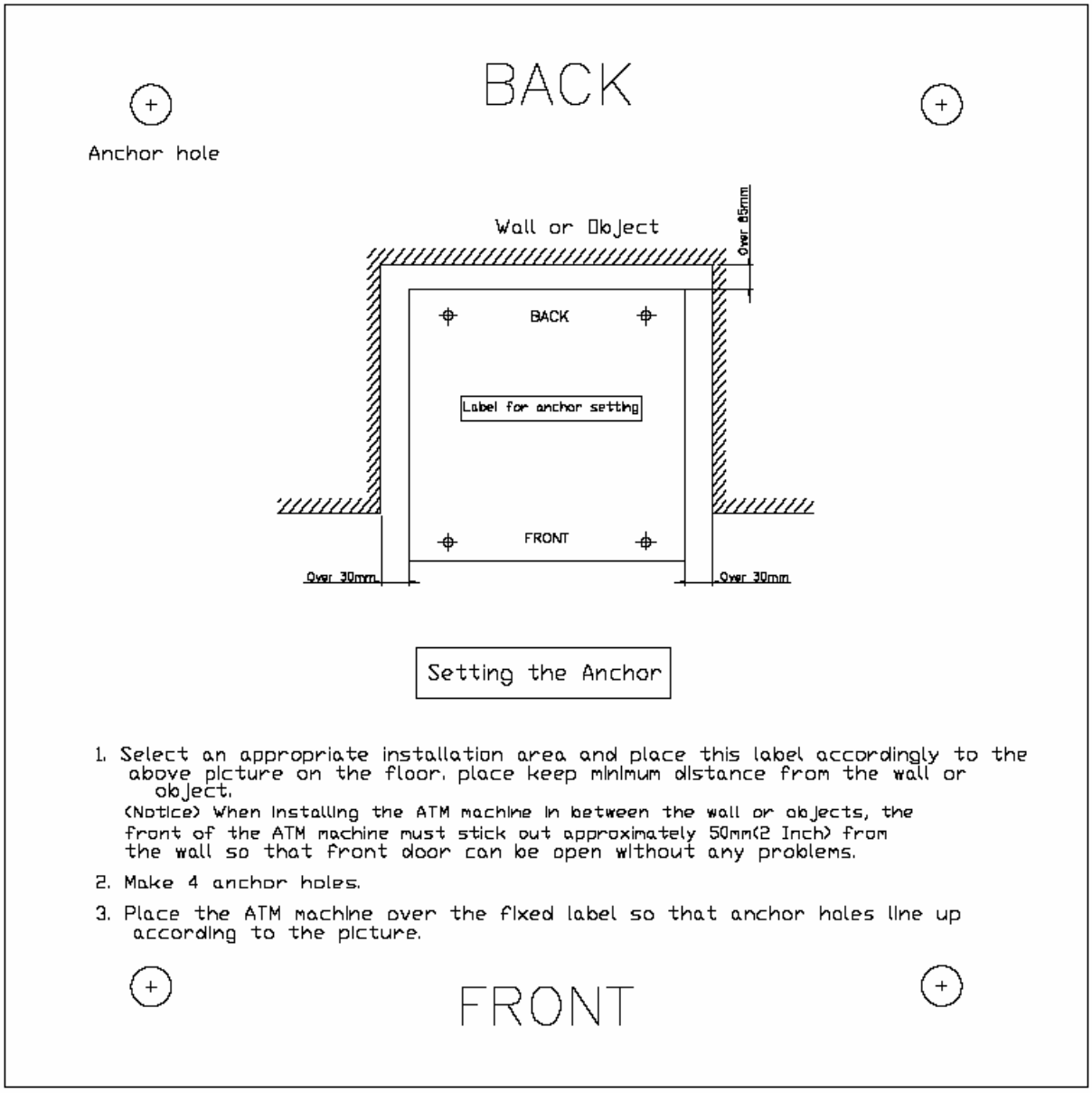

BACK
Anchor hole
Wall or Object
Over 85mm
BACK
Label for anchor setting
FRONT
Over 30mm
Over 30mm
Setting the Anchor
1. Select an appropriate installation area and place this label accordingly to the above picture on the floor. place keep minimum distance from the wall or object.
(Notice) When installing the ATM machine in between the wall or objects, the front of the ATM machine must stick out approximately 50mm(2 Inch) from the wall so that front door can be open 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.
FRONT

Fig. 4.5

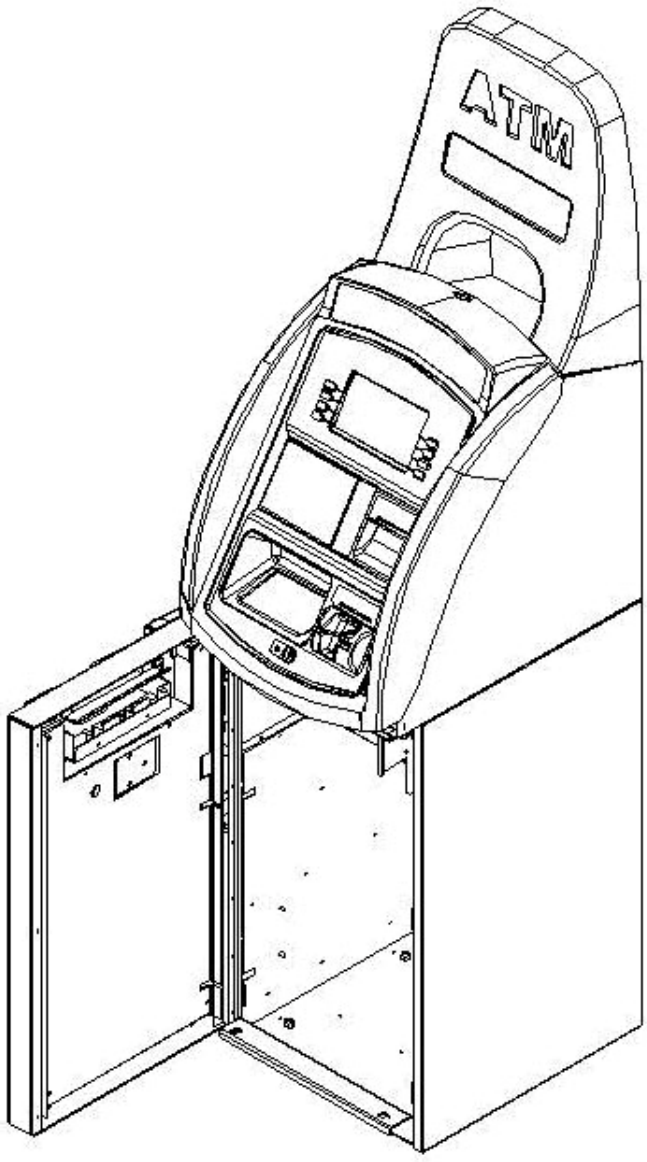


Fig. 4.6

4.4 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.
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 Dispensing 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. For more detailed information refer to Chapter 6 and Chapter 7.

Chapter 5. Operating Instructions

5. Operating Instructions

5.1 Opening and Closing the Door

5.1.1 Opening and Closing the Security Cover and Door

1) Turn the Security Cover key clockwise to open the Security Cover.

2) To unlock the Combination Lock, please refer to 5.1.2 and 5.1.3.

3) Turn the Security Door Handle counterclockwise, then pull the Security Door to open it.

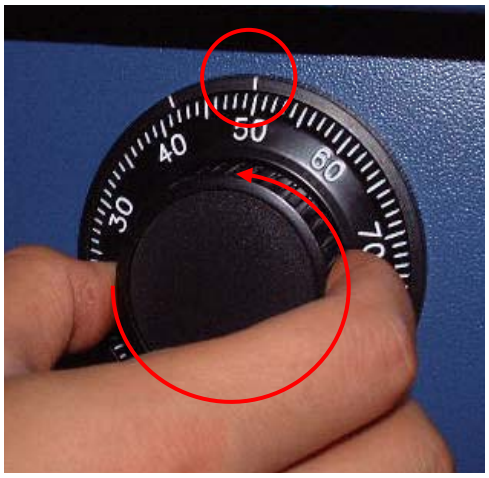
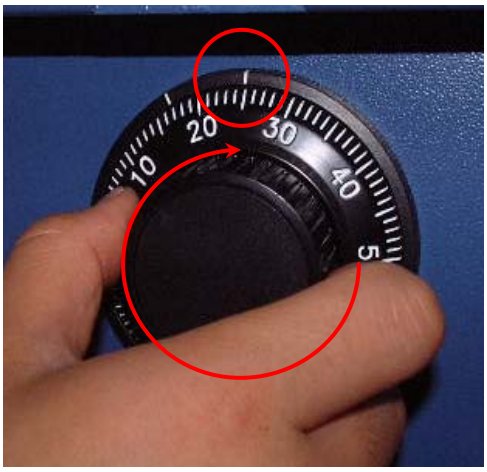
4) Use the reverse order of above description to close the Security cover and door.

5.1.2 How to open the mechanical combination lock

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

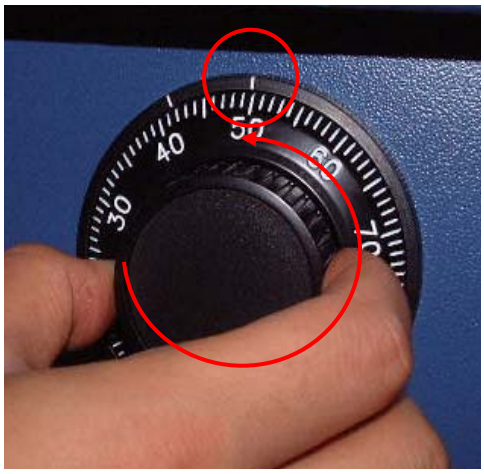
1) Turn to the counterclockwise for more than four times and set to “50.”

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.

5.1.3 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.5.1.

4) Turn to the clockwise and stop at “25” at the third time as shown in the Fig.5.2.

5) Turn to the counterclockwise and stop at “50” at the second times as shown in the Fig.5.3.

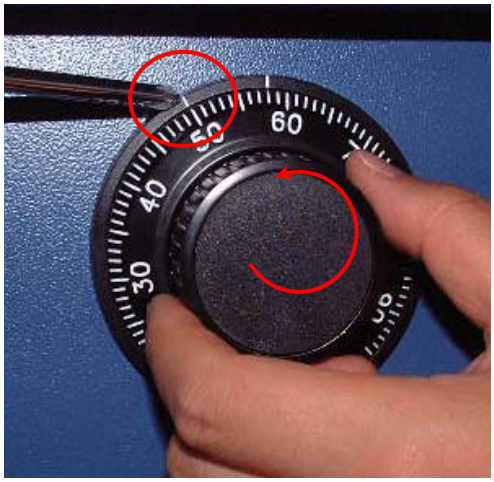


Fig.5.1

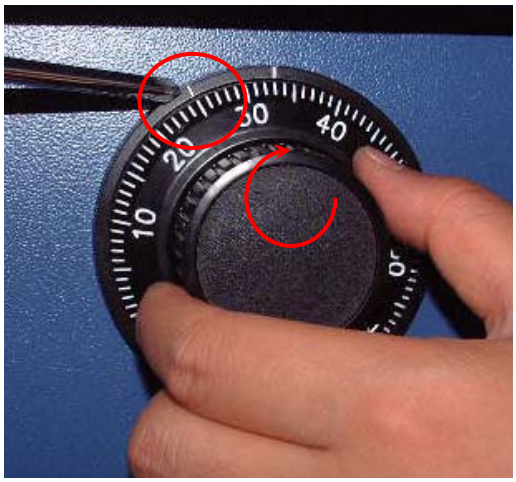


Fig.5.2

Fig.5.3

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.5. 4) inside the safe door and turn to the clockwise by 90 degrees (Fig.5.5).

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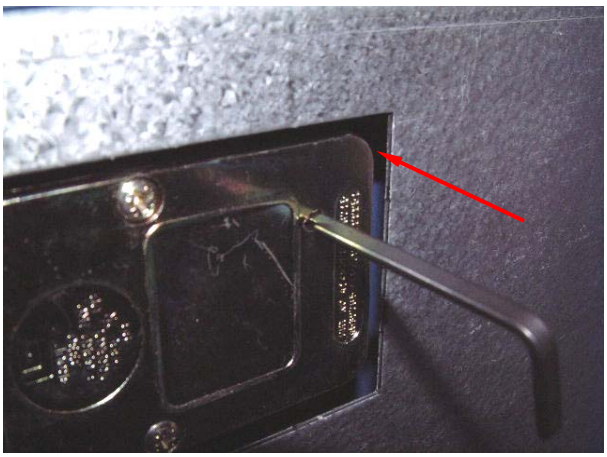


Fig.5.4

Fig.5.5

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.5.6

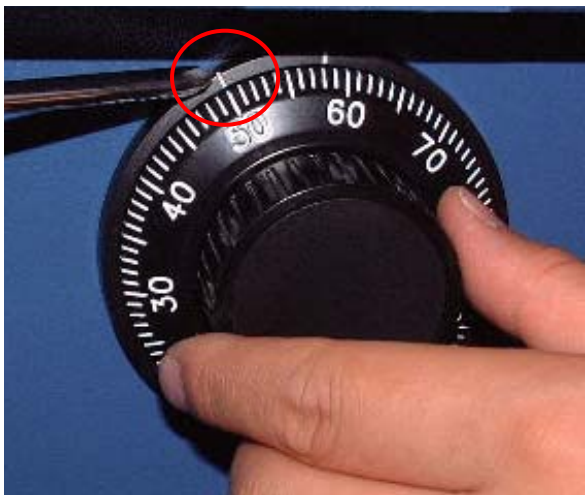


Fig.5.7

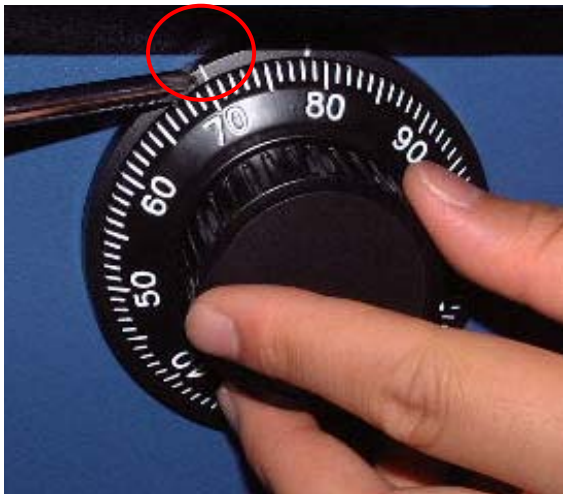


Fig.5.8

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.5.9.

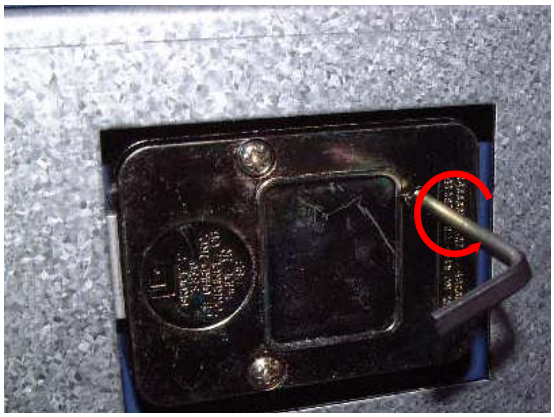


Fig.5.9

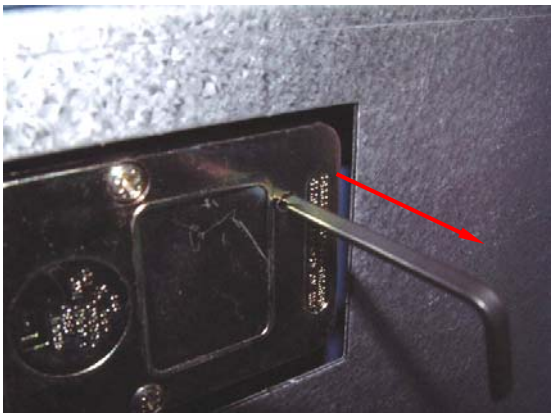


Fig.5.10

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.

5.1.4 Opening and Closing the Front Panel

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

2) Please pull the Front Panel outward.

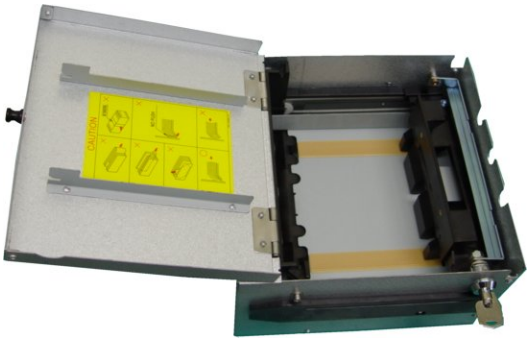
3) Use the reverse order of above description to close the Front panel.

5.2 Replenishing the Cash Cassette

1) Open the Security Cover and Door.
(Please see 5.1.1 Opening and Closing the Security Cover and Door.)

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

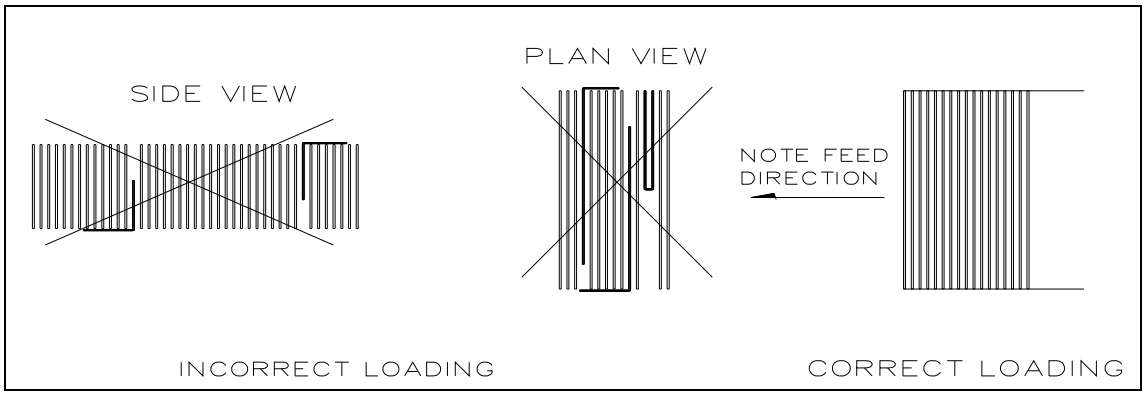
3) Place the cash cassette on a flat level platform and turn the cassette key clockwise to unlock the cassette cover. Then lift the cassette cover.

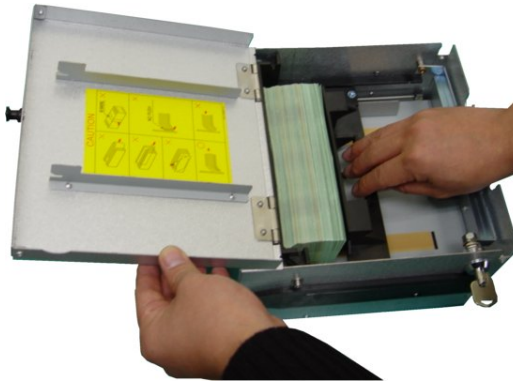


4) Pull the cash plate back until it is locked against the cash plate latch. And then, replenish the cash cassette. (Refer to note below.)

NOTE :

1. Fan the notes so that the notes do not stick together.
2. Remove all notes with holes or notes that are torn.
3. Unfold the folded notes.
4. Place the notes correctly. Refer to below figure.





5) After replenishing the cash cassette, release the cash plate from the cash plate latch and allow it gradually to take up its position behind the notes.

6) After closing the cassette cover, turn the key counterclockwise

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

8) Close the Security Door.

5.3 Emptying the Reject Bin

1) Open the reject bin cover.

2) Remove the notes in the reject bin.

3) Close the reject bin cover.

[Precaution!]

Don’t 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

5.4 Loading the Receipt Paper

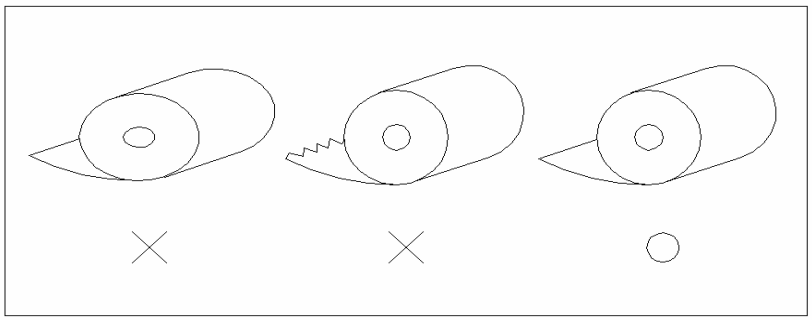
1) Open the Front Panel with key and pull this outward completely with hands. (Please see the Chapter 5.1.2)

2) Prepare the new paper roll. Please see the NOTE described below

3) Remove the green paper holder by carefully pulling it off and add the receipt paper into the spindle. And then insert the green paper holder tightly again to fix it.

NOTE:

1. Make sure the roll is in its proper roll form. (A deformed roll may cause jamming problems)
2. When replacing the new roll, make sure the end of the roll paper has a clean cut. (See the below figure.)



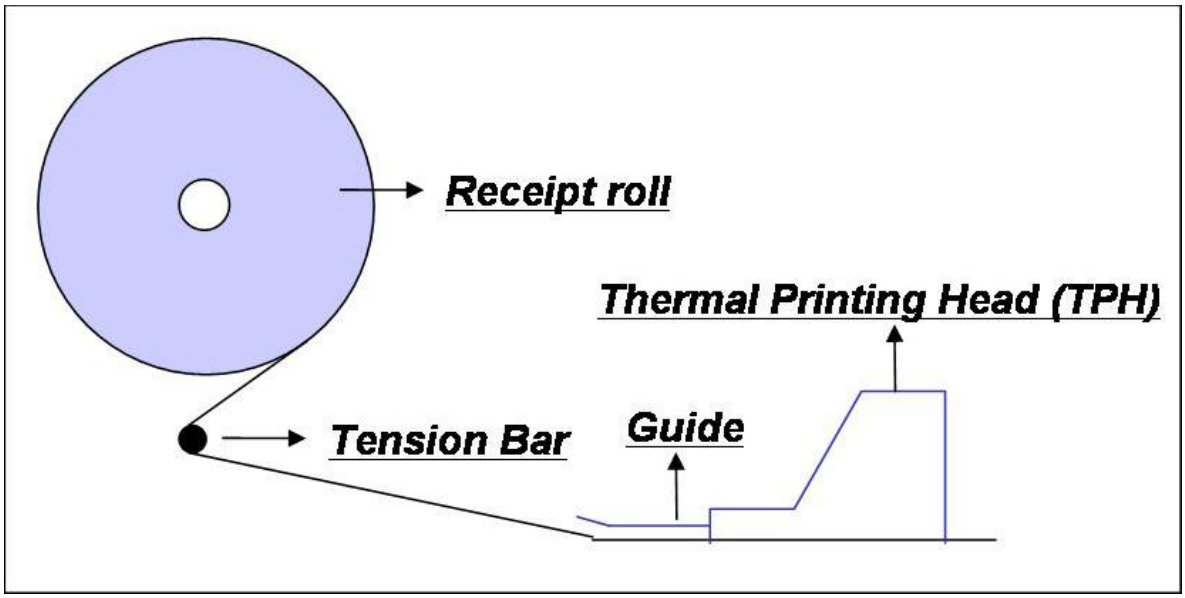
4) The shiny side of the paper should be faced up to be printed properly and the metallic tension guide should be surrounded with paper to reduce the tension during feeding

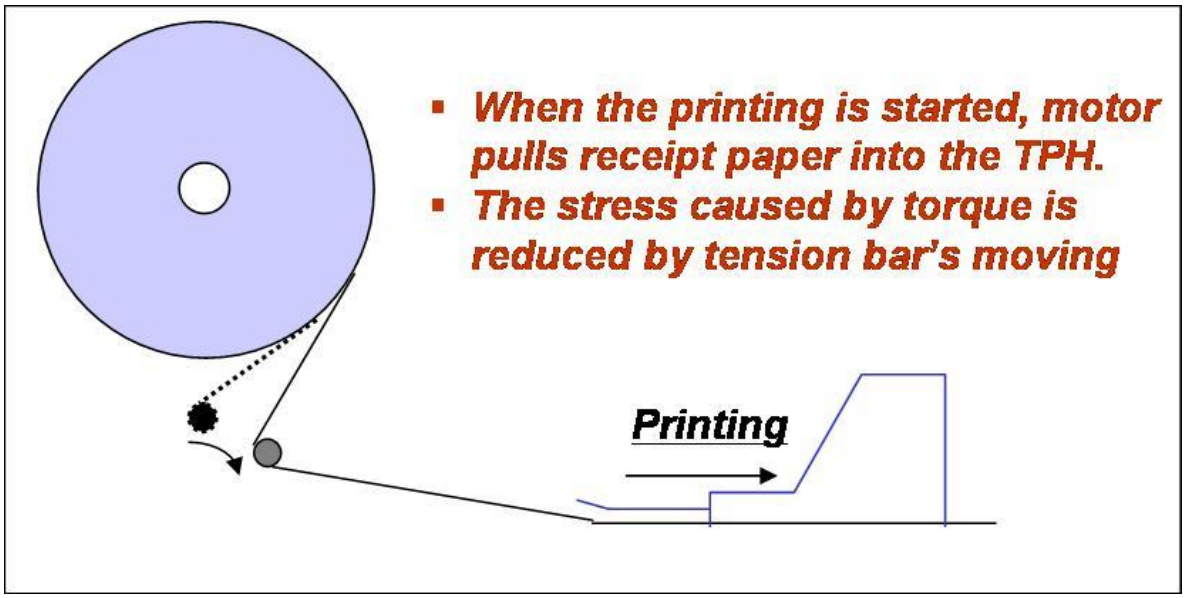
5) Insert the leading edge of paper into the loading guide of the receipt printer slowly. When the machine is initialized, the paper is going to start feeding

6) If the paper does not feed at all during initializing, make sure that paper has a CLEAN CUT at the end and the green lever behind the transport path is on its right place (It must be lifted up).

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

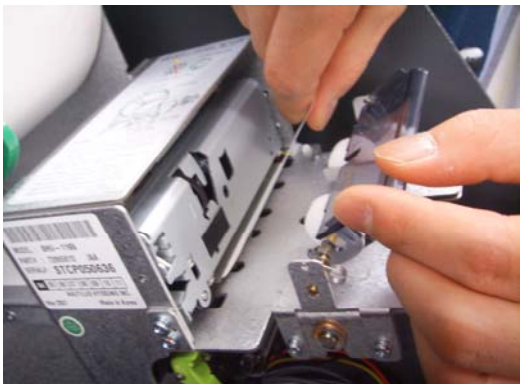
NOTE: THE BASIC MECHANISM OF RECEIPT PRINTER





5.5 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 the green lever down 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. Please make sure to return the green lever to its right place one more time before closing the Front Panel. When finished loading paper, close the Front Panel and remove the key.

5.6 How to Clear Jam

1) Turn power off first.
Pull the rail of cash dispenser outward on the bottom of the cash dispenser.

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.

[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.

Optional A. 2,000 notes Cassette (2x2,000)

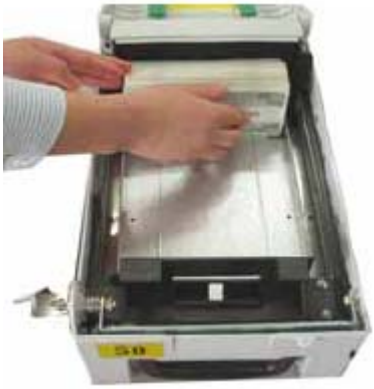
A.1 Replenishing the Cash Cassette

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)

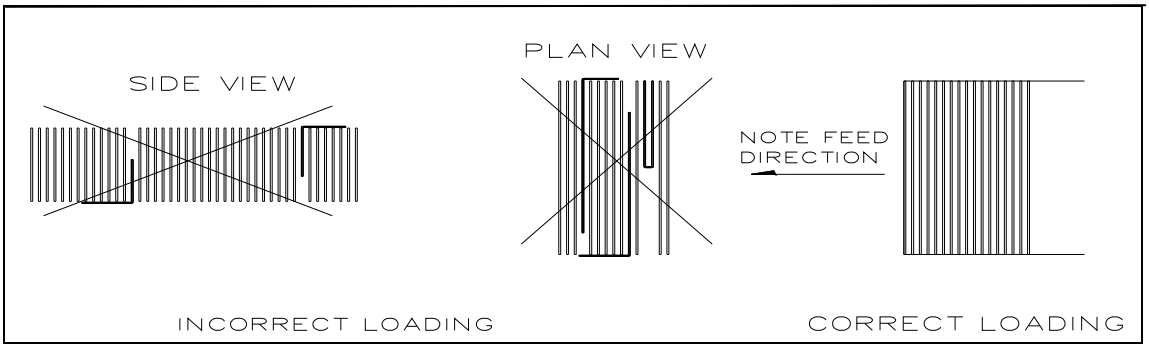
[Precaution!]

Don't 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.

NOTE :

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.**



6) Close the cassette cover and turn the cassette key counter clock-wise 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.

A.2 Emptying the Reject Bin

1) Insert the reject box key, turn it clockwise.

2) Open the lid in reject box.

3) Take bills in reject box and turn the key counter clockwise to close the box lid.

[Precaution!]
Don't 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

A.3 How to Clear Notes Jam

1) Pull the rail of CDU outward while pressing the white button on the CDU.

2) Lift up the upper cover of CDU.

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

4) Take out the jammed note carefully.

[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.

5) Remove the cash cassettes.

6) Remove the jammed note inside CDU body carefully.

[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.

Chapter 6. Operator Functions

6. Operator Functions

6.1 Basic System Operation

6.1.1 Accessing the Operator Function Menu

6.1.1.1 General Method

1) Turn on the NH-1800. The system will automatically be initialized and run the status check once when the NH-1800 is turned on. The system will attempt to connect to the host.

2) If the host connection is established, the display will show “IN SERVICE” screen.
Press the CANCEL, CLEAR, ENTER key simultaneously and then press 1, 2, 3 keys in order.

3) Enter the Operator Password and press ENTER. If the wrong password is entered, the screen will be back to “ENTER PASSWORD” screen.
The factory default Operator Password is “555555”.

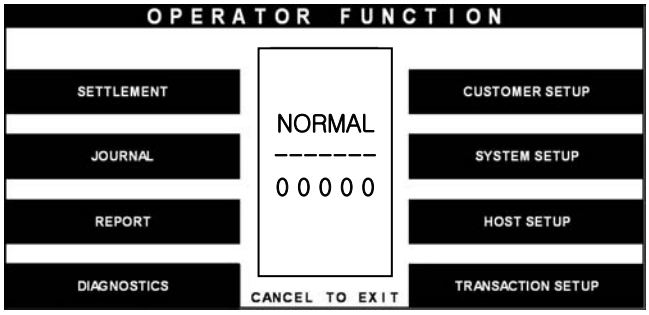


Fig. 6.1 General Method

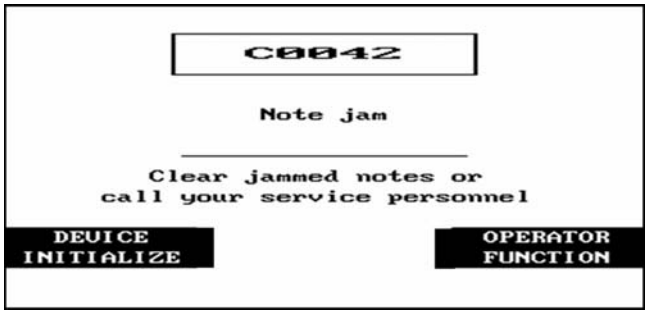
4) If the correct password is entered, the OPERATOR FUNCTION menu will be displayed.

6.1.1.2 When an Error Occurs

1) When an error occurs, please press CANCEL, CLEAR, ENTER simultaneously and then press 1, 2, 3 in order.

ote: 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

2) “ENTER PASSWORD” will be displayed and enter the Operator Password.



3) When the screen is in current display, press the OPERATOR FUNCTION key to access the OPERATOR FUNCTION.

Fig. 6.2 When an Error Occurs

6.1.2 How to Use Keypad

This section will explain the basic operation of the Keypad.

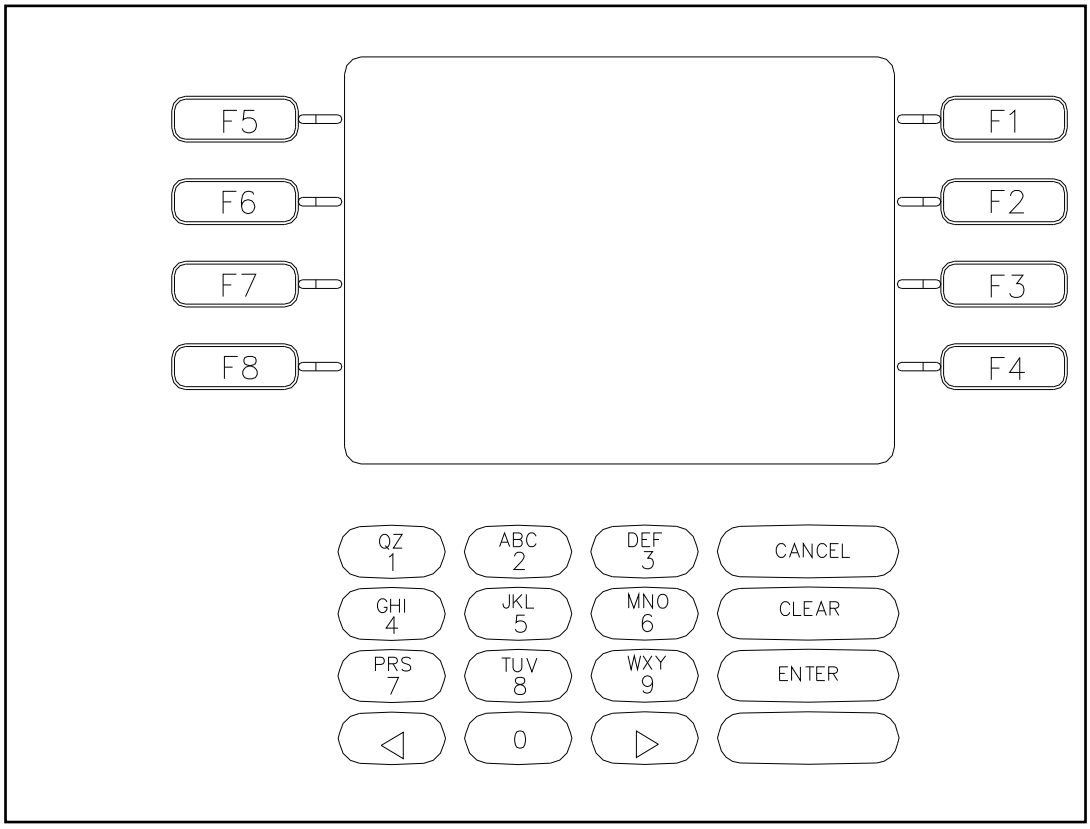


Fig. 6.3.Keypad

Shift Status				0	1	2	3	4	5	6	7	8	9
F5	Alpha	F6	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
	Numeric		Don't care	0 ( )	1 [ ]	2 { }	3 < >	4 , .	5 ! $	6 ‘ “	7 % *	8 : ;	9 ? /
	Table		Don't care	The character on the current cursor position on the screen will be selected.									

Fig. 6.4 Keypad Character Table

How to Enter the Character

a. The Keypad Character Table of Fig. 6.4 will appear on the bottom of the screen in all keypad input screens.
b. F5 key gives the option for Alpha or Numeric, Table mode. Default is Alpha.
c. F6 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. Keys are in toggle fashion such as, when key “1” is pressed once it is “SPACE”, pressed twice it is “Q”, pressed third time it is “Z” when in the Alpha mode. When the desired character is selected, press ENTER.
f. ◂ , ▸ keys move the cursor position in the Alpha or Numeric mode. In the Table mode ◂ , ▸ keys are used to select the character.
g. F1 key is used to clear the whole screen and returns the cursor to its initial position.
h. F2 key is used to clear the current line.
i. F3 key is used to ignore the changes and to exit.
j. F7 key is used to save the current changes and to exit.

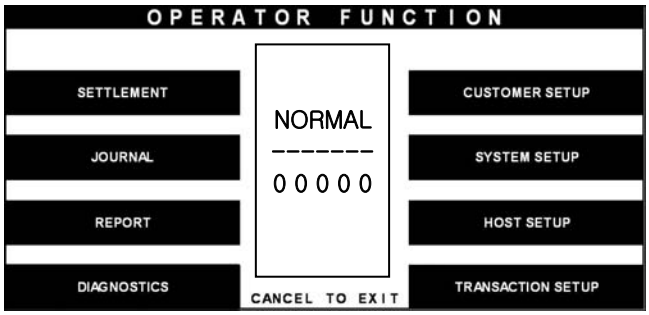
6.2 Settlement

The Settlement Function of the Operator Function includes the following :

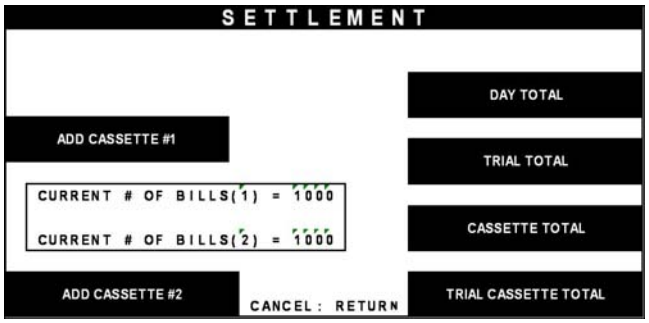
DAY TOTAL
CASSETTE TOTAL
SUBTOTAL (TRIAL) DAY TOTAL
SUBTOTAL (TRIAL) CASSETTE TOTAL
ADD CASSETTE #1

6.2.1 Day total

Accessing the DAY TOTAL



1) Select ‘SETTLEMENT’ in the ‘OPERATOR FUNCTION’ menu.



2) Select ‘DAY TOTAL’ in the SETTLEMENT menu.

3) After the information is downloaded from the processor, the Day Total information will be printed from the Receipt Printer. If the GOOD message appears, press “ENTER KEY”

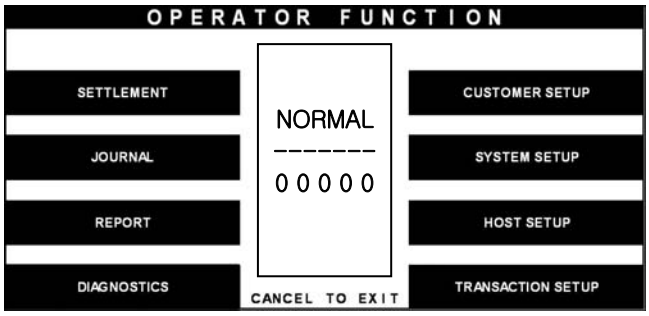
Fig. 6.5 DAY TOTAL

Function Description

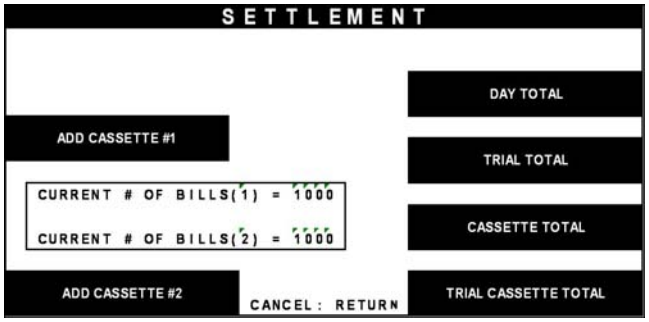
The DAY TOTAL includes all information of the ATM terminal totals and the host totals. If the host can not be connected, an “ERROR” message will be displayed and only the ATM terminal totals will be printed without verification with the host. All information will be deleted after the use of this function.

6.2.2 Cassette total

Accessing the CASSETTE TOTAL



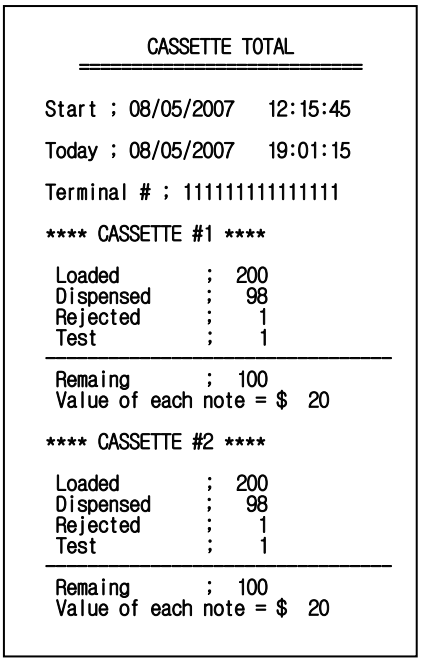
1) Select ‘SETTLEMENT’ in the ‘OPERATOR FUNCTION’ menu.



2) Select ‘CASSETTE TOTAL’ in the SETTLEMENT menu.

The Cassette Total information will be printed from the Receipt Printer. If the GOOD message appears, press “ENTER KEY”.

Fig. 6.6 CASSETTE TOTAL



```
          CASSETTE TOTAL
          ==============

Start ; 08/05/2007   12:15:45

Today ; 08/05/2007   19:01:15

Terminal # ; 111111111111111

**** CASSETTE #1 ****

 Loaded        ;  200
 Dispensed     ;   98
 Rejected      ;    1
 Test          ;    1
-------------------------------
 Remaing       ;  100
 Value of each note = $  20

**** CASSETTE #2 ****

 Loaded        ;  200
 Dispensed     ;   98
 Rejected      ;    1
 Test          ;    1
-------------------------------
 Remaing       ;  100
 Value of each note = $  20
```

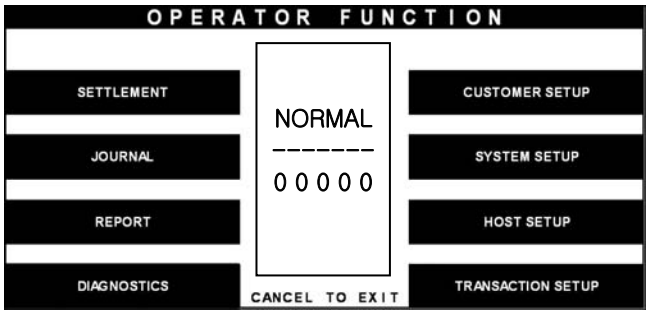
Fig. 6.7 A sample print out of CASSETTE TOTAL

Function Description

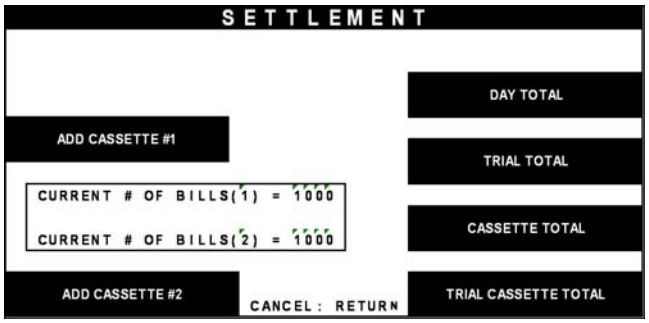
The CASSETTE TOTAL includes the total loaded number of bills in the cassette, the normal dispensed amount, the number of rejected notes, the test dispensed amount and the number of remaining notes, etc. since the last CASSETTE TOTAL was operated. This will be printed from the Receipt Printer. All information will be deleted after the use of this function.

6.2.3 Subtotal (Trial) day total

Accessing the SUBTOTAL(TRIAL) DAY TOTAL



1) Select 'SETTLEMENT' in the 'OPERATOR FUNCTION' menu.



2) Select 'SUBTOTAL(TRIAL) DAY TOTAL' in the SETTLEMENT menu.

3) After the information is downloaded from the processor, the Subtotal Day Total information will be printed from the Receipt Printer. If the GOOD message appears, press "ENTER".

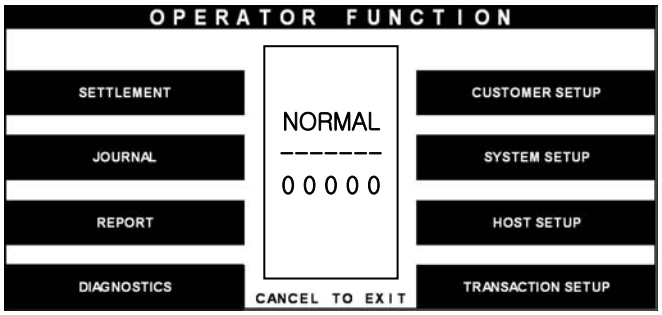
Fig. 6.8 SUBTOTAL DAY TOTAL

Function Description

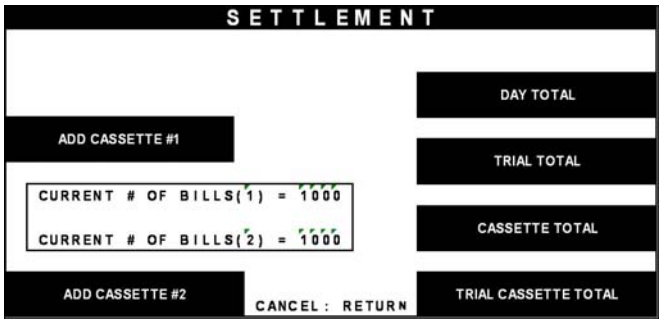
The SUBTOTAL(TRIAL) DAY TOTAL function is used anytime to confirm the totals since the last DAY TOTAL. It does the same function as the DAY TOTAL, except the day total information is not cleared.

6.2.4 Subtotal(Trial) cassette total

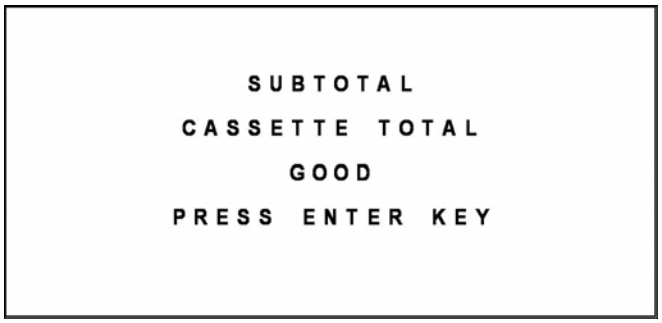
Accessing the SUBTOTAL(TRIAL) CASSETTE TOTAL



1) Select ‘SETTLEMENT’ in the ‘OPERATOR FUNCTION’ menu.

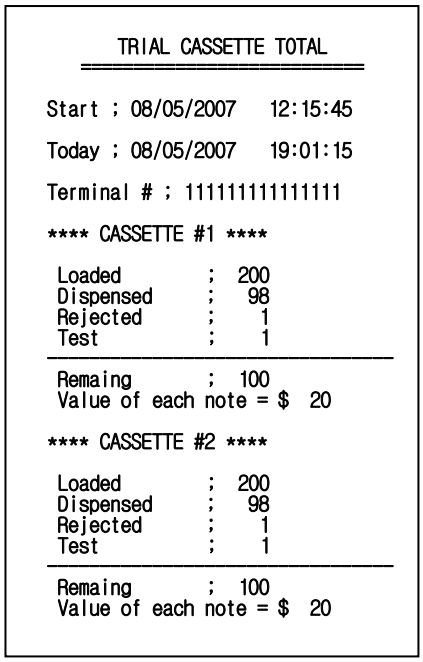


2) Select ‘SUBTOTAL(TRIAL) CASSETTE TOTAL’ in the SETTLEMENT menu



3) The Subtotal Cassette Total information will be printed from the Receipt Printer. If the GOOD message appears, press “ENTER”.

Fig. 6.9 SUBTOTAL CASSETTE TOTAL



```
        TRIAL CASSETTE TOTAL
      ========================

Start ; 08/05/2007   12:15:45

Today ; 08/05/2007   19:01:15

Terminal # ; 111111111111111

**** CASSETTE #1 ****

 Loaded        ;  200
 Dispensed     ;   98
 Rejected      ;    1
 Test          ;    1
-------------------------------
 Remaing       ;  100
 Value of each note = $  20

**** CASSETTE #2 ****

 Loaded        ;  200
 Dispensed     ;   98
 Rejected      ;    1
 Test          ;    1
-------------------------------
 Remaing       ;  100
 Value of each note = $  20
```

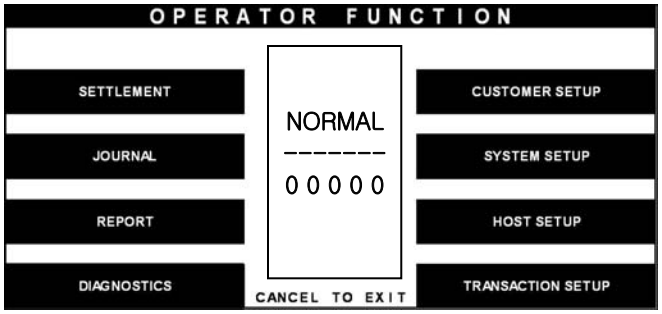
Fig. 6.10 A sample print out of SUBTOTAL CASSETTE TOTAL

Function Description

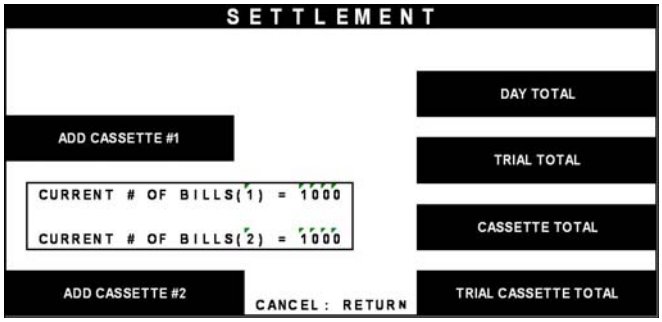
The SUBTOTAL(TRIAL) CASSETTE TOTAL function is used to check the amount dispensed from the cassette since the last CASSETTE TOTAL was operated. It does the same function as the CASSETTE TOTAL, except the cassette total information is not cleared.

6.2.5 Add cassette #1

the ADD CASSETTE #1



1) Select 'ADD CASSETTE ' in the SETTLEMENT menu.



2) Set the number of bills loaded in the cassette.

NOTE : Enter the number of bills, NOT the amount of cash.

Fig. 6.11 ADD CASSETTE

Function Description

The operator must set the additional number of bills being loaded into the cash cassette at all times. After the use of CASSETTE TOTAL, the current number of bills will be reset to "0".

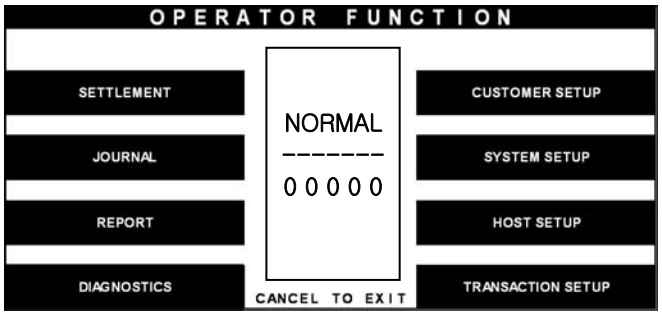
6.3 Journal

The Journal Function of the Operator Function includes the following:

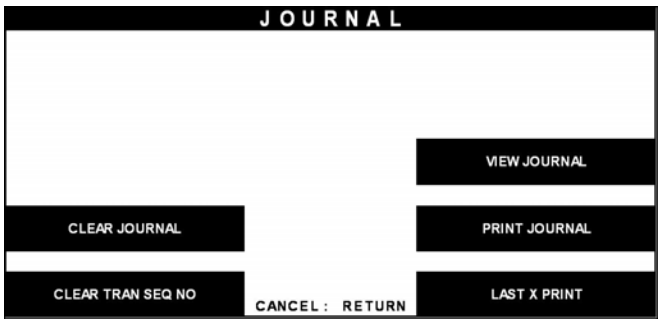
PRINT JOURNAL
LAST X PRINT
VIEW JOURNAL
CLEAR JOURNAL
CLEAR TRANSACTION SEQUENCE NUMBER

6.3.1 Print journal

Accessing the PRINT JOURNAL



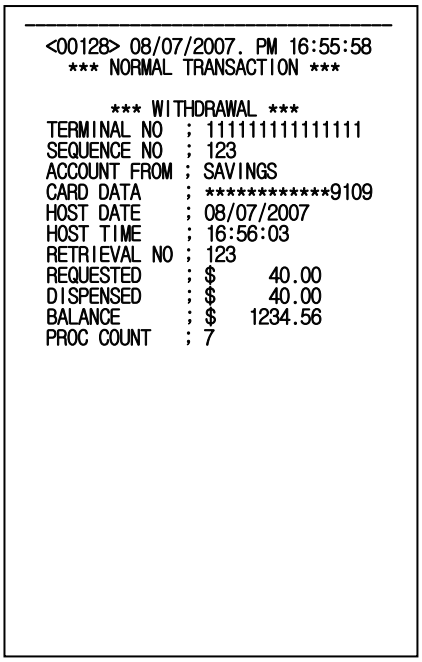
1) Select 'JOURNAL' in the OPERATOR FUNCTION menu.



2) Select 'PRINT JOURNAL' in the JOURNAL menu.

3) Wait while the Journal data is being printed. If the GOOD message appears, press "ENTER".

Fig. 6.12 PRINT JOURNAL



```
<00128> 08/07/2007. PM 16:55:58
  *** NORMAL TRANSACTION ***

      *** WITHDRAWAL ***
TERMINAL NO  ; 111111111111111
SEQUENCE NO  ; 123
ACCOUNT FROM ; SAVINGS
CARD DATA    ; ************9109
HOST DATE    ; 08/07/2007
HOST TIME    ; 16:56:03
RETRIEVAL NO ; 123
REQUESTED    ; $     40.00
DISPENSED    ; $     40.00
BALANCE      ; $   1234.56
PROC COUNT   ; 7
```

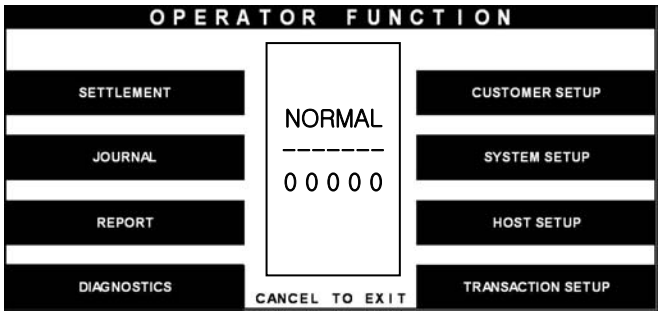
Fig. 6.13 A sample print out of PRINT JOURNAL

Function Description

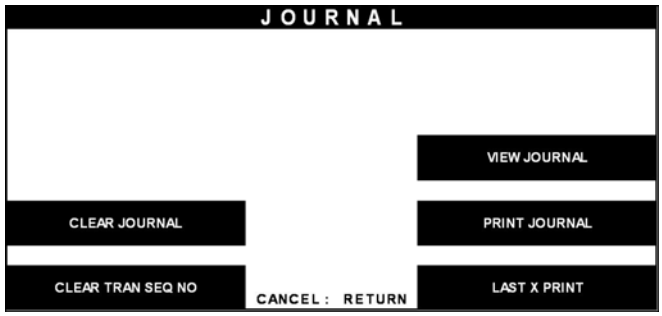
The PRINT JOURNAL function is used to automatically print out any journal entries collected since the last time this command was operated.

6.3.2 Last X print

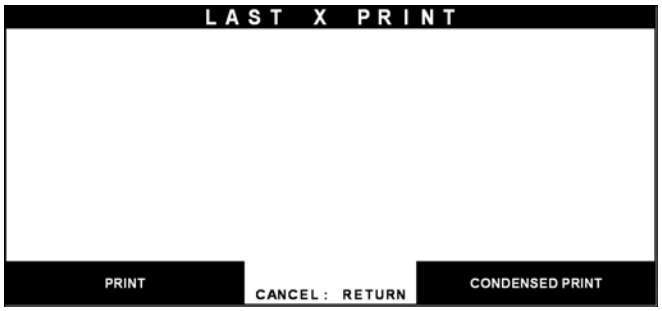
Accessing the LAST X PRINT(PRINT)



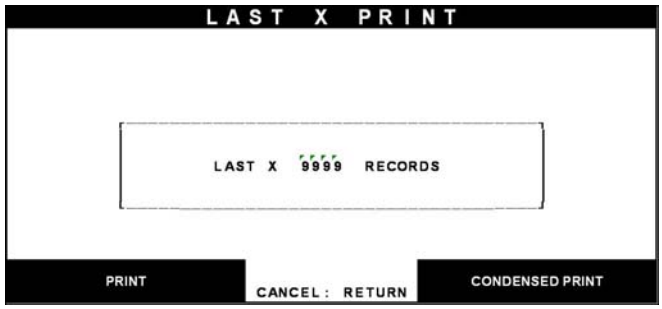
1) Select 'JOURNAL' in the OPERATOR FUNCTION menu.



2) Select 'LAST X PRINT' in the JOURNAL menu.



3) Select 'PRINT' in the LAST X PRINT menu.



4) Enter the number of records to be printed. Wait while the Journal data is being printed.

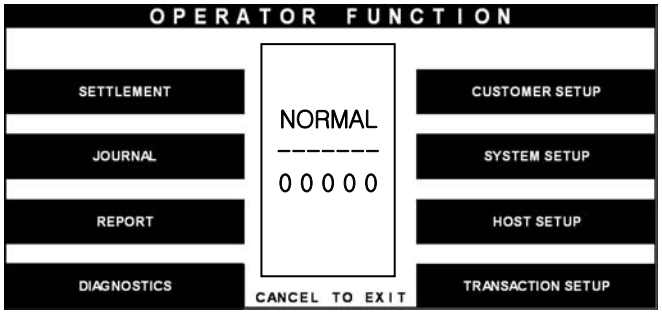
Fig. 6.14 LAST X PRINT(PRINT)

5) If the GOOD message appears, press “ENTER”.

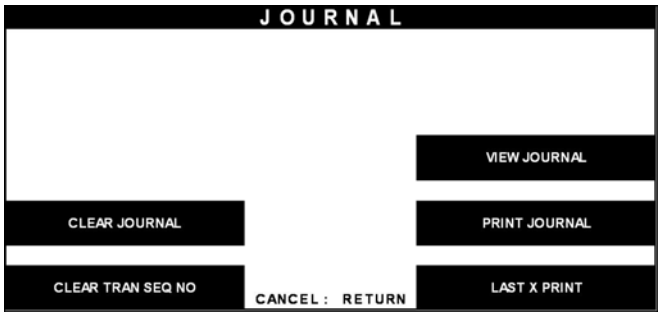
Function Description

The LAST X PRINT(PRINT) function is used to reprint records for which the paper trail has been lost or destroyed. Reprint certain range of journal data specified by X record after they have been printed or cleared.

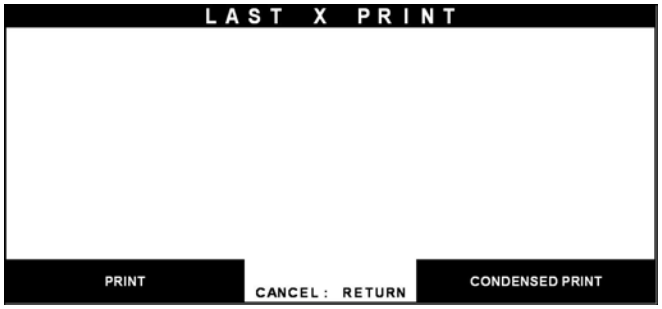
Accessing the LAST X PRINT(CONDENSED JOURNAL)



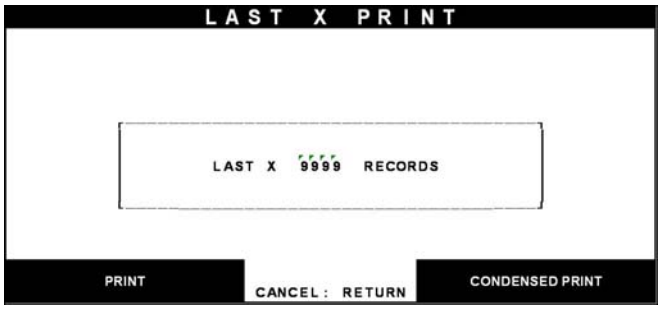
1) Select ‘JOURNAL’ in the OPERATOR FUNCTION menu.



2) Select ‘LAST X PRINT’ in the JOURNAL menu.



3) Select ‘CONDENSED JOURNAL’ in the LAST X PRINT menu.



4) Enter the number of records to be printed. Wait while the Journal data is being printed.

5) If the GOOD message appears, press “ENTER”.

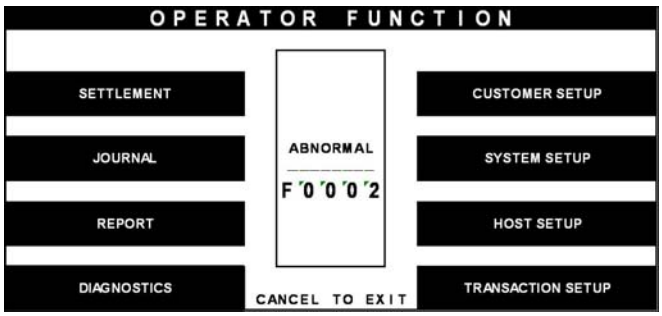
Fig. 6.15 LAST X PRINT(CONDENSED JOURNAL)

Function Description

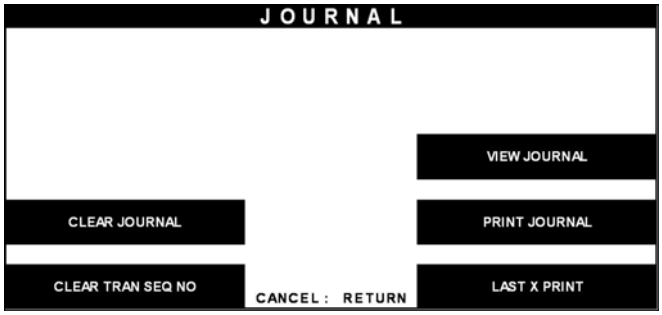
The LAST X PRINT(CONDENSED JOURNAL) function is used to reprint condensed records for which the paper trail has been lost or destroyed. Reprint as condensed certain range of journal data specified by X record after they have been printed or cleared.

6.3.3 View journal

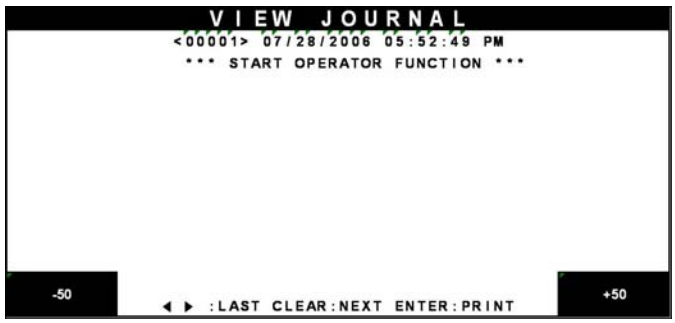
Accessing the VIEW JOURNAL



1) Select 'JOURNAL' in the OPERATOR FUNCTION menu.



2) Select 'VIEW JOURNAL' in the JOURNAL menu.



3) You may see the Journal Data which will be displayed on the screen.

Fig. 6.16 VIEW JOURNAL

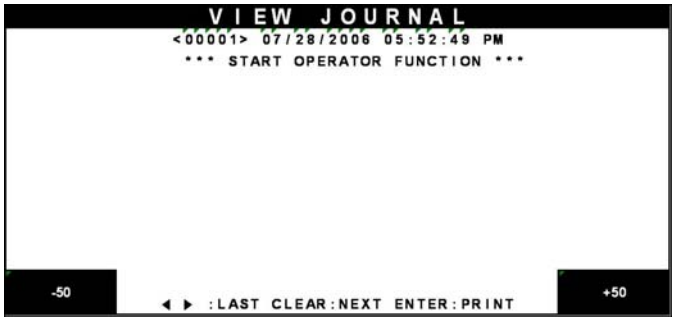


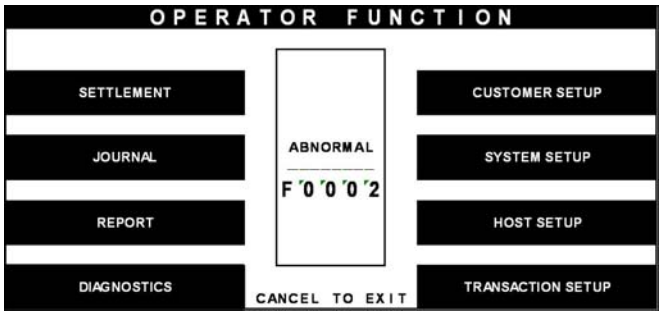
Fig. 6.16 VIEW JOURNAL

Function Description

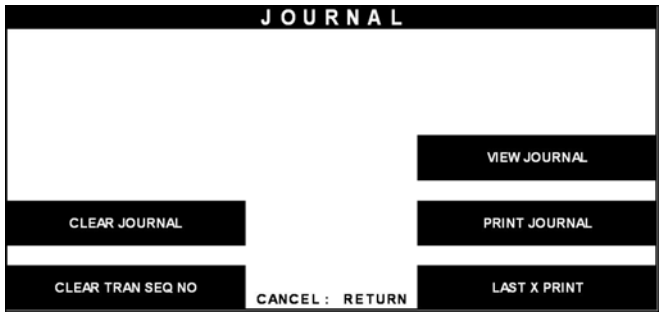
The VIEW JOURNAL function is used to display the journal data in the LCD screen.

6.3.4 Clear journal

Accessing the CLEAR JOURNAL



1) Select 'JOURNAL' in the OPERATOR FUNCTION menu.



2) Select 'CLEAR JOURNAL' in the JOURNAL menu.
The pointer of Journal data to print will be reset.

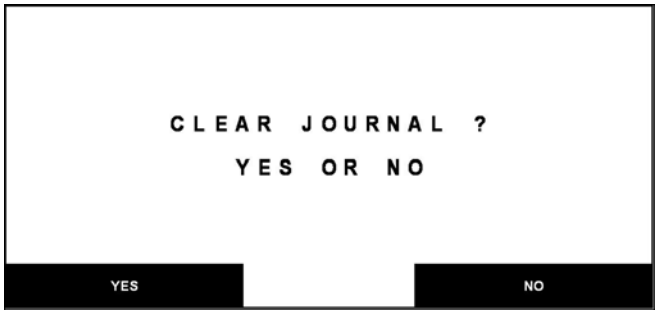


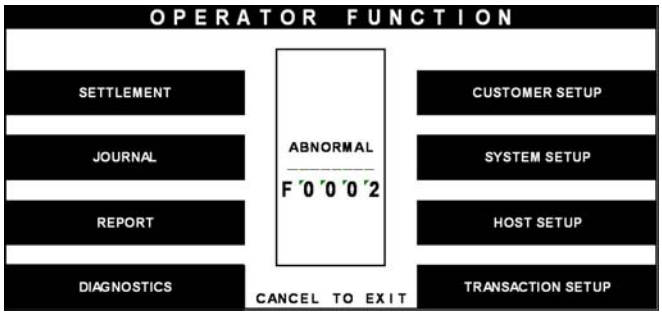
Fig. 6.17 CLEAR JOURNAL

Function Description

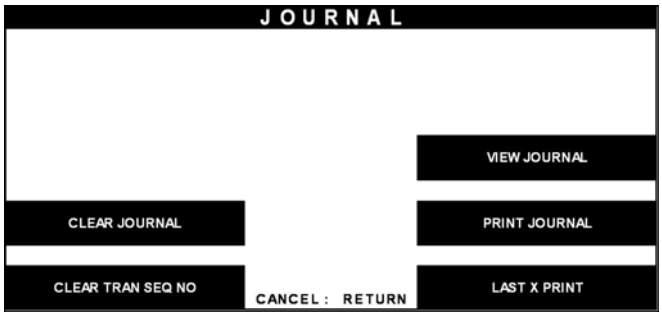
The CLEAR JOURNAL function is used to mark all records not printed in the journal. Journal records are not erased. They are marked as if they had been printed.

6.3.5 Clear tran. sequence NO.

Accessing the CLEAR TRAN. SEQUENCE NO.



1) Select 'JOURNAL' in the OPERATOR FUNCTION menu.



2) Select 'CLEAR TRAN. SEQUENCE NO.' in the JOURNAL menu.

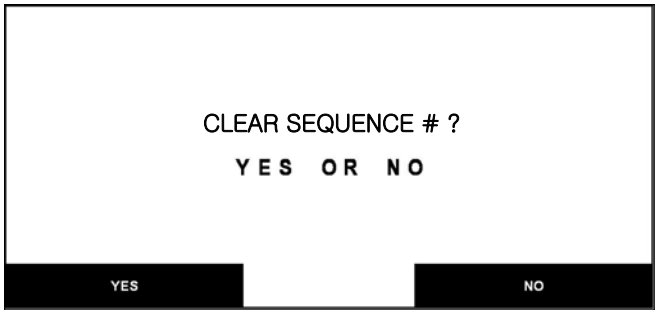


Fig. 6.18 CLEAR TRAN. SEQUENCE NO.

Function Description

The CLEAR TRAN. SEQUENCE NO. function is used to reset the transaction serial number as "1".

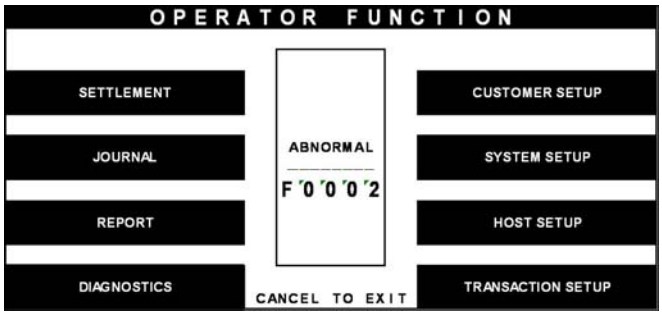
6.4 Report

The Report function of the Operator Function includes the following :

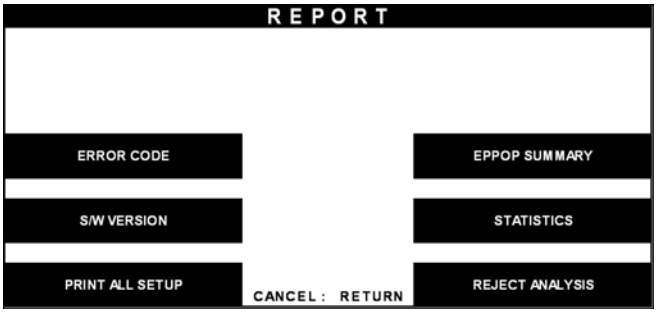
ERROR CODE
S/W VERSION
PRINT ALL SETUP
ERROR SUMMARY
STATISTICS
REJECT ANALYSIS

6.4.1 Error code

Accessing the ERROR CODE



1) Select 'REPORT' in the OPERATOR FUNCTION menu.



2) Select 'ERROR CODE' in the REPORT menu.

3) The Error code, description and corrective action will be displayed.

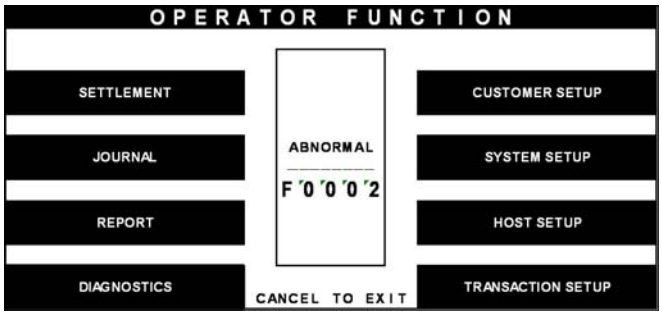
Fig. 6.19 ERROR CODE

Function Description

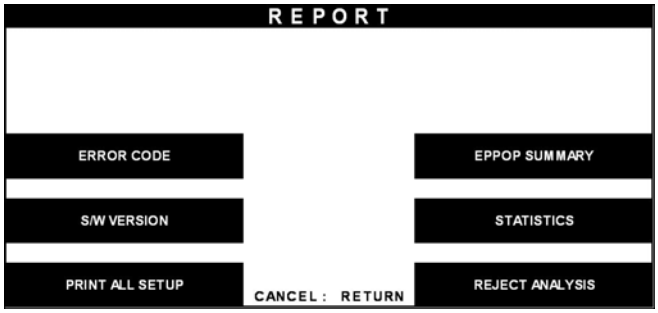
The ERROR CODE includes all error codes, descriptions and corrective actions. If an error occurs, the current error code will be displayed. To search the error code, use ◀ , ▶ key.

6.4.2 S/W version

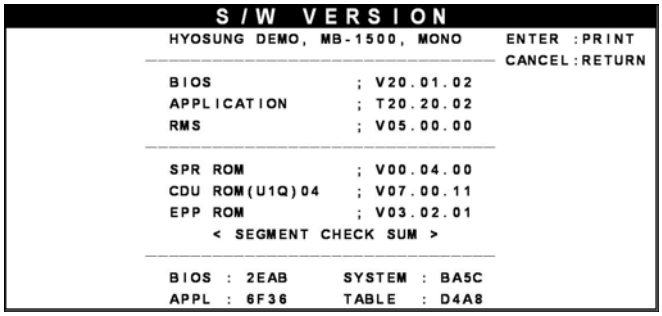
Accessing the S/W VERSION



1) Select ‘REPORT’ in the OPERATOR FUNCTION menu.



2) Select ‘S/W VERSION’ in the REPORT menu.



3) Software Version will be displayed. To print the Software Version information, press “ENTER”.

Fig. 6.20 S/W VERSION

Fig. 6.20 S/W VERSION

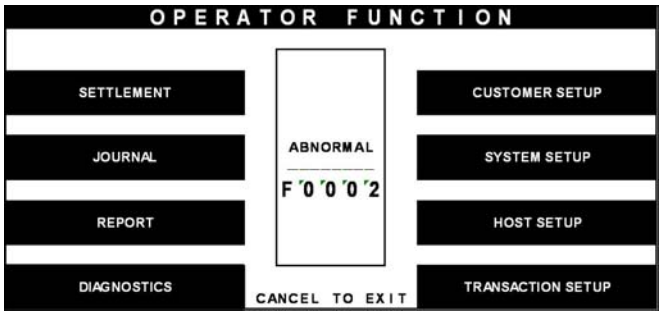
1) Software version will be printed from the receipt printer.

Function Description

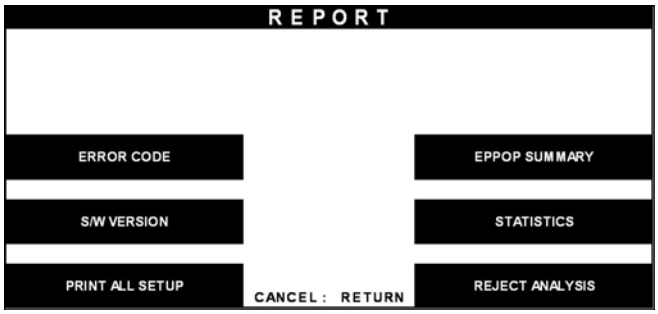
The S/W VERSION function is used to display each software version of system.

6.4.3 Print all setup

Accessing the PRINT ALL SETUP



1) Select 'REPORT' in the OPERATOR FUNCTION menu.



2) Select 'PRINT ALL SETUP' in the REPORT menu.

3) All setup parameters will be printed from the Receipt Printer. If the GOOD message appears, press "ENTER".

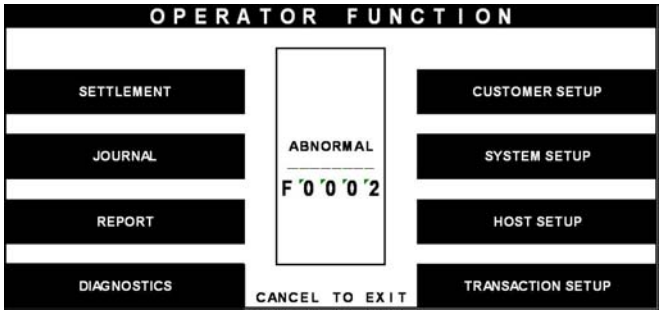
Fig. 6.21 PRINT ALL SETUP

Function Description

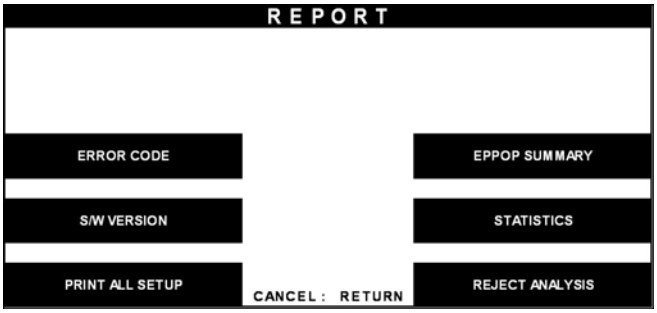
The PRINT ALL SETUP function is used to print all parameters of the system.

6.4.4 Error summary

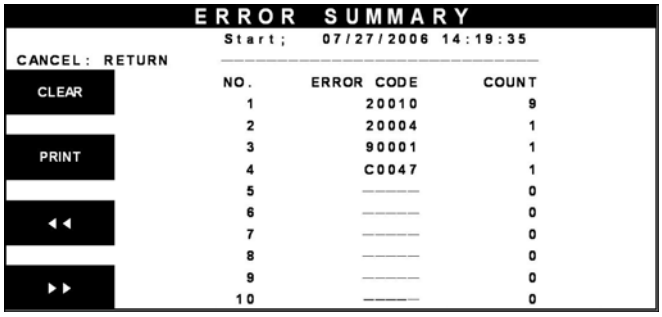
Accessing the ERROR SUMMARY



1) Select ‘REPORT’ in the OPERATOR FUNCTION menu.



2) Select ‘ERROR SUMMARY’ in the REPORT menu.



3) The error summary data will be displayed.
Press “PRINT” key to print the Error Sum Data.

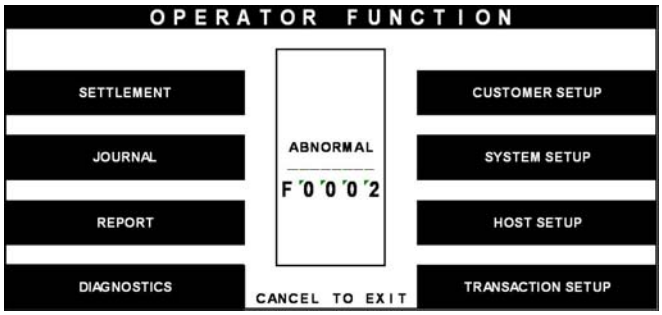
Fig. 6.22 ERROR SUMMARY

Function Description

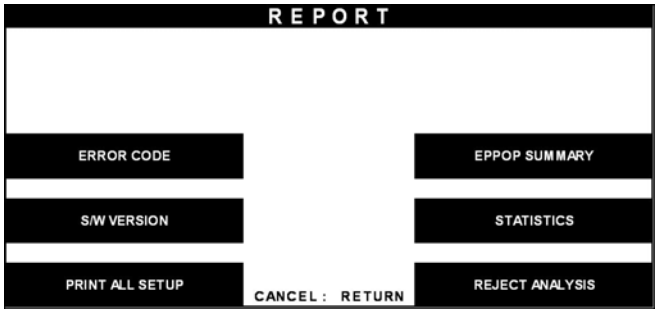
The ERROR SUM function is used to display the error code and number of times the error occurred since the last ERROR SUM CLEAR. Therefore an operator can know which error occurs frequently and with this function it is useful for preventive maintenance. To clear all data, press “CLEAR”.

6.4.5 Statistics

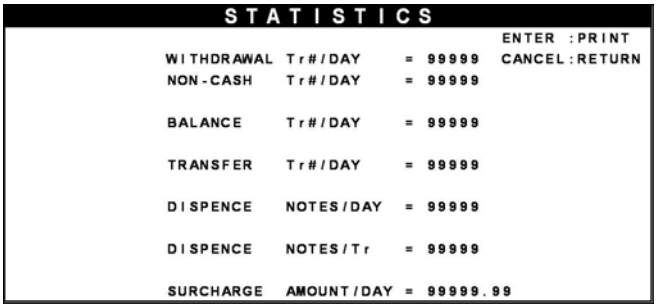
Accessing the STATISTICS



1) Select 'REPORT' in the OPERATOR FUNCTION menu.



2) Select 'STATISTICS' in the Report Menu.



3) Statistics data will be displayed. Press "ENTER" key to print data.

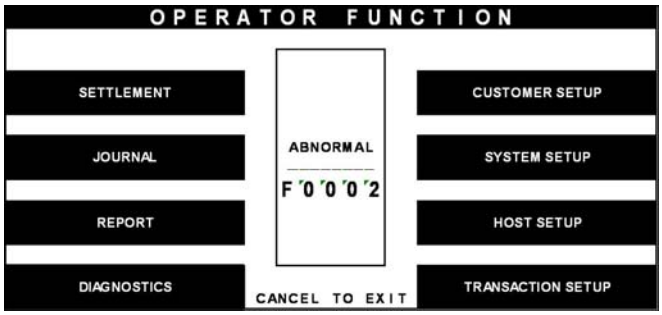
Fig. 6.23 STATISTICS

Function Description

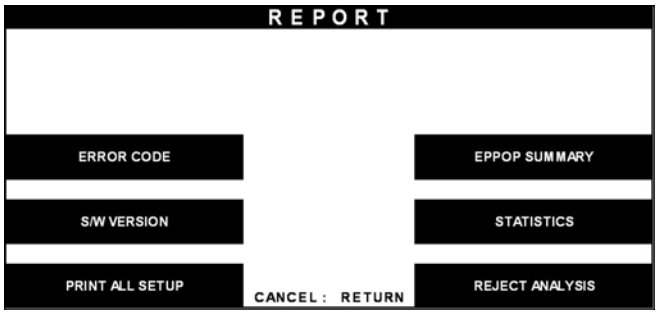
The STATISTICS displays all transaction statistics data. To clear the data, press "CLEAR".

6.4.6 Reject analysis

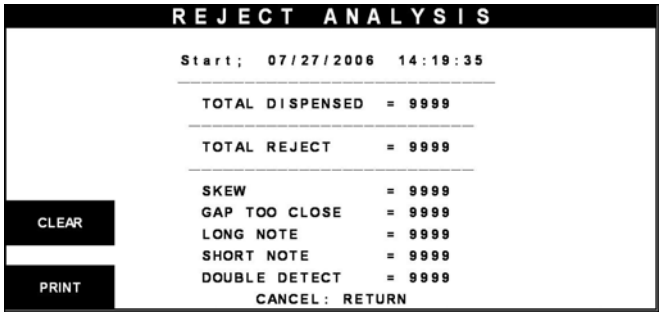
Accessing the REJECT ANALYSIS



1) Select 'REPORT' in the OPERATOR FUNCTION menu.



2) Select 'REJECT ANALYSIS' in the REPORT menu.



3) Reject Analysis data will be displayed. Press "PRINT" key to print data.

Fig. 6.24 REJECT ANALYSIS

Function Description

The REJECT ANALYSIS function includes the analysis for the reason of the note reject and it is useful for the preventive maintenance.

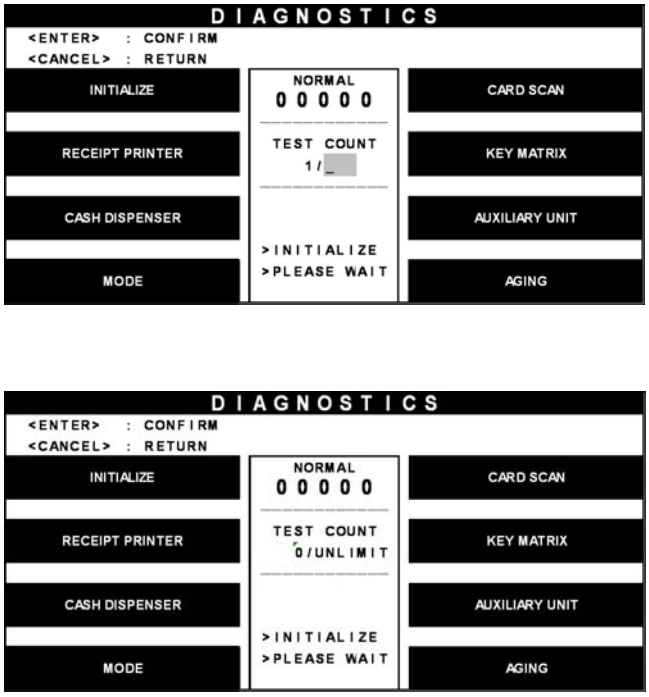
6.5 Diagnostics

The Diagnostic function of Operator Function includes the following:

INITIALIZE
RECEIPT PRINTER
CASH DISPENSER
MODEM
CARD SCAN
KEY MATRIX
SENSOR
AGING

Changing the TEST COUNT

The TEST COUNT means the number of test.



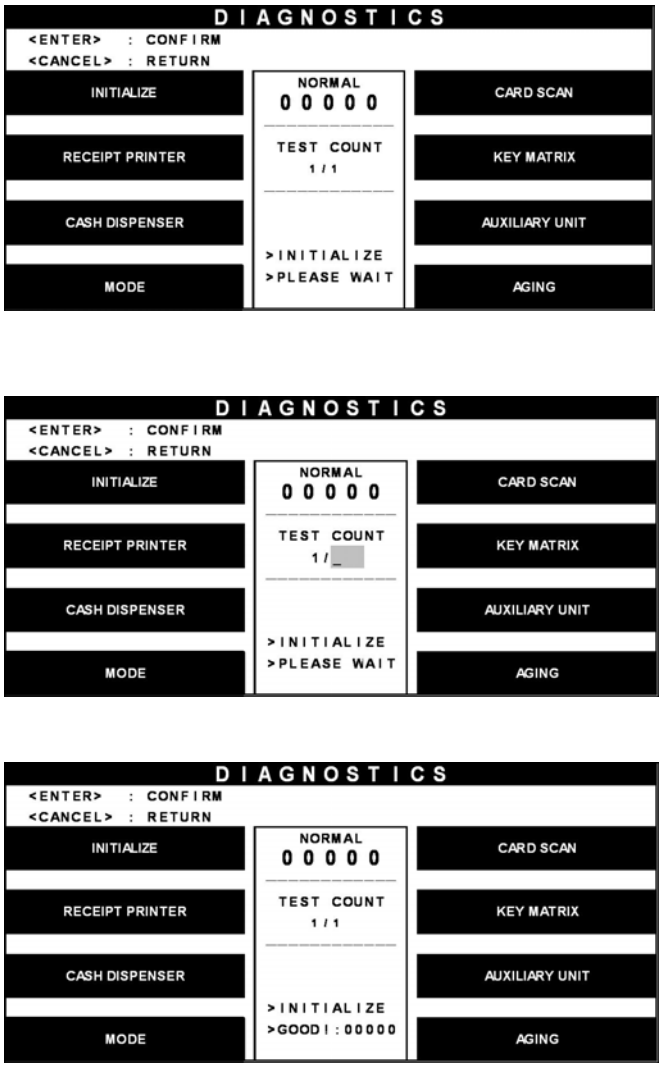
1) If you want to change the test count, press “CLEAR” then input the test count and press “ENTER”.

2) If you input ‘0 (zero)’, the test count will be changed to unlimited.

Fig. 6.25 CHANGING THE TEST COUNT

6.5.1 Initialize

Accessing the INITIALIZE



1) Select 'DIAGNOSTICS' in the OPERATOR FUNCTION.

2) Select the 'INITIALIZE' in the IAGNOSTICS menu. All units will be initialized.

3) When the ATM is in the normal state, the GOOD message will be displayed.

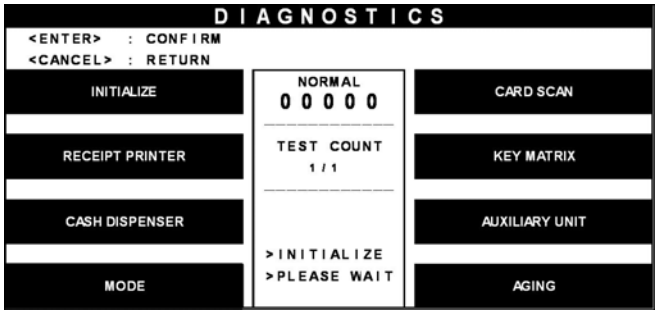
Fig. 6.26 INITIALIZE

Function Description

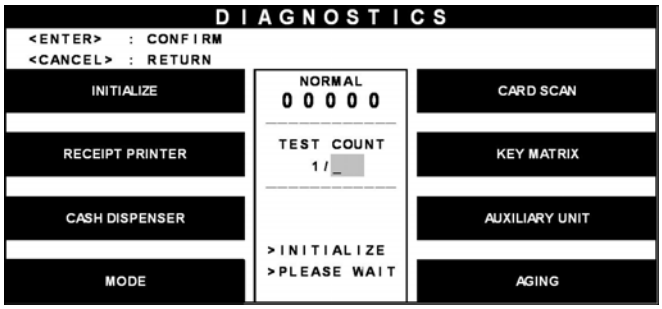
The INITIALIZE has the function of resetting each unit of the NH-1800. If an error occurs while executing, the system will stop and display an error code. Confirm the detailed error description in the ERROR CODE of REPORT MENU.

6.5.2 Receipt printer

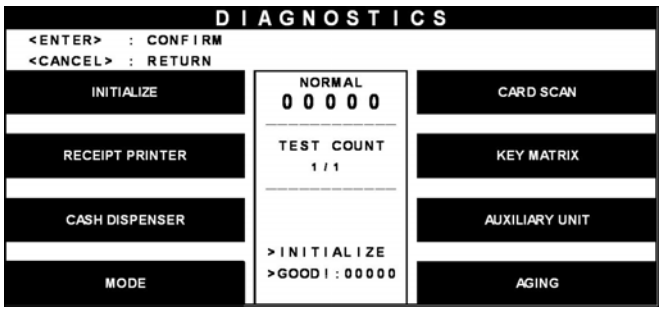
Accessing the RECEIPT PRINTER



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 GOOD message will be displayed.

Fig. 6.27 RECEIPT PRINTER

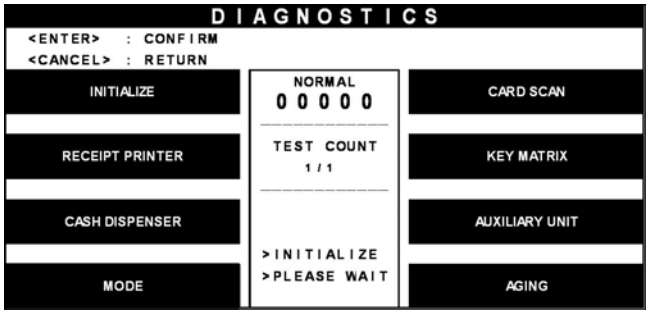
Fig. 6.28 A Sample of the print out from the RECEIPT PRINTER TEST

Function Description

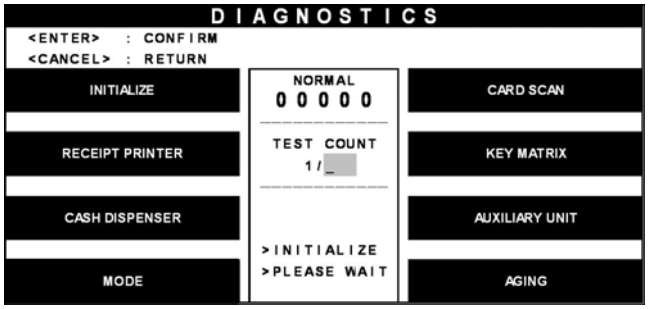
The RECEIPT PRINTER has the function of printing a sample receipt and cutting out one receipt. If an error occurs while executing, the system will stop and display an error code. Confirm the detailed error description in the 6.24 ERROR CODE of REPORT MENU.

6.5.3 Cash dispenser

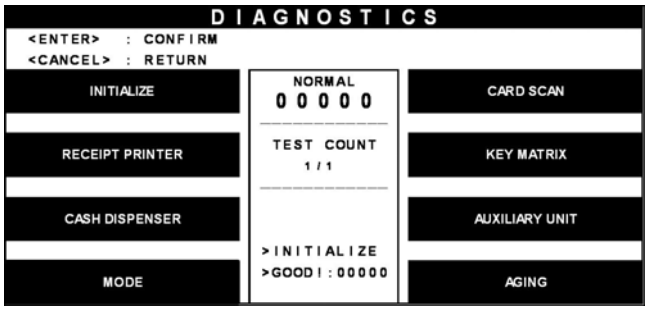
Accessing the CASH DISPENSER



Select 'DIAGNOSTICS' in the OPERATOR FUNCTION.



Select the 'CASH DISPENSER' in the DIAGNOSTICS menu.
The CASH DISPENSER test will be performed.



When the ATM is normal state, the GOOD message will be displayed.

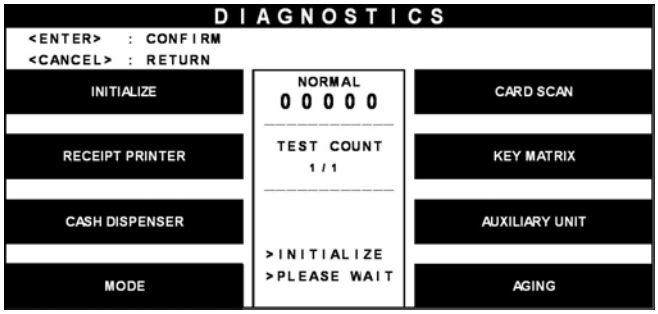
Fig. 6.29 CASH DISPENSING UNIT

Function Description

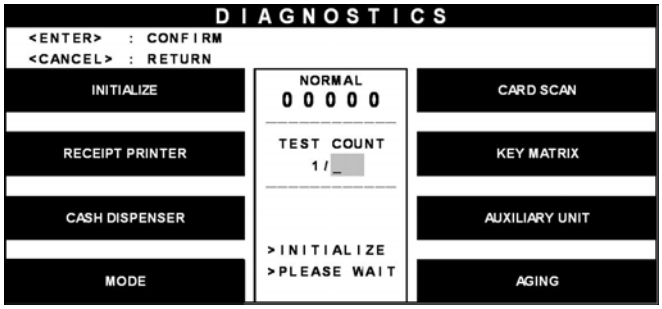
The CASH DISPENSER has the function of testing the dispense mechanisms. This function will dispense one note from the cassette and dump into the reject bin. If an error occurs, the system will stop and display an error code. Confirm the detailed error description in the ERROR CODE of REPORT MENU.

6.5.4 Modem

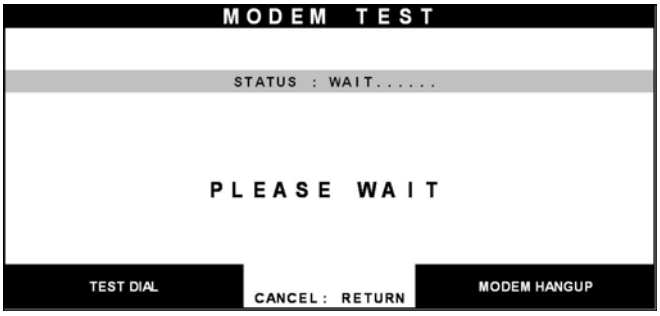
Accessing the MODEM



1) Select 'DIAGNOSTICS' in the OPERATOR FUNCTION.



2) Select the 'MODEM' in the DIAGNOSTICS menu.



3) The MODEM TEST will be displayed.

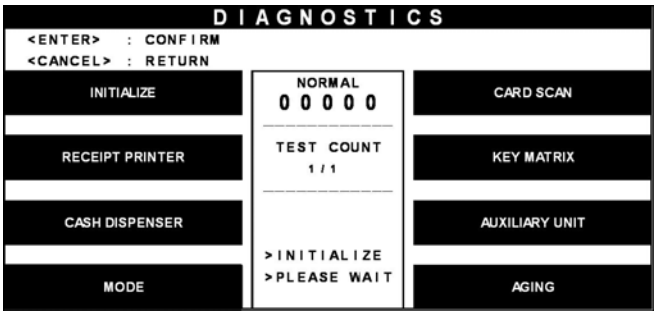
Fig. 6.30 MODEM

Function Description

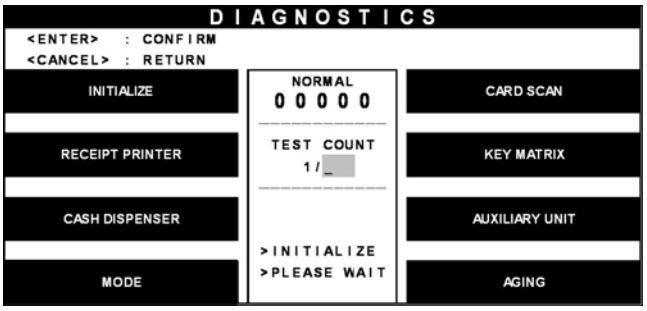
The MODEM has the function of testing the modem for any errors. When the phone number input is displayed after pressing the TEST DIAL key, input the desired phone number. The TEST DIAL function is used to check the function of the modem dial. The MODEM HANGUP function is used to hang-up the dialing after using TEST DIAL. If an error occurs, the system will stop and display an error code. Confirm the error description in the ERROR CODE MENU.

6.5.5 Card scan

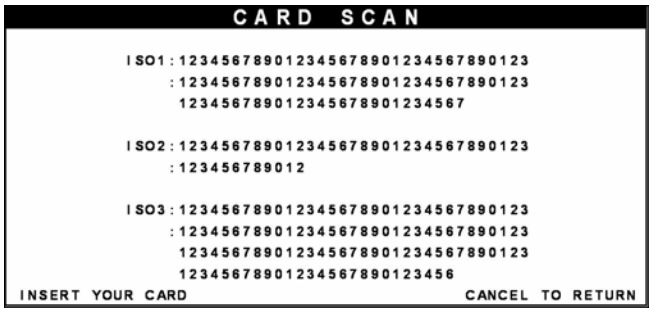
Accessing the CARD SCAN



1) Select 'DIAGNOSTICS' in the OPERATOR FUNCTION.



2) Select 'CARD SCAN' in the DIAGNOSTICS menu.
And if the display is ready, please insert and remove the card quickly.



3) The card data will be displayed.

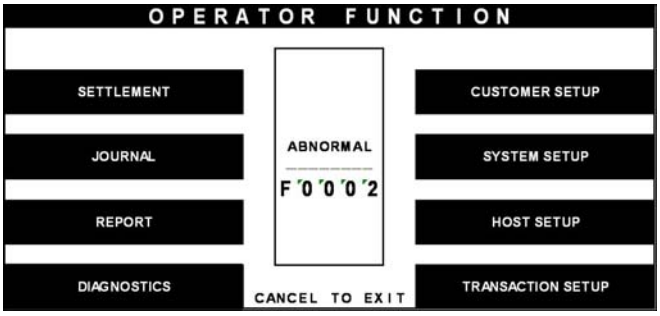
Fig. 6.31 CARD SCAN

Function Description

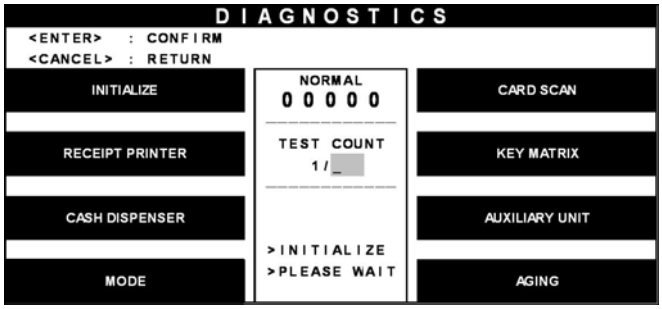
The CARD SCAN has the function of testing the magnetic stripe reader and the card itself.

6.5.6 Key matrix

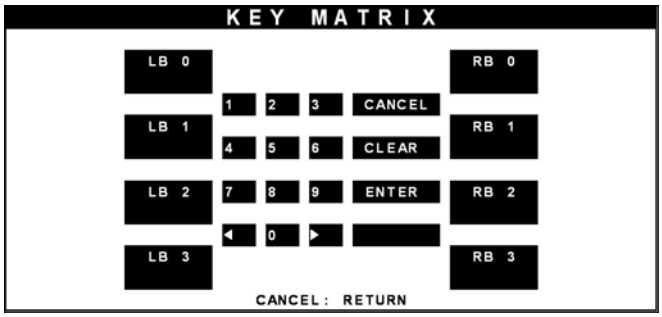
Accessing the KEY MATRIX



1) Select 'DIAGNOSTICS' in the OPERATOR FUNCTION.



2) Select 'KEY MATRIX' in the DIAGNOSTICS menu.



3) Select the desired key to be tested and the key being pressed will blink on the display.

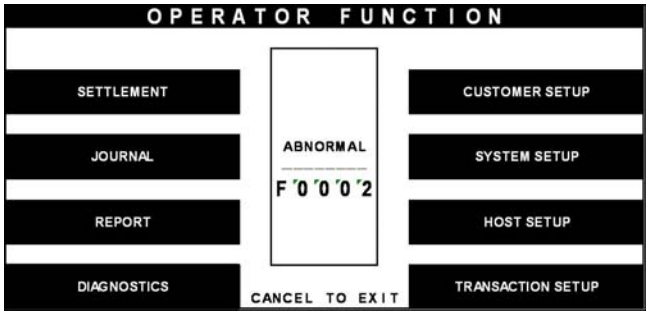
Fig. 6.32KEY MATRIX

Function Description

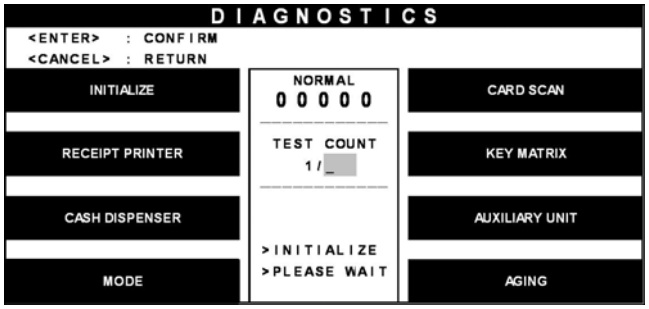
The KEY MATRIX has the function of testing the key pad.

6.5.7 Sensor

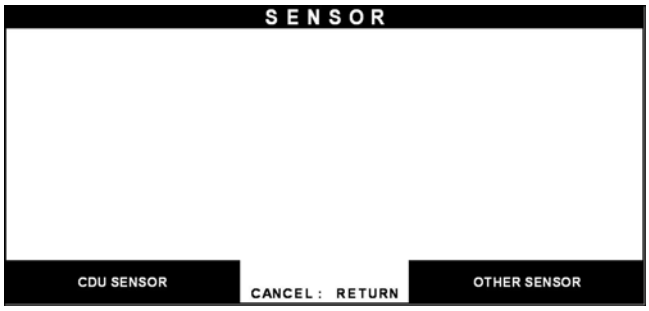
Accessing the SENSOR



1) Select ‘DIAGNOSTICS’ in the OPERATOR FUNCTION.



2) Select 'AUXILIARY UNIT' in the DIAGNOSTICS menu and then select 'SENSOR' in the AUXILIARY menu.



3) All SENSOR data will be displayed.

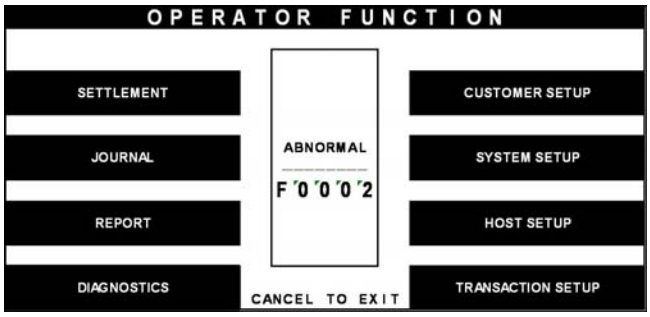
Fig. 6.33 SENSOR

Function Description

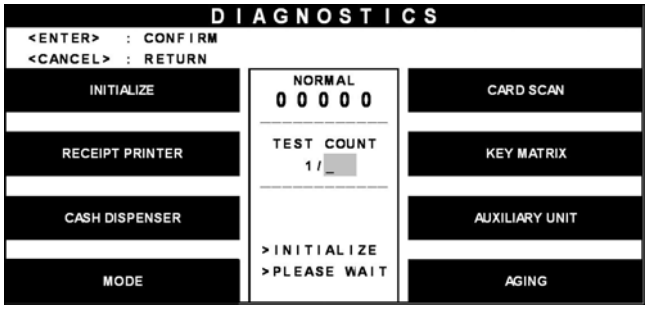
The SENSOR has the function of testing if all the sensors are in proper working condition. The sensors are tested by turning the sensors on and off.

6.5.8 Aging

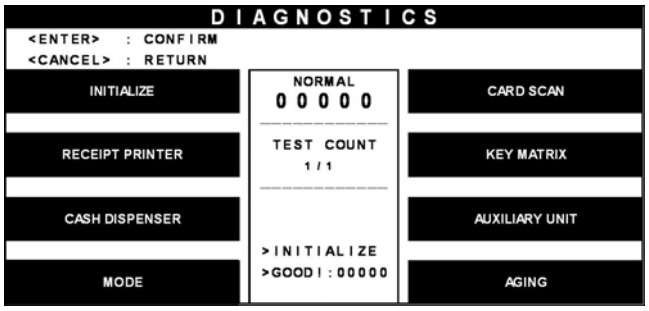
Accessing the AGING



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.

Fig. 6.34 AGING

Function Description

The AGING function is only used at the factory. All units will be tested unlimitedly.

6.6 CUSTOMER SETUP

The Customer Setup function of the OPERATOR MENU includes the following :

CHANGE MESSAGE
- **WELCOME MESSAGE**
- **RECEIPT HEADER**

BIN LIST

SURCHARGE MODE

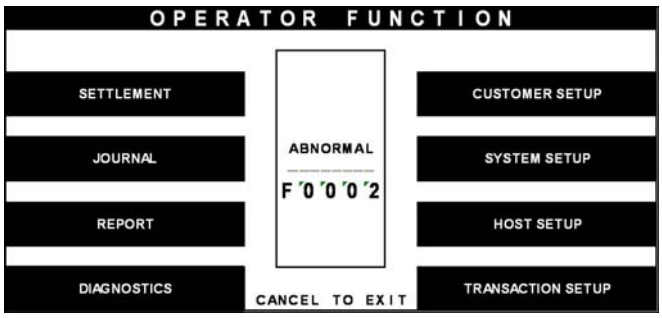
ADVERTISEMENT

OPTIONAL FUNCTION

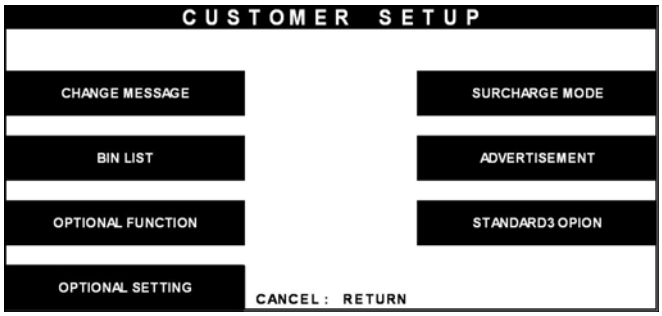
6.6.1 Change message

6.6.1.1 WELCOME MESSAGE

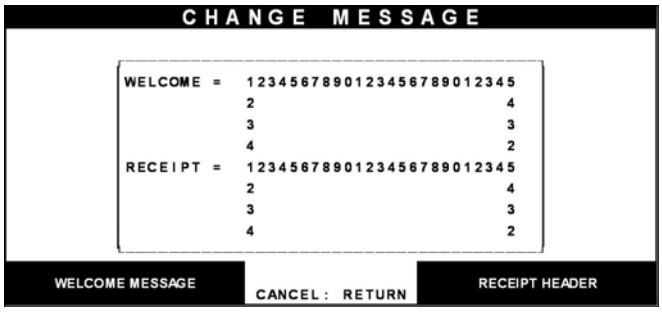
Accessing the WELCOME MESSAGE



1) Select the 'CUSTOMER SETUP' in the OPERATOR FUNCTION menu.



2) Select the 'CHANGE MESSAGE' in the CUSTOMER SETUP menu.



3) Select the 'WELCOME MESSAGE' in the CHANGE MESSAGE menu.

Fig. 6.35 WELCOME MESSAGE

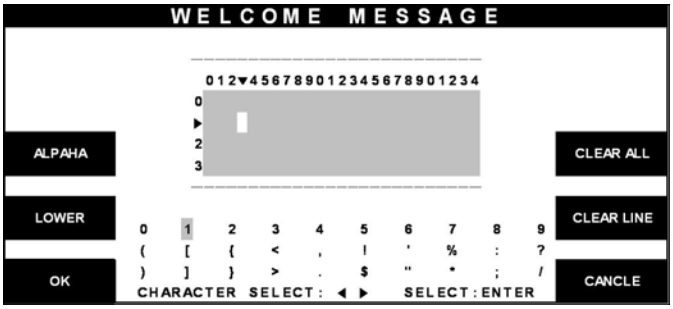


Fig. 6.35 WELCOME MESSAGE

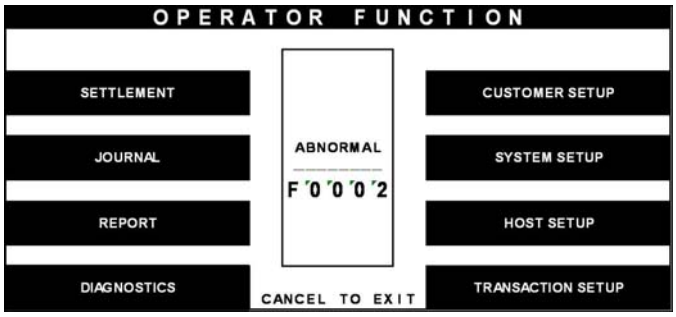
1) You can edit the welcome message. Please refer to 6.1.2 How to use keypad.

Function Description

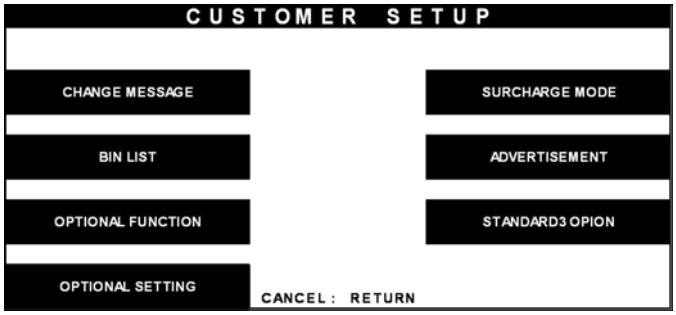
The WELCOME MESSAGE function is used to edit the welcome text in “INSERT AND REMOVE YOUR CARD QUICKLY” screen. The factory default message is “WELCOME!!!”.

6.6.1.2 RECEIPT HEADER

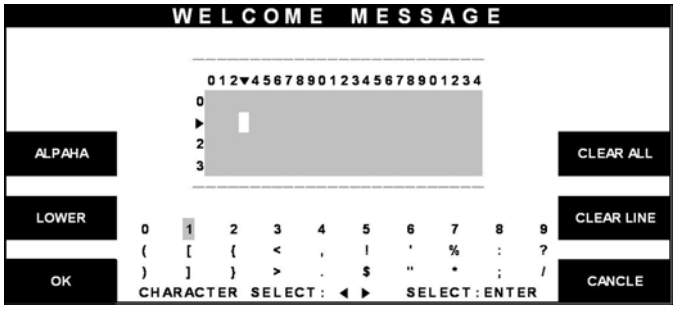
Accessing the RECEIPT HEADER



1) Select the 'CUSTOMER SETUP' in the OPERATOR FUNCTION menu.



2) Select the 'CHANGE MESSAGE' in the CUSTOMER SETUP menu.



3) Select the ‘RECEIPT HEADER’ in the CHANGE MESSAGE menu.

Fig. 6.36 RECEIPT HEADER

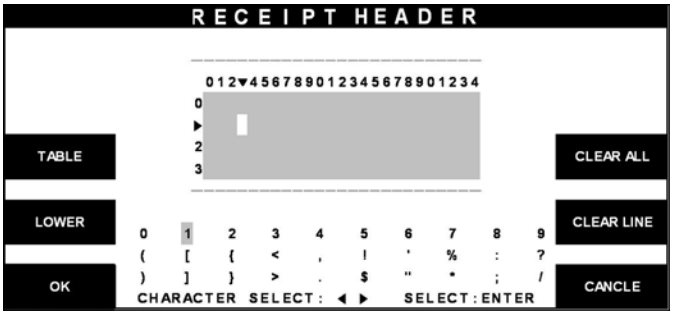


Fig. 6.36 RECEIPT HEADER

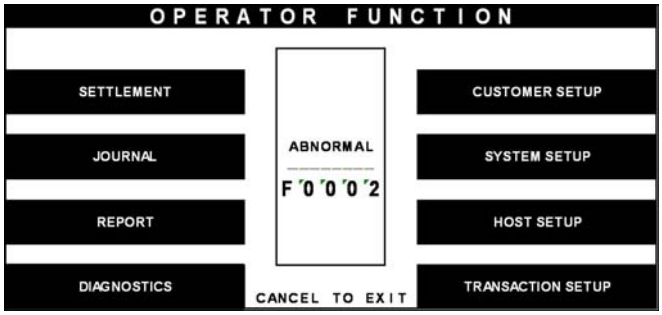
1) You can edit the RECEIPT HEADER. Please refer to 5.1.2 How to use keypad.

Function Description

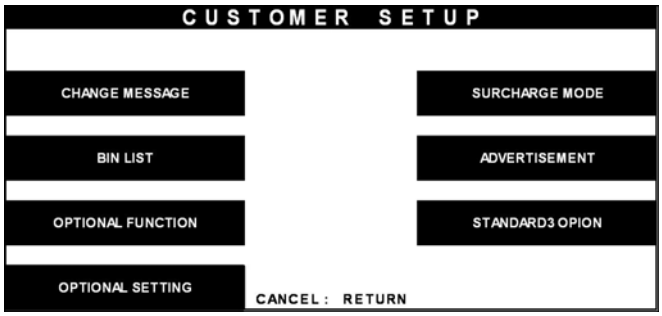
The RECEIPT HEADER function is used to edit the message at the header of receipt. The factory default message is none.

6.6.2 Bin list

Accessing the BIN LIST



1) Select the 'CUSTOMER SETUP' in the OPERATOR FUNCTION menu.



2) Select the ‘BIN LIST' in the CUSTOMER SETUP menu.

3) The BIN LIST menu will be displayed.

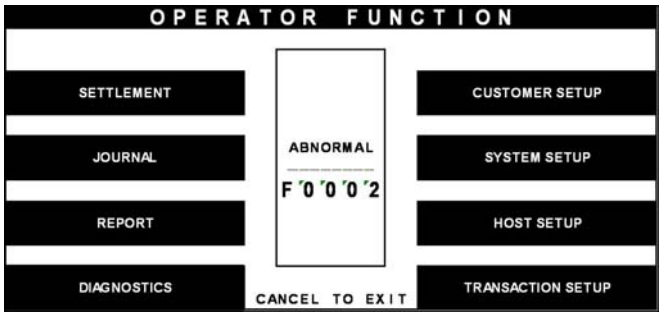
Fig. 6.37 BIN LIST

Function Description

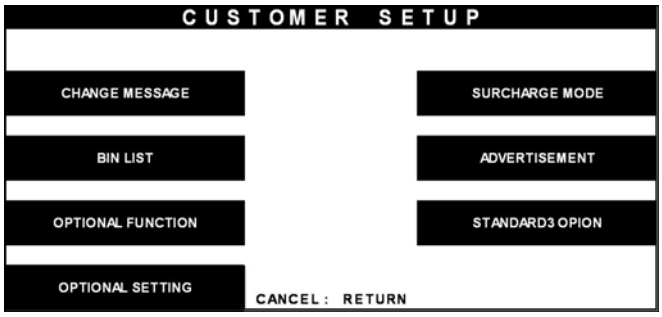
The BIN LIST function is used to register bank lists and give bin codes not to surcharge the additional fee. But it is necessary to confirm the connected host because according to the host it can be used or not. After designating the INDEX, input a bin code with using “EDIT BIN LIST”.

6.6.3 Surcharge mode

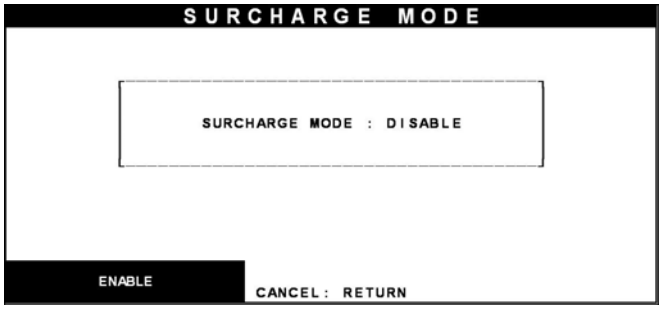
Accessing the SURCHARGE MODE



1) Select the 'CUSTOMER SETUP' in the OPERATOR FUNCTION menu.

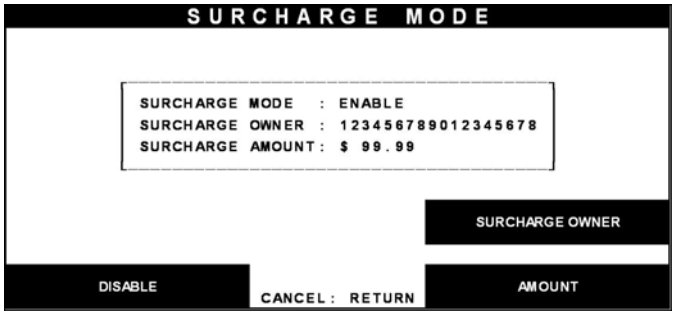


2) Select the 'SURCHARGE MODE' in the CUSTOMER SETUP menu.

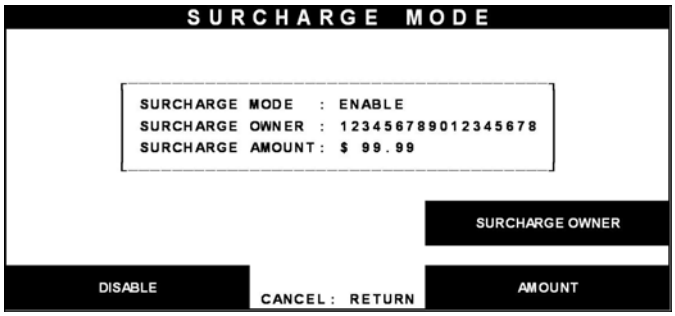


3) The SURCHARGE MODE menu will be displayed.

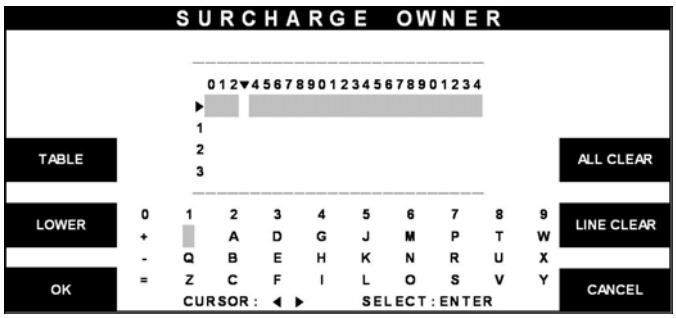
Fig. 6.38 SURCHARGE MODE



1) If you press the ENABLE key, it will be enabled as displayed.



2) If you press the AMOUNT key, you can enter the desired surcharge amount.



3) If you press the SURCHARGE OWNER key, you can enter the owner's name with keypad. Please refer to 5.1.2 How to use keypad.

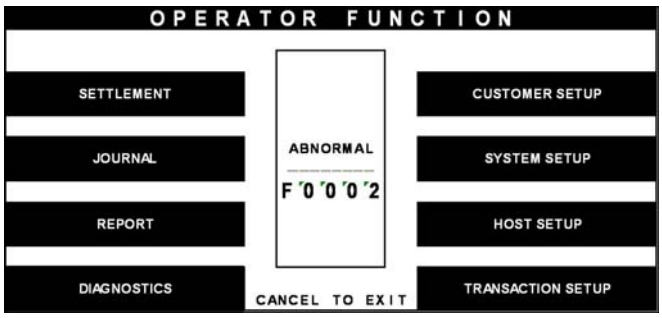
Fig. 6.38SURCHARGE MODE

Function Description

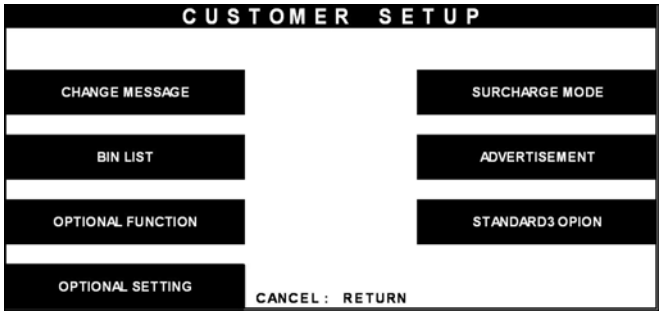
The SURCHARGE MODE includes the function to enable or disable the surcharge warning screen, setting the surcharge amount and surcharge owner. When the surcharge mode is disabled, the surcharge warning message will not be displayed and when the surcharge mode is enabled, the surcharge amount and owner name will be displayed in the surcharge warning screen. The factory default is disabled mode, surcharge amount is £0.00 and the surcharge owner is none.

6.6.4 Advertisement

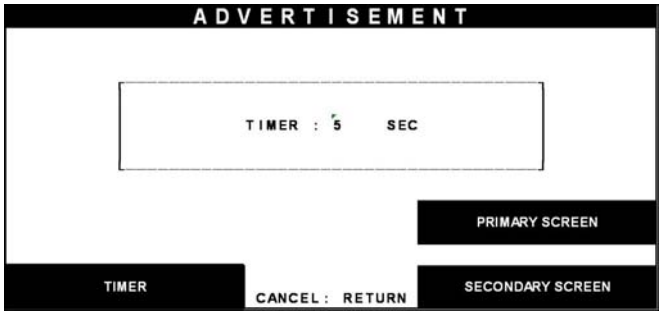
Accessing the ADVERTISEMENT



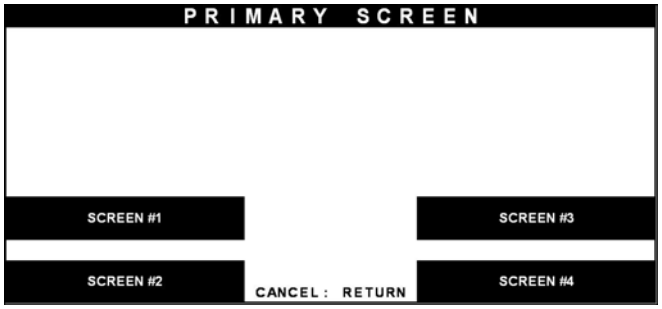
1) Select the 'CUSTOMER SETUP' in the OPERATOR FUNCTION menu.



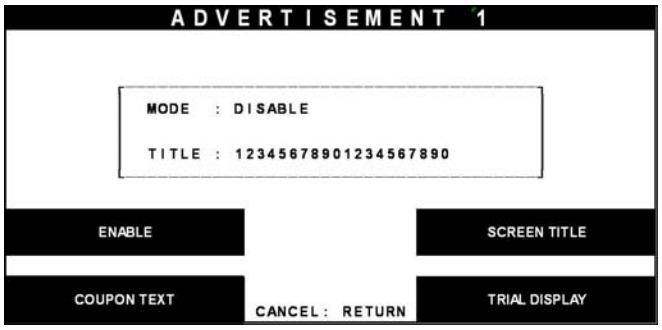
2) Select the 'ADVERTISEMENT' in the CUSTOMER SETUP menu.



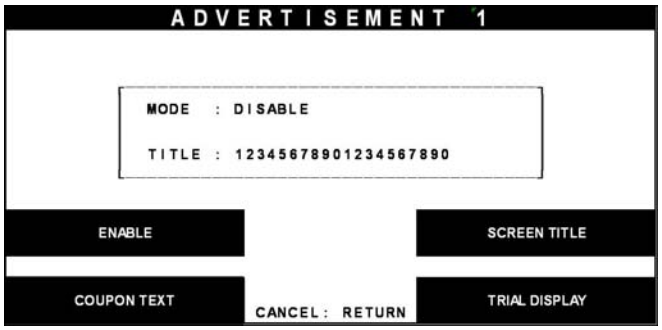
3) The ADVERTISEMENT menu will be displayed.



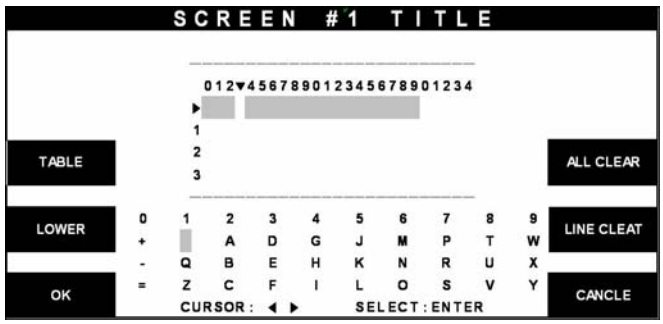
1) If you press the PRIMARY SCREEN key, the PRIMARY SCREEN will be displayed.
Select the 'SCREEN #1' in the PRIMARY SCREEN MENU.



2) If you press the ENABLE/DISABLE key, it will be changed to be enabled or disabled.



3) Select the 'SCREEN TITLE key' in the PRIMARY SCREEN MENU.



4) If you press the SCREEN TITLE key, you can enter the desired advertisement message. Please refer to 5.1.2 How to use keypad.

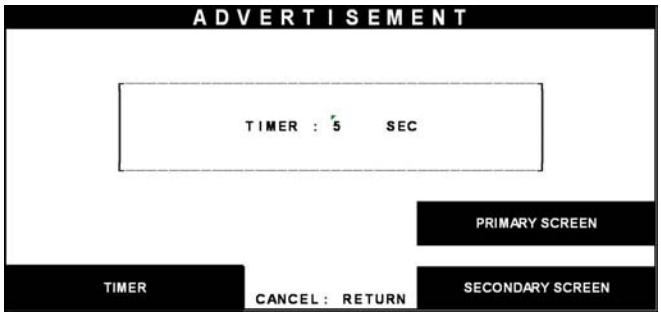


Fig. 6.39 ADVERTISEMENT MODE

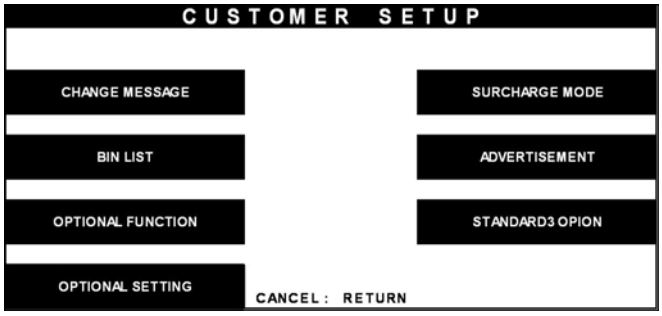
5) If you press the TIMER key, you can input the desired refreshing timer of advertisement text.

Function Description

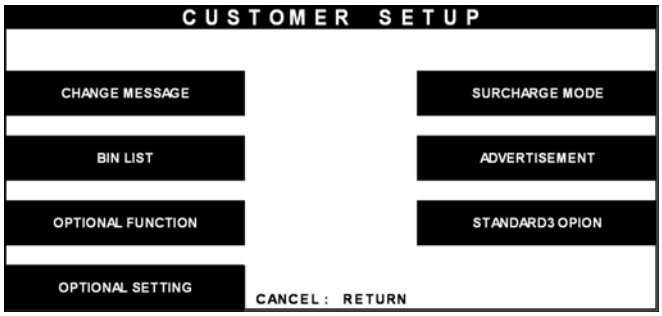
The ADVERTISEMENT function is used to set the advertisement message displayed during idle time, such as “INSERT AND REMOVE YOUR CARD QUICKLY” and “PLEASE WAIT CONNECTING”. The factory default is disabled mode, 3 seconds and no message. But if there is no message, “HAVE A NICE DAY” will be displayed in the bottom of screen.

6.6.5 Optional function

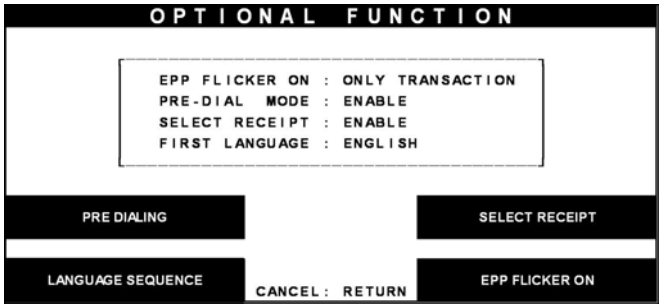
Accessing the OPTIONAL FUNCTION



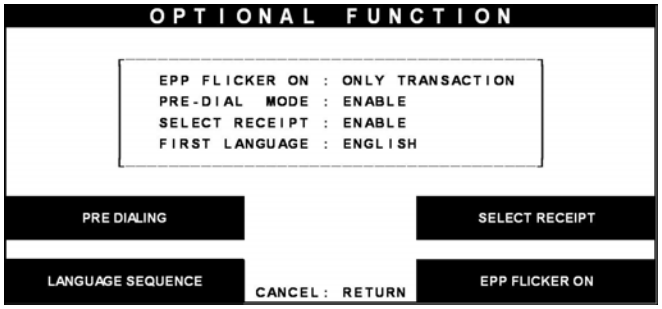
1) Select the 'CUSTOMER SETUP' in the OPERATOR FUNCTION menu.



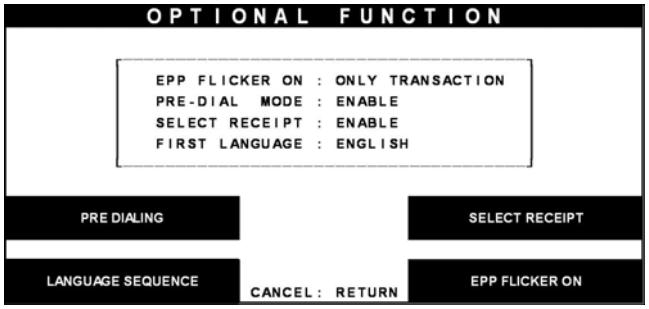
2) Select the 'OPTIONAL FUNCTION' in the CUSTOMER SETUP menu.



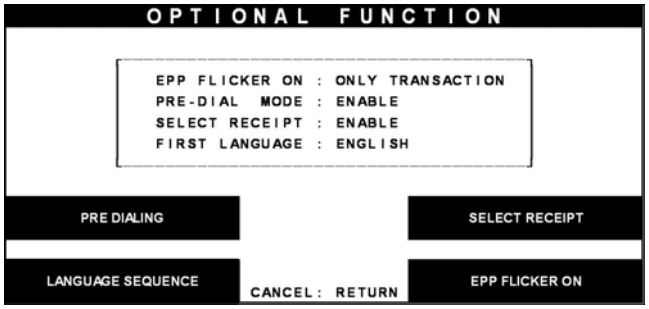
3) Select the ‘PRE DIALING’ in the OPTIONAL FUNCTION menu.



1) If you press the PRE DIALING key, you can change the desired pre-dialing mode.



2) If you Select the ‘SELECT RECEIPT’ in the OPTIONAL FUNCTION MENU, it will be changed to be enabled or disabled.



3) If you Select the ‘LANGUAGE SEQUENCE’ or ‘EPP FLICKER ON’ in the OPTIONAL FUNCTION MENU, it will be changed to English/French, Only Transaction/Always be enabled or disabled.

Fig. 6.40 OPTIONAL FUNCTION

Function Description

The ‘OPTIONAL FUNCTION’ function is used to set PRE-DIALING and set RECEIPT.

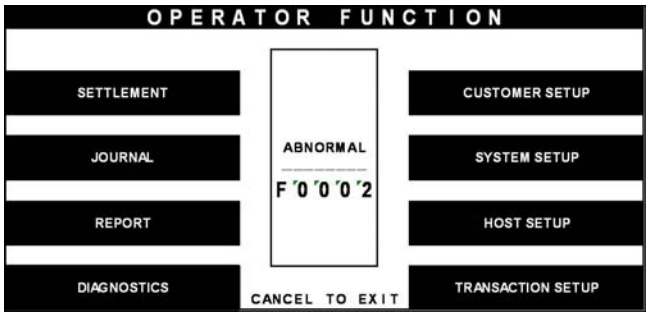
6.7 System setup

The SYSTEM SETUP function of the OPERATOR FUNCTION includes the following:

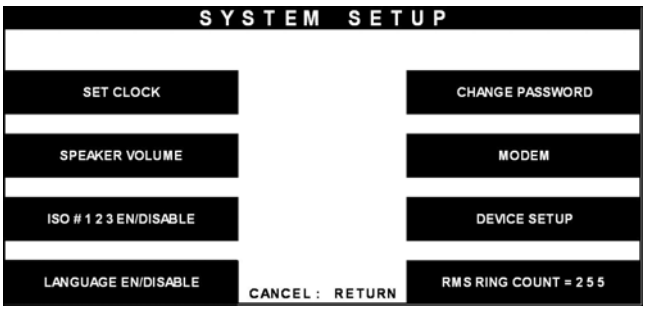
SET CLOCK
ISO #1, #2, #3 EN/DISABLE
LANGUAGE EN/DISABLE
CHANGE PASSWORD
MODEM
MODEM SETUP
DIAL MODE
MODEM SPEED
SPEAKER OUT
INITIAL STRING
MODEM TEST
RMS RING COUNT
DEVICE SETUP

6.7.1 Set clock

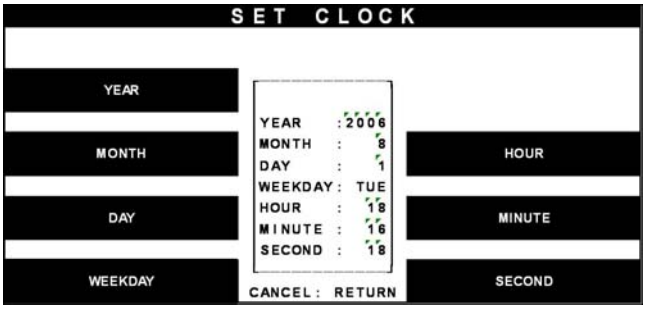
Accessing the SET CLOCK



1) Select the 'SYSTEM SETUP' in the OPERATOR FUNCTION menu.



2) Select the 'SET CLOCK' in the SYSTEM SETUP menu.



3) The SET CLOCK menu will be displayed.

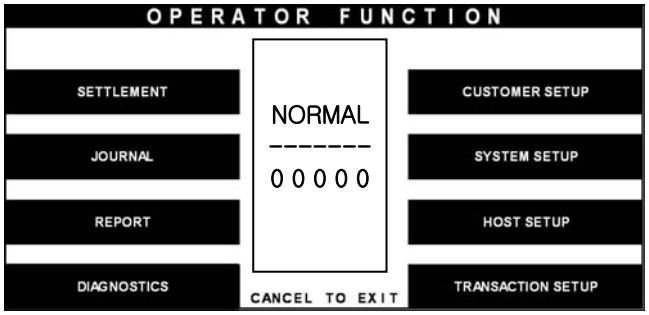
Fig. 6.41 SET CLOCK

Function Description

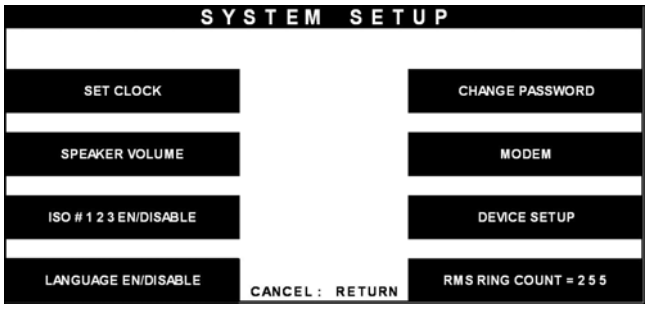
The SET CLOCK function is used to set the date and clock. When the "SECOND" key is pressed, the second will be reset to "0".

6.7.2 ISO #1, #2, #3 en/disable

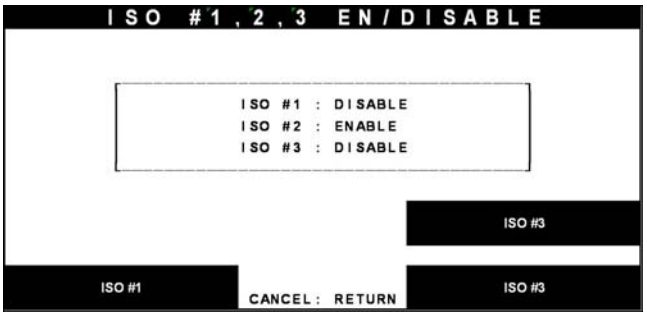
Accessing the ISO #1, #2, #3 EN/DISABLE



1) Select the 'SYSTEM SETUP' in the OPERATOR FUNCTION menu.



2) Select the 'ISO #1, #2, #3 EN/DISABLE' in the SYSTEM SETUP menu.



3) If you press the ISO #1, #2, #3 key, it will be changed to be enabled or disabled.

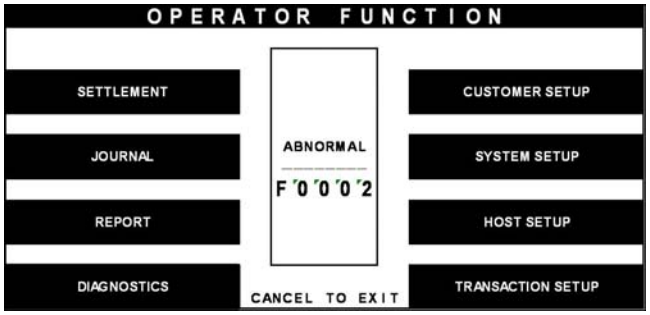
Fig. 6.42 ISO #1, #2, #3 EN/DISABLE

Function Description

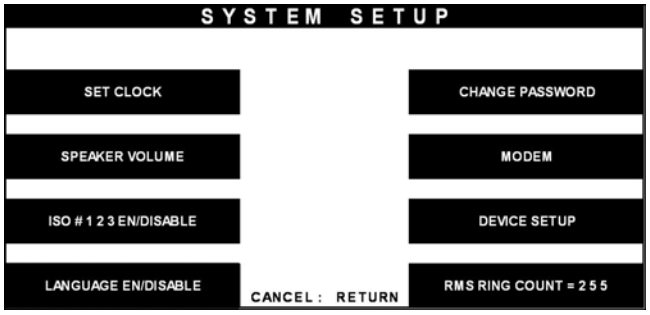
The ISO #1, #2, #3 EN/DISABLE includes the function to enable or disable the ISO warning screen. Each key will be changed to be enabled or disabled.

6.7.3 Language en/disable

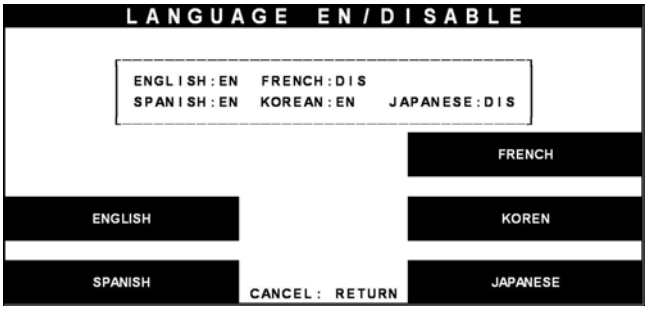
Accessing the LANGUAGE EN/DISABLE



1) Select the 'SYSTEM SETUP' in the OPERATOR FUNCTION menu.



2) Select the 'LANGUAGE EN/DISABLE' in the SYSTEM SETUP menu.



3) If you press the ENGLISH or SPANISH or KOREAN or JAPANSE key, it will be changed to be enabled or disabled.

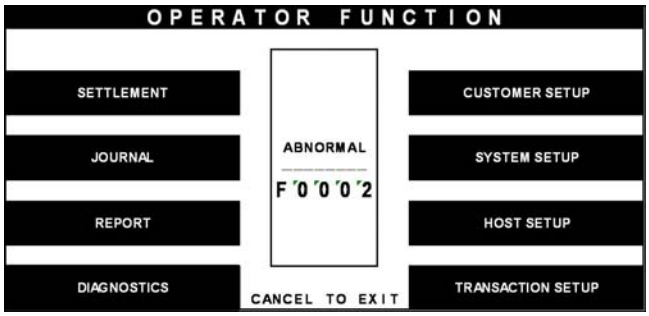
Fig. 6.43 LANGUAGE EN/DISABLE

Function Description

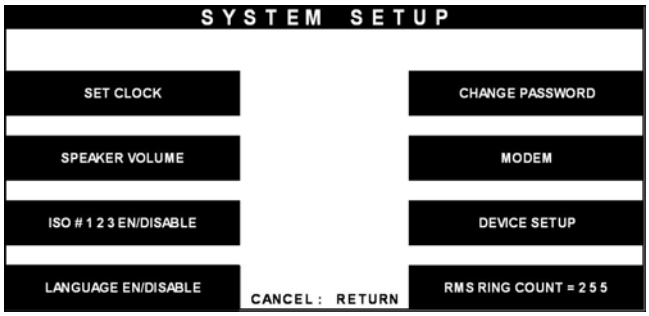
The LANGUAGE EN/DISABLE key includes the function to enable or disable the LANGUAGE warning screen. Each key will be changed to be enabled or disabled.

6.7.4 Change password

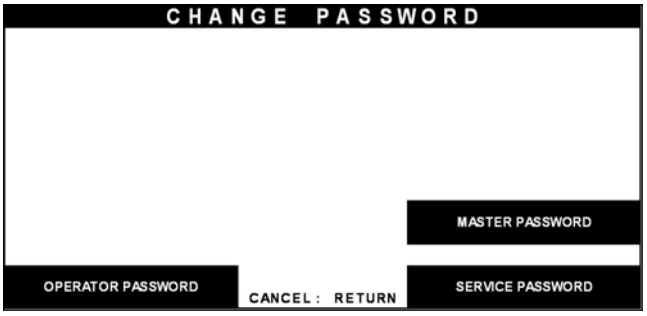
Accessing the CHANGE PASSWORD



1) Select the 'SYSTEM SETUP' in the OPERATOR FUNCTION menu.

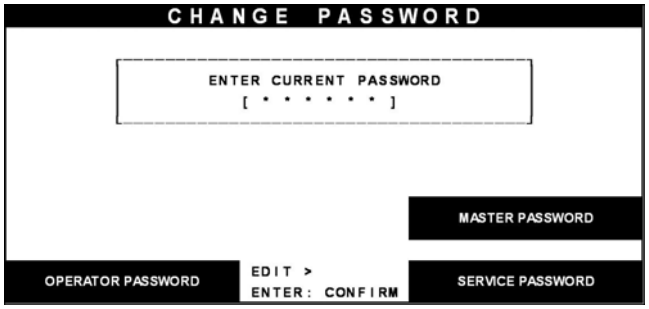


2) Select the 'CHANGE PASSWORD' in the SYSTEM SETUP menu.

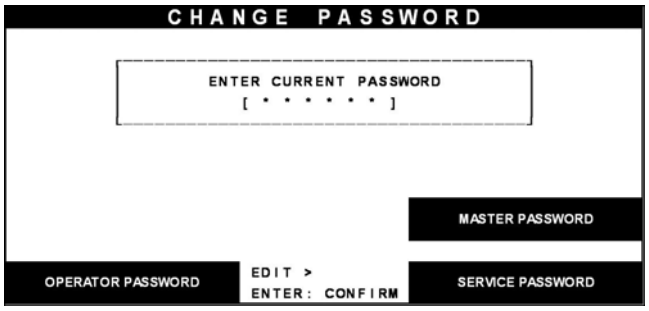


3) Select the 'MASTER PASSWORD' or the 'OPERATOR PASSWORD' or the 'SERVICE PASSWORD' in the CHANGE PASSWORD.
Enter the current Operator Password.

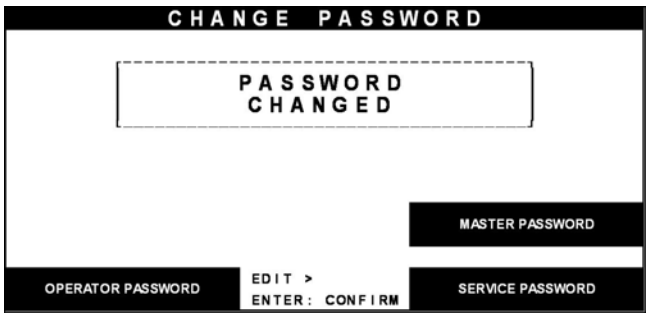
Fig. 6.44 CHANGE PASSWORD



1) Enter the new Operator Password or the new Master Password.



2) Enter the new Operator Password or the new Master Password again.



3) The password will be changed.

Fig. 6.44 CHANGE PASSWORD

Function Description

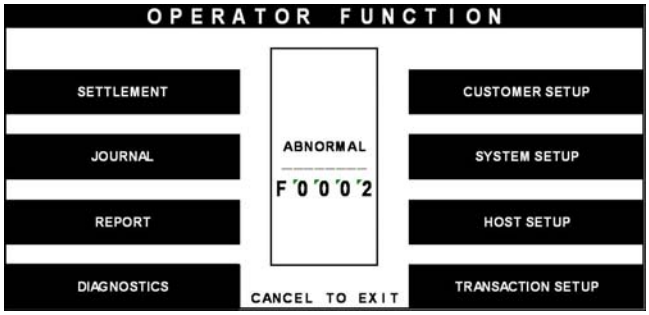
The CHANGE PASSWORD function is used to change the Operator Password.
The factory default Operator Password is “111111”..
The factory default Master Password is “555555”..
The factory default Service Password is “222222”.

6.7.5 Modem

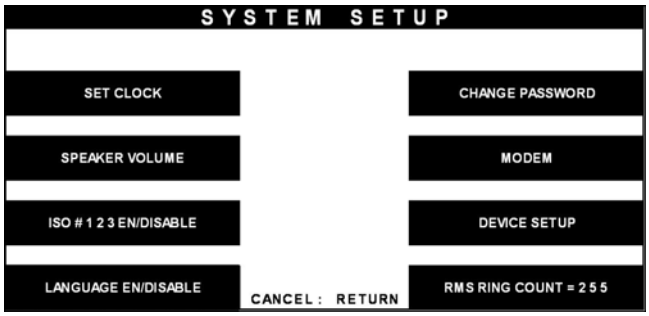
6.7.5.1 MODEM SETUP

1) DIAL MODE

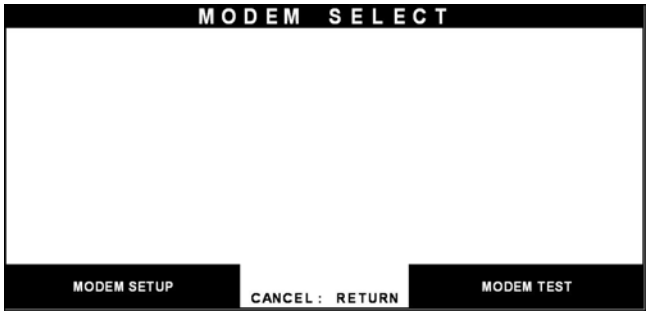
Accessing the DIAL MODE



1) Select the 'SYSTEM SETUP' in the OPERATOR FUNCTION menu.



2) Select the 'MODEM' in the SYSTEM SETUP menu.



3) Select the 'MODEM SETUP' in the MODEM menu.

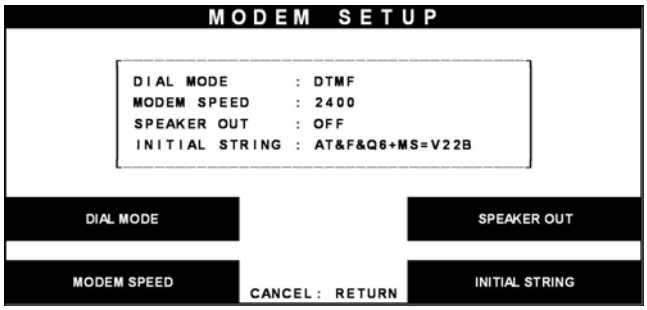


Fig. 6.45 DIAL MODE

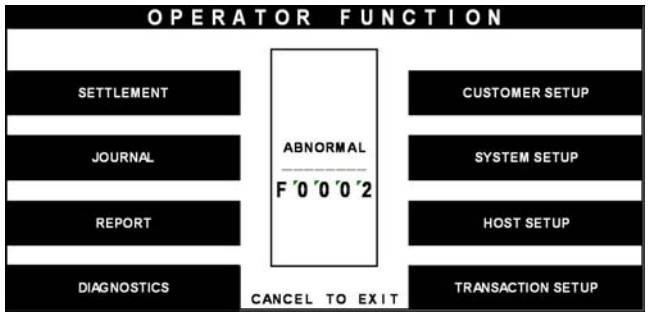
4) When the DIAL MODE is pressed , the DIAL MODE will be changed to DTMF or PULSE.

Function Description

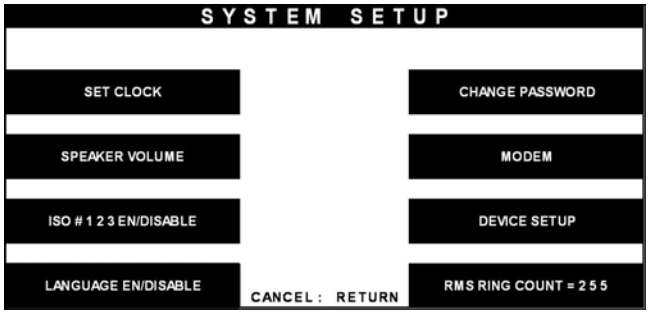
The DIAL MODE function is used to change the Dial Mode to touch-tone mode(DTMF) or rotary mode(PULSE). Consult with the local phone company to determine which option is supported. The factory default is DTMF.

2) Modem speed

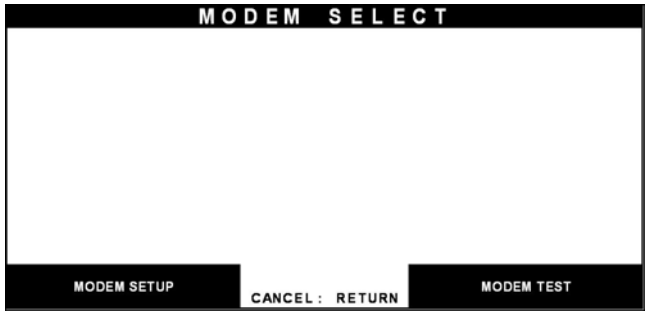
Accessing the MODEM SPEED



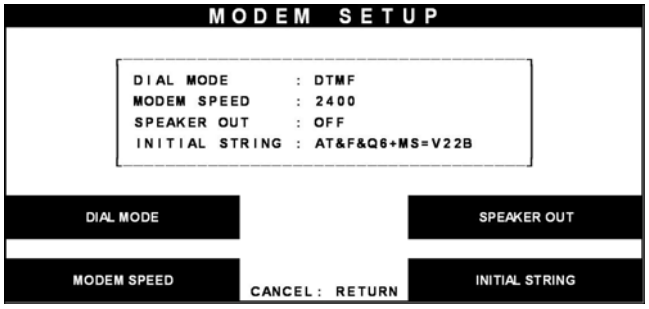
1) Select the 'SYSTEM SETUP' in the OPERATOR FUNCTION menu.



2) Select the 'MODEM' in the SYSTEM SETUP menu.



3) Select the 'MODEM SETUP' in the MODEM menu.



4) Select the 'MODEM SPEED' in the MODEM SETUP menu.

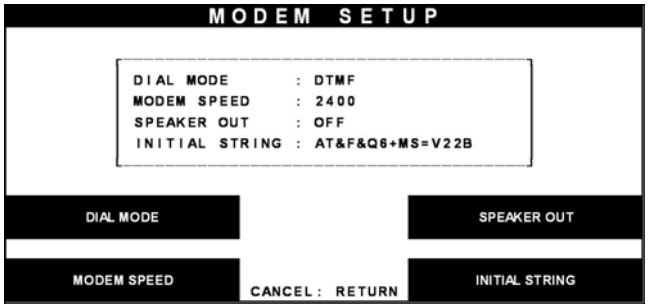


Fig. 6.46 MODEM SPEED

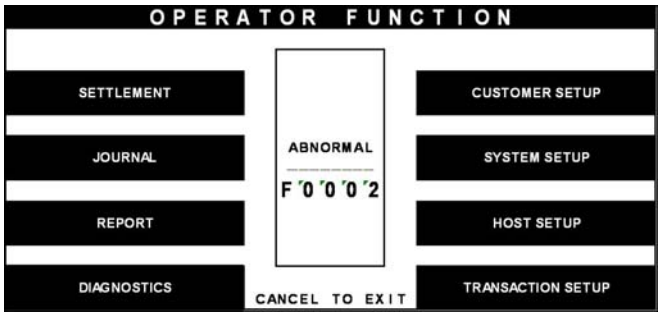
5) The Modem Speed can be changed from 300bps up to 56,600bps.

Function Description

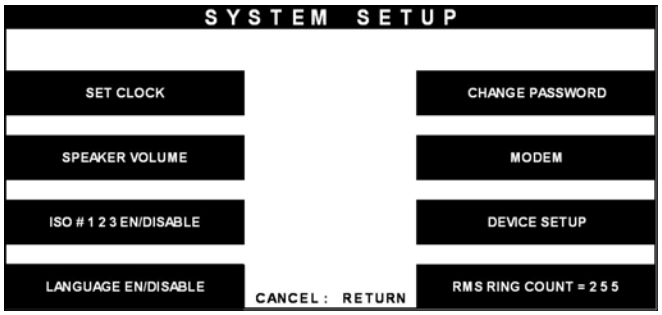
The MODEM SPEED function is used to set the modem connecting speed with the host. The factory default speed is 2400bps.

3) Speaker out

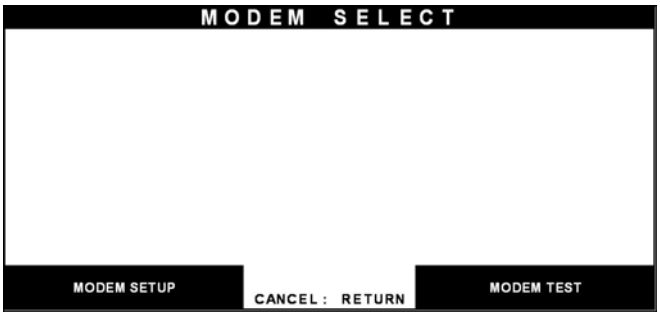
Accessing the SPEAKER OUT



Select the ‘SYSTEM SETUP’ in the OPERATOR FUNCTION menu.



Select the ‘MODEM’ in the SYSTEM SETUP menu.



Select the ‘MODEM SETUP’ in the MODEM MENU.

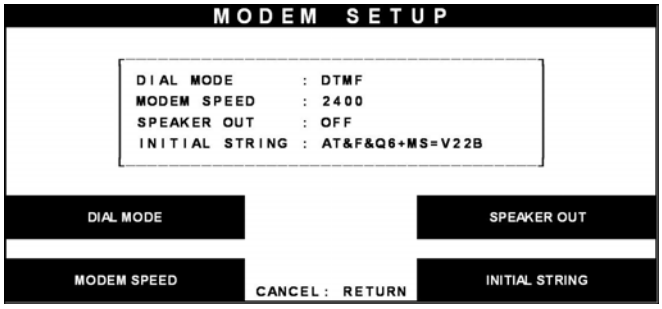


Fig. 6.47 SPEAKER OUT

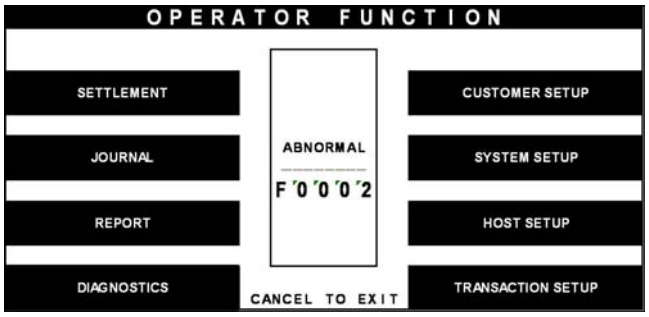
1) Select the 'SPEAKER OUT' in the MODEM SETUP menu.
When you press the Speaker Out key, you can change speaker out on or off.

Function Description

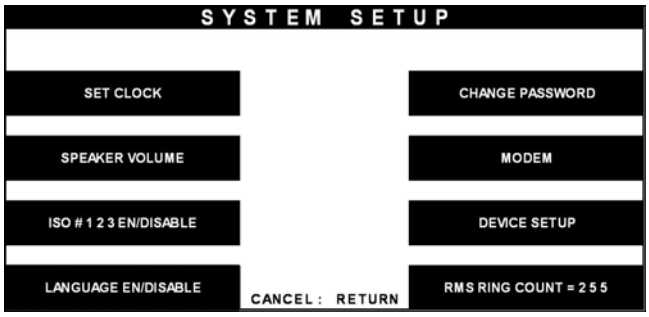
The SPEAKER OUT function is used to change the speaker out on or off at the modem dial connection. Service Personnel can check the dialing if it is normal or abnormal with this function in the speaker out on state. The factory default is OFF.

4) Initial string

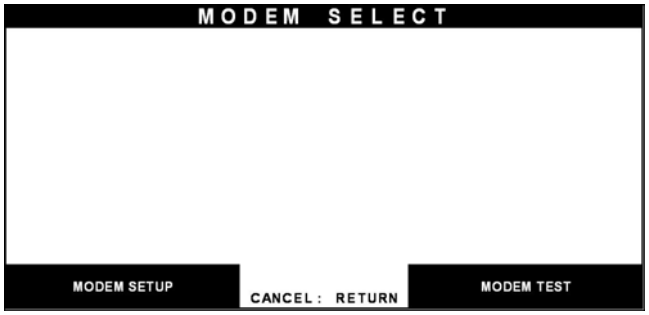
Accessing the INITIAL STRING



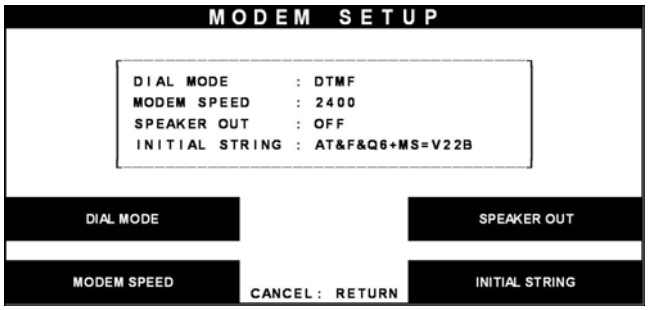
1) Select the 'SYSTEM SETUP' in the OPERATOR FUNCTION menu.



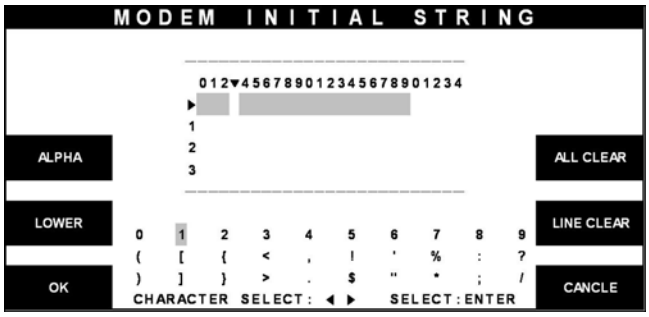
2) Select the 'MODEM' in the SYSTEM SETUP menu.



3) Select the 'MODEM SETUP' in the MODEM menu.



1) Select the 'INITIAL STRING' in the MODEM SETUP menu.



2) Enter the desired modem initial string. Please refer to 6.1.2 How to use keypad.

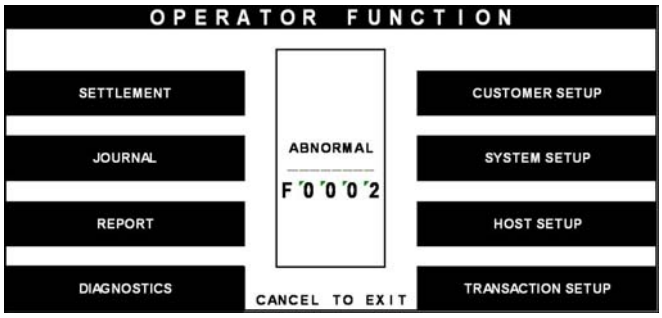
Fig. 6.48 INITIAL STRING

Function Description

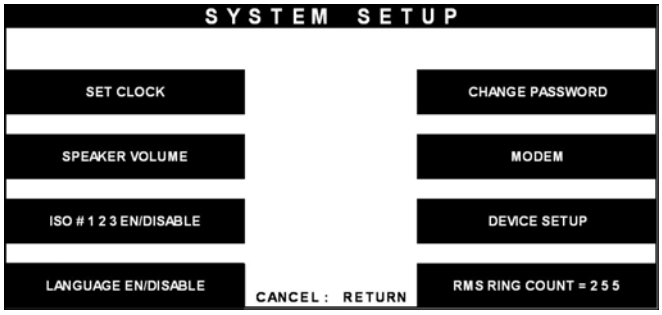
The INITIAL STRING function is used to edit the Modem Initial String when the special circumstances require a nonstandard Modem Initial String. The factory default is AT&F&C1. Before edit the Initial String, consult with Service Personnel.

6.7.5.2 Modem test

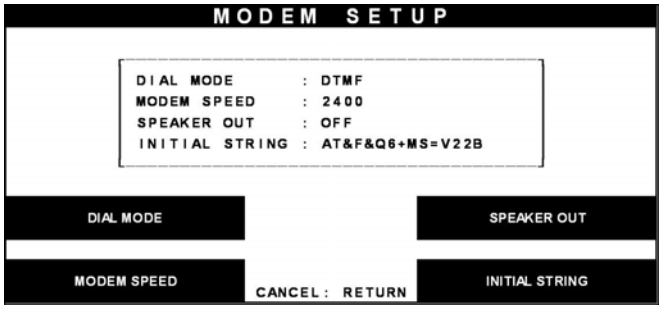
Accessing the MODEM TEST



1) Select the 'SYSTEM SETUP' in the OPERATOR FUNCTION menu



2) Select the 'MODEM' in the SYSTEM SETUP menu. The modem will be started to test.



3) Select the 'MODEM TEST' in the MODEM menu.

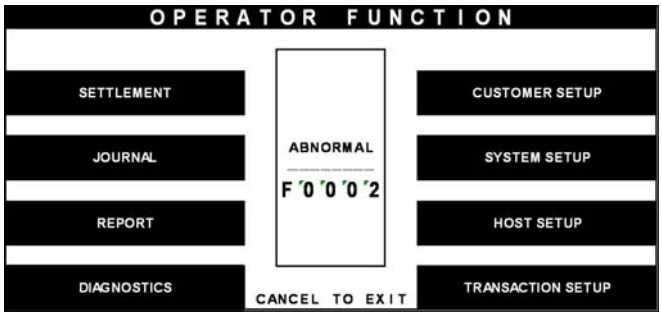
Fig. 6.49 MODEM TEST

4) If the GOOD message appears, press "ENTER".

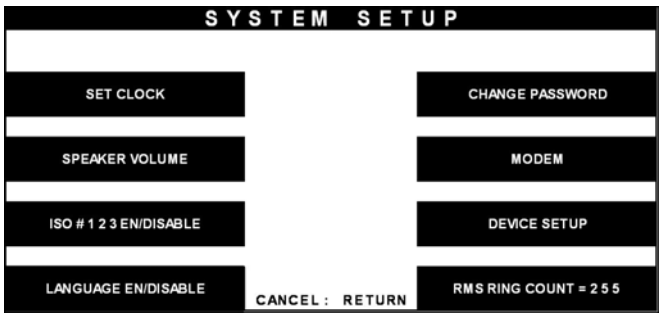
Function Description

The MODEM TEST function is used to perform the modem reset test.
When the error is occurred, contact the Service Personnel.

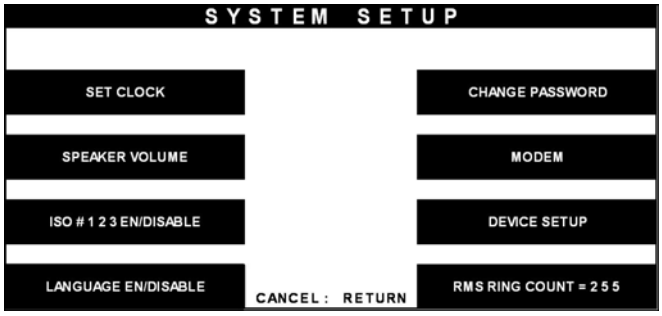
6.7.6 RMS ring count



1) Select the 'SYSTEM SETUP' in the OPERATOR FUNCTION menu.



2) Select the 'RMS RING COUNT' in the SYSTEM SETUP menu.



3) Input the RMS RING COUNT and press 'ENTER'.

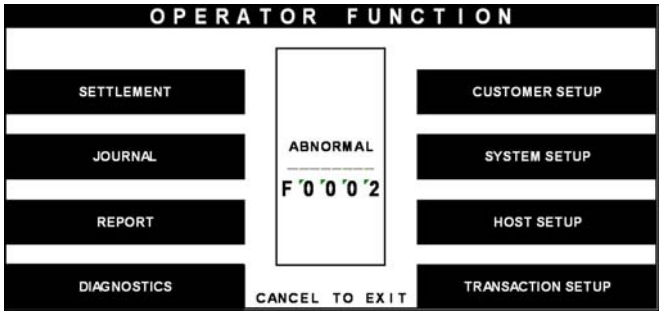
Fig. 6.50 RMS RING COUNT

Function Description

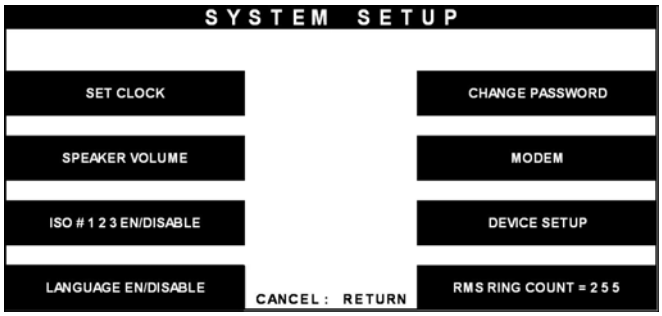
When RMS calls to ATM, ATM will answer to RMS after ringing as RMS RING COUNT.

6.7.7 Device Setup

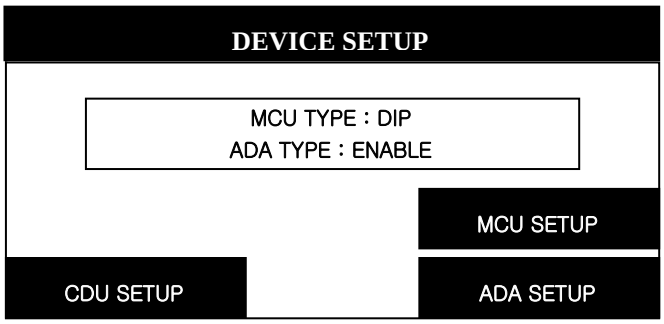
Accessing the DEVICE SETUP



1) Select the 'SYSTEM SETUP' in the OPERATOR FUNCTION menu.



2) Select the 'DEVICE SETUP' in the SYSTEM SETUP menu.



3) Set your device type (CDU, MCU and ADA)

Fig. 6.51 DEVICE SETUP

Function Description

The SPEAKER VOLUME function is used to set the speaker volume. With using ◂ , ▸ key an operator can hear the beep sound.

6.8 Host setup

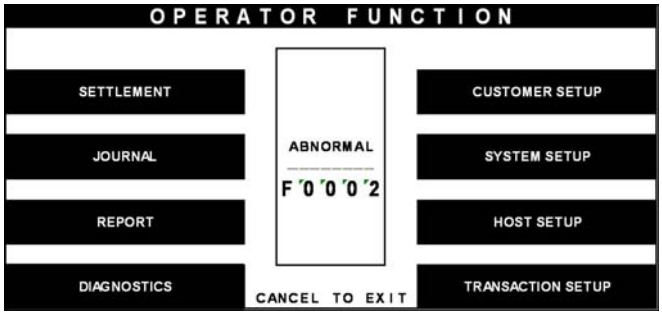
The HOST SETUP function of the OPERATOR FUNCTION includes the following:

KEY MANAGEMENT
MASTER KEY INDEX
CHECK MASTER KEY
EDIT MASTER KEY
SET MASTER KEY SERIAL NUMBER
TELEPHONE NUMBER
TERMINAL NUMBER
ROUTING ID
HEALTH CHECK MESSAGE
CONNECT TIMER
REMOTE MONITOR
RMS EN/DISABLE
RMS STATUS SEND EN/DISABLE
PASSWORD
REMOTE PHONE
MODEM SPEED
TRIAL DAY TOTAL

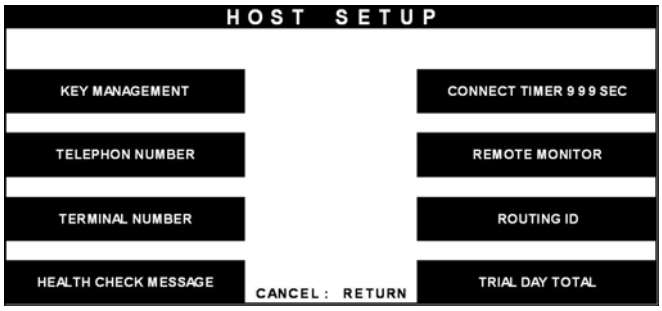
6.8.1 Key management

6.8.1.1 Master key index

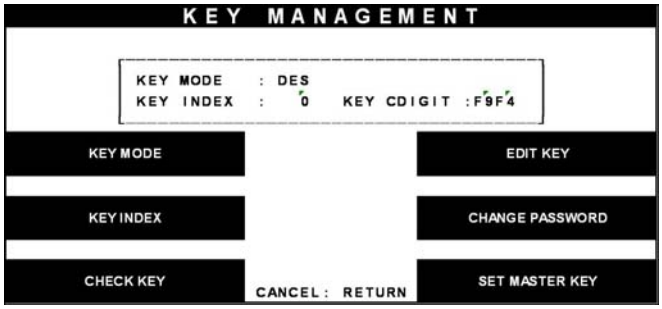
Accessing the MASTER KEY INDEX



1) Select the 'HOST SETUP' in the OPERATOR FUNCTION menu.



2) Select the 'KEY MANAGEMENT' in the HOST SETUP menu.



3) Select the 'MASTER KEY INDEX' in the KEY MANAGEMENT menu. Enter the Master Key Index.

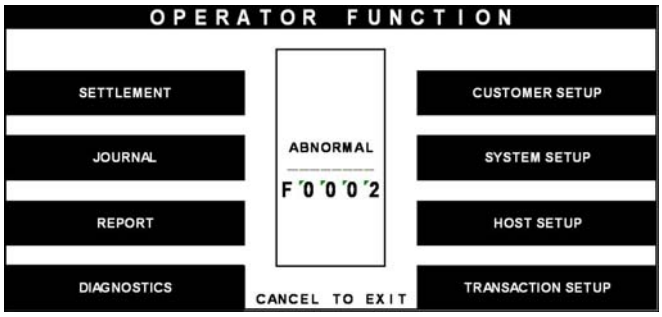
Fig. 6.52 MASTER KEY INDEX

Function Description

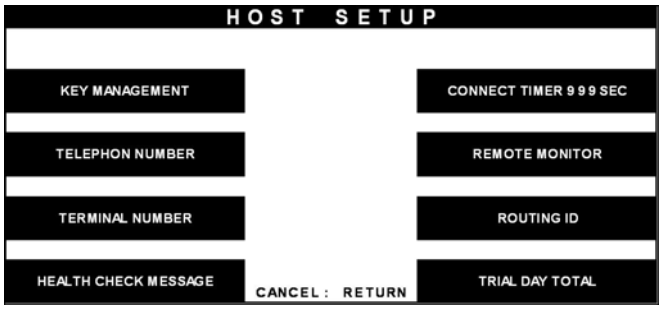
The MASTER KEY INDEX function is used to set the Master Key Index.
The range is 0 to 15.

6.8.1.2 Check master key

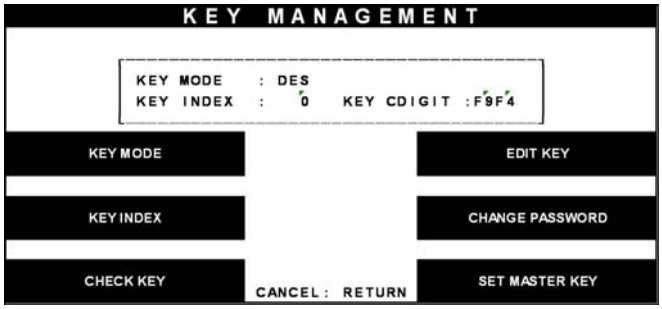
Accessing the CHECK MASTER KEY



1) Select the 'HOST SETUP' in the OPERATOR FUNCTION menu.



2) Select the 'KEY MANAGEMENT' in the HOST SETUP menu.



3) Select the 'CHECK MASTER KEY' in the KEY MANAGEMENT menu.

Fig. 6.53 CHECK MASTER KEY

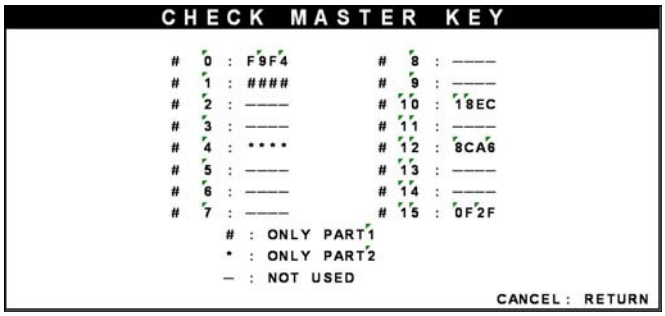


Fig. 6.53 CHECK MASTER KEY

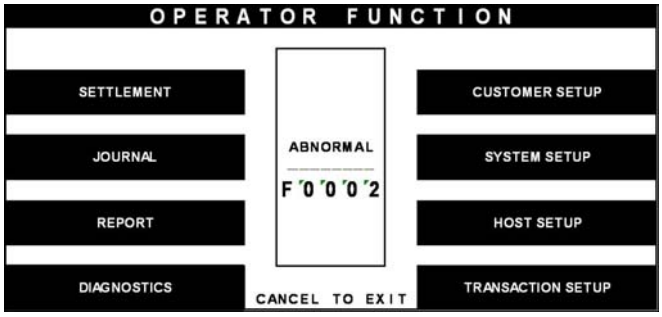
4) It will display the check sum of all injected master key.

Function Description

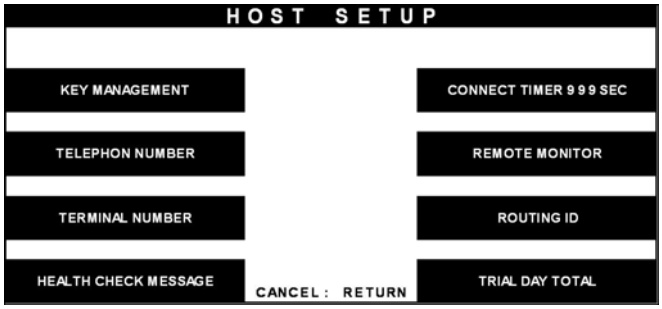
The CHECK MASTER KEY function is used to display the check sum of all injected Master Key. The master key which is displayed as "_____" means it is in empty state.

6.8.1.3 Edit master key

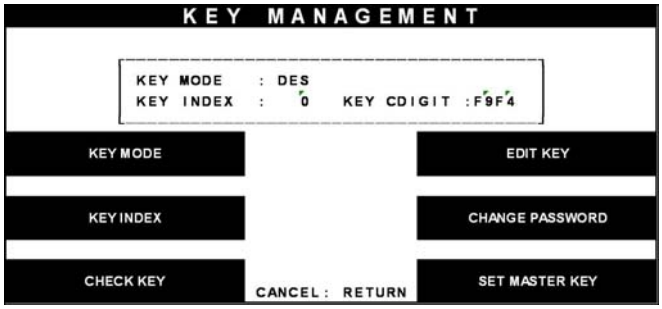
Accessing the EDIT MASTER KEY



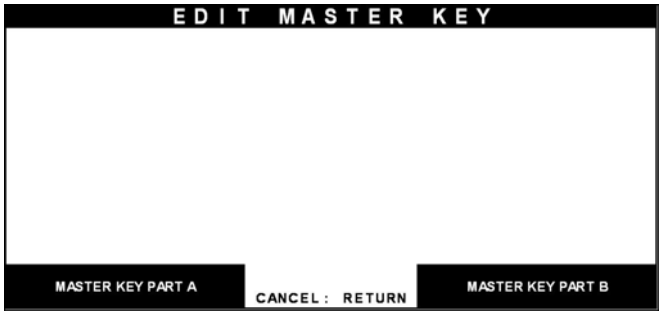
1) Select the 'HOST SETUP' in the OPERATOR FUNCTION menu.



2) Select the 'KEY MANAGEMENT' in the HOST SETUP menu.

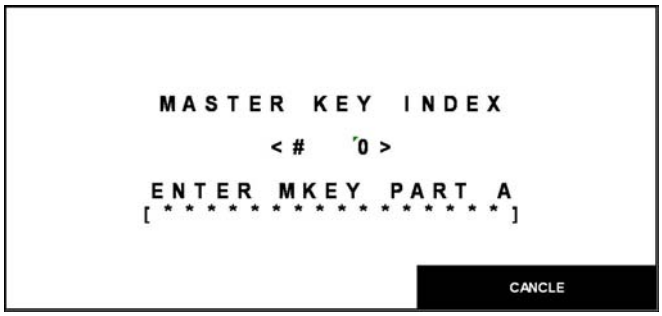


3) Select the 'EDIT MASTER KEY' in the KEY MANAGEMENT menu.

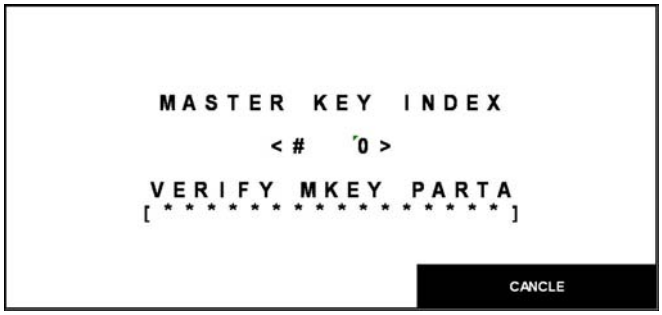


4) Select the 'MASTER KEY PART1' or 'MASTER KEY PART2' in the EDIT MASTER KEY menu.

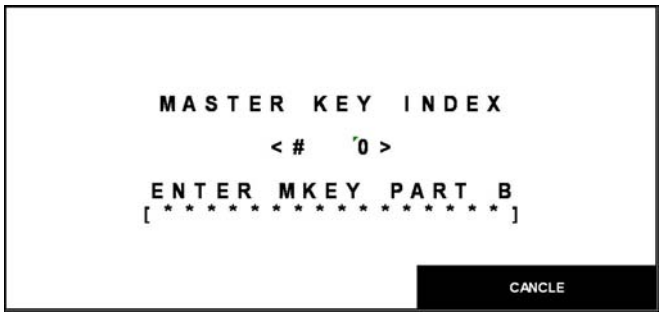
1) Enter the master key index.



2) Enter the Master Key PART A.



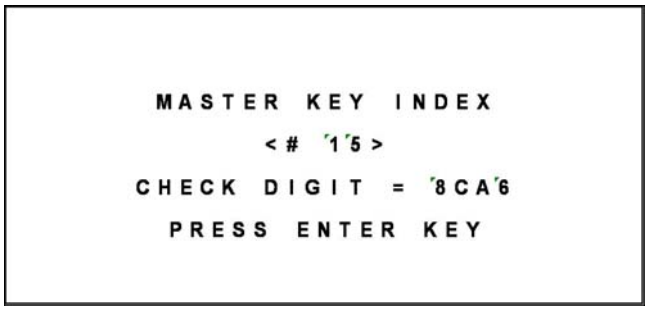
3) Verify the Master Key PART A.



4) Enter the Master Key PART B

Fig. 6.54 EDIT MASTER KEY

5) Verify the Master Key PART B.



6) After inputting the Master Key, the check sum will be displayed. Press "ENTER" after confirming the check sum.

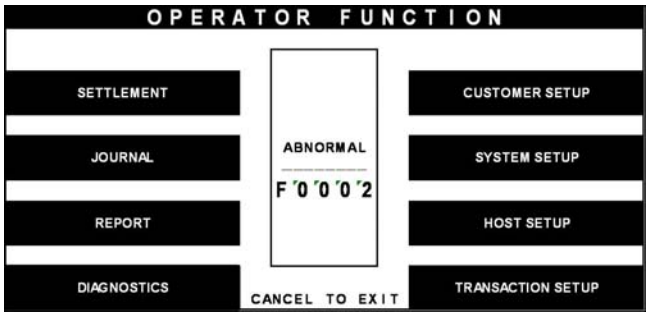
Fig. 6.54 EDIT MASTER KEY

Function Description

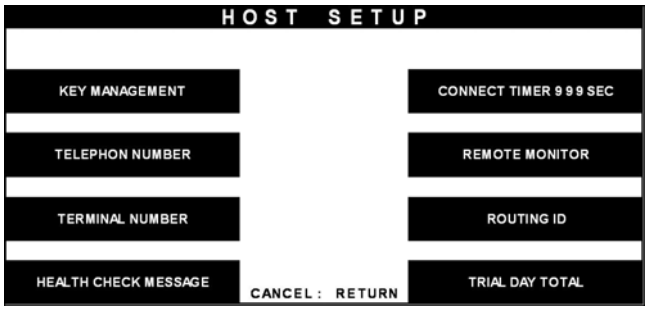
The EDIT MASTER KEY function is used to enter the Master Key.

6.8.1.4 Set master key serial number

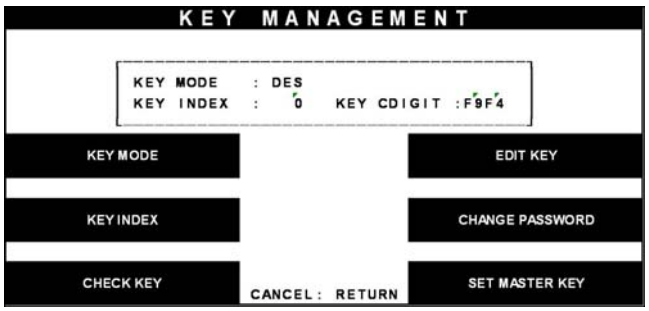
Accessing the SET MASTER KEY SERIAL NUMBER



1) Select the 'HOST SETUP' in the OPERATOR FUNCTION menu.



2) Select the 'KEY MANAGEMENT' in the HOST SETUP menu.



3) Select the 'MASTER KEY SERIAL NUMBER' in the KEY MANAGEMENT menu.
And insert serial number.

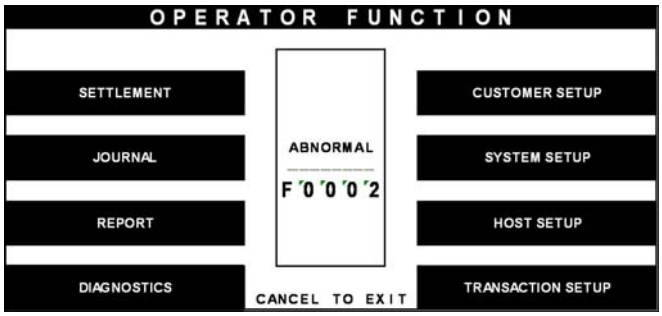
Fig. 6.55 MASTER KEY SERIAL NUMBER

Function Description

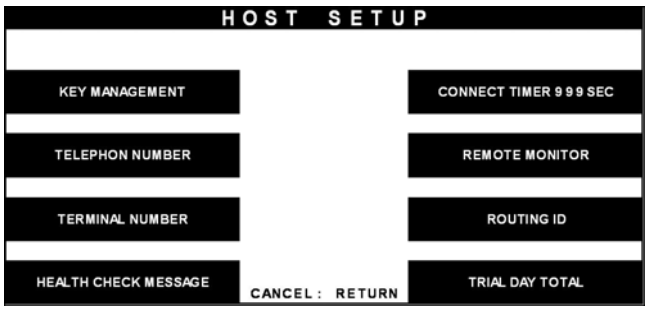
The MASTER KEY SERIAL NUMBER function is used to insert the ATM machine number for RMS (Mono : 1400000001 ~ 1499999999, Color : 1500F000001 ~ 1599999999).

6.8.2 Telephone number

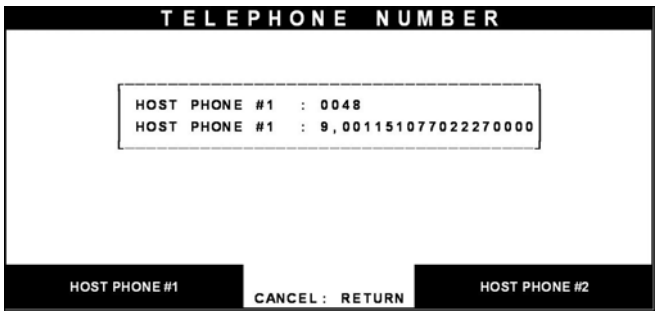
Accessing the TELEPHONE NUMBER



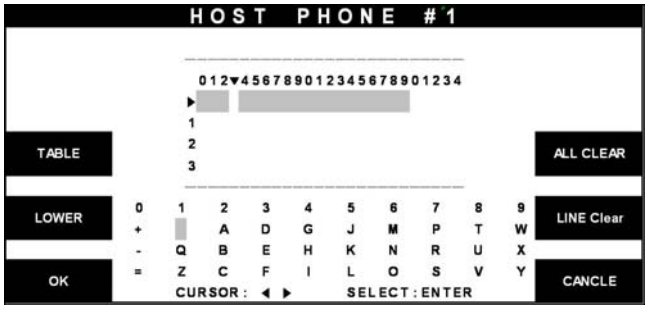
1) Select the 'HOST SETUP' in the OPERATOR FUNCTION menu.



2) Select the 'TELEPHONE NUMBER' in the HOST SETUP menu.

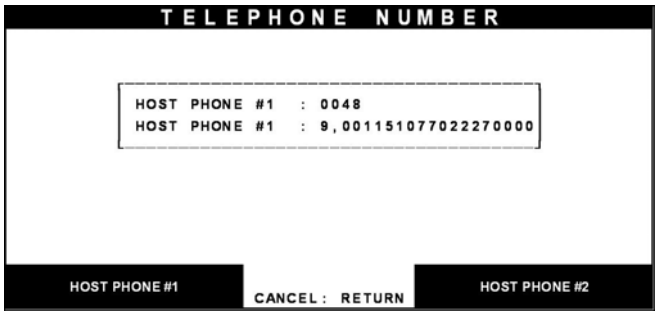


3) Select the 'HOST PHONE #1' in the TELEPHONE NUMBER menu.



4) Enter the Host Phone number 1.
Please refer to 6.1.2 How to use keypad.

Fig. 6.56 TELEPHONE NUMBER



5) Select the 'HOST PHONE #2' in the TELEPHONE NUMBER MENU.

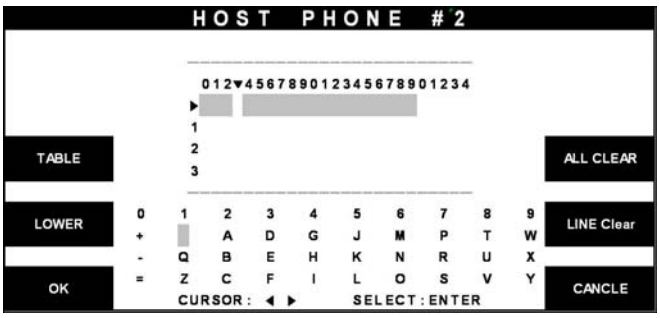


Fig. 6.56 TELEPHONE NUMBER

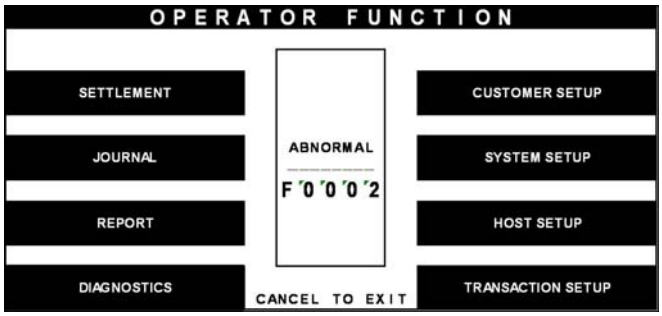
6) Enter the Host Phone number 2.
Please refer to 5.1.2 how to use keypad.

Function Description

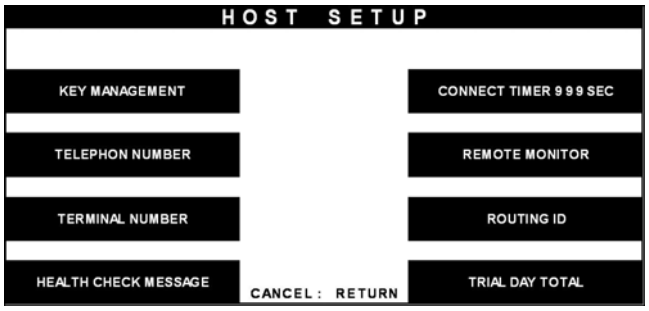
The TELEPHONE NUMBER function is used to enter the Primary Telephone Number and the Back-up Telephone number of the host.

6.8.3 Terminal number

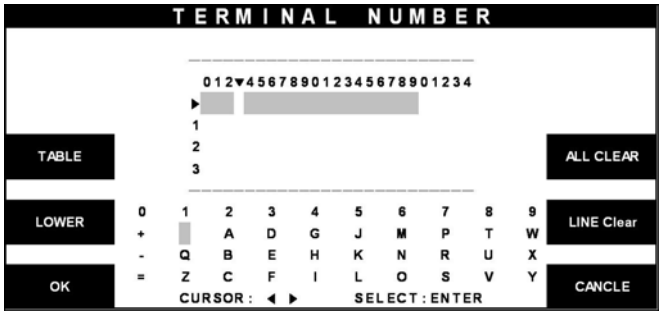
Accessing the TERMINAL NUMBER



1) Select the 'HOST SETUP' in the OPERATOR FUNCTION menu.



2) Select the 'TERMINAL NUMBER' in the HOST SETUP menu.



3) Enter the Terminal Number.
Please refer to 5.1.2 how to use keypad.

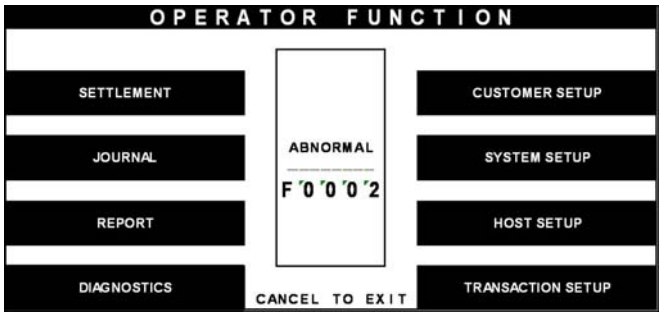
Fig. 6.57 TERMINAL NUMBER

Function Description

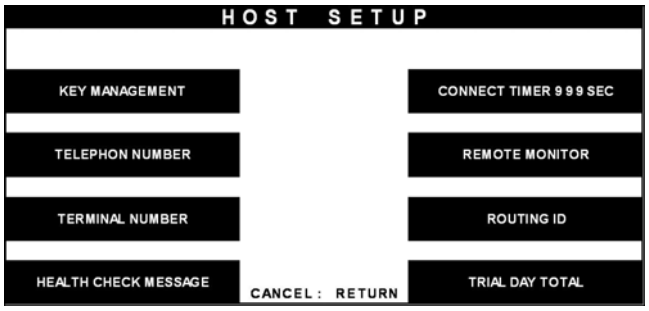
The TERMINAL NUMBER function is used to set the Terminal Number of NH-1800.

6.8.4 Routing ID

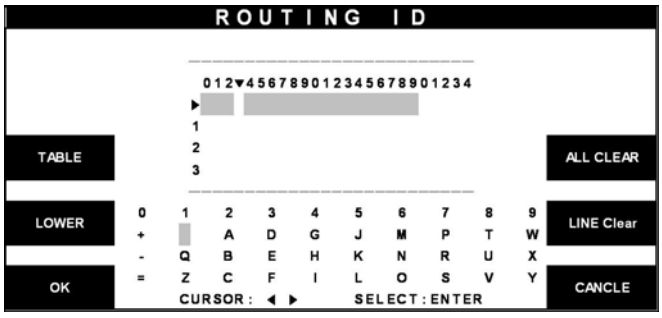
Accessing the ROUTING ID



1) Select the 'HOST SETUP' in the OPERATOR FUNCTION menu.



2) Select the 'ROUTING ID' in the HOST SETUP menu.



3) Enter the desired Routing ID number. Please refer to 5.1.2 How to use keypad.

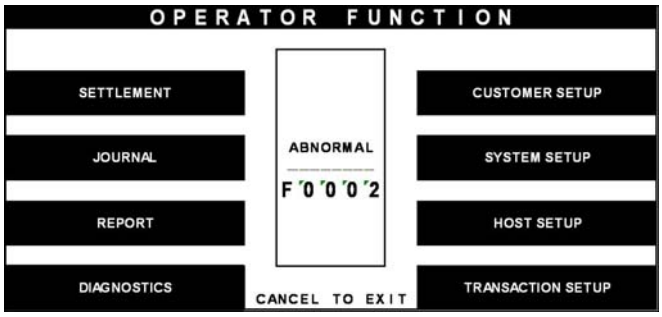
Fig. 6.58 ROUTING ID

Function Description

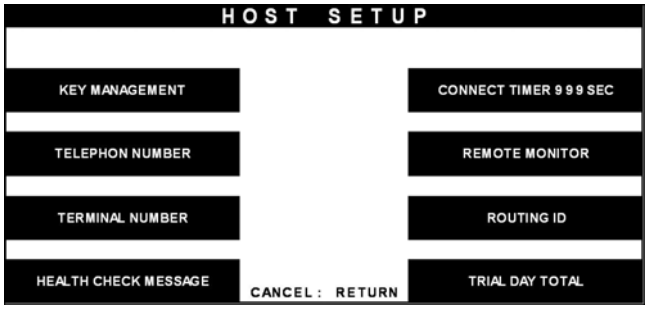
The ROUTING ID function is used to set the Routing ID Number of NH-1800.

6.8.5 Health check message

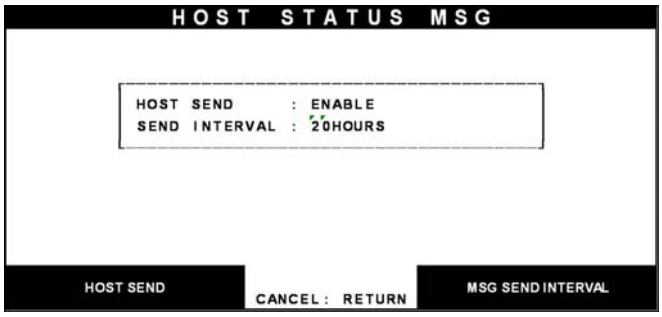
Accessing the HEATH CHECK MESSAGE



1) Select the 'HOST SETUP' in the OPERATOR FUNCTION menu.



2) Select the 'HEALTH CHECK MESSAGE' in the HOST SETUP menu.



3) Select the 'HOST SEND' and 'MESSAGE SEND INTERVAL' in the HEALTH CHECK MESSAGE menu.

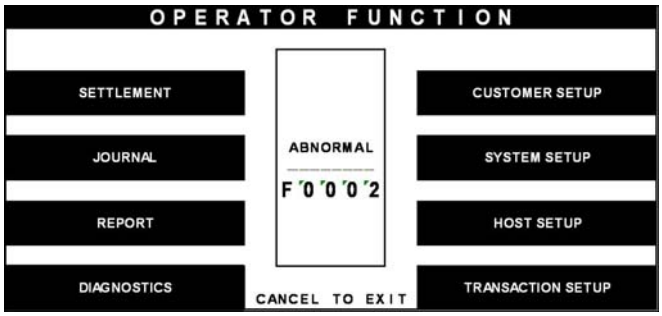
Fig. 6.59 HEALTH CHECK MESSAGE

Function Description

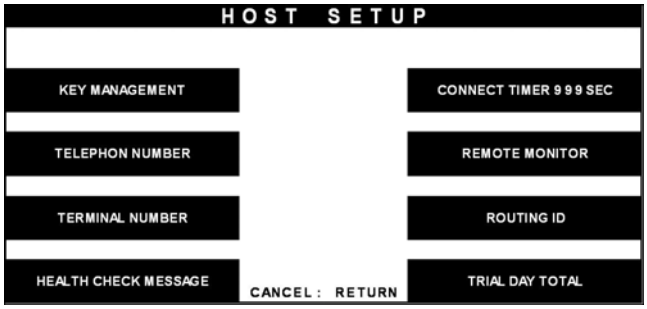
The HOST SEND function is used to set HOST SEND MESSAGE to be enabled or disabled.
The MESSAGE SEND INTERVAL function is used to set INTERVAL TIME.

6.8.6 Connect timer

Accessing the CONNECT TIMER



1) Select the 'HOST SETUP' in the OPERATOR FUNCTION menu.



2) Select the 'CONNECT TIMER' in the HOST SETUP menu. After inputting the timer parameter, press "ENTER".

Fig. 6.60 CONNECT TIMER

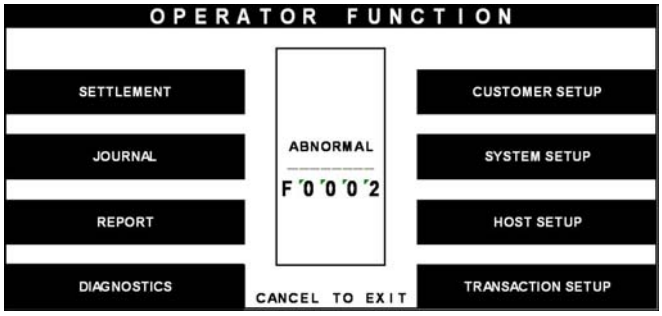
Function Description

The CONNECT TIMER function is used to set the waiting timer during connecting to the host. After powering on the machine, the machine will try to connect to the host. However when the machine fails to connect to the host, it will wait for a while and will attempt to connect again. This function is used to set the waiting time. The factory default is 60 second.

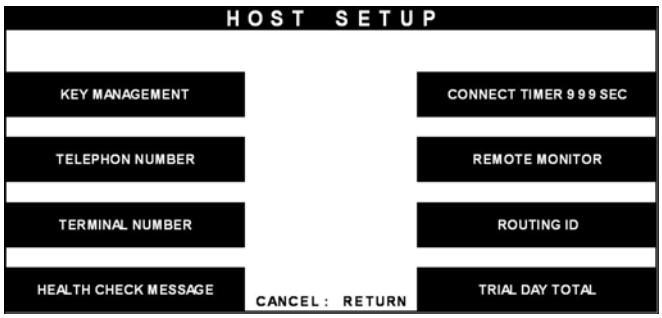
6.8.7 Remote monitor

6.8.7.1 RMS EN/DISABLE

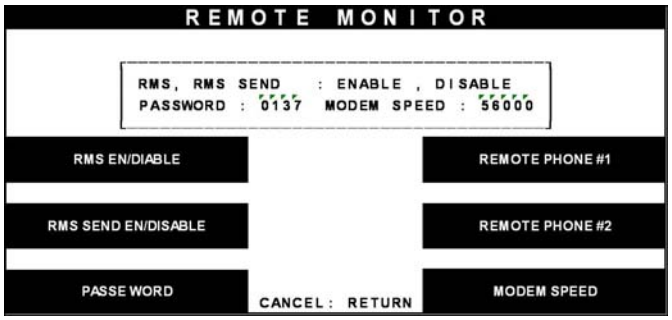
Accessing the RMS EN/DISABLE



1) Select the 'HOST SETUP' in the OPERATOR FUNCTION menu.



2) Select the 'REMOTE MONITOR' in the HOST SETUP menu.



3) Select the 'RMS EN/DISABLE' in the REMOTE MONITOR menu.

Fig. 6.61 RMS EN/DISABLE

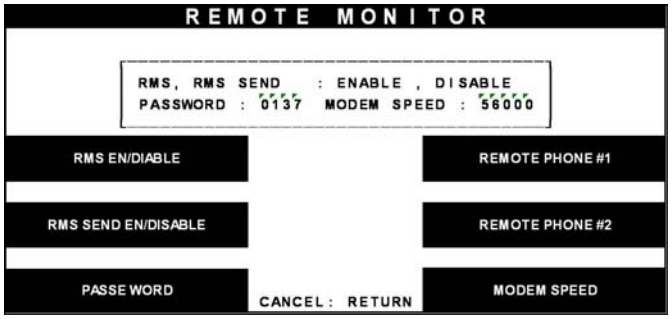


Fig. 6.61 RMS EN/DISABLE

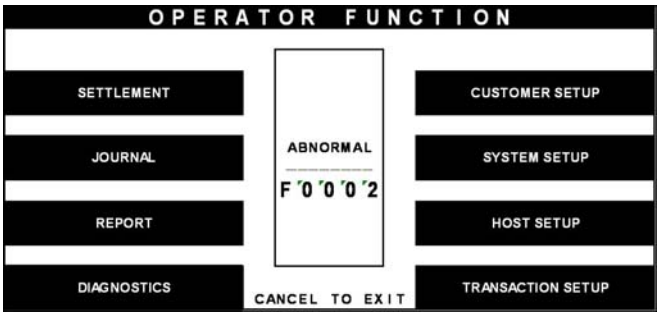
4) When you press the RMS EN/DISABLE key, it will be changed to to be enabled or disabled.

Function Description

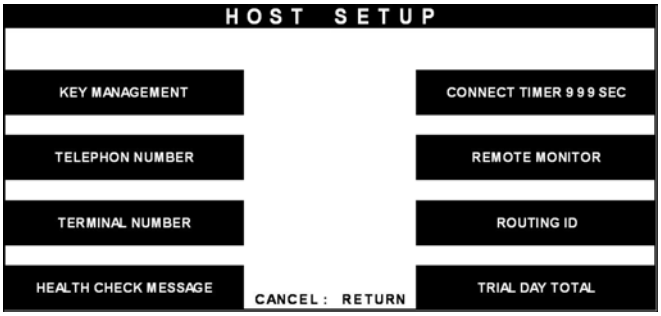
The RMS(Remote Management System) EN/DISABLE function is used to connect with the RMS mode in enabled or in disabled. The factory default is disabled.

6.8.7.2 RMS status send en/disable

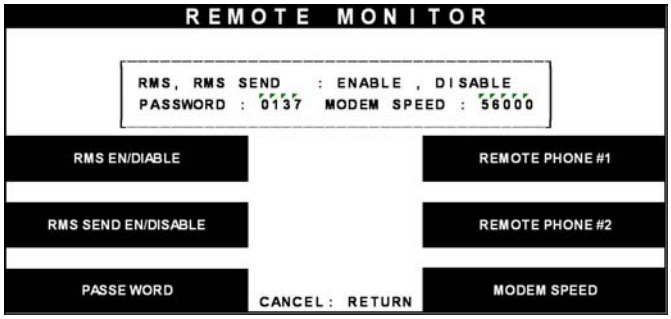
Accessing the RMS STATUS SEND EN/DISABLE



1) Select the 'HOST SETUP' in the OPERATOR FUNCTION menu.



2) Select the 'REMOTE MONITOR' in the HOST SETUP menu.



3) Select the 'RMS STATUS SEND EN/DISABLE' in the REMOTE MONITOR menu.

Fig. 6.62 RMS STATUS SEND EN/DISABLE

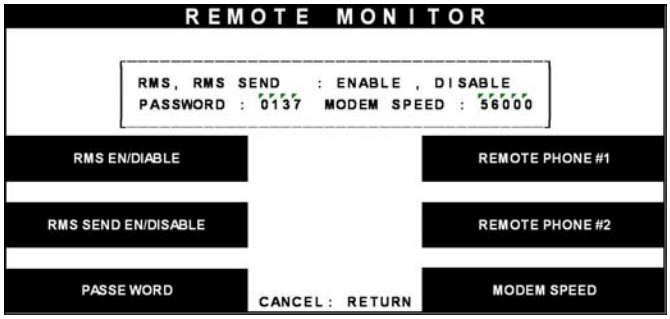


Fig. 6.62 RMS STATUS SEND EN/DISABLE

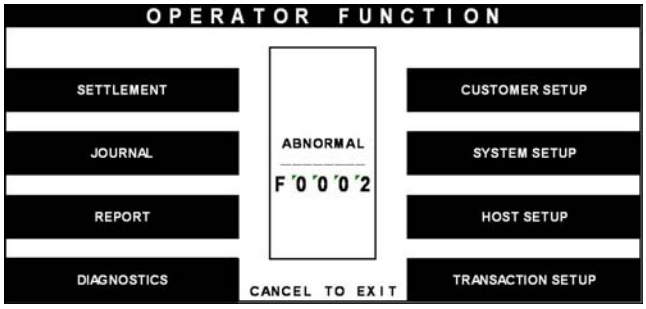
4) When you press the RMS STATUS SEND EN/DISABLE key, it will be changed to be enabled or disabled.

Function Description

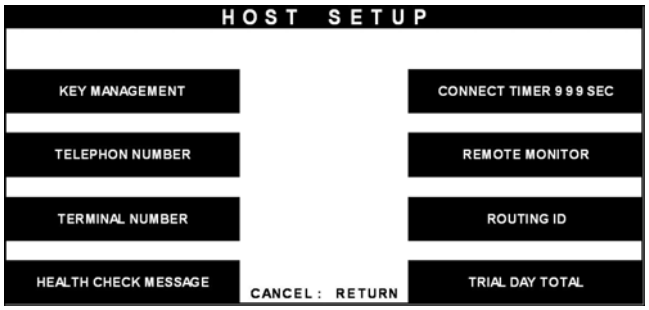
The RMS(Remote Management System) STATUS SEND EN/DISABLE function is used to send NH-1800 status to the RMS when NH-1800 status is changed.
The factory default is disabled.

6.8.7.3 Password

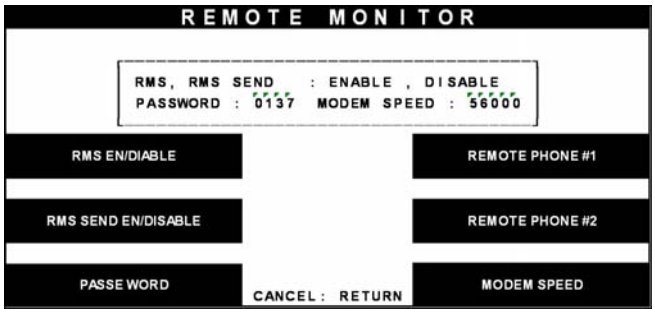
Accessing the PASSWORD



1) Select the 'HOST SETUP' in the OPERATOR FUNCTION menu.

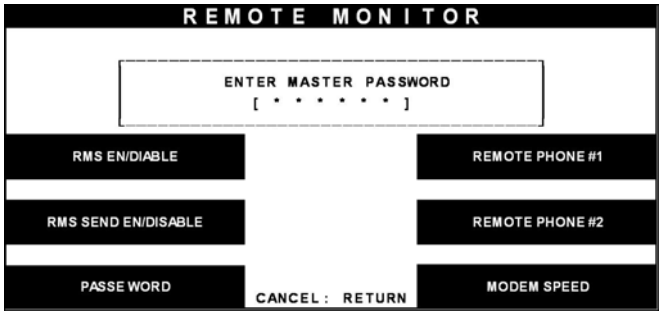


2) Select the 'REMOTE MONITOR' in the HOST SETUP menu.

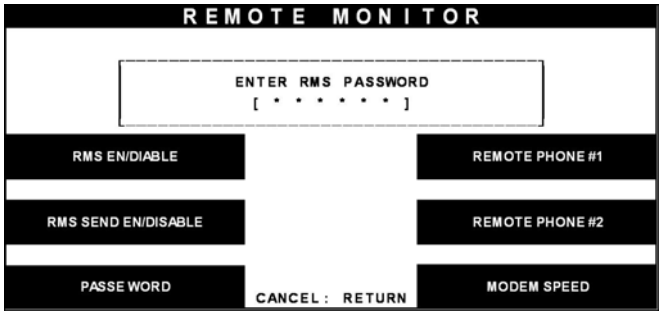


3) Select the 'PASSWORD' in the REMOTE MONITOR menu.

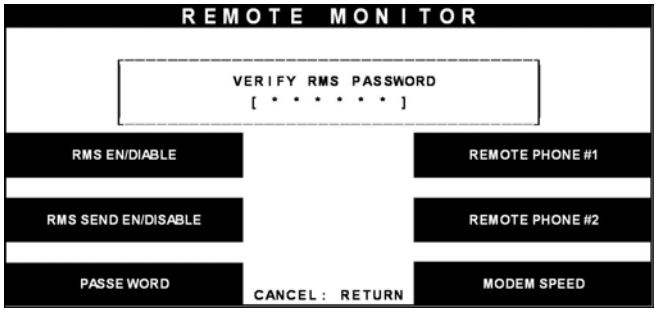
Fig. 6.63 PASSWORD



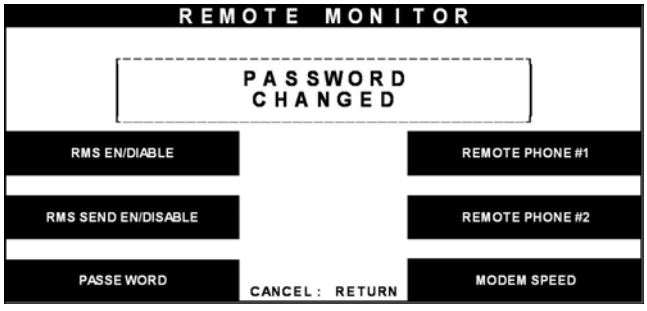
4) Enter the MASTER Password.



5) Enter the new RMS Password.



6) Enter the new RMS Password again.



7) The password will be changed.

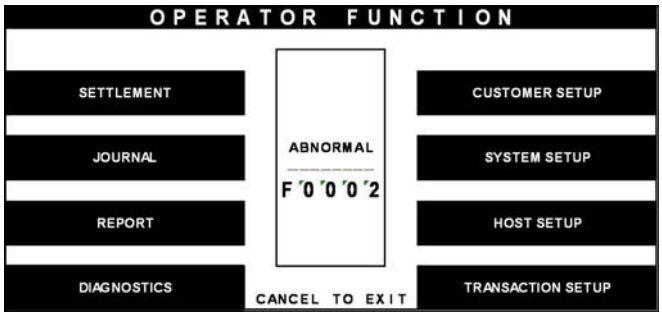
Fig. 6.63 PASSWORD

Function Description

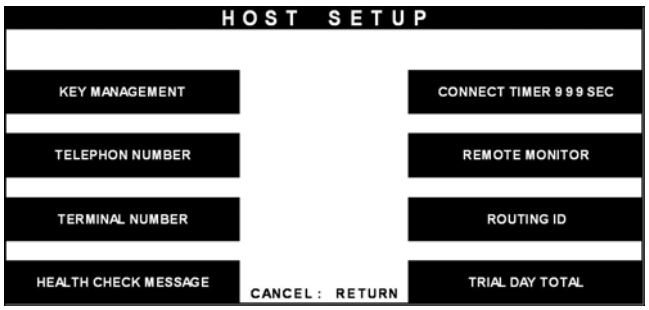
The PASSWORD function is used to set the RMS password to connect to NH-1800 from RMS. The factory default RMS Password is “111111”.

6.8.7.4 Remote phone

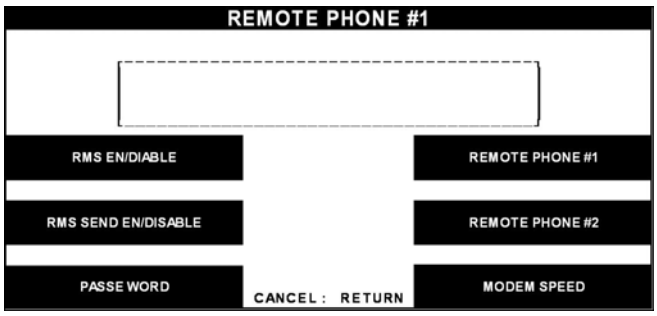
Accessing the REMOTE PHONE



1) Select the 'HOST SETUP' in the OPERATOR FUNCTION menu.

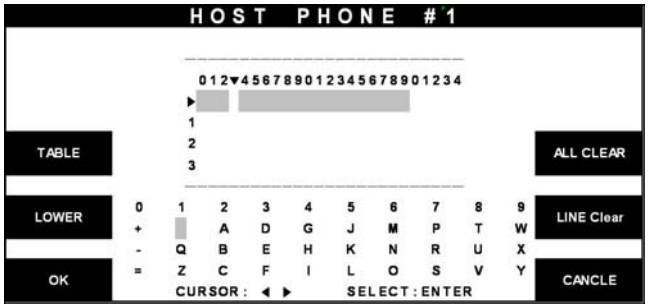


2) Select the 'REMOTE MONITOR' in the HOST SETUP menu.

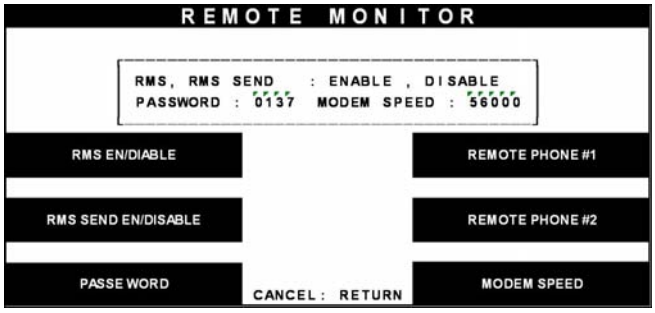


3) Select the 'REMOTE PHONE #1' in the REMOTE MONITOR menu.

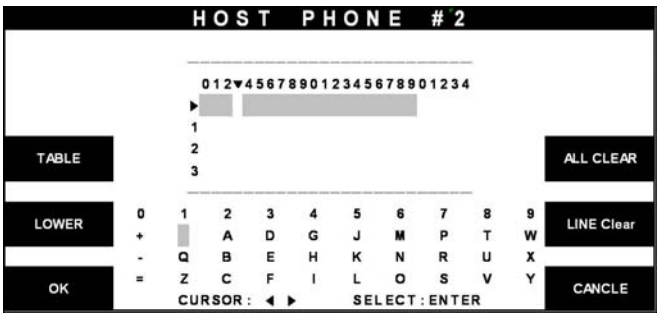
Fig. 6.64 REMOTE PHONE



4) Enter the first Remote Phone number.
Please refer to 5.1.2 How to use keypad.



5) Select the 'REMOTE PHONE #2' in the REMOTE MONITOR menu.



6) Enter the second Remote Phone number 2.
Please refer to 5.1.2 How to use keypad.

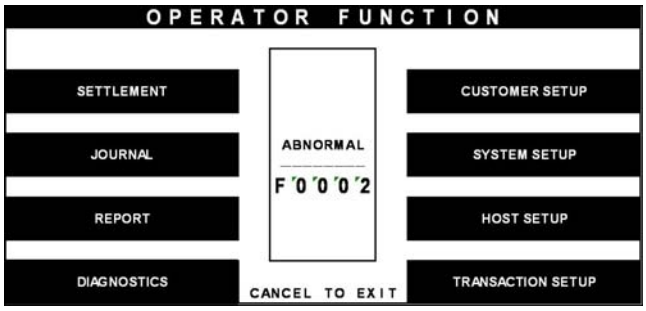
Fig. 6.64 REMOTE PHONE

Function Description

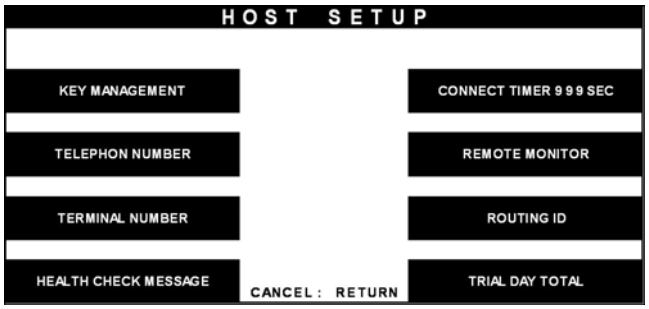
The REMOTE PHONE function is used to input the RMS Primary Telephone Number and the Back-up Telephone Number.

6.8.7.5 Modem speed

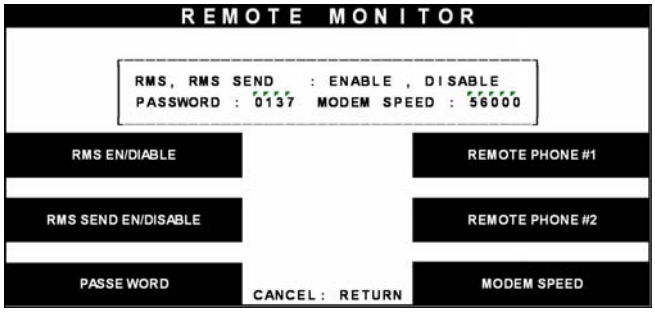
Accessing the MODEM SPEED



1) Select the 'HOST SETUP' in the OPERATOR FUNCTION menu.



2) Select the 'REMOTE MONITOR' in the HOST SETUP menu.



3) When you press the MODEM SPEED key, the speed will be changed to 300bps up to 56,600bps.

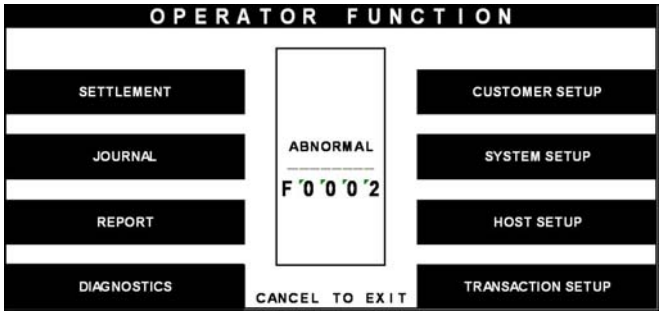
Fig. 6.65 MODEM SPEED

Function Description

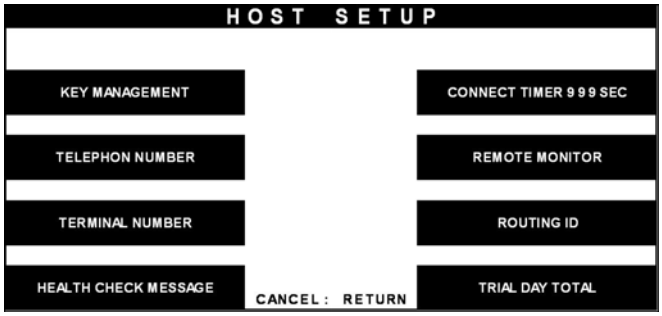
The MODEM SPEED function is used to set the Modem speed of RMS and NH-1800.

6.8.8 Close time

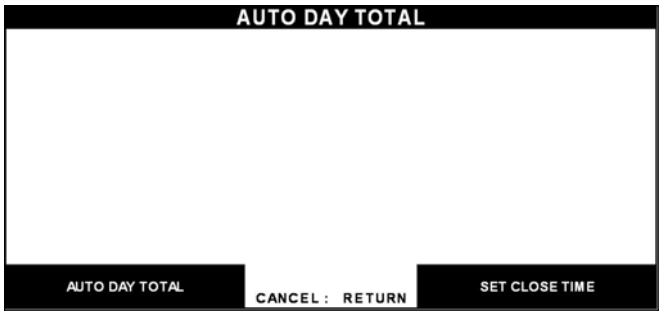
Accessing the CLOSE TIME



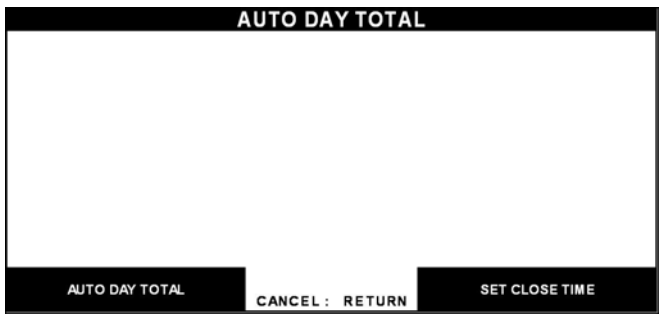
1) Select the 'HOST SETUP' in the OPERATOR FUNCTION menu.



2) Select the 'CLOSE TIME' in the HOST SETUP menu.



3) If you press 'AUTO DAY TOTAL' key, it will be changed to be enabled or disabled.



4) If you press 'SET CLOSE TIME' key, it will set close time.

Fig. 6.66 AUTO DAY TOTAL

Function Description

The AUTO DAY TOTAL function is used to run automatic action of DAY TOTAL.

6.9 Transaction Setup

The TRANSACTION SETUP function of the OPERATOR FUNCTION includes the following:

DISPENSE LIMIT
DENOMINATION
FAST CASH
LOW CURRENCY CHECK

6.9.1 Dispense limit

Accessing the DISPENSE LIMIT

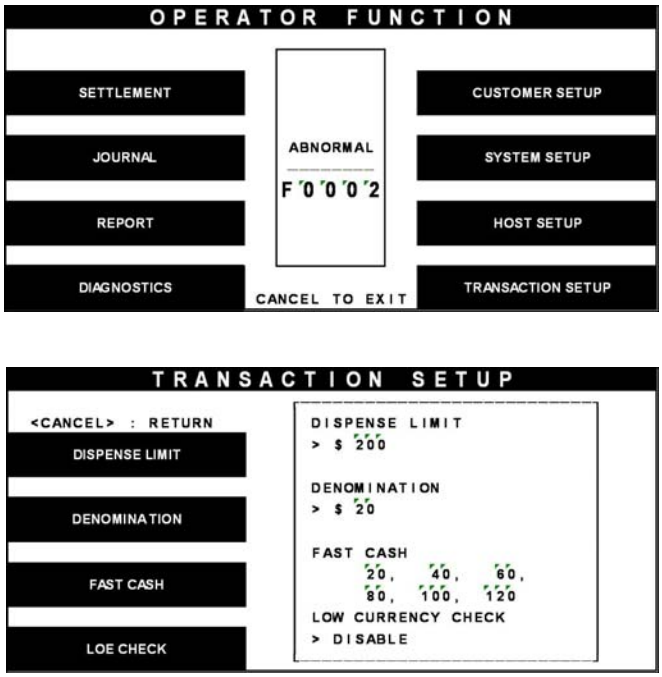


Fig. 6.67 DISPENSE LIMIT

1) Select the 'TRANSACTION SETUP' in the OPERATOR FUNCTION menu.

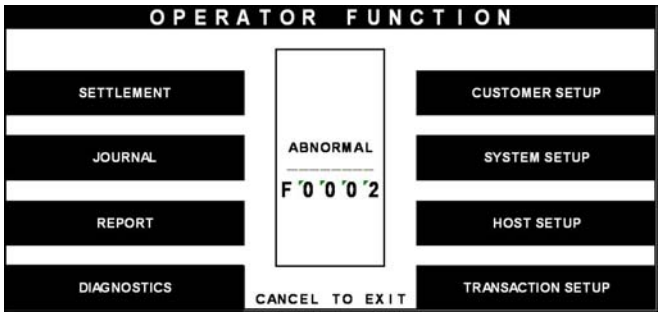
2) Enter the desired dispense limit after pressing the Dispense Limit screen key.

Function Description

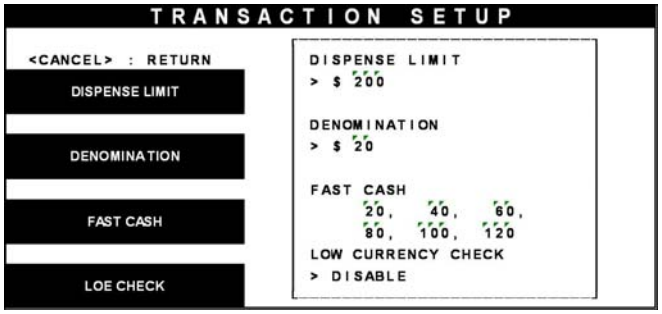
The DISPENSE LIMIT function is used to set the maximum amount of notes that can be dispensed per transaction. The maximum amount must be multiples of denomination. And the maximum number of notes must not be over totals of 40 notes. The factory default is £100.

6.9.2 Denomination

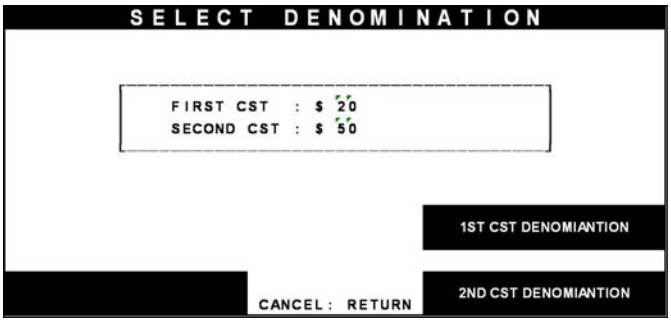
Accessing the DENOMINATION



1) Select the 'TRANSACTION SETUP' in the OPERATOR FUNCTION menu.



2) Select the 'DENOMINATION' in the TRANSATION SETUP.



3) Enter the desired denomination of bills after pressing the Denomination key.

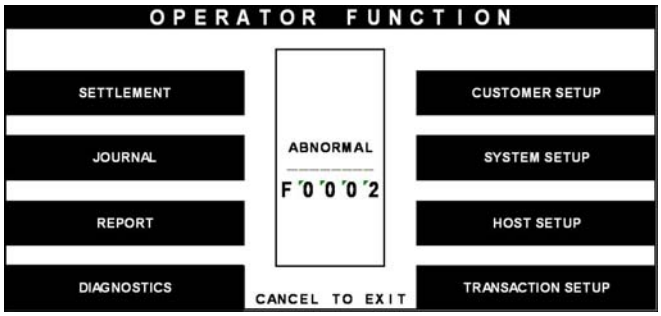
Fig. 6.68 DENOMINATION

Function Description

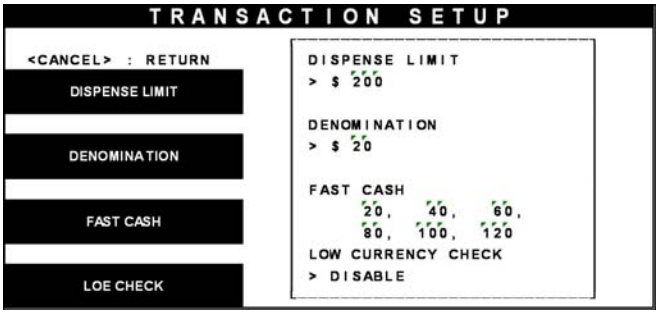
The DENOMINATION function is used to set the denomination of notes to be set in the cassette. The valid denomination is £10, £20, £50, £100. The factory default is £10 and £20.

6.9.3 Fast cash

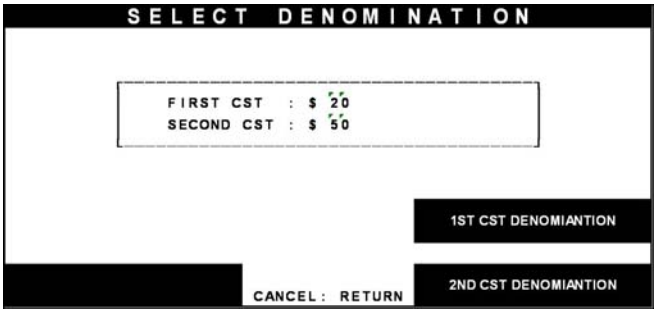
Accessing the FAST CASH



1) Select the 'TRANSACTION SETUP' in the OPERATOR FUNCTION menu.



2) Select the 'FAST CASH' in the TRANSACTION SETUP menu.



3) You can change the fast cash amount LB0 to LB2 and RB0 to RB2 with press the button.

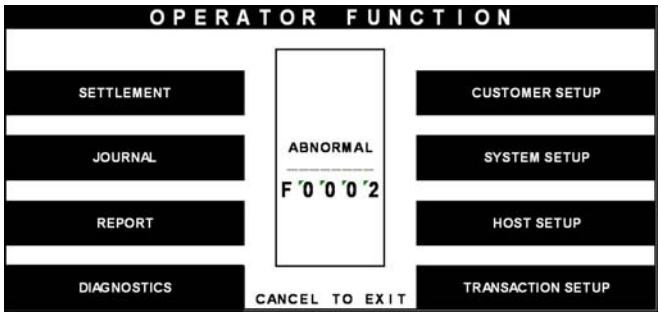
Fig. 6.69 FAST CASH

Function Description

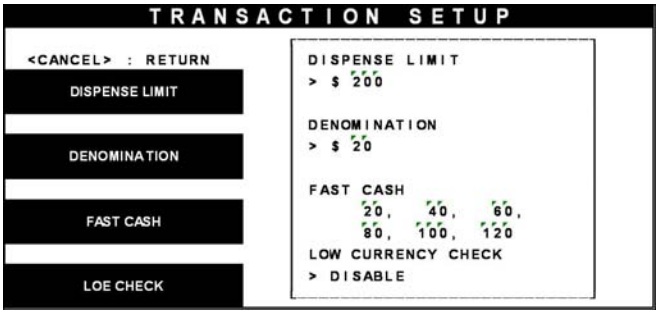
The FAST CASH function is used to set the cash amount, which is to be displayed on the FAST CASH screen. The maximum amount must be less than the Dispensable Limit. The factory default is £10, £20, £30, £40, £50, £60.

6.9.4 Low currency check

Accessing the LOW CURRENCY CHECK



1) Select the 'TRANSACTION SETUP' in the OPERATOR FUNCTION menu.



2) If you want to enable the Low Currency check function, press the Currency Low Check screen key once.

Fig. 6.70 LOW CURRENCY CHECK

Function Description

The LOW CURRENCY CHECK function is used to set the cassette low level detection. If this function is enabled, the machine will be changed to "OUT OF SERVICE" when notes are not enough in the cassette. The factory default is in disable.

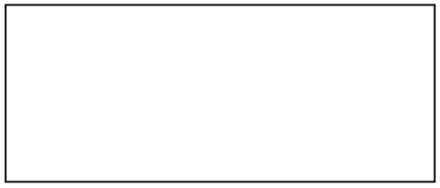
7. Appendix

7. Appendix

A. BILL CONDITIONS

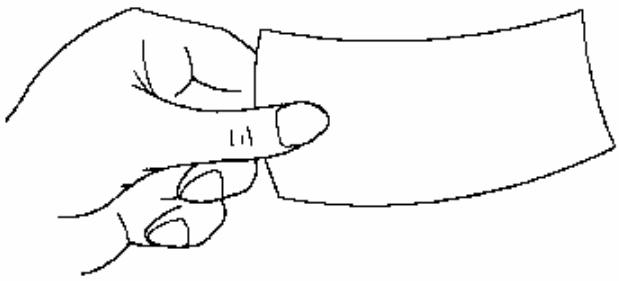
A.1 Acceptable condition

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



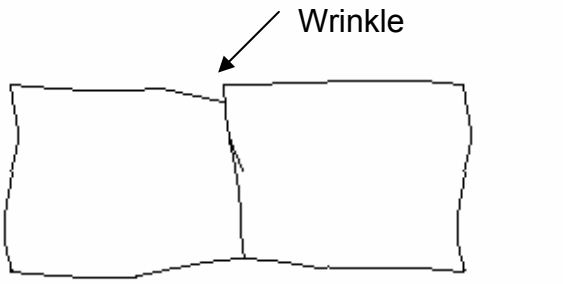
- Bill has sufficient life or sizing to be handled easily

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

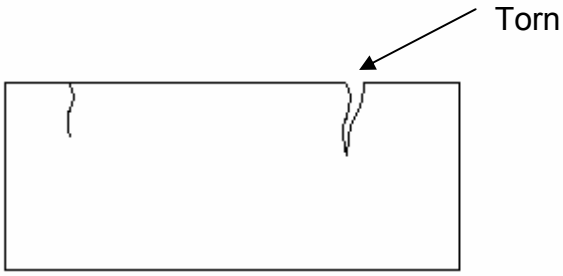


A.2 Unacceptable condition

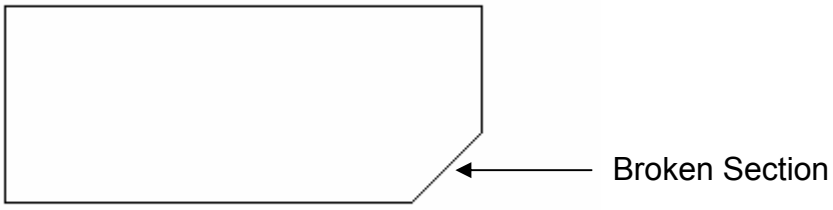
- Bill having serious wrinkles, torn or broken section wherein paper fiber is broken and separation begins
  - ✓ Wrinkle



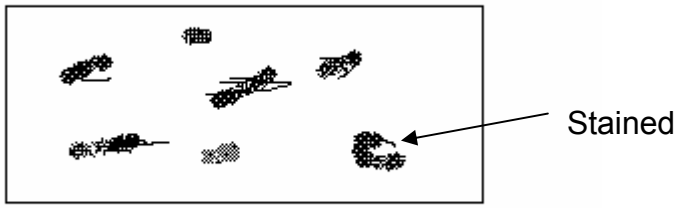
  - ✓ Torn



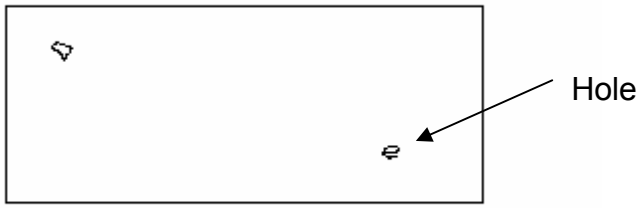
  - ✓ Broken section



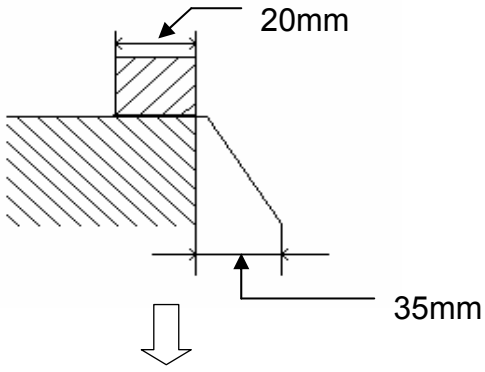
- Bill having adequate life or sizing, but stained seriously



- Bill with holes (Perforated bill)

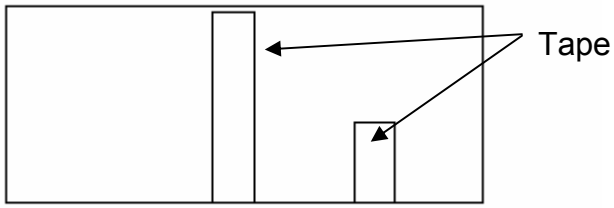


- Bill ragged and cannot be held straightly when one end is supported by a hand

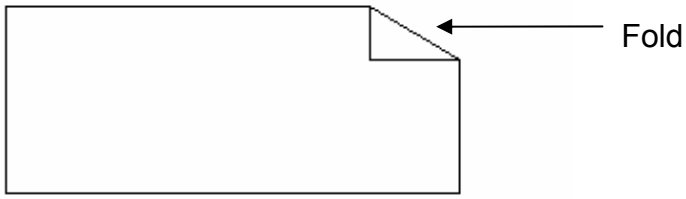


When the bill is held by 20mm and the straightness of the bill is 35mm or less, it cannot be used

- Bill with cellophane tape, scotch tape, etc



- Bill with folds

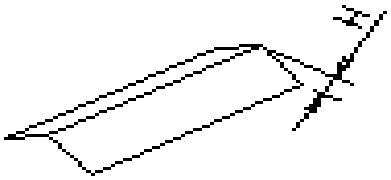


- Gradually curved bill (bills tied by hand seal, etc)

- Bill with folded lines
  - ✓ Case 1

  - ✓ Case 2

  - ✓ Case 3



  - ☞ Bill distortion should not exceed 10 mm

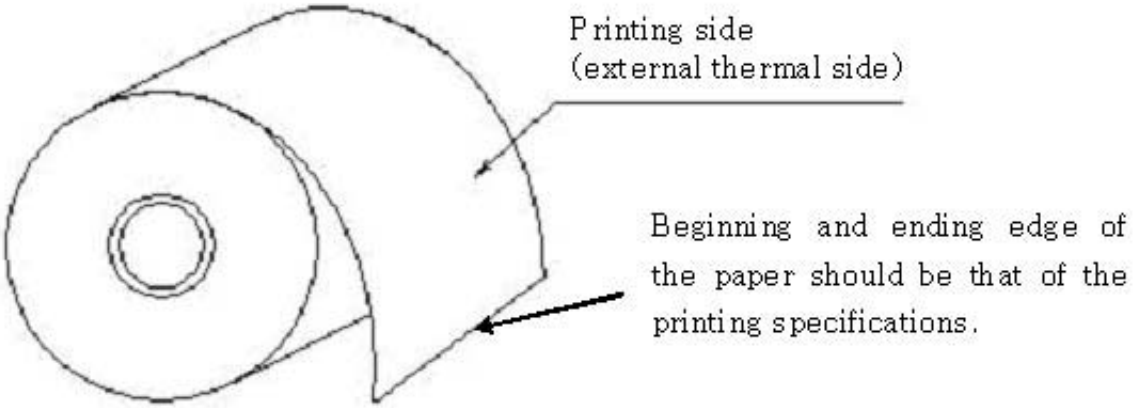
B. RECEIPT PAPER SPECIFICATIONS

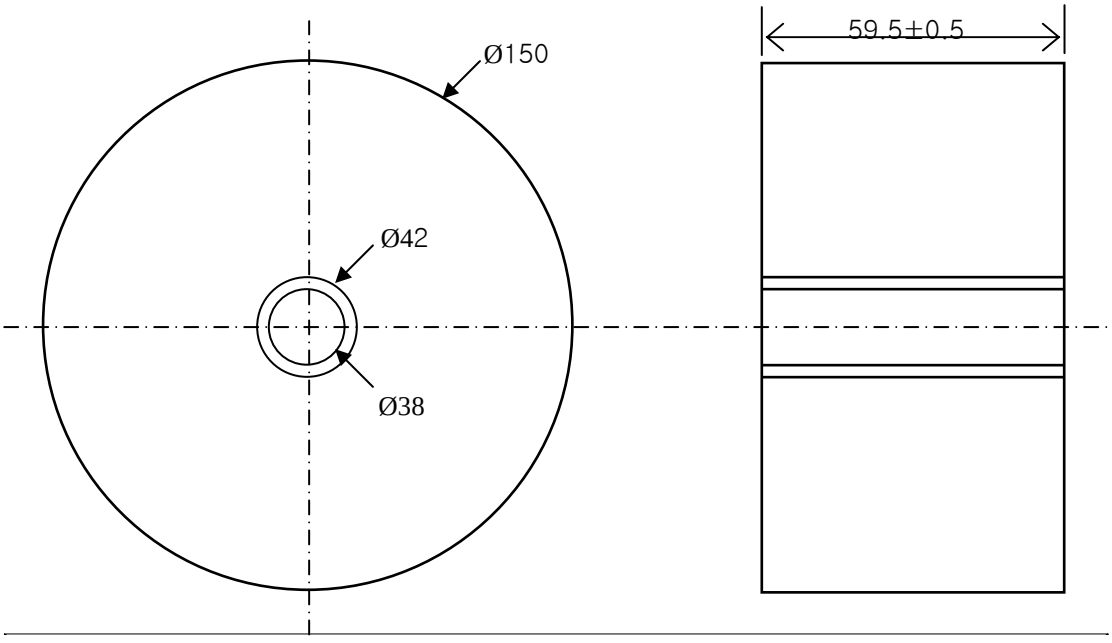
Paper type: Thermal roll paper

Print color: Black

Specification : Paper detects heat.

Roll enough for 1,900±40 slips.(in case of 65gsm paper)





- All measurements are in mm.

C. MAGNETIC CARD SPECIFICATIONS

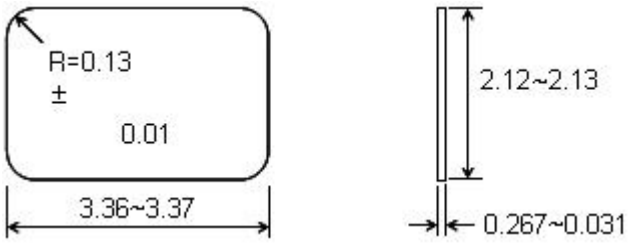
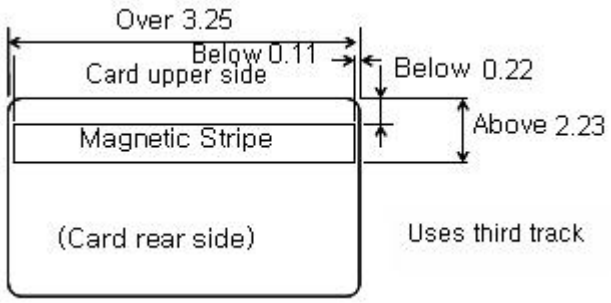
Item	ISO Card (Unit : Inch)
Length	
Card Bending	
Magnetic Stripe Position	

Fig. D.1 Magnetic Card Specifications

D. OPERATING & CHANGING THE ELECTRONIC COMBINATION LOCK (Optional)

USER CODE

● Open Lock

● Change Code

WRONG TRY PENALTY

● Four (4) consecutive invalid codes initiates five minute delay period.

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.

OPENING THE LOCK

1. Enter valid six (6) digit code.
2. The lock will signal a valid code entry with a double signal.
3. Within four (4) seconds, turn handle to the open position.
4. Pull door open.

● Invalid Code Entry - Lock will signal three (3) times.

WRONG TRY PENALTY

● Entry of four (4) consecutive invalid codes starts a 5-minute delay period.

- LED flashed red at five (5) second intervals.

● At the end of the delay period, two more consecutive invalid codes will restart an additional 5-minute delay period.

CHANGING YOUR CODE

ALWAYS PERFORM THIS OPERATION WITH THE DOOR OPEN

1. Enter “zero” six times.
2. Enter your existing six (6) digit code one time.
3. Enter your NEW six (6) digit code two times.
4. If a mistake is made wait thirty (30) seconds and repeat steps 1. - 3.
5. Test lock operation several times before closing the door.

● Valid Code Entry - Double signal after valid six (6) digit code is entered.

● Invalid Code Entry - Triple signal and old code is still valid.

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.

E. ERROR CODES

ERROR CODES	ERROR DESCRIPTION	CORRECTIVE ACTION
00000	Normal Status	Normal Status
20001	The Cash Dispenser Unit cassette is not installed. The Control Electronics checks if the Cash Dispenser Unit cassette is in the right position with the location sensor (CS7/17/27&NS11/16), and generates an error when the Cash Dispenser Unit is not in the correct position.	1. Set the cassette again. 2. Check if CS7/17/27(NS11/16) is fully pressed while the cassette is loaded. 3. Check if CS7/17/27(NS11/16) connector has been properly inserted and if cable is cut. 4. Check logic related to CS7/17/27(NS11/16) of the Cash Dispenser Unit board.
20002	Cash is not enough. This error occurs in the following cases: When the number of bills is “0” after the final payment transaction is made When the low level sensor (CS6/16/26&NS6/16) detects that the cassettes is at a low level in “Low currency check enable” mode "	Fill cash and set the number of bills. * In “Low currency enable” mode: 1. Check if CS6/16/26(NS6/16) hole on the side of the cassettes is matching with CS6/16/26(NS6/16) after installing the cassette. 2. Check if the reflection plate of the CS6/16/26(NS6/16) sensor is polluted in the cassette. 3. Check if CS6/16/26(NS6/16) sensor is polluted, cable is cut, or the connector is wrongly inserted. 4. Check logic related to CS6/16/26(NS6/16) of the Cash Dispenser Unit board.
20003	The reject box is full. This error occurs when the sum of rejected bills during the transaction and the rejected bills during the test is more than 50 after finally executing “Cassette Total”	Execute “Cassette Total” after moving cash from the reject box.
20004	The security door is open. The sensor detects that the security door is open"	1. Close the security door. 2. Check if the security door can be mechanically opened and closed by the door switch. 3. Check if cable between the door switch and the Control Electronics is cut. 4. Check if the connector is well connected to the Control Electronics. 5. Check logic related to the door switch in the Control Electronics.
20005	Cash Dispenser Unit data (country, cassette, shutter) setting error Occurs during initialization.	1. Check Cash Dispenser Unit information. 2. Check battery back-up SRAM. 3. Check the battery.
20010	Receipt paper jam in the receipt printer. The jam detection sensor checks if there is paper	1. Remove paper jam and paper scraps. 2. Check the lever operation position in the

ERROR CODES	ERROR DESCRIPTION	CORRECTIVE ACTION
	before starting operation.	sensor. 3. Check if the sensor is polluted. 4. Check if cable is cut or the connector is wrongly inserted. 5. Check logic related to the jam detection sensor of the Slip Printer board.
20011	TPH Headup Lever Open	1. Check Headup Lever
20012	The feed lever of the recipt printer is open. It was detected that the feed lever was open before ther receipt printer started to operate.	1. Close the feed lever. 2. Check if the micro switch of the feed lever normally functions. 3. Check if cable of the micro switch is cut in the feed lever and the connector is wrontly inserted. 4. Check logic related to the micro switch of the feed lever of the Slip Printer board
20013	Receipt paper is empty. It was detected that receipt paper was empty before the receipt printer started to operate (when both the paper empty sensor and the paper sentting sensor are lights).	1. Fill paper. 2. Check the lever operation position in the sensor. 3. Check if cable is cut or the connector is wrongly inserted. 4. Check logic related to the paper empty and the paper setting sensors in the Slip Printer board.
20014	The thermal head of the receipt printer is overheated (before the receipt printer starts to operate).	1. Check and replace the thermal printer head. 2. Check logic related to the TPH of the PR board.
2YY15	Note has been detected on the return path before the Cash Dispenser Unit starts to operate.	1. Remove the jammed note on the return path. 2. Check if the sensor is polluted. 3. Check if cable is cut or the connector is wrongly inserted. 4. Check logic related to the sensor in the Cash Dispenser Unit board.
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

ERROR CODES	ERROR DESCRIPTION	CORRECTIVE ACTION
		2. Check DIP MCR 3. Check cable connection
AXXX1	The feed lever of the receipt printer is open. It was detected that the feed lever was open while the receipt printer was operating.	1. Remove receipts and close the feed lever. 2. Check if the micro switch of the feed lever normally operates. 3. Check if cable of the micro switch of the feed lever is cut or the connector is wrongly inserted. 4. Check logic related to the micro switch of the feed lever in the Slip Printer board.
AXXX2	The thermal head of the receipt printer is overheated (before the receipt printer starts to operate).	1. Check and replace the terminal printer head. 2. Check logic related to TPH of the Slip Printer board.
A0803	Receipt Paper Jam	1. Remove jammed paper
AXXX3	Receipt paper jam A jam error occurred while the receipt printer operates.	1. Remove paper jam and paper scraps. 2. Check the lever operatio position in the sensor. 3. Check if the sensor is polluted. 4. Check if cable is cut or the connector is wrongly inserted. 5. Check logic related to jam detection in the Slip Printer board.
AXXX4	Receipt paper is empty. It was detected that paper was empty while the receipt printer was operating (when the paper empty sensor detected the light).	1. Set receipt paper. 2. Check the lever operation position in the sensor. 3. Check if cable is cut or the connector is wrongly inserted. 4. Check logic related to the paper empty sensorin the Slip Printer board.
AXXX5	"Receipt paper setting error Jam and miss-feeding are detected during receipt paper is loaded. -> This error occurs when the setting sensor detects a dark part.	1. Remove paper jam and reload. 2. Check the level oepration position in the jam sensor. 3. Check if cable is cut or the connector is wrongly inserted (in the jam sensor). 4. Check logic related to the jam sensor. 5. Check if the return motor is operating. 6. Check if cable is cut or a connector is wrongly inserted in the return motor, and check related logic.
AXXX6	During the test in the offline mode of the Slip Printer	Turn off/on Slip Printer.
AXXX7	Feed Lever Opened	Check feed lever and sensor pollution
AXXX8	Receipt paper cutting error. Receipt paper cutting failed.	1. Remove paper jam. 2. Check if the cutter properly rotates and the swtich normally functions. 3. Check if cable is cut or the connector is wrongly inserted. 4. Check logic rlated to the cutter of the Slip Printer board.

ERROR CODES	ERROR DESCRIPTION	CORRECTIVE ACTION
ADNXX	Receipt printer connection failure	1. Check if communication cable between the Control Electronics and the Slip Printer is cut or the connector is wrongly inserted. 2. Check communiation logic of the Control Electronics and the Slip Printer board. 3. Check if the CPU of the Slip Printer board is normally running. 4. Check if the power is normally supplied to the Slip Printer.
B0001	Expaded Flash Memory error	1. Replace CE mainboard
C001Y	Cash Dispenser Unit sensor cover 1 Ex) 'C0015' ; CS2(NS4), CS4A(NS3) covered CS4(NS3) Occurs before or after initialization and dispensing notes.	1. Check if ther are notes. If so, remove them. 2. Check if cable is cut or the connector is wrongly inserted. 3. Check logic related to the sensor of the Cash Dispenser Unit board.
C002Y	Cash Dispenser Unit sensor covered 2 Ex) 'C0023' ; CS1A, CS1B(NS2) covered CS13(NS4) Occurs before or after initialization and dispensing notes.	1. Check if there are notes. If so, remove them. 2. Check if cable is cut or the connector is wrongly inserted. 3. Check logic related to the sensor of the Cash Dispenser Unit board.
C0030	Cash Dispenser Unit main motor failure Occurs during initialization. Occurs before notes are dispensed.	1. Check the main motor of the Cash Dispenser Unit. 2. Check CS8(NS8) sensor. 3. Check if cable is cut or the connector is wrongly inserted. 4. Check logic relatd to the motor of the Cash Dispenser Unit board.
C0031	Gate solenoid echo error Occurs during initialization. Occurs before notes are dispensed.	1. Check if cable is cut or the connector is wrongly inserted in the gate solenoid. 2. Check the gate solenoid. 3. Check logic of the gate solenoid in the Cash Dispenser Unit board.
C0032	Outlet solenoid echo error Occurs during initialization. Occurs before notes are dispensed.	1. Check if cable is cut or the connector is wrongly inserted in the outlet solenoid. 2. Check the outlet solenoid. 3. Check logic of the outlet solenoid in the Cash Dispenser Unit board.
C0033	Cash Dispenser Unit data (country, cassette, shutter) setting error Occurs during initialization.	1. Check Cash Dispenser Unit information. 2. Check battery back-up SRAM. 3. Check the battery.
C0034	Double detect module failure 1	1. Check if there are notes in the double detect module. 2. Check CS5(NS9) sensor. 3. Check the double detect slit. 4. Check the double detect lever. 5. Check logic related to double detect in the Cash Dispenser Unit board.
C0035	Double detect module failure 2	1. Check if there are notes in the double detect module.

ERROR CODES	ERROR DESCRIPTION	CORRECTIVE ACTION
		2. Check CS5(NS9) sensor. 3. Check the double detect slit. 4. Check the double detect lever. 5. Check logic related to double detect in the Cash Dispenser Unit board.
C0036	CS13, CS2(NS4) covered befor initialization	1. Check jam and remove jammed notes 2. Check if cable is cut or the connector is wrongly inserted. 3. Check logic of CS13 and CS2(NS4) sensors in the Cash Dispenser Unit board.
C0037	Double detection sensor (CS5/NS9) covered Occurs while notes are being dispensed.	1. Check CS5(NS9) - pollution, cable cutting, wrong insertion of connectors, etc. 2. Check logic related to CS5(NS9) in the Cash Dispenser Unit board.
C0038	SRAM CHECK ERROR	1. Check the SRAM
C0039	Gate operation detection sensor (CS3/NS7) Error Occurs during initialization. Occurs before notes are dispensed.	1. Check CS3(NS7) sensor polution. 2. Check the position of the gate solenoid. 3. Check if cable is cut or the connector is wrongly inserted. 4. Check logic related to CS3(NS7) of the Cash Dispenser Unit board.
C003A	Request to display four or more notes.	1. Issue the command decrease the number of bills to four or less in the Control Electronics.
C003B	CS15A,15B(NS2) sensor covered Occurs during initialization.	1. Check jam and remove jammed notes. 2. Check CS15A and 15B(NS2) sensors ? pollution, cable cutting, wrong insertion of connectors, etc. 3. Check logic related to CS15(NS2) of the Cash Dispenser Unit board.
C0040	The cassette was removed while notes were dispensed.	1. Check if the cassette has been normally installed. 2. Check if CS7(NS11) can be completely pressed while the cassette is installed. 3. Check if cable is cut or a connector is wrongly installed in CS7(NS11) connector. 4. Check logic related to CS7(NS11) of the Cash Dispenser Unit board.
C0041	The machine tried to dispense notes five times or more.	1. Check the status of the note. 2. Check if the note type on the index set by the Control Electronics matches with the actual note type.
C0042	Note jam No. of requested notes > No. of notes passing CS13(NS4) Occurs after notes are dispensed.	1. Check whether there are notes in the return path. If so, remove them. 2. Check CS13(NS4) sensor. 3. Check logic related to CS13(NS4) of the Cash Dispenser Unit board.
C0043	Ten or more notes are rejected in one transaction. Occurs while notes are being dispensed.	1. Check status of the note.Check the two-sheet detection sensor. 2. Check if the note type on the index set by

ERROR CODES	ERROR DESCRIPTION	CORRECTIVE ACTION
		the Control Electronics matches with the actual note type.
C0044	Five consecutive rejections in one transaction. Occurs while notes are being dispensed.	1. Check the status of the note. 2. Check the two-sheet detection sensor. 3. Check if the note type on the index set by the Control Electronics matches with the actual note type.
C0045	More note than requested were dispensed. No. of requested notes < No. of notes passing CS13(NS4) Occurs while notes are being dispensed.	1. Check the number of dispensed notes and the status of notes. 2. Check CS13(NS4). 3. Check logic related to CS13(NS4) of the Cash Dispenser Unit board.
C0046	Cash Dispenser Unit Hardware Failure	1. Check Main motor 2. Check Cash Dispnser Unit Main board
C0047	1 st Cassette Miss-feed	1. Check the note-setting status in the cassette. 2. Check CS1A and 1B(NS2) sensors.
C0048	Incorrect bill count	1. Check CS2,CS4 and CS13(NS3/NS4) 2. Check Cassette
C0049	Request to dispense 0 note. Command error in the Control Electronics control part	The Control Electronics revises and reissues the command.
C004A	Note jam CS1～CS4(NS2~NS3) : Note Passting Time >= 400ms CS4~CS13(NS3~NS4) : Note Passting Time >= 500ms Occurs while notes are being dispensed.	Check if there are notes in the return path. If so, remove them.
C004B	Three or more consecutive rejection. Occurs while notes are being dispensed.	1. Check the status of the note. 2. Check if the note type on the index set by the Control Electronics matches with the actual note type.
C004C	The number of dispensed notes does not match. No. of notes passing CS13(NS4) <> No. of notes passing CS1(NS2). Occurs after notes are dispensed.	1. Check the number of dispensed notes. 2. Check if the gate normally functions.
C004D	The cassette has not been installed before notes were dispensed. Occurs before notes are dispensed.	1. Check if the cassette has been normally installed. 2. Check if CS7(NS11) is completely presed while the cassettes is installed. 3. Check if cable is cut or a connector is wrongly installed in CS7(NS11). 4. Check logic related to CS7(NS11) of the Cash Dispenser Unit board.
C004E	The number of dispensed notes does not match. Number of requested notes > Number of notes dispensed and reported to the Cash Dispenser Unit The Control Electronics checks after notes are dispensed.	1. Check the number of dispensed notes. 2. Perform a unit test on the Cash Dispenser Unit.

ERROR CODES	ERROR DESCRIPTION	CORRECTIVE ACTION
C004F	The number of dispensed notes does not match. No. of requested notes < No. of notes dispensed and reported to the Cash Dispenser Unit. The Control Electronics checks after notes are dispensed.	1. Check the number of dispensed notes. 2. Perform a test on the Cash Dispenser Unit.
C0050	The power is cut while notes are being dispensed. The Control Electronics checks.	1. Check the number of dispensed notes. 2. Check if there are notes in the return path. If so, remove them.
C0051	Request to dispense 150 or more notes. Control command error in the Control Electronics	1. The Control Electronics revises and reissues the command.
C0052	CS1A,1B(NS2) sensor covered. Occurs after notes are dispensed.	1. Check if there are notes in the return path. If so, remove them. 2. Check CS1A and 1B(NS2) sensors. 3. Check logic related to CS1A and 1B(NS2) of the Cash Dispenser Unit board.
C0053	CDU Double detect module failure	1. Check CS5(NS9) - pollution, cable cutting, wrong insertion of connectors, etc. 2. Check logic related to CS5(NS9) in the Cash Dispenser Unit board.
C0054	CDU Program Error	1. Download new EP software
C0055	Outlet sensor (CS13/NS4) senses the length of the note. Occurs while notes are being dispensed.	1. Check the status of the note. 2. Check CS13(NS4). 3. Check the main motor speed. 4. Check if the note type on the index set by the Control Electronics matches with the actual note type.
C0056	The gate position sensor (CS3/NS4) detects an incorrect position while the notes are being discharged.	1. Check the gate solenoid. 2. Check CS13(NS4). 3. Check related logic of the Cash Dispenser Unit board.
C0057	Cassette information is not properly set	1. Set information of Cash Dispenser Unit if error is not cleared after power Off/On
C0059	Cash cassette 2 removed prior to dispenser	1. Set cassette again 2. Check CS7(NS11) 3. Ceck related logic of Cash Dispenser Unit board
C005A	Cash cassette 1 removed prior to dispenser	1. Set cassette again 2. Check CS17(NS16) 3. Ceck related logic of Cash Dispenser Unit board
C005B	2 nd Cassette Miss-feed	1. Check the note-setting status in the cassette. 2. Check CS15A and 15B(NS2) sensors
C005D	Double detect constantly	1. Check CS5(NS9) - pollution, cable cutting, wrong insertion of connectors, etc. 2. Check logic related to CS5(NS9) in the Cash Dispenser Unit board.
C005E	Dispense command size check error	1. Download new EP software
C005F	Dispense command error	1. Check AP software 2. Download new EP software
C006Y	Cash Dispenser Unit sensor half-light error1	1. Check if related sensors are polluted.

ERROR CODES	ERROR DESCRIPTION	CORRECTIVE ACTION
	EX) 'C0065' ; CS2, CS4A error CS2(NS4),CS4(NS3),CS13(NS4)	2. Check related logic of the Cash Dispenser Unit board.
C007Y	Cash Dispenser Unit sensor half-light error2 Ex) 'C0073'; CS1A, CS1B(NS2) Error CS1(NS2),CS14(NS4)	1. Check if related sensors are polluted. 2. Check related logic of the Cash Dispenser Unit board.
C0081	CS15AB is dark while dispensing	1. Check the sensor
C0082	Shutter open error (CS10) Occurs while the shutter is being opened.	1. Check if the shutter normally operates and the status of CS10 when the shutter is open. 2. Check CS10. 3. Check logic related to CS10 of the Cash Dispenser Unit board.
C0083	Stacker note detection sensor (CS9) covered. Occurs before initiazliation and notes are dispensed.	1. Check if there are notes in the stacker. If so, remove them. 2. Check CS9. 3. Check logic related to CS9 of the Cash Dispenser Unit board.
C0084	Shutter close error (CS11) Occurs while the shutter is being closed.	1. Check if the shutter normally operates and status of CS22 when the shutter is closed. 2. Check CS22. 3. Check logic related to CS11 of the Cash Dispenser Unit board.
C00AB	Note has been detected on the path before the Cash Dispenser Unit initializing.	1. Remove the jammed note on the path. 2. Check if the sensor is polluted. 3. Check if cable is cut or the connector is wrongly inserted. 4. Check logic related to the sensor in the Cash Dispenser Unit board.
C00C7	CS12 is Dark while initializing or dispensing (NH2100T)	1. Check the sensor
C00C8	CS14 is Dark while initializing or dispensing (NH2100T)	1. Check the sensor
C00C9	CS14 is Dark while initializing or dispensing (NH2100T)	1. Check the sensor
C00D0	CS13 ~ CS12 Sensor Timeout[Jam] (NH2100T)	1. Check the sensor
C00D1	CS12 ~ CS14 Sensor Timeout[Jam] (NH2100T)	1. Check the sensor
CDNXX	Cash Dispenser Unit connection failure Control Electronics<-> Cash Dispenser Unit communication error	1. Check if the communication cable between the Control Electronics and the Cash Dispenser Unit is cut and the connector is wrongly inserted. 2. Check logic related to communication between the Control Electronics and the Cash Dispenser Unit board. 3. Check if the CPU of the Cash Dispenser Unit board is normally running. 4. Check is power is supplied to the Cash Dispenser Unit.
C00E0	NS2A, NS2B dark	1. Check NS2
C00E1	NS4 dark	1. Check NS4
D0001	Modem initializing error An error is received from the modem controller after Modem Initialize command is issued.	Check the modem controller and logic.

ERROR CODES	ERROR DESCRIPTION	CORRECTIVE ACTION
	EXPIRED CARD	Host declines by expired card
D0002	Reversal transaction failure Cancellation of the transaction due to an error having occurred while notes were dispensed was notified to the host; however, the host did not receive this notification.	1. Check the Cash Dispenser Unit error and the numberof notes nornally dispensed. 2. Contact the host, and manually reverse. 3. Perform a unit test on the Cash Dispenser Unit to see if there is any error.
	UNAUTHORIZED USAGE	Host declines by unauthorized usage.
D0003	PIN ERROR	Enter correct PIN
D0004	INVALID PIN	Enter correct PIN
D0005	BANK UNAVAILABLE	Check your card
D0006	CARD NOT SUPPORTED	Check your card
D0007	INSUFFICIENT FUNDS	Check your balance and make transaction again
D0008	INELIGIBLE TRANSACTION	Check your transaction type
D0009	INELIGIBLE ACCOUNT	Check your available account
D0010	DAILY LIMIT EXCEEDE	Make transaction later
D0011	UNABLE TO PROCESS	Make transaction again
D0012	AMOUNT TOO LARGE	Enter smaller amount
D0012	Invalid Transaction	The bank doesn't support this transaction type
D0013	ACCOUNT CLOSED	Check your account
D0013	Invalid Amount	Enter available amount
D0014	PIN TRIES EXCEEDED	Contact to your bank
D0014	Invalid Card Number	Check your account
D0015	UNABLE TO PROCESS	Make transaction later
D0016	WITHDRAWAL LIMIT ALREADY REACHE	Make transaction later
D0017	INVALID AMOUNT	Enter available amount
D0018	EXTERNAL DECLINE	This ATM doesn't support your transaction because of bank's alliance
D0019	SYSTEM ERROR	Make transaction later
D0020	CONTACT CARD ISSUER	Contact card issuer
D0020	Surcharge screen should have been displayed	Make transaction later
D0021	ROUTING LOOKUP PROBLEM	Contact to network company
D0022	UNABLE TO PROCESS	Make transaction later
D0023	TRANSACTION NOT SUPPORTED	The bank doesn't support this transaction type
D0024	Exceeds Issuer Withdrawal Limit	Make transaction later
D0039	No Credit Account	Check your available account
D0051	Insufficient Funds	Check your balance and make transaction again
D0052	No Checking Account	Check your available account
D0053	No Savings Account	Check your available account
D0054	Expire Card	Check your card
D0055	Incorrect Pin	Enter correct PIN
D0057	Transaction not Permitted – Card	Check your card
D0058	Transaction not Permitted – Terminal	Check your card
D0061	Exceeds Withdrawal Limit	Make transaction later
D0075	PIN Tries Exceeded	Contact to your bank
D0078	No Account	Check your available account

ERROR CODES	ERROR DESCRIPTION	CORRECTIVE ACTION
D0080	Invalid Date	Make transaction later
D0083	Can not Verify PIN	Enter correct PIN
D0086	Can not Verify PIN	Enter correct PIN
D0091	Bank Unavailable	Check your card
D0092	System Unavailable	Make transaction later
D0093	Transaction Serial No Miss-match	Error in modem data. Contact to service personnel
D0094	Record Format Miss-match. Check if a proper AP for the host has been loaded.	Error in modem data. Contact to service personnel
D0095	Routing Identification Miss-match. Check the routing Identification.	Error in modem data. Contact to service personnel
D0096	Terminal Identification Miss-match. Check the terminal Identification.	Error in modem data. Contact to service personnel
D0097	Response Type Miss-match (Reversal)	Error in modem data. Contact to service personnel
D0098	Response Type Miss-match (Day Close)	Error in modem data. Contact to service personnel
D0099	Response Type Miss-match (Config)	Error in modem data. Contact to service personnel
D009A	Response Type Miss-match (Withdrawal, Balance, Transfer)	Error in modem data. Contact to service personnel
D009B	STX missing	Error in modem data. Contact to service personnel
D009C	ETXmissing	Error in modem data. Contact to service personnel
D009D	FS missing (next to Response Code)	Error in modem data. Contact to service personnel
D009E	FS missing(next to Retrieval Reference Number)	Error in modem data. Contact to service personnel
D009F	FS missing(next to System Trace Audit Number)	Error in modem data. Contact to service personnel
D00A0	FS missing (next to Account Balance)	Error in modem data. Contact to service personnel
D00A1	FS missing (next to Available Balance)	Error in modem data. Contact to service personnel
D00A2	FS missing (next to Surcharge Amount)	Error in modem data. Contact to service personnel
D00A3	FS missing(next to Authorization Response Text)	Error in modem data. Contact to service personnel
D00A4	ETX position is not correct.	Error in modem data. Contact to service personnel
D00A5	FS missing (next to Total Cash Dispense Amount in the Day Close message)	Error in modem data. Contact to service personnel
D00A6	FS missing (nex to Total Non Cash Dispense Amount in the Day Close message)	Error in modem data. Contact to service personnel
D00A7	FS missing (next to Total Surcharge Amount in the Day Close message)	Error in modem data. Contact to service personnel
D00A8	FS missing (next to Surcharge Amount in the Config message)	Error in modem data. Contact to service personnel
D00A9	ETX missing (in the Config message)	Error in modem data. Contact to service

ERROR CODES	ERROR DESCRIPTION	CORRECTIVE ACTION
		personnel
D0111	REVERSAL DECLINED	Reversal was declined by host
D0222	PIN CHANGE DECLINED	PIN change was declined by host
D0300	Modem is not responding No response from the modem controller within a certain time after issuance.	Check the modem controller and logic.
D1000	No connection	Contact to your service personnel
D1100	ENQ was not received from the host.	Check the host.
D1200	Transmission error Failed to receive the whole data within 5 seconds after requesting the modem to send the data.	Check the modem controller and logic.
D1300	NAK has been sent three times or more. Failed in receiving the data due to parity or LRC error. Therefore, sent NAK to the host and requested to send the data again three times or more.	1. Check the host. 2. Check line noise. 3. Check the modem controller and logic.
D1500	Modem dial connection time-out (while dialing the modem)	1. Check if the telephone line is well connected. 2. Check the telephone number of the host and if the host is alive. 3. Check modem-related parameter setting. 4. Check the modem controller and logic.
	Host not responding No response from the host for 60 seonds.	1. Check if the transaction card is valid. 2. Check the host.
D170X	No carrier No carrier during data transmission after the modem is connected.	1. Check the host. 2. Check if the transaction card is valid. 3. Check line noise. 4. Check the modem controller and logic.
D1800	No dial tone No dial tone while the modem is connected.	1. Check if the telephone line is well connected. 2. Check the status of the telephone line. 3. Check the modem controller and logic.
D1900	No Answer	1. Check the status of the telephone line. 2. Check the modem controller and logic.
D2000	Dial(Line) busy	1. Check the host and the telephone number of the host. 2. Check the modem controller and logic.
D2100	Response time-out (30 seconds) for Modem Initialize command before the modem was connected.	Check the modem controller and logic.
D2200	EOT was not received from the host.	1. Check the host.
D3200	1. Dial connect time-out (60Sec) or dial connection error 2. Host response message time-out (60Sec)	1. Check the phone line or connector. 2. Contact the processor manufacturer.
E0001	RMS port failure	1. Check RMS-related settings. 2. Check if the telephone line is connected and the status of the telephone line. 3. Check if the RMS host is alive. 4. Check the modem controller and logic. Note) These errors are not related to transaction. So, ATM doesn't send error to

ERROR CODES	ERROR DESCRIPTION	CORRECTIVE ACTION
		host
E0002	RMS response time-out	1. Check RMS-related settings. 2. Check if the telephone line is connected and the status of the telephone line. 3. Check if the RMS host is alive. 4. Check the modem controller and logic. Note) These errors are not related to transaction. So, ATM doesn't send error to host
E0003	RMS modem failure	1. Check RMS-related settings. 2. Check if the telephone line is connected and the status of the telephone line. 3. Check if the RMS host is alive. 4. Check the modem controller and logic. Note) These errors are not related to transaction. So, ATM doesn't send error to host
E0004	RMS no dial tone	1. Check RMS-related settings. 2. Check if the telephone line is connected and the status of the telephone line. 3. Check if the RMS host is alive. 4. Check the modem controller and logic. Note) These errors are not related to transaction. So, ATM doesn't send error to host
F0001	The number of bills is not set.	Set the number of bills.
F0002	Surchage Owner is not set in Surcharge Enable mode.	Set the surcharge owner.
F0003	Surcharge Amount is not set in Surcharge Enable mode.	Set the surcharge amount.
F0004	Refresh timer is not set in Advertisement Enable mode.	Set the refresh timer.
F0005	Advertisement text is not set in Advertisement Enable mode.	Set advertisement text.
F0006	Dispense limite setting error Ex) Dispense Limit > Face value of the note type x 25	Check the dispense limit, and set the limit again.
F0007	Note type setting error	Check the note type, and set it again.
F0008	Fast cash setting error Ex) Fast cash value > Dispense limit	Check the fast cash value, and set it again.
F0009	Master key index invalid : 0 <= MKEY Index <= 15	Check the master key, and set it again.
F000A	Master key empty	Inject the master key.
F000B	Host phone number is not set.	Set the host phone number.
F000C	The error retry timer is not set.	Set the error retry timer.
F000D	RMS password is not set in RMS Enable mode.	Set the RMS password.
F000E	RMS phone number is not set in RMS Enable mode.	Set the RMS phone number.
F000F	The terminal number is not set.	Set the terminal number.
F0010	Routing Identification is not set.	Set the routing Identification.
F0011	The master key serial number is not set.	Master key Serial Number set

ERROR CODES	ERROR DESCRIPTION	CORRECTIVE ACTION
F0012	Non-cash type text is not set.	Non-Cash Type set
F0014	NVRAM failure	Check the battery and the battery plug and replace the main board if error happens continuously.
IDN0X	DIP MCR connection failure	1. Power Off/On 2. Check DIP MCR 3. Check cable connection

● Additional Error Code for the Optional Cash Dispenser with 2,000 Cassette

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	
20001	No cassette	Insert or re-insert the cassette(s). Check cassette sensor.
2000100	Cassette is not properly set	
20002	Note shortage	Replenish the cassette.
2000200	Cassette empty	
2000300	Reject bin full	Remove notes from the reject bin and try the Cassette Total function again.
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.

Error Code	Description	Trouble shooting
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.
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
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
4003600	Error of CS 2, CS13 sensor during initialization	

Error Code	Description	Trouble shooting
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	
4003900	Gate operation sensor (CS3) error before initial recovery	1. Initialize after removing notes or dust over Gate 2. Check CS3 Sensor BKRT 3. Check CS3 Sensor Cable 4. Exchange Sensor after abnormal operating CS3 Gate detecting Sensor 5. Replace Reject Solenoid 1
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
4004000	Cassette is removed during dispensing	1. Check the cassette catcher 2. Set the cassette properly
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

Error Code	Description	Trouble shooting
4004200	In case the number of notes detected outlet sensor(CS13) 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 Sensor 4. Exchange sensor after abnormal operating CS13 Sensor
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
4004500	In case the number of notes detected outlet sensor(CS13) is more than required notes	1. Check notes dispensed and rejected 2. Remove dust in CS13 Sensor 3. Exchange sensor after abnormal operating CS13 Sensor
4004600	Program error(Separated rejection)	1. Initialize after Reset Power 2. Upgrade Cash Dispenser Firmware or Re-download 3. Exchange Cash Dispenser B/D
4004700	1 cassette misfeed error (Separated rejection)	1. Check notes in 1 Cassette 2. Check Sensor(CS6) Poll 3. Check jam in 1 cassette and reload 4. Remove dust in CS1A, CS1B Sensor 5. Exchange 1 cassette box when there are many error

Error Code	Description	Trouble shooting
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
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
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) is more than that of notes detected on CS1A,B sensor	1. Check CS1 sensor 2. Reconnect CS1 sensor
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
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.

Error Code	Description	Trouble shooting
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.
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
4005500	Timeout due to note's length error passed through the CS13 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 sensor 3. Remove a dust on the CS13 sensor
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 sensor bracket is bended. 4. Check if the CS3 sensor cable is disconnected (CN10 #9~10) 5. Exchange a sensor after abnormal operating CS3 Gate detecting sensor. 6. Replace the reject solenoid 1
4005700	Cash dispenser configuration error	1. Replace cash dispenser PCB 2. Reconfigure cash dispenser setup data
4005800	Retract box position error during command reserved operation	1. Mount the retract box or open the box cover 2. Check if CS62 sensor poll is abnormal 3. Check if the CS62 sensor cable is disconnected (Cash Dispenser Board CN10 #5~2).

Error Code	Description	Trouble shooting
4005900	Initial jam time error	1. Remove jammed notes 2. Clean the sensors (CS1~CS15) in cash dispenser
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)
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
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

Error Code	Description	Trouble shooting
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	1. Reconfigure cash dispenser setup data
9719500	Invalid Cash Unit number	1. Reconfigure cash dispenser setup data
9719600	The abnormal of the number of Cash Unit	1. Reconfigure cash dispenser setup data
9719700	No. of dispensed notes that software counts is not matched to it cash dispenser responded	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	1. Reconfigure denomination at supervisor mode

Error Code	Description	Trouble shooting
971A100	Invalid currency	1. Reconfigure currency at supervisor mode
971A200	CASSETTE OFF POSITION". Not dispensable	1. Reconfigure denomination 2. Reconfigure currency
971A200	CASSETTE OFF POSITION	
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
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	1. 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
9740000	Cash Dispenser communication failure during COM port open	1. Do RESET at Operator Function 2. Reboot ATM
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

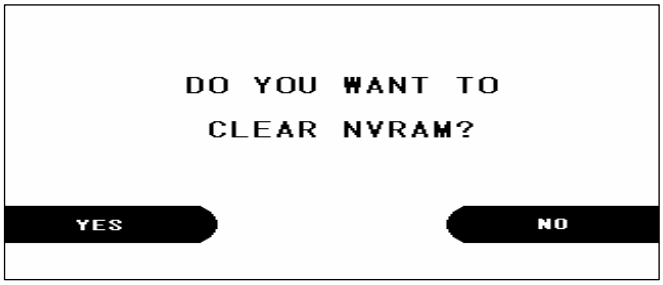
Error Code	Description	Trouble shooting
9747C00	Cash picking-up fail while cash in cassette #4 is enough	1. Check bill jam or no note in cassette #2 2. Check cash dispenser
9749F00	Cash picking-up fail while cash in cassette #3 is enough	1. Check bill jam or no note in cassette #2 2. Check cash dispenser
97914XX	DEV_Cash Dispenser Timeover Error Code	1. Reboot ATM 2. Call your attendant
97924XX	DEV_Cash Dispenser FATALERROR (WARNING)	1. Reboot ATM 2. Call your attendant
9799499	DISPENSER COUNT ERROR	1. Check the sensor on cash dispenser

F. HOW TO CLEAR NV-RAM

Accessing the NV-RAM CLEAR

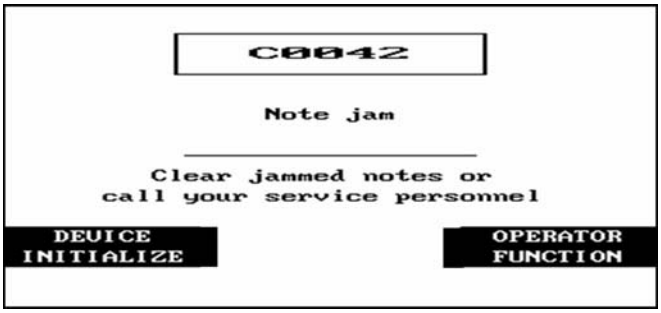
Turn on NH-1800 while pressing F6 key(upper-right 2nd key)

After initializing, follow below pictures...



Select 'YES' in the CLEAR NVRAM MENU.

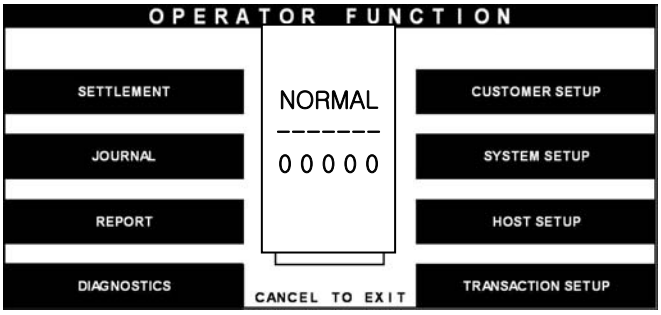
Enter the NVRAM CLEAR PASSWORD. If the wrong password is entered, the screen will be back to "ENTER PASSWORD" screen. The factory default NV-RAM Clear Password is as same as Master Password ("555555").



Select ‘OPERATION FUNCTION’ in the ERROR CODE of REPORT MENU.

Enter the OPERATOR PASSWORD.
If the wrong password is entered, the screen will be back to “ENTER PASSWORD” screen. The factory default Master Password is “555555”

.



If the correct password is entered, the OPERATOR FUNCTION MENU will be displayed

G. AP Software

Programming Changes

The application software on this ATM has been updated with the following changes.

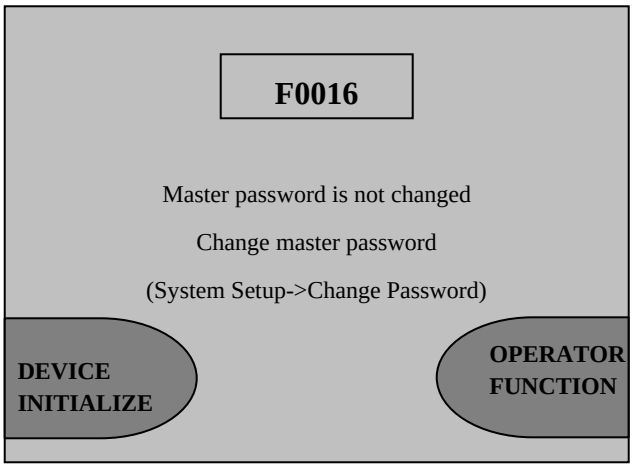
Which have not been covered in the Operator Manual. Please familiarize yourself with these new programming procedures before installing the terminal.

Master Password:

The software will no longer allow you to put the ATM in service using the default master password.

Then master password must be changed before attempting to initialize the machine or a F0016 error will be reported.

As with all passwords, the Master Password must be 6 digits in length



Changing Denomination:

With this new AP software, changing the cassette denomination (Transaction Setup) will cause all master keys to be erased from the EPP keyboard. The purpose of this is to prevent unauthorized access to this critical parameter.

When programming the terminal, make certain that you change the denomination setting (If you intend to)BEFORE programming your master key.

You'll be prompted by the Warning screen shown before you can change the denomination