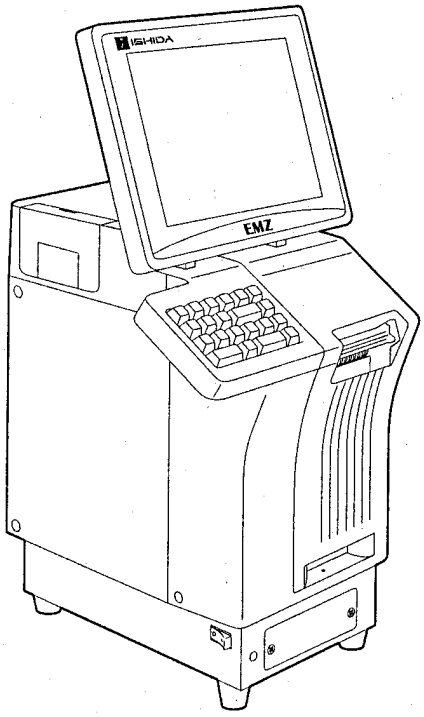
IL-EMZ

Service Manual

COUNTRY: CAN. USA 2008.09.10



IMPORTANT

- Read this manual thoroughly, and do not perform installation, operation, maintenance, or inspection unless you fully understand all of the contents.
- Keep this manual in a safe place where you can refer to it easily while installing, operating, and carrying out maintenance or inspections.

ISHIDA CO., LTD.

IMPORTANT NOTICE

This manual explains the procedures to perform installation, operation, service, or maintenance of the machine.
Those who handle the machine must be aware of the hazards involved. These dangers may not be obvious, so it is imperative to follow the instructions detailed in this manual when installing, operating, inspecting, or servicing the machine. Therefore, we recommend that you thoroughly read and understand this manual before installing, operating, inspecting, or servicing the machine, and keep this manual in a safe place where you can refer to it whenever necessary.
ISHIDA is not liable for any damage, loss or injury that results from incorrect operation, insufficient caution, unauthorized modifications to the machine, or failure to follow the instructions contained in this manual.
In the recent weighing industry, the latent hazards involved with handling the machine have increased due to new materials, new processing methods, and higher processing speeds, and it is impossible to predict all of the possible dangers.
Likewise, there are far too many operations which cannot or should not be performed to fully describe all of them in the manual. Please assume that any handling or operation not specifically described in this manual should never be performed.
Safety countermeasures should be carefully considered and implemented before performing any installation, operation, inspection, or maintenance procedure not specifically described in this manual or indicated on the machine itself.

CHANGE IN SPECIFICATIONS

Machine specifications and accessories may be changed at any time due to improvements or other reasons. Consult with your ISHIDA representative at any time to confirm the actual specifications of the purchased machine.

ERRORS AND OMISSIONS

The information in this manual has been carefully checked and is believed to be accurate. However, please understand that the descriptions in this manual may not agree with the actual machine due to machine improvements. The information is subject to change without prior notice in the future. ISHIDA assumes no responsibility for clerical, typographical or proofreading errors, or omissions.

LIMITATIONS OF LIABILITY

ISHIDA assumes no responsibility for special, indirect, or consequential damages, loss of profits or commercial loss in any way connected with the machine, whether such claim is based on contract, warranty, negligence, or strict liability.
ISHIDA shall assume responsibility for problems with the machine or the system based on an individual maintenance contract. However, ISHIDA shall not be responsible for secondary problems.
ISHIDA assumes no responsibility for the user's programming of this machine, or any consequence thereof.
In no event shall ISHIDA be responsible for warranty, repair, or other claims regarding the machine unless ISHIDA’s analysis confirms that the machines were properly handled, stored, installed, and maintained and not subject to contamination, abuse, misuse, or inappropriate modification or repair.

PRECAUTION SYMBOLS

This machine is manufactured for use according to proper procedures by a qualified operator and only for the purposes described in this manual.
Warning symbols in this manual are divided into three categories, depending on the level of danger, or seriousness of potential injury. The definition of each of these warnings and precautions is shown below. Failure to heed these warnings or precautions may result in bodily injury or damage to the machine.

⚠ DANGER	Indicates information that, if not heeded, is likely to result in loss of life or serious injury.
⚠ WARNING	Indicates information that, if not heeded, could possibly result in loss of life or serious injury.
⚠ CAUTION	Indicates information that, if not heeded, could result in relatively serious or minor injury, damage to the machine, or faulty operation.

SAFETY CONSIDERATIONS

This service manual contains information necessary for servicing the machine. To ensure the safety and long operating life of this machine, it is important to observe the following precautions:

- **Servicing is to be done by qualified service personnel only**
  These service instructions are for use by qualified service personnel who fully understand the potential hazards involved. To avoid any possible danger, do not perform any service procedures unless qualified to do so.
- **Perform only the specified service procedures**
  To ensure personal safety, do not perform any service procedures that are not specifically mentioned in this manual.
- **Avoid servicing while power is being supplied**
  The power supply to the machine is disconnected only when the electrical plug is removed from the electrical outlet. For protection against electrical shock, remove the plug before performing any servicing to the machine. Servicing the machine while power is being supplied and opening or removing covers or enclosures should be avoided as much as possible. When servicing cannot be performed by any other means, service personnel should take precautions against the danger of electrical shock or other potential hazards involved.
- **Take precaution against residual electrical charge hazard**
  Capacitors inside the machine may still hold an electrical charge even after power is disconnected.
- **Use the same type of fuses and components for replacement parts**
  To avoid the potential hazards involved, do not replace fuses or components with types other than those specified in the parts list for this machine.

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Chapter 6 ELECTRIC ASSEMBLY

APPENDIX A LABEL FORMATTING

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1 INSTALLATION

Contents

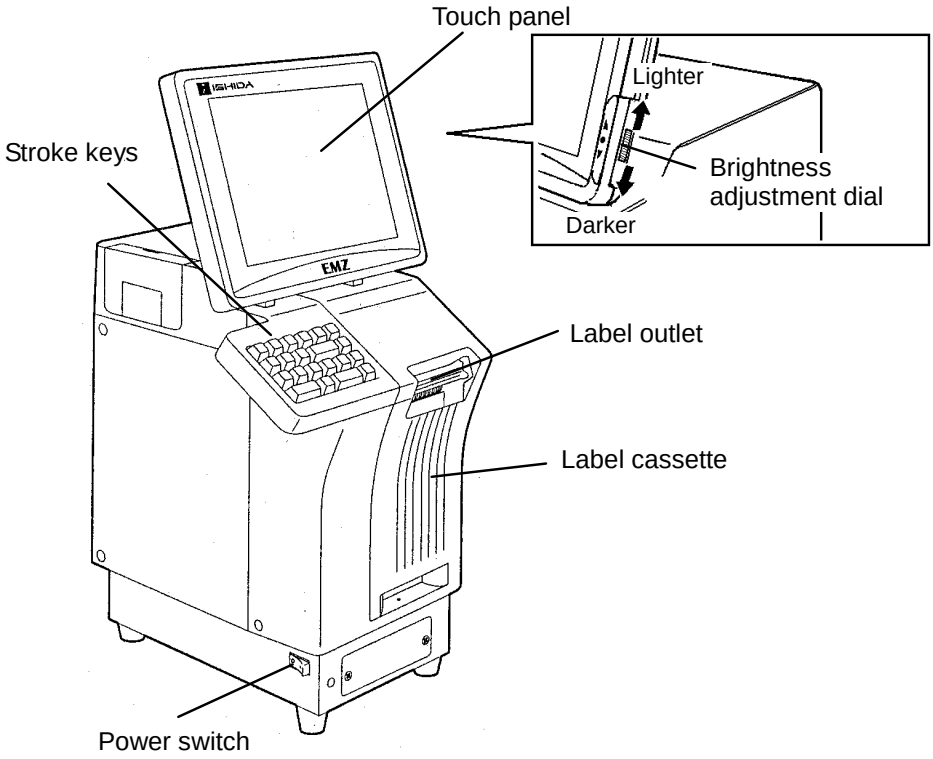
1.1 SPECIFICATIONS

No.	Item	Specifications
1	**Operating environment**	
1.1	Temperature range	-5°C - 40°C
1.2	Operating humidity	20% - 85% (Non condensing)
2	**Outer dimensions**	
2.1	Main body	W285 × D368 × H645mm
2.2	Scale unit	W300 × D270 × H88mm
3	**Mass**	
3.1	Main body	19kg
4	**Power supply**	CAN, USA: AC110-120V 50/60Hz 4A
5	**Display unit**	10.4-inch TFT color liquid crystal VGA with backlight (640 × 480 dots)
6	**Printing method**	Direct thermal method
7	**Thermal head**	LH4114K (TDK) 3-inch (640 dots), 8 dots/mm
8	**Print speed**	100mm/sec
9	**Effective print size**	78mm
10	**Label size**	
10-1	Label width	30 - 80mm
10-2	Label length	30 - 150mm
10-3	Backing paper width	32 - 82mm
11	**Label diameter**	
11-1	Core inner diameter	ϕ76mm
11-2	Max. outer diameter	ϕ2240mm
12	**Keys**	
12-1	Touch panel	212mm × 159mm
12-2	Stroke key	24 keys
13	**I/O**	Ethernet:1ch RS-232C:2ch PCMCIA:2ch I2NET:2ch(ISHIDA Original Protocol)
14	**Program storage medium**	
14-1	Flash ROM (1MB)	Boot program
14-2	Compact Flash (32MB)	OS + Application program
15	**Memory capacity**	*The registration number varies depending on the total memory capacity.
15-1	PLU master	511 characters, 4,000 PLUs, 5 prices
15-2	Additive master	511 characters, 9,999 additives
15-3	POP master	39 characters, 999 POPs
15-4	Comment master	511 characters, 99 comments
15-5	Origin master	39 characters, 9,999 origins
15-6	Storage temperature master	119 characters, 99 temperatures
15-7	Storage method master	119 characters, 99 methods
15-8	Free master 1	511 characters, 99 messages
15-9	Free master 2	511 characters, 99 messages
15-10	Free master 3	511 characters, 99 messages
15-11	Free master 4	511 characters, 99 messages
15-12	Free master 5	511 characters, 99 messages
15-13	Format master	99 characters, 2,048 bytes/format
15-14	Label master	99 labels
15-15	Department name master	13 characters, 9,999 names
15-16	Group name master	13 characters, 9,999 names
15-17	Class name master	13 characters, 9,999 names
15-18	Sales promotion master	99 images, 99 comments, 999 origins
15-19	Store master	9,999 stores,

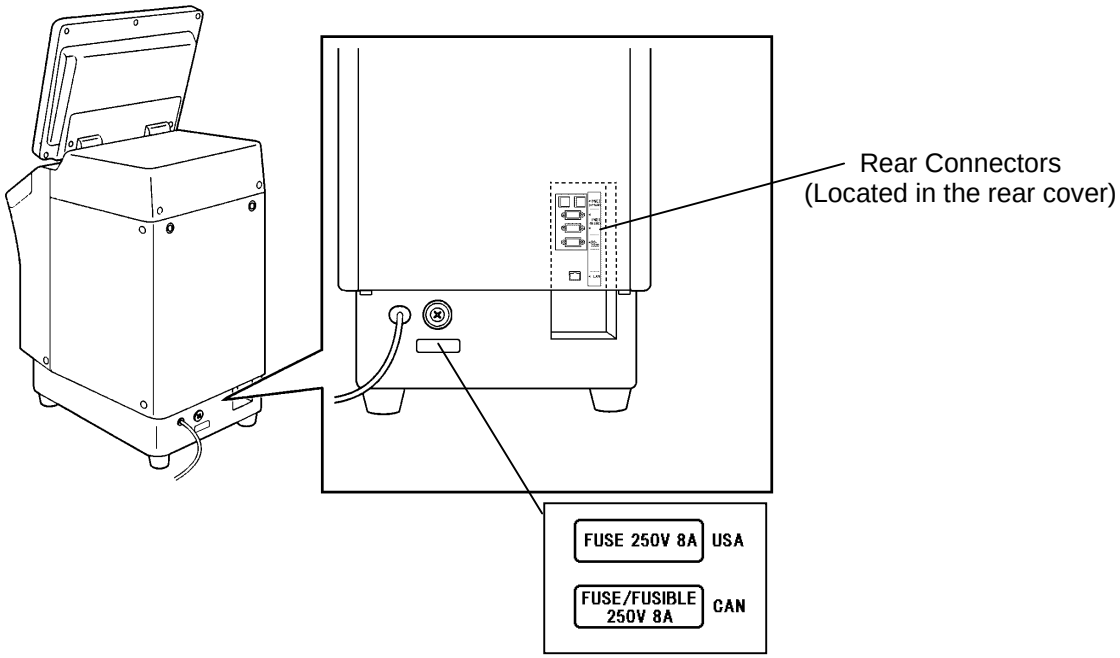
No.	Item	Specifications
		48 characters/store name, 48 characters/store address
15-20	Tray master	9,999 trays, 10 characters/tray
15-21	Memo preset keys	56 items (28 items x 2 pages)
15-22	Classification preset keys	36 types (5 ranges/type)
16	**Barcode print**	
17	POS code system	NON-PLU 13 digits, NON-PLU 8 digits PLU 13 digits, PLU 8 digits
18	POS types	5-digit standard code, 6-digit code including check price, 6-digit code including flag, 5-digit code including check price, 6-digit code + 5-digit price
19	**Durability**	
19-1	Number of label issues	16.2 million labels.(label length 42mm, 9,000 labels, 360 operation days, 5 years, 721km)
19-2	Printer frame drawer	7,300 times (4 times/day, 360 days × 5 years)
19-3	Display angle adjustment frequency	3,650 times (2 times/day, 360 days × 5 years)
19-4	Volume adjustment frequency	7,300 times (4 times/day, 360 days × 5 years)
19-5	LCD backlight	40,000 hours (10.9 years on the assumption of 10 hours/day)
19-6	Power switch	10,000 times, 6.8 years on the assumption of 4 times/day

1.2 NAME OF EACH PART

1.2.1 FRONT VIEW

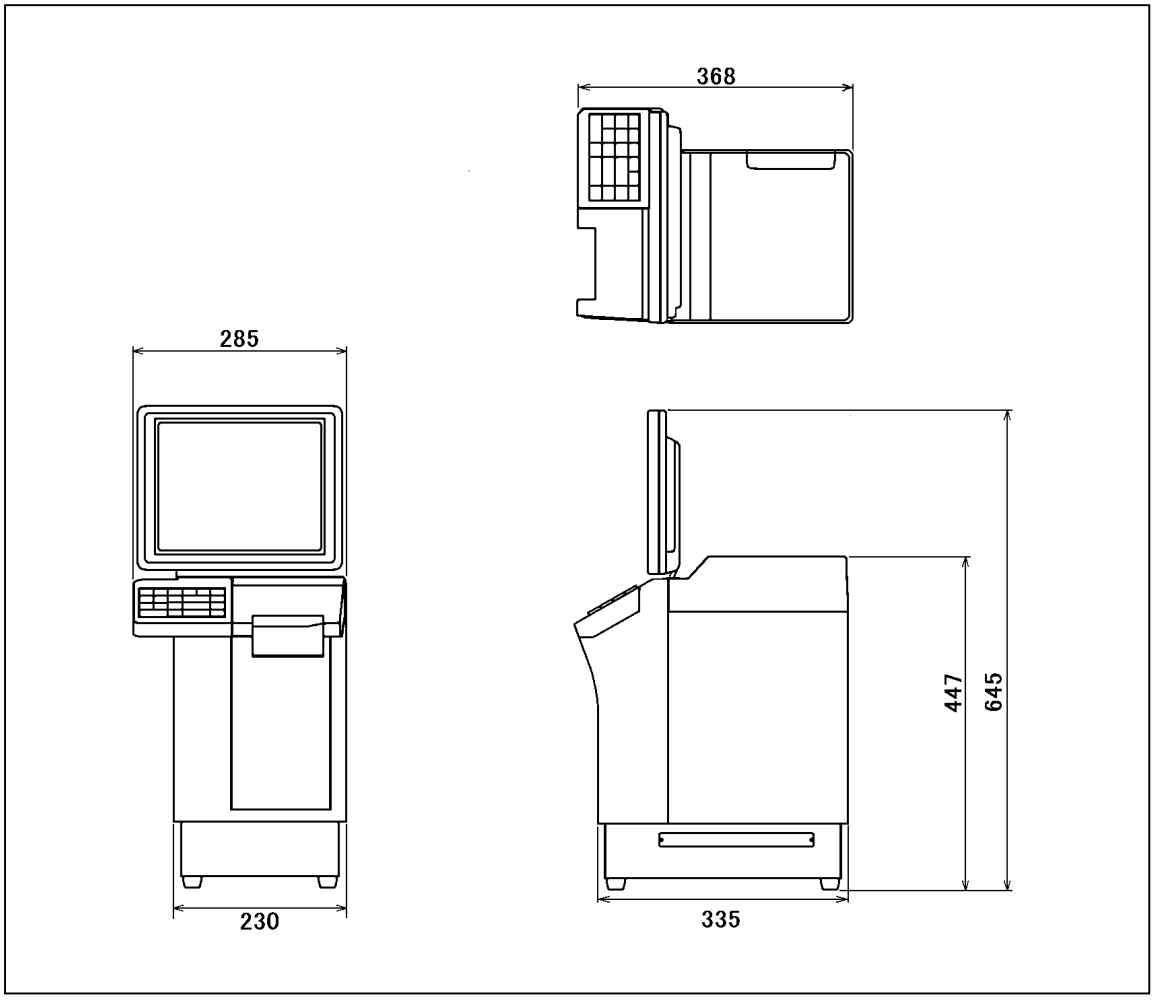


1.2.2 REAR VIEW



1.3 OUTER DIMENSIONS

(Unit: mm)



1.4 PREPARATION FOR INSATALLATION

1.4.1 UNPACKING

Confirm that the following things are packed.

- Main body
- Scale unit
- Grounding cable
- Tool: Plus Screw driver
- User's manual
- Cleaning pen

NOTE: Parts are fixed with adhesive tapes so as not to move when transported.
Remove these tapes when unpacking.

1.4.2 THINGS TO BE PREPARED

- IF-21FD
- 3.5-inch 2DD floppy disk in which the user's data is recorded
- I2NET cable (D-sub 9 pin -modular)
- Labels

1.5 PRECAUTIONS FOR INSTALLATION

1.5.1 GENERAL PRECAUTIONS

● **DO NOT PUT HANDS IN THE MACHINE**
When you need to put your hand inside the machine, always push the Emergency Stop Button first. Never put your hand inside the machine.

● **ALWAYS KEEP HANDS AWAY FROM THE MOVING PARTS**
When the power is turned ON, some parts may still move after a commodity or tray has been called, and your hand may get caught in the machine.

● **DO NOT PUT YOUR HAND INSIDE THE POWER SUPPLY UNIT**
There is danger of electric shock if you touch the inside of the Power Supply Unit. Never touch directly or spill water into the unit. Also, never touch the Main Power Switch with wet hands.

● **DO NOT DISASSEMBLE OR MAKE ANY ALTERATIONS TO THE MACHINE**
The machine can be damaged if disassembled incorrectly. Making any alterations without permission, or removing any parts other than those specified, may cause a serious accident or injury.

● **HANDLE WITH CARE AS THIS IS A PRECISION MACHINE**
Bumps or shocks to the machine can cause damage.

1.5.2 MAINTENANCE PRECAUTIONS

- Keep the area around the machine clear of any dust and debris.
- Do not leave screws or other foreign objects in the machine after performing routine maintenance since this can cause major damage to the machine when the electrical switch is turned on.
- Always remove wires by holding the connector and pulling to disconnect.
  Do not disconnect by pulling on the wires themselves since this may cause a wire to snap or damage the connection.
- Before disassembling or adjusting this machine, make sure you thoroughly understand and follow each step in the order indicated in this manual.

1.5.3 PROHIBITED LOCATIONS

Do not install the machine in the following types of places:

- Places subject to high temperatures or high humidity
- Places exposed to direct sunlight
- Places where water or other liquids are easily spilled on the machine
- Places subject to excessive vibration or unstable foundations
- Places exposed to direct cold air from air conditioners or refrigerators
- Places where the floor or foundation is unstable
- Places subject to a lot of dust or dirt
- Places with large voltage fluctuations

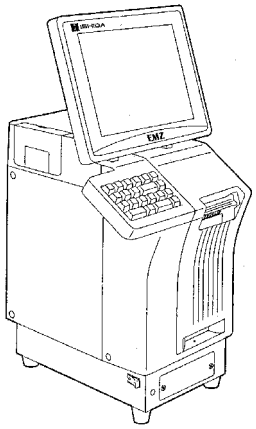
1.5.4 PRECAUTIONS FOR POWER SUPPLY

Do not use an unspecified power supply.

- Use a power supply with rated voltage ground.
- Prepare a dedicated power source.
  A power supply that generates voltage variation may cause a malfunction.
- To avoid any potential electrical shock, securely attach the ground wire to the grounding provision.

1.6 HARDWARE INSTALLATION

1. Install the main body to be able to see the display clearly and perform the key operation easily.



2. Make sure that the machine is grounded at the power supply outlet.

3. Insert the power plug into the outlet.

(CAN,USA)

4. When connecting other devices, connect them according to the following.
Other machine of the master/satellite system I2NET (INLINE) (Dsub 9 pin)
Optional printer·····I2NET (OPTION1) (Modular jack)
IF-21FD·····I2NET (INLINE) (Dsub 9 pin)
Journal printer·····RS-232C

5. Fix the harnesses.

NOTE:
Nylon clamps to fix harnesses are not attached. Prepare the nylon clamps beforehand with their sizes according to the number of the connected harnesses.

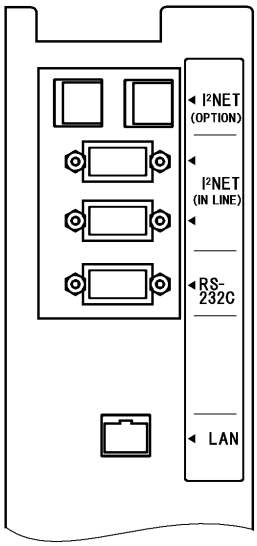


Fig.1 Rear Connectors
(Located in the rear cover)

6. Load labels to be used by the user. Refer to “Label Replacement” in the User’s Manual.

1.7 FINALIZING INSTALLATION

Operation check

Call up a product, place a load on the weighing platter, and issue a label.
After issuing the label, clear the result.

Set content save

Connect the IF-21FD and save the settings.

Operation explanation

Explain the operation method and precautions to the user.

memo

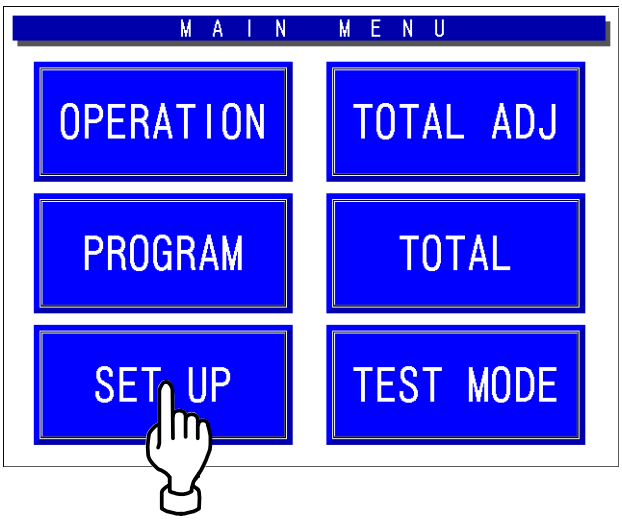
2 SETUP MODE

Contents

2.1 ENTERING SETUP MENU

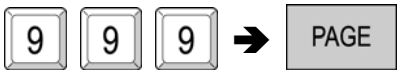
1. Ensure that the Main Menu screen is displayed.

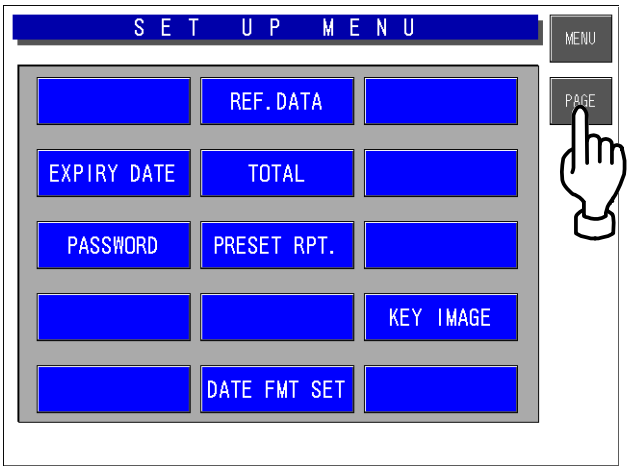
Then, touch the [SETUP] button on the screen.



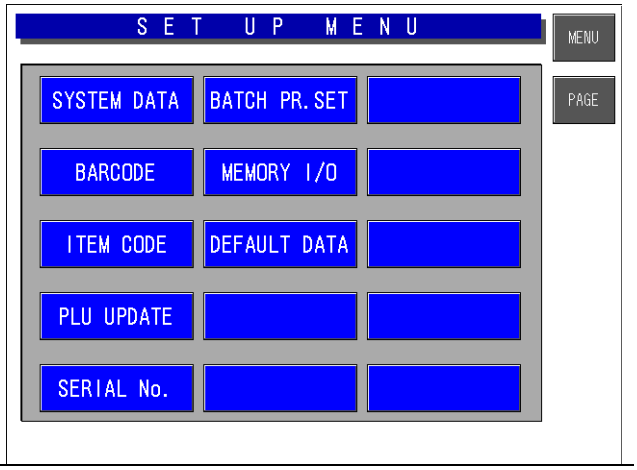
2. The Setup Menu screen appears.

To display the next page, enter [9][9][9] using numeric keys on the operation panel and touch the [PAGE] button on the screen.





3. The second page of the Setup Menu screen appears.

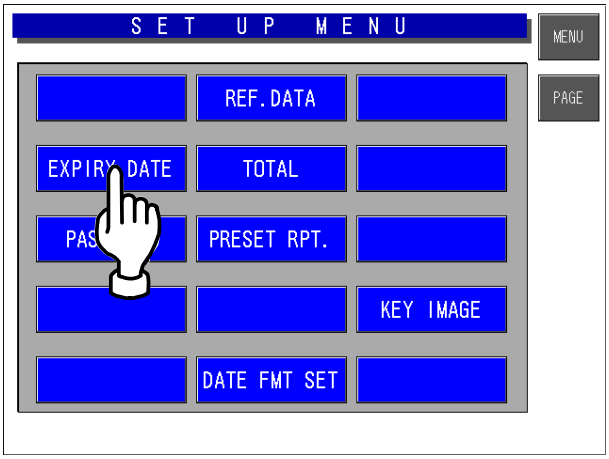


2.2 EXPIRY DATA SETTING

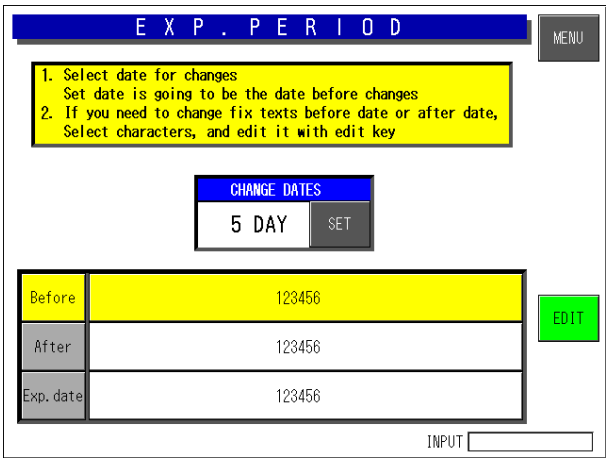
1. Ensure that the Setup Menu screen is displayed.

Touch the [EXP. DATE SET] button on the screen.

Note:
This function does not use, In the case of 6 or more characters of the date title.
The title of the date is using the [UNIT TYPE =FIXED Character] of a label format.

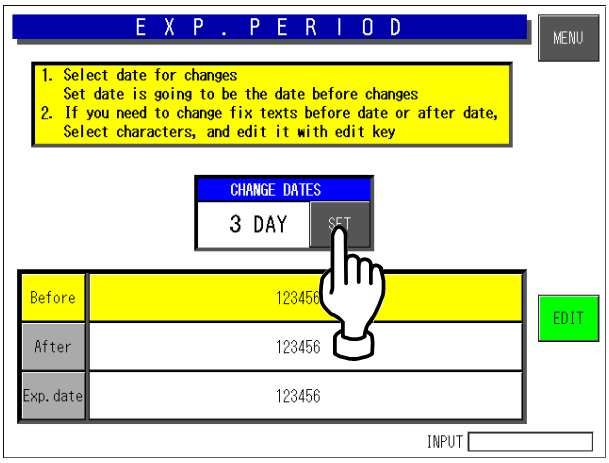


2. The Expiry Date Setting screen appears.



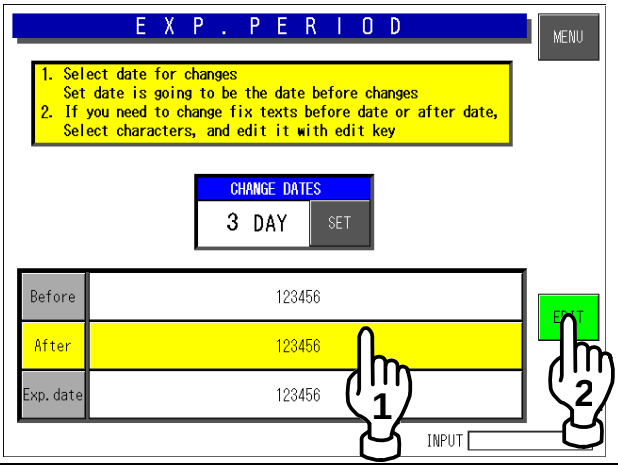
3. Enter the number of days for Conversion Days using numeric keys on the operation panel and touch the [SET] button on the screen.

EXAMPLE "3 days".



4. To edit a text, touch to select a desired field and touch the [EDIT] button on the screen to display the edit screen.

EXAMPLE Select “Best Before”



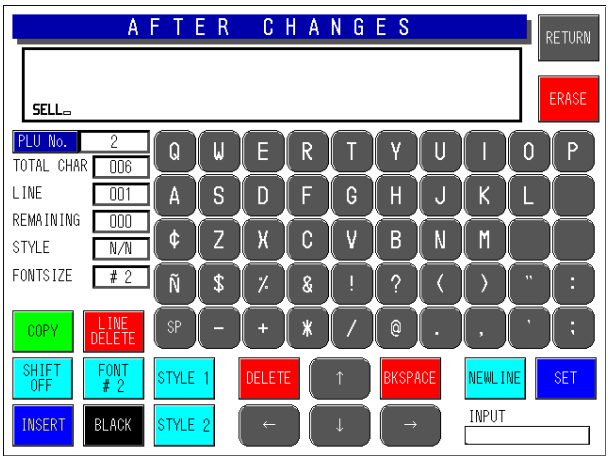
5. The text editing screen appears.

Edit the text by referring to the procedure described in appendix “Text Editing”.

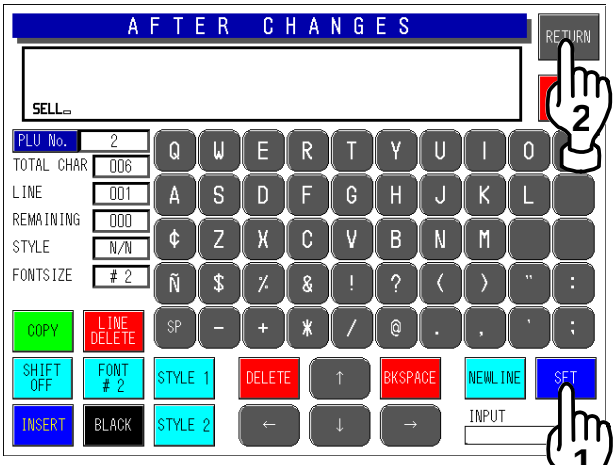
A maximum of 6 characters can be inputted.

EXAMPLE Change to “Sell”

S E L L



6. After editing the text, touch the [SET] and [RETURN] buttons.



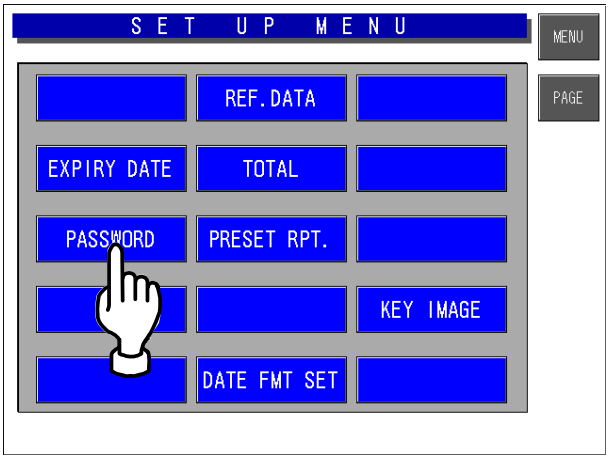
7. The confirmation screen appears.

Then, touch the [EXECUTE] button to save the data.

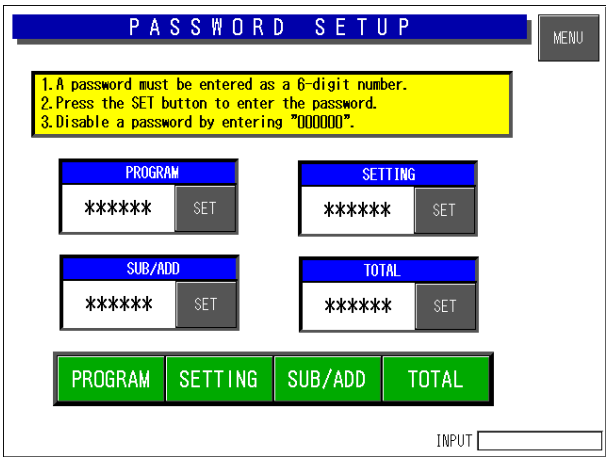
2.3 PASSWORD SETTING

1. Ensure that the Setup Menu screen is displayed.

Touch the [PASSWORD SET] button on the screen.



2. The Password Setup screen appears.

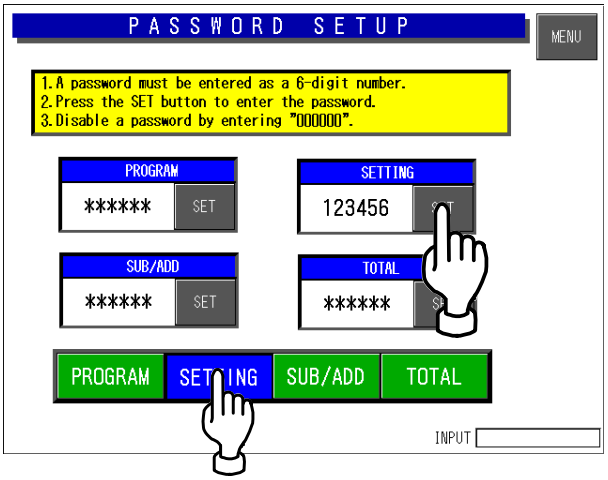


3. Enter a 6-digit numeric data and touch the [SET] button in a desired field.

EXAMPLE Password “123456”

Then, touch the [SET] button.
And touch The mode button.

Note: *To disable a password, enter “000000” and touch the [SET] button.*

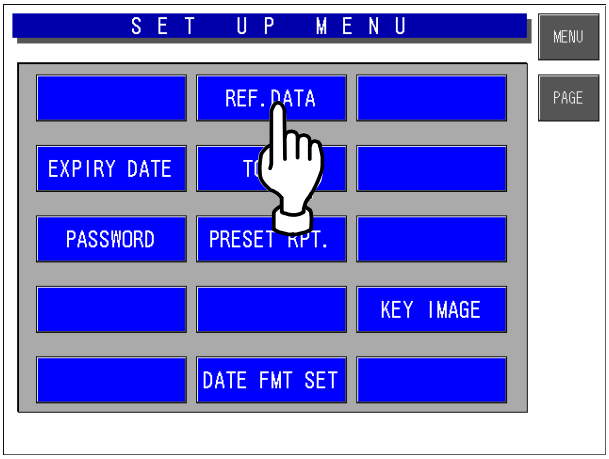


When you have forgotten the password.

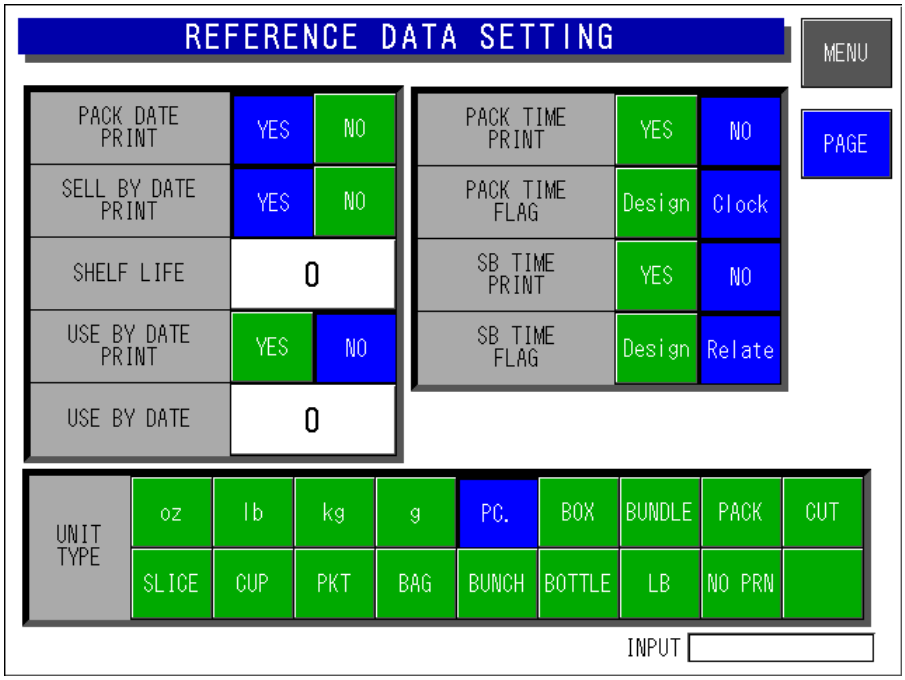
2.4 REFERENCE DATA SETTING

1. Ensure that the Setup Menu screen is displayed.

Touch the [REFERENCE DATA SET] button on the screen.

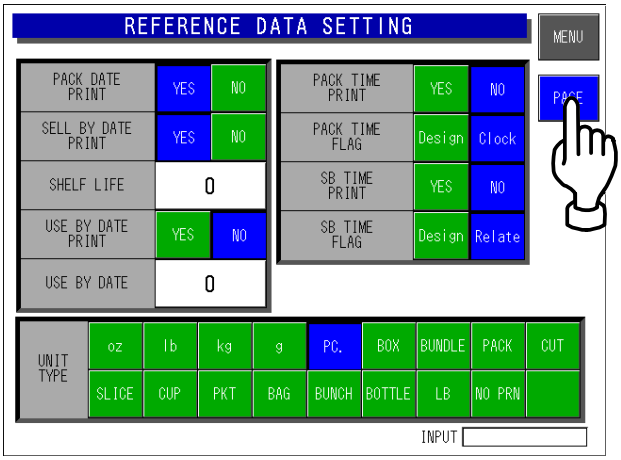


2. The Reference Data Setting screen appears.

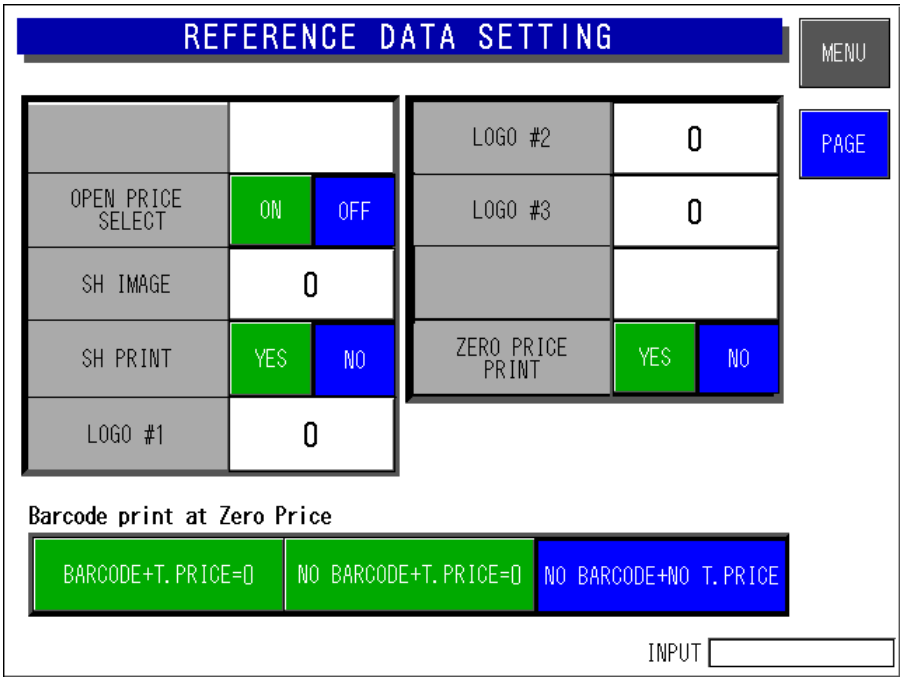


PACK DATE PRINT	Touch to select whether or not to print a pack date.
SELL BY DATE PRINT	Touch to select whether or not to print a sell-by date.
SHELF LIFE	Enter a numeric value and touch this field.
USE BY DATE PRINT	Touch to select whether or not to print a use-by date.
USE BY DATE	Enter a numeric value and touch this field.
PACK TIME PRINT	Touch to select whether or not to print a pack time.
PACK TIME FLAG	Touch to select of using the clock time or designated time.
SB TIME PRINT	Touch to select whether or not to print a sell-by time.
SB TIME FLAG	Touch to select of using the related time or designated time.
UNIT TYPE	Touch to select a desired unit type.

3. Touch the [PAGE] button to display the next screen page.



4. The second screen page appears.

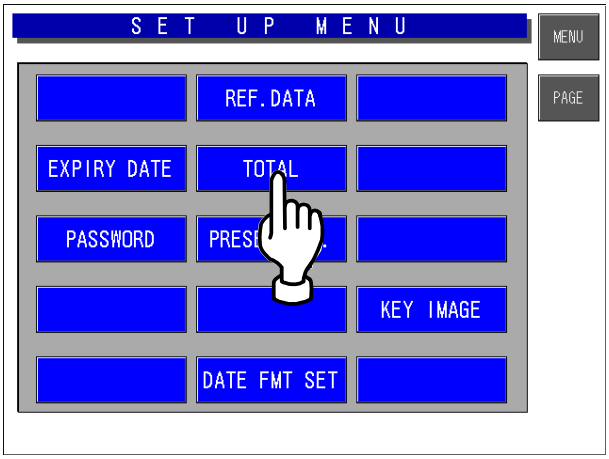


OPEN PRICE SELECT	Touch to select whether to allow open price function or not.
SH IMAGE	Enter a desired safe handling image number and touch this field.
SH PRINT	Touch to select whether or not to print safe handling image.
LOGO #1	Enter a desired logo number and touch this field
LOGO #2	Enter a desired logo number and touch this field
LOGO #3	Enter a desired logo number and touch this field
ZERO PRICE PRINT	Touch to select whether to use zero price print function or not. YES: Only a buzzer sounds. (print:$0.00 or blank) NO: An error screen pops up. (printout does not carry out.)
Barcode print at Zero Price	[Zero Price Print] functions at the time of yes. BARCODE+T.PRICE=0: Barcode: print price: $0.00 NO BARCODE+T.PRICE=0: Barcode: non price: $0.00 NO BARCODE+NO T.PRICE=0 Barcode: non price: non Non= blank

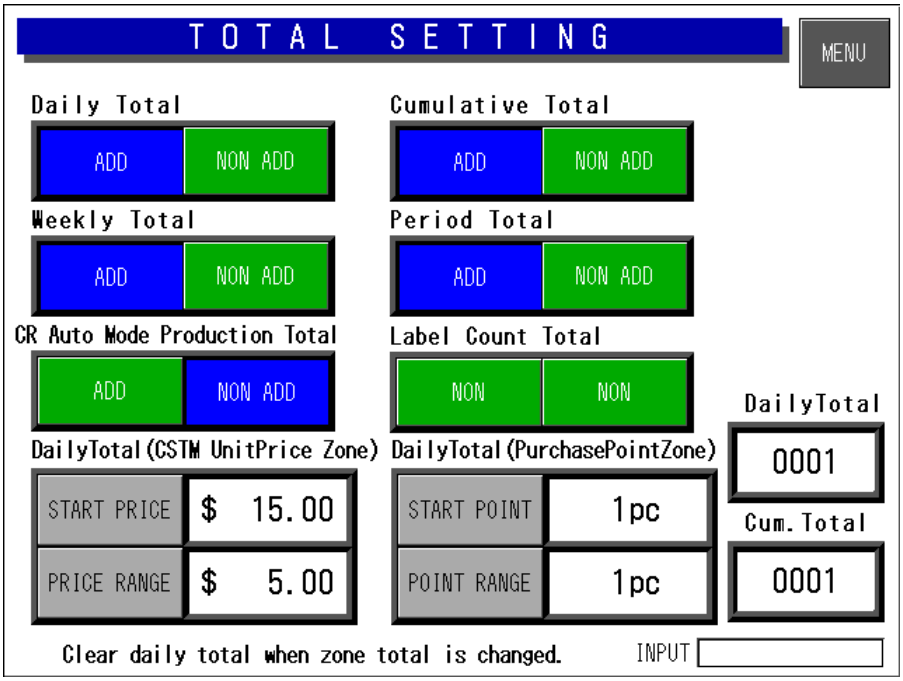
2.5 TOTAL SETTING

1. Ensure that the Setup Menu screen is displayed.

Touch the [REFERENCE DATA SET] button on the screen.



2. The Total Setting screen appears.

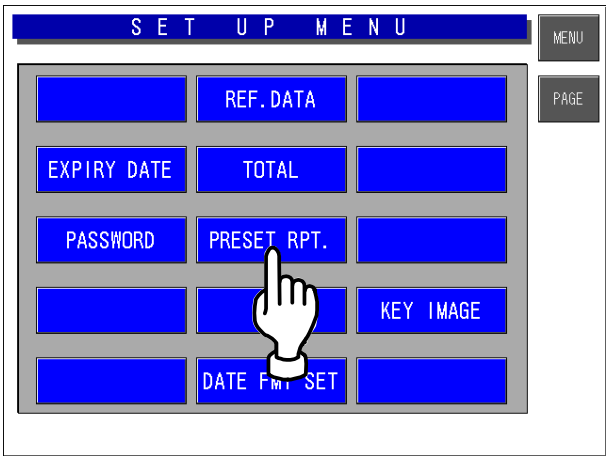


DAILY TOTAL	Touch to select whether to add to Daily Total or not.
WEEKLY TOTAL	Touch to select whether to add to Weekly Total or not.
CUMULATIVE TOTAL	Touch to select whether to add to Cumulative Total or not.
PERIOD TOTAL	Touch to select whether to add to Period Total or not.
CR AUTO MODE PRODUCTION TOTAL	Touch to select whether to add to Cash Register Auto Mode Production Total or not.
DAILY TOTAL (CSTM UNIT PRICE ZONE)	Enter a numeric data and touch the corresponding field.
DAILY TOTAL (PURCHASE POINT ZONE)	Enter a numeric data and touch the corresponding field.

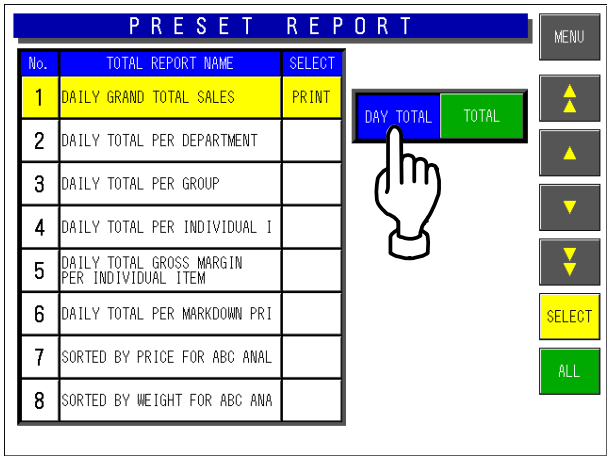
2.6 PRESET REPORT SETTING

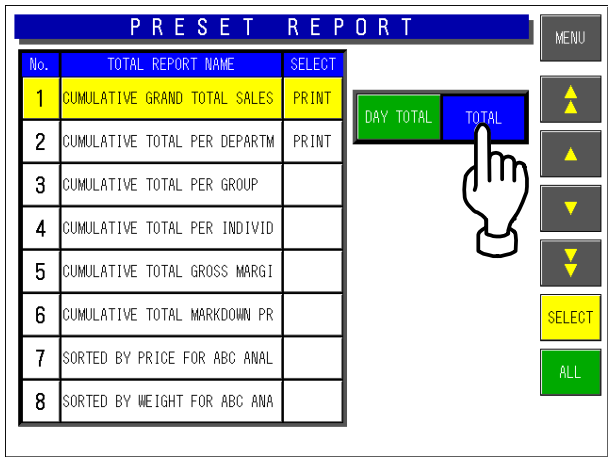
1. Ensure that the Setup Menu screen is displayed.

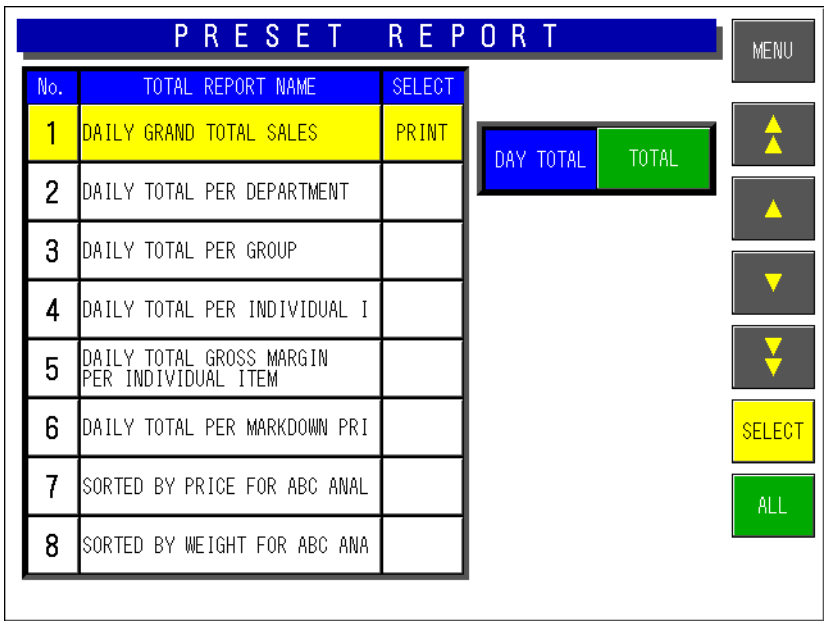
Touch the [PRESET REPORTS] button on the screen.



2. The Preset Report screen appears.
Then, select a preset report for daily totals or total by touching the corresponding button.







Touch to page up.

Touch to move up the selection.

Touch to move down the selection.

Touch to page down.

Touch to select each report.

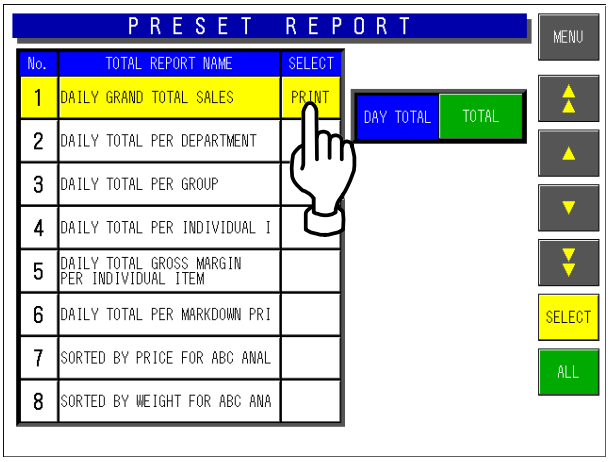
Touch to select all reports.

3. Touch to select a desired field for enabling or disabling the report printing.

EXAMPLE

Print “Daily Grand Total Sales”

Repeat this step for more selections.

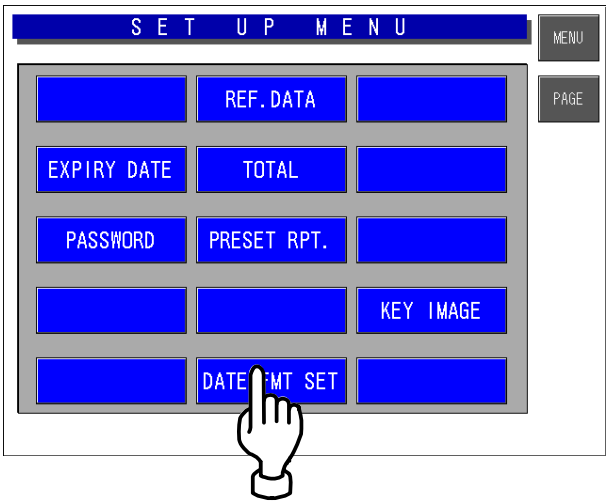


2.7 DATE FORMAT SETTING

This function is the date format shown on the main display.

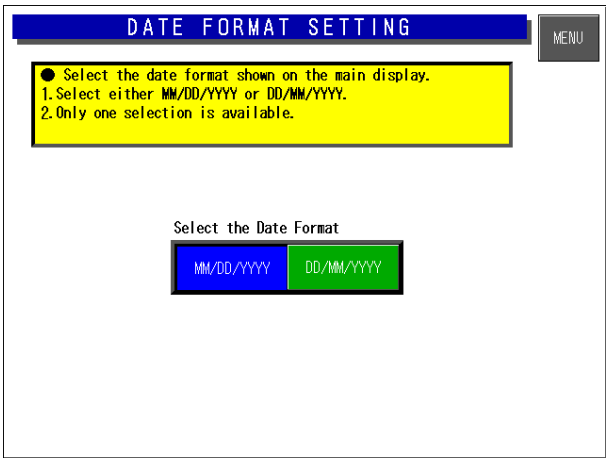
1. Ensure that the Setup Menu screen is displayed.

Touch the [DATRE FMT SET] button on the screen.



2. Select the Date format

Then, touch to select the [MM/DD/YYY] or [DD/MM/YYY] by touching the corresponding button.



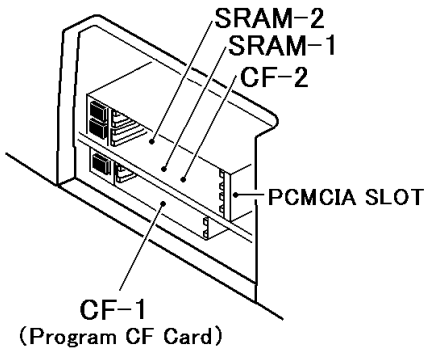
2.8 KEY IMAGE SETTING

This function is used to list images stored in the machine and select a desired image to be used.

1. Preparation:

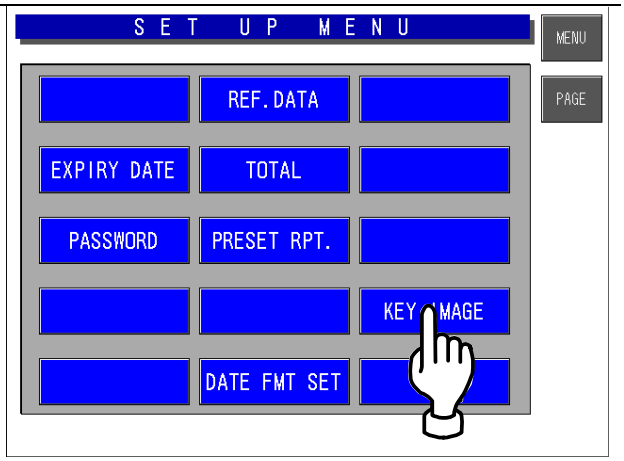
Save the bitmapped image into the Compact Flash card.
(Reference bit map size: 640x480 pixels)
Insert the Compact Flash card in Compact Flash card adapter.
Then insert the Compact Flash card adapter into the CF-2.

(Compact Flash card adapter is required.)

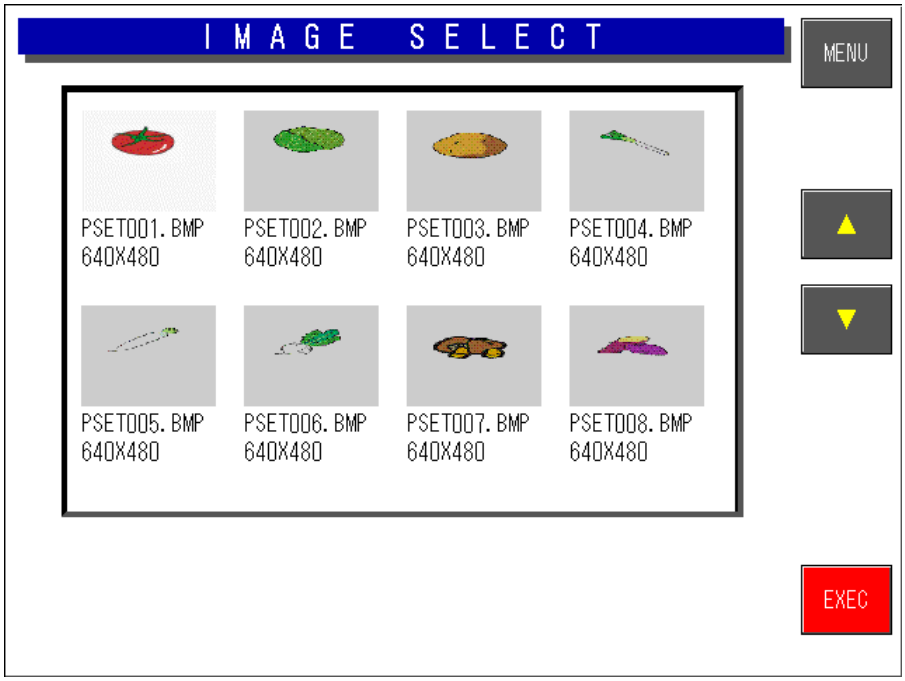


2. Ensure that the Setup Menu screen is displayed.

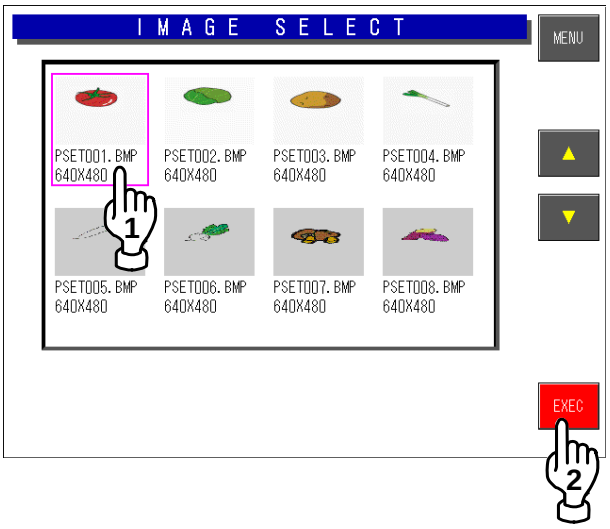
Touch the [KEY IMAGE] button on the screen.



3. The Image Select screen appears.



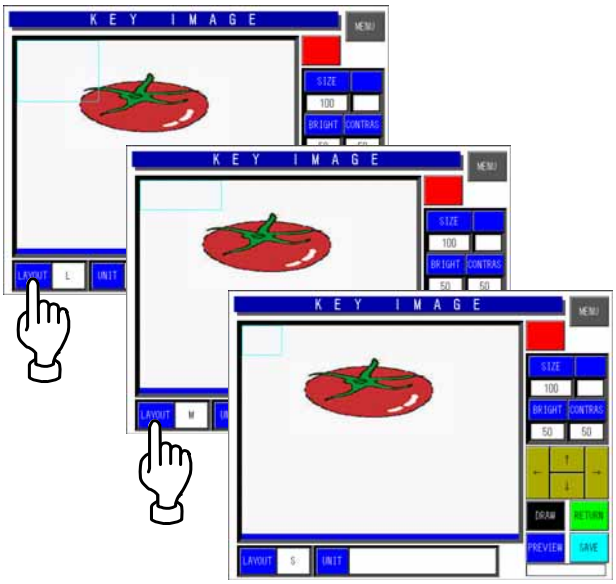
4. Touch to select the desired image area and touch the [EXEC] button to paste on the desired preset key.



5. The Key Image screen appears.

Adjust the image by using this screen.

Select the key size to be used.
LAYOUT: S/M/L

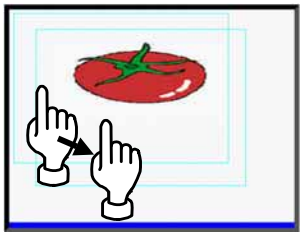


6. Adjustment the image:

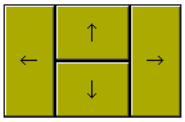
SAIZ: 10 - 341

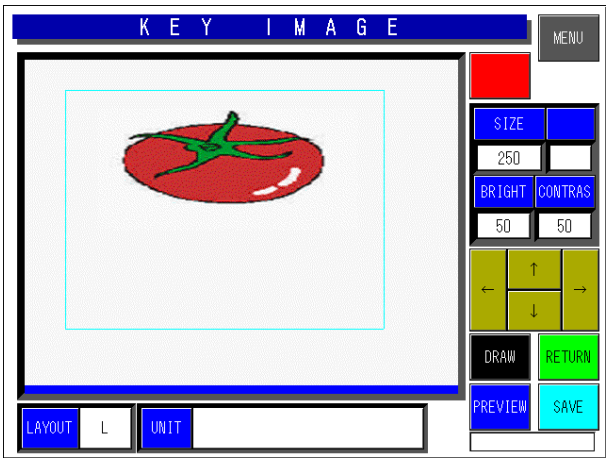
Trimming position:

Touch and drag.

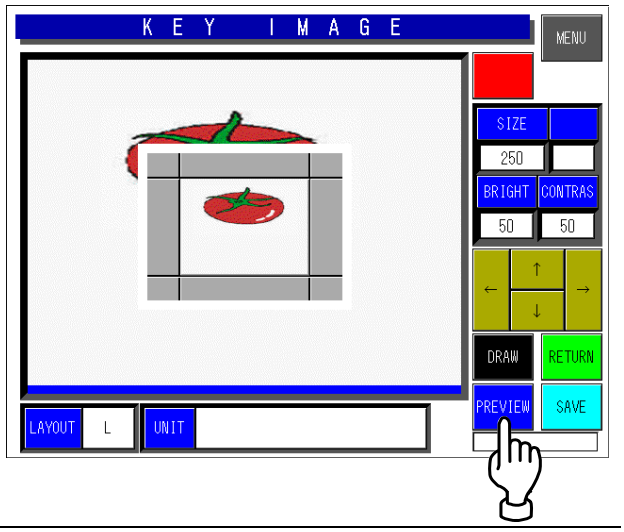


Touch the position button.





7. Touch the [PREVIEW] button.
If a result is good, touch the [PREVIEW] button once again.

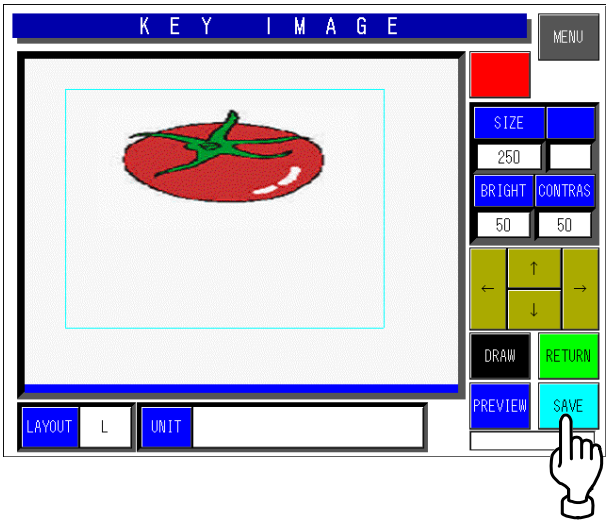


8. Save to the memory of IL-EMZ.

Number the key image.
Input the number and touch the [SAVE] button.

Key image is saved on CF card of a program.
IMGSV001.BMP

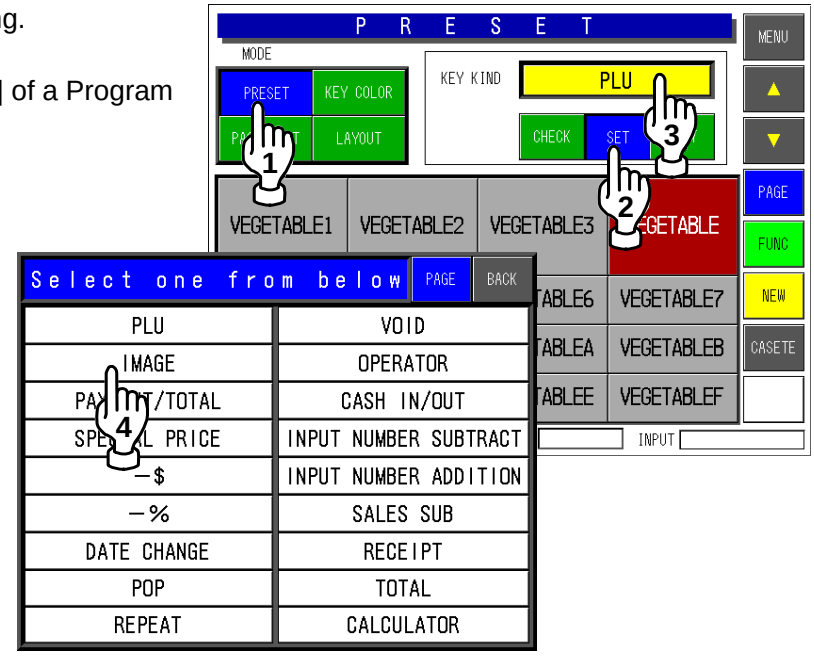
Cautions:
The same number is overwritten.



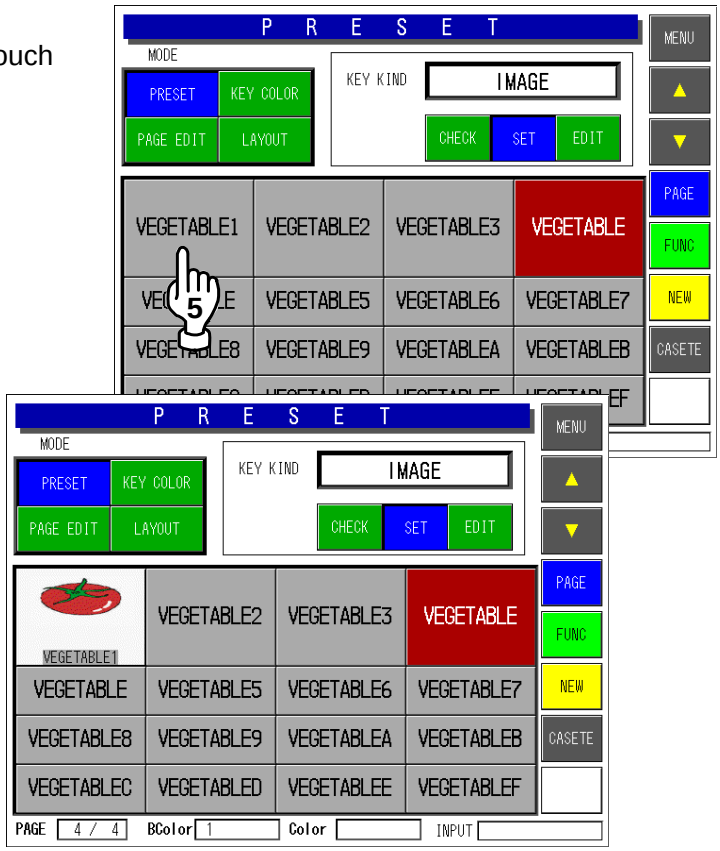
9. The method of programming.

Touch the [PRESET KEYS] of a Program menu.

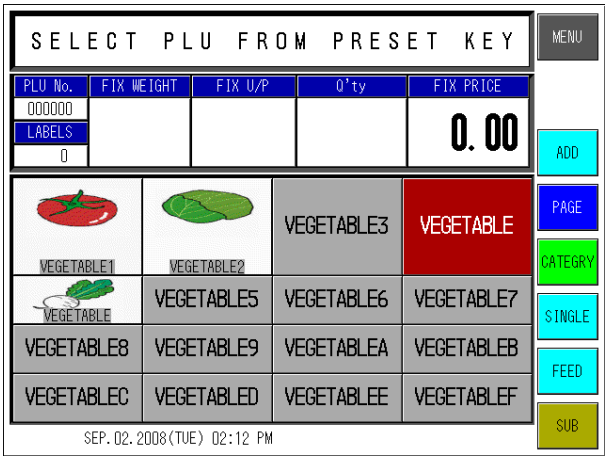
MODE: [PRESET],[SET]
KEY KIND: IMAGE



Input the Key image number and touch the [PRESET] button.



Program menu – Preset Keys Screen

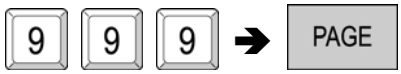


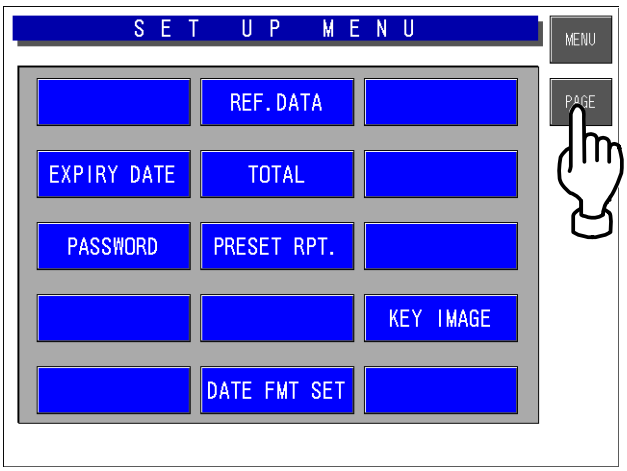
Operation mode Screen

2.9 SYSTEM DATA SETTING

1. Ensure that the Setup Menu screen is displayed.

To display the next page, enter [9][9][9] using numeric keys on the operation panel and touch the [PAGE] button on the screen.

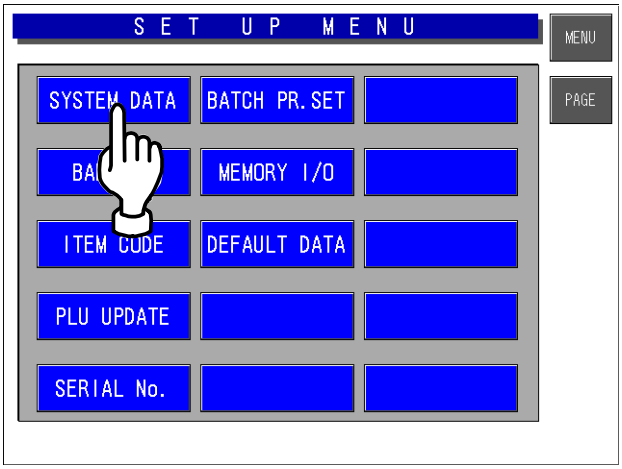




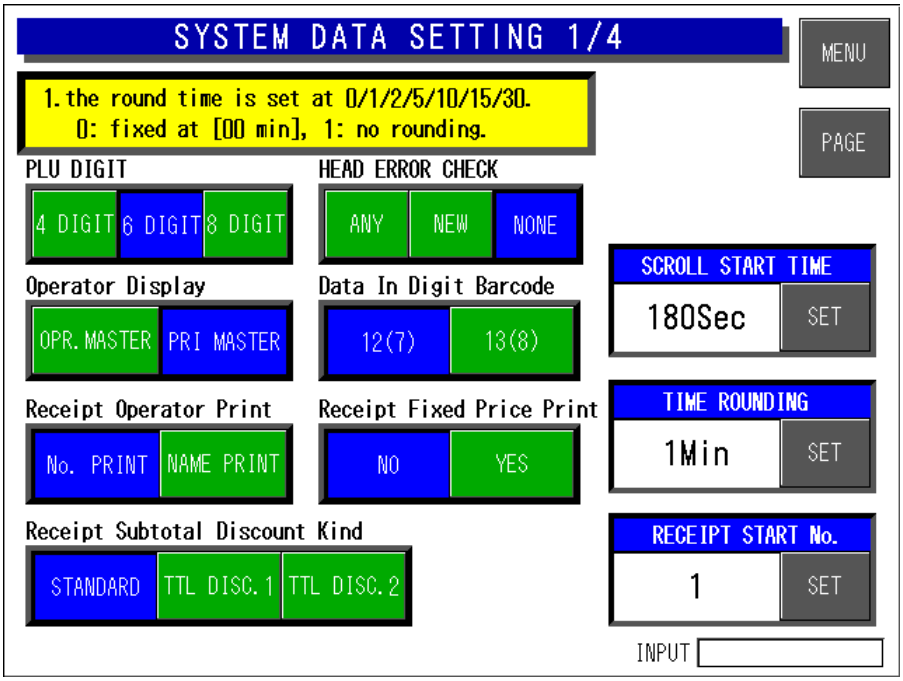
2. The second page of the Setup Menu screen appears.

Then, touch the [SYS DATA SET] button on the screen.

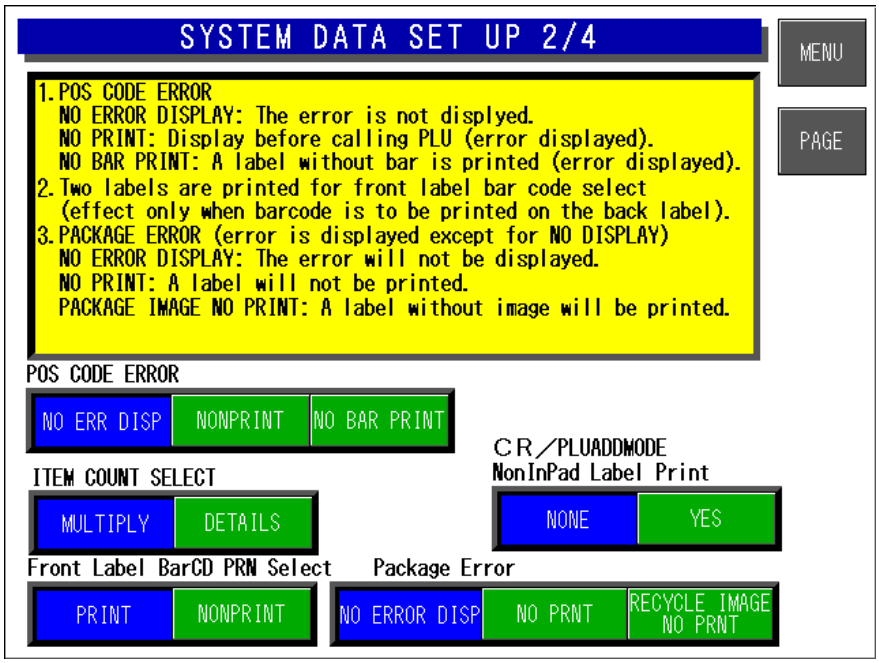
.



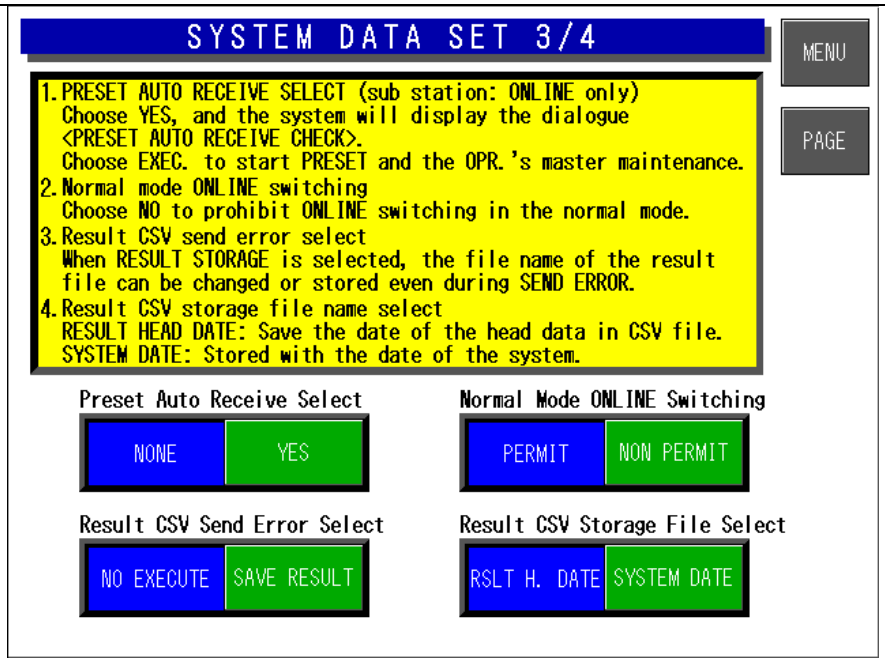
3 The System Data Setting screen appears.



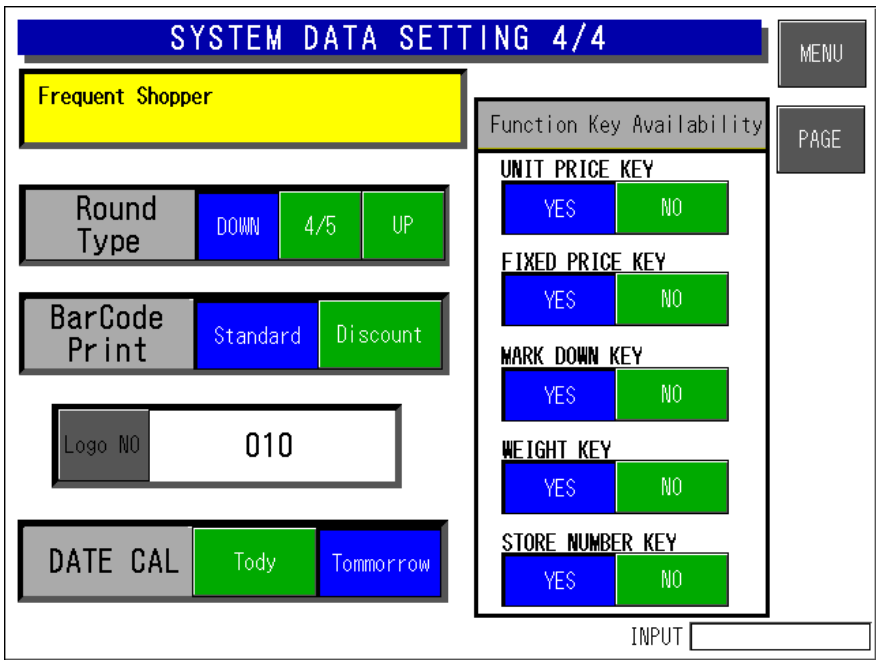
PLU DIGIT	Touch to select a desired number of digits.
HEAD ERROR CHECK	Touch to select a desired check type.
OPERATOR DISPLAY	Touch to select a desired master data.
DATA IN DIGIT BARCODE	Touch to select a bar cord type.
RECEIPT OPERATOR PRINT	Touch to select whether or not to print a operator name..
RECEIPT FIXED PRICE PRINT	Touch to select whether or not to print a fixed price.
RECEIPT SUBTOTAL DISCOUNT KIND	Touch to select a desired subtotal discount type.



POS CODE ERROR	Touch to select a desired error display type.
ITEM COUNT SELECT	Touch to select a desired item counting method.
CR/PLUADDMODE NON INPAD LABEL PRINT	Cash register/ Price lookup Select the label issue when not inputting the amount of money.
FRONT LABEL BARCODE PRINT SELECT	Touch to select whether or not to print a barcode on front labels.
PACKAGE ERROR.	Touch to select a desired error indication method.



PRESET AUTO RECEIVE SELECT	Touch to select a desired field. When “YES” is selected, the system will display the “Preset Auto Receive Check” dialog box.
NORMAL MODE ONLINE SWITCHING	Touch to select a desired field. When “NON PERMIT” is selected, on-line switching is prohibited in the normal mode.
RESULT CSV SEND ERROR SELECT	Touch to select a desired field. When “SAVE RESULT” is selected, the file name of the result file can be changed or stored during error sending.
RESULT CSV STORAGE FILE SELECT	Touch to select a desired field. When “RESULT HEAD DATE” is selected, the head data can be saved in CSV file. When “SYSTEM DATE” is selected, the head data can be stored with the date of the system.

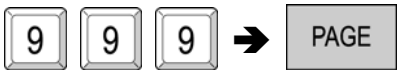


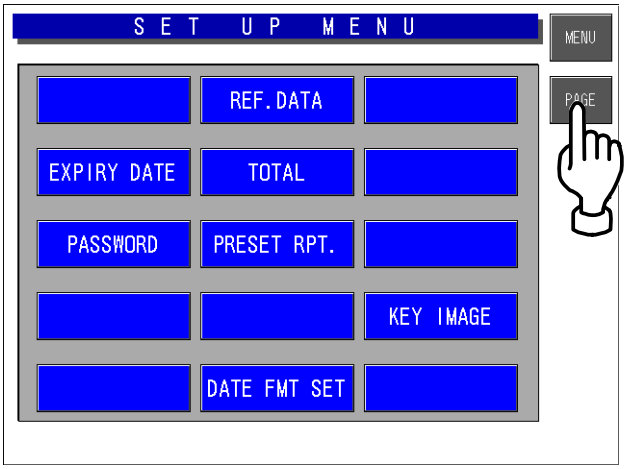
ROUND TYPE	Touch to select a desired rounding type.
BARCODE PRINT	Touch to select a desired barcode printing type.
DATE CAL	Touch to select a desired Date calculation type. Shelf life value 1(day) = today Shelf life value 1(day) = tomorrow.
UNIT PRICE KEY	Touch to select whether to enable this key or not.
FIXED PRICE KEY	Touch to select whether to enable this key or not.
MARK DOWN KEY	Touch to select whether to enable this key or not.
WEIGHT KEY	Touch to select whether to enable this key or not.
STORE NUMBER KEY	Touch to select whether to enable this key or not.

2.10 BARCODE SETTING

1. Ensure that the Setup Menu screen is displayed.

To display the next page, enter [9][9][9] using numeric keys on the operation panel and touch the [PAGE] button on the screen.

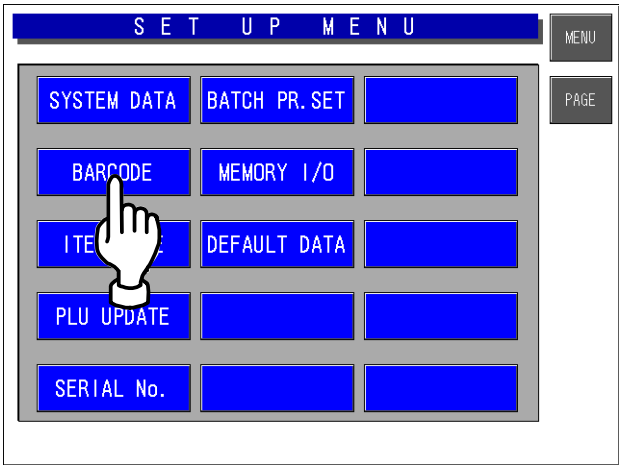




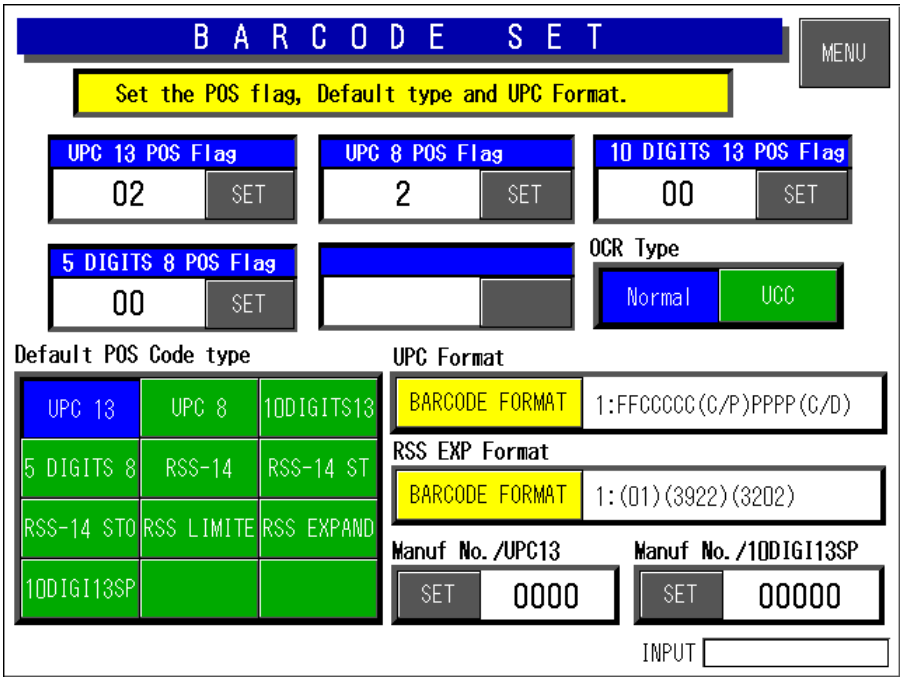
2. The second page of the Setup Menu screen appears.

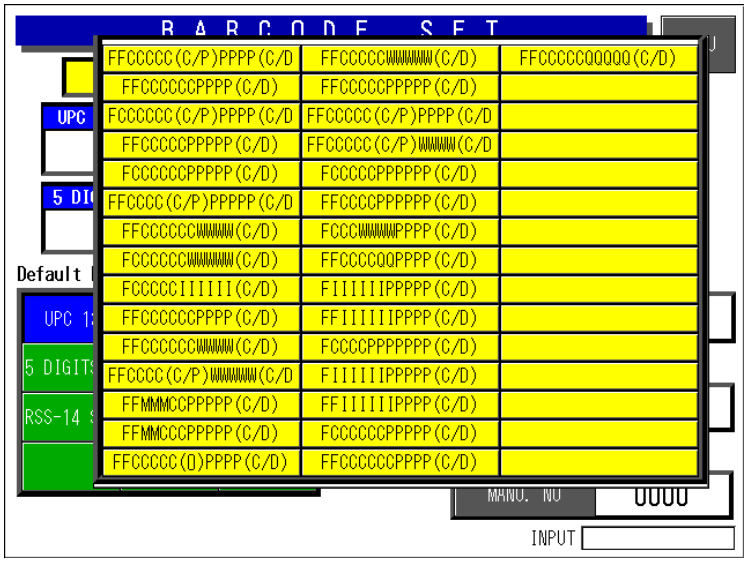
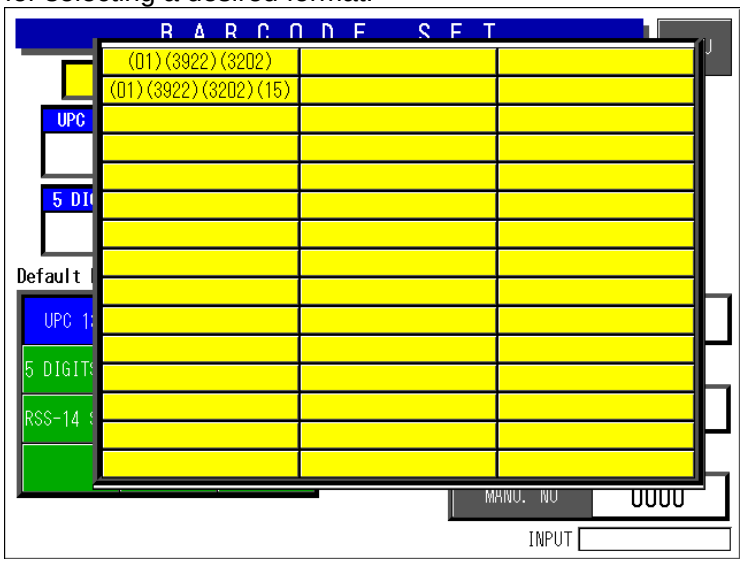
Then, touch the [BARCODE SET] button on the screen.

.



3. The Barcode Set screen appears.

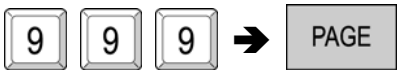


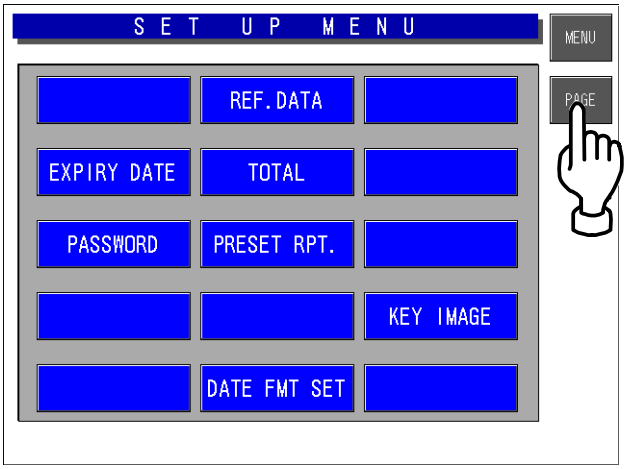
EAN 13 UPC 8 10 DIGITS 13 POS FLAG 5 DIGITS 8 POS FLAG OCR TYPE	Enter a numeric value and touch the [SET] button to specify the POS flag. Select the OCR type. Normal or UCC
DEFAULT POS CODE TYPE	Select a desired default POS code type by touching the corresponding filed.
UPC FORMAT	Touch this field to display the UPC format table for selecting a desired format. 
RSS Exp Format	Touch this field to display the RSS Expansion format table for selecting a desired format. 

2.11 ITEM CODE SETTING

1. Ensure that the Setup Menu screen is displayed.

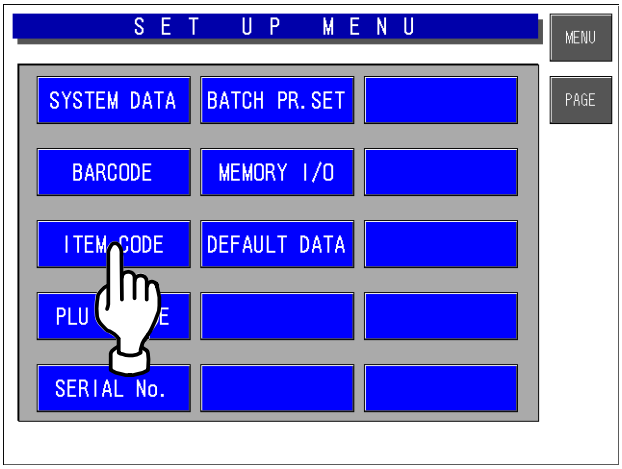
To display the next page, enter [9][9][9] using numeric keys on the operation panel and touch the [PAGE] button on the screen.



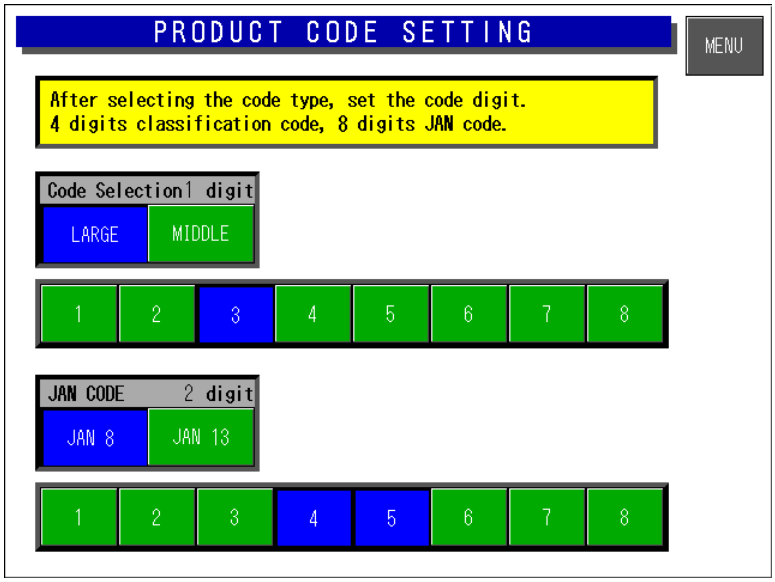


2. The second page of the Setup Menu screen appears.

Then, touch the [ITEM CODE] button on the screen.
.



3. The Product Code Setting screen appears

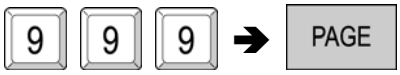


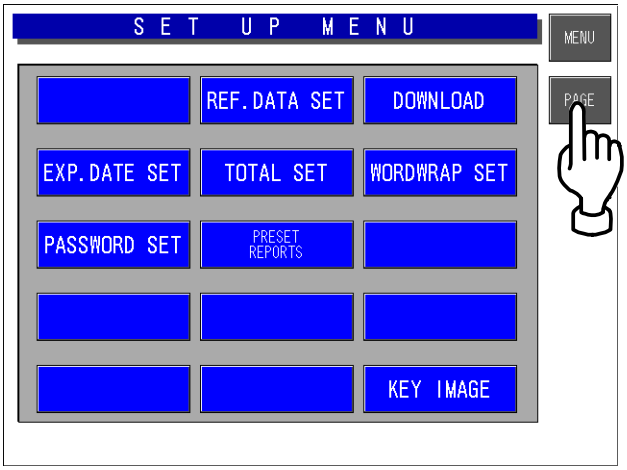
CODE SELECTION	Touch to select the code type, and set the code digits by touching desired fields.
JAN CODE	Touch to select “JAN 8” or “JAN 13”, and set the code digits by touching desired fields.

2.12 PLU UPDATE SETTING

1. Ensure that the Setup Menu screen is displayed.

To display the next page, enter [9][9][9] using numeric keys on the operation panel and touch the [PAGE] button on the screen.

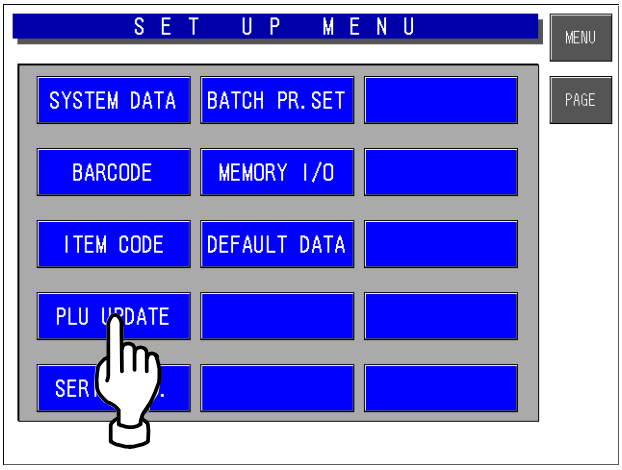




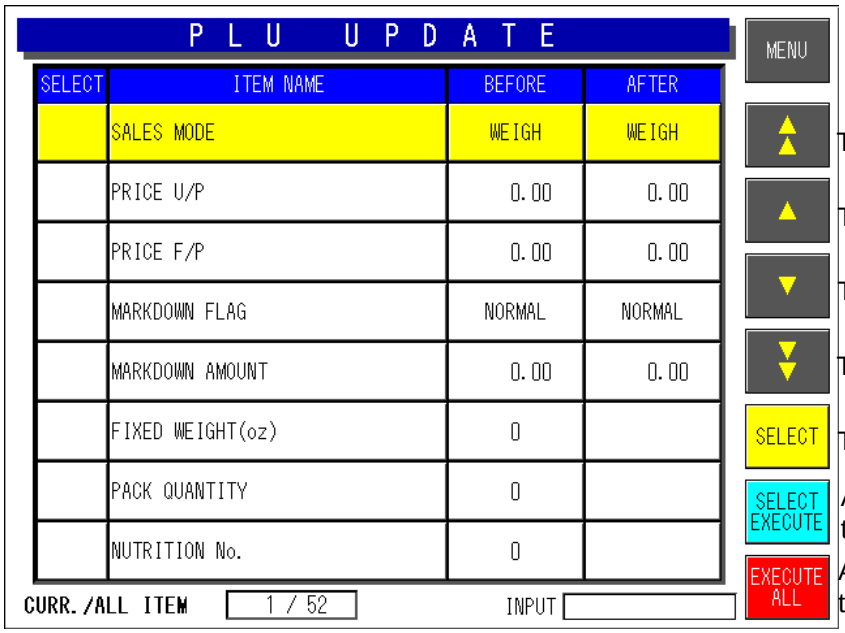
2. The second page of the Setup Menu screen appears.

Then, touch the [PLU UPDATE] button on the screen.

.



3. The PLU Update screen appears



Touch to page up.

Touch to move up the selection.

Touch to move down the selection.

Touch to page down.

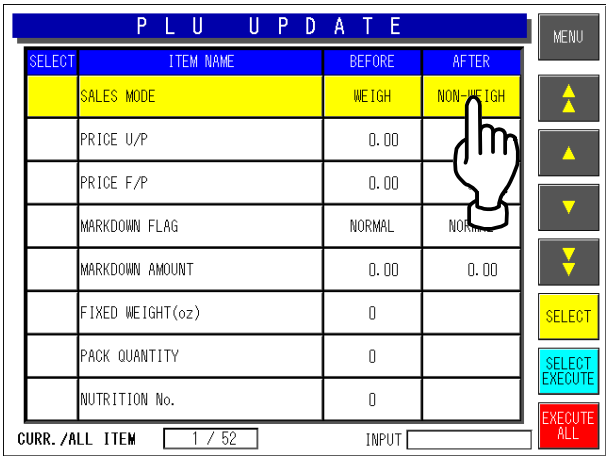
Touch to select each item.

After selecting items, touch this button for execution.

After selecting items, touch this button for execution.

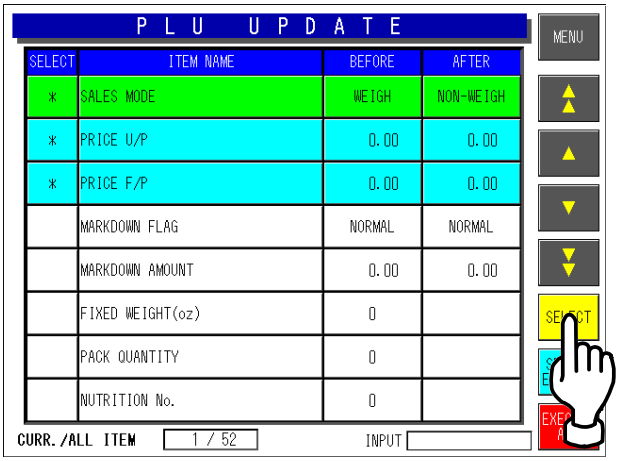
4. Touch to change a selection.

EXAMPLE Change to “NON-WEIGH”



5. Touch the [SELECT] button.

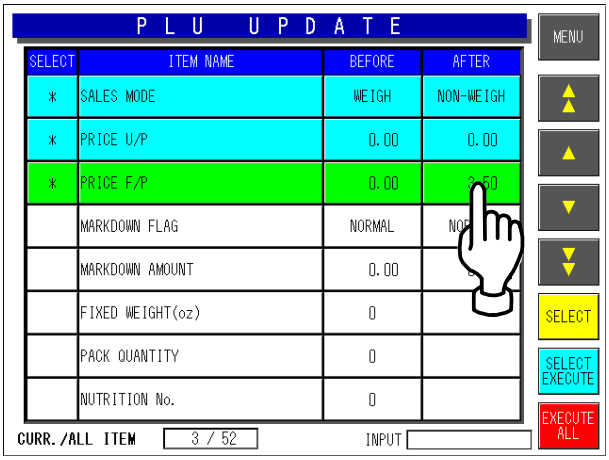
The related fields will be highlighted.



6. To change data, enter a numeric value and touch a desired field..

EXAMPLE Change to “3.50”.

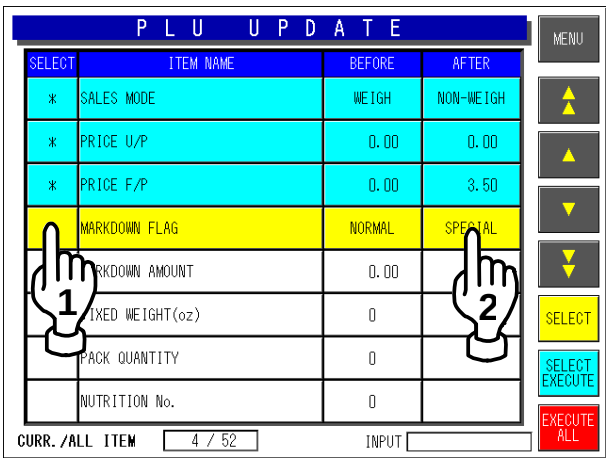
3 5 0



7. Touch to select a desired field, and touch to change a selection.

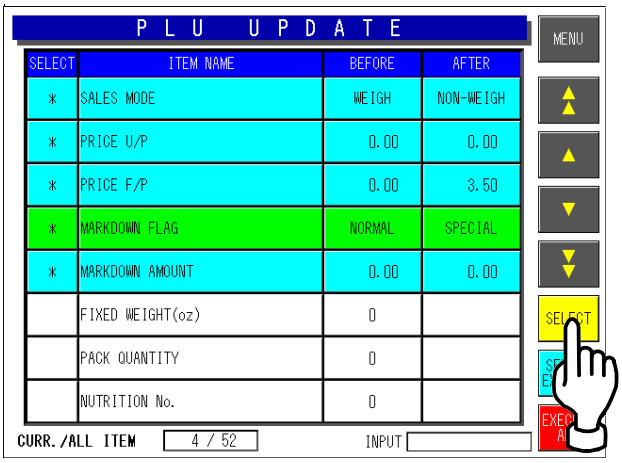
EXAMPLE

Select “Markdown Flag” and change to “SPECIAL”



8. Touch the [SELECT] button.

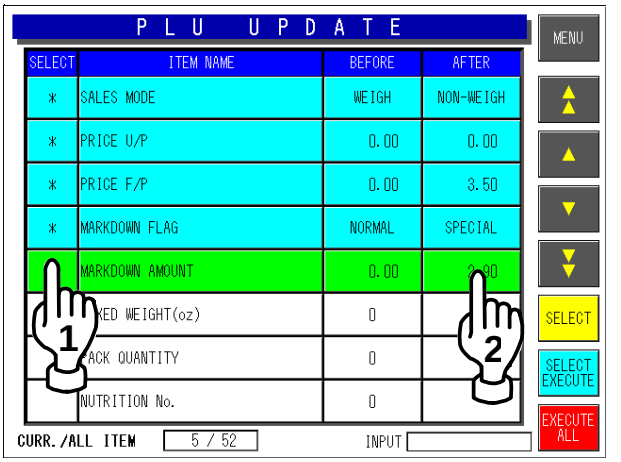
The related fields will be highlighted.



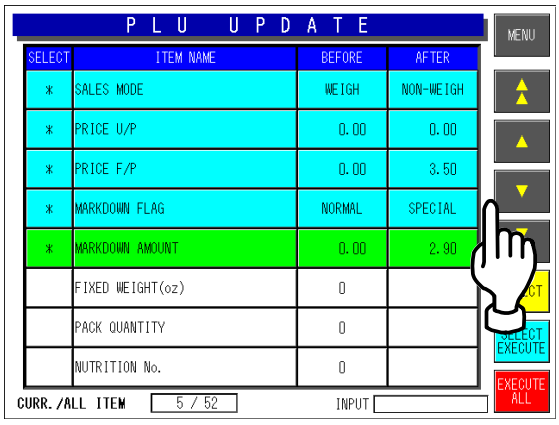
9. Touch to select a desired field, and enter a desired numeric value.

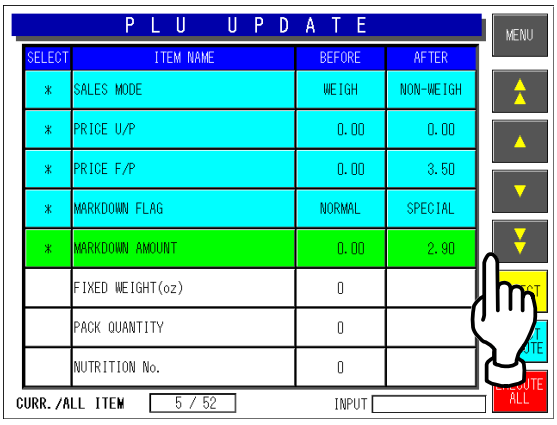
EXAMPLE Change to “2.90”.

2 9 0

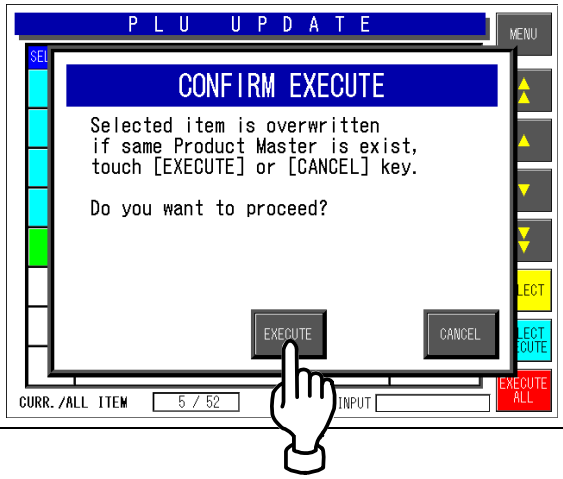


10. Touch the [SELECT EXECUTE] or [EXECUTE ALL] button.





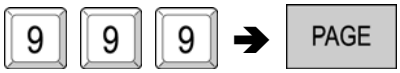
11. The confirmation screen appears. Then, touch the [EXECUTE] or [EXECUTE ALL] button.

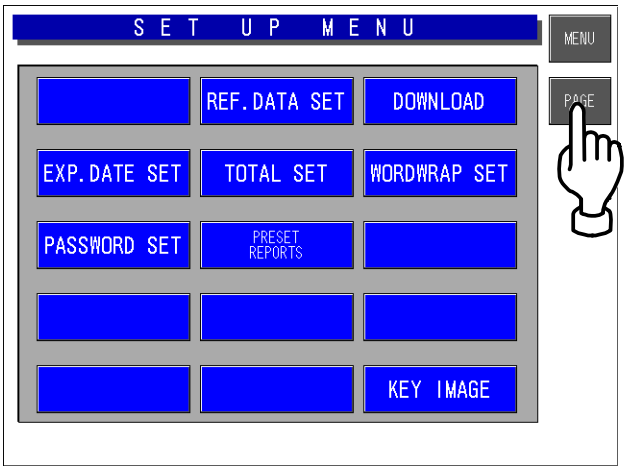


2.13 SERIAL NO. SETTING

1. Ensure that the Setup Menu screen is displayed.

To display the next page, enter [9][9][9] using numeric keys on the operation panel and touch the [PAGE] button on the screen.

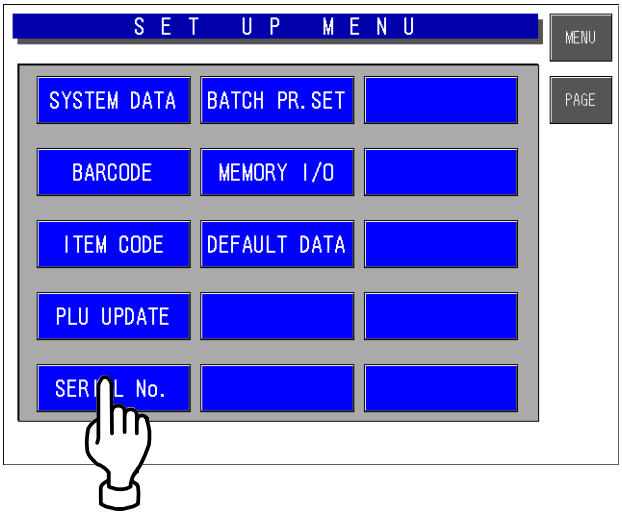




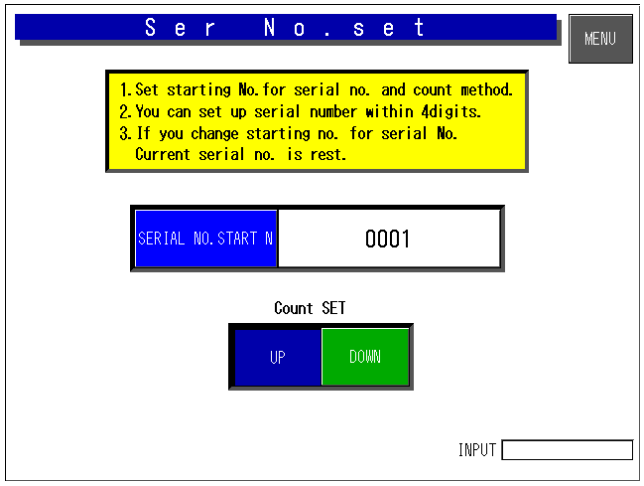
2. The second page of the Setup Menu screen appears.

Then, touch the [SERIAL No.] button on the screen.

.



3. The Serial No, screen appears.

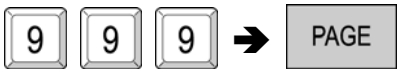


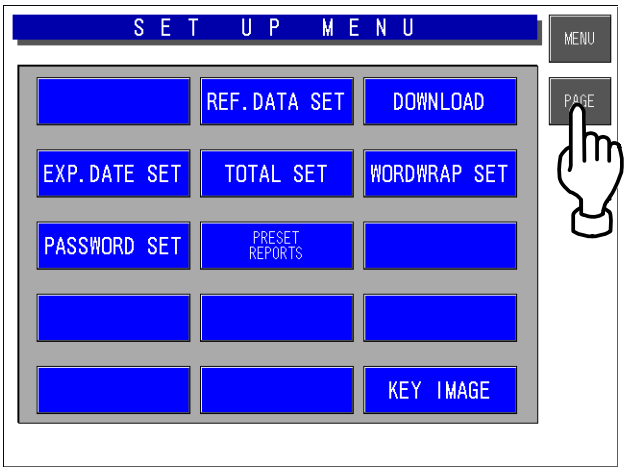
SERIAL NO, START N	You can set up serial number within 4digits.
COUNT SET	Select the up-button or down-button.

2.14 BATCH PRINT SETUP SETTING

1. Ensure that the Setup Menu screen is displayed.

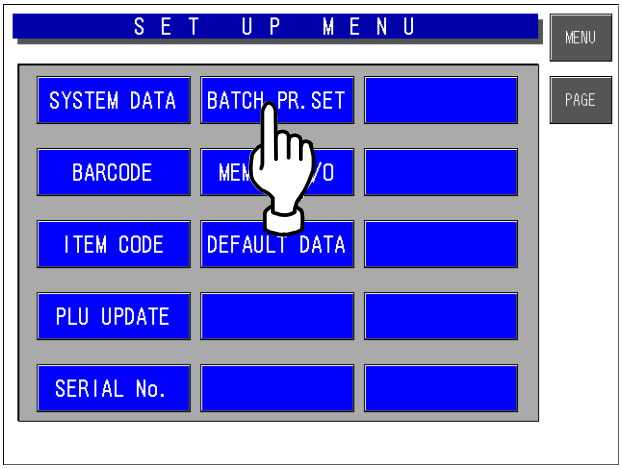
To display the next page, enter [9][9][9] using numeric keys on the operation panel and touch the [PAGE] button on the screen.



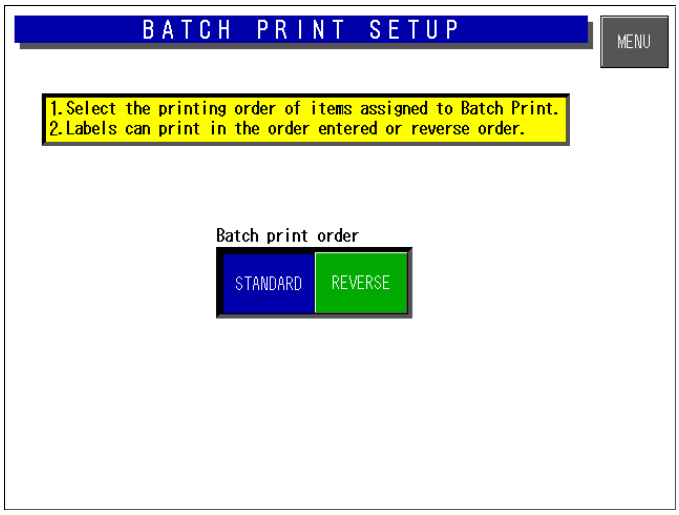


2. The second page of the Setup Menu screen appears.

Then, touch the [BATCH PR.SET] button on the screen.
.



3. The Batch Print set up screen appears.

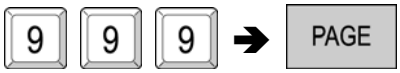


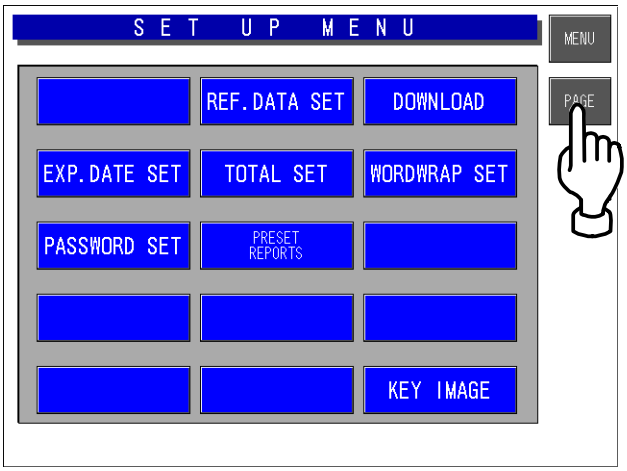
BATCH PRINT ORDER	Labels can print in the order entered or reverse order.

2.15 MEMORY I/O SETTING

1. Ensure that the Setup Menu screen is displayed.

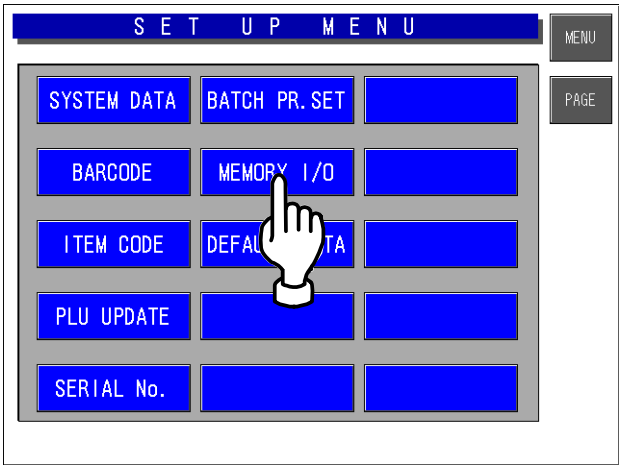
To display the next page, enter [9][9][9] using numeric keys on the operation panel and touch the [PAGE] button on the screen.



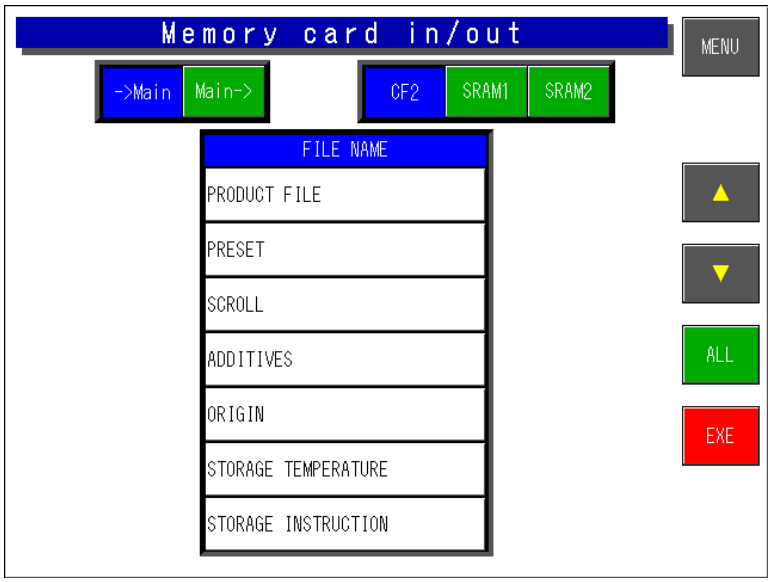


2. The second page of the Setup Menu screen appears.

Then, touch the [MEMORY I/O] button on the screen.
.



3. The Memory card in/out screen appears.

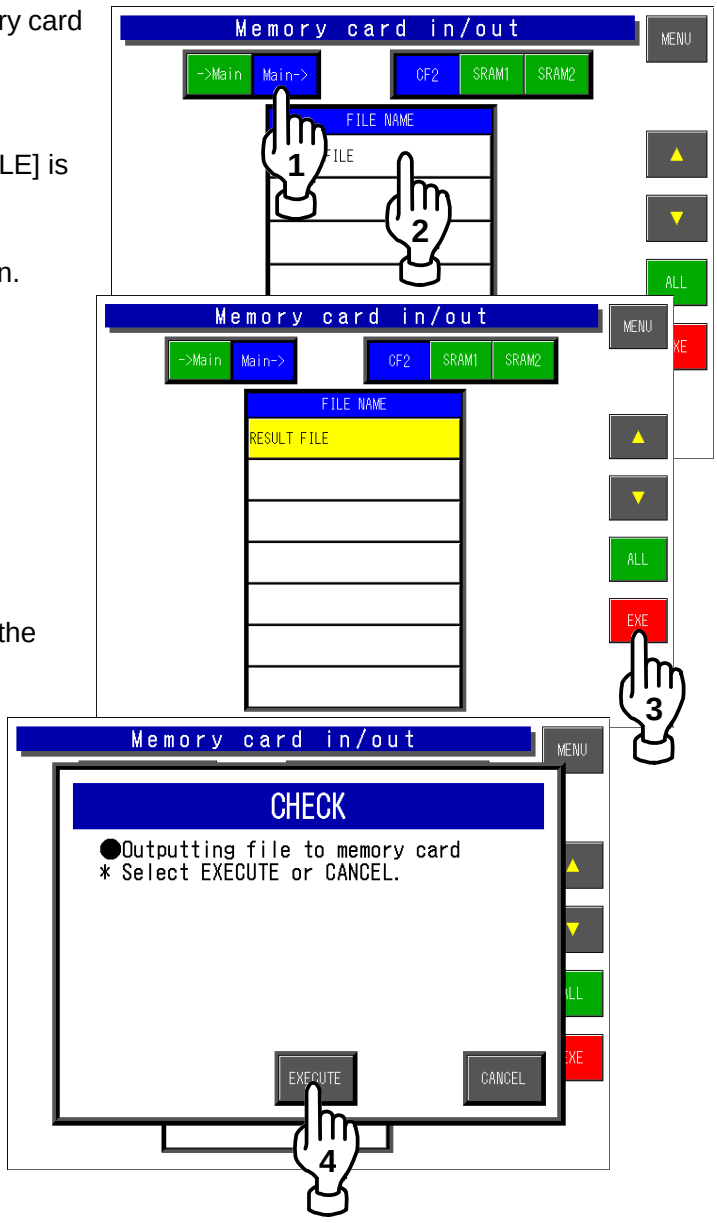


4. This function is transmits to memory card from the main-memory.

1. Touch the [Main->] button.
   As for a file name,[RESULT FILE] is then chosen automatically.

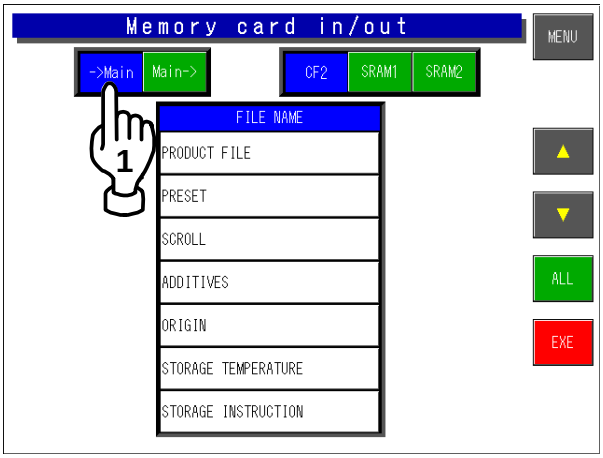
2. Touch the [RESULT FILE] button.

3. Touch the [EXE] button.
   Screen A appears. Then, touch the [EXECUTE] button.

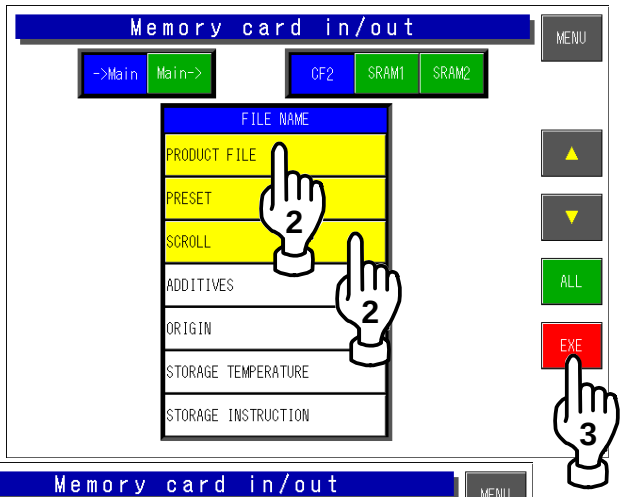


5. This function is transmits to main-memory from the memory card.

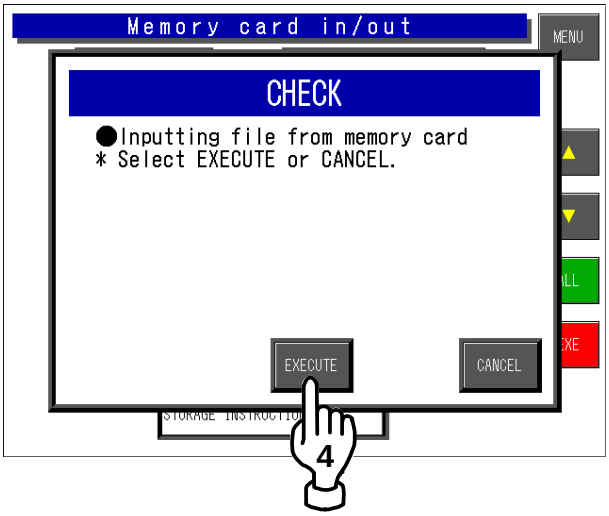
1. Touch the [->Main] button.
   The file name which can be transmits appears.



2.Touch the file name to transmit.



3. Touch the [EXE] button.
Screen A appears. Then, touch the [EXECUTE] button.



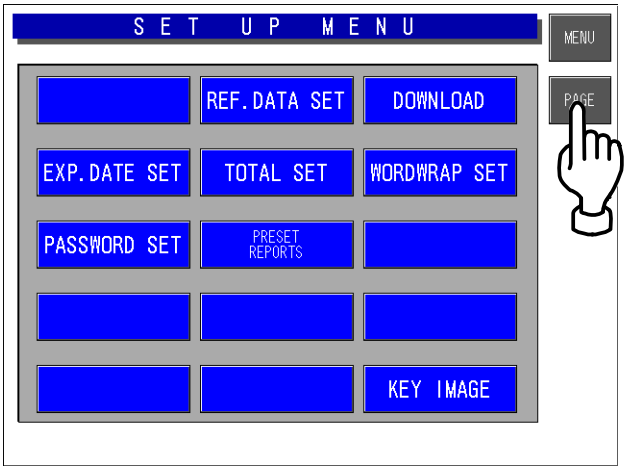
2.16 DEFAULT DATA SETTING

This function is to set default data to be used when a new PLU is created.

1. Ensure that the Setup Menu screen is displayed.

To display the next page, enter [9][9][9] using numeric keys on the operation panel and touch the [PAGE] button on the screen.

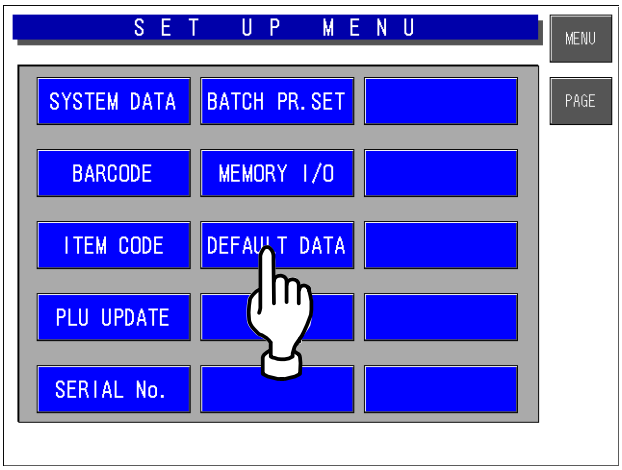
9 9 9 ➔ PAGE



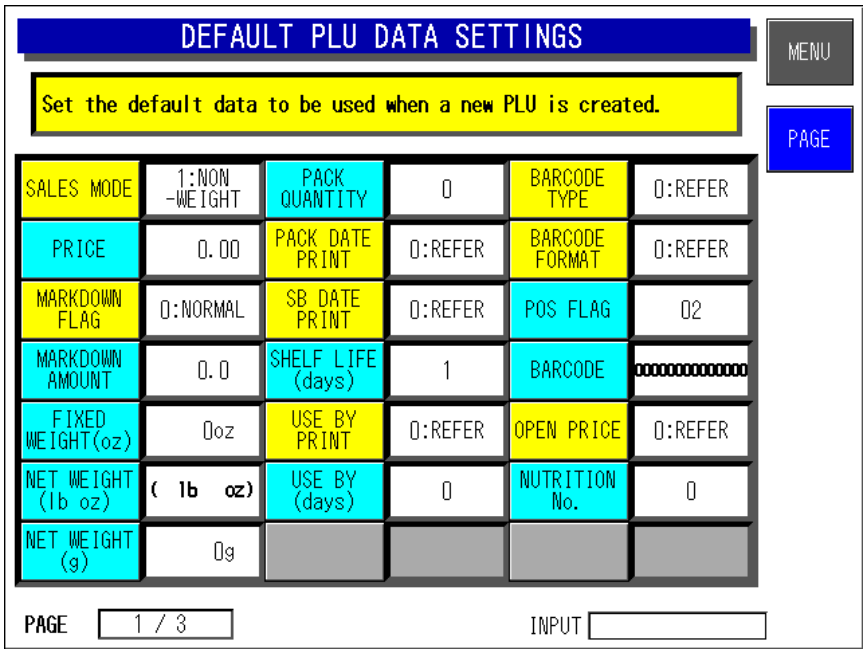
2. The second page of the Setup Menu screen appears.

Then, touch the [DEFAULT DATA] button on the screen.

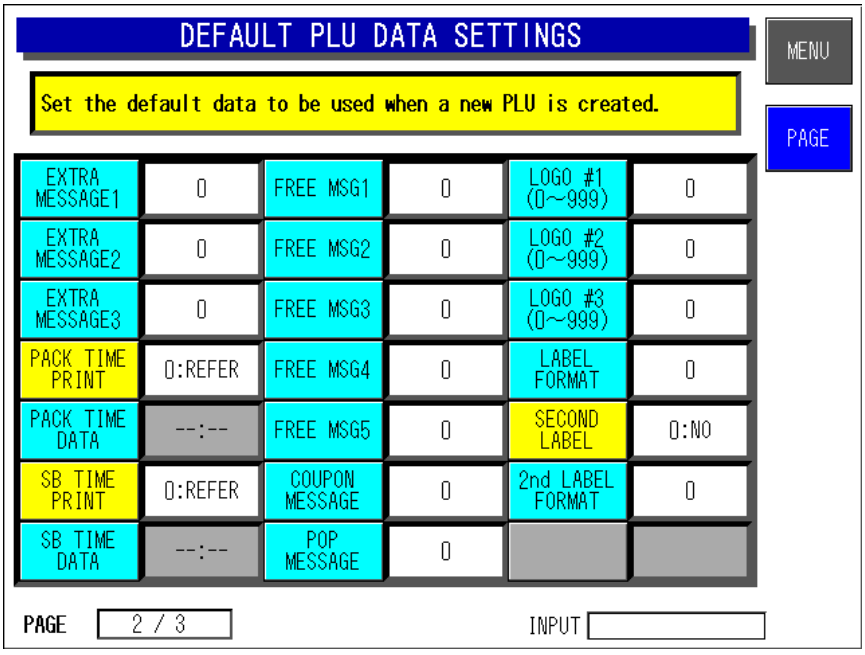
.



3. The Default PLU Data Setting screen appears.

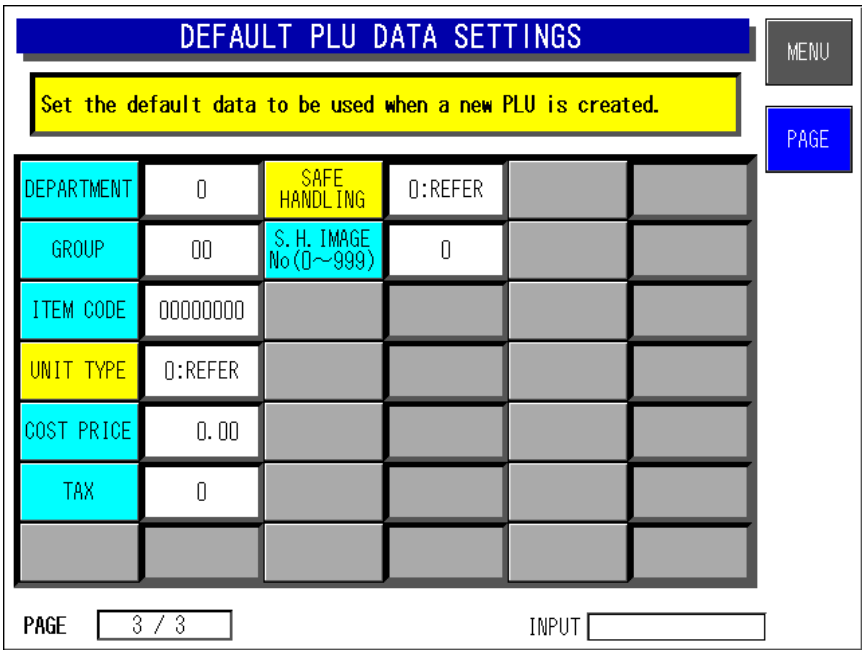


SALES MODE	1:NON-WEIGHT only.
PRICE	Enter a price and touch this field.
MARKDOWN FLAG	Touch this field to display a pop-up screen for selection. 0:normal 1:special 2:-$ 3:-%
MARKDOWN AMOUNT	Enter an amount and touch this field.
FIXED WEIGHT (OZ)	Enter a fixed weight and touch this field.
NET WEIGHT (LB OZ)	Enter a net weight and touch this field.
NET WEIGHT (G)	Enter a net weight and touch this field.
PACK QUANTITY	Enter a quantity and touch this field.
PACK DATE PRINT	Touch this field to display a pop-up screen for selection. 0:refer 1:yes 2:no
SELL-BY DATE PRINT	Touch this field to display a pop-up screen for selection. 0:refer 1:yes 2:no
SHELF LIFE	Enter the number of days for the shelf life and touch this field.
USE-BY PRINT	Touch this field to display a pop-up screen for selection.
USE-BY (DAYS)	Enter the number of days for the use-by date and touch this field.
BARCODE TYPE	Touch this field to display a pop-up screen for selection.
BARCODE FORMAT	Touch this field to display a pop-up screen for selection.
POS FLAG	Enter a flag number and touch this field.
BARCODE	Enter a barcode and touch this field.
OPEN PRICE	Touch this field to display a pop-up screen for selection. 0:refer 1:prohibit 2:allow
NUTRITION NO.	Enter a number and touch this field.



EXTRA MESSAGE1-3	Enter a message number and touch this field.
PACK TIME PRINT	Touch this field to display a pop-up screen for selection. 0:refer 1:prohibit 2:designate 3:clock
PACK TIME DATA	Enter the time and touch this field.
SELL-BY TIME PRINT	Touch this field to display a pop-up screen for selection. 0:refer 1:prohibit 2:designate 3:clock
SELL-BY TIME DATA	Enter the time and touch this field.
FREE MESSAGE1-5	Enter a message number and touch this field.
COUPON MESSAGE	Enter a message number and touch this field.
POP MESSAGE	Enter a message number and touch this field.

SAFE HANDLING	Touch this field to display a pop-up screen for selection.
SAFE HANDLING IMAGE	Enter a image number and touch this field.
LOGO#1-#3	Enter a logo number and touch this field.
LABEL FORMAT	Enter a format number and touch this field.
SECOND LABEL	Touch this field to display a pop-up screen for selection. 0:no 1:yes
2ND LABEL FORMAT	Touch this field to display a pop-up screen for selection.



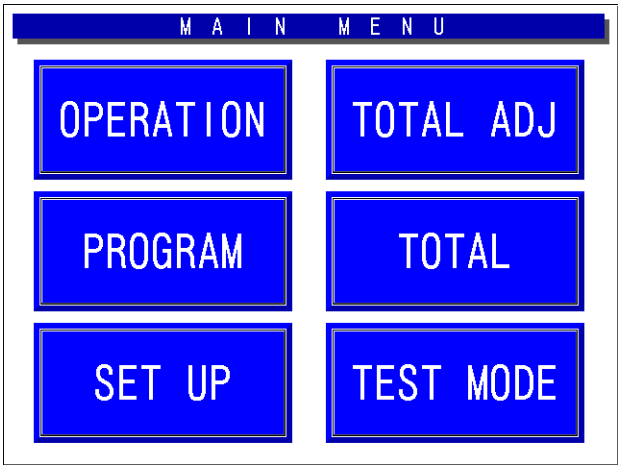
DEPARTMENT	Enter a department number and touch this field.
GROUP	Enter a group number and touch this field.
ITEM CODE	Enter an item code and touch this field.
UNIT TYPE	Touch this field to display a pop-up screen for selection. 0:refer 1:oz 2:ib 3:kg 4:g 5: pc. 6:box 7:bundle 8:pack 9:cut 10:slice 11:cup 12:pkt 13:bag 14:bunch 15:bottle 16:LB 17:no prn
COST PRICE	Enter a cost price and touch this field.
TAX	Enter a tax number and touch this field.
SAFE HANDLING	Touch this field to display a pop-up screen for selection. 0:refer 1:no prn 2:print
S.H.IMAGE NO. (0-999)	Enter a safe handling number and touch this field.

3 TEST MODE

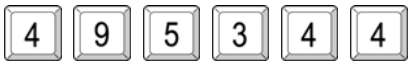
Contents

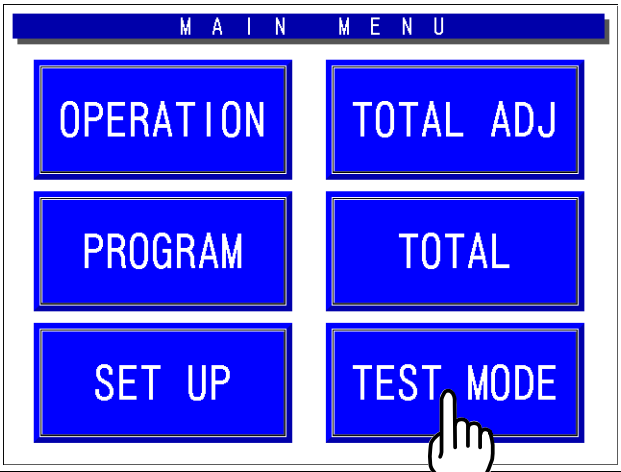
3.1 ENTERING TEST MENU

1. Ensure that the Main Menu screen is displayed.

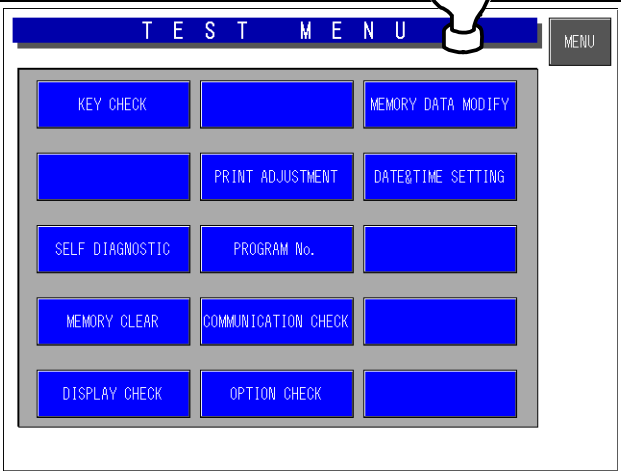


2. Enter [4][9][5][3][4][4] using numeric keys on the operation panel and touch the [TEST MODE] button on the screen.





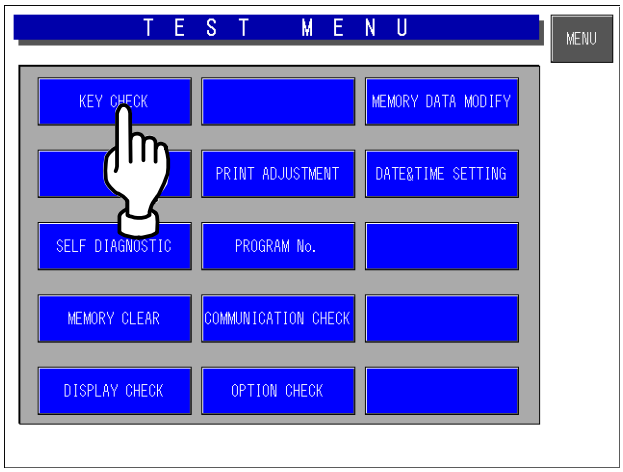
3. The Test Menu screen appears.



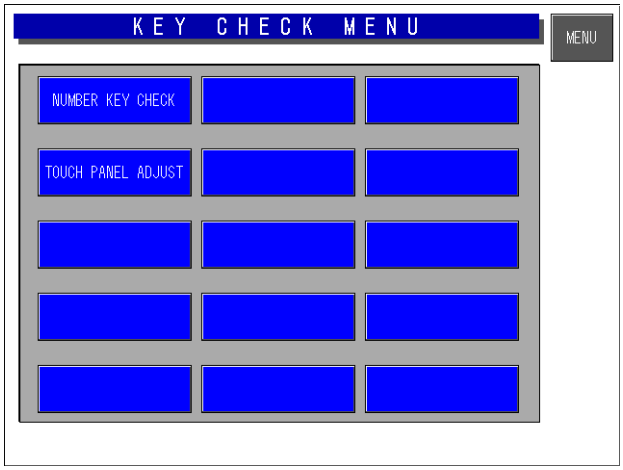
3.2 KEY CHECK

1. Ensure that the Test Menu screen is displayed.

Then, touch the [KEY CHECK] button on the screen



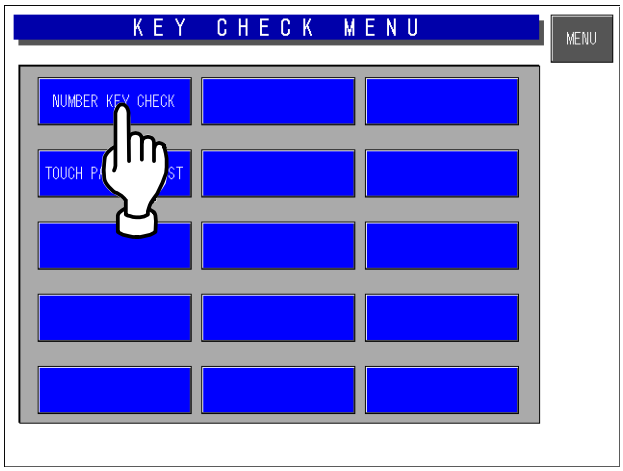
2. The Key Check Menu screen appears.



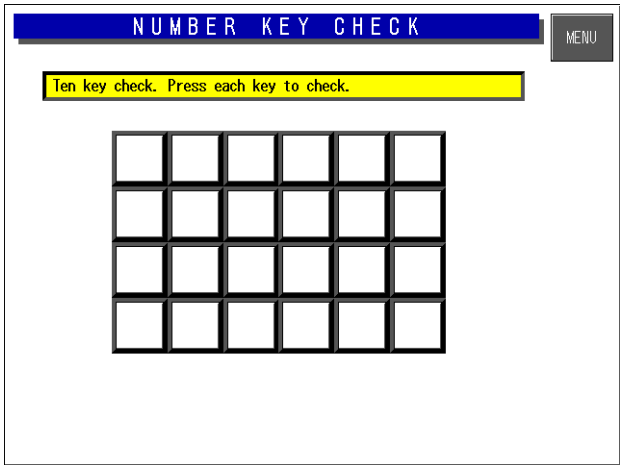
3.2.1 NUMERIC KEY CHECK

1. Ensure that the Key Check Menu screen is displayed.

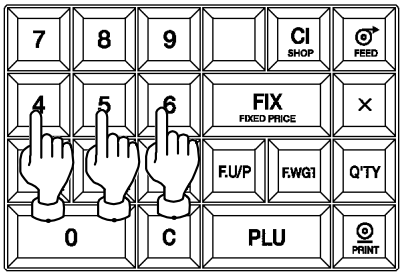
Then, touch the [NUMBER KEY CHECK] button on the screen.

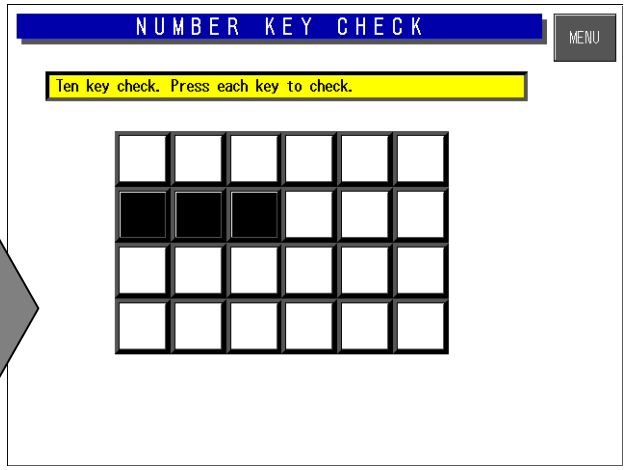


2. The Number Key Check screen appears.



3. To check that each key on the operation panel is operating properly, press any desired keys on the operation panel and check that the corresponding key turns black in color.

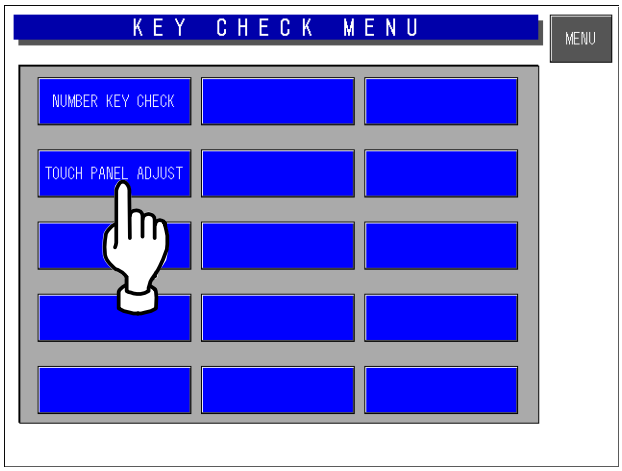




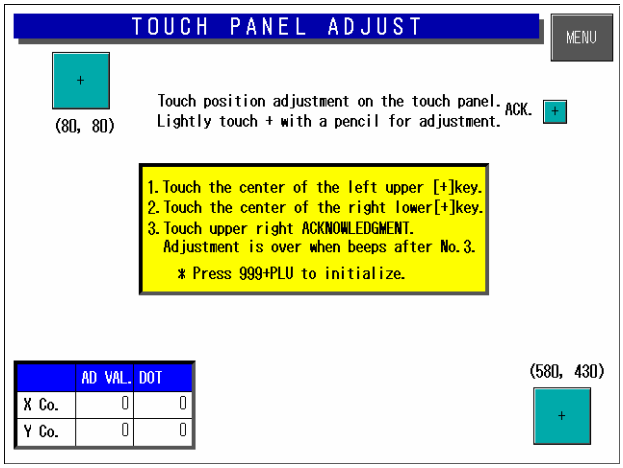
3.2.2 TOUCH PANEL ADJUSTMENT

1. Ensure that the Key Check Menu screen is displayed.

Then, touch the [TOUCH PANEL ADJUST] button on the screen.

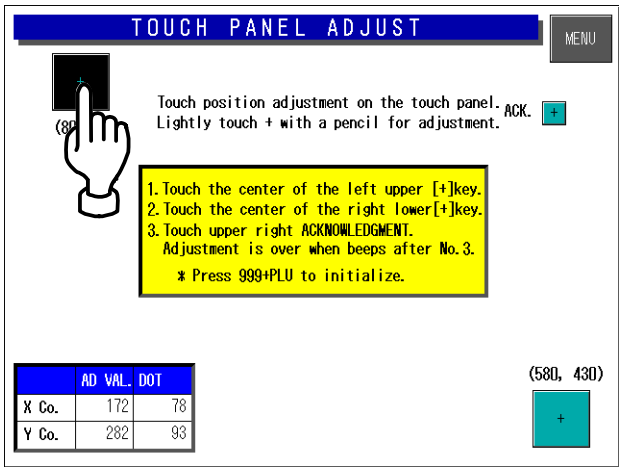


2. The Touch Panel Adjustment screen appears.



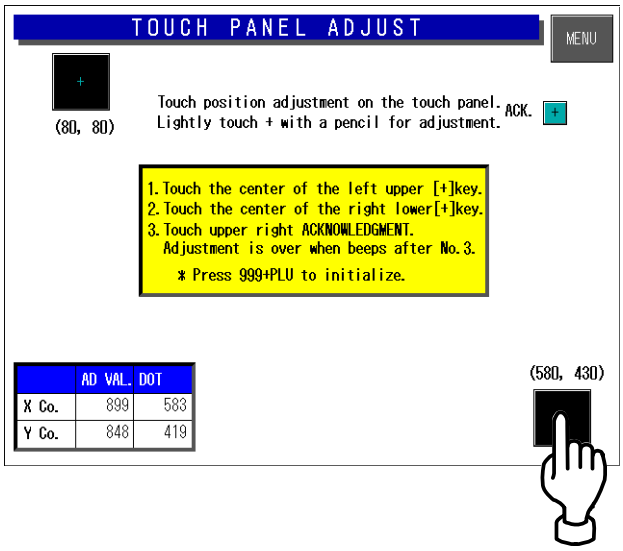
3. Touch the center of the upper-left [+] button on the screen.

The touched button turns black in color.



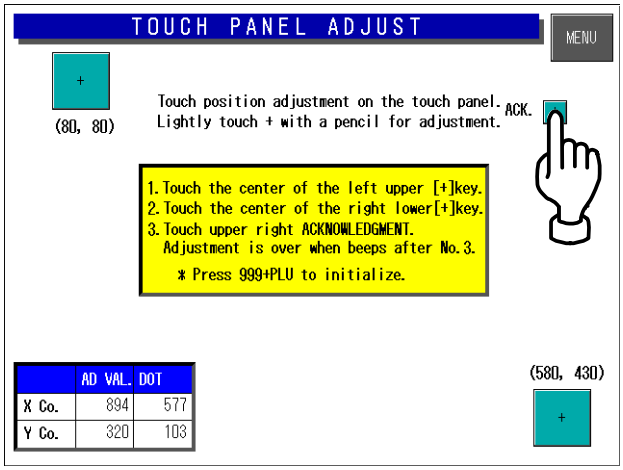
4. Touch the center of the bottom-right [+] button on the screen.

The touched button turns black in color.



5. Touch the center of the small upper-right [+] button on the screen for acknowledgement.

You can hear the beep when the adjustment is completed.

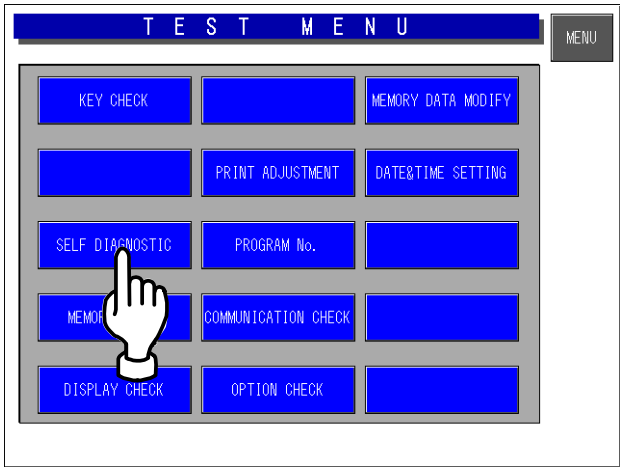


3.3 SELF DIAGNOSTIC

CAUTION	This menu is used to test the machine in the factory. Note that all memories will be initialized when this menu is used.

1. Ensure that the Test Menu screen is displayed.

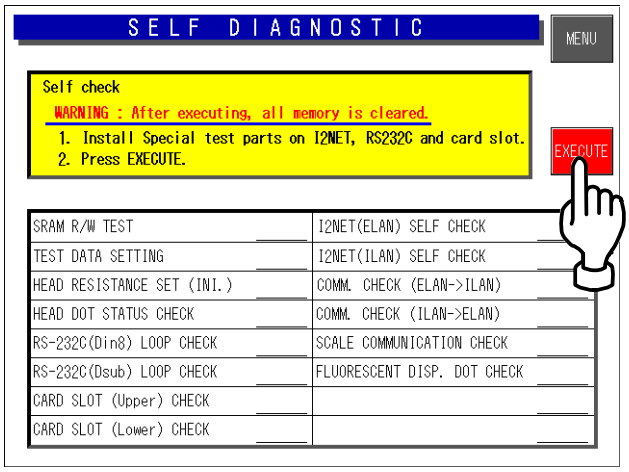
Then, touch the [SELF DIAGNOSTIC] button on the screen.



2. The Self Diagnostic screen appears.

Touch the [EXECUTE] button on the screen.

As a checking result, the word “NORMAL” or “ABNORMAL” appears in each field.



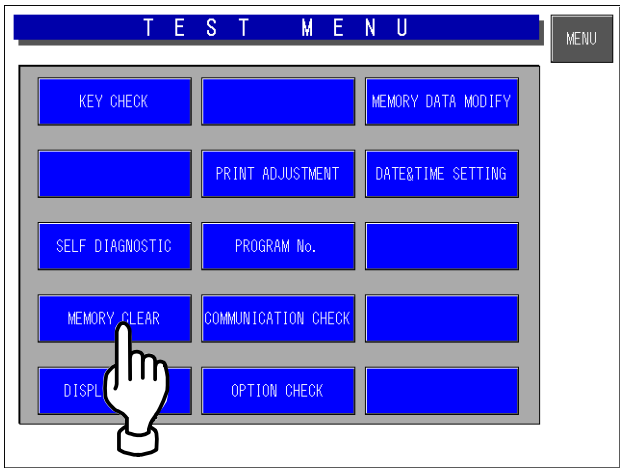
S E L F D I A G N O S T I C
MENU
Self check
WARNING : After executing, all memory is cleared.
1. Install Special test parts on I2NET, RS232C and card slot.
2. Press EXECUTE.
EXECUTE
SRAM R/W TEST
TEST DATA SETTING
HEAD RESISTANCE SET (INI.)
HEAD DOT STATUS CHECK
RS-232C(Din8) LOOP CHECK
RS-232C(Dsub) LOOP CHECK
CARD SLOT (Upper) CHECK
CARD SLOT (Lower) CHECK
I2NET(ELAN) SELF CHECK
I2NET(ILAN) SELF CHECK
COMM. CHECK (ELAN->ILAN)
COMM. CHECK (ILAN->ELAN)
SCALE COMMUNICATION CHECK
FLUORESCENT DISP. DOT CHECK

Items	Contents	Probable Causes
SRAM R/W TEST	SRAM reading and writing test	• Defect of P-910
TEST DATA SETTING	Master data setting for each test	• Abnormal display
HEAD RESISTANCE SET (INITIALIZATION)	Automatic setting of head resistance	• Defect of thermal head • Defect of P-909 • Defect of harness “C2” thermal head (63-5585-04)
HEAD DOT STATUS CHECK	Thermal head failure check	• Defect of thermal head • Defect of P-909 • Defect of harness “C2” thermal head (63-5585-04)
RS-232C (DIN8) LOOP CHECK	RS-232C (DIN8) hardware check *Check cable is required.	• Defect of P-910 • Defect of harness “C2” communication (63-8458-26)
RS-232C (D-SUB) LOOP CHECK	RS-232C (D-SUB) hardware check *Check cable is required.	• Defect of P-910 • Defect of P-907 • Defect of harness “C2” RS-232C (63-8459-20)
CARD SLOT (UPPER) CHECK	PCMCIA (upper) hardware check *Check cable is required.	• Defect of P-910
CARD SLOT (LOWER) CHECK	PCMCIA (lower) hardware check *Check cable is required.	• Defect of P-910
I^2NET (ELAN) SELF CHECK	I^2NET (ELAN) hardware check	• Defect of P-910
I^2NET (ILAN) SELF CHECK	I^2NET (ILAN) hardware check	• Defect of P-910
COMMUNICATION CHECK (ELAN→ILAN)	I^2NET loop-back hardware check *Check cable is required.	• Defect of P-910
COMMUNICATION CHECK (ILAN→ELAN)	I^2NET loop-back hardware check *Check cable is required.	• Defect of P-910
SCALE COMMUNICATION CHECK	Scale communication hardware check	• Defect of P-888
FLUORESCENT DISPLAY DOT CHECK	Display test of fluorescence display (visual check)	• Defect of fluorescence display • Defect of harness “C2” fluorescence (63-8471-16)

3.4 MEMORY CLEAR

1. Ensure that the Test Menu screen is displayed.

Then, touch the [MEMORY CLEAR] button on the screen.

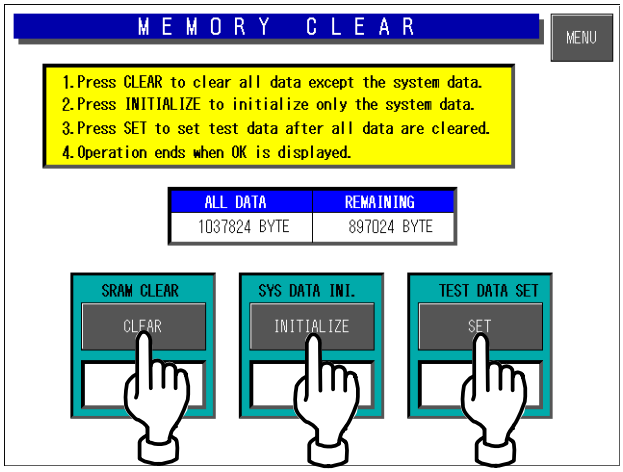


2. Touch one of the [CLEAR], [INITIALIZE], and [SET] buttons on the screen.

◇**SRAM CLEAR**
Master data in SRAM is cleared except system master data.

◇**SYSTEM DATA INITIALIZATION**
System master data returns to initial values.

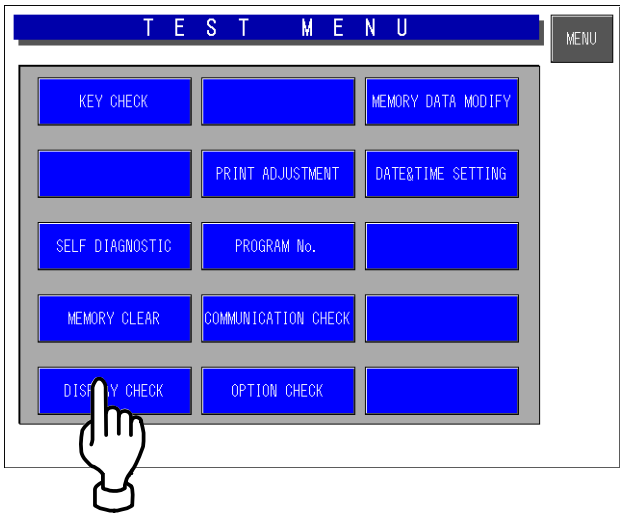
◇**TEST DATA SET**
Test data is set.



3.5 DISPLAY CONFIRMATION

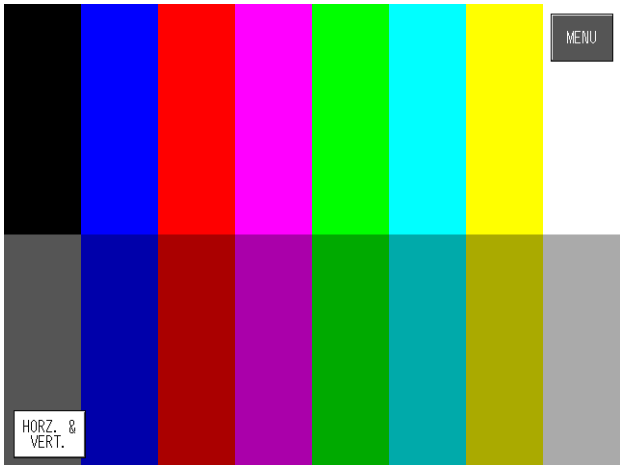
1. Ensure that the Test Menu screen is displayed.

Then, touch the [DISPLAY CHECK] button on the screen.

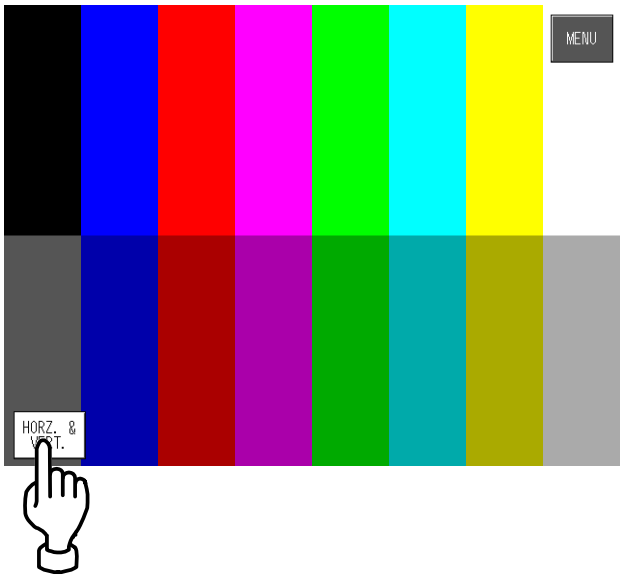


2. The vertical color pattern screen appears.

Check brightness of the screen.

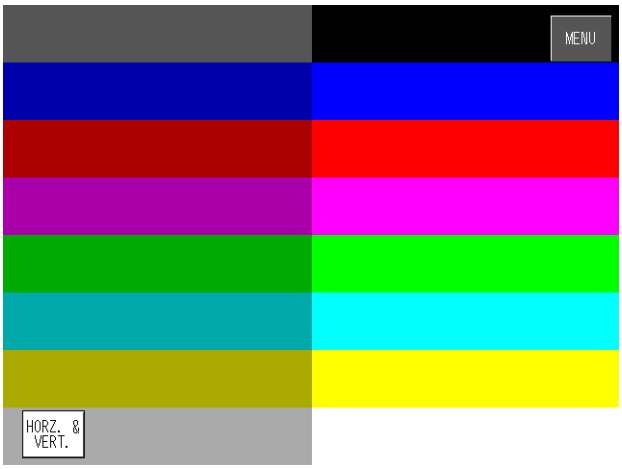


3. Touch the [HORIZONTAL/VERTICAL] button on the screen.



4. The horizontal color pattern screen appears.

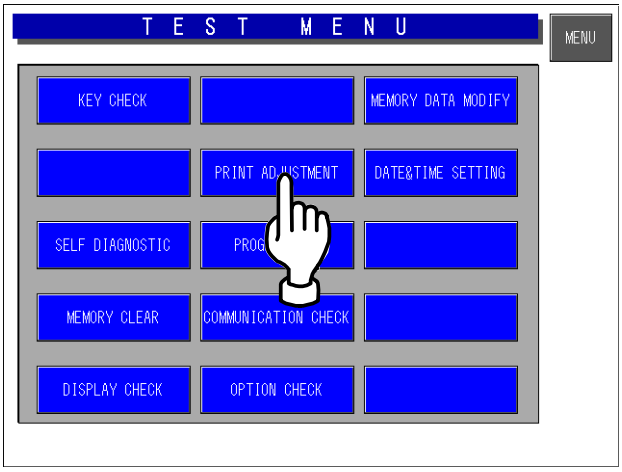
Check brightness of the screen.



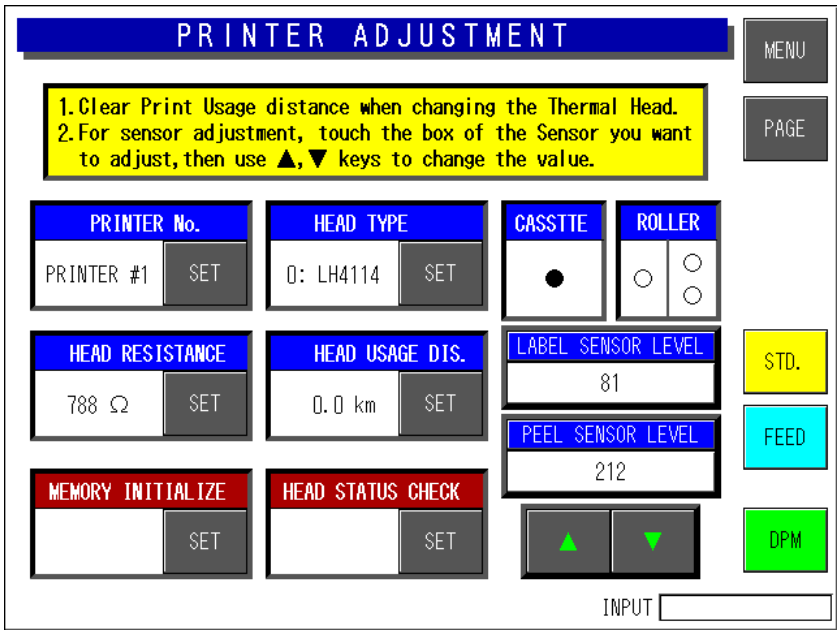
3.6 PRINTER ADJUSTMENT

1. Ensure that the Test Menu screen is displayed.

Then, touch the [PRINTER ADJUSTMENT] button on the screen.

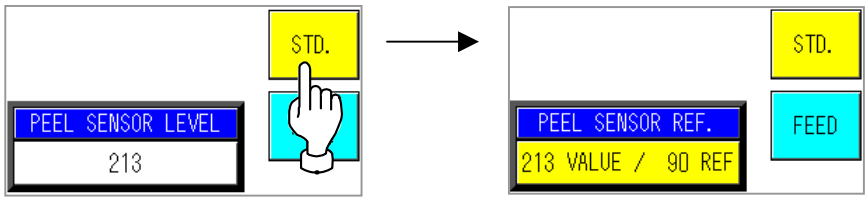


2. The Printer Adjustment screen appears.



PRINTER No.	Printer number: “1” (fixed).
HEAD RESISTANCE	There are two setting methods: <Method 1> Touch the [SET] button to automatically read the thermal head resistance value and store it in the memory of the main body. <Method 2> Touch the [SET] button after a numeric data entry to manually set the resistance value.
HEAD TYPE	Enter “0”, “1” or “2” and touch the [SET] button to select a type of thermal head type being used. 0: LH4114 1: LH4116 2: BHP4312
PRINTER USAGE DISTANCE	Enter a numeric data and touch the [SET] button to set the head usage distance in units of 0.1 km.

MEMORY INITIALIZE	Touch the [EXECUTE] button to initialize the following five settings: ・Automatic setting of head resistance ・Head type (Set it to 0: LH4114.) ・Head usage distance (Set it to “0.0” km.) ・Initialization of the label sensor level ・Initialization of the peel sensor level
HEAD STATUS CHECK	Touch the [EXECUTE] button to check for a head failure. The following causes are assumed when an error is displayed. (1) Thermal head failure (2) Defect of the P-964 board (3) Defect of the harness “C2” thermal head (091-8799-01)
CASSETTE STATUS	At the time of cassette insertion: ● At the time of a cassette drawer: ○
ROLLER	It is not used.
LABEL SENSOR LEVEL	Displays label sensor level. Press this button to finely adjust the label sensor level (display field will change to green) and press the (△▽) adjustment buttons. Press this button again to change the display to white and set adjustment data. The level range is 0-255.
PEEL SENSOR LEVEL	Displays peel sensor level. Touch this button to finely adjust the peel sensor level (display field will change to green) and press the (□□) adjustment buttons. Touch this button again to change the display to white and set adjustment data. The level range is 0-255.
STANDARD	STANDARD button can perform change of the threshold value of peel sensor.



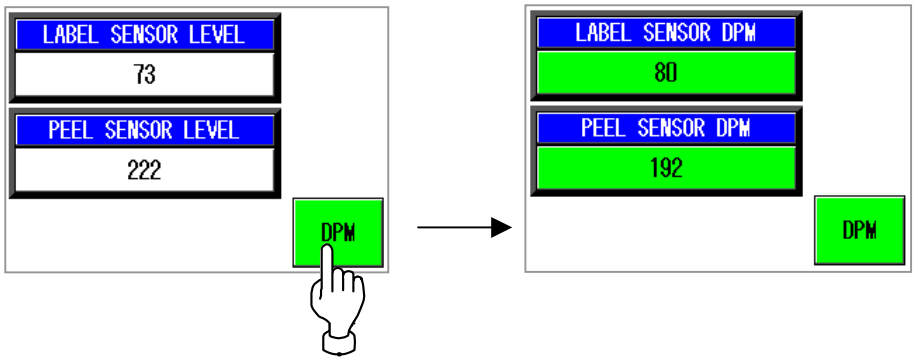
Default: 90

PEEL SENSOR REFERENCE

Peel sensor is threshold Detection mode.

It is judged that the value below threshold has a label.
It is judged that the value exceeding threshold has no label.
Threshold value can be adjusted.

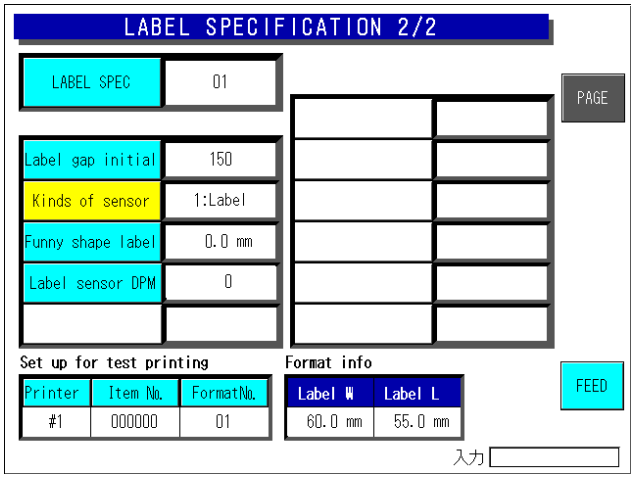
DPM	DIGITAL POTENTIAL METER Digital The position of volume can be checked.



It is a minimum 0 from a maximum 255.
The following figure is a case where it transposed to analog type volume.

The adjustment method of a LABEL SENSOR LEVEL

There is Level Detection mode or Threshold Detection mode in the detection of a label gap.
Adjustment of Level Detection mode can be performed in this test mode.
Adjustment of Threshold Detection mode can be performed in system mode.



System Setting menu – Label Specification 2/2

Level Detection mode:

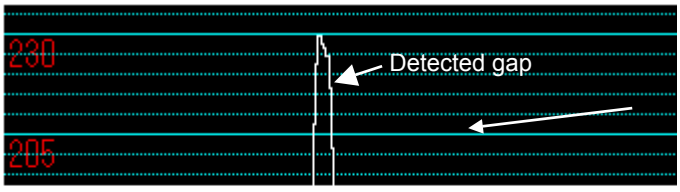
When the value of Label sensor DPM (System Setting menu– Label Specification) is 0, it is the mode of Level Detection.
The label gap is detected when a sensor level is 60 or more.

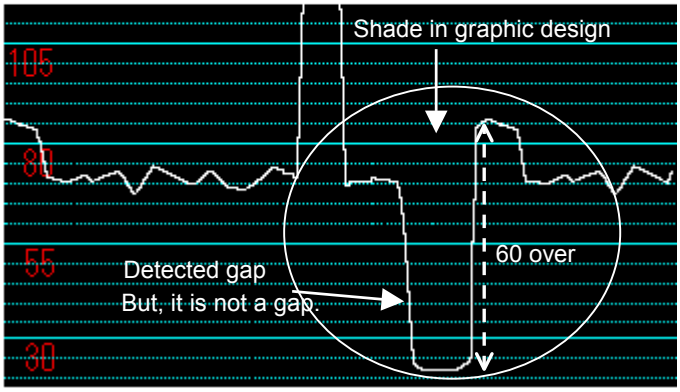
Threshold Detection mode:

When the value of Label sensor DPM (System Setting menu– Label Specification) is 1 or more, it is the mode of Threshold Detection.
The label gap is detected when a sensor level is exceeded threshold.
The value of a threshold is displayed on the "Label gap initial."
And the value can be changed.

The standard label is the mode of Level Detection.

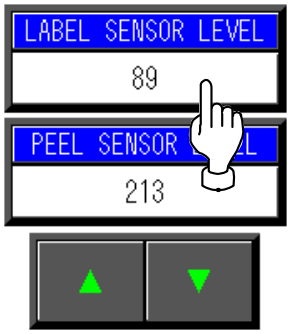
The Label which has shade in graphic design may cause 60 or more output change.
In this case, it is judged as label gap.
In such a case ,Please set it as Threshold Detection mode.



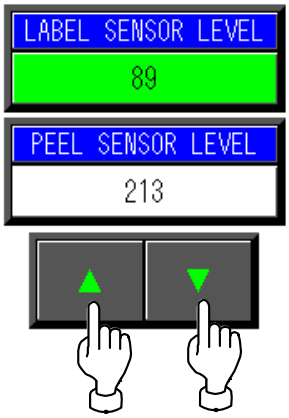


1. The adjustment method of a gain.

Touch the [LABEL SENSOR LEVEL] button.



Display field will change to green.

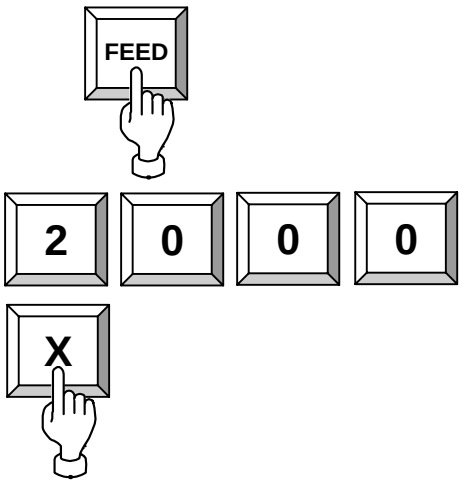


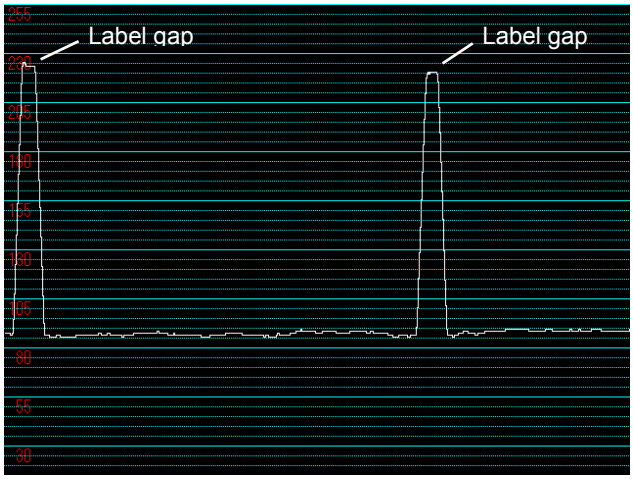
Touch the (△▽) adjustment buttons. Touch this button again to change the display to white and set adjustment data.

2. The check method of a sensor level.

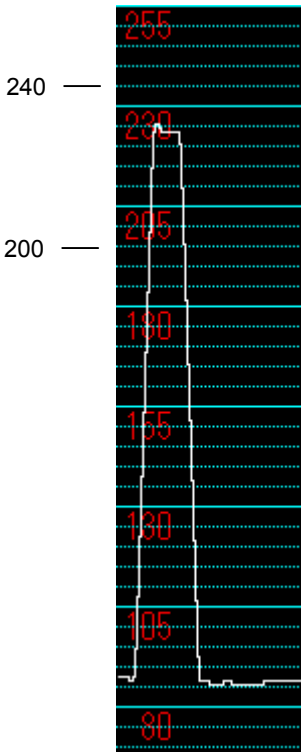
Touch the [FEED] key 2 or 3 times. Then, label comes out.

Enter the 2000 at numeric keys and press the [X] key. Then, graph pops up.

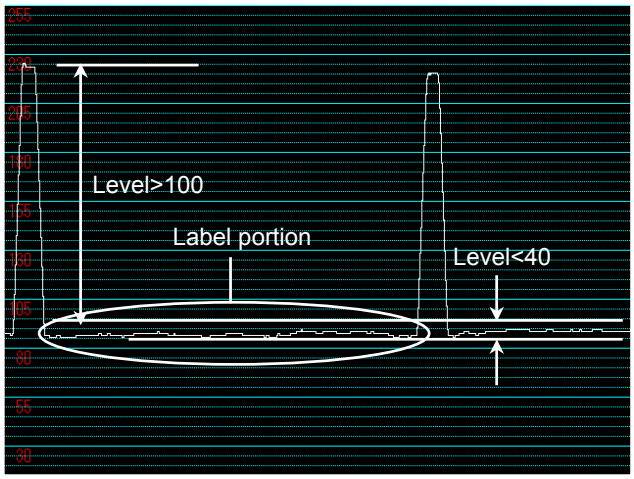




Please adjust the output of label gap to 200 - 240.



Check whether the levels of the label portion are less than about 40 ranges.
Lower the gain, if level is 40 or more.
Then, the level of the gap also becomes small.
Adjustment is completion if the gap level is about 100 or more, between label gap level from label portion level.

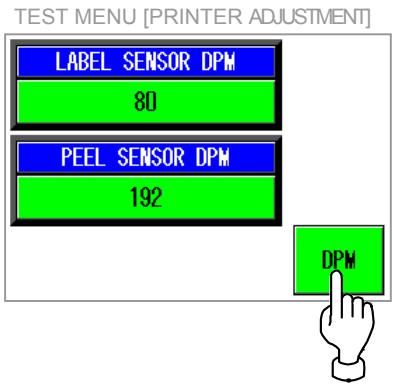


It sets threshold Mode,In not fulfilling the above-mentioned conditions,and case of 60 or more output at Label portion.

Adjustment of Threshold Detection mode can be performed in **system setting mode**.

Adjustment in threshold value detection mode

1. Touch the DPM button by a test mode and see the value of a LABEL SENSOR DPM.

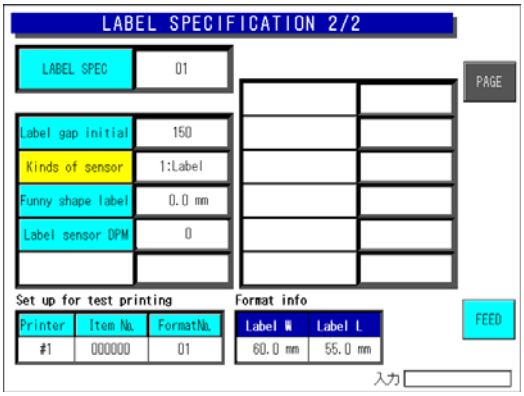


2. Operate the LABEL SPECIFICATION 2/2 of System Setting menu.

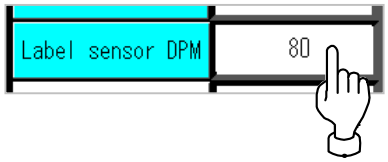
   Touch a button in the following procedure.

   [System Setting menu] -> [LABEL SPEC.] ->

   [9][9][9] -> [PAGE]



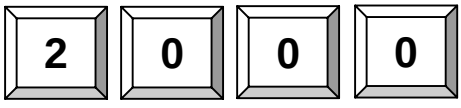
3. Enter the value of [LABEL SENSOR DPM] at numeric keys and touch the [Label sensor DPM] field.

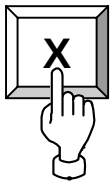


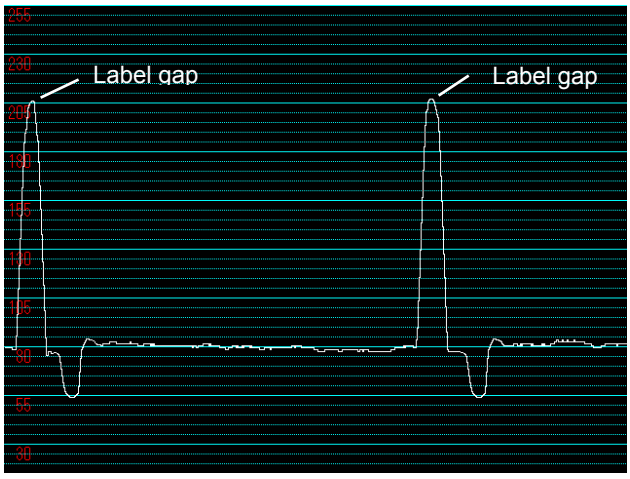
4. Enter the temporary threshold value 120 at numeric keys and touch the [Label sensor DPM] field.

5. Press the [FEED] key 2 or 3 times. Then, label comes out.

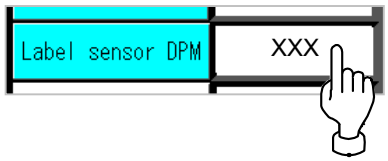
Enter the 2000 at numeric keys and touch the [X] key. Then, graph pops up.



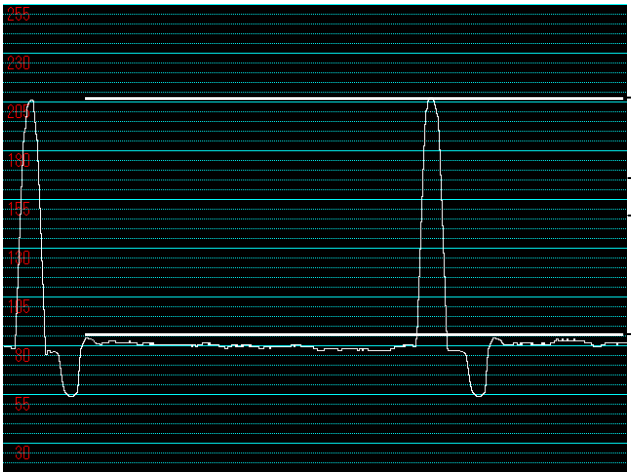


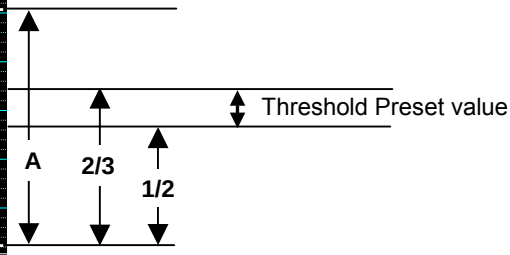


6. By operation of No. 3 and No.5, Please adjust the output of label gap to 200 - 240.



7. By operation of No. 4, Enter the Threshold Preset value at numeric keys, and press the [Label sensor DPM] field.





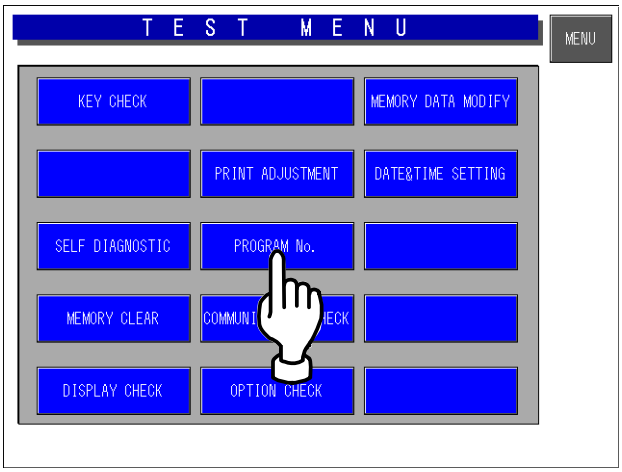
A is the value between label detection part and label gap detection part.
Label detection part is the highest value.
Label gap detection part is the lowest value.

Preset value is between one half of **A**, and 2/3.

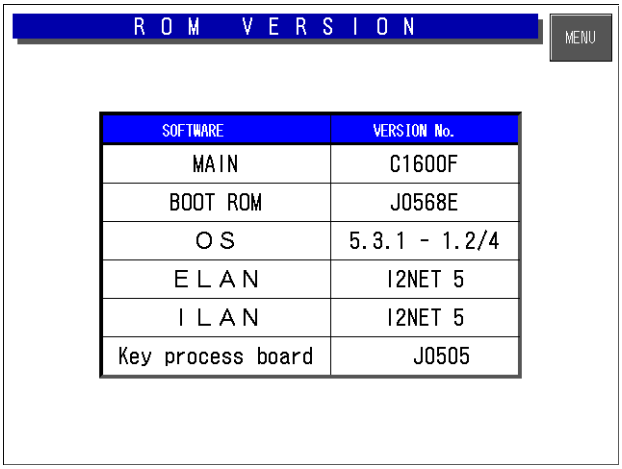
3.7 PROGRAM NUMBER

1. Ensure that the Test Menu screen is displayed.

Then, touch the [PROGRAM No.] button on the screen.



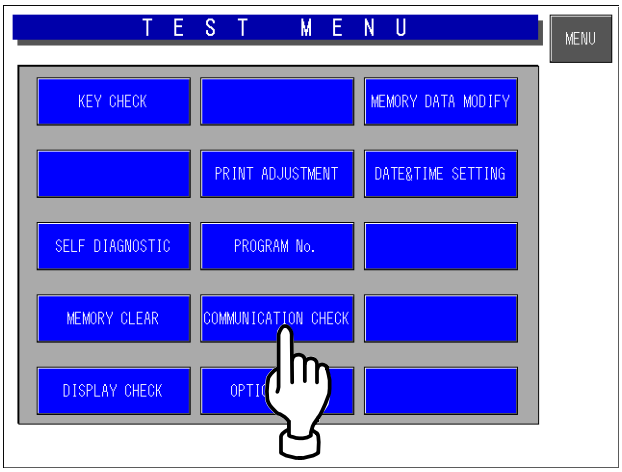
2. Confirm Each software program and the version number.



3.8 COMMUNICATION CHECK

1. Ensure that the Test Menu screen is displayed.

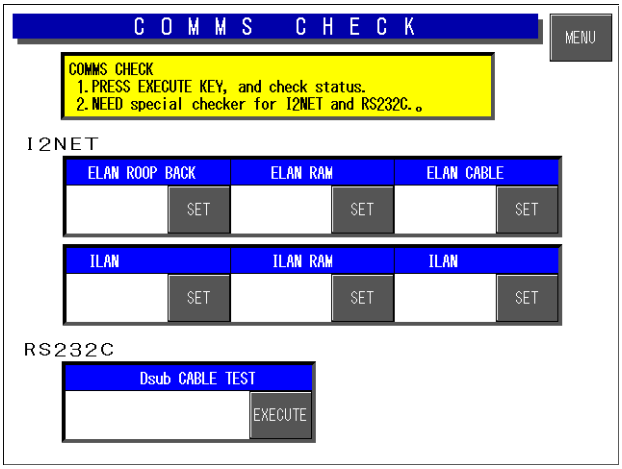
Then, touch the [COMMUNICATION CHECK] button on the screen.



2. The Communication Check screen appears.

Then, touch the [EXECUTE] button on the screen for each item to perform communication check.

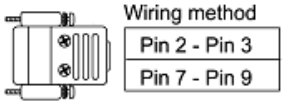
Note that I²NET and RS232C require a special device for testing..



Check Items		Contents	Measures
I²NET	ELAN loop-back test	Driver → Receiver communication test	•Defect of P-910 main board • Defect of P-918 connecter junction
	ELAN RAM test	Communication buffer read/write test	•Defect of P-910 main board
	ELAN cable test *1	Main body → IF-21FD communication test	• The poor cable between IL-EMZ and IF-21FD.
	ILAN loop-back test	Driver → Receiver communication test	•Defect of P-910 main board • Defect of P-918 connecter junction
	ILAN RAM test	Communication buffer read/write test	•Defect of P-910 main board
	ILAN cable test	Main body → IF-21FD communication test	• The poor cable between IL-EMZ and IF-21FD.
RS-232C	D-sub cable test *2	D-sub communication test	•Defect of P-910 main board • Defect of P-918 connecter junction

*1: IF-21FD is required.

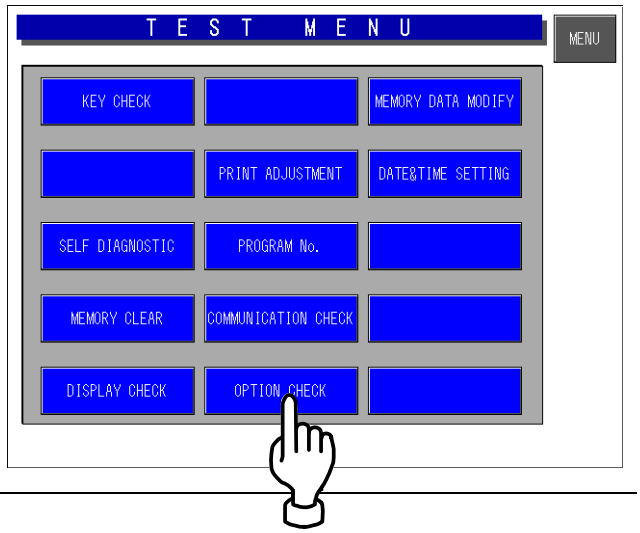
*2: The short-circuited connector is required.



3.9 OPTION CHECK

1. Ensure that the Test Menu screen is displayed.

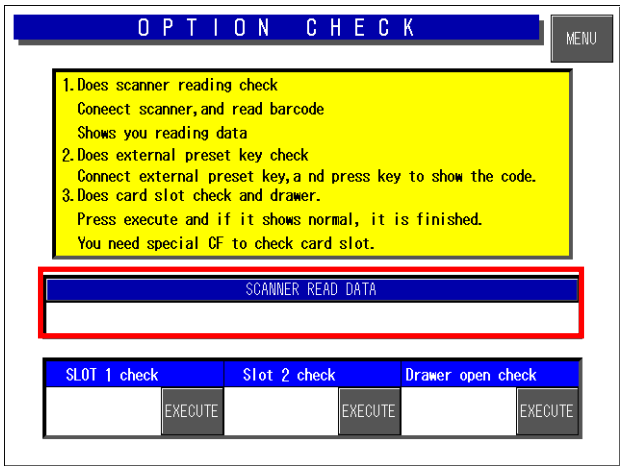
Then, touch the [OPTION CHECK] button on the screen.



2. The Option Check screen appears.

Connect the scanner for reading the barcode.

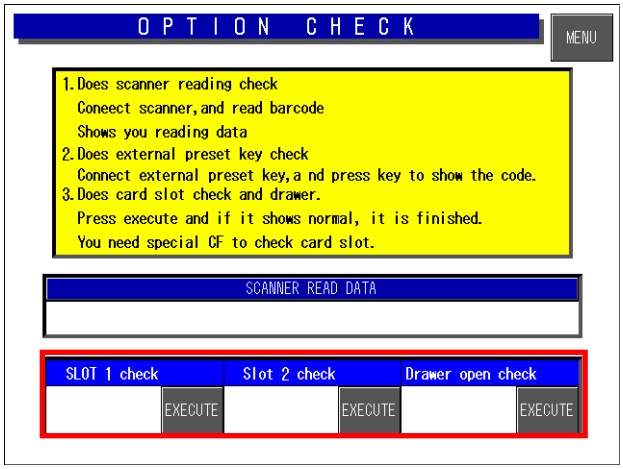
The scanned data is displayed in the “Scanner Read Data” field..



3. **<Slot 1 Check>**
Insert a CF card into the slot 1, and touch the [EXECUTE] button on the screen.

<Slot 2 Check>
Insert a CF card into the slot 2, and touch the [EXECUTE] button on the screen.

<Drawer Open Check>
Connect a drawer and touch the [EXECUTE] key to open the drawer.

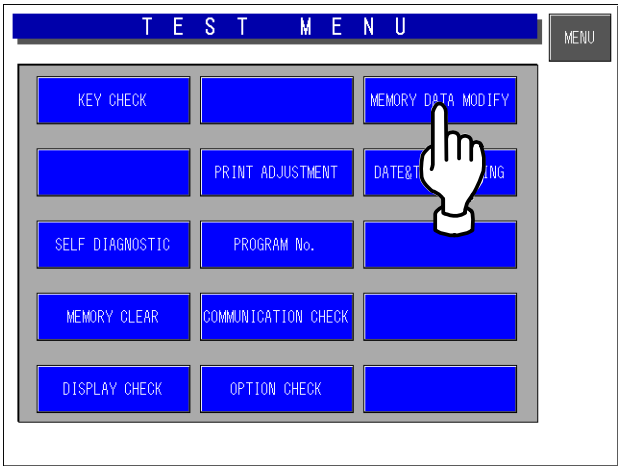


3.10 MEMORY DATA MODIFICATION

CAUTION Do not modify the memory data, or the machine will not operate normally.

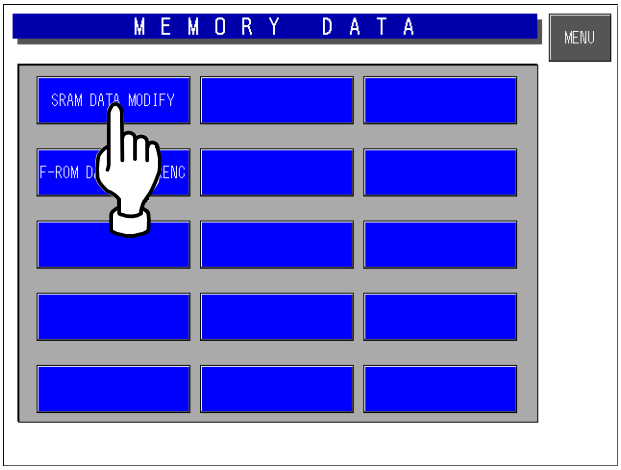
1. Ensure that the Test Menu screen is displayed.

Then, touch the [MEMORY DATA MODIFY] button on the screen.

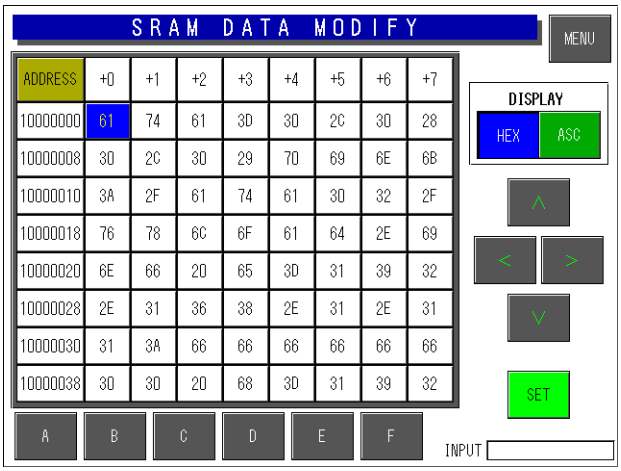


2. The Memory Data screen appears.

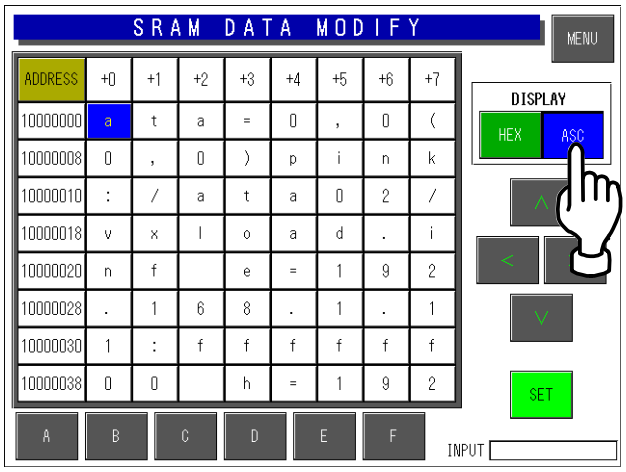
Touch the [SRAM DATA MODIFY] button to confirm SRAM data.



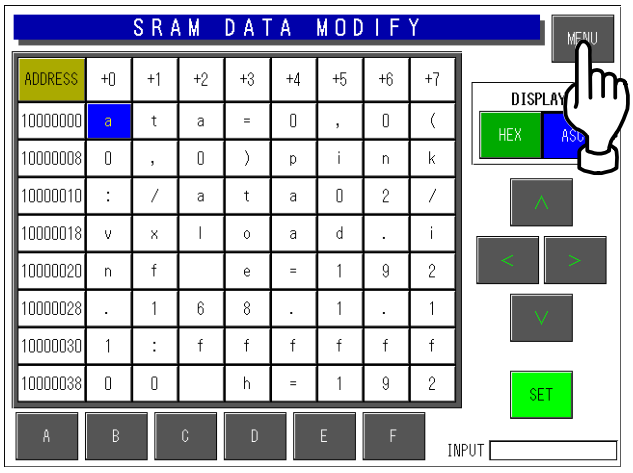
3. The HEX data appears on the SRAM Data Modify screen.



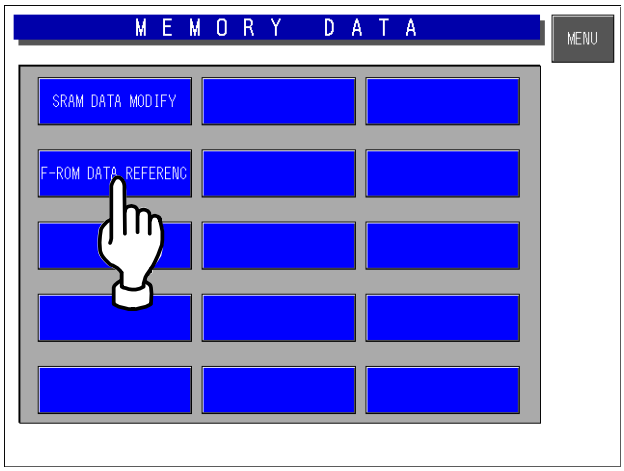
4. Touch the [ASC] button on the screen to display ASC data on the SRAM Data Modify screen.



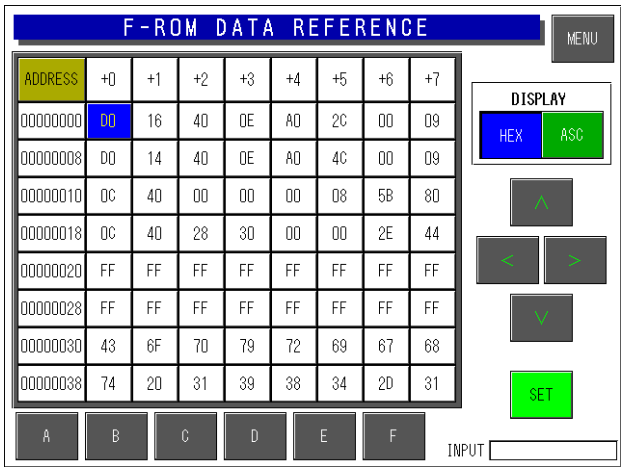
5. Touch the [MENU] button on the screen to return to the Memory Data screen.



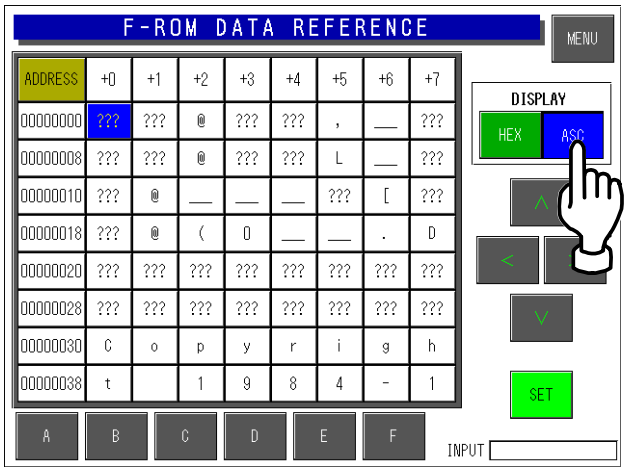
6. Touch the [F-ROM DATA REFERENCE] button to confirm F-ROM data.



7. The HEX data appears on the F-ROM Data Reference screen.



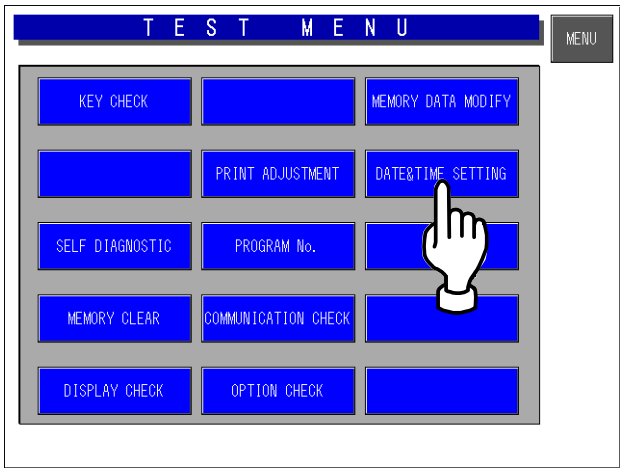
8. Touch the [ASC] button on the screen to display ASC data on the F-ROM Data Reference screen.



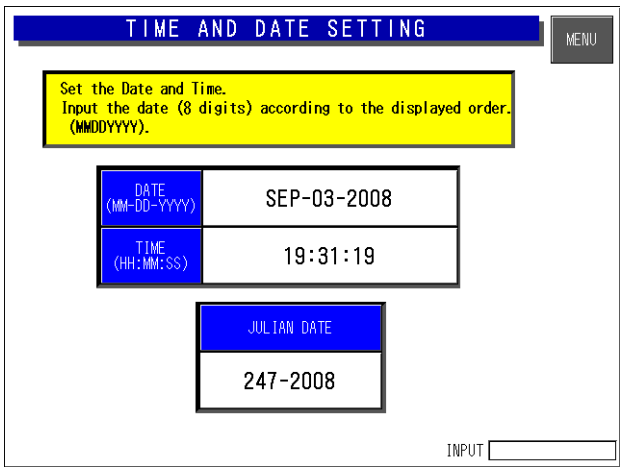
3.11 TIME AND DATE SETTING

1. Ensure that the Test Menu screen is displayed.

Then, touch the [TIME&DATE SETTING] button on the screen.

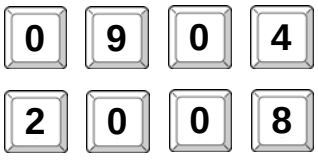


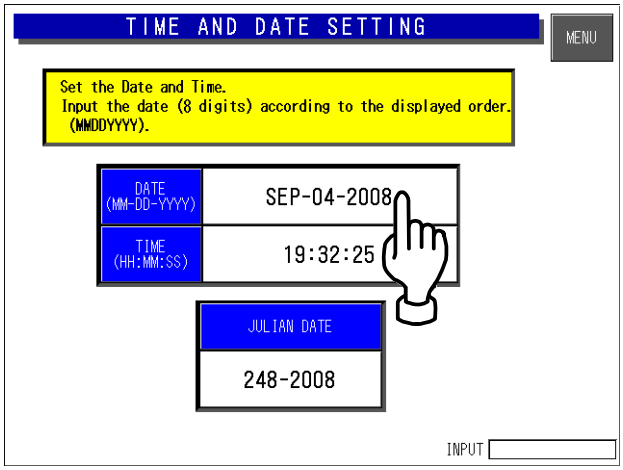
2. The Time And Date Setting screen appears.



3. To change the date, enter the current date using numeric keys on the operation panel and touch the “DATE” field.

EXAMPLE “SEP 05 2008”

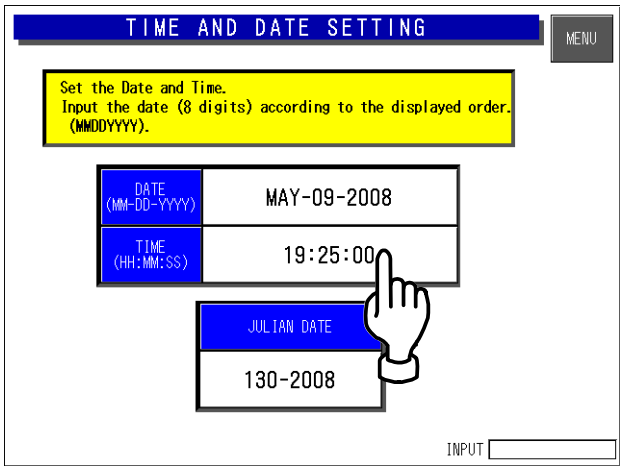




4 To change the time, enter the current time using numeric keys on the operation panel and touch the “TIME” field.

EXAMPLE “19:25:00”

1 9 2 5 0 0



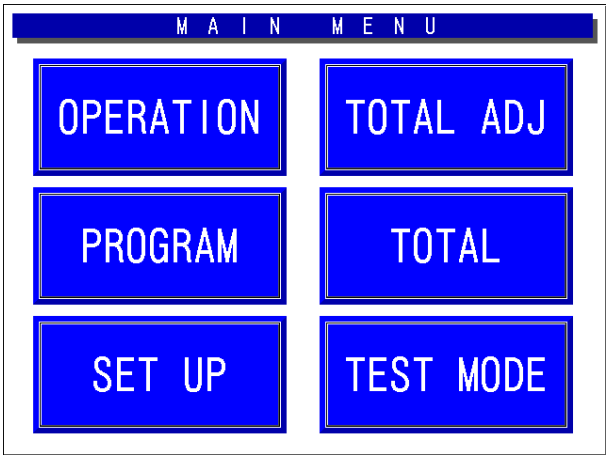
memo

4 SYSTEM MODE

Contents

4.1 ENTERING SYSTEM SETTING MENU

1. Ensure that the Main Menu screen is displayed.



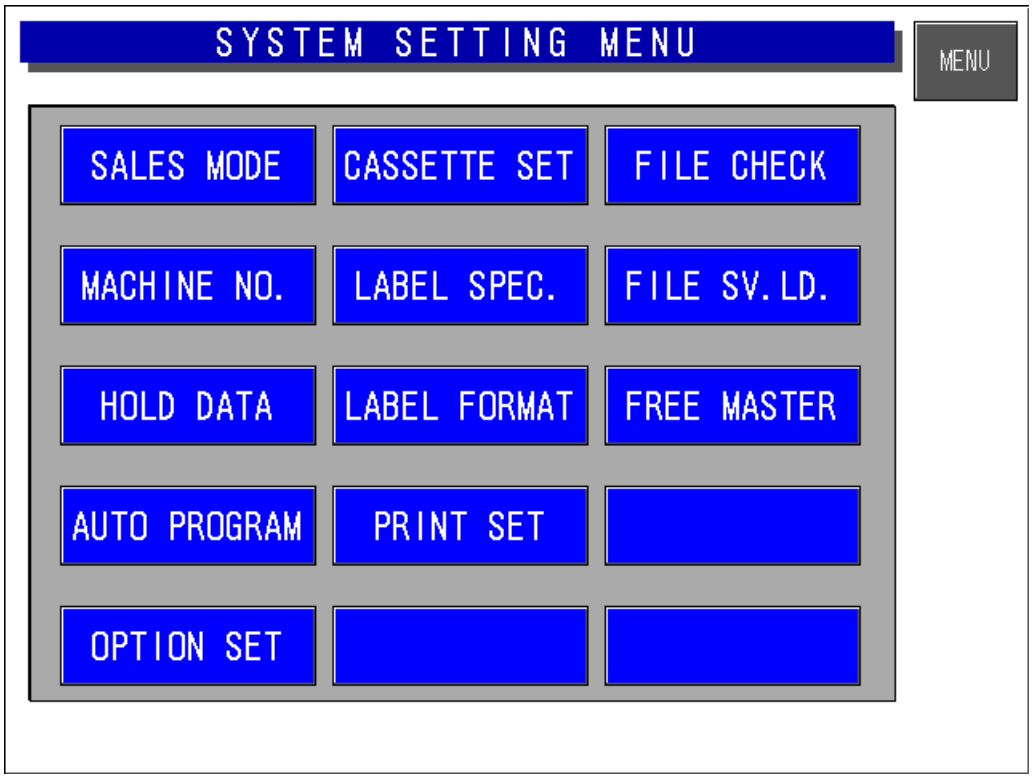
3

2. To enter System Setting Men, enter [4][9][5][3][4][4] and press the [PLU] key on the operating console.

4 9 5 3 4 4

➔ PLU

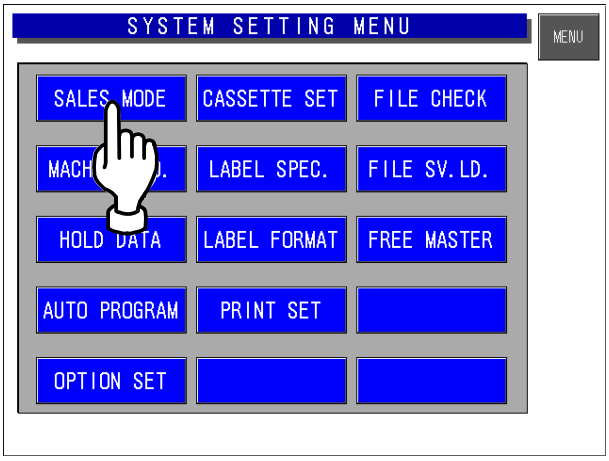
3. The System Setting Menu screen appears.



4.2 SALES MODE SETTING

1. Ensure that the System Setting Menu screen is displayed.

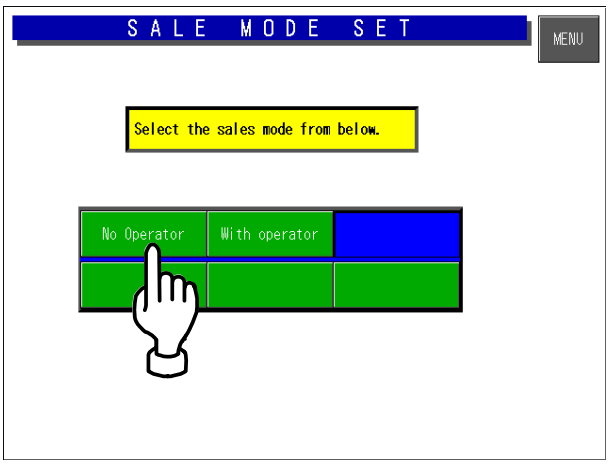
Then, touch the [SALES MODE] button on the screen.



2. The Sales Mode Setting screen appears.

Touch to select whether or not to use an operator system.

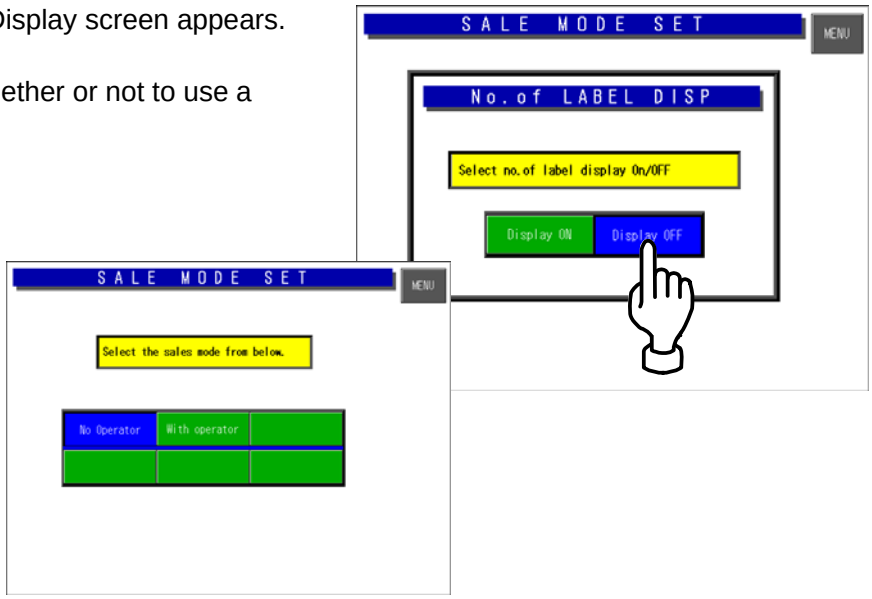
When program was exchanged, Neither is select.
Follow a message in a setup at this case.



[With operator]:
When operator analysis is conducted at total.
It is necessary to make a operators button.

3. The No. of Label Display screen appears.

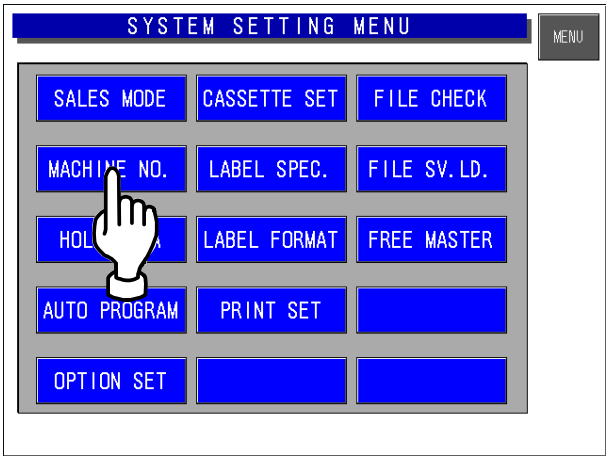
Touch to select whether or not to use a label display.



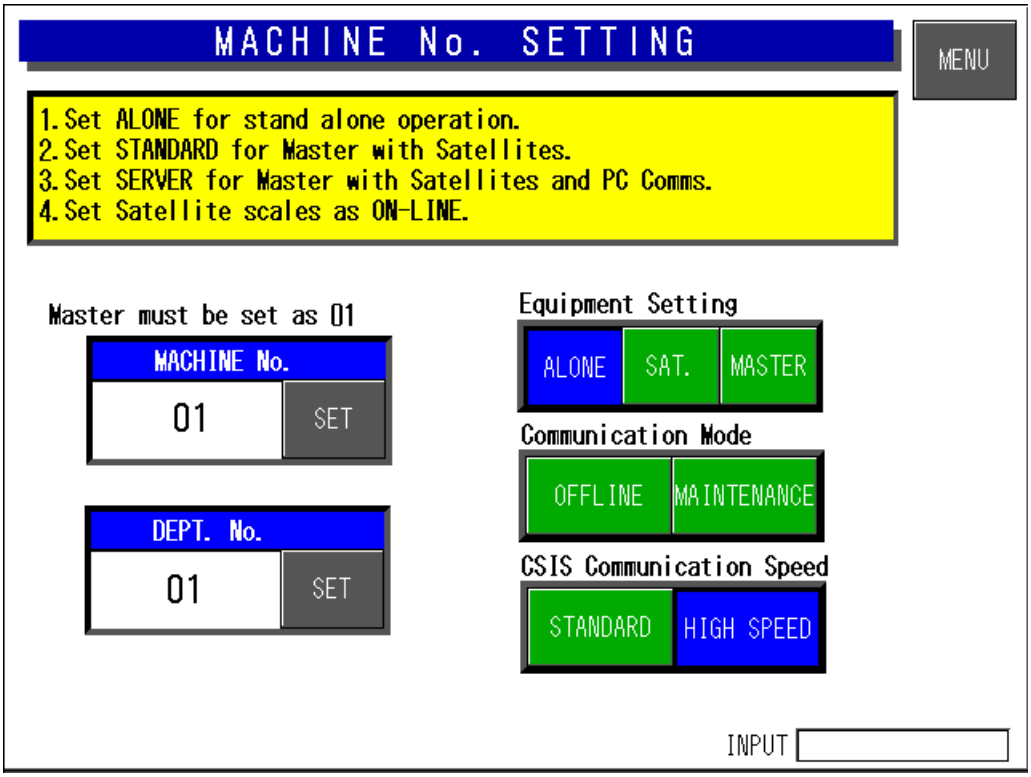
4.3 MACHINE NUMBER SETTING

1. Ensure that the System Setting Menu screen is displayed.

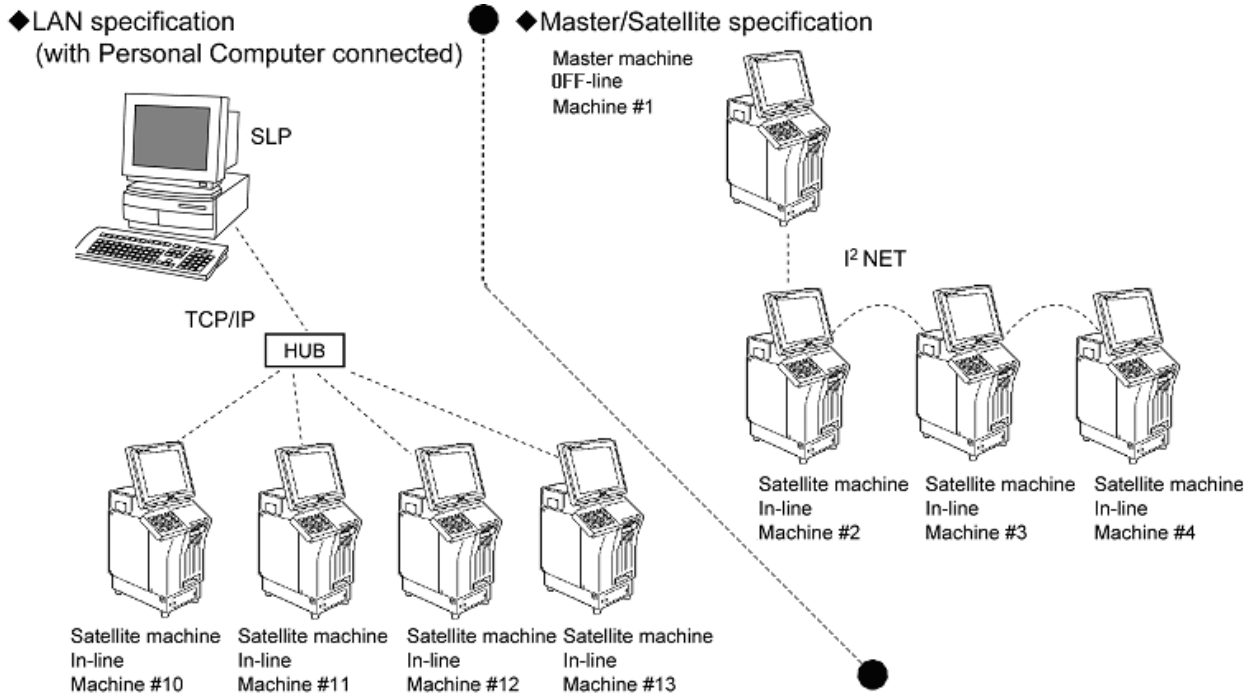
Then, touch the [MACHINE No.] button on the screen.



2. The Machine Number Setting screen appears.



MACHINE NO.	Enter a machine number and touch the [SET] button.
DEPARTMENT NO.	Enter a department number and touch the [SET] button.
EQUIPMENT SETTING	Touch to select one among following three types: •Standalone machine •Satellite machine •Master machine
COMMUNICATION MODE	Touch to select either “Offline” or “Online”.
CSIS COMMUNICATION SPEED	Touch to select either “Standard-speed” or “High-speed”.

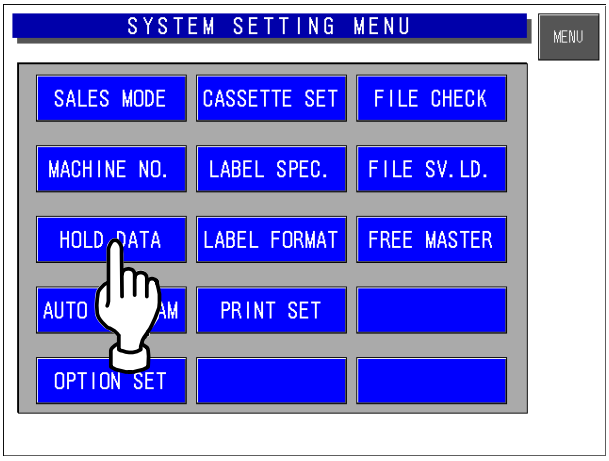

◆LAN specification
(with Personal Computer connected)
SLP
TCP/IP
HUB
Satellite machine
In-line
Machine #10
Satellite machine
In-line
Machine #11
Satellite machine
In-line
Machine #12
Satellite machine
In-line
Machine #13
◆Master/Satellite specification
Master machine
OFF-line
Machine #1
I² NET
Satellite machine
In-line
Machine #2
Satellite machine
In-line
Machine #3
Satellite machine
In-line
Machine #4

4.4 HOLD DATA SETTING

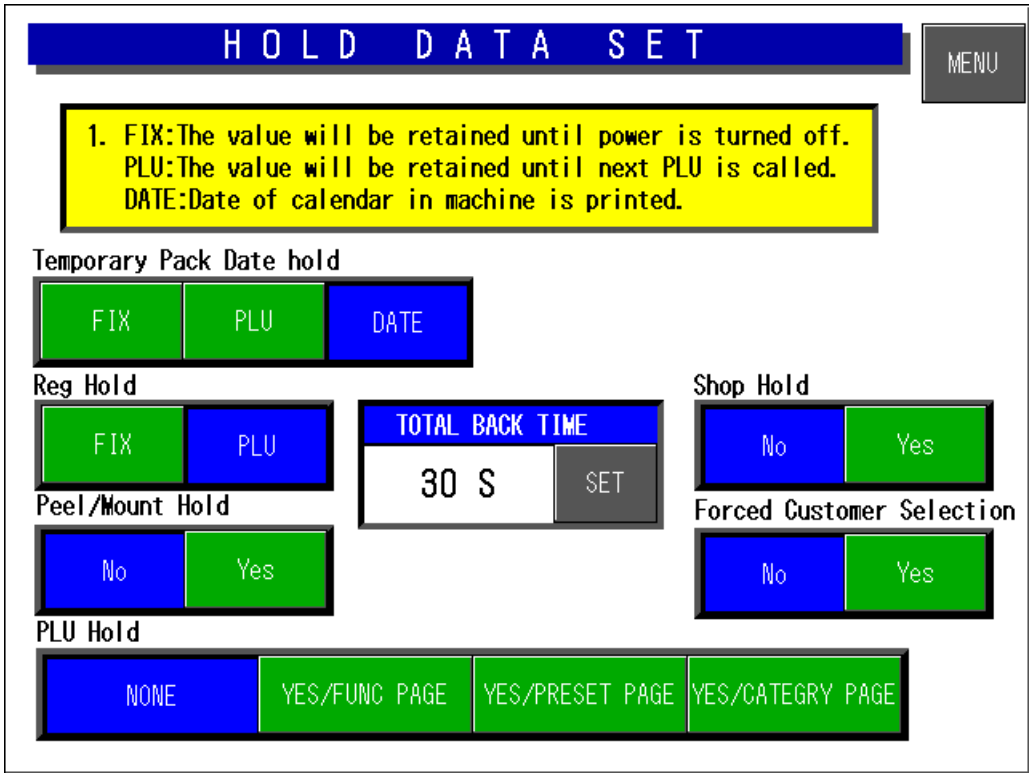
This function is used only for Cash Register application.

1. Ensure that the System Setting Menu screen is displayed.

Then, touch the [HOLD DATA] button on the screen.



2. The Hold Data Setting screen appears.

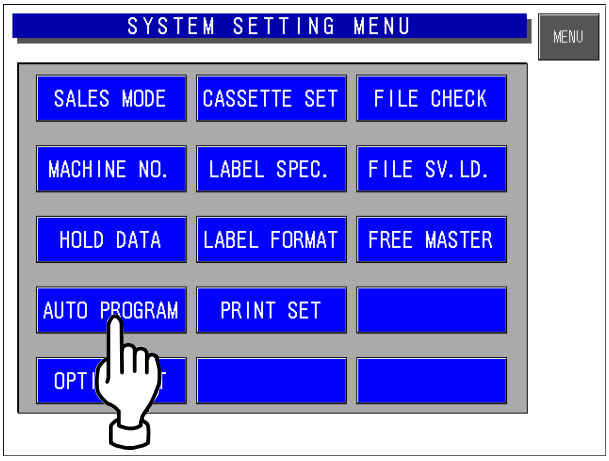


TEMPORARY PACK DATE HOLD	Touch to select one among following three items: **[FIX]** The value will be kept until the power is turned off. **[PLU]** The value will be kept until the next PLU is called. **[DATE]** The calendar date in the machine of real time will be printed.
REG HOLD	Touch to select either “FIX” or “PLU”. **[fix]** Fixes until it cuts a power supply to the value which inputted the register code. **[PLU]** The register code registered into PUL is applied.
PEEL/MOUNT HOLD	Touch to select either “YES” or “NO”. **[No]** Label issuing condition either peeled off or with backing paper is not hold. **[Yes]** Label issuing condition either peeled off or with backing paper is hold.
PLU HOLD	Touch to select either “YES/---” or “NONE”. **[None]** The PLU name is not hold after the print ends. **[Yes/----]** The PLU name is hold for the called PLU after the print ends.
SHOP HOLD	Touch to select either “YES” or “NO”. **[No]** The Shop name is not hold after the print ends. **[Yes]** The store name changed temporarily is held.
FORCED CUSTOMER SELECTION	Touch to select either “YES” or “NO”. **[No]** A customer data entry is not forced. **[Yes]** A customer data entry is forced.
TOTAL BACK TIME	Enter the timeout period for changing from the subtotal screen to the normal screen and touch the [SET] button.

4.5 AUTO PROGRAM SETTING

1. Ensure that the System Setting Menu screen is displayed.

Then, touch the [AUTO PROGRAM] button on the screen.



2. The Auto PLU Update screen appears.

Then, touch to select either “YES” or “NO” for each item.

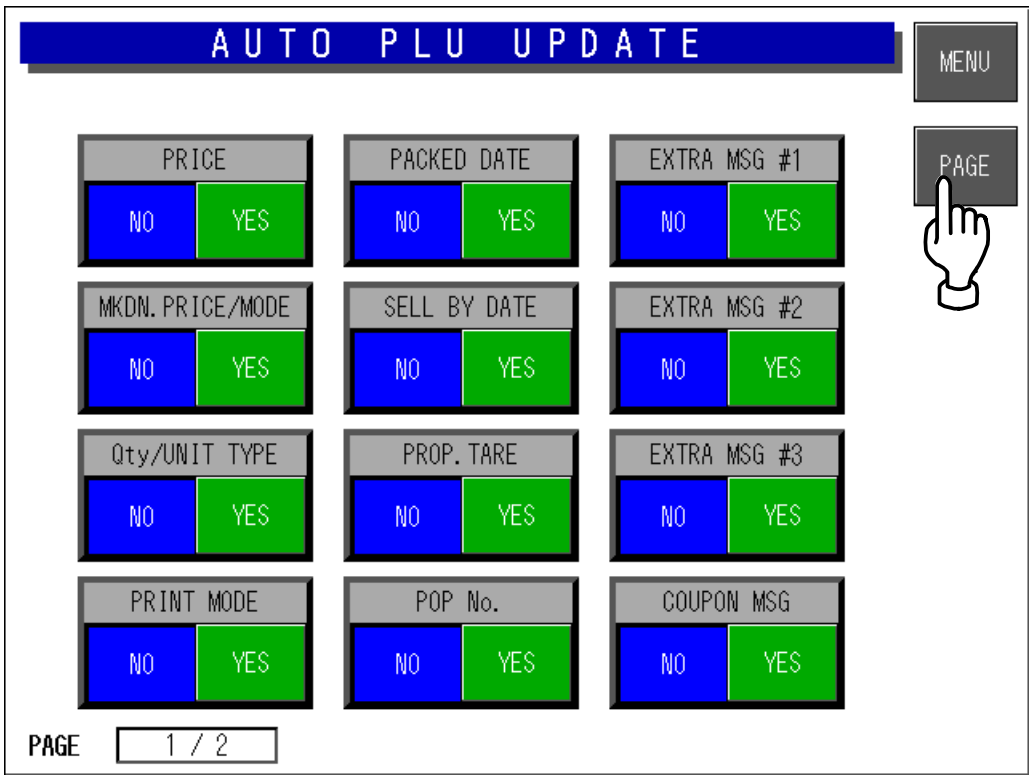
[No]

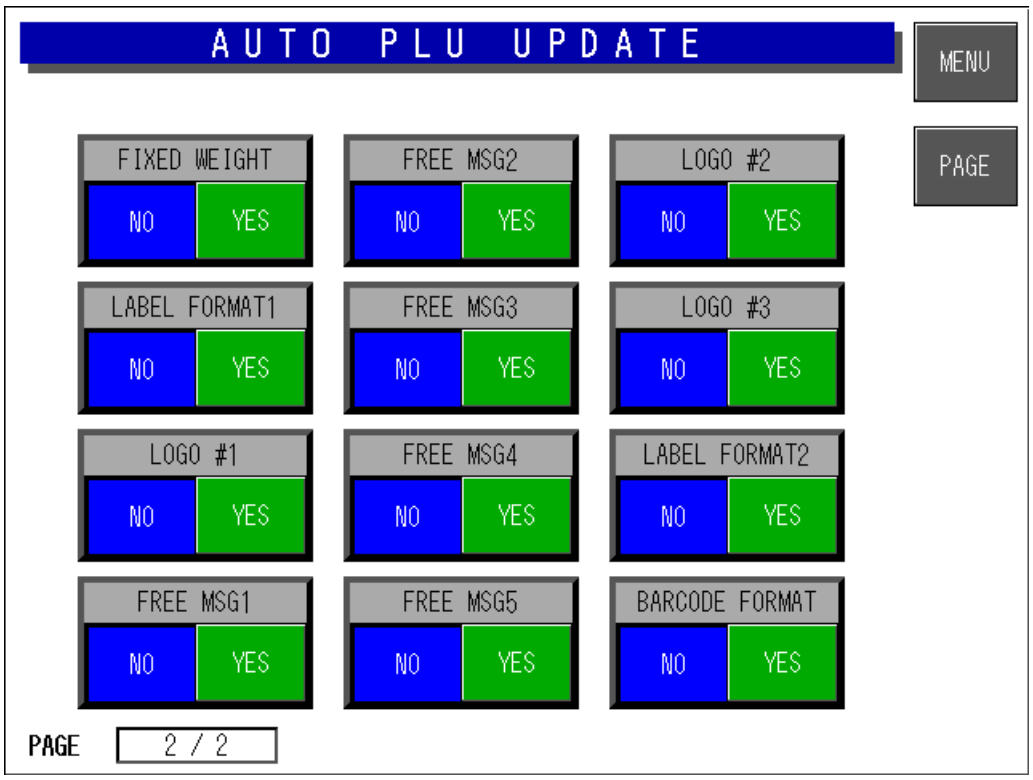
The data which is temporarily changed in the operation mode is not reflected in the PLU master.

[Yes]

The PLU master is updated automatically with the data temporarily changed in the operation mode.

Note: *When the RAM is cleared, everything is set to "No".*

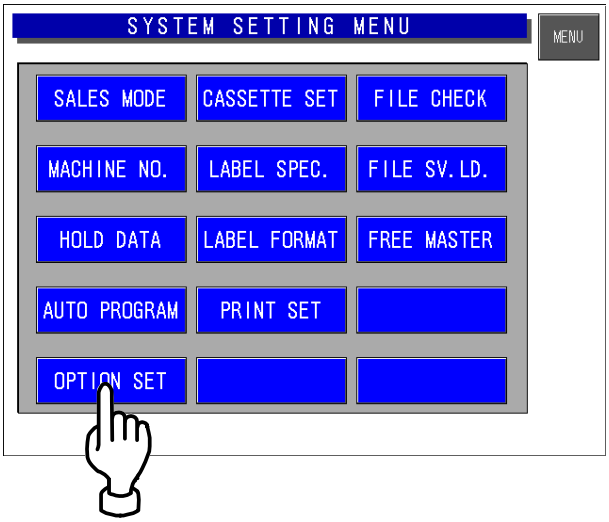



AUTO PLU UPDATE
MENU
PAGE
FIXED WEIGHT
NO
YES
FREE MSG2
NO
YES
LOGO #2
NO
YES
LABEL FORMAT1
NO
YES
FREE MSG3
NO
YES
LOGO #3
NO
YES
LOGO #1
NO
YES
FREE MSG4
NO
YES
LABEL FORMAT2
NO
YES
FREE MSG1
NO
YES
FREE MSG5
NO
YES
BARCODE FORMAT
NO
YES
PAGE
2 / 2

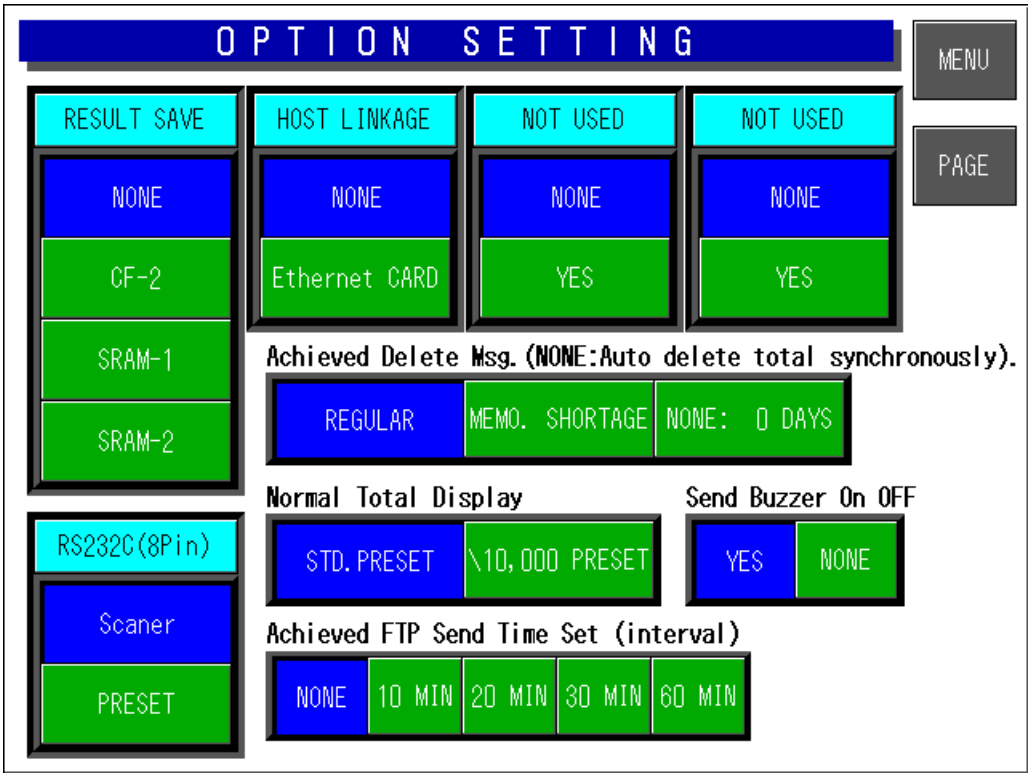
4.6 OPTION SETTING

1. Ensure that the System Setting Menu screen is displayed.

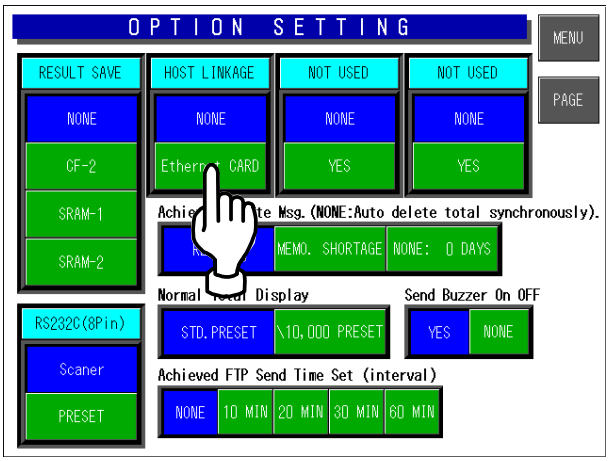
Then, touch the [OPTION SET] button on the screen.



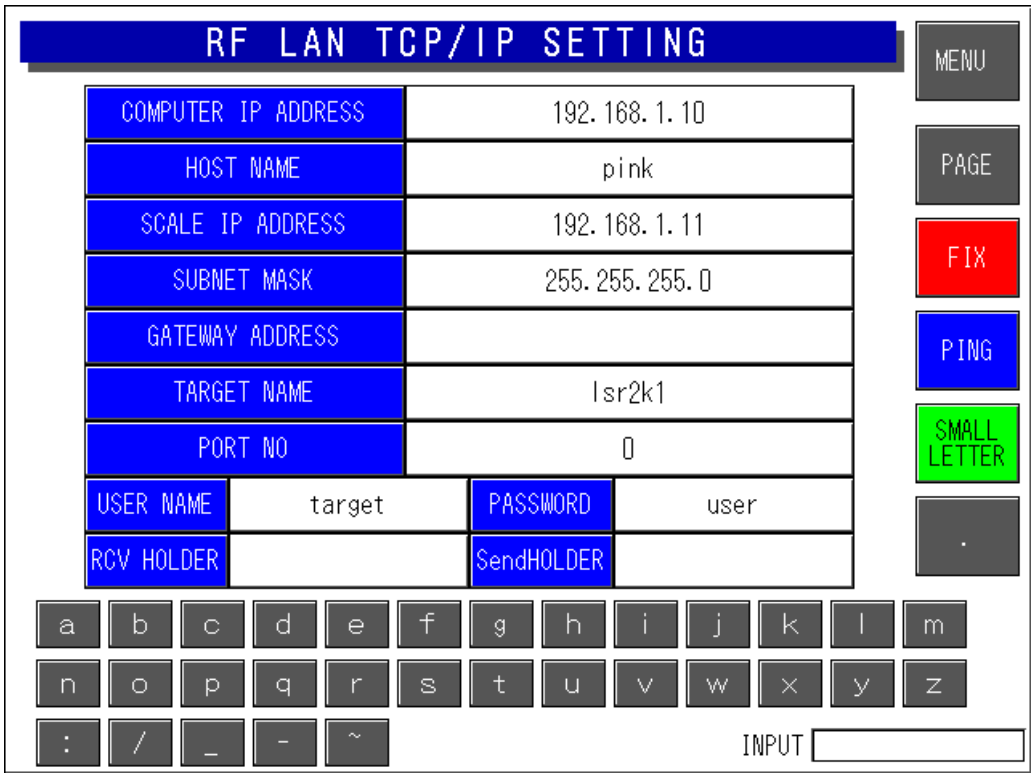
2. The Option Setting screen appears.
Then, touch to select a desired field for each item on the screen.



3. To make LAN TCP/IP settings, touch to select “Ethernet Card” on the screen.



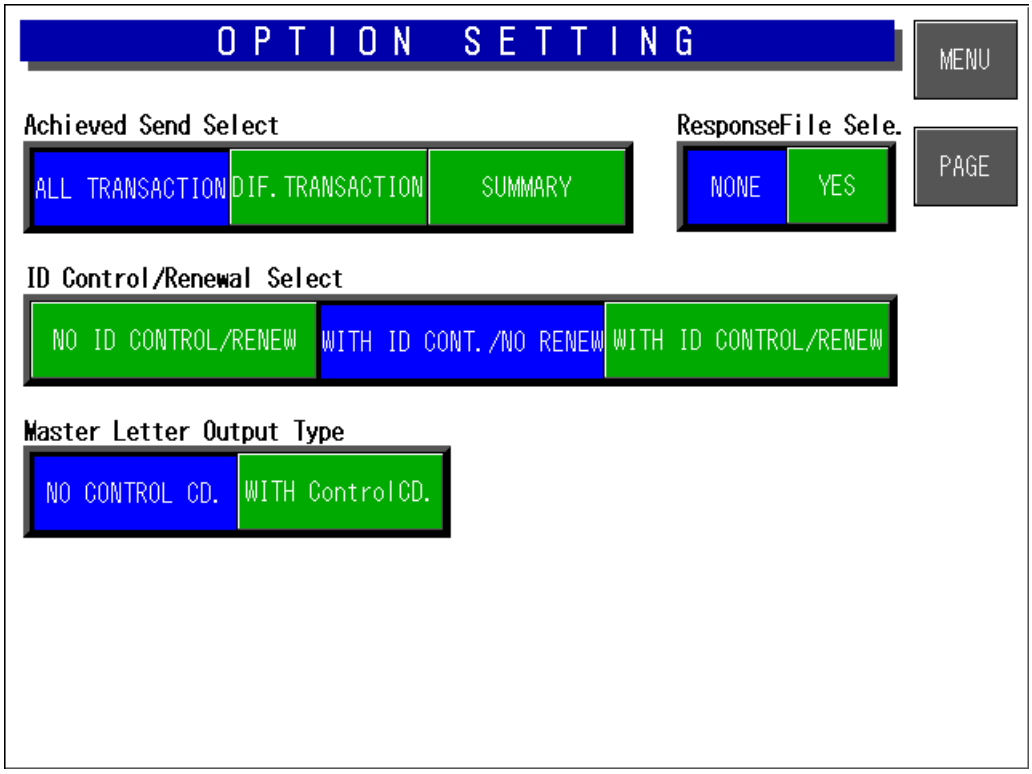
4. The RF LAN TCP/IP setting screen appears.
Then, perform settings on this screen.



FIX	Displays the confirmation screen. Touch the [EXECUTE] button on the confirmation screen The machine is automatically turned OFF, and turned ON again to apply parameter table settings.
PING	Touch to execute a communication test with the host computer.
LOWER LETTER/ UPPER LETTER	Touch to select upper or lower case letters for character entry.
Character buttons (A, B, C, etc.)	Touch to enter characters for setup values.
INPUT	Displays the data input from the numeric keys and/or the character buttons. A total of 15 digits can be displayed. If 15 digits are exceeded, the first characters will be lost.

Parameter Table	Enter new data using the character buttons and/or numerical keys when changing the parameters. Delete a parameter by pressing the corresponding field on the screen without numeric entry to display the confirmation screen and touch the [EXECUTE] button on the confirmation screen.
EXECUTE	Execute processing.
CANCEL	Cancels execution.

5. To turn the page, touch the [PAGE] button on the screen.
Then, touch to select a desired field for each item on the screen.

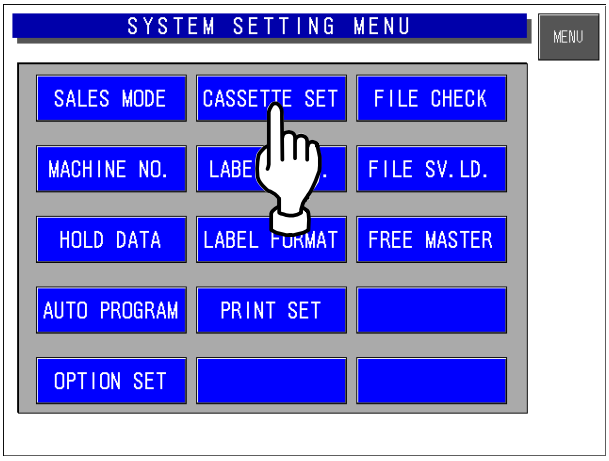


4.7 CASSETTE SETTING

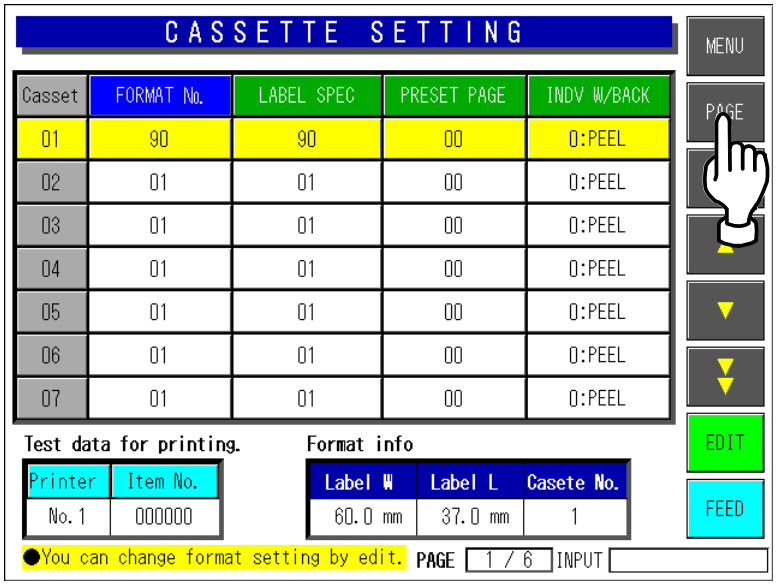
Up to 7 cassettes (1-7) are available with this machine..

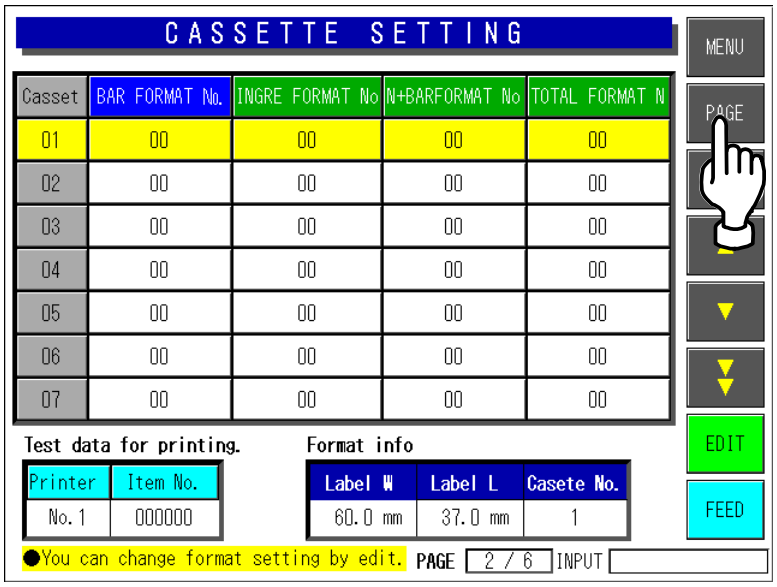
1. Ensure that the System Setting Menu screen is displayed.

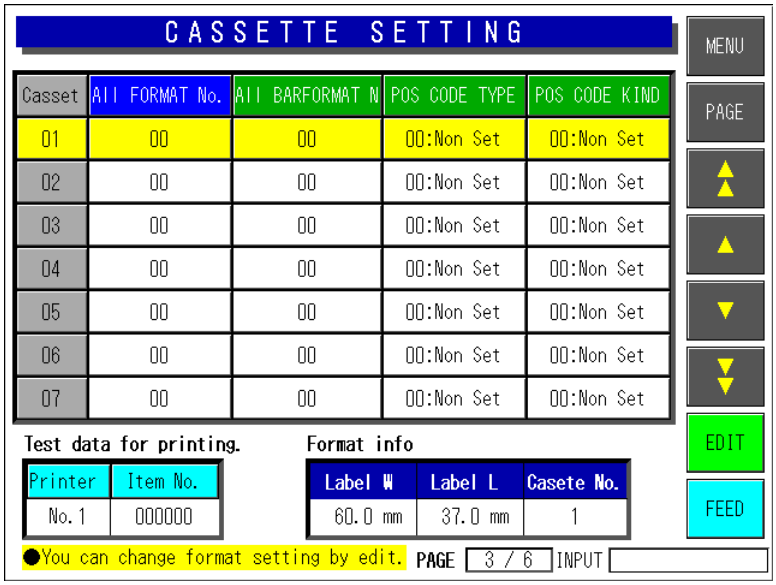
Then, touch the [CASSETTE SET] button on the screen.

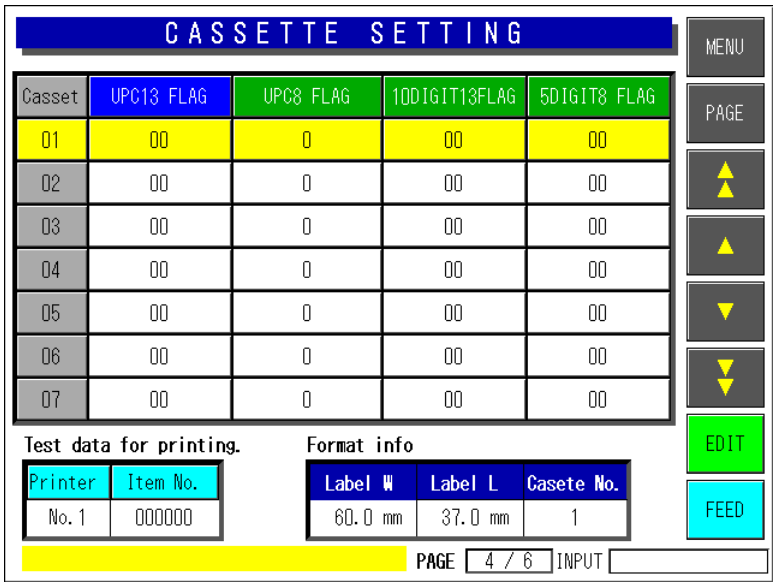


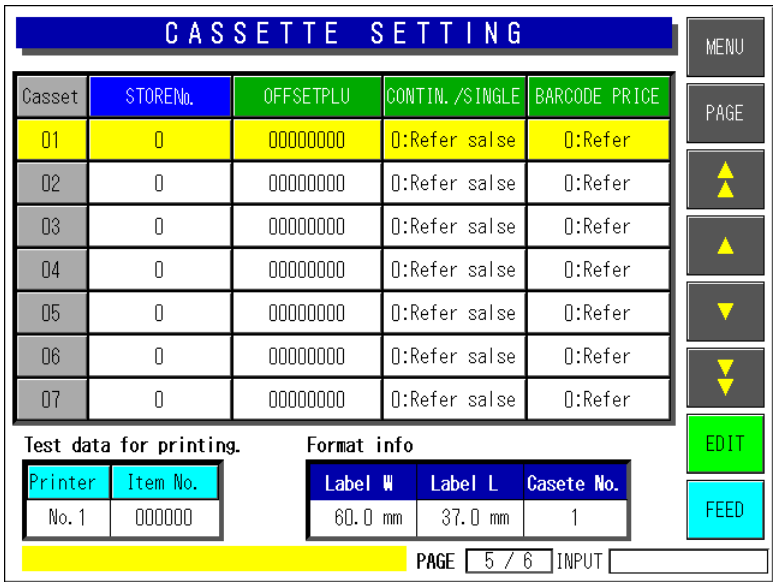
2. The Cassette Setting screen appears.

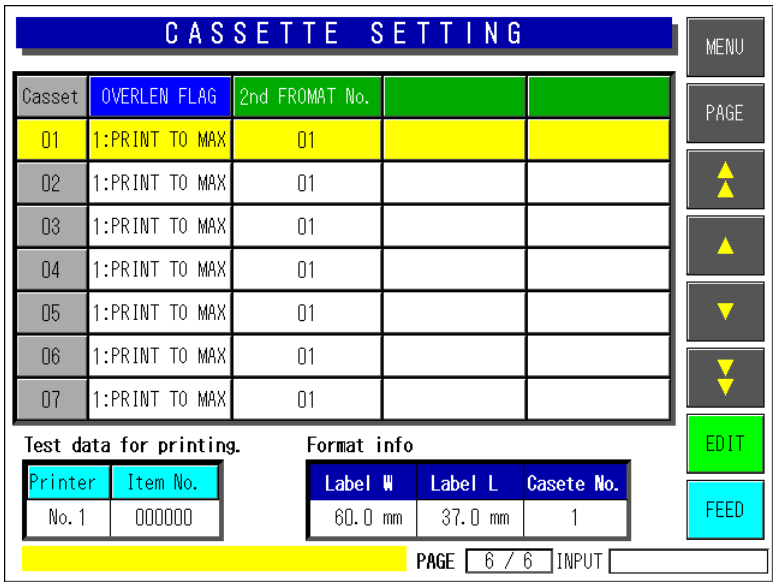





CASSETTE SETTING
MENU
PAGE
EDIT
FEED
Casset
All FORMAT No.
All BARFORMAT N
POS CODE TYPE
POS CODE KIND
01 00 00 00:Non Set 00:Non Set
02 00 00 00:Non Set 00:Non Set
03 00 00 00:Non Set 00:Non Set
04 00 00 00:Non Set 00:Non Set
05 00 00 00:Non Set 00:Non Set
06 00 00 00:Non Set 00:Non Set
07 00 00 00:Non Set 00:Non Set
Test data for printing.
Printer
Item No.
No.1 000000
Format info
Label W
Label L
Casete No.
60.0 mm 37.0 mm 1
●You can change format setting by edit.
PAGE 3 / 6 INPUT


CASSETTE SETTING
MENU
PAGE
EDIT
FEED
Casset
UPC13 FLAG
UPC8 FLAG
10DIGIT13FLAG
5DIGIT8 FLAG
01 00 0 00 00
02 00 0 00 00
03 00 0 00 00
04 00 0 00 00
05 00 0 00 00
06 00 0 00 00
07 00 0 00 00
Test data for printing.
Printer
Item No.
No.1 000000
Format info
Label W
Label L
Casete No.
60.0 mm 37.0 mm 1
PAGE 4 / 6 INPUT


CASSETTE SETTING
MENU
PAGE
EDIT
FEED
Casset
STORENo.
OFFSETPLU
CONTIN./SINGLE
BARCODE PRICE
01 0 00000000 0:Refer salse 0:Refer
02 0 00000000 0:Refer salse 0:Refer
03 0 00000000 0:Refer salse 0:Refer
04 0 00000000 0:Refer salse 0:Refer
05 0 00000000 0:Refer salse 0:Refer
06 0 00000000 0:Refer salse 0:Refer
07 0 00000000 0:Refer salse 0:Refer
Test data for printing.
Printer
Item No.
No.1 000000
Format info
Label W
Label L
Casete No.
60.0 mm 37.0 mm 1
PAGE 5 / 6 INPUT



The cassette of IL-EMZ is being fixed. Therefore, exchange of a cassette cannot be performed.
A Cassette number is 01.

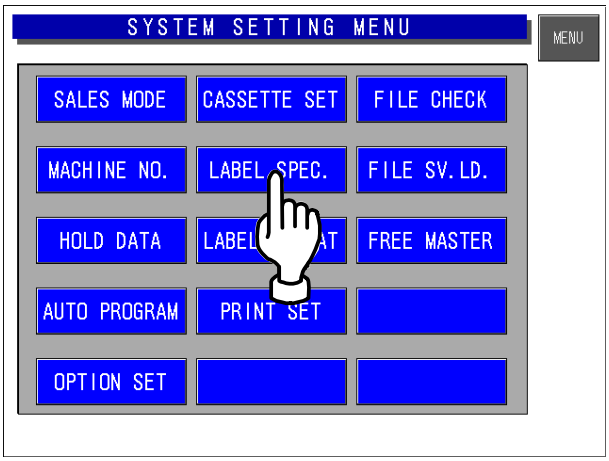
FORMAT NO	Set a label format number.
LABEL SPEC	Set the label specifications.
PRESET PAGE	Set a page number of the default preset key.
INDIVIDUAL/ WITH BACKING PAPER	Touch the field display a Individual/with backing paper screen for selection. 0:peel 1:with/backing
BAR FORMAT No.	Set a barcode format number.
INGRE FORMAT No.	Set an image format number.
N+BARFORMAT No.	Set nutrition and barcode format number.
TOTAL FORMAT No.	Set a total format number.
ALL FORMAT No.	Set an all format number.
ALL BARFORMAT No.	Set an all barcode format number.
POS CODE TYPE	Touch the field display a pos code type screen for selection. 0:non set 1:upc13 2:upc8 3:10 digit 13 4:5 digit 8
POS CODE KIND	Touch the field display a pos code kind screen for selection. 0:non set 1:5digt 2:c/p 6digit 3:f/g 6digit 4:c/p price5digit 5:code6,price5
UPC13 FLAG	Set a UPC13 barcode flag.
UPC8 FRAG	Set a UPC8 barcode flag.
10DIGIT13FLAG	Set a 10digit 13 flag.
5DIGIT8 FLAG	Set a 5digit 8 flag.
STRE No.	Set a store number.
OFFSET PLU	Set an offset PLU number.
CONTIN./SIGNALE	Touch the field display a continue/single screen for selection. 0:refer sales mode 1:single 2:continue
BARCODE PRICE	Touch the field display a barcode price screen for selection. 0:refer 1:price 2:taxprice
OVERLEN FLAG	Touch the field display a print the text over length screen for selection. 0:error and blank 1:print to max
2nd FORMAT No.	Set a 2nd format number.

4.8 LABEL SPEC SETTING

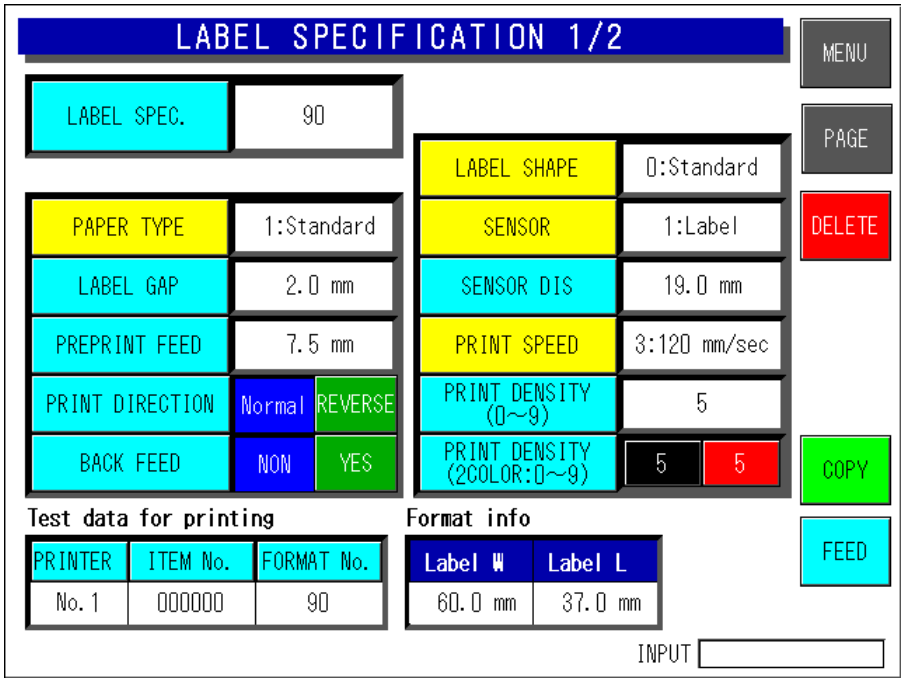
Printing conditions can be set for each label number.

1. Ensure that the System Setting Menu screen is displayed.

Then, touch the [LABEL SPEC] button on the screen.



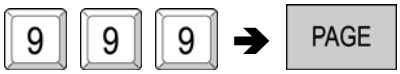
2. The Label Specification screen appears.

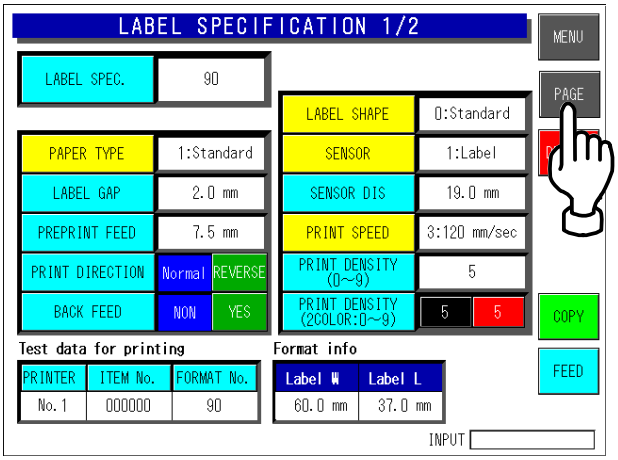


LABEL SPEC.	Enter a desired label number (1-99) and touch this field.
THERMAL PAPER TYPE	Touch to display pop-up screen for selection. 0:Receipt 1:Standard label (monochrome label) 2:Two color label
LABEL GAP	Set the label gap in units of 0.1mm. (Initial value: 2.0 mm)
PREPRINT FEED	Set the amount in units of 0.1mm for the preprint feed. (Initial value: 7.5 mm)
BACK FEED	Always select “NONE”.
LABEL SHAPE	0:Standard (fixed at standard)
LABEL SENSOR	Touch to display pop-up screen for selection. 0:No use 1:Label sensor(default value)

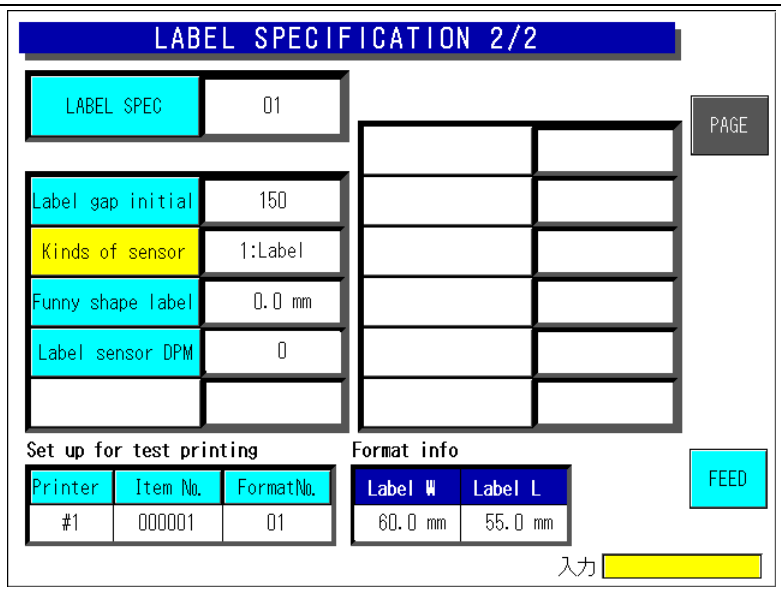
PRINT DIRECTION	 **Normal direction**  **Reverse direction**
SENSOR DISTANCE	Set the print side line to be 7.5 mm from the label bottom.
PRINT SPEED	Touch to display pop-up screen for selection. 1:80 mm/sec 2:100 mm/sec 3:120 mm/sec
PRINT DENSITY (0-9)	Usually, “5” is an optimum density. If the density is too thin, adjust the thermal head position.
PRINT DENSITY (2 COLOR) (0-9)	Two color printing is not available with this machine.
PRINT CHECK TEST DATA SET	Set a printer number. Number 1 is Self-machine. Set an item number for test printing. Set the label format number with which the machine is loaded.
FORMAT INFORMATION	The set information is displayed.

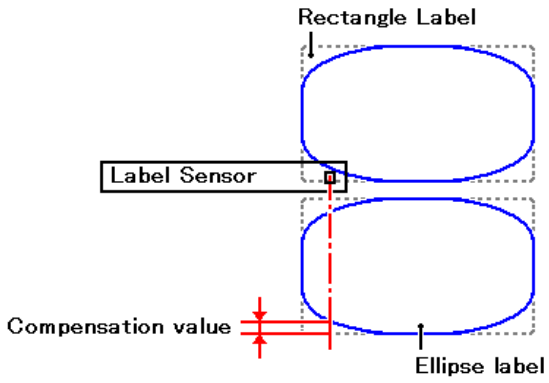
3. To display the next page, enter [9][9][9] using numeric keys on the operation panel and touch the [PAGE] button on the screen.





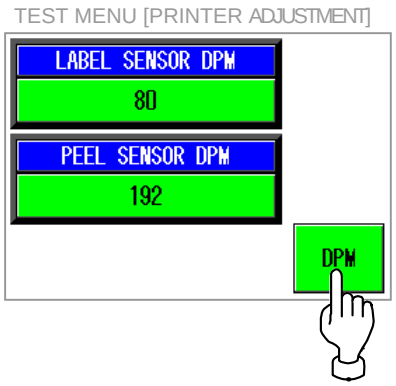
4.



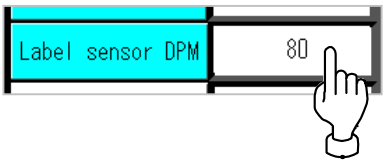
LABEL GAP INITIAL	Threshold of Adjustment of Threshold Detection mode is inputted. Enter the threshold (1-255) at numeric keys and touch this field.
KINDS OF SENSOR	1:Label sensor (fixed) IL-EMZ 0:Non use 3:Peel sensor
FUNNY SHAPE LABEL	Input, when you use an ellipse label. Measure the compensation value of the position through which a sensor passes, and enter the numerical value. 
LABEL SENSOR DPM	When a gain is 0, it is Level Detection mode. When detection by Level Detection mode is difficult, Threshold Detection mode is applied. REFERENCE Refer to [PRINTER ADJUSTMENT] of “TEST MENU”. When a gain is 1-255, it is Threshold Detection mode. Touch the DPM button by a test mode and see the value of a LABEL SENSOR DPM. And enter the value.

The adjustment “Label gap initial” (Threshold)

1. Touch the DPM button by a test mode and see the value of a LABEL SENSOR DPM.



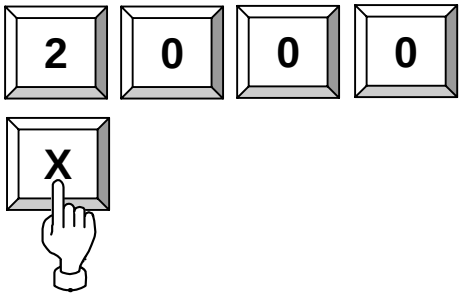
2. Enter the value of [LABEL SENSOR DPM] at numeric keys and touch the [Label sensor DPM] field.

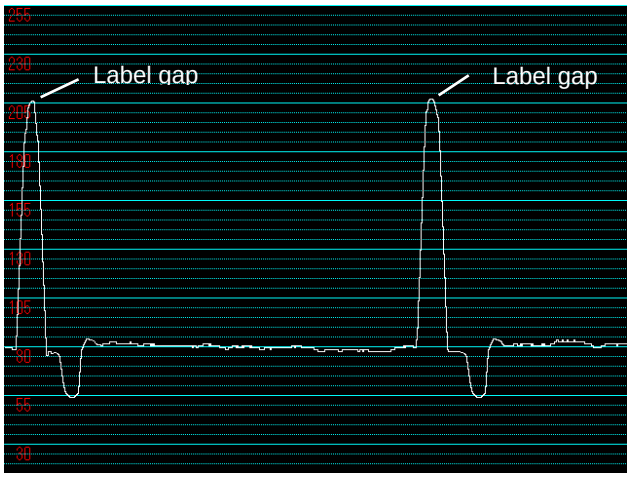


3. Enter the temporary threshold value 120 at numeric keys and touch the [Label sensor DPM] field.

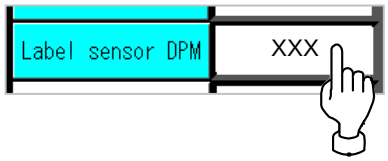
4. Press the [FEED] key 2 or 3 times. Then, label comes out.

Enter the 2000 at numeric keys and touch the [X] key. Then, graph pops up.

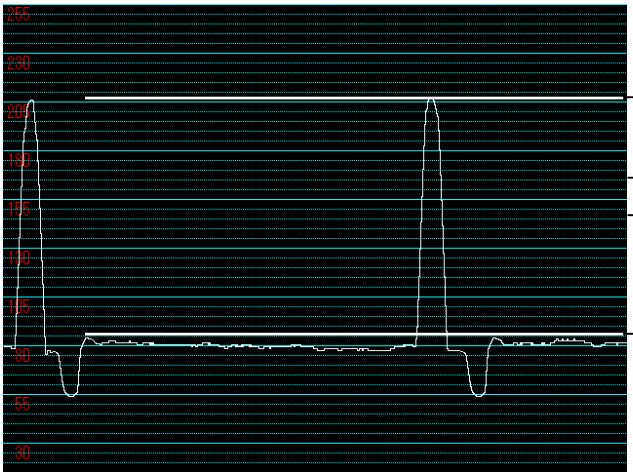


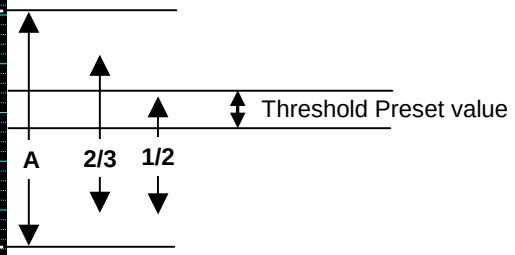


5. By operation of No. 2 and No.4, Please adjust the output of label gap to 200 - 240.



6. By operation of No. 3, Enter the Threshold Preset value at numeric keys, and press the [Label sensor DPM] field.





A is the value between label detection part and label gap detection part.
Label detection part is the highest value.
Label gap detection part is the lowest value.

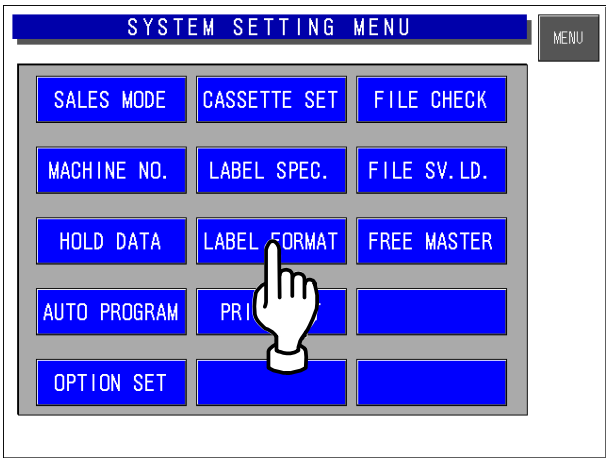
Preset value is between one half of **A**, and 2/3.

4.9 LABEL FORMAT SETTING

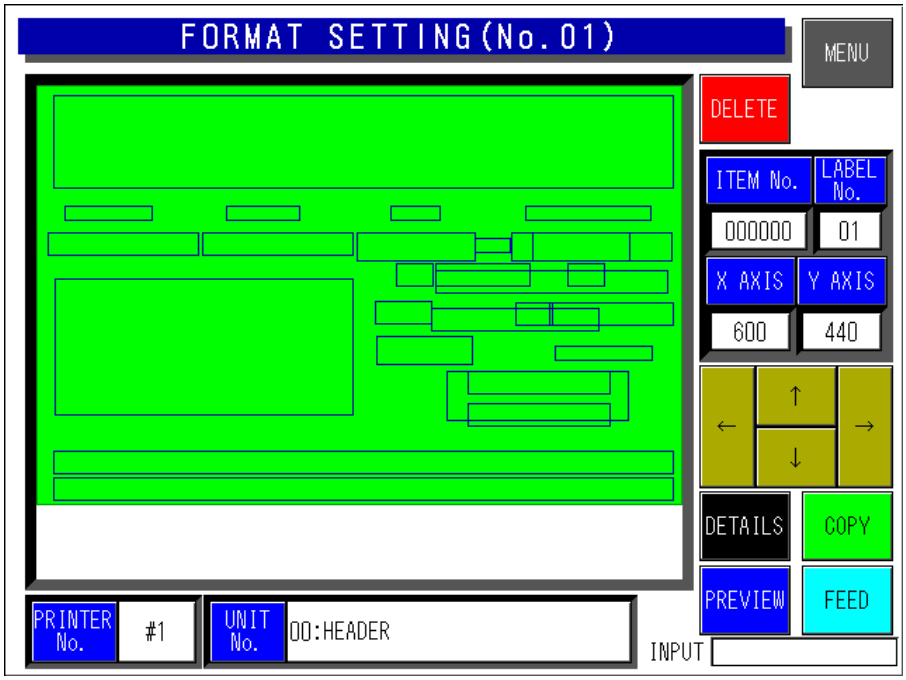
This function is used to create label formats.
Up to 99 formats (label format number 1 through 99) are available with this machine.

1. Ensure that the System Setting Menu screen is displayed.

Then, touch the [LABEL FORMAT] button on the screen.



2. The Format Setting screen appears.



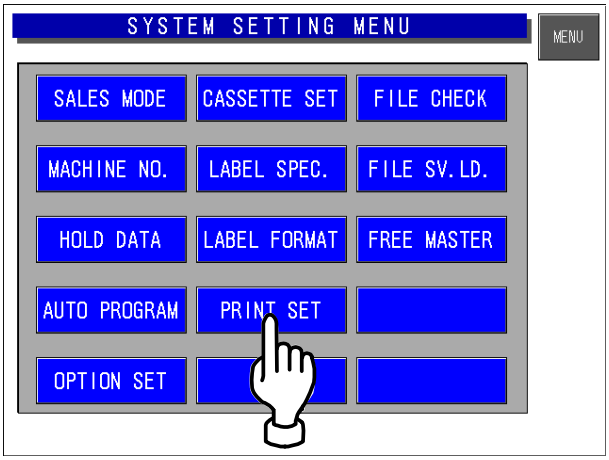
REFERENCE

Refer to Appendix A “Label Formatting” for detailed procedures for formatting labels.

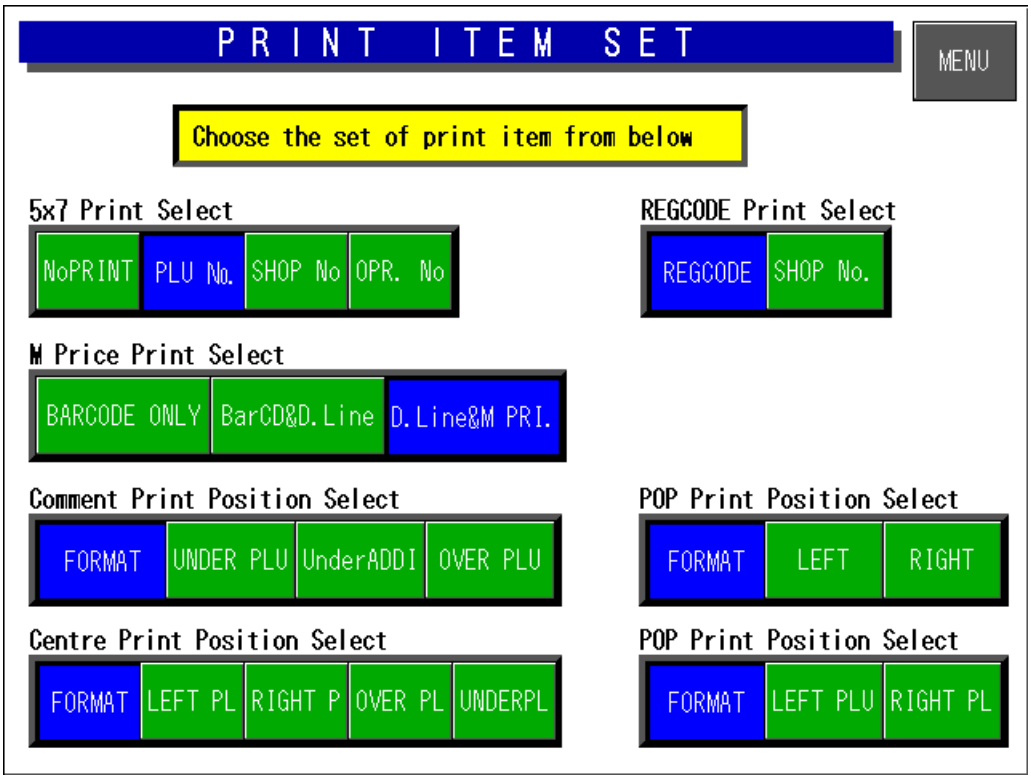
4.10 PRINT SETTING

1. Ensure that the System Setting Menu screen is displayed.

Then, touch the [PRINT SET] button on the screen.



2. The Print Setting screen appears.



5X7 PRINT SELECT	Touch to select the 5X7 print content.
REGISTER CODE SELECT	Touch to select either “Register code” or “Shop number”.
MARKDOWN PRICE PRINT SELECT	Touch to select one among following three methods; •Barcode only •Barcode + D. line •D. line + Markdown price
COMMENT PRINT POSITION SELECT	Touch to select one among following four positions; •Format •Under PLU •Under addition •Over PLU

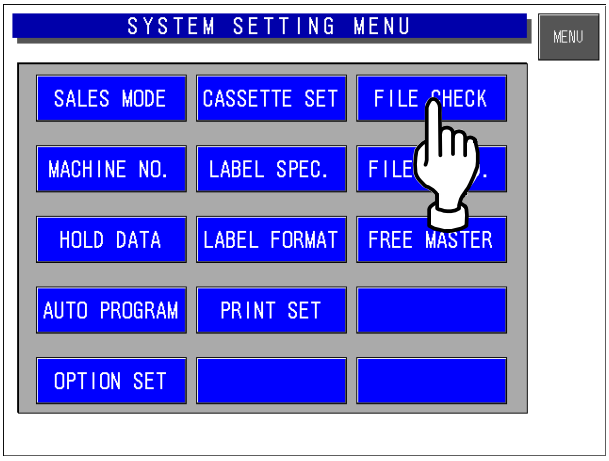
CENTRE PRINT POSITION SERECT (PLACE OF PRODUCTION)	Touch to select one among following five positions; •Format •Left PLU •Right PLU •Over PLU •Under PLU
POP PRINT POSITION SELECT (NOT USE)	Touch to select one among following three positions; •Format •Left •Right
POP PRINT POSITION SELECT	Touch to select one among following three positions; •Format •Left PLU •Right PLU

CAUTION	Print position changes for each print position selection of Comment, POP name, and Register code. Note that the display position does not change.

4.11 FILE CHECK SETTING

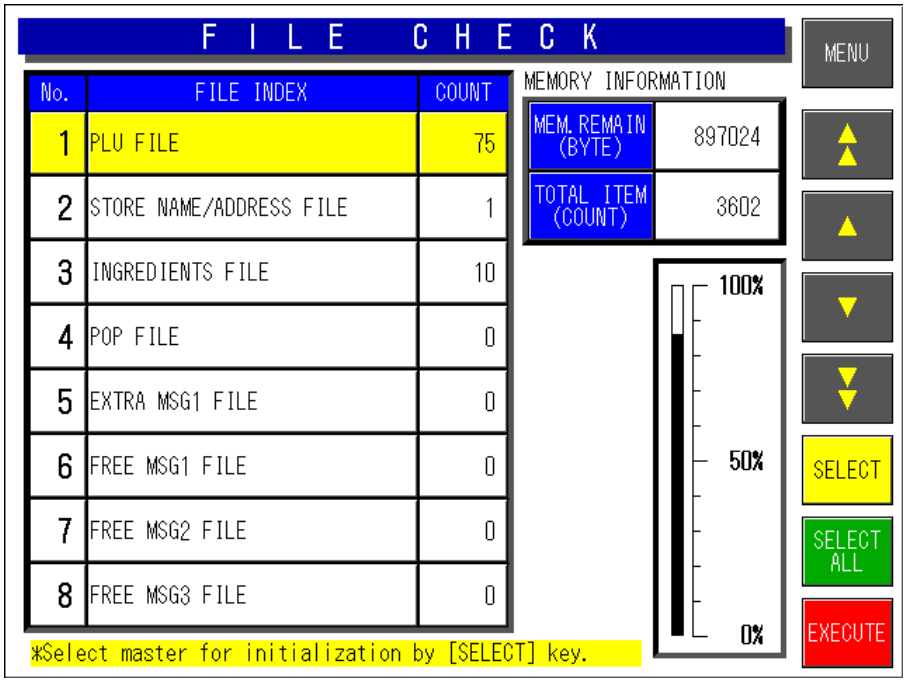
1. Ensure that the System Setting Menu screen is displayed.

Then, touch the [FILE CHECK] button on the screen.



2. The File Check screen appears.
Ensure that the System Setting Menu screen is displayed.

The number of files is displayed.
<Master Initialization>
Select the master(s) by touching the one of [SELECT] and [SELECT ALL] key, and initialize by touching the [EXECUTE] key.



MEMO

Even if initialization is performed for all masters by touching [SELECT ALL] and [EXECUTE] keys, a part of basic master is written. Therefore, the PLU master conversion (number of files) does not become “0” because memory is partially used.

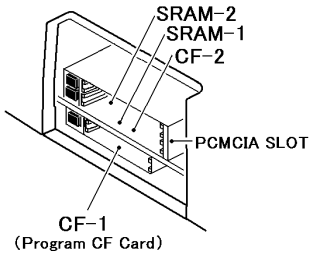
4.12 FILE SAVE AND LOAD

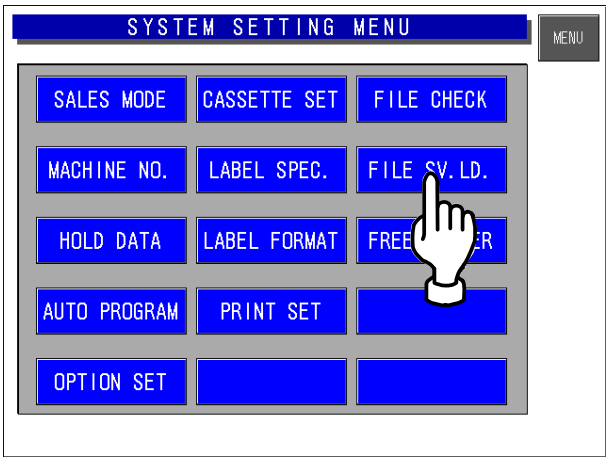
This function requires a CF card inserted into Slot 1(CF-2) located inside of the I/O port section on the left side of the machine.

7.12.1 FILE DOWNLOAD

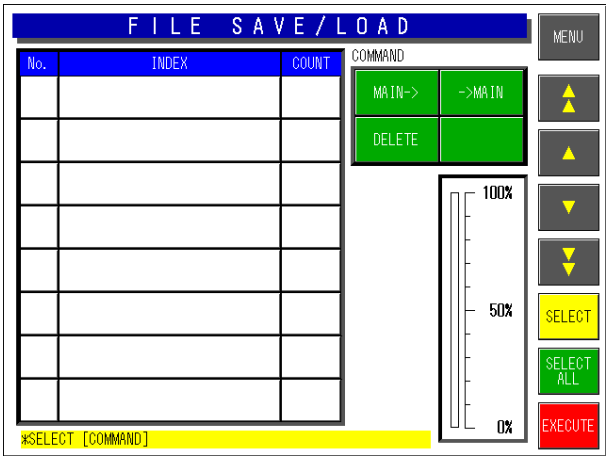
1. Ensure that the System Setting Menu screen is displayed.

Then, touch the [FILE SV.LD] button on the screen.



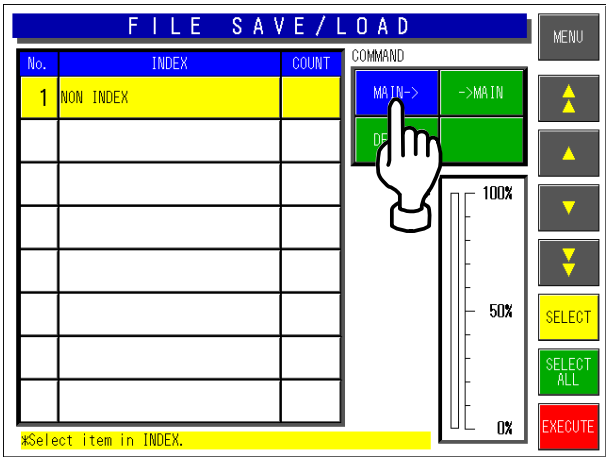


2. The File Save/Load screen appears.

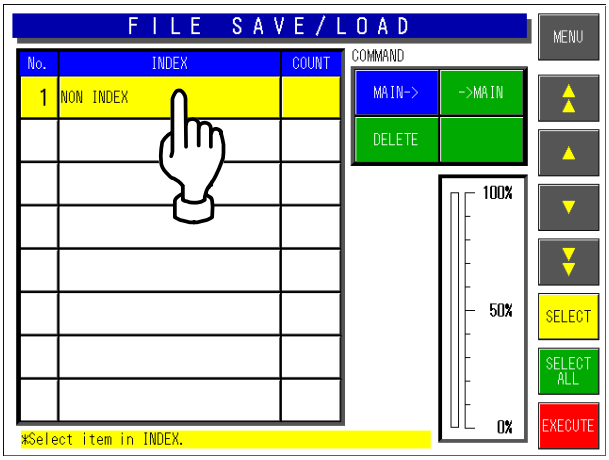


3. Touch to select the [MAIN→] button among the following three commands.

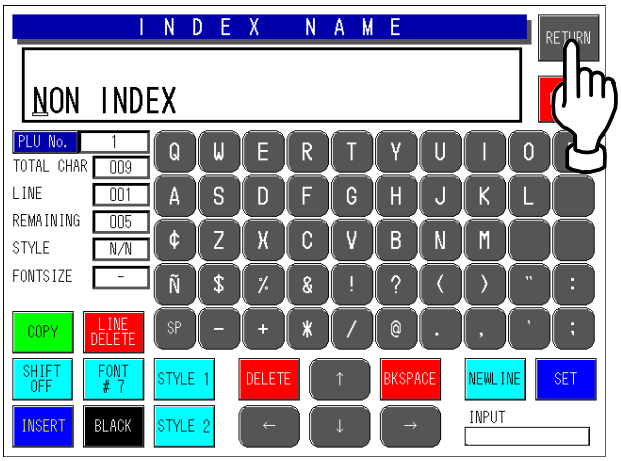
[MAIN→]
Select when writing the machine data into the CF card memory.
[→MAIN]
Select when writing the CF data into the machine memory.
[DELETE]
Select when deleting data.



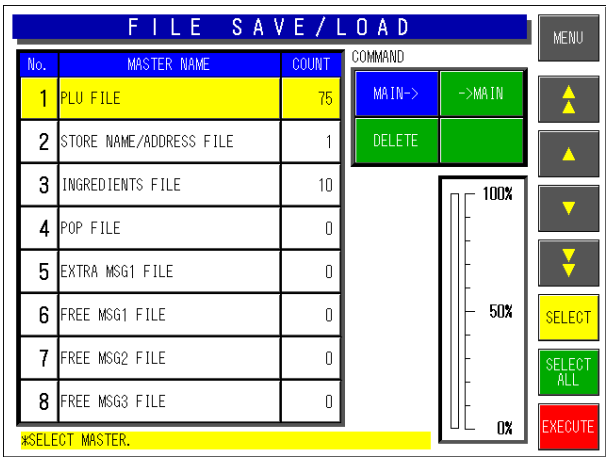
4. Touch to select desired index fields.



5. The text edit screen appears.
Then, touch the [RETURN] button.

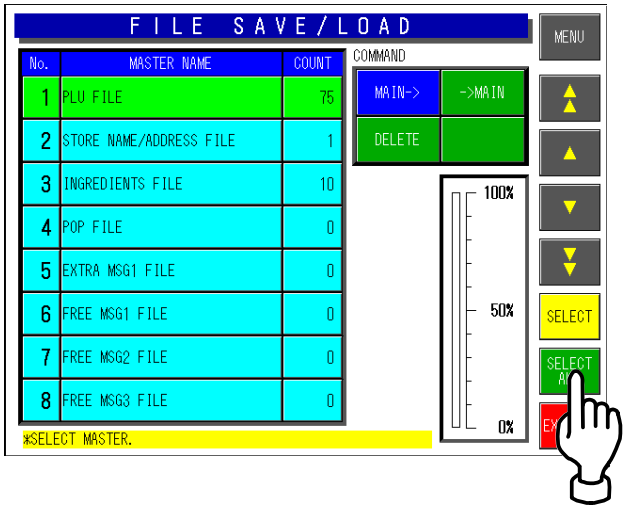


6. All stored master data appears on the screen.

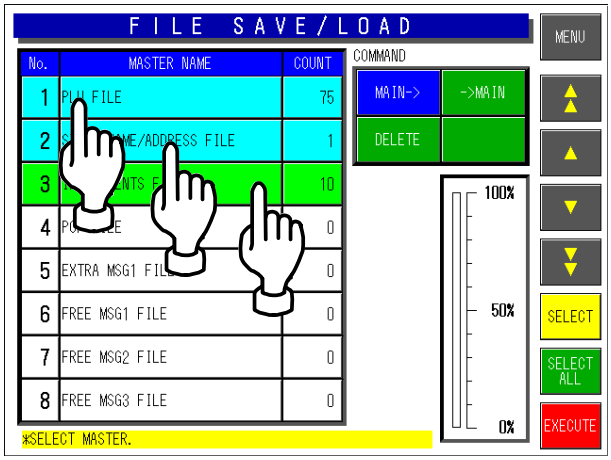


7. Touch to select desired master data.

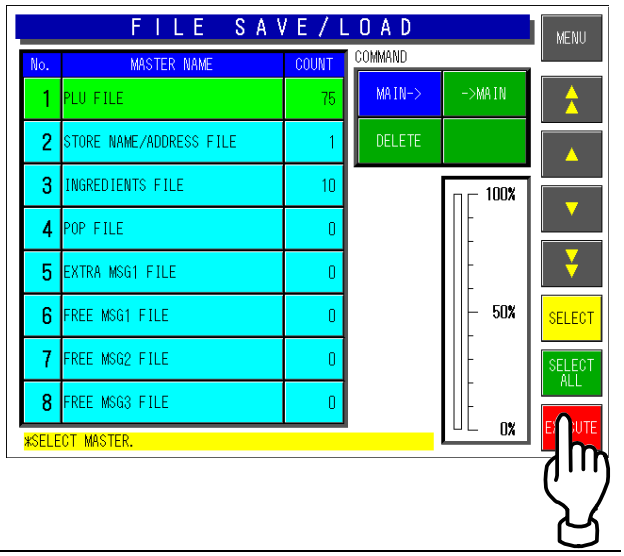
Touch [SELECT ALL] to select all master data.



Touch to select each master data.

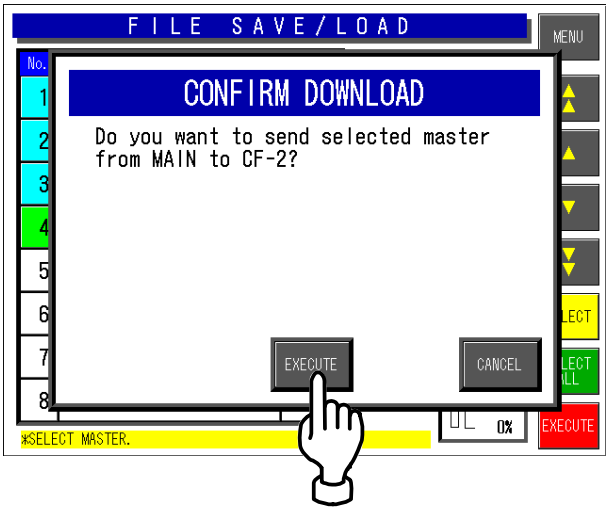


8. Touch the [EXECUTE] button to start downloading.



9. The confirmation screen appears. Then, touch the [EXECUTE] button to download the selected data into the CF card memory.

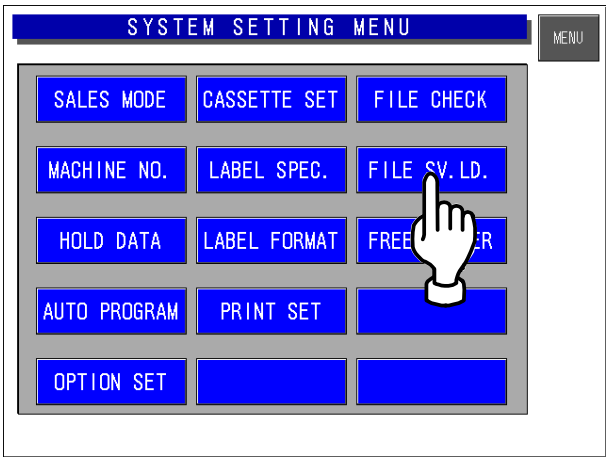
When download is normally completed, the buzzer sounds.



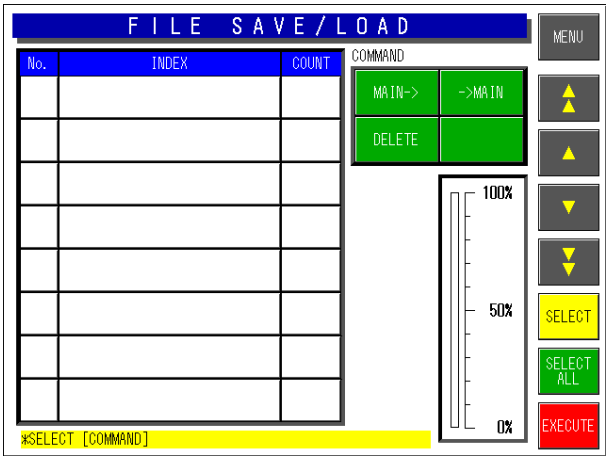
7.12.2 FILE UPLOAD

1. Ensure that the System Setting Menu screen is displayed.

Then, touch the [FILE SV.LD] button on the screen.

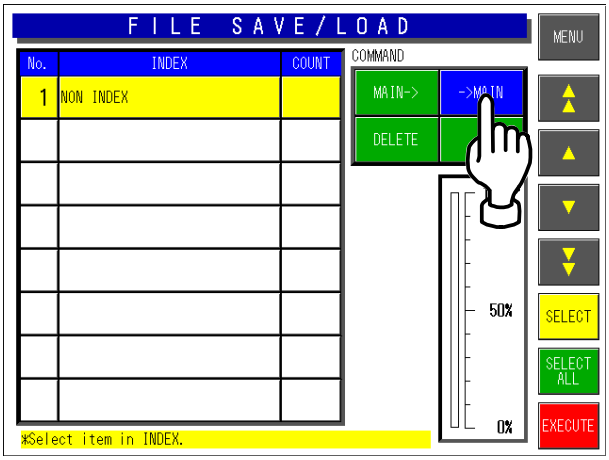


2. The File Save/Load screen appears.

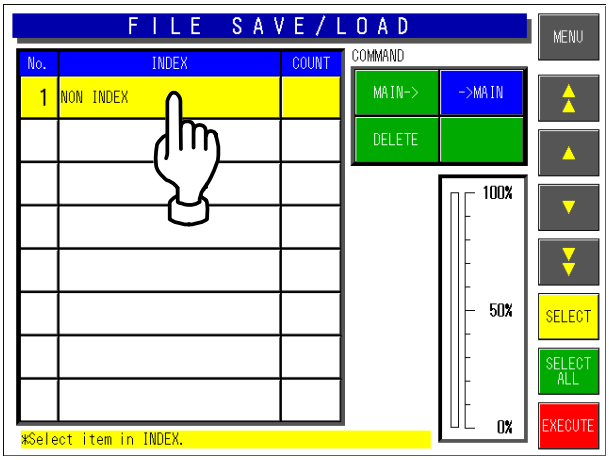


3. Touch to select the [→MAIN] button among the following three commands.

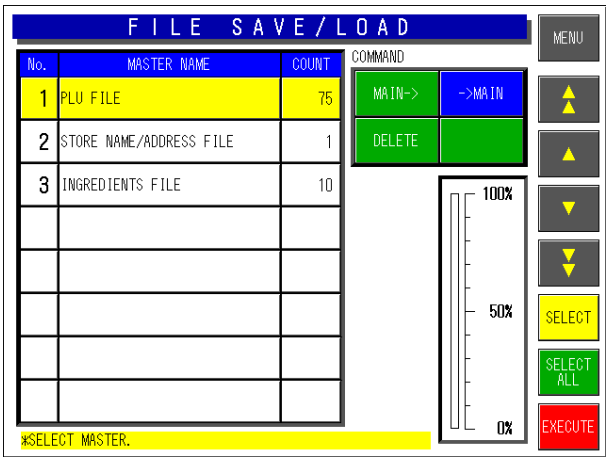
[MAIN→]
Select when writing the machine data into the CF card memory.
[→MAIN]
Select when writing the CF data into the machine memory.
[DELETE]
Select when deleting data.



4. Touch to select a desired index field.

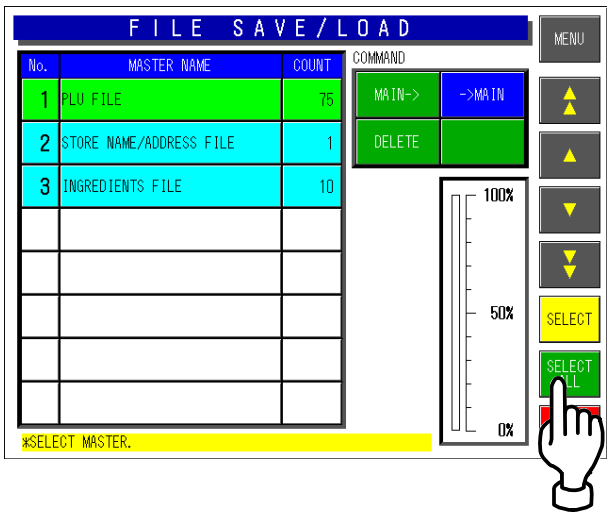


5. All stored master data appears on the screen.

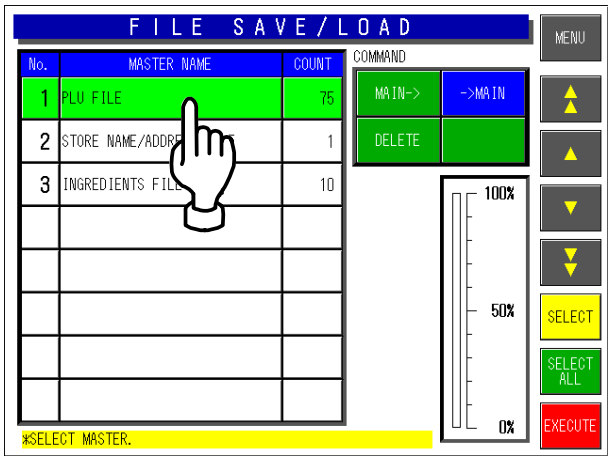


6. Touch to select desired master data.

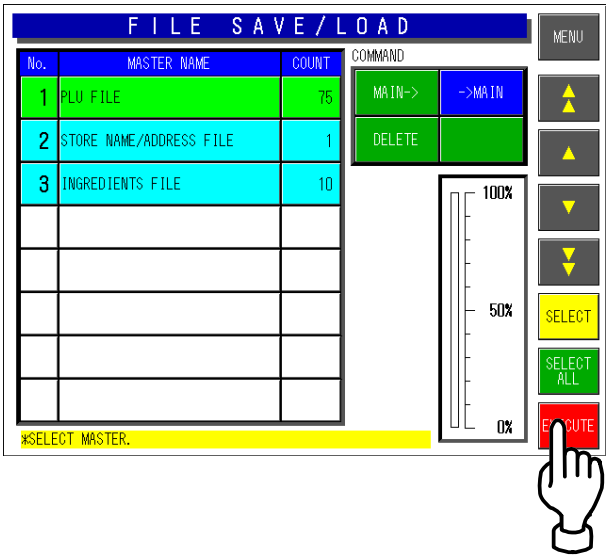
Touch [SELECT ALL] to select all master data.



Touch to select each master data.

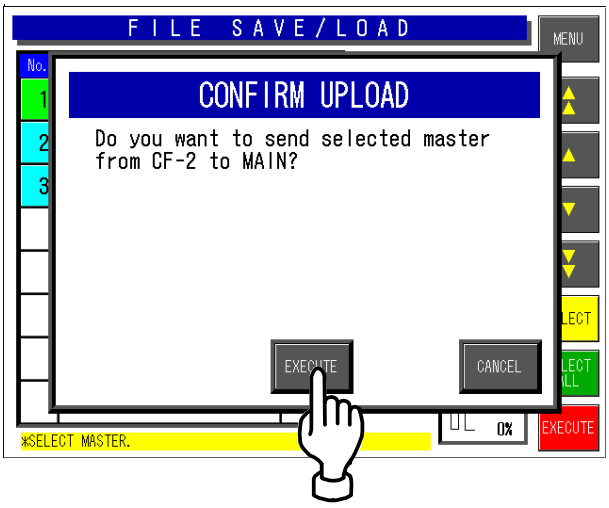


7. Touch the [EXECUTE] button to start uploading.



8. The confirmation screen appears. Then, touch the [EXECUTE] button to upload the selected data into the machine memory.

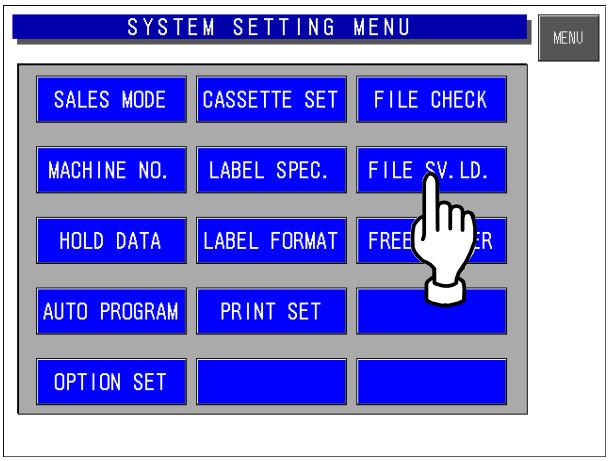
When upload is normally completed, the buzzer sounds.



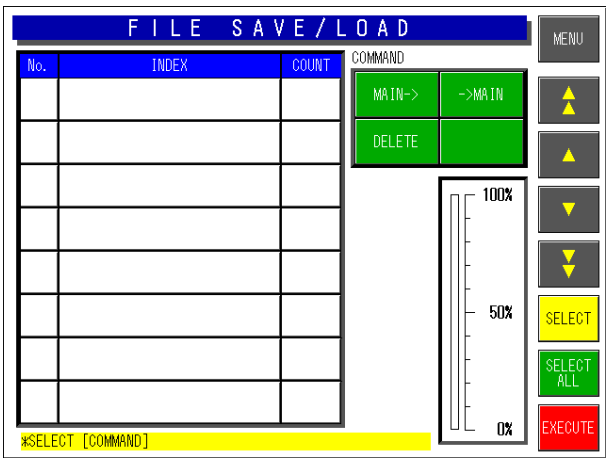
4.12.3 FILE DELETION

1. Ensure that the System Setting Menu screen is displayed.

Then, touch the [FILE SV.LD] button on the screen.

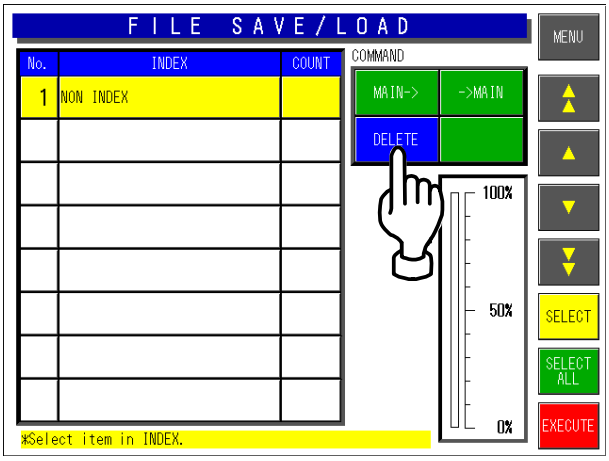


2. The File Save/Load screen appears.

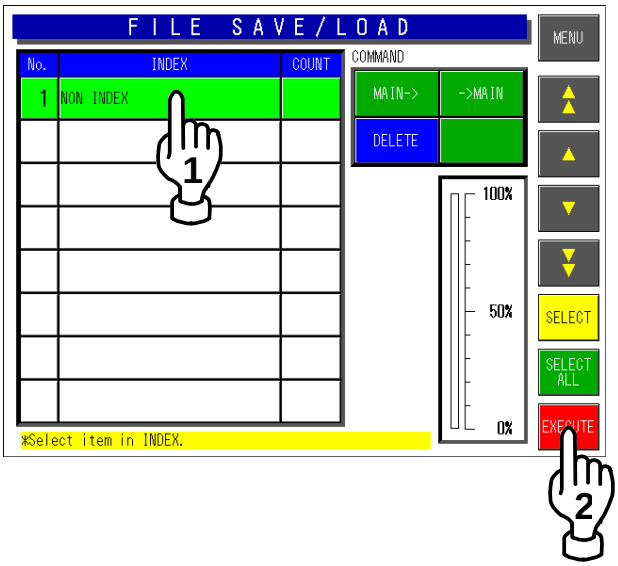


3. Touch to select the [DELETE] button among the following three commands.

[MAIN→]
Select when writing the machine data into the CF card memory.
[→MAIN]
Select when writing the CF data into the machine memory.
[DELETE]
Select when deleting data.

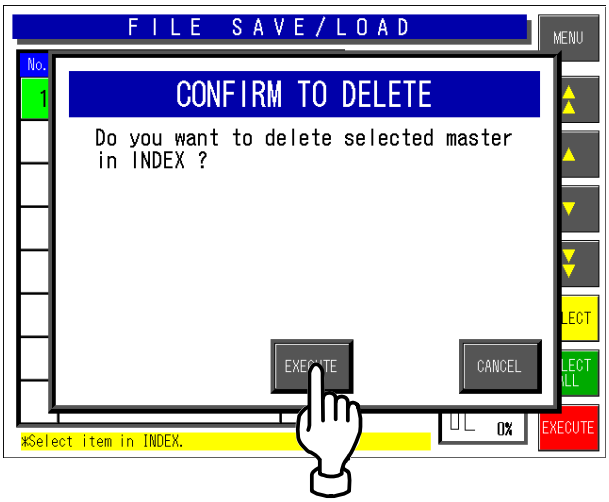


4. Touch to select a desired index field, and touch the [EXECUTE] button to start deleting.



5. The confirmation screen appears. Then, touch the [EXECUTE] button to delete selected master data.

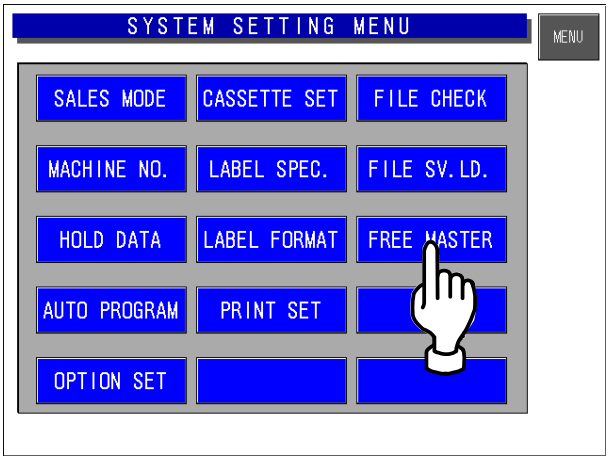
When deletion is normally completed, the buzzer sounds.



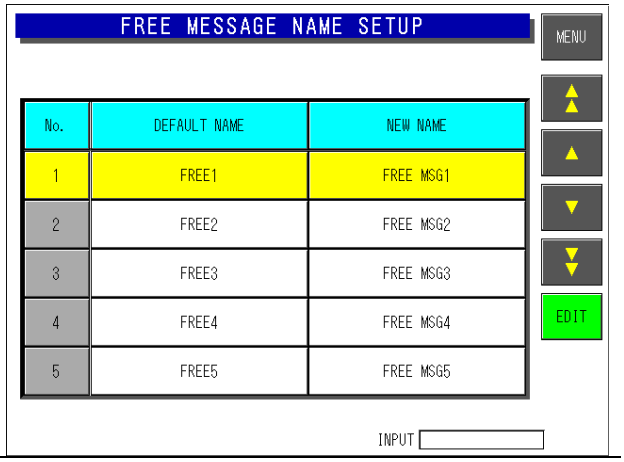
4.13 FREE MASTER SETTING

1. Ensure that the System Setting Menu screen is displayed.

Then, touch the [FREE MASTER] button on the screen.

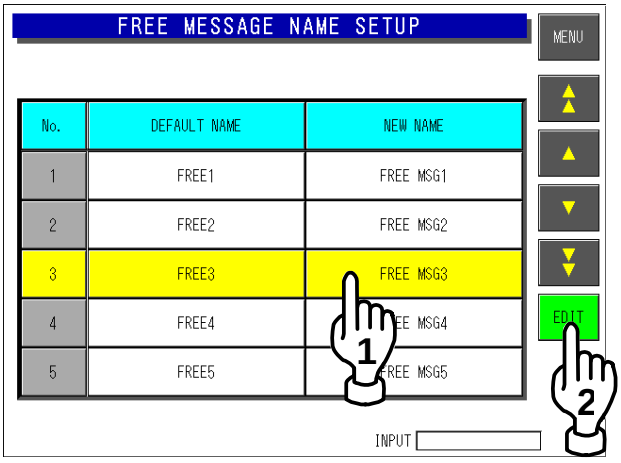


2. The Free Message Name Setup screen appears.

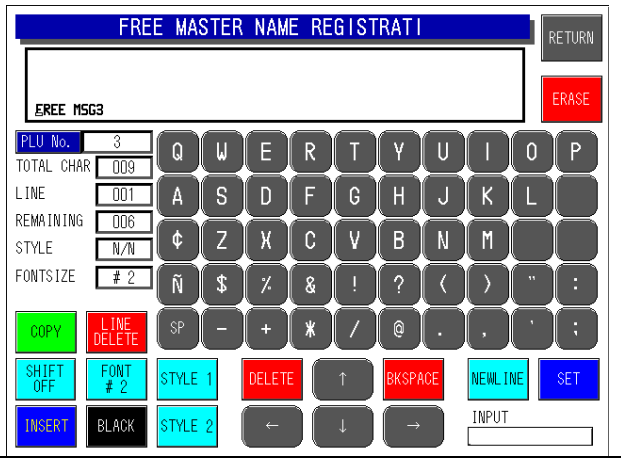


3. Touch to select a desired filed. Then, touch the [EDIT] button.

EXAMPLE Select “No.3”

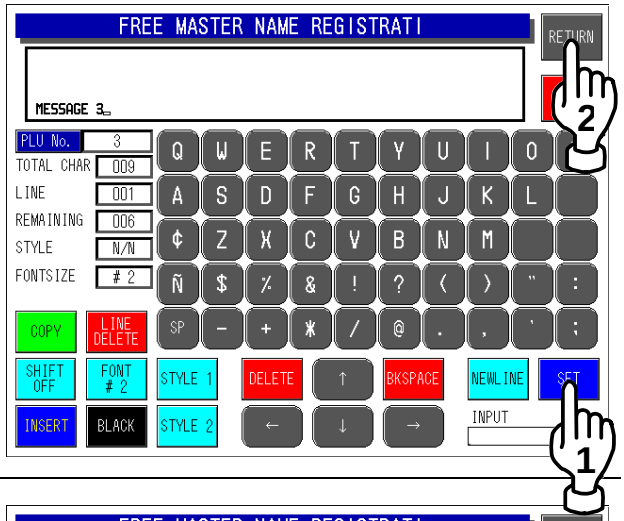


4. The text edit screen for the selected message number appears.



5. Edit the text by referring to the procedures described in Appendix B “Text Editing”.

Touch the [SET] and [RETURN] buttons as soon as the editing is completed.

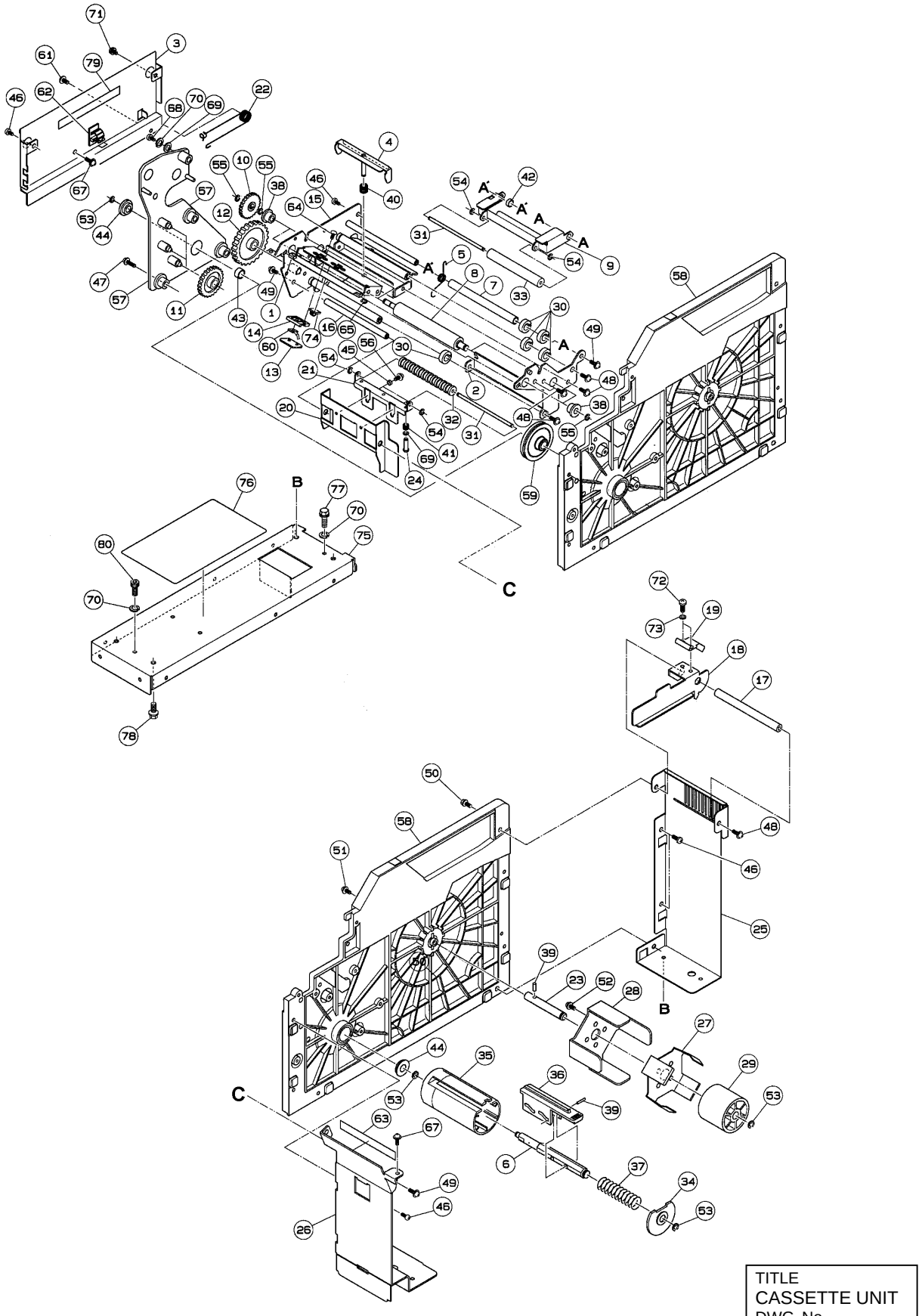


6. The confirmation screen appears. Then, touch the [EXECUTE] button to save the text.

5 MECHANICAL ASSEMBLY

Contents

5.1 CASSETTE UNIT



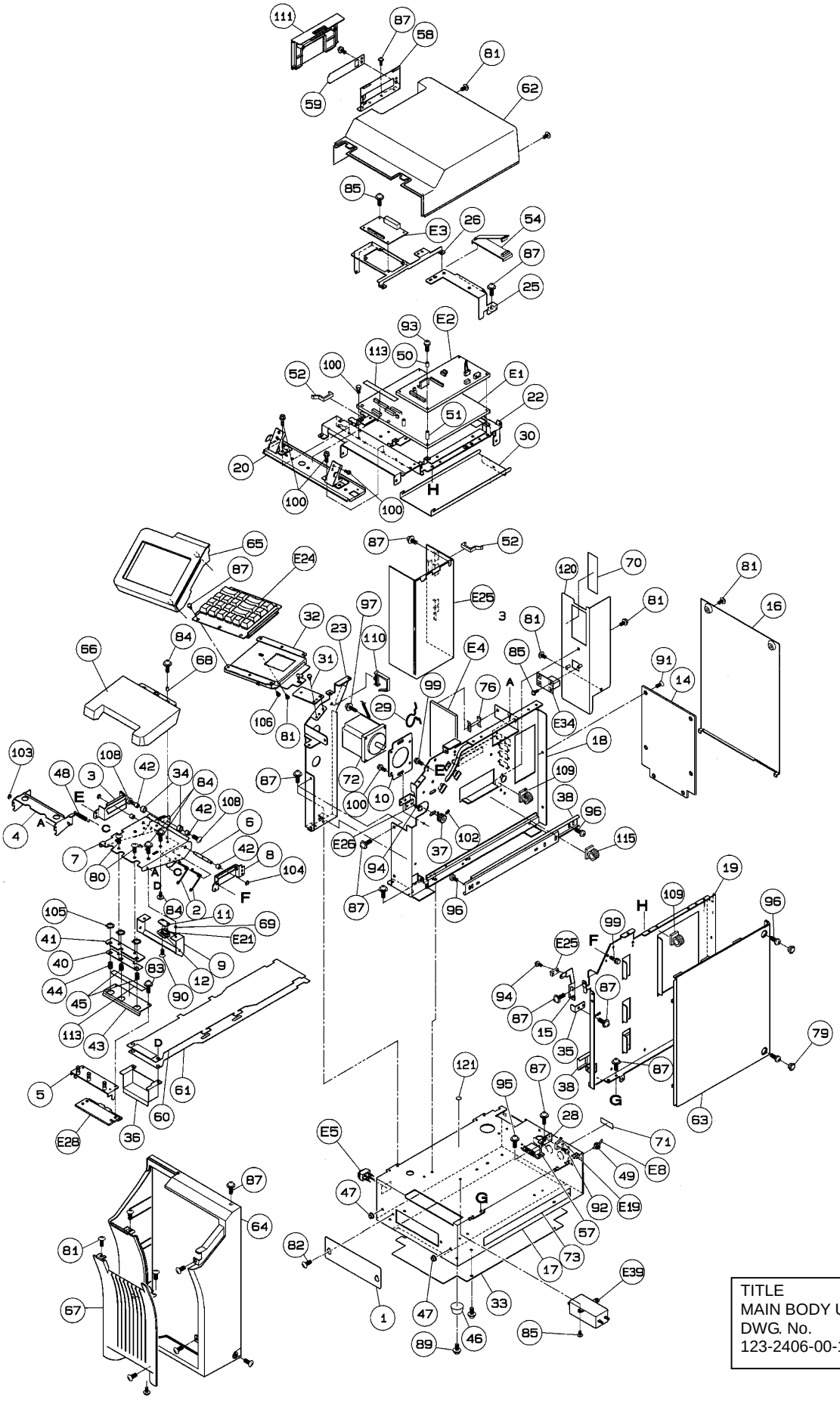
TITLE
CASSETTE UNIT
DWG. No.
096-9752-06-0

CASSETTE UNIT: IP-EMZ
PART CODE: 113-8448-09
Refer to DWG No.: 096-9752-06-0

ITEM	DESCRIPTION
1	PLATE AS:PEELING SHAFT:
2	BRACKET:PRINT:
3	COVER:HARNESS:LAVEL SENSOR
4	LAVEL:BREAK:
5	SPRING:C:3
6	SHAFT:STEP:
7	ROLLER:
8	ROLLER:PRINT:
9	BRACKET:LABEL:STOPPER
10	GEAR:IDOLER:25
11	GEAR:FLAT:
12	GEAR:FLAT:
13	PLATE A:SENSOR
14	BLOCK B:SENSOR:
15	BASE AS:PRINTER:
16	SHAFT:LABEL:REAR
17	THREADED ROD:ROUND:MM
18	GUIDE:LABEL:
19	SPRING:PLATE:GUIDE
20	BRAKET:HOLDER:
21	HOLDER:ROLLER:
22	SPRING:COIL:
23	SHAFT:LABEL:
24	STEP SCREW:PAN:
25	FRAME:CASETTE:REAR
26	FARAME:CASSETTE:FRONT
27	SPRING:PLATE:
28	GUIDE:PRINTER:CASSETTE
29	ROLLER:POLE
30	GUIDE:LABEL:
31	SHAFT:ROLLER:ASSIST
32	ROLLER:ASSIST:
33	ROLLER:ASSIST:
34	COVER:WILDING:
35	BOBBIN:WILDING:
36	HOLDER:WILDING:STOPPER
37	SPRING:COIL:COMPRESSIVE
38	BUSH:
39	SPRING PIN:
40	SPRING:COIL:COMPRESSIVE

ITEM	DESCRIPTION
41	SPRING:COIL:COMPRESSIVE
42	COLLAR:SPACER
43	COLLAR:SPACER
44	BEARING:RADIAL:
45	COLLAR:SPACER
46	TAPIING SCREW:PLUS:P TIGHT
47	TAPPING SCREW:TP:B TIGHT
48	TP TAPPING SCREW:
49	TP SCREW:
50	HEX BOLT:BOLT&WASHER AS S2P2:
51	SCREW:CROSS TRUSS:
52	TP TAPPING SCREW:T2
53	E RING:
54	E RING:
55	E RING:
56	SCREW:CROSS PAN HEAD:
57	COVER:GEAR:
58	MAIN BODY:PRINTER:CASSETTE
59	LIMITTER A:ASSY:
60	SENSOR AS:LABEL:
61	SCREW:CROSS TRUSS:
62	ACCESSORY:CLAMP:CKN CLAMP
63	TAPE REJECTION
64	SCREW:CROSS FLAT:
65	E RING:
67	SCREW:CROSS TRUSS:
68	SCREW:CROSS PAN HEAD:
69	PLAIN WASHER:
70	SPRING WASHER:
71	TAPPING SCREW:CROSS PAN HEAD:
72	SCREW:CROSS PAN HEAD:
73	SPRING WASHER:
74	ACCESSORY:CLAMP:WIRE
75	BASE:CASSETTE:
76	NAME PLATE:EXPLANATION:
77	HEX BOLT:
78	PLUS HEX BOLT:
79	TAPE REJECTION
80	HEX SOCKET BOLT:

5.2 MAIN BODY UNIT



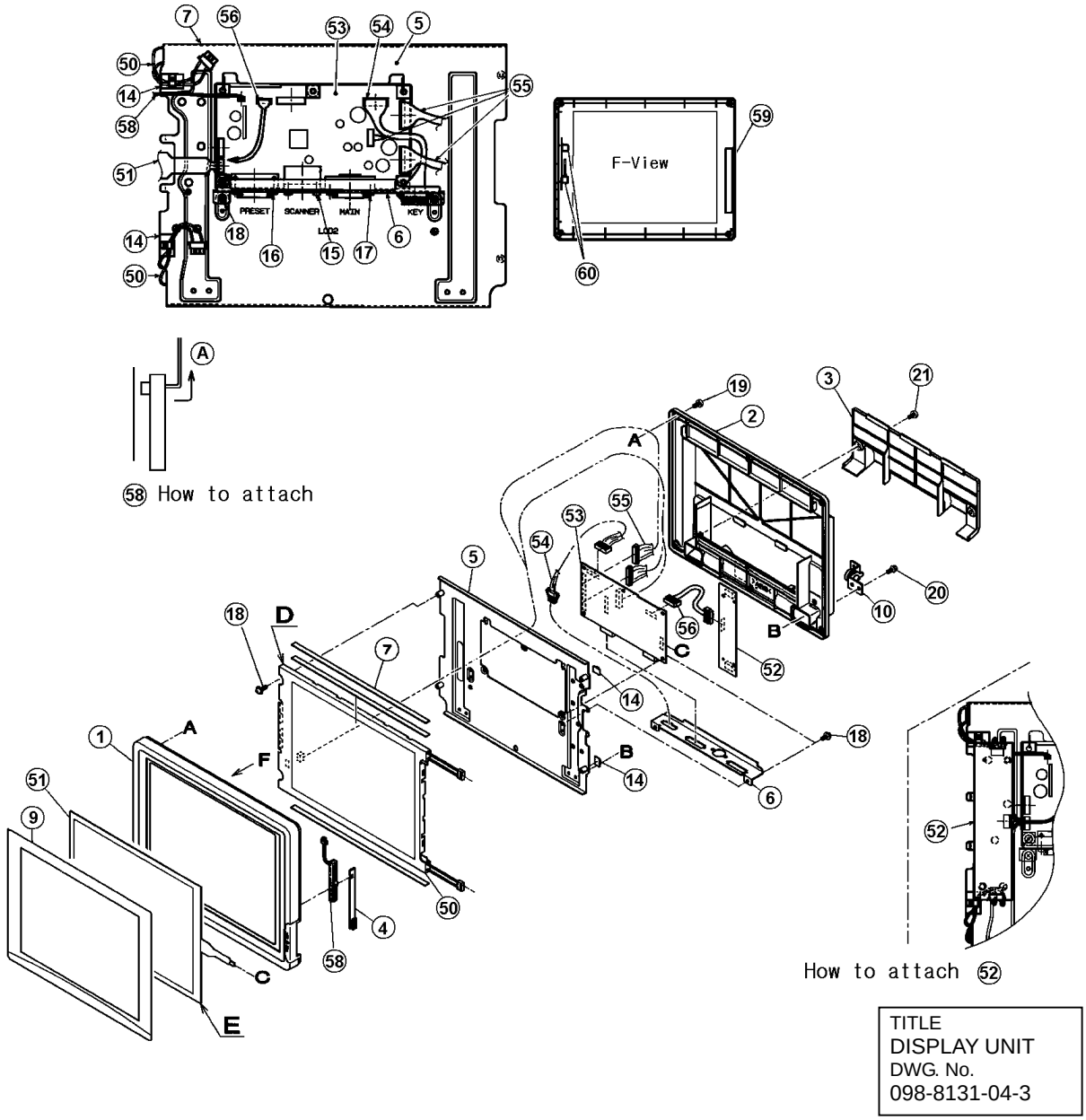
TITLE
MAIN BODY UNIT
DWG. No.
123-2406-00-1

MAIN BODY UNIT: IP-EMZ
PART CODE:
Refer to DWG No.: 123-2406-00-1

ITEM	DESCRIPTION
1	PLATE AS:PEELING SHAFT:
2	SPRING:B:2
3	SLIDE:RAIL:LEFT
4	BRACKET:STOPPER
5	BRACKET:HEAD:
6	SHAFT:PRINTER:SLIDE
7	BRACKET AS:PRINT:
8	SLIDE:RAIL:RIGHT
9	BRACKET:SENSOR:
10	BRACKET:MOTOR:
11	PLATE A:SENSOR
12	BLOCK B:SENSOR:
14	FRAME:REAR:
15	SENSOR:RECEIVER:
16	COVER:REAR:
17	BASE:UNDER:
18	FRAME:MIDDLE:
19	FRAME:RIGHT:
20	BRACKET:AS:DISPLAY
22	FRAME AS:UPPER
23	FRAME:LEFT
25	BRAKCET:THERMAL HARNESS:
26	BRACKET:DISPLAY BOARD:
28	L PLATE A:MICHRO SW
29	CRIPPING:PRINT:
30	COVER:HAENESS:THERMAL
31	PLATE A:KEY
32	BASE:KEY:
33	PLATE A:COVER:LOWER
34	COLLAR:
35	BRAKET:STOPPER
36	COVER:PRINTER:CONNECTOR
37	GEAR:FLAT:
38	RAIL:SLIDE:
40	PLATE A:SPRING:SUPPORT
41	STAY:HEAD:THERMAL
42	BUSH:
43	COVER:HEAD:
44	SPRING:COIL:COMPRESSIVE
45	SPRING:COIL:COMPRESSIVE
46	RUBBER PAD:
47	ACCESSORY:BUSH:
48	SPRING:COIL:TENSION
49	ACCESSORY:BUSH:CABLE
50	PWB ACCESSORY:COLLAR BUSH:
51	PWB ACCESSORY:COLLAR BUSH:
52	ACCESSORY:FASTENER:EDGE
54	ACCESSORY:CLAMP:FLAT CABLE
57	CATCH:MAGNET:
58	COVER:SLOT:CF
59	PLATE B:PC:
60	SHEET:HARNESS:UPPER
61	SHEET:HARNESS:LOWER
62	CASE:MAIN BODY:UPPER
63	CASE:MAIN BODY:SIDE
64	CASE:MIAN BODY:FRONT
65	CASE:KEY:

ITEM	DESCRIPTION
66	COVER:PRINTER:
67	COVER:CASSETTE:FRONT
68	COLLAR:SPACER
69	COLLAR:SPACER
70	NAME PLATE:EXPLANATION:
71	NAME PLATE:EXPLANATION:
72	MOTOR AS; STEPPING:
73	NAME PLATE:SPECIFICATION:
76	PWB ACCESSORY:CARD SPACER:
79	CAP:
80	SCREW:CROSS TRUSS:
81	SCREW:CROSS TRUSS:
82	SCREW:CROSS TRUSS:
83	TP SCREW:
84	TP TAPPING SCREW:
85	TP SCREW M3X6
87	TP SCREW:
89	SCREW:CROSS TRUSS:
90	SCREW:CROSS FLAT:
91	SCREW:CROSS FLAT:
92	SCREW:CROSS PAN HEAD:
93	SCREW:CROSS PAN HEAD:
94	SCREW:CROSS PAN HEAD:
95	SCREW:CROSS PAN HEAD:BWA S2P2
96	SCREW:CROSS PAN HEAD:
97	SCREW:CROSS PAN HEAD:BWA S2P1
99	CROSS HEAD:HEX BOLT WITH SW/PW
100	PLUS HEX BOLT:
102	SET SCREW:HEX SOCKET:W-POINT
103	E RING:
104	E RING:
105	C RING:FOR SHAFT:
106	TP TAPPING SCREW:T2
108	SCREW:CROSS TRUSS:
109	ACCESSORY:CLAMP:CKN CLAMP
110	ACCESSORY:CLAMP:LWS CLAMP
111	COVER:CARD:
113	TAPE REJECTION
115	ACCESSORY:CLAMP:CKN CLAMP
120	L PLATE B:
121	NAME PLATE::(Grounding)
E1	PWB:P-910:H-2
E2	PWB:P-964:-3
E3	PWB:P-919:B-3
E4	PWB:P-918:A-1
E5	SWITCH AS:SEESAW:
E8	HARNESS:C3:PS
E18	HARNESS:C2:SCALE
E19	SENSOR AS:HEAD:
E21	SENSOR AS:LABEL:RECEIVER
E24	KEY BOARD AS:
E25	POWER SUPPLY:SWITCHING:
E26	PHOTO INTERRUPTOR:TRANS:
E27	PHOTO INTERRUPTOR:TRANS:RECEIV
E34	PWB:P-967:-1 Ethernet Junction Board
E39	Noise Filter

5.3 DISPLAY UNIT



TITLE
DISPLAY UNIT
DWG. No.
098-8131-04-3

DISPLAY UNIT: IP-EMZ
PART CODE:
Refer to DWG No.: 098-8131-04-3

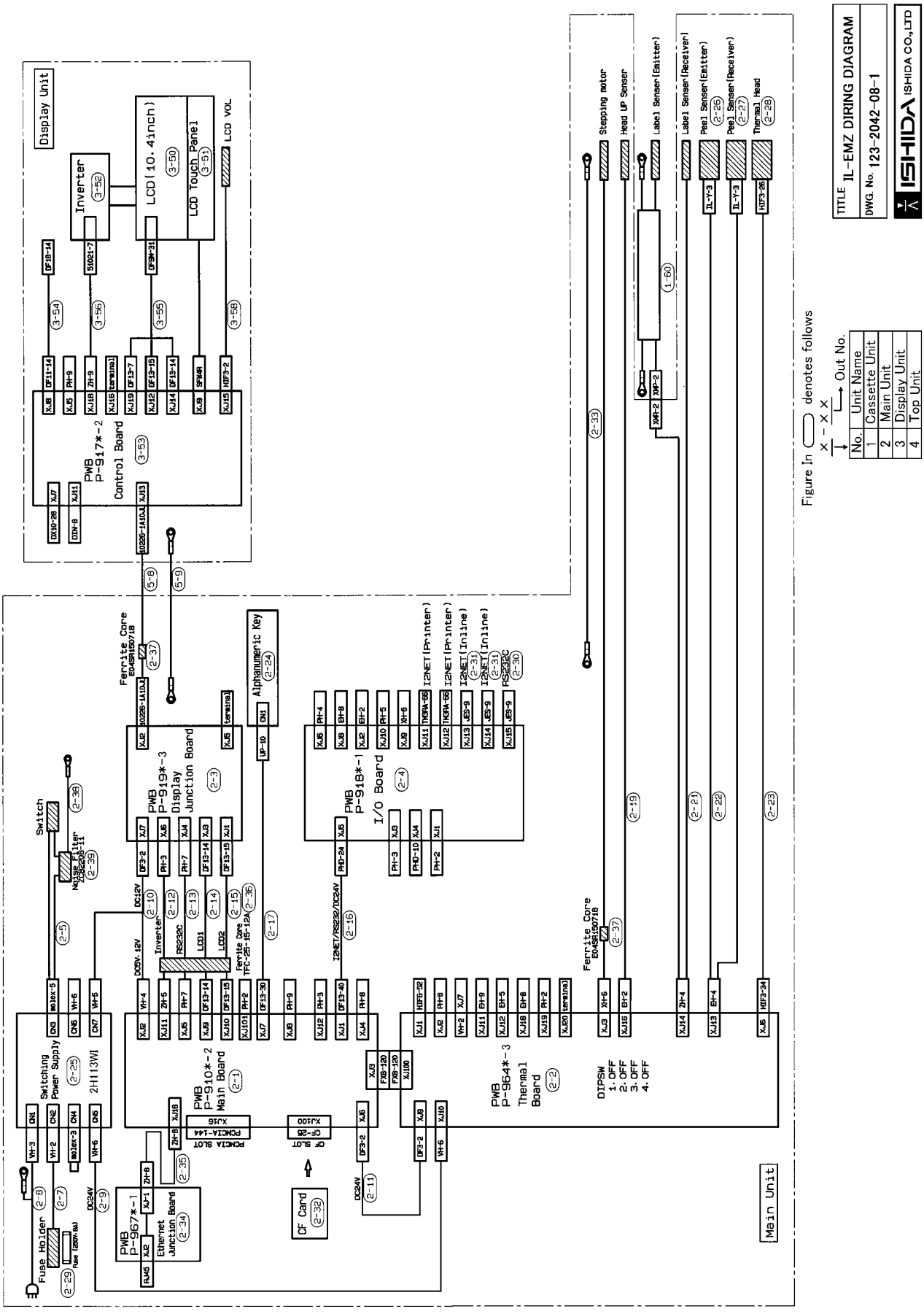
ITEM	DESCRIPTION
1	CASE:CONTROLLER:FRONT
2	CASE AS:CONTROLLER:REAR
3	COVER:CONNECTOR:
4	COVER:VOLUME:
5	FRAME:CONTROLLER:
6	BRACKERT:CONNECTOR:OPERATIO
7	SHEET:
9	SHEET:DISPLAY:
10	PRINT:TORQUE:
14	ACCESSORY:CLAMP:WIRE
15	SCREW:CROSS PAN HEAD:
16	SCREW:CROSS PAN HEAD:
17	SCREW:CROSS PAN HEAD:

ITEM	DESCRIPTION
18	SCREW:CROSS PAN HEAD:BWA S2P2
19	TAPPING SCREW:CROSS PAN:P
20	CROSS HEX:SET SCREW S2P2:
21	TAPPING SCREW:CROSS PAN HEAD:
50	DISPLAY:LIQUIT CLYSTAL:TFT
51	TOUCH PANEL:ANALOG:
52	INVERTER
53	PWB:P-917:B-2
54	HARNESS:C2:KEY JUNC.
55	HARNESS:C4:TFT
56	HARNESS:C2:INVERTER
58	VOLUME AS:
59	PLATE:SPACER:
60	PLATE:SPACER:

6 ELECTRIC ASSEMBLY

Contents

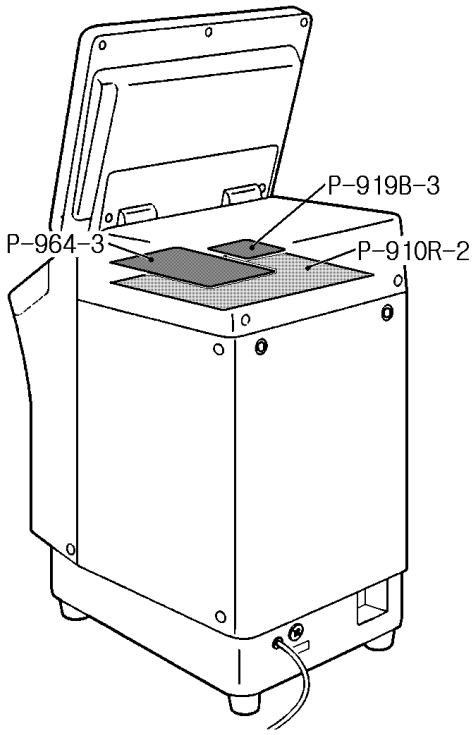
6.1 ELECTRIC BLOCK DIAGRAM



6.2 MAIN PC BOARD (P-910R-2)

6.2.1 BOARD LOCATION

Main board controls the entire machine.
It is located in the main body.



- **Main storage data**

▪ Master data such as commodity master data, etc.

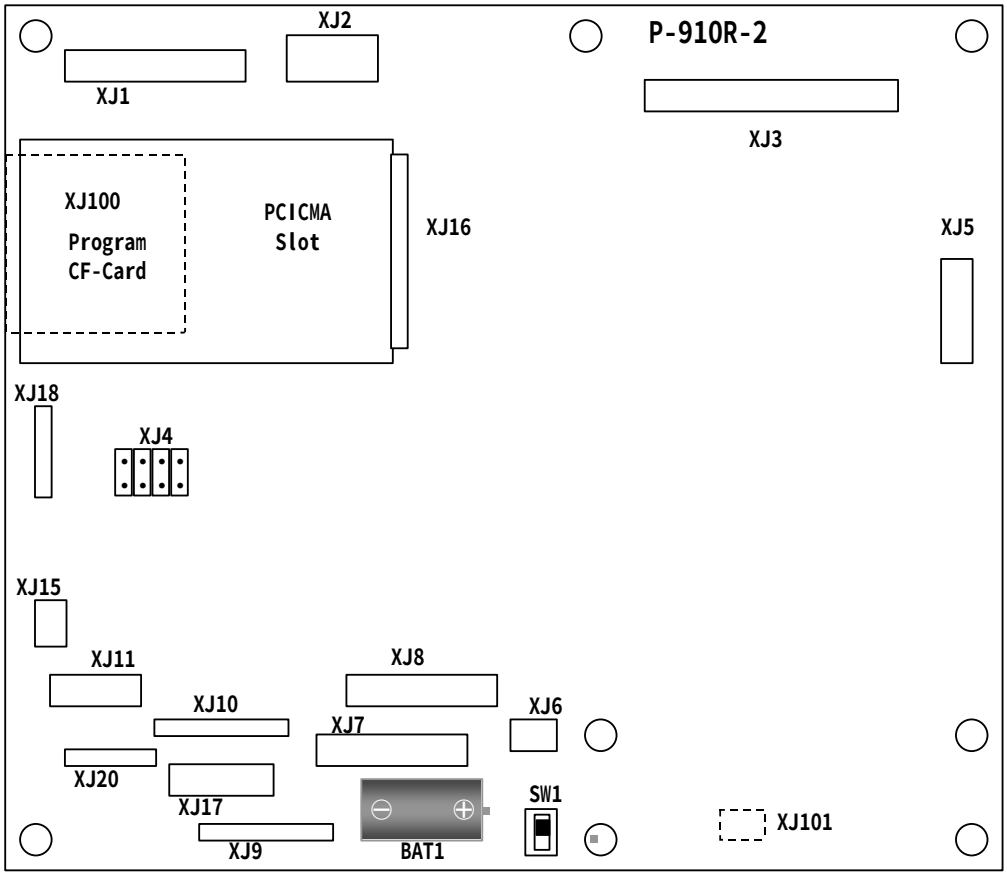
- **Work after PC board replacement**

▪ Load the backup data if any from IF-21FD.

▪ Turn on the battery switch after the board was replaced.

⚠ CAUTION

When replacing this board, please follow local regulation on its disposal because it contains lithium battery.



6.2.2 I/O SIGNALS

XJ1

No.	Signal name	Direction	Other end
1-8	RS-232C	←→	P-918 (XJ5)
9-12	I2NET (ELAN)	←→	
13-16	I2NET (ILAN)	←→	
17-18	RS-485 (Wrapper, Applicator, Sensors, and Scale)	←→	
19-31	Not used		
32-33	DC+24V	→	
34-38	GND	-	
39-40	Not used	-	

XJ2

No.	Signal name	Direction	Other end
1	DC+5V	←	▪ Switching power supply (CN7) ▪ P-919 (XJ7)
2	GND	-	
3	DC+12V	←	
4	GND	-	

XJ3

No.	Signal name	Direction	Other end
A1-A60 B1-B60	Signal between P-964 and P-910	←→	P-964 (XJ100)

XJ5

No.	Signal name	Direction	Other end
1	RS232C TxD	→	P-919 (XJ4) To P-917 via the above-mentioned PC board.
2	RS232C RTS	→	
3	RS232C RxD	←	
4	RS232C CTS	←	
5	RS232C DC+5V	→	
6	RS232C SG	-	
7	RS232C FG	-	

XJ6

No.	Signal name	Direction	Other end
1	DC+24V	←	P-964 (XJ9)
2	GND	-	

XJ7

No.	Signal name	Direction	Other end
21	KS3	→	Alphanumeric Key
22	KS2	→	
23	KS1	→	
24	KS0	→	
11	KD5	←	
12	KD4	←	
13	KD3	←	
14	KD2	←	
15	KD1	←	
16	KD0	←	
1-10 25-30	Not Used	-	

XJ9

No.	Signal name	Direction	Other end
1-8	LCD control signal	←→	P-919 (XJ3) To P-917 via the above-mentioned PC board.
9	DC+5V	→	
10	GND	-	
11-14	Not used	-	

XJ10

No.	Signal name	Direction	Other end
1,3,4,6, 8-15	LCD control signal	←→	P-919 (XJ1) To P-917 via the above-mentioned PC board.
2	Not used	-	
5, 7	GND	-	

XJ11

No.	Signal name	Direction	Other end
1	DC+12V	→	P-919 (XJ6) To P-917 via the above-mentioned PC board.
2	GND	-	
3	Buzzer ON/OFF	→	
4-5	Not used	-	

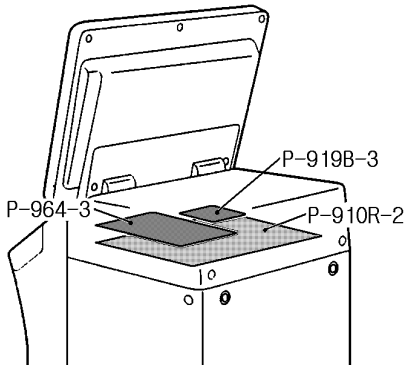
XJ18

No.	Signal name	Direction	Other end
1	LAN TD+	→	P-967-1 (XJ1)
2	LAN TD-	→	
3	LAN TD+	←	
4-5	LAN TD-	←	

6.3 THERMAL PC BOARD (P-964-3)

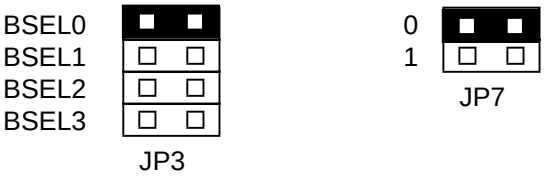
6.3.1 BOARD LOCATION

Thermal board controls the printer.
It is located in the main body.

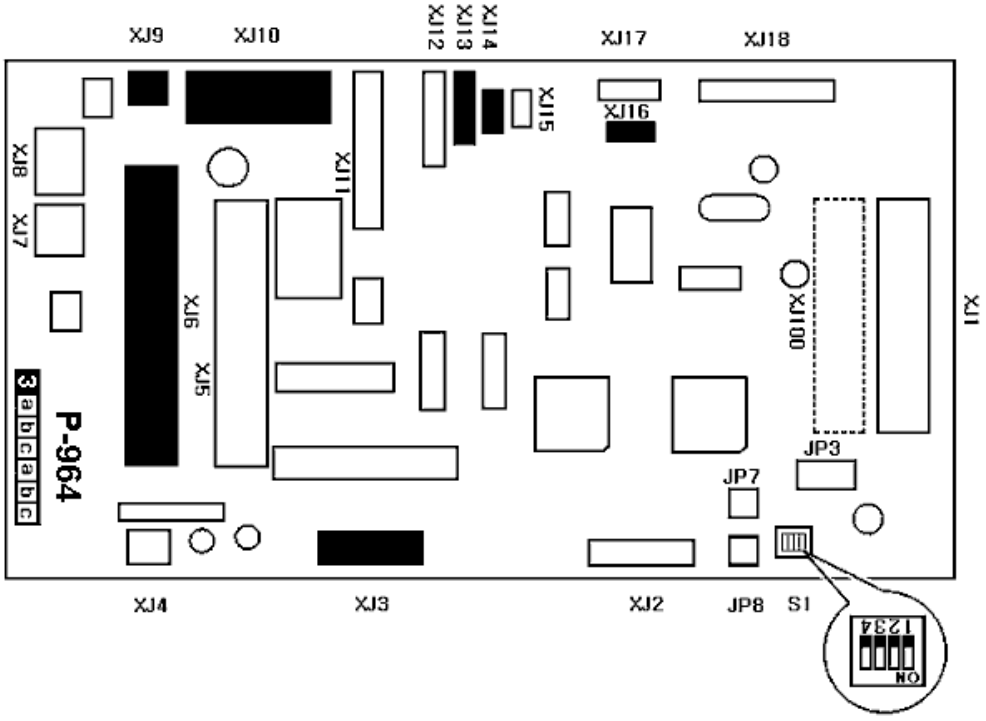


Note that one thermal PC board is required for one printer.
Set the jumper switch on the PC board for each printer as follows:

PC board for Printer #1

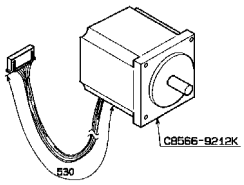


Note: Set "OFF" for all the settings of DIP switch (S1) mounted on the PC board.



6.3.2 I/O SIGNALS

XJ3

No.	Signal name	Direction	Other end
1	$\overline{B}$ phase	→	Stepping motor for label feeding 
2	B phase	→	
3	$\overline{A}$ phase	→	
4	A phase	→	
5	BCOM	-	
6	ACOM	-	

XJ6

No.	Signal name	Direction	Other end
1,3,5,7,9,11	GND	-	Thermal head
2,4,6,8,10	DC+24V	→	
13	DC+5V	→	
12,14,34	Thermal head control signal	←→	

XJ9

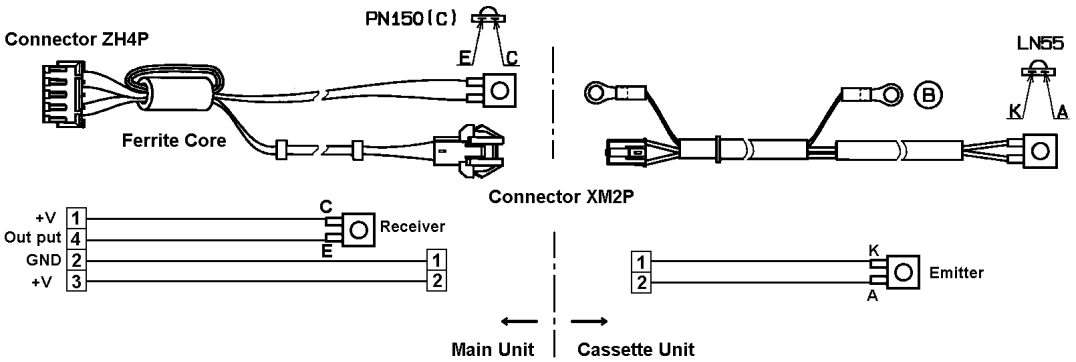
No.	Signal name	Direction	Other end
1	DC+24V	→	P-910 (XJ6)
2	GND	-	

XJ10

No.	Signal name	Direction	Other end
1-3	DC+24V	←	Switching power supply (CN5)
4-6	GND	-	

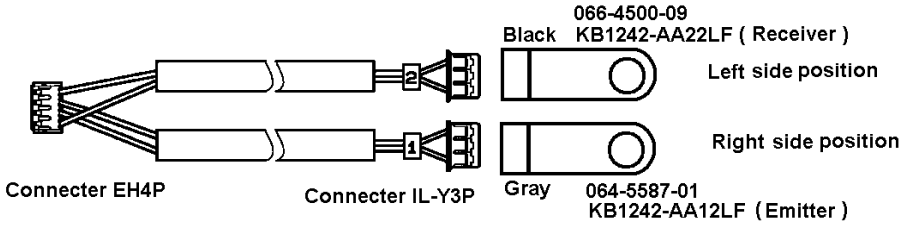
XJ13

No.	Signal name	Direction	Other end
1	Power supply for sensor receiving light	→	Label sensor
2	GND (emitter side)	-	
3	Power supply for sensor emitter side	→	
4	Sensor input signal (receiver side)	←	



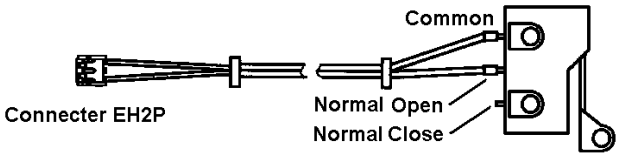
XJ14

No.	Signal name	Direction	Other end
1	Power supply for sensor receiving light	→	Peel sensor
2	GND (emitter side)	-	
3	Power supply for sensor emitter side	→	
4	Sensor input signal (receiver side)	←	



XJ16

No.	Signal name	Direction	Other end
1	Sensor input signal	←	Head-up sensor
2	GND	-	



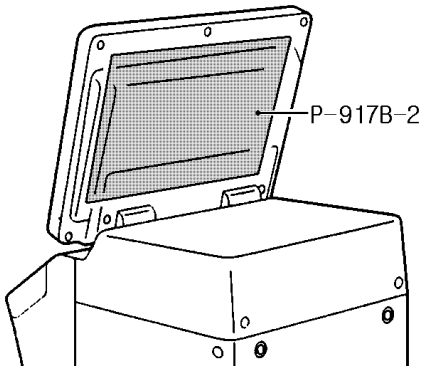
XJ100

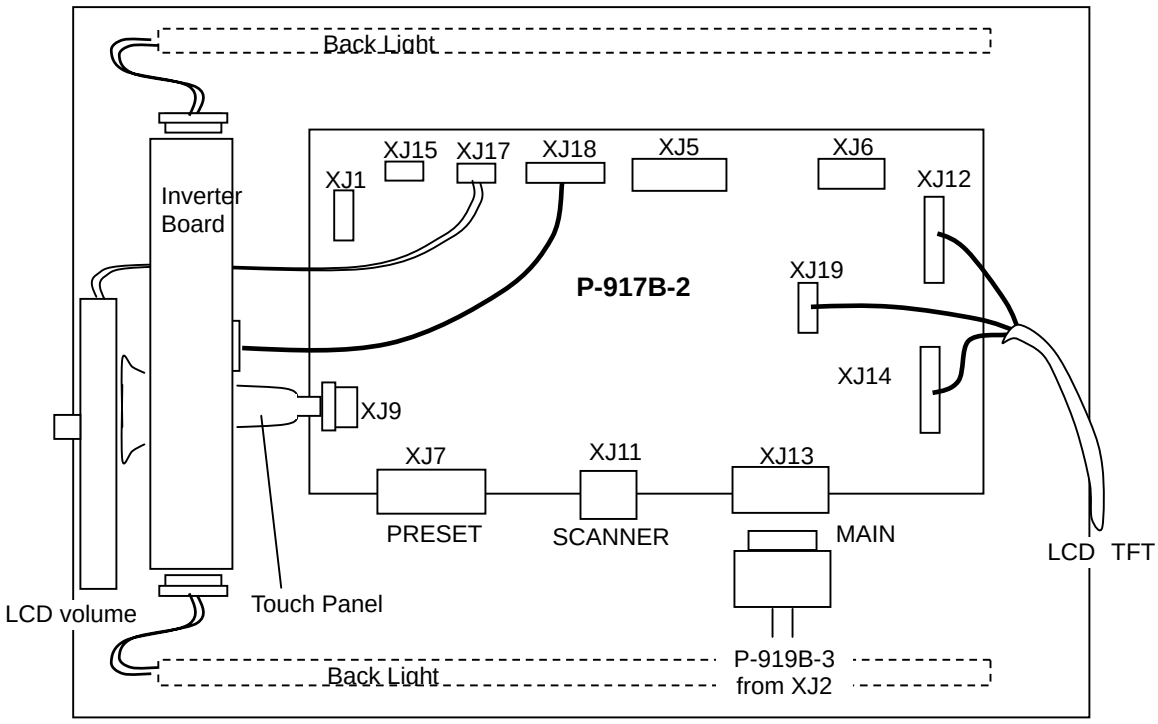
No.	Signal name	Direction	Other end
A1-A60 B1-B60	Signal between P-909 and P-910	←→	P-910 (XJ3)

6.4 CONTROL CONSOLE PC BOARD (P-917B-2)

6.4.1 BOARD LOCATION

This board controls the control console.
It is located in the main body.





〔Rear view〕

6.4.2 I/O SIGNALS

XJ8

No.	Signal name	Direction	Other end
1-14	Keyboard control signal	←	Numeric keys

XJ9

No.	Signal name	Direction	Other end
1-4	Touch panel control signal	←	Touch panel

XJ12

No.	Signal name	Direction	Other end
1,4,8-15	LCD control signal	←→	TFT LCD display
2,3,6	Not used	-	
5,7	GND	-	

XJ13

No.	Signal name	Direction	Other end
1-26	LCD control signal RS-232C DC+12V	-	P-919 (XJ2)

XJ14

No.	Signal name	Direction	Other end
1-8	LCD control signal	←→	TFT LCD display
9	DC+5V	→	
10	GND	-	
11-14	Not used	-	

XJ17

No.	Signal name	Direction	Other end
1	LCD contrast adjustment variable resister	-	LCD volume
2	LCD contrast adjustment variable resister	-	

XJ18

No.	Signal name	Direction	Other end
1-3	DC+12V	-	LCD inverter
4,5	GND	-	
6	VR-2	-	
7	VR-1	-	

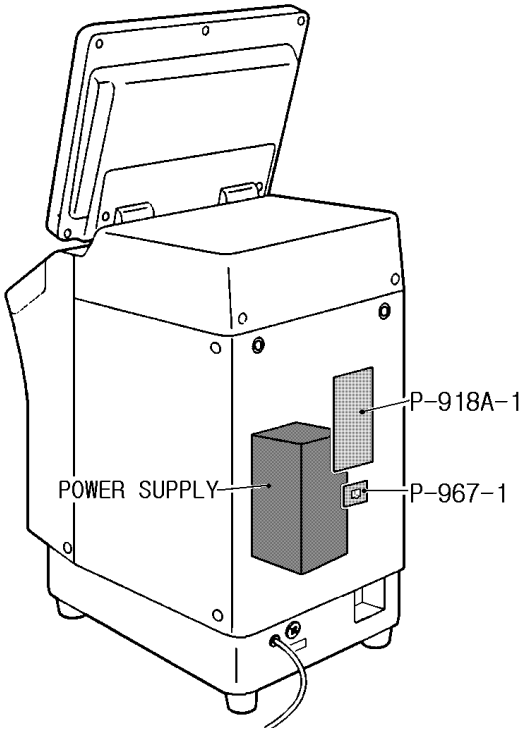
XJ19

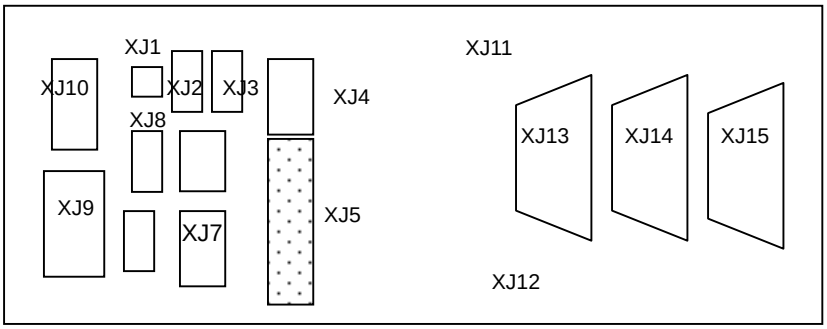
No.	Signal name	Direction	Other end
1	DC+5V	-	LCD display
2,4	GND	-	
3,5-7	LCD control signal	-	

6.5 CONNECTOR JUNCTION PC BOARD (P-918A-1)

6.5.1 BOARD LOCATION

This board connects the I2NET and the options.
It is located in the main body.





6.5.2 I/O SIGNALS

XJ5

No.	Signal name	Direction	Other end
1-8	RS-232C	←→	P-910 (XJ1)
9-12	I2NET (ELAN)	←→	
13-16	I2NET (ILAN)	←→	
17-18	RS-485(Wrapper, Applicator, Sensors, and Scale)	←→	
19-20	DC+24V	←	
21-24	GND	-	

XJ11

No.	Signal name	Direction	Other end
1	I2NET D	←→	ILAN (Option 1)
2	I2NET $\overline{D}$	←→	
3	I2NET EN	←→	
4	I2NET $\overline{EN}$	←→	
5	GND	-	
6	FG	-	

XJ12

No.	Signal name	Direction	Other end
1	I2NET D	←→	ILAN (Option 1)
2	I2NET $\overline{D}$	←→	
3	I2NET EN	←→	
4	I2NET $\overline{EN}$	←→	
5	GND	-	
6	FG	-	

XJ13

No.	Signal name	Direction	Other end
1	Not used	-	ELAN (INLINE)
2	Not used	-	
3	GND	-	
4	I2NET EN	←→	
5	I2NET D	←→	
6	Not used	-	
7	FG	-	
8	I2NET $\overline{EN}$	←→	
9	I2NET $\overline{D}$	←→	

XJ14

No.	Signal name	Direction	Other end
1	Not used	-	ELAN (INLINE)
2	Not used	-	
3	GND	-	
4	I2NET EN	←→	
5	I2NET D	←→	
6	Not used	-	
7	FG	-	
8	I2NET $\overline{EN}$	←→	
9	I2NET $\overline{D}$	←→	

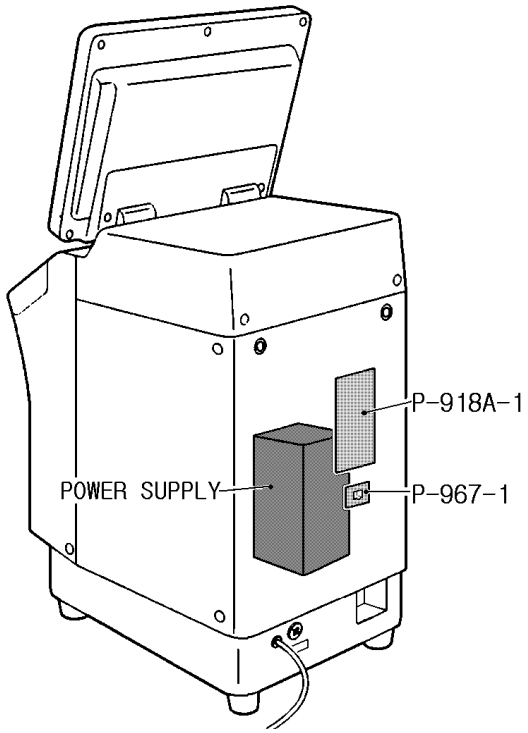
XJ15

No.	Signal name	Direction	Other end
1	RS232C CD	←→	ELAN (INLINE)
2	RS232C RxD	←→	
3	RS232C TxD	←→	
4	RS232C DTR	←→	
5	RS232C SG	-	
6	RS232C DSR	←→	
7	RS232C RTS	←→	
8	RS232C CTS	←→	
9	RS232C RI	←→	

6.6 LAN PC BOARD (P-967-1)

6.6.1 BOARD LOCATION

This board connects a computer, etc. using TCP-IP.
It is located in the main body.



6.6.2 I/O SIGNALS

XJ1

No.	Signal name	Direction	Other end
1	LAN TD+	←	P-910 (XJ18)
2	LAN TD-	←	
3	LAN RD+	→	
6	LAN RD-	→	
4.5.7.8	GND	-	

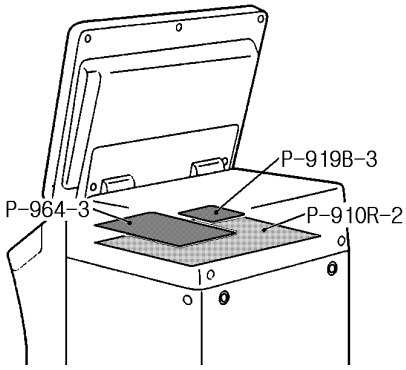
XJ2

No.	Signal name	Direction	Other end
1	LAN TX+	→	LAN
2	LAN TX-	→	
3	LAN RX+	←	
6	LAN RX-	←	
4.5.7.8	GND	-	

6.7 DISPLAY JUNCTION PC BOARD (P-919B-3)

6.7.1 BOARD LOCATION

This board junctions the main PC board and the display PC board.
It is located in the right side cover of the main body.



6.7.2 I/O SIGNALS

XJ1

No.	Signal name	Direction	Other end
1,3,4,6, 8-15	LCD control signal	←→	P-910 (XJ10)
2	Not used	-	
5･7	GND	-	

XJ2

No.	Signal name	Direction	Other end
1-26	LCD control signal RS-232C DC+12V	-	P-917 (XJ13)

XJ3

No.	Signal name	Direction	Other end
1-8	LCD control signal	←→	P-910 (XJ9)
9	DC+5V	←	
10	GND	-	
11-14	Not used	-	

XJ4

No.	Signal name	Direction	Other end
1	RS232C TxD	←	P-910(XJ5)
2	RS232C RTS	←	
3	RS232C RxD	→	
4	RS232C CTS	→	
5	RS232C DC+5V	←	
6	RS232C SG	-	
7	RS232C FG	-	

XJ6

No.	Signal name	Direction	Other end
1	DC+12V	←	P-910(XJ11)
2	GND	-	
3	Buzzer ON/OFF	←	

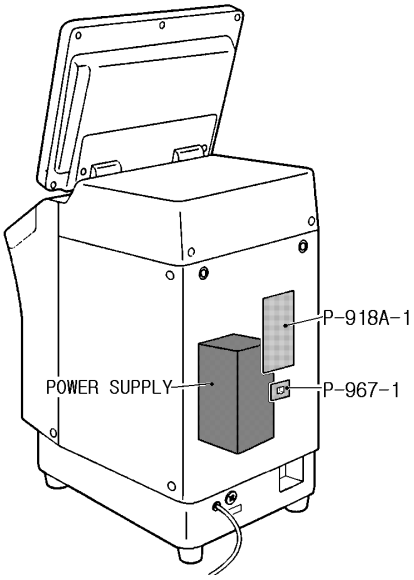
XJ7

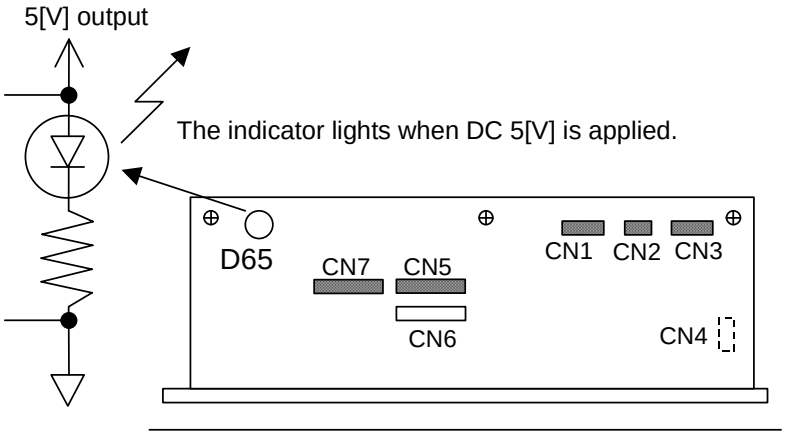
No.	Signal name	Direction	Other end
1	DC+12V	←	Switching power supply (CN7)
2	GND	-	

6.8 SWITCHING POWER SUPPLY (2H113WI)

6.8.1 BOARD LOCATION

This unit is located in the main body.



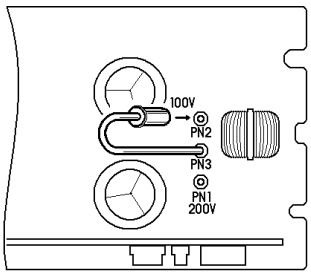


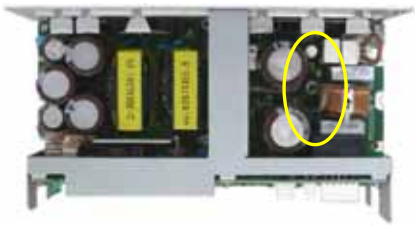
CAUTION

When the 200V is applied to the 100V specification, the switching power supply is damaged. Confirm the specification power-supply voltage.

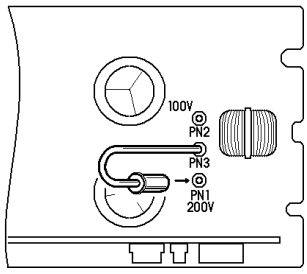
- **Input voltage select.**

PN2-PN3: 100V - 120V
(AC85 - 132V)





PN1-PN3: 200V - 240V
(AC170 - 264V)



6.8.2 I/O SIGNALS

CN1

No.	Signal name	Direction	Other end
1	AC110 V –120V/230V	←	Power plug
3	AC110 V –120V/230V	←	
2	Not used		

CN2

No.	Signal name	Direction	Other end
1	AC110 V –120V/230V	←	Fuse
2	AC110 V –120V/230V	←	

CN3

No.	Signal name	Direction	Other end
1	AC110 V –120V/230V	→	Power switch
2	AC110 V –120V/230V	←	
4	AC110 V –120V/230V	→	
5	AC110 V –120V/230V	←	
3	Not used		

CN5

No.	Signal name	Direction	Other end
1-3	DC24V	→	Not used
4-6	GND	-	

CN7

No.	Signal name	Direction	Other end
1	DC+5V	→	P-910 (XJ2)
2	DC+12V	→	P-910 (XJ2, P-919 (XJ7)
3	Not used		
4	GND	-	P-910 (XJ2)
5	GND	-	P-910 (XJ2), P-919 (XJ7)

A

APPENDIX A LABELFORMATTING

Contents

LABEL FORMATTING

A

A.1 LABEL FORMAT TABLE

To print the numeric, character, barcode, line, or image data;

- Where the data is stored
- The position to be printed
- In which size
- And other print information is required.

A collection of these data which determines the printing style is called “Label Format Table”, and printing is performed based on these information.

Label format table with this machine is as follows;

Fixed program: 20 formats stored
Fixed program in the CompactFlash

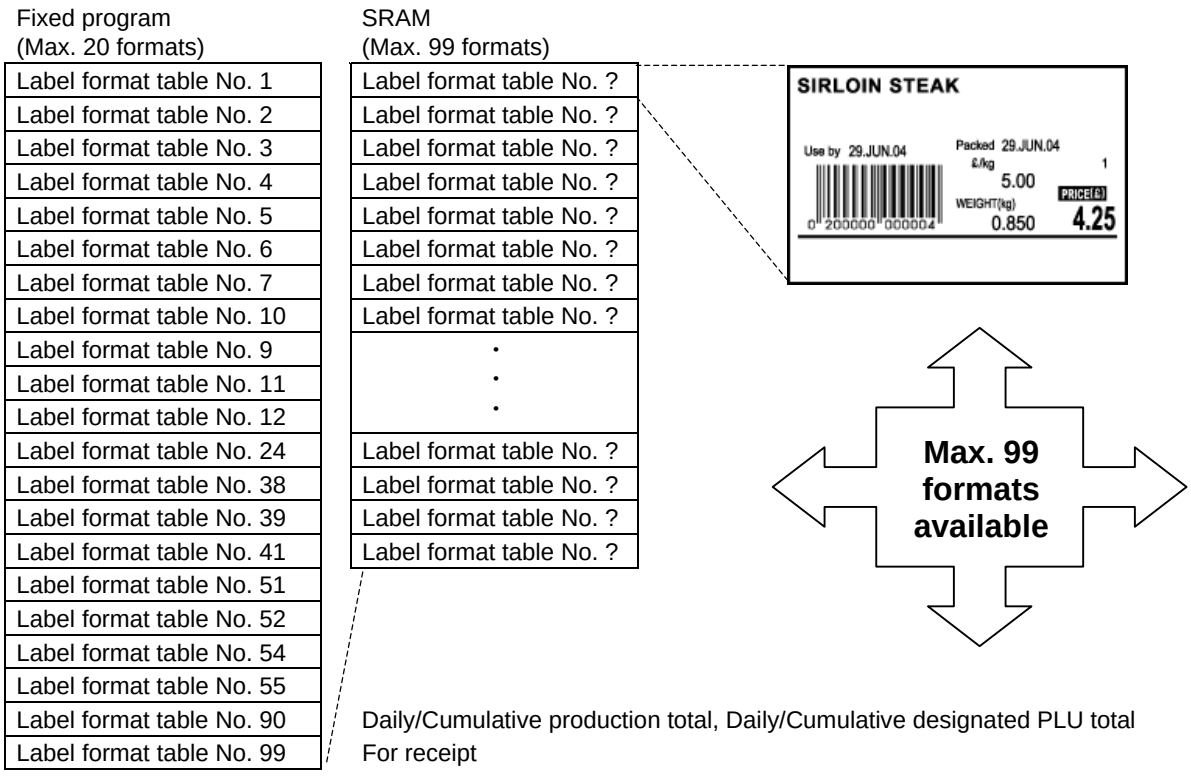
SRAM: Max. 99 formats stored
Using this machine, a maximum of 99 formats can be created and stored in the SRAM. This data can be written in the F/D using the DataRapid.

Up to 99 formats (label format number 1 through 99) are available with this machine.
If the same label number exists both in the CompactFlash and SRAM, the one in the SRAM is used.

The maximum number of label format tables are;

(1) Number of label formats in the Compact Flash
20 written formats (fixed, not possible to change)

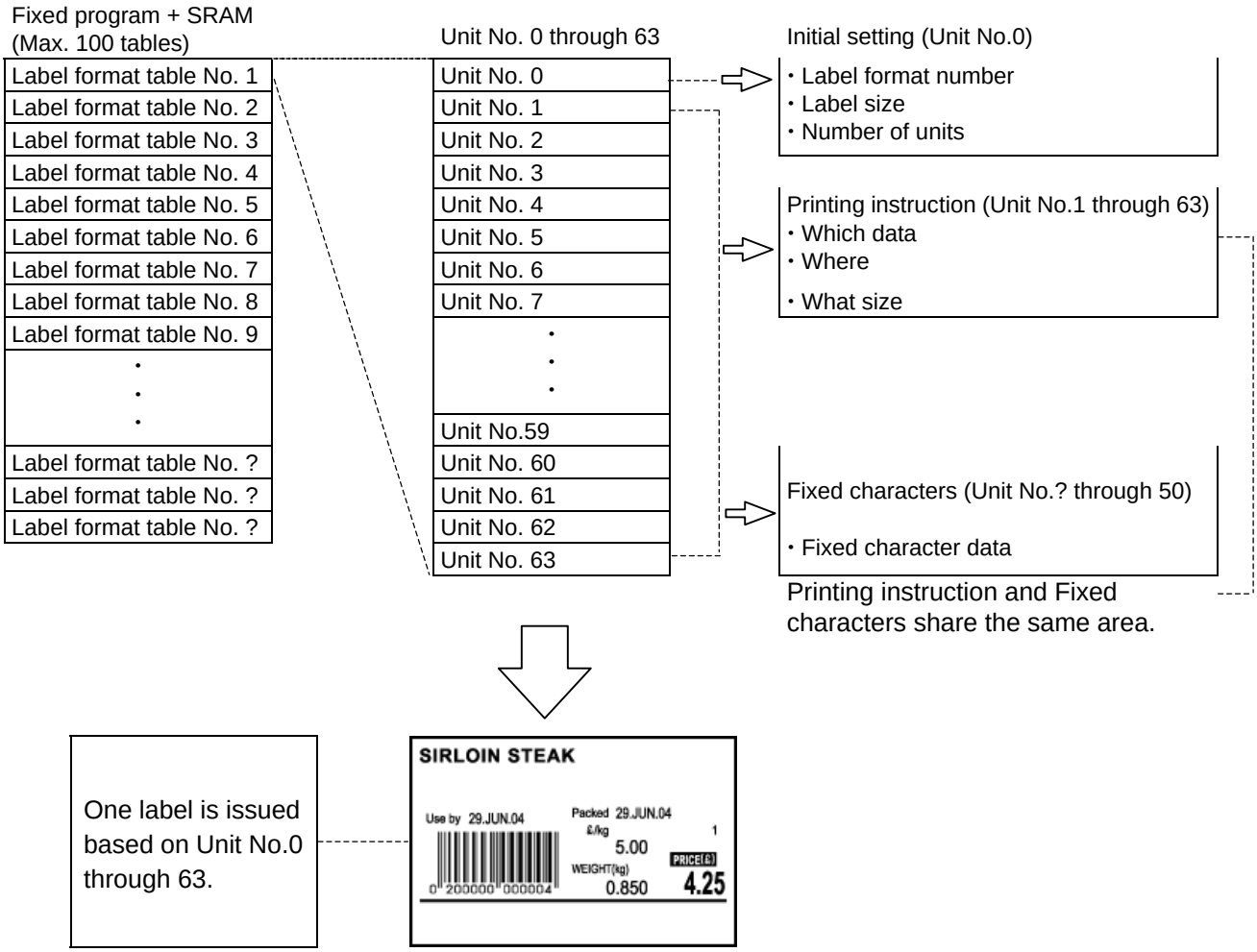
(2) Number of formats in SRAM
99 formats (possible to be written in Set Up mode)



A.2 LABEL FORMAT TABLE CONFIGURATION

The label format table configuration for printing one label is shown below.
One unit is used for printing per one printing item.

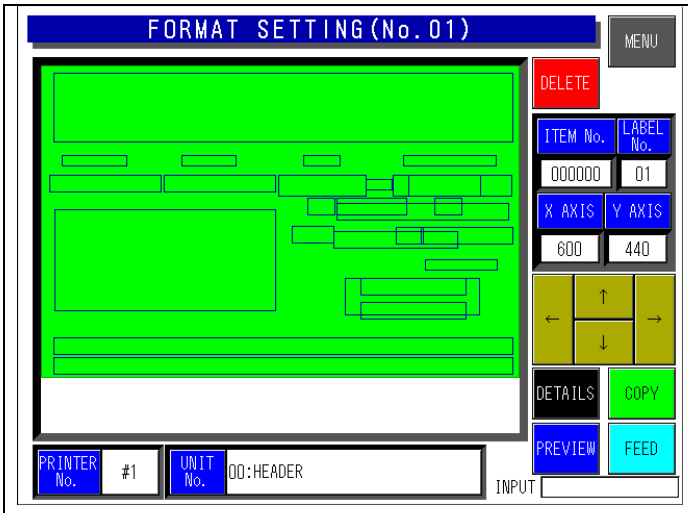
Up to 63 items (Unit No. 1 through 63) can be printed for one label.
The unit number “0” is nothing to do with the printing item.

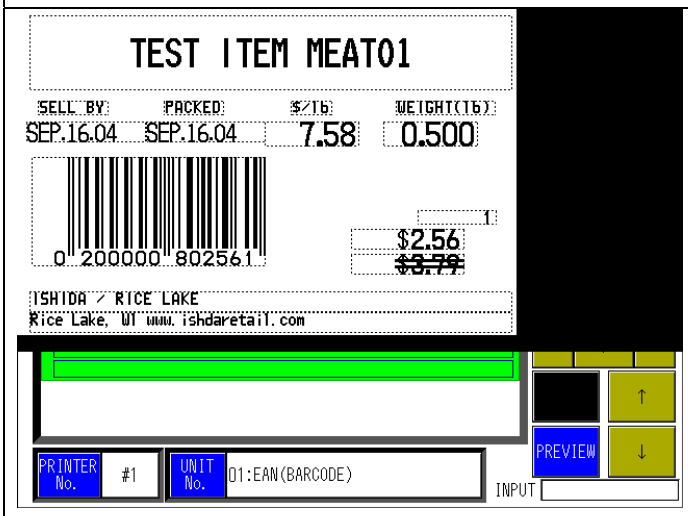


Label format table configuration

A.3 PRINTING POSITION CHANGE

This section explains the procedure of changing the print position of the unit price (item print and data). As an example, call the format number “1”, and register the changed format to the format number “1".

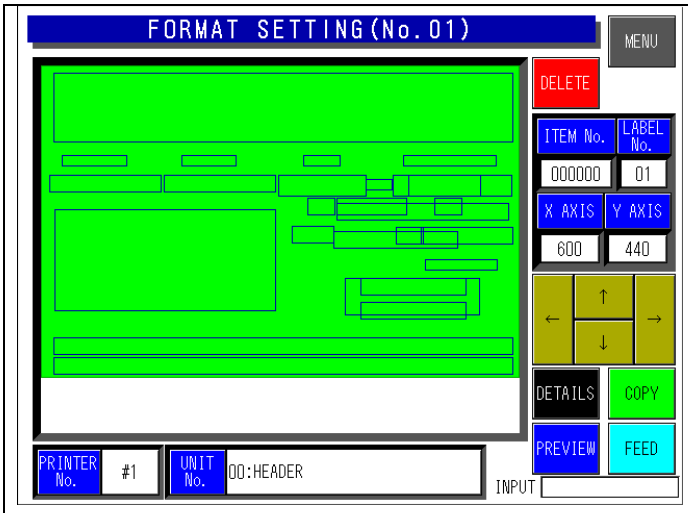


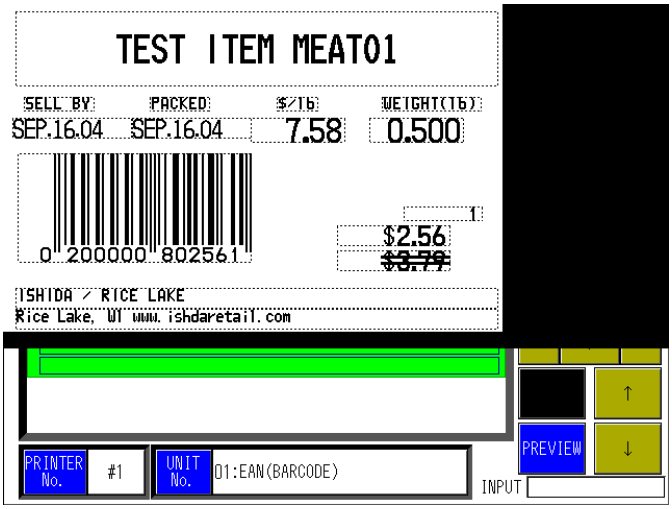


Call a label format number.
1→[PLU]
The format is displayed.
Set the label number.
Enter the label number→[Label No.]
Set the test item number
Enter the item number→[Item No.]
Print the non-changed label.
[PRINT]
Call the unit of unit price data
Touch the data field of Unit No. six times to display “06: Normal Numeric (Unit price)”.
Or,
[6] → Touch the data field of Unit No
When [Unit No] is touched, the list appears and unit price data printing place turns in red frame.
Unit price data printing position change
Use [←][↑][→][↓] keys to move the printing position.
Call the unit price printing unit.
[3][4] → Touch the data field of Unit No
“34: Fixed Character String (Unit price)” is displayed.
The unit price area turns in red frame.
Unit price printing position change
Use [←][↑][→][↓] keys to move the printing position.
Confirm the changed contents as an image.
Changed label print
[PRINT]
Save the changed label format
[MENU]
Touch the [EXECUTE] key on the save confirmation screen.

A.4 PRINT SIZE CHANGE

This section explains the procedure of changing the print size of the unit price data.
As an example, copy the label format No.1 to a new label format No.80, and register it as a changed format as the format number 80.

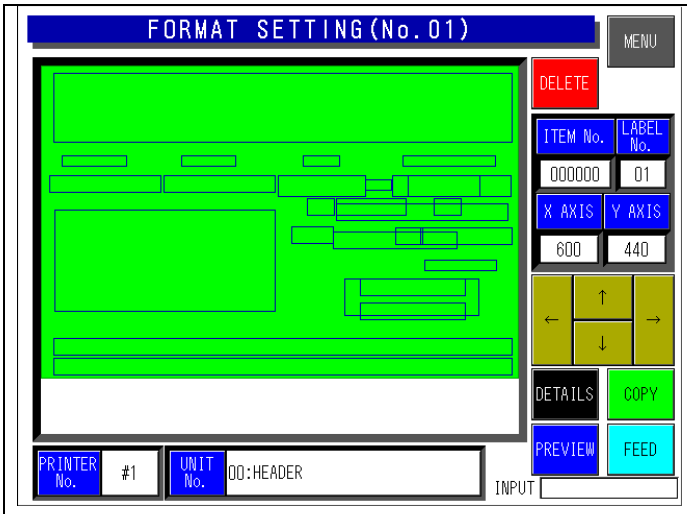


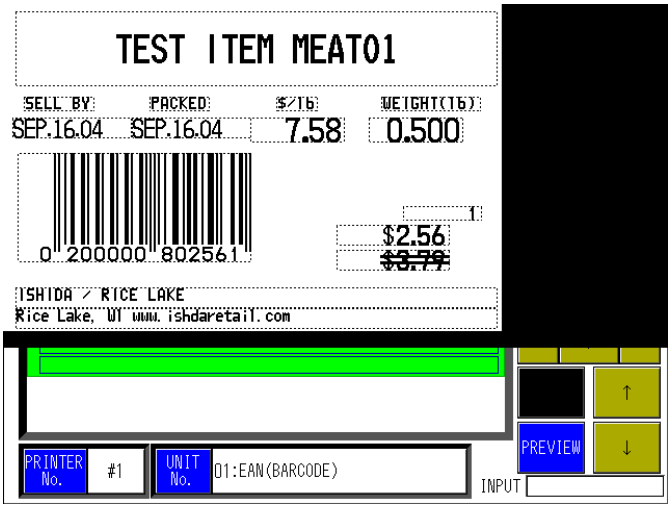


Call a new label format number.
[8][0] → [PLU]
Copy the existing label format number.
[1] → [COPY]
Set the label number.
Enter the label number. → [LABEL No.]
Set the test item number.
Enter the item number. → [ITEM No.]
Print the non-changed label.
[PRINT]
Call the unit price data unit.
Touch the data field of Unit No. six times to display “06: Normal Numeric (Unit price)”.
Or,
[6] → Touch the data field of Unit No.
When [Unit No] is touched, the list is displayed. unit price data printing place turns in red frame.
Change the size of the unit price data
[DETAIL]
Select the character type.
Touch [CHARCTER TYPE] to select the desired size.
Select “08” as an example.
Touch the [RETURN] key.
Confirm the changed contents as an image.
[Confirm]
Touch [Confirm] again will return to the original screen.
Changed label print
[PRINT]
Save the changed label format
[MENU]
Touch the [EXECUTE] key on the save confirmation screen.

A.5 FIXED CHARACTER CONTENT CHANGE

This section explains the procedure of changing the unit price.
As an example, copy the label format No.1 to a new label format No.81, and register it as a changed format as the format number 81





Call a new label format number.
[8][1] → [PLU]
Copy the existing label format number.
[1] → [COPY]
Set the label number.
Enter the label number. → [LABEL No.]
Set the test item number.
Enter the item number. → [ITEM No.]
Print the non-changed label.
[PRINT]
Call a unit of the fixed character string (unit price).
[3][4] → Touch the data field of Unit No. to display “34: Fixed Character String (Unit price)”.
The fixed character string printing area turns in red frame
Display the Unit Setting screen.
[DETAIL]
Register the fixed characters of the unit price.
Touch the [EDIT] key.
Enter the fixed characters (unit price).
Divided by a carriage return, the first line of the PLU name is the Fixed Character No.1, and the second line is No.2.
After entry, touch the [RETURN] key to register.
Register the fixed character number to “1”.
Character No. → [1] → Character No
Confirm the changed contents as an image.
Touch the [RETURN] key to return the display to the Format Setting screen.
[Confirm]
Touch [Confirm] again will return to the original screen
Changed label print.
[PRINT]
Save the changed label format
[MENU]
Touch the [EXECUTE] key on the save confirmation screen

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