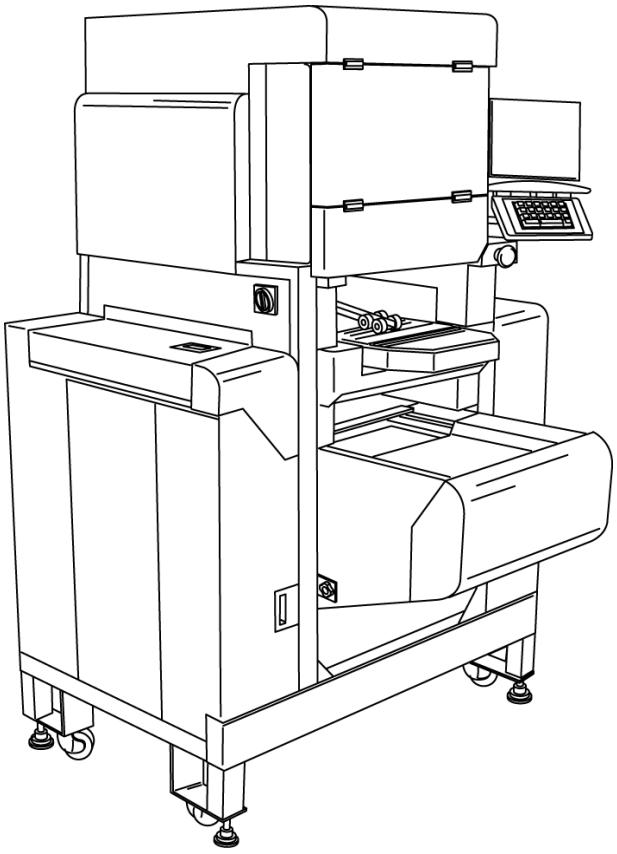
Automatic Weigh/Wrap Labeling Machine

WM-4000

Service Manual



IMPORTANT

- Do not carry out installation, operation, service, or maintenance until thoroughly understanding the contents of this manual.
- Keep this manual available at all times for installation, operation, service, and maintenance.

ISHIDA CO., LTD.

PN 155665

IMPORTANT NOTICE

Thank you for purchasing the ISHIDA WM-4000.
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.

SAFETY CONSIDERATIONS

This service manual contains information necessary for servicing the WM-4000. It is strongly advised that the following safety measures must be observed to ensure the safe servicing of the machine:

- **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.

- **Properly ground machinery**
  As a Class 1 electrical device, this machine requires protective grounding for safe operation. To avoid any potential electrical shock, securely attach the protective ground wire to the main grounding provision.

- **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.

MAINTENANCE PRECAUTIONS

To ensure the safety and long operating life of this machine, it is important to observe the following 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 INSTALLATION

CONTENTS

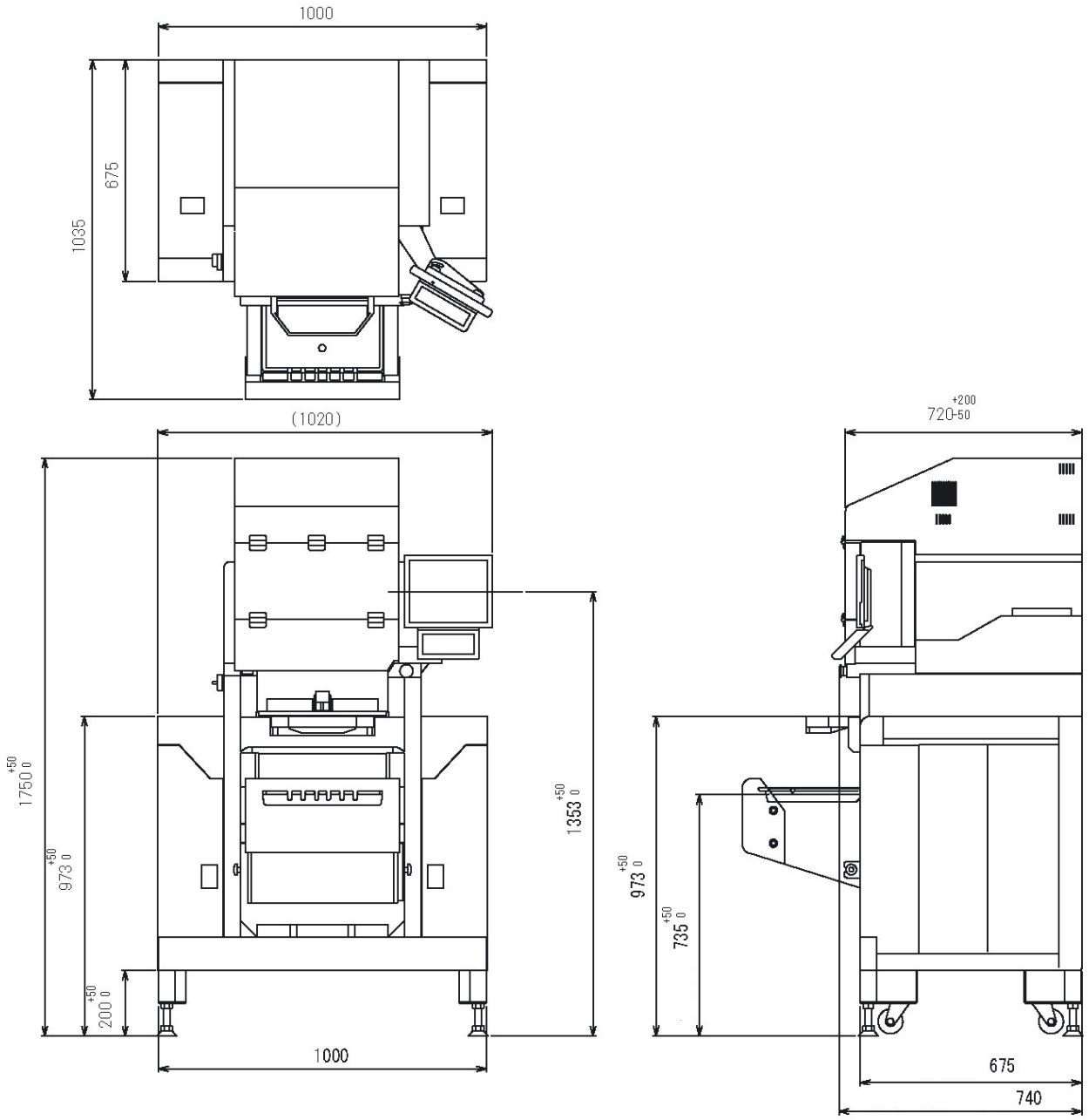
1.1 SPECIFICATIONS

No.	Item	Specifications
1	**Environmental Conditions**	
1.1	Temperature range	5°C - 35°C
1.2	Operating humidity	20% - 85% (Non condensing)
2	**Basic Specifications**	
2.1	Wrap weight	0.04kg - 3kg
2.2	Max. weight	0.04kg - 15kg
2.3	Power supply	Oceania: 3-phase circuit, AC400V±10% 50/60Hz S. Africa: 3-phase circuit, AC380V±10% 50/60Hz
2.4	Total height	Oceania: Max. 1830mm (Display part excluded) S. Africa: Max. 1755mm (Display part excluded)
2.5	Machine weight	30kg or less
3	**Wrapping Unit**	
3.1	Film size	Nominal width: 250mm - 500mm
3.2	Film roll length.	1000m
3.3	Film type	Polyolefin/polyvinyl chloride
4	**Printer/Applicator**	
4.1	Label size	Width: 47mm - 80mm Length: 45mm - 105mm
4.2	Label position	Direction: Vertical/Horizontal Position: Right side of the tray
5	**Longevity Target**	5 years for use (consumable parts excluded) Condition: 3000 packing/day, 350 operating days (4200 hours), 5.25 million packing in five years.
6	**Safety**	Conforming to ISHIDA product safety standard and warning display standard
7	**Standards**	ISHIDA product standard conforming Oceania EMI restriction OIML R76 conforming Australia New Zealand Measurement Law

1.2 EXTERNAL DIMENSIONS

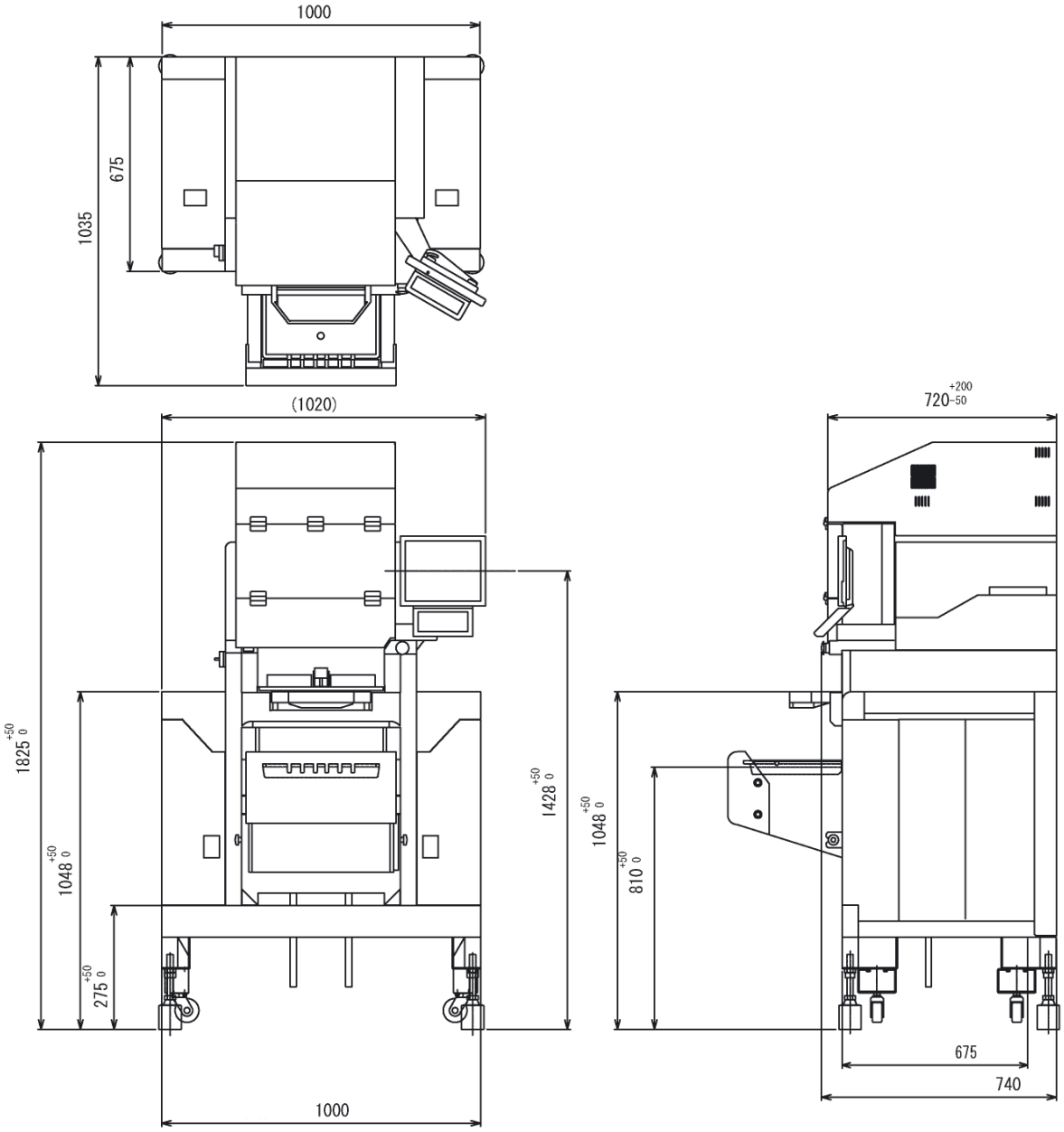
External dimensions are shown in the figures below.

■ **South Africa Specification** (Unit: mm)



■ Oceania Specification

(Unit: mm)



1.3 INSTALLATION PROCEDURE

1.3.1 REQUIRED TOOLS

In addition to tools a service person usually brings alone, the following tools are required:

- Wrench (opposite side 30mm)
- Switch Actuator Straight (Part No. 072-2322-05)
  This part is an insert key into each safety detection switch.
  It is convenient when checking operations with covers and doors open (two for film replacement doors, two for film removal covers, one for front cover, and two for infeed conveyor covers).
- Weight (for weighing capacity)

1.3.2 WORK CLOTHES

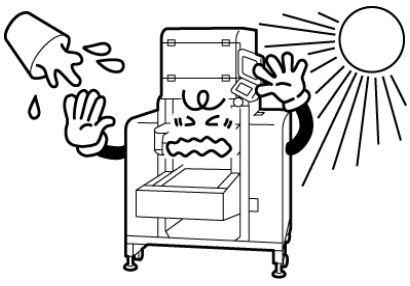
Avoid wearing loose clothing that might be caught in the machine.
Shirt sleeves should be kept buttoned or rolled securely above the elbows.
Do not wear gloves to keep fingers or hands from getting caught in the machine.
Ties should be tucked inside shirts.

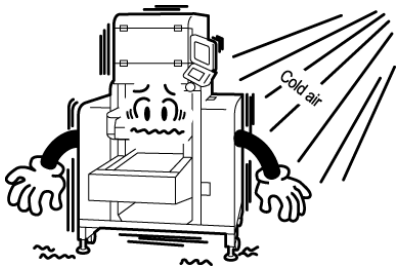
1.3.3 PROHIBITED LOCATIONS

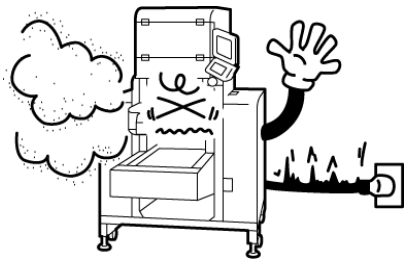
⚠WARNING

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

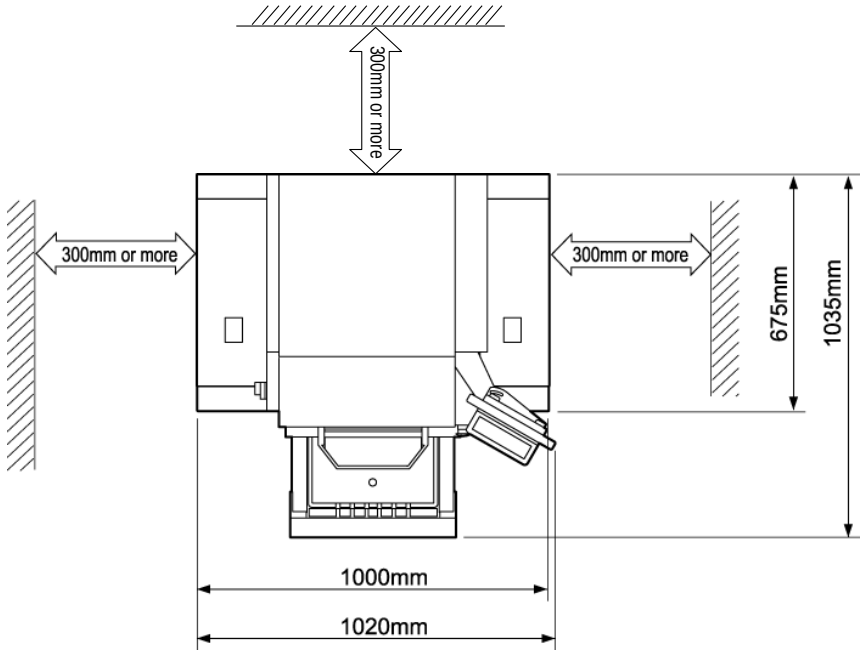






1.3.4 INSTALLATION SPACE

Allow ample installation space on either side of the machine to ensure easy access for maintenance.



1.3.5 INSTALLATION PROCEDURE

1. Bring in the machine.
- Confirm the floor strength of the installation site and the passage route.
- When the passage route is too narrow to bring in the machine, detach the Infeed Unit form the main body. → Refer to the DVD manual.

Note: The caster diameter is 75mm.

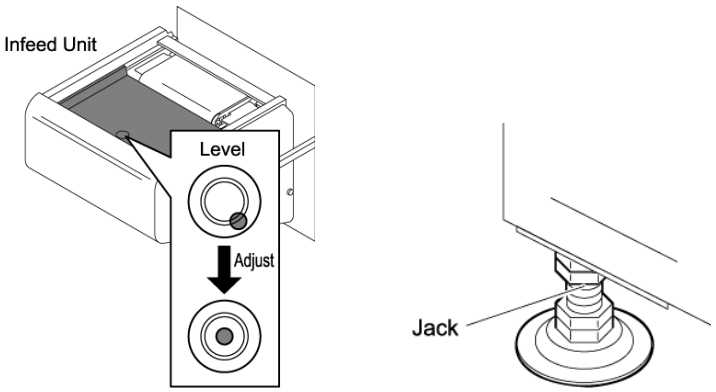
2. Detach the air cap sheet with which the exterior is covered in transportation.

3. Detach the following protection materials.
- Rubber band and cardboard of the Infeed Unit
- Air cap sheet and cardboard of the Control Console.
- The operation movable part is fixed in transportation. Remove the knob, and install it in the hole.

⚠CAUTION
Install the packing materials back to their original positions when transporting the machine again.

4. Remove the packing materials for fixation.
- Packing for the Infeed Unit
- Packing for the Lift Unit
- Band for the Camera Unit
- Packing under the Applicator Arm
- Band for right and left of the Applicator fixation
- Cardboard for front and rear of the Applicator
- Rubber band for the Tray Press

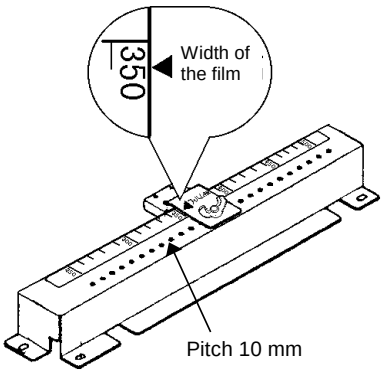
5. Adjust the four level adjustment feet (jacks) to locate the bubble of the level gauge in the center of the window. (Use the wrench with opposite side 30mm)



6. Match the pin spike projection amount of the film holder to the internal core diameter of the film roll.
Confirm the insertion power when spiked to the roll core when inserting the film roll on the film holding shaft.

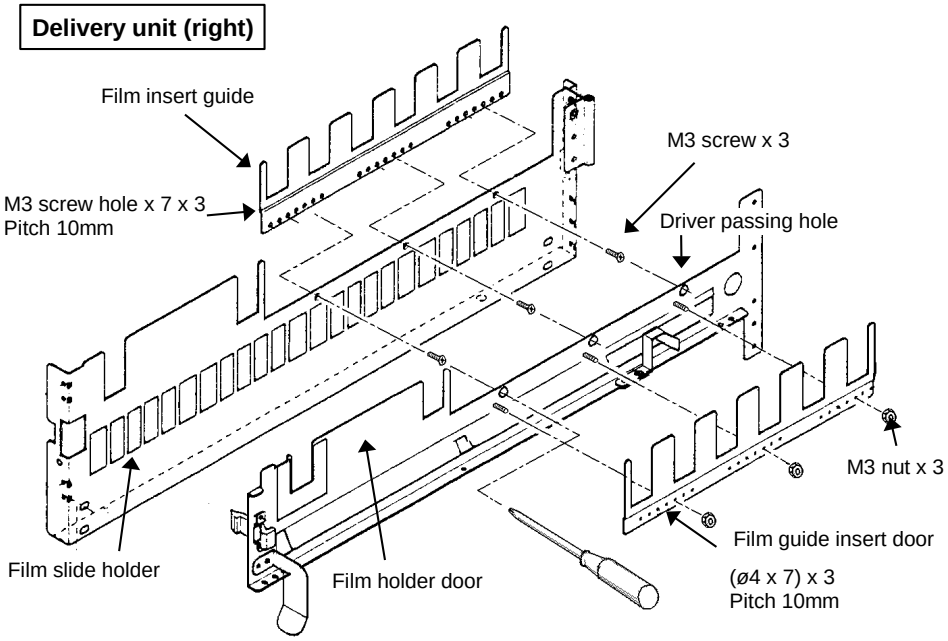
7. Open the Feeder Cover, and set the film width. The basic width is 250 (minimum), 300, 350, 400, 450, or 500 (maximum) mm. In this case, it functions by simply moving the wing screw.

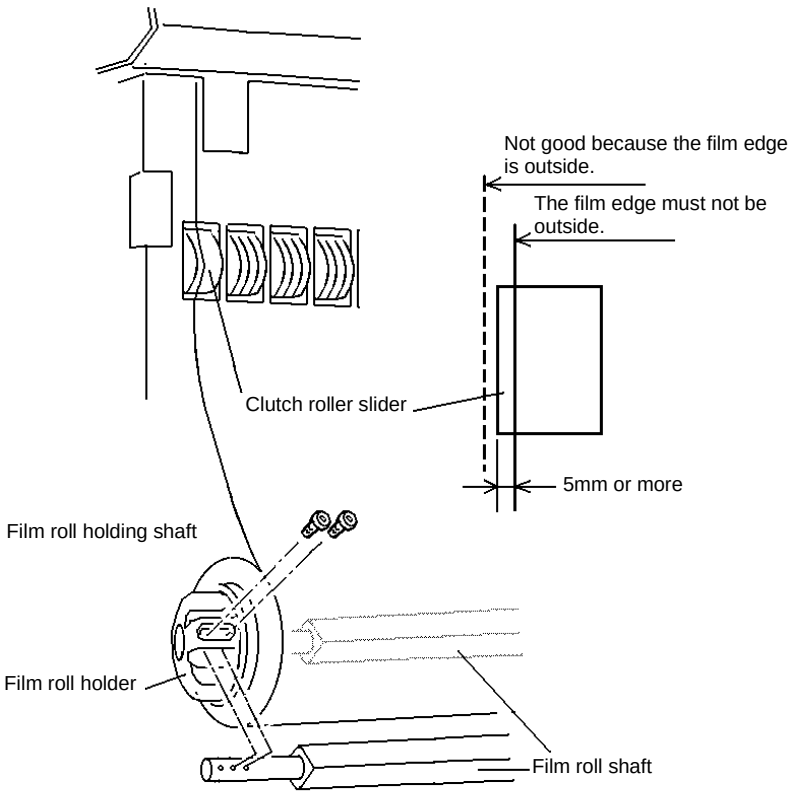
If the film width is 380 mm for example, move the wing screw position to 380 mm, and also adjust to make the Film Guide Insert and Film Guide Insert Door wider by 30mm (as many as three screw holes). This means that it is not possible for the user to do so.



8. Adjustment of the film roll maintenance shaft → Refer to the DVD manual.
There is no influence in wrapping conditions for the gap because the film is designed to come off 20 mm outside from the front and rear feeder belts. Adjustment is performed to reduce cut pieces of the film.

The film may be torn off when dimensions of the film roll core and the film width are different from ones of the genuine film and when the machine is used with the film edge coming off from the Clutch Roller Slider.





Loosen the two hexagonal headed screws and move the Film Roll Holder. Changing one screw hole of the Film Roll Shaft can move the holder by 5mm.

9. Connect the power supply with the terminal. → Refer to the DVD manual.

10. Set the film.

11. Set the label.

1.3.6 POWER SUPPLY

⚠WARNING HEED THE FOLLOWING PRECAUTIONS ABOUT 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.
- Do not stand on the power cord, and do not place anything heavy on the cord.
  Doing so may damage the cord, resulting in accident or trouble.

1.3.7 AIR SUPPLY

⚠WARNING HEED THE FOLLOWING PRECAUTIONS ABOUT AIR SUPPLY:

- **Use clean air.**
  Do not use the compressed air if it contains synthetic fluid, salt, corrosive gas, etc. which contain chemical and organic solvents. Doing so may result in damage and defective operation of the machine.

⚠CAUTION Take measures to prevent drainage by installing an after cooler, air dryer, drain catch, etc.

Compressed air containing a large amount of drainage may cause valves and other pneumatic equipment to operate improperly.

1.4 HANDLING PRECAUTIONS

● **DO NOT PUT HANDS IN THE WEIGHING, INFEEDING, OR WRAPPING AREAS**
When you need to put your hand inside the wrapping area to take something out of the weighing, infeeding, or wrapping areas, always press the Emergency Stop Button first.
Never put your hand inside the wrapping area, or it may be caught in the machine.

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

● **KEEP HANDS AWAY FROM THE FILM CUTTER**
When you need to change the film or do anything near the film cutter, always press the Emergency Stop Button first, otherwise the film cutter may come out and cut your hand.

● **KEEP HANDS AWAY FROM THE FILM ROLLERS**
When you need to change the film or do anything near the film rollers, always press the Emergency Stop Button first. There is a danger that the film rollers may move and your hands may get caught in the machine.

● **DO NOT GET YOUR HAND CAUGHT WHEN YOU CLOSE THE FILM SET ROLLER**
There is a danger that your hand may get caught when opening and closing the Film Set Roller to change the film. Close the Film Set Roller carefully to avoid injury.

● **DO NOT GET YOUR HAND CAUGHT IN THE FILM SET ROLLER WHEN CHANGING FILM**
There is a danger that your hand may get caught in the top of the Film Set Roller when changing the film. Use caution when changing the film to avoid injury.

● **DO NOT TOUCH, OR ALLOW CLOTHING TO TOUCH THE HEATER**
The heater will remain hot for some time even after the power is switched OFF, and can cause burns if touched. As the cover on the back of the heater can also become hot, do not touch the cover when pulling the handle.

● **ALWAYS PRESS THE EMERGENCY STOP BUTTON WHEN REMOVING EXCESS FILM**
There is a danger your hands will get caught in the machine. Always press the Emergency Stop Button before removing excess film.

● **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 and lower the wrapping speed.

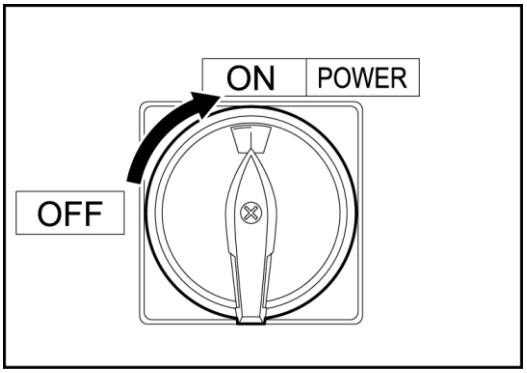
● **DO NOT APPLY HEAVY LOAD ON THE WEIGH AND INFEED UNIT WHEN IT IS EXTENDED**
The maximum load for the weigh and Infeed Unit is 10kg. If objects exceeding this weight limit are placed on the unit, it may break, or the machine itself may tip over.

2 SETUP MODE

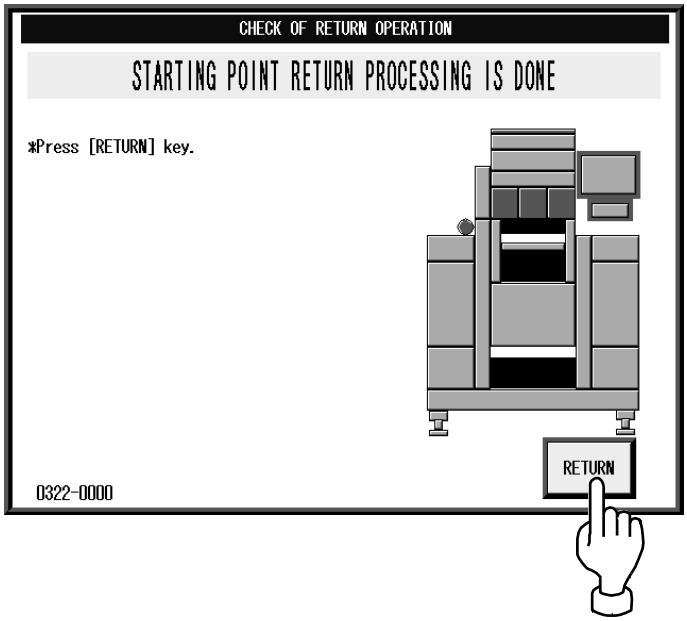
CONTENTS

2.1 STARTING PROCEDURE

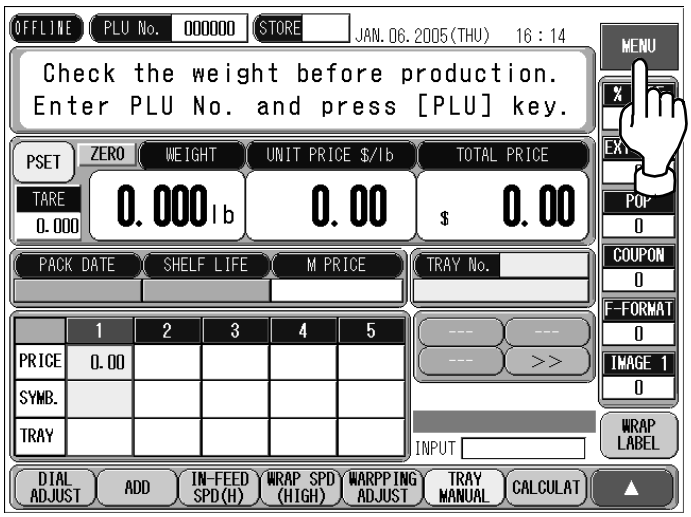
1. Turn the Main Power Switch lever clockwise to power ON the machine.



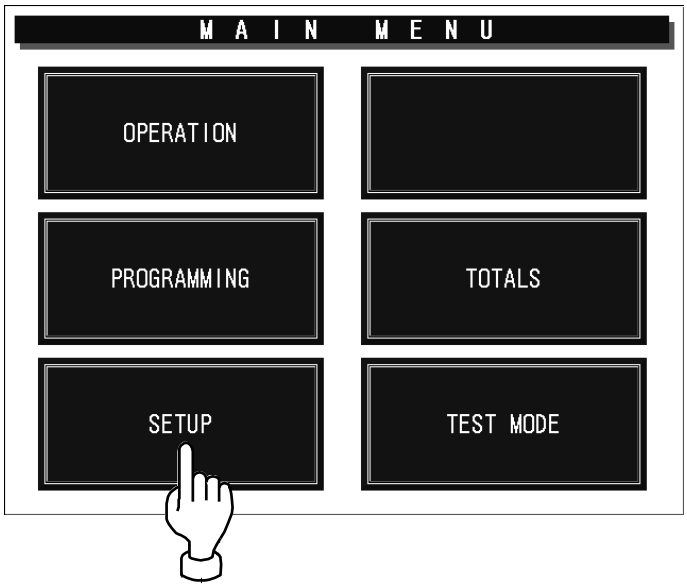
2. The Check of Return Operation screen appears. Press the [RETURN] button.



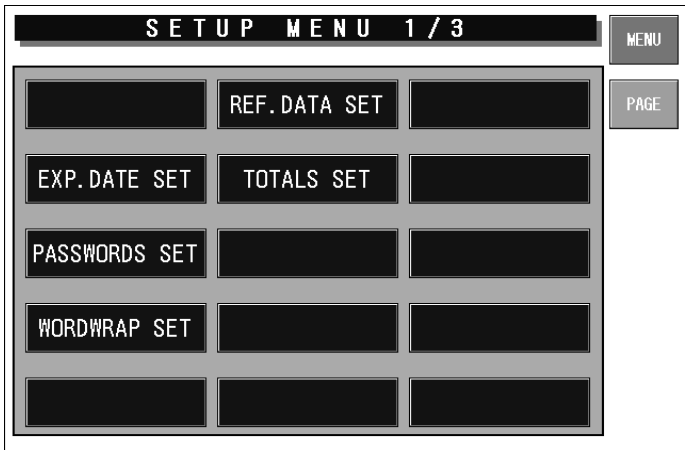
3. The initial screen appears. Press the [MENU] button on the screen.



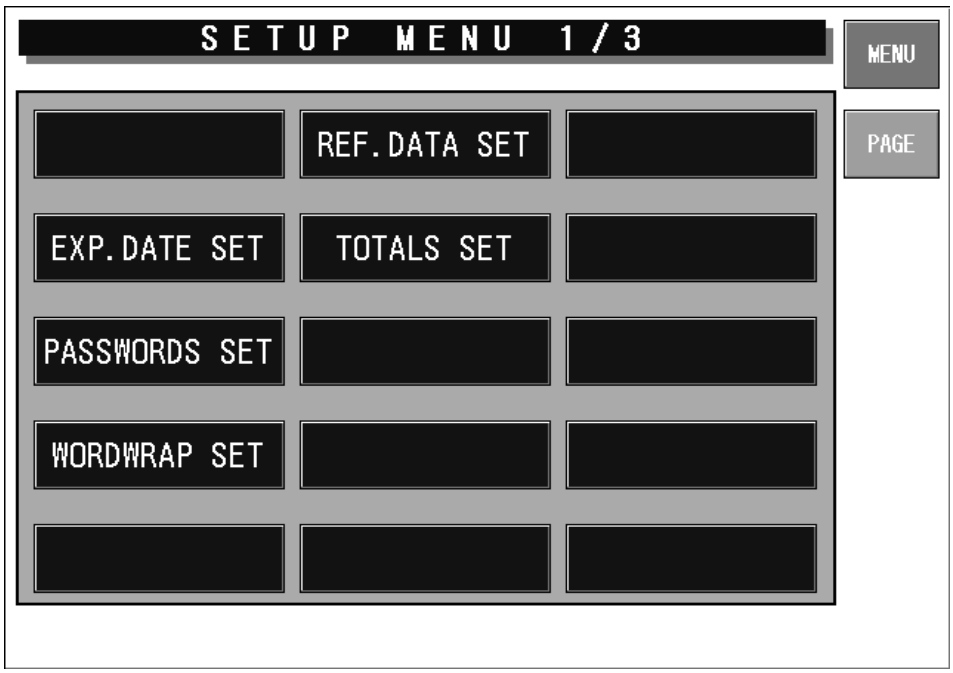
4. Press the [SETUP] button to display the Setup Menu screen.



5. The Setup Menu screen appears.

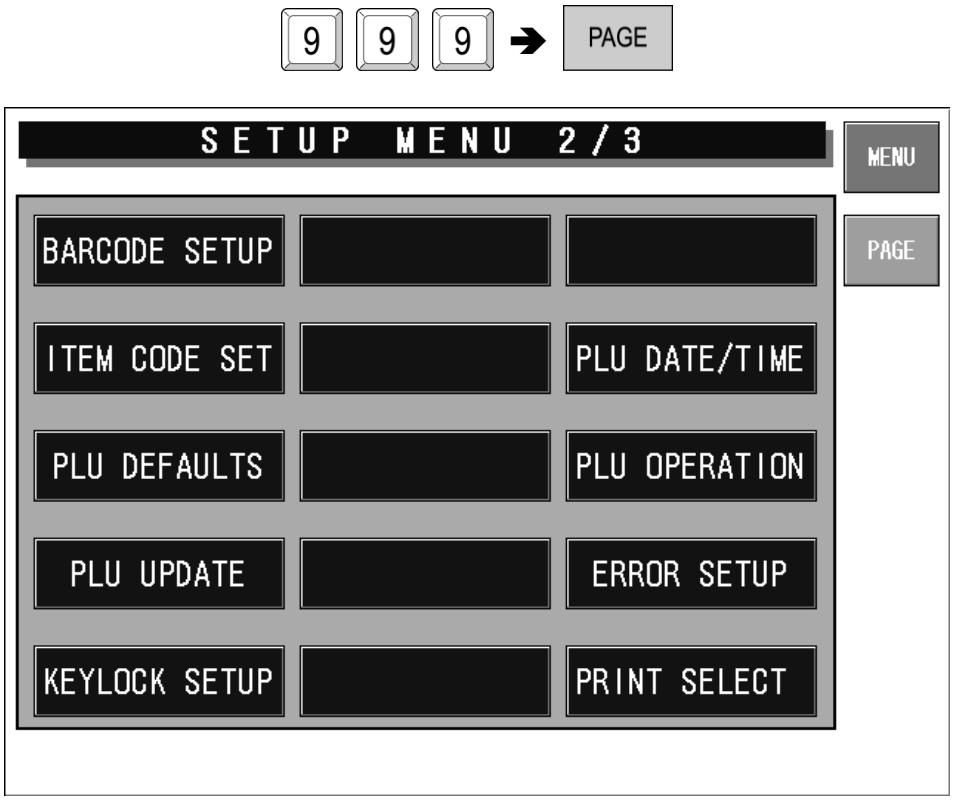


2.2 SETUP MENU



Setup Menu Screen (1/2)

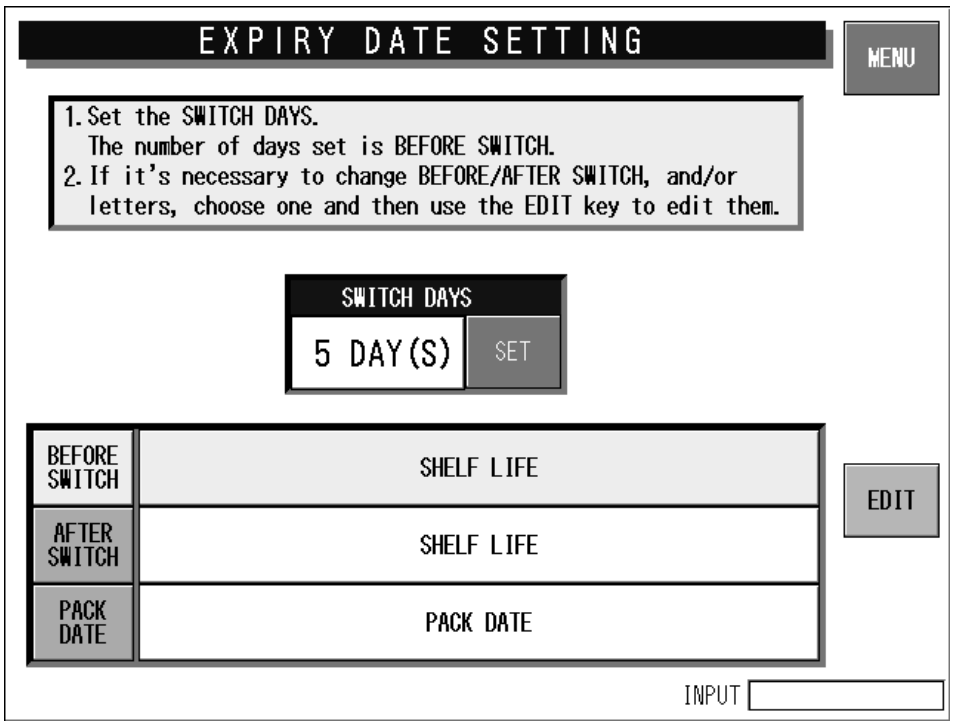
Buttons/Display Fields	Function
Expiry Date Set	Changes to the Expiry Date Setting screen. Set the expiry text change days, cutoff date text, and pack date text.
Password Set	Changes to the Password Setting screen. Set the password for entering Registration, Setup, Total, and Subtraction modes.
Word-wrap Set	Changes to the Word-wrap Width Setting screen. Set the text width in 0.1mm increments for PLU name, Message, etc。for an automatic linefeed.
Reference Data Set	Changes to the Reference Data Setup screen. Specify the operation when “Refer” is selected in the PLU registration, and set the reference data.
Total Set	Changes to the Total Add Setting screen. ・ Set whether or not to add the data to totals. ・ Set a maximum of 20 target commodities to be added to hourly totals. ・ Set the weight data type (fixed weight, actual weight) when a fixed price commodity is added to totals.
MENU	Changes to the first screen of the Setup Menu.
PAGE	Turns over the screen.



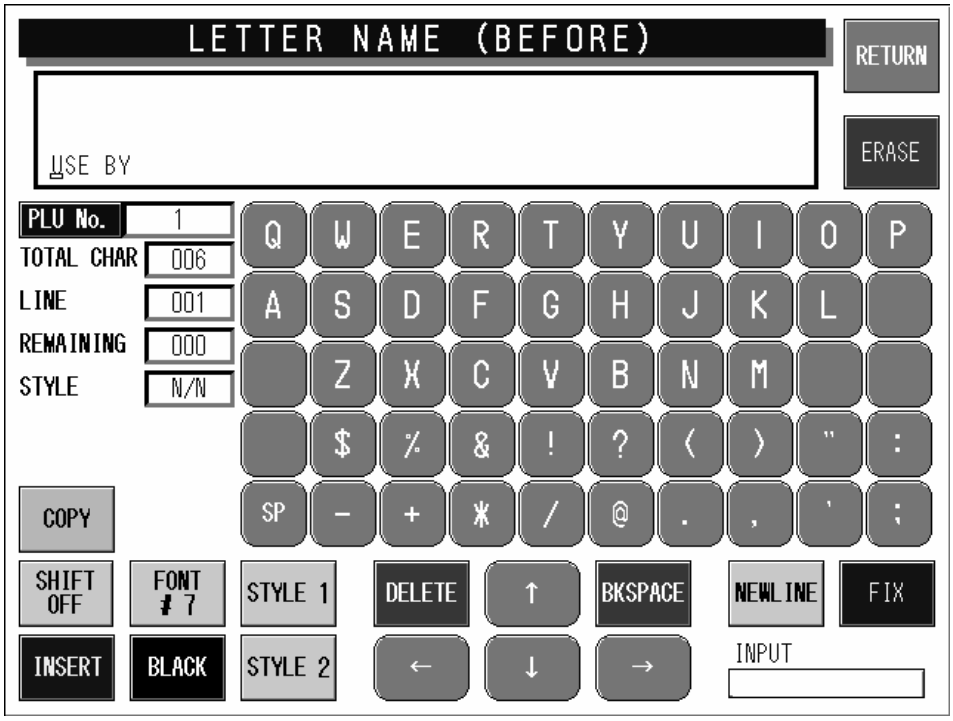
Setup Menu Screen (2/2)

Buttons/Display Fields	Function
Barcode Setup	Changes to the Barcode Setting screen. Set the POS type, POS system, and POS flag (system reference data).
Item Code Set	Changes to the Item Code Setting screen. Assign the classification code (position/digit number) in an item code, and set the code position and the digit number for a barcode.
PLU Defaults	Changes to the PLU Default Data Setting screen display. Set the default master data when newly created in the PLU registration.
PLU Update	Changes to the PLU Update screen. Perform the batch data changing process for the master data of existing commodities.
Key Lock Setup	Changes to the Key Lock Setup screen. Set the key lock password, and the key lock availability for each item.
PLU Date/Time	Changes to the PLU Date/Time Setting screen. Set the pack date holding function, accrued pack date processing, and time rounding.
PLU Operation	Changes to PLU Operation Setting screen. Set the number of digits for calling a PLU code, register code, wrapping mode, unit price holding function, and shop change processing.
Error Setup	Changes to the Error Setup screen. Set the processing procedure when a PLU code is not found, the price data is “0”, a PLU in which the tare weight is not registered is called, or the head failure is detected.
Print Select	Changes to the Print Select screen. ・ Set whether to print the barcode on the top of the tray when two labels are issued, and the barcode is set to print on the bottom label. ・ It is referred when “System Reference” is set in the barcode print selection when two labels are issued in the store master registration.
MENU	Changes to the first screen of the Setup Menu.
PAGE	Turns over the screen.

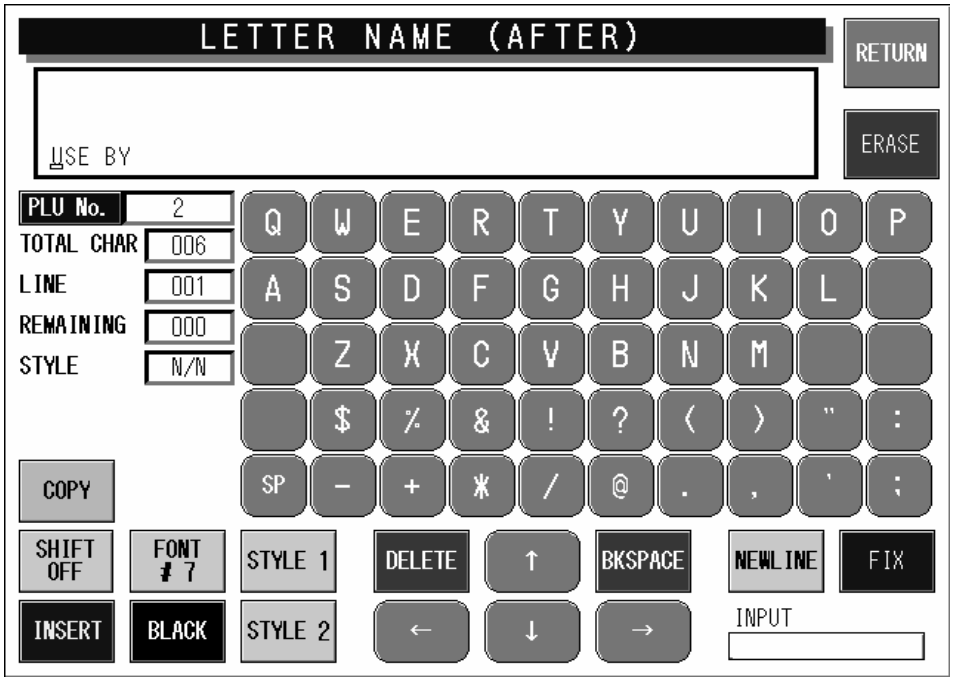
2.3 EXPIRY DATE SETTING



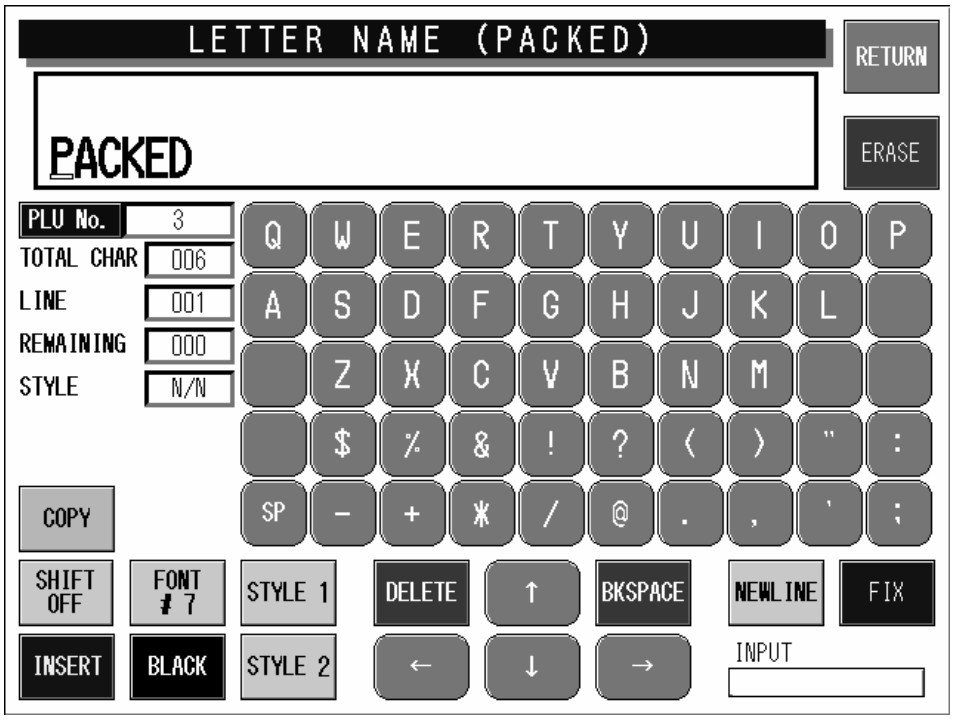
Expiry Date Setting Screen



Text Edit (Before) Screen



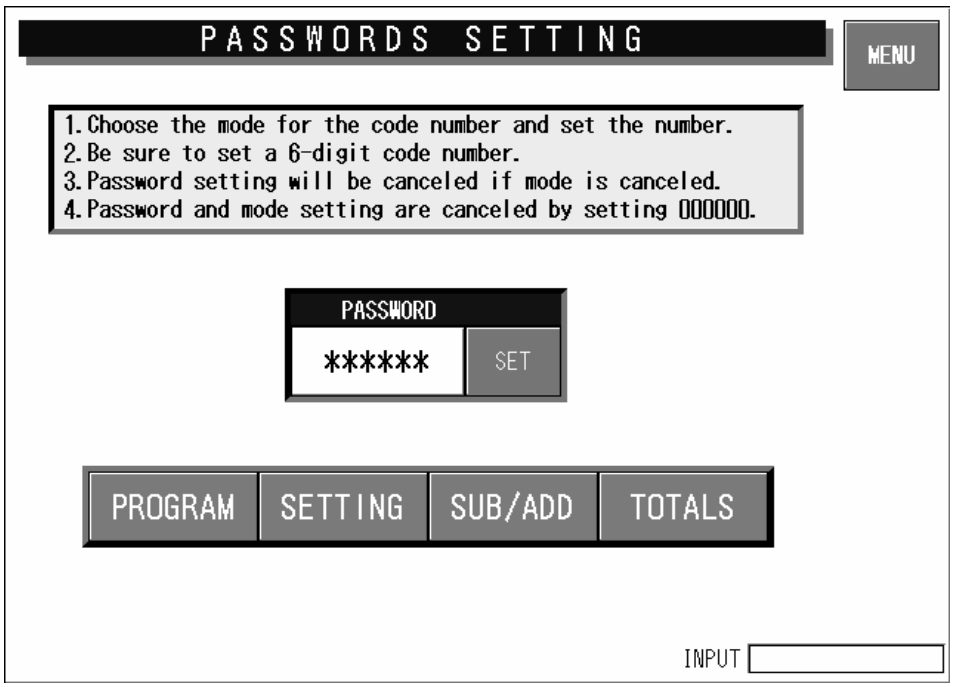
Text Edit (After) Screen



Text Edit (Packed) Screen

Buttons/Display Fields	Function
MENU	Changes to the first screen of the Setup Menu.
Switch Days	Press the [SET] button after numeric entry (0-99) to set the entered data as switching days. When the expiry date is same as or before the “Switch Days”, the text in the “Before Switch” field is printed. When “0” is set in this field, switching does not happen and the text in the “Before Switch” field is printed.
Before Switch	Selects “Before Switch” field and the field color changes yellow. Press the [EDIT] button to display the text edit screen. Up to 6 characters can be registered.
After Switch	Selects “After Switch” field and the field color changes yellow. Press the [EDIT] button to display the text edit screen. Up to 6 characters can be registered.
Pack Date	Selects “Pack Date” field and the field color changes yellow. Press the [EDIT] button to display the text edit screen. Up to 6 characters can be registered.

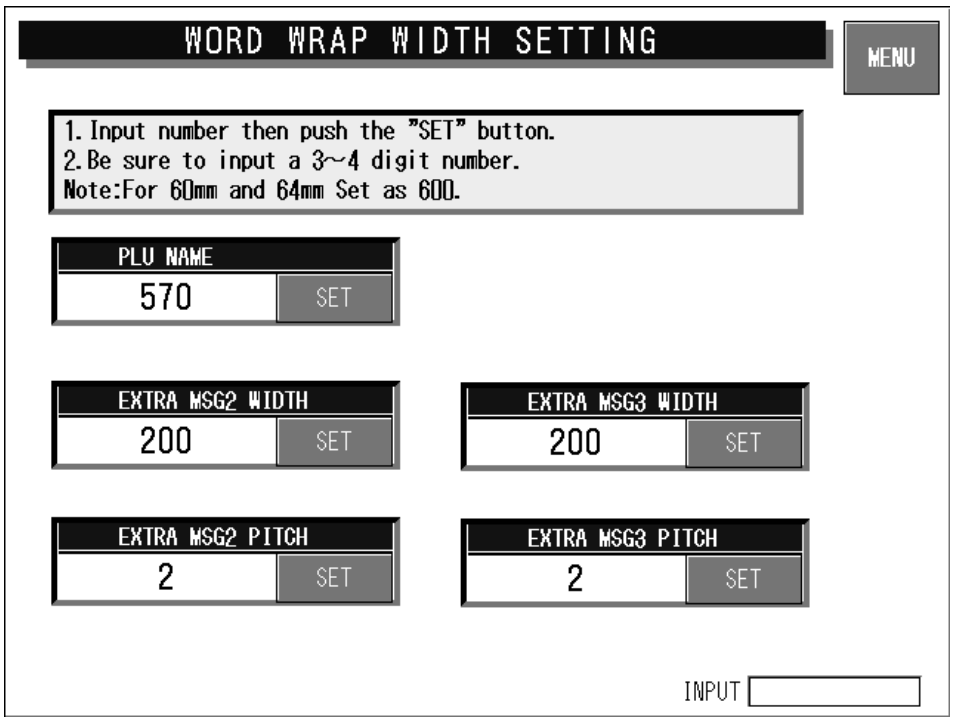
2.4 PASSWORD SETTING



Password Setting Screen

Buttons/Display field	Function
MENU	Changes to the first screen of the Setup Menu.
Password	Set the password data by pressing this button after 6-gigit numeric entry. Press this button after “000000” entry to cancel the password and the mode selection. Only one password can be registered.
Mode Selection Buttons	Press the desired button(s) to select the mode that requires the password entry. The selected mode button becomes blue.

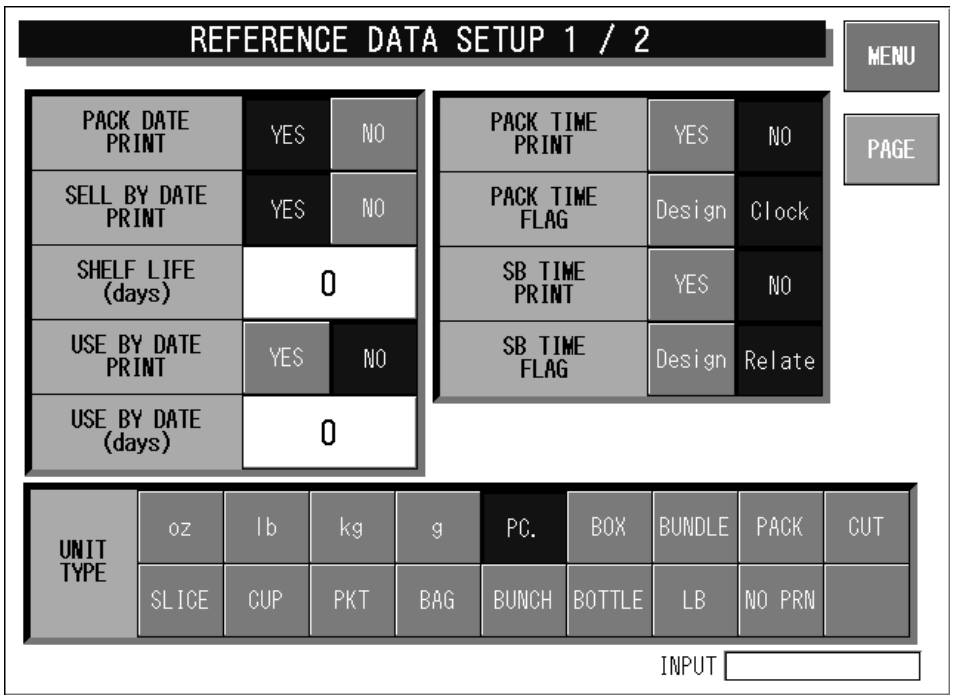
2.5 WORDWRAP WIDTH SETTING



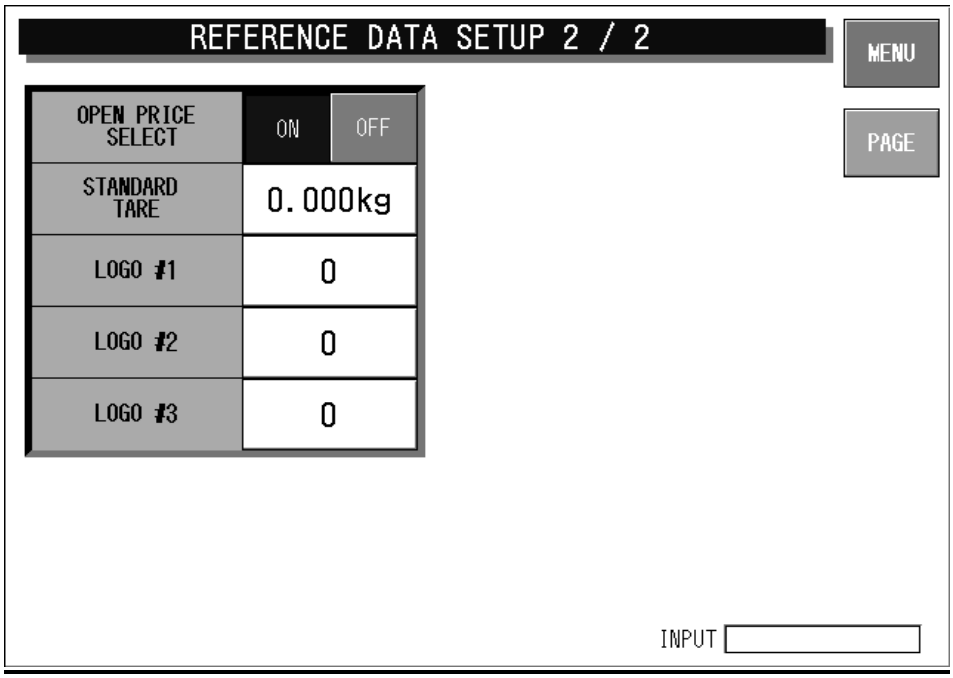
Word-wrap Width Setting Screen

Buttons/Display Fields	Function
MENU	Changes to the first screen of the Setup Menu.
PLU Name	Enter a numeric value (1-9999) and press the [SET] button to set the entered value (unit: 0.1mm) as a word-wrap width value.
Extra Message 1,2 Width	Enter a numeric value (1-9999) and press the [SET] button to set the entered value (unit: 0.1mm) as a word-wrap width value.
Extra Message 1,2 Pitch	Enter a numeric value (1-99) and press the [SET] button to set the entered value (unit: 0.1mm) as a gap between characters.

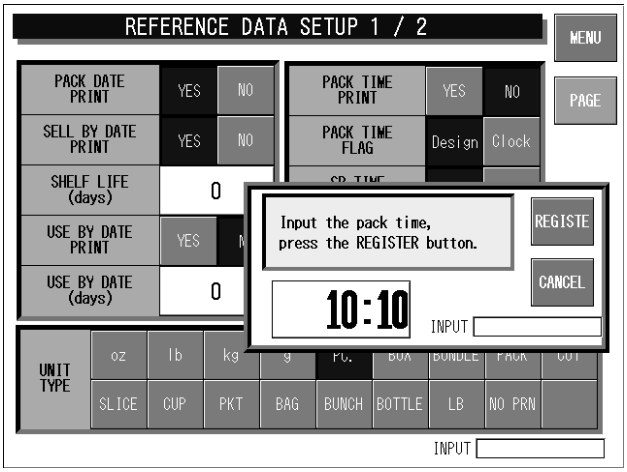
2.6 REFERENCE DATA SETUP



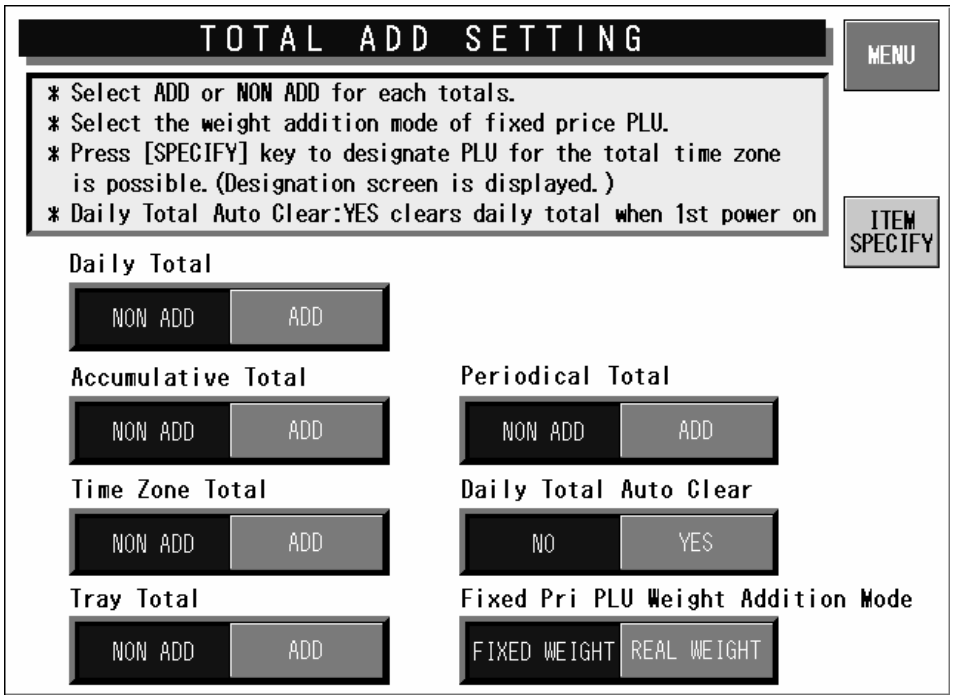
Reference Data Setup 1/2 Screen



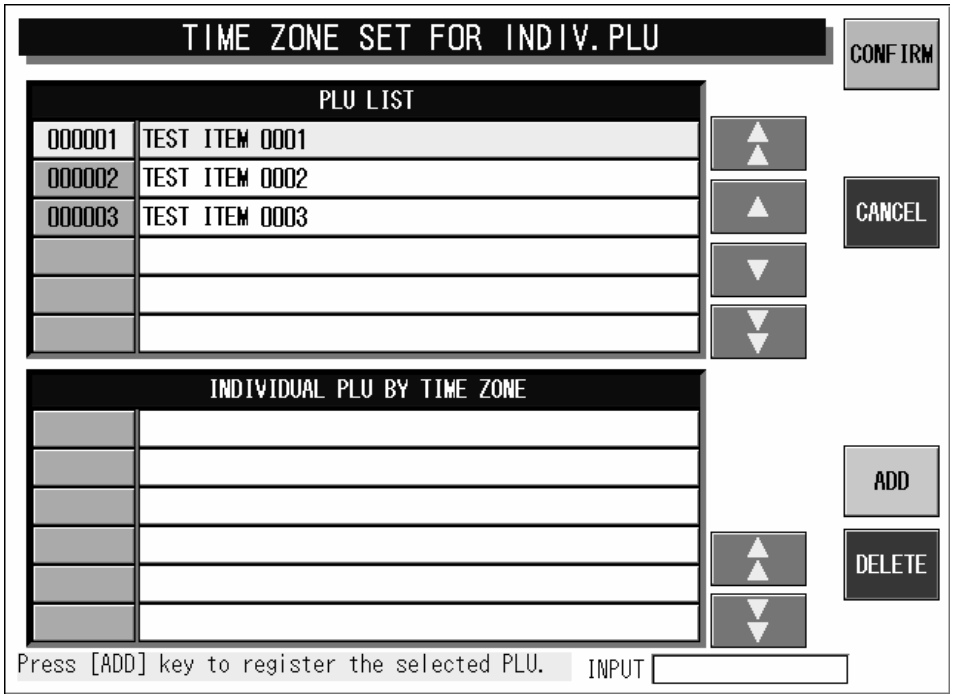
Reference Data Setup 2/2 Screen

Buttons/Display Fields	Function
MENU	Determines the settings and returns to the first screen of the Setup Menu.
PAGE	Turns over the screen.
Pack Date Print	Press “YES” or “NO” to set whether to print the Pack Date or not. This setting is effective only when “REFER” is specified by the Pack Date Print setting in the PLU registration.
Sell By Date Print	Press “YES” or “NO” to set whether to print the Sell By Date or not. This setting is effective only when “REFER” is specified by the Sell By Date Print setting in the PLU registration.
Shelf Life (days)	Enter a numeric value (0-9999) and press this field to set the entered value as the Shelf Life data. This setting is effective only when “REFER” is specified by the Shelf Life Date Print setting in the PLU registration.
Use By Date Print	Press “YES” or “NO” to set whether to print the Use By Date or not. This setting is effective only when “REFER” is specified by the Use By Date Print setting in the PLU registration.
Use By Date (days)	Enter a numeric value (0-9999) and press this field to set the entered value as the Use By Date data. This setting is effective only when “REFER” is specified by the Use By Date print setting in the PLU registration.
Pack Time Print	Press “YES” or “NO” to set whether to print the Pack Time or not. This setting is effective only when “REFER” is specified by the Pack Time Print setting in the PLU registration.
Pack Time Flag	Specify the pack time to be used. Clock: Use the system clock. Designated: Use the time designated on the following screen. 
Sell By Time Print	Press “YES” or “NO” to set whether to print the Pack Time or not. This setting is effective only when “REFER” is specified by the Pack Time Print setting in the PLU registration.
Sell By Time Flag	Not used
Unit Type	Set the unit type of quantity data for fixed price items. This setting is effective only when “REFER” is specified by the Unit Type setting in the PLU registration.
Open Price Select	Select whether or not to allow price change in Normal Mode. This setting is effective only when “REFER” is specified by the Open Price setting in the PLU registration.
Standard Tare	Set the standard tray weight. Enter a numeric value (max. 3 digits) and press this field, then the entered data becomes the standard tray weight. This setting is effective only when “REFER” is specified by the Forced Tare setting in the PLU registration.
Logo #1, #2, #3	Enter a numeric value (max. 3 digits) and press this field, then the entered data becomes the logo data. This setting is effective only when “REFER” is specified by the Logo setting in the PLU registration.

2.7 TOTAL ADD SETTING



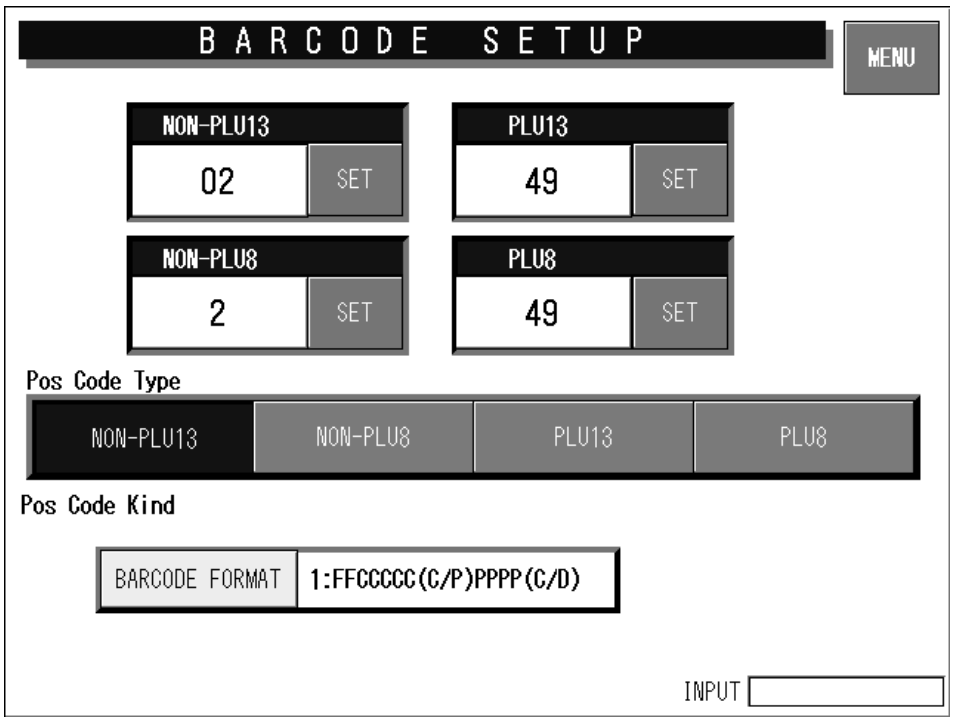
Total Add Setting Screen



Time Zone Set for Individual PLU Screen

Buttons/Display Fields	Function
MENU	Determines the settings and returns to the first screen of the Setup Menu.
Daily Total	Select whether or not to add the data to Daily Total. The selected button color will change to blue. This is not displayed at a satellite machine in master/satellite specification.
Accumulative Total	Select whether or not to add the data to Accumulative Total. The selected button color will change to blue. This is not displayed at a satellite machine in master/satellite specification.
Periodical Total	Select whether or not to add the data to Periodical Total. The selected button color will change to blue. This is not displayed at a satellite machine in master/satellite specification.
Time Zone Total	Select whether or not to add the data to Time Zone Total. The selected button color will change to blue. This is not displayed at a satellite machine in master/satellite specification.
Daily Total Auto Clear	Select whether or not to clear Daily Total when turning off the machine. The selected button color will change to blue. This is not displayed at a satellite machine in master/satellite specification.
Tray Total	Select whether or not to add the data to Tray Total. The selected button color will change to blue. This is not displayed at a satellite machine in master/satellite specification.
Fixed Price PLU Weight Addition Mode	Select to add either “Fixed Weight” or “Real Weight” for a fixed price item to total. The selected button color will change to blue.
ITEM SPECIFY	Displays the Time Zone Set For Individual PLU screen.
CONFIRM	Determines the settings and returns to the Total Add Setting Screen. Clears the existing Daily PLU Time Zone Total.
CANCEL	Cancels the settings and returns to the Total Add Setting Screen.
ADD	Add a commodity to target commodities by pressing this button after selecting the desired PLU or entering the PLU number.
DELETE	Delete a commodity from target commodities by pressing this button after selecting the PLU to be deleted.

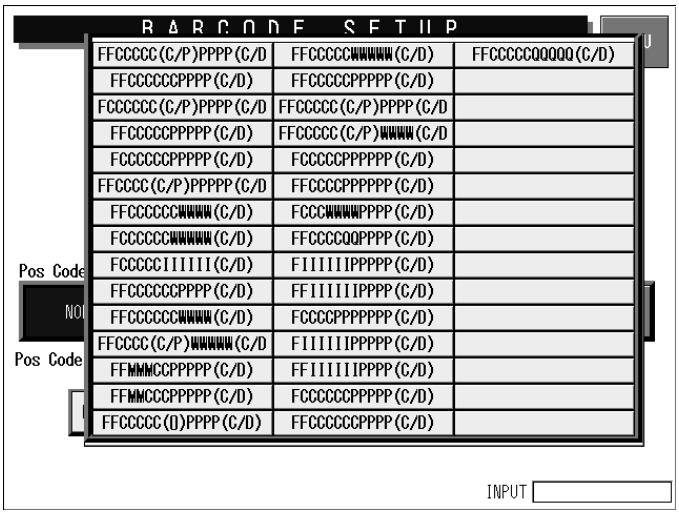
2.8 BARCODE SETUP



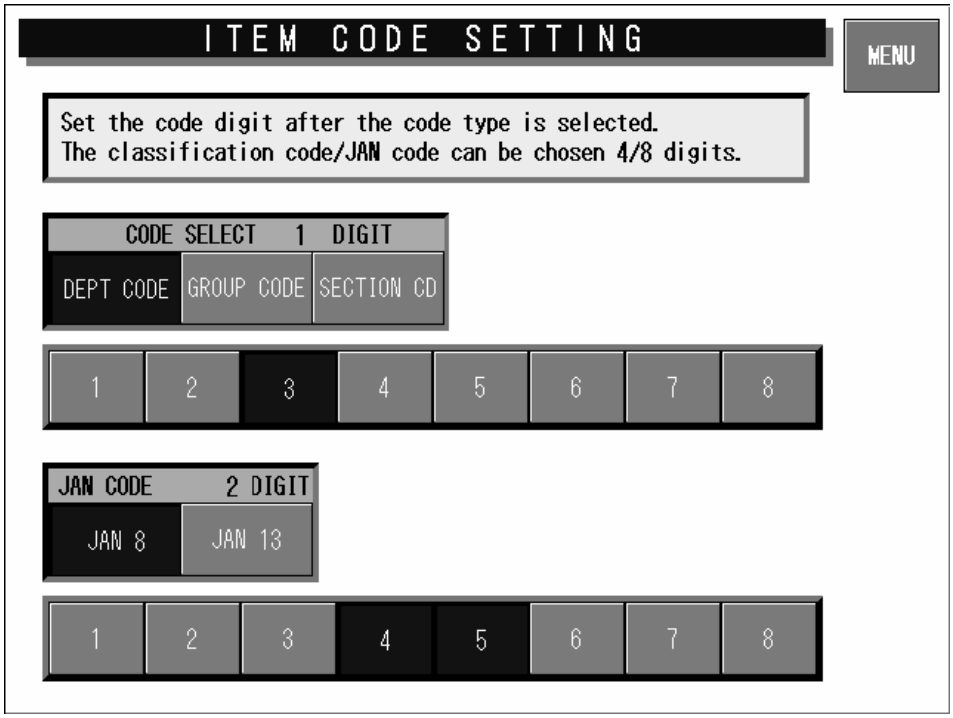
Barcode Setup Screen

Buttons/Display Fields	Function
MENU	Determines the settings and returns to the first screen of the Setup Menu.
Non PLU 13	This is referred when “System” is set in the flag reference of the PLU registration and the code type is set as “Non PLU 13”. The set flag data is displayed. Enter a numeric value (max. 2 digits) and press the [SET] button to set the entered data as a flag data.
Non PLU 8	This is referred when “System” is set in the flag reference of the PLU registration and the code type is set as “Non PLU 8”. The set flag data is displayed. Enter a numeric value (max. 2 digits) and press the [SET] button to set the entered data as a flag data.
PLU 13	This is referred when “System” is set in the flag reference of the PLU registration and the code type is set as “PLU 13”. The set flag data is displayed. Enter a numeric value (max. 2 digits) and press the [SET] button to set the entered data as a flag data.
PLU 8	This is referred when “System” is set in the flag reference of the PLU registration and the code type is set as “PLU 8”. The set flag data is displayed. Enter a numeric value (max. 2 digits) and press the [SET] button to set the entered data as a flag data.
POS Code Type	Select the code type to be referred to when the code type is set as “Refer” in the PLU master file. Press the desired button to select among Non PLU 13, Non PLU 8, PLU 13, and PLU 8.

Buttons/Display Fields	Function
POS Code Kind	Select the code kind to be referred to when the code kind is set as “Refer” in the PLU master file. Press the desired field to select among 31 different kinds.



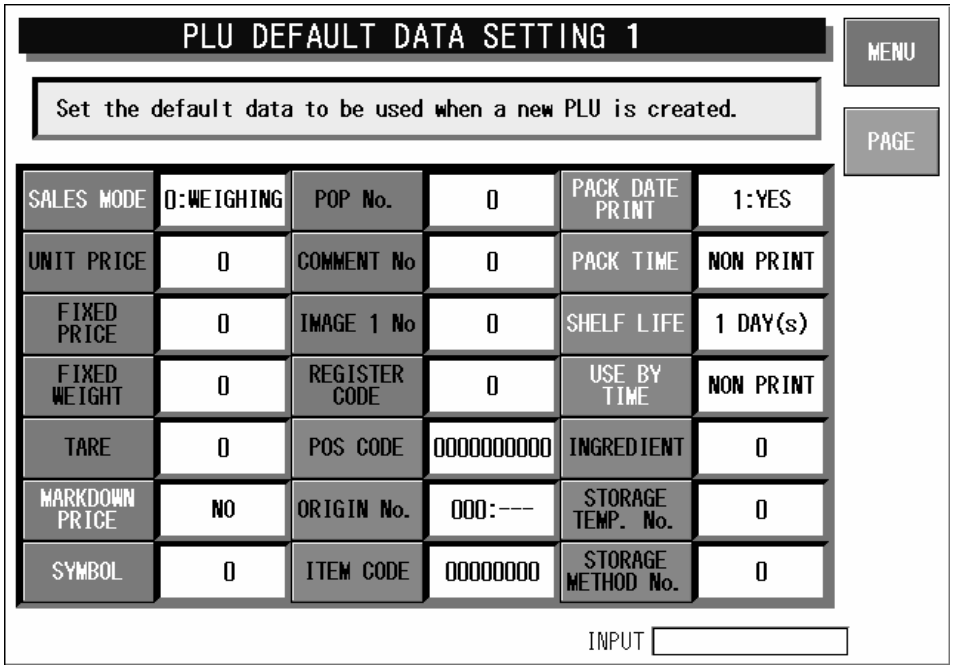
2.9 ITEM CODE SETTING



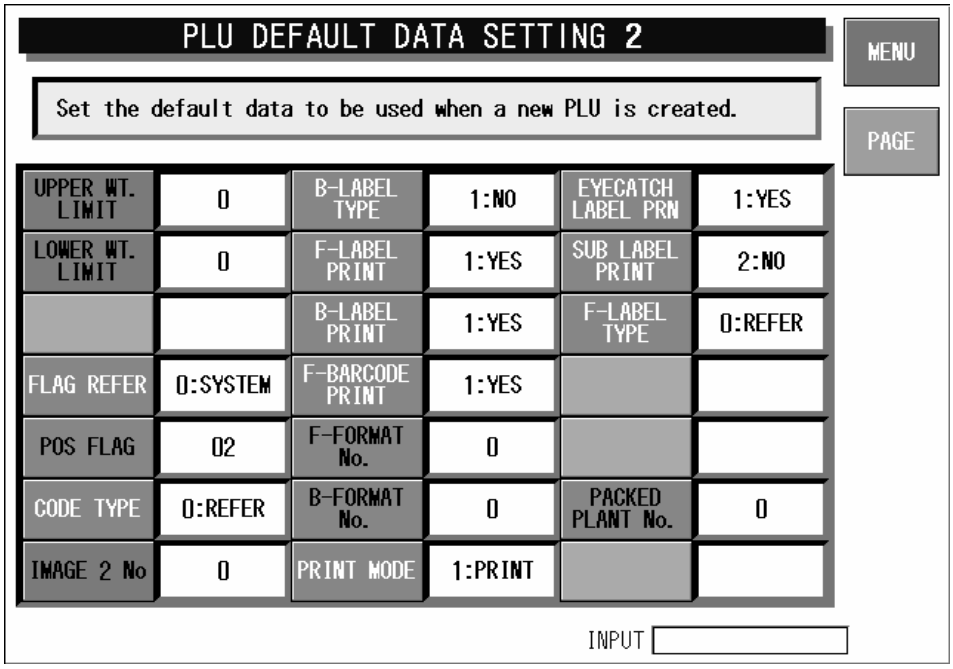
Item Code Setting Screen

Buttons/Display Fields	Function
MENU	Determines the settings and returns to the first screen of the Setup Menu.
Code Digit Display	The set digit(s) is displayed.
Classification Code Select	Select one of code types “Department Code” “Group Code” and “Section Code” of which code digit(s) is displayed.
Classification Code Digit Set	Set the code digit position (max. 4 digits) for the selected code type by pressing the contiguous fields.
JAN Code Select	Select one of code types “JAN 8” and “JAN 13” of which code digit(s) is displayed.
JAN Code Digit Set	Set the code digit position (max. 8 digits) for the selected code type by pressing the contiguous fields.

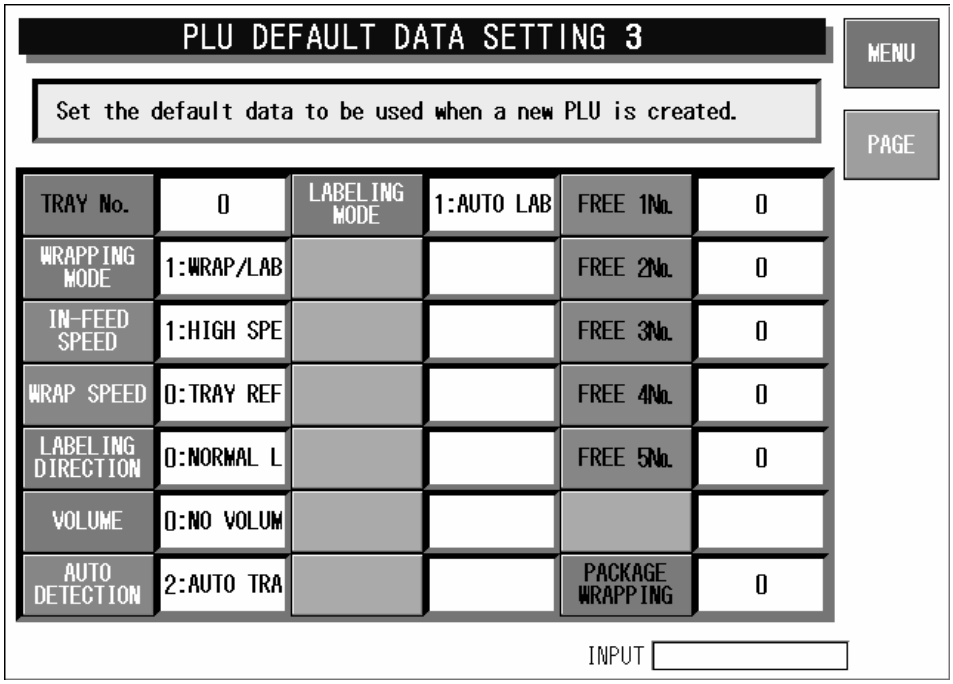
2.10 PLU DEFAULT DATA SETTING



PLU Default Data Setting 1 Screen



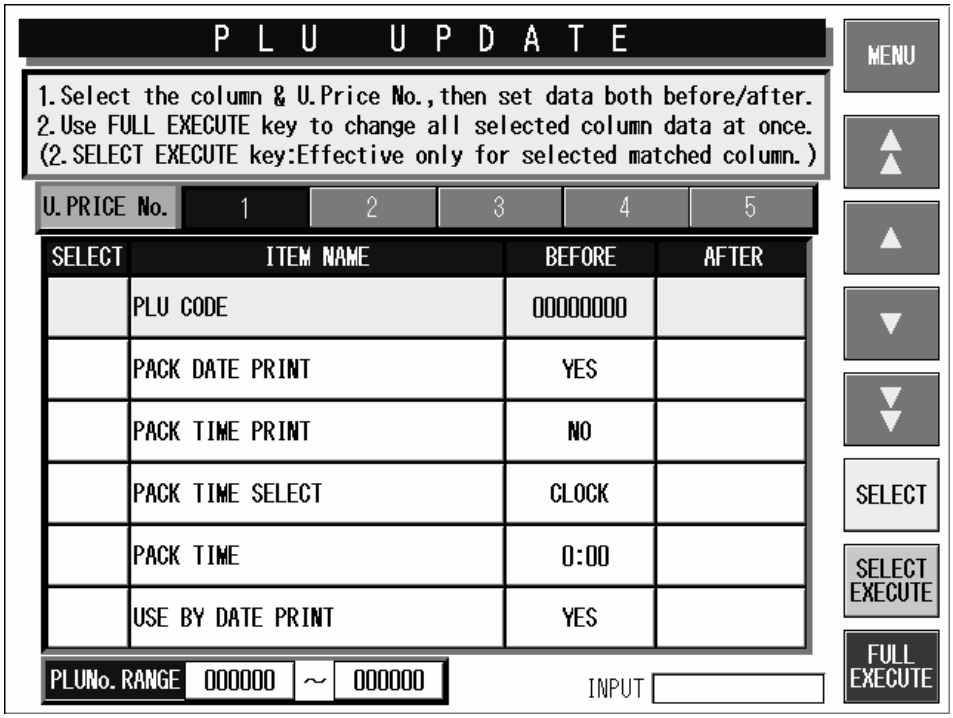
PLU Default Data Setting 2 Screen



PLU Default Data Setting 3 Screen

Buttons/Display Fields	Function
MENU	Determines the settings and returns to the first screen of the Setup Menu.
PAGE	Turns over the screen.
Default Data Setting Items	Each button color has its meaning: ● Background➔Green: Unit price master data, Blue: PLU master data ● Characters➔Black: Requires numeric entry, White: Make a selection

2.11 PLU UPDATE SETTING

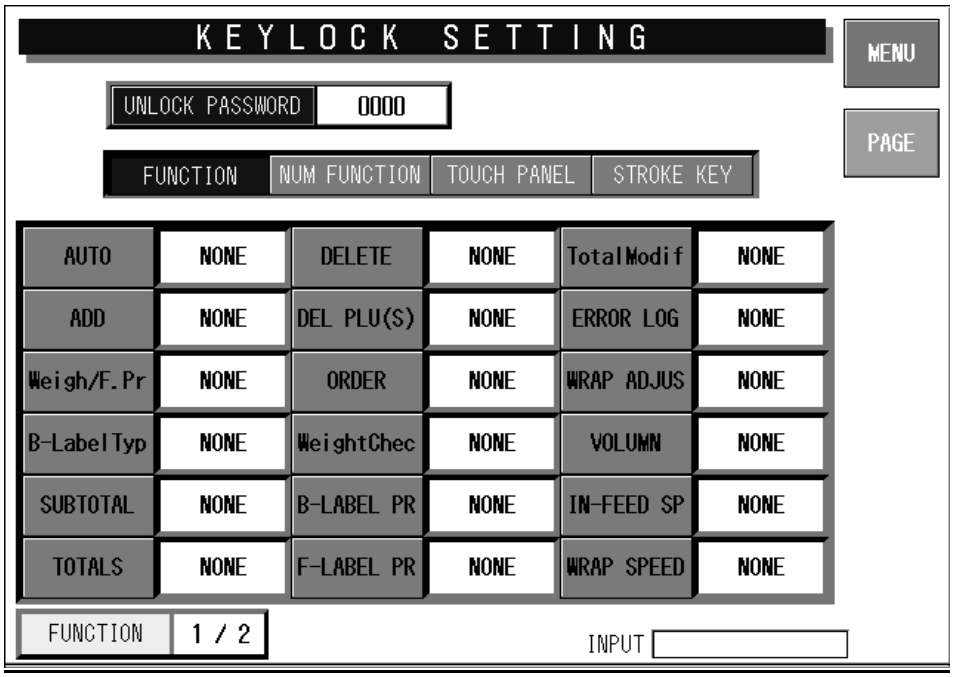


PLU Update Screen

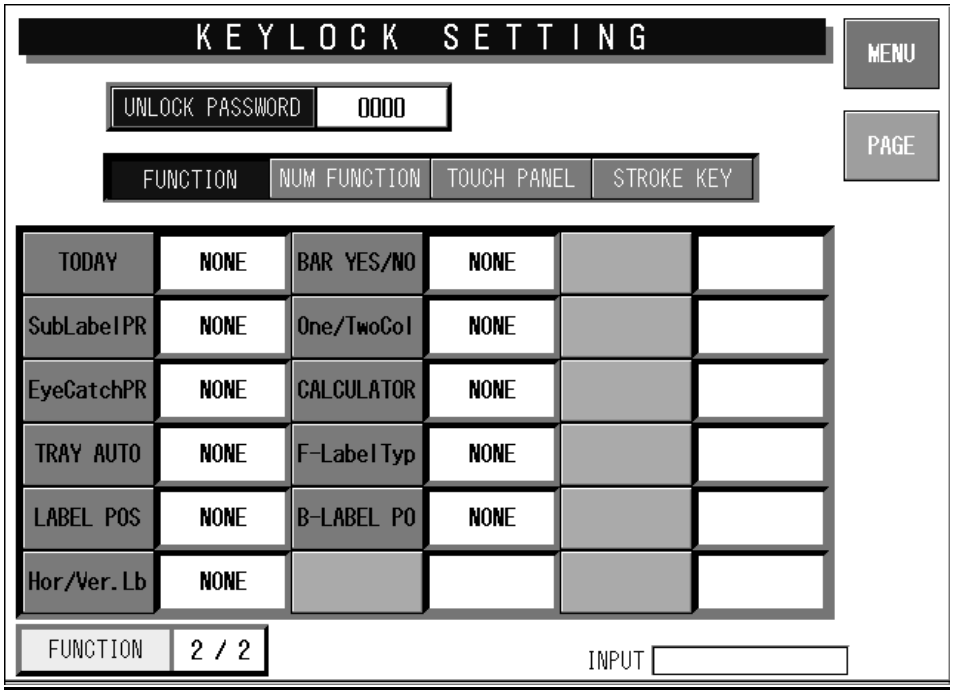
Buttons/Display Fields	Function
MENU	Determines the settings and returns to the first screen of the Setup Menu.
▲ ▼ ▲ ▼	Changes to the previous or next screen.
▲ ▼	Moves the cursor up or down.
SELECT	Selection can be made for items to be collectively changed. Master data at the cursor position is selected. When selected, "●" is displayed in the selected filed at the cursor position on the list. Selection cannot be made when no data is set in "After" field.
SELECT EXECUTE	Executes changes in "After" field for the selected items only to the PLU master file of which "Before" data matches.
FULL EXECUTE	Executes changes in "After" field for the selected items only to all PLU master files.
Unit Price No.	Select the desired unit price master file among "1" through "5".
Item Name	The name of master item to be collectively changed is displayed. (See the master name list below)
Before	Data can be set in this field when pressed after numeric entry. Selection items appear when pressed without numeric entry.
After	Data can be set in this field when pressed after numeric entry. Selection items appear when pressed without numeric entry.
PLU No. Range	Specifies the PLU range to be collectively changed.

Master Name	Before / After Data Range	Default Value
Sales Mode	Weigh / Non-Weigh / Weigh & Fixed Price	Weigh
Unit Price	0.00 - 999.99	0.00
Fixed Price	0.00 - 999.99	None
Markdown Price Mode	Refer to “PLU Data Registration” in Programming Mode.	Normal
Markdown Price	Depending on “Markdown Price Mode”	0.00
Fixed Weight	0.000 - 99.999	0.000
Pack Quantity	0 - 999	0
Tare	0.000 - 5.998	0.000
Pack Data Print	Refer / Yes / No	Refer
Sell-By Data Print	Refer / Yes / No	Refer
Shelf Life Time	1 day - 9999 day(s)	1 day(s)
Use-By Print	Refer / Yes / No	Refer
Use-By (day)	0 day(s)	0 day(s)
Barcode Type	Refer / Non-PLU 13 / Non-PLU 8 / PLU 13/ PLU 8	Refer
POS Flag	00 - 99	02
POS Code	0000000000 - 9999999999	0000000000
Open Price	Refer / Prohibit / Allow	Refer
Forced Tare	Refer / Yes / No	Refer
Extra Message 1	0 - 999999	0
Extra Message 2	0 - 999999	0
Extra Message 3	0 - 999999	0
Pack Time Print	Refer / Yes / No	Refer
Pack Time Mode	Refer / Designate / Clock	Refer
Pack Time Data	0:00 - 23:59	0:00
Sell-By Time Print	Refer / Yes / No	Refer
Sell-By Time Mode	Refer / Relative	Refer
Use-By Time	0 hour(s) - 9999 hour(s)	0 hour
Free 1 No.	0 - 999999	0
Free 2 No	0 - 999999	0
Free 3 No	0 - 999999	0
Free 4 No	0 - 999999	0
Free 5 No	0 - 999999	0
POP No.	0 - 999	0
Coupon Message	0 - 999999	0
Image 1 No.	0 - 999	0
Image 2 No.	0 - 999	0
Image 3 No.	0 - 999	0
Label Format	0 - 999	0
Second Label	Yes / No	YES
Second Label Format	0 - 99	0
Item Code	00000000 - 99999999	00000000
Unit Type	Refer to “PLU Data Registration” in Programming Mode.	Refer
Upper Weight Limit	0.000 - 99.999	0.000
Lower Weight Limit	0.000 - 99.999	0.000
Tray No.	0 - 9999	0
Wrapping Mode	Wrap & Label / Label / Wrap	Wrap & Label
Infeed Speed	High Speed / Medium Speed / Low Speed	High Speed
Wrapping Speed	Tray Refer / High Speed / Medium Speed / Low Speed	Tray Refer
Label Rotation	Normal Label / Horizontal Label / Vertical Label	Normal Label
Tray Volume	No Volume / Low Volume / Medium Volume / High Volume	No Volume
Auto Detection	Auto Tray / Tray Designate	Auto Tray
Labeling Mode	Auto Label / Manual Label	Auto Label

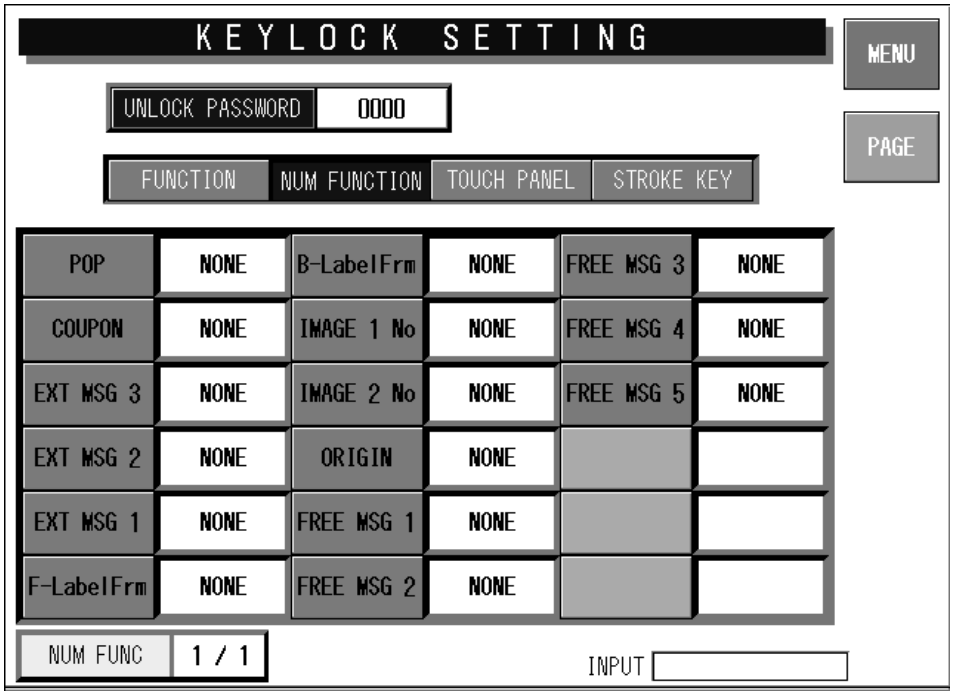
2.12 KEY LOCK SETTING



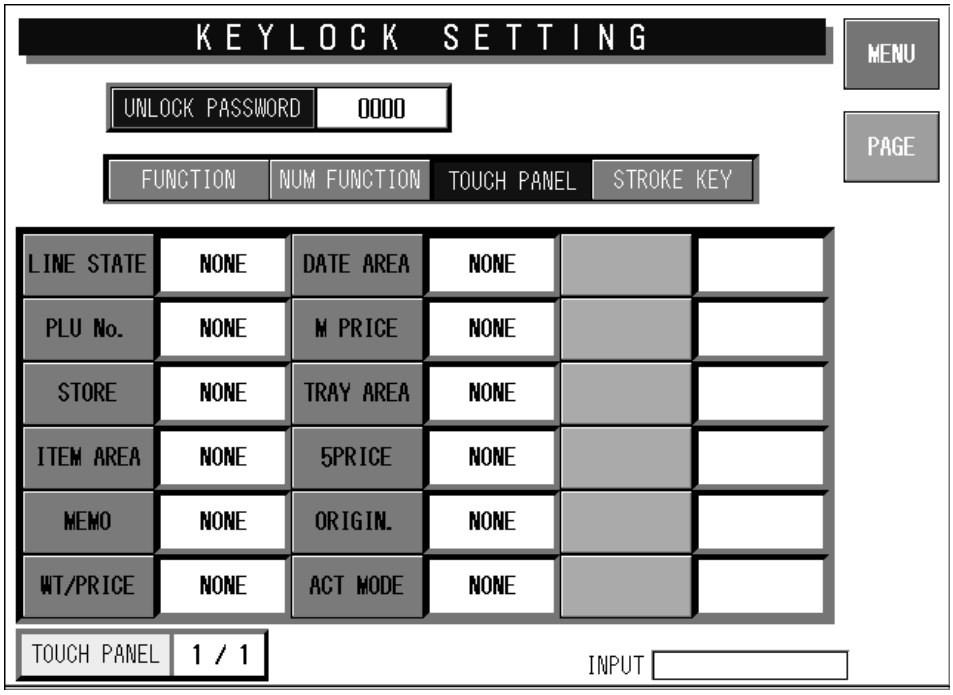
Key Lock Setting 1/5 Screen



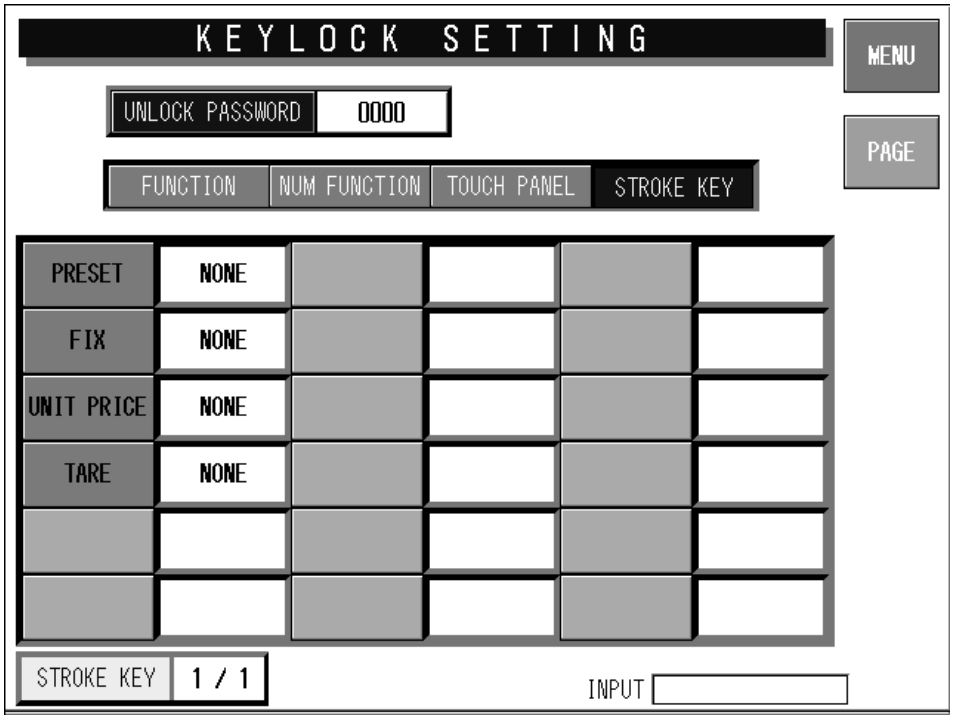
Key Lock Setting 2/5 Screen



Key Lock Setting 3/5 Screen



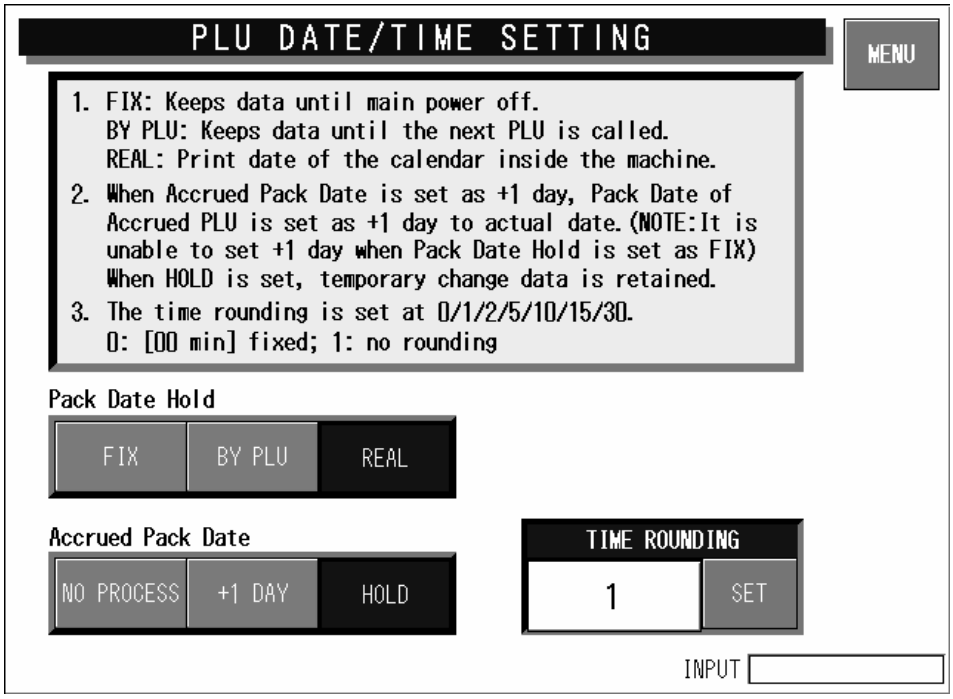
Key Lock Setting 4/5 Screen



Key Lock Setting 5/5 Screen

Buttons/Display Fields	Function
MENU	Determines the settings and returns to the first screen of the Setup Menu.
PAGE	Turns over the screens.
Unlock Password	Press this filed after numeric entry (4 numeric digits) to set a password to make “Key Unlock” of a function key effective.
Key Lock Objective Group	Select one of the following key groups: • Function key group • Numeric function key group • Touch panel key group • Stroke key group
Key Lock Items	Select “Yes” to lock the key, or “None” not to lock the key.

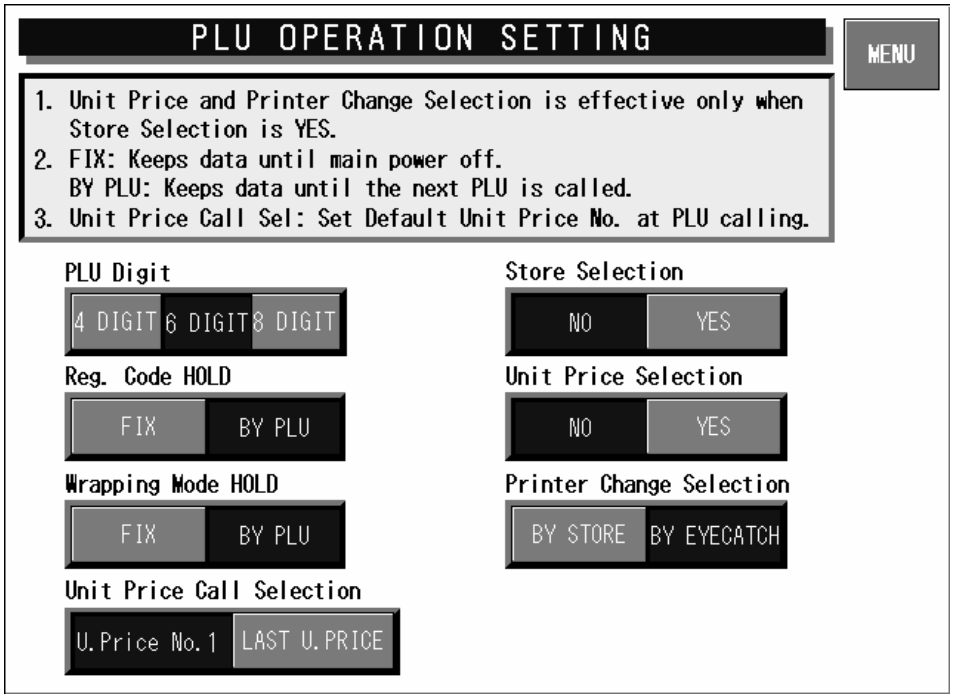
2.13 PLU DATE/TIME SETTING



PLU Date/Time Setting Screen

Buttons/Display Fields	Function
MENU	Determines the settings and returns to the first screen of the Setup Menu.
Pack Date Hold	Select one of the following items: • Fix: Pack date and time which have been set after the power was turned on will be held until the power will be turned on again, or data will be changed. When “+1 Day” is selected in the Accrued Pack Date, the date changes to holding condition. • By PLU: Pack date and time at the time of PLU call is held until next PLU is called. • Real: Pack date and time are printed when the label is printed.
Accrued Pack Date	Select one of the following items: • No process: Temporary change data is canceled when next PLU is called and becomes the date of that day. • +1 day: The pack date will become the date added by one day to that day. When “Fix” is selected in the Pack Date Hold, this selection cannot be made. • Hold: Data that has been changed temporarily as an accrued pack date will be held until next PLU is called.
Time Rounding	Select one of the following items: • 0: 00 minute fixed • 1: No rounding • 2: Touch panel key group • 5: 05 minutes • 10: 10 minutes • 15: 15 minutes • 30: 30 minutes

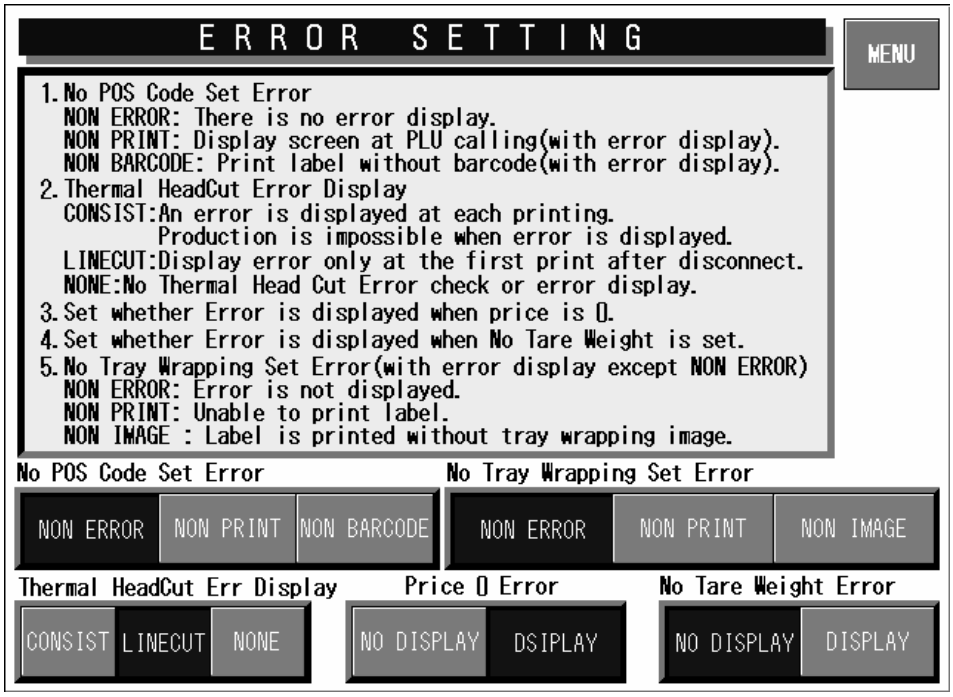
2.14 PLU DATE/TIME SETTING



PLU Operation Setting Screen

Buttons/Display Fields	Function
MENU	Determines the settings and returns to the first screen of the Setup Menu.
PLU Digit	Select the number of digits (4/6/8) when calling a PLU.
Store Selection	Select whether or not to call a store in the normal mode.
Unit Price Selection	Select whether or not to fix the Unit Price No. that is set to the called store.
Register Code Hold	Select one of the following items to hold the register code: • Fix: The register code which has been set after the power was turned on will be held until the power will be turned on again, or data will be changed. • By PLU: The register code will be updated every time the PLU is called.
Wrapping Mode Hold	Select one of the following items to hold the wrapping mode: • Fix: The wrapping mode which has been set after the power was turned on will be held until the power will be turned on again, or data will be changed. • By PLU: The wrapping mode will be updated every time the PLU is called.
Printer Change Selection	When the machine is set as “Store change available”, select one of the following items to determine the printer changing method: • By Store: This is effective only when the machine is set as “Store change available”, the printer number registered in the store master file is given priority. • By Eye-catch: The printer is selected according to the eye-catch (label print pattern).
Unit Price Call Selection	Perform the holding selection for the Unit Price No. in the normal mode. • Unit Price No.1: The Unit Price No.1 is always selected when any PLU is called. • Last Unit Price: The Unit Price No. which was processed last is memorized, and it will be called when the PLU is called next time.

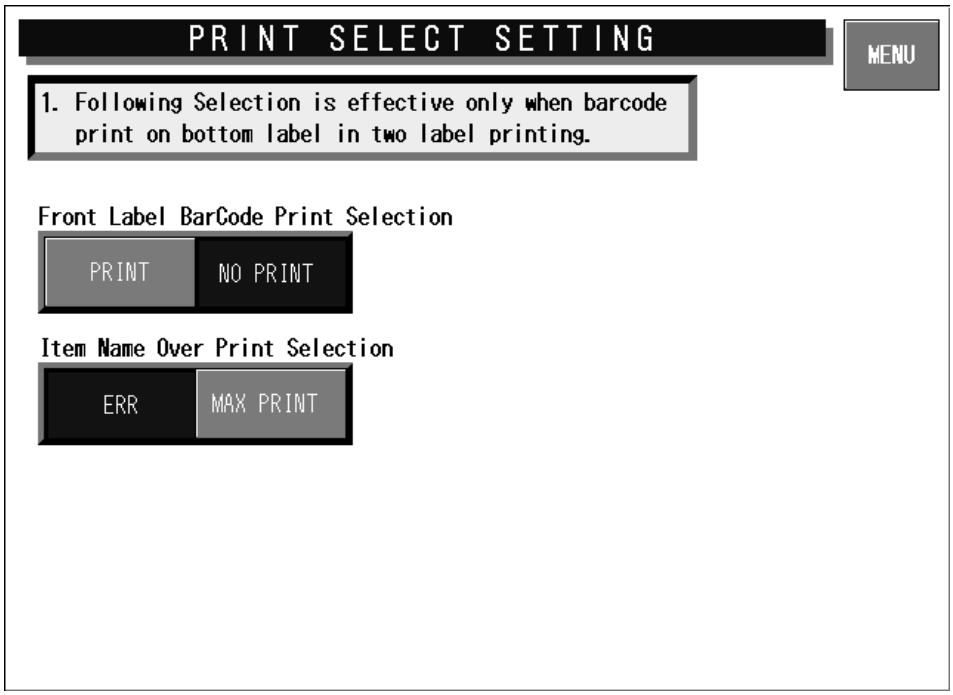
2.15 ERROR SETTING



Error Setting Screen

Buttons/Display Fields	Function
MENU	Determines the settings and returns to the first screen of the Setup Menu.
No POS Code Set Error	Select one of the following items to determine the procedure when calling a PLU of which POS code is not set. • Non Error: No error screen appears. • Non Print: An error screen appears. When the error screen is released, calling the PLU will be canceled. • Non Barcode: An error screen appears. When the error screen is released, the barcode will be blanked on the label.
Price 0 Error	Select whether or not to display an error screen when “0” price is entered.
Thermal Head Cut Error Display	Select one of the following items to determine the procedure when a head failure occurs. • Consistent: An error screen always appears once a failure occurs. • Line Cut: An error screen appears when a failure occurs. • None: No error screen appears.
No Tare Weight Error	Select whether or not to display an error screen when printing is performed without tare weight setting.
No Tray Wrapping Set Error	Select one of the following items to determine the procedure when no tray wrapping is set. • Non Error: No error screen appears even when the tray wrapping image is not set. • Non Print: Even after the error screen is released, it appears every time until the tray wrapping image is normally set. Operation is prohibited when the tray wrapping image is not set. • Non Image: An error screen appears when the tray wrapping image is not set. After the error screen is released, it will not appear until next call.

2.16 PRINT SELECT SETTING



Buttons/Display Fields	Function
MENU	Returns to the first screen of the Setup Menu.
Front Label Barcode Print Selection	This function is effective only when two labels are issued, and the bottom label type is selected to print the barcode. Select whether or not to print the barcode on the first label. (See the table below)
Item Name Over Print Selection	Select one of the following items to determine an expansion error procedure. • Error: Output the expansion error, and stop processing. • Max. Print: Expand to a maximum and print within the range.

■ When front label barcode is printed (PLU master file)

Bottom Label Type	Front Label Barcode Print Selection			
	Print		No print	
	Front	Bottom	Front	Bottom
None	○	-	○	-
Barcode	○	○	×	○
Additive	○	×	○	×
Barcode + Additive	○	○	×	○
Collective display	○	-	○	-
Collective display + Barcode	○	○	×	○
Collective import	○	-	○	-
Collective import + Barcode	○	○	×	○

■ When front label barcode is not printed (PLU master file)

Bottom Label Type	Front Label Barcode Print Selection			
	Print		No print	
	Front	Bottom	Front	Bottom
None	×	-	×	-
Barcode	×	○	×	○
Additive	×	×	×	×
Barcode + Additive	×	○	×	○
Collective display	×	-	×	-
Collective display + Barcode	×	○	×	○
Collective import	×	-	×	-
Collective import + Barcode	×	○	×	○

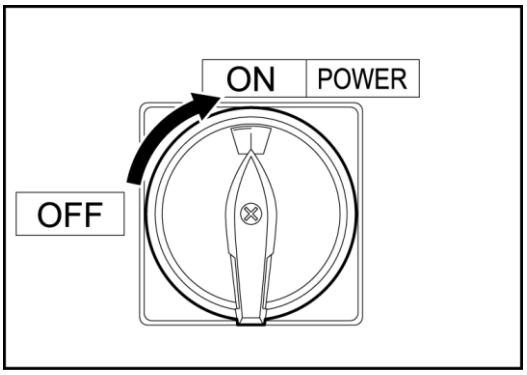
○: With barcode print ×: Without barcode print

3 TEST MODE

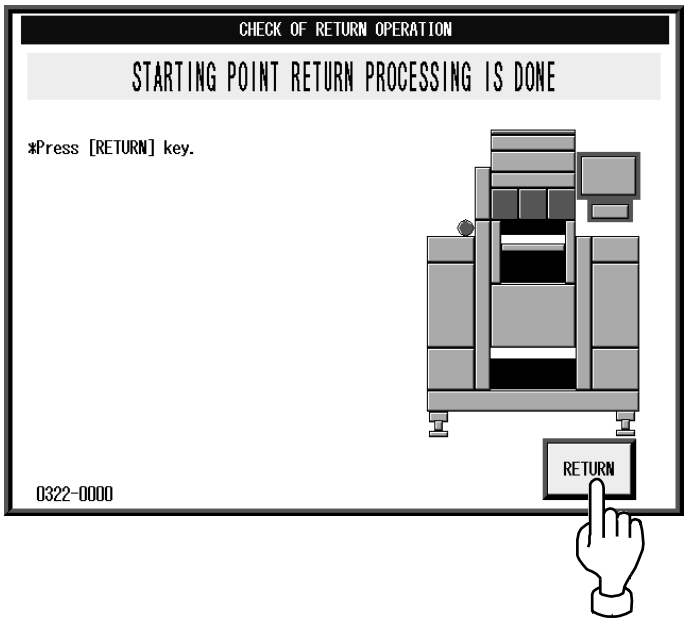
CONTENTS

3.1 STARTING PROCEDURE

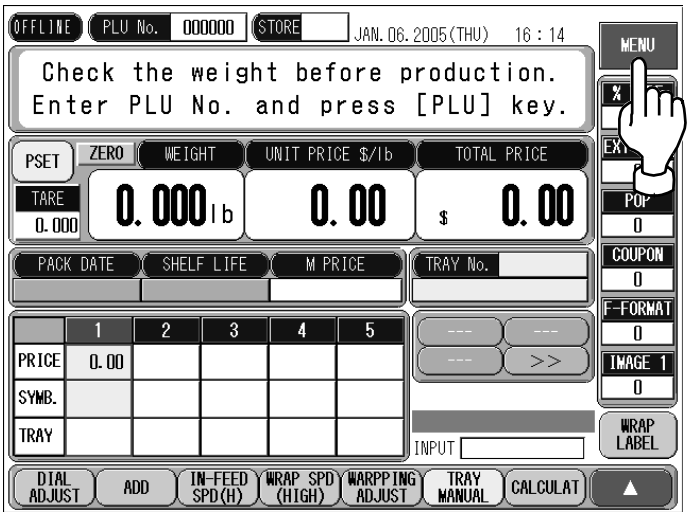
1. Turn the Main Power Switch lever clockwise to power ON the machine.



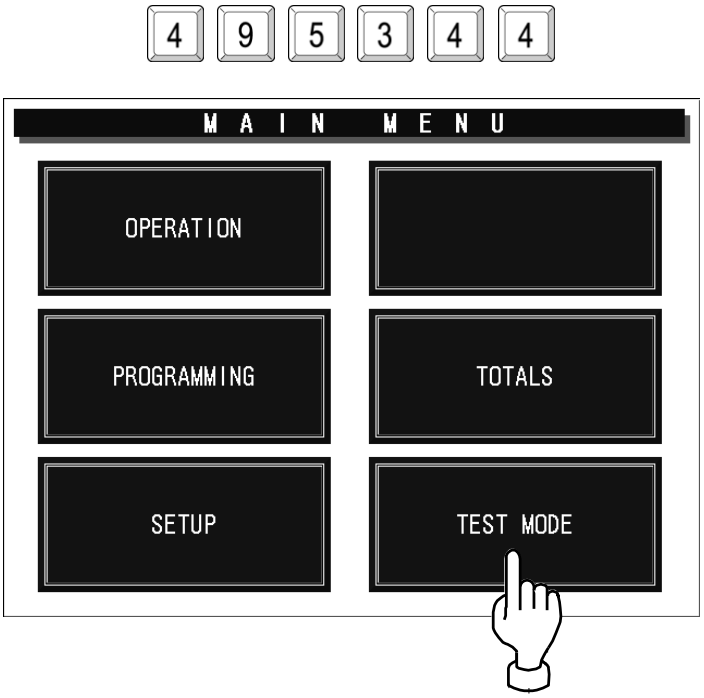
2. The Check of Return Operation screen appears. Press the [RETURN] button.



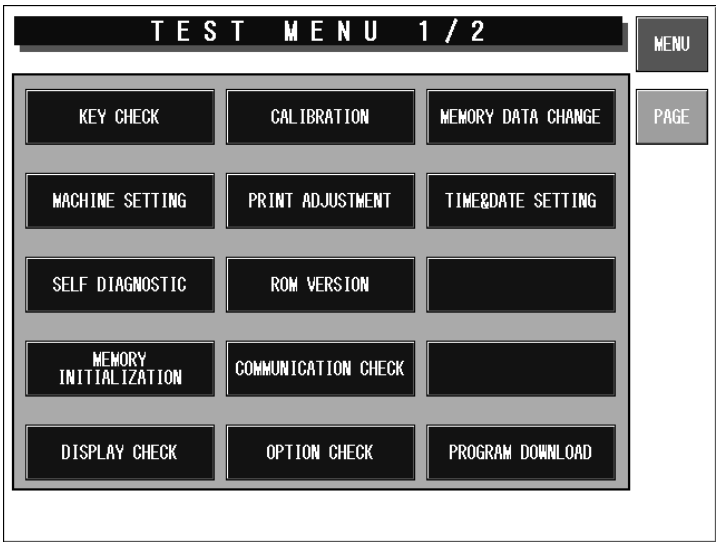
3. The initial screen appears. Press the [MENU] button on the screen.



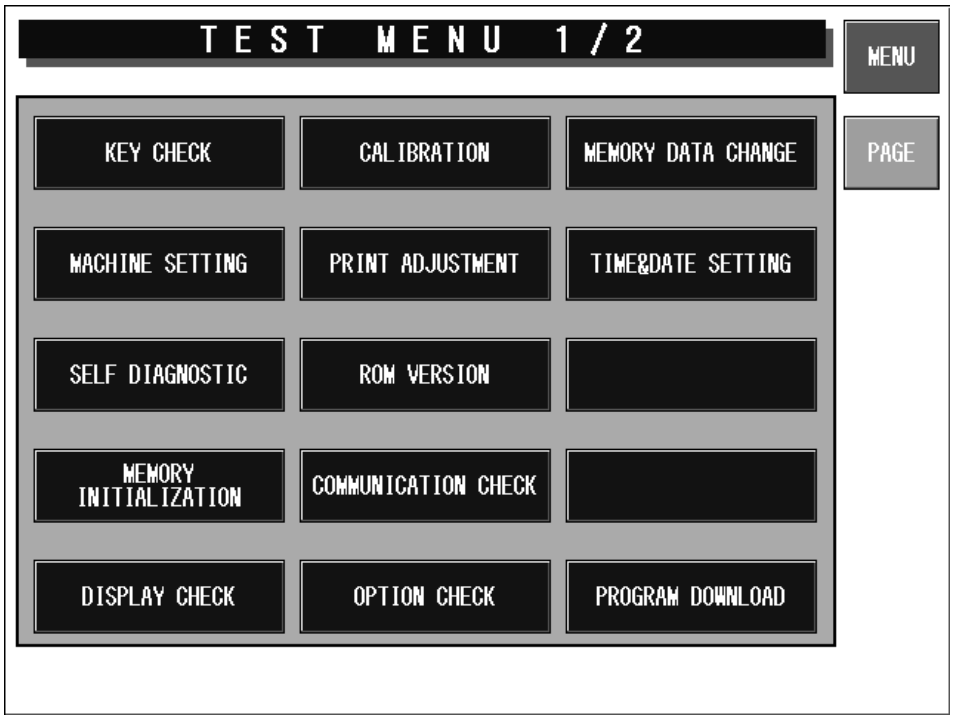
4. Enter “495344” using the numeric keys and press the [TEST MODE] button.



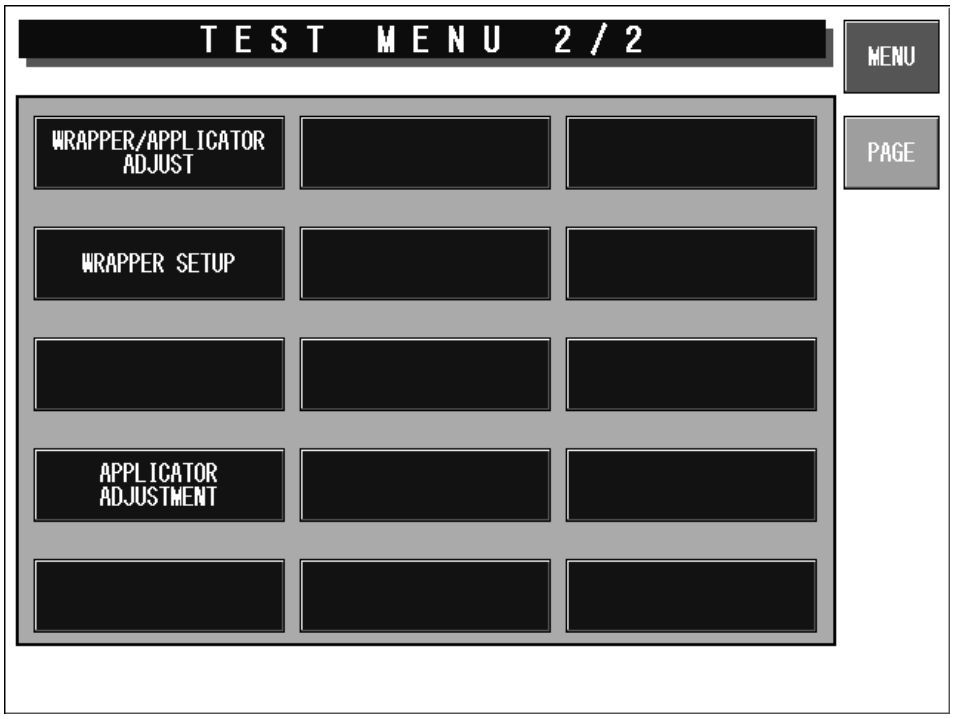
5. The Test Menu screen appears.



3.2 TEST MENU



Test Menu 1/2 Screen

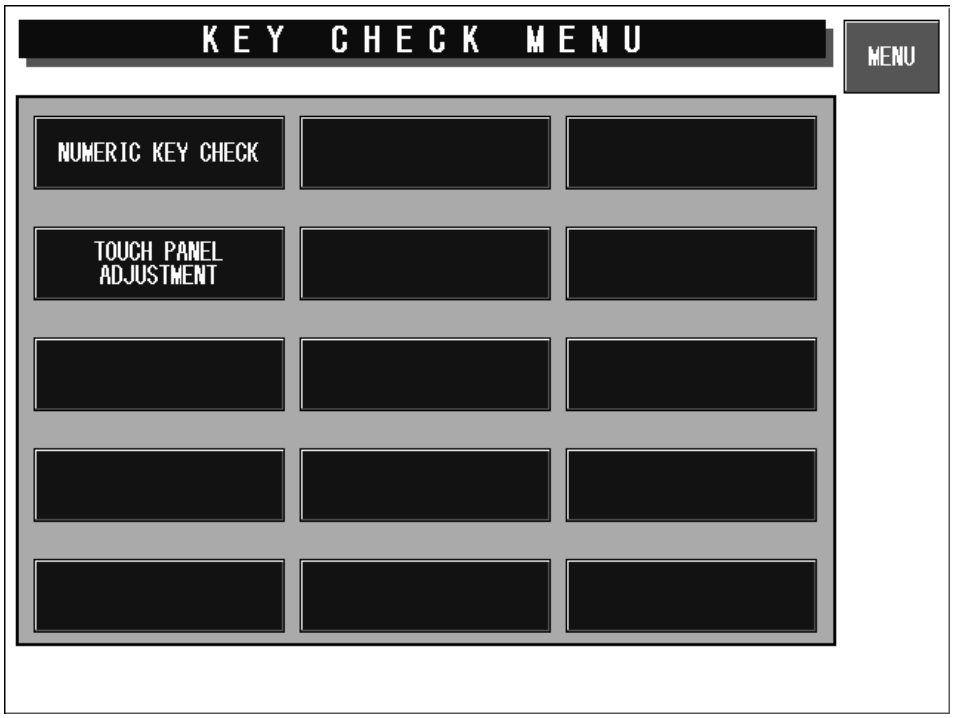


Test Menu 2/2 Screen

Buttons/Display Fields	Function
Key Check	Changes to the Key Check menu screen.
Machine Setting	Changes to the Machine Setting screen. Set basic machine and optional unit configuration.
Self-diagnostic	Changes to the Self-diagnostic screen. Check cables, memory, printer head and connection check, etc.
Memory initialization	Changes to the Memory Initialization screen. Display memory information (installed and remainder) and initialize memory (master data clear, system data initialization, and test data setting).
Display check	Changes to the Display Check screen. Adjust color contrast.
Calibration	Changes to the Scale Calibration screen. There are two screens for calibrating the scale and setting the scale board. (Scale board setting requires password entry)
Print adjustment	There are two screens for adjusting the printer head information (head type, head resistance, head running distance, etc.) and the print information (print density, various sensor distances, label length, etc.).
ROM version	Changes to ROM version display. Displays ROM versions for OS, BSP, BIOS, Main memory, Scale, ELAN, Thermal head, Wrapper, etc.
Communication check	Changes to the Communication Check screen. Check I2NET and RS232C hardware (Communication and RAM).
Option check	Changes to the Option Check screen. Check barcode scanner reading and card slot operation.
Memory data change	Changes to the Memory Data Change menu screen. Confirm and change SRAM memory and refer FROM.
Time/ Date setting	Changes to date and time setup screen. Set the present date, time, and printing year.
Program download	Changes to the option device program download screen. Download option device (wrapper, applicator, and detector) programs.
Wrapper/Applicator check	Changes to the Wrapper Check screen. Perform a series of operation checks on the wrapper and applicator.
Wrapper setting	Changes to the Wrapper Setting screen. Initialize and set data stored in the wrapper.
Auto verification adjustment	Changes to the Automatic Verification Adjustment screen. Adjust the actual camera position by taking image data and displaying it on the camera positioning screen.
Applicator adjustment	Changes to the Applicator Adjustment screen. Execute applicator calibration.

3.3 KEY CHECK MENU

Press the [Key Check] button on the Test Menu screen. Then, the Key Check Menu screen appears.

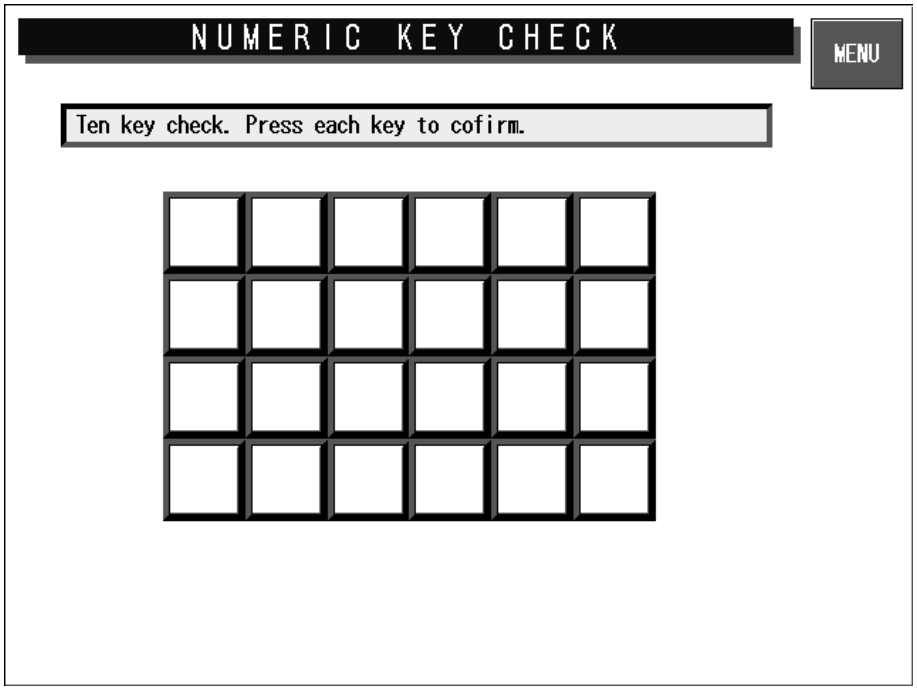


Key Check Menu Screen

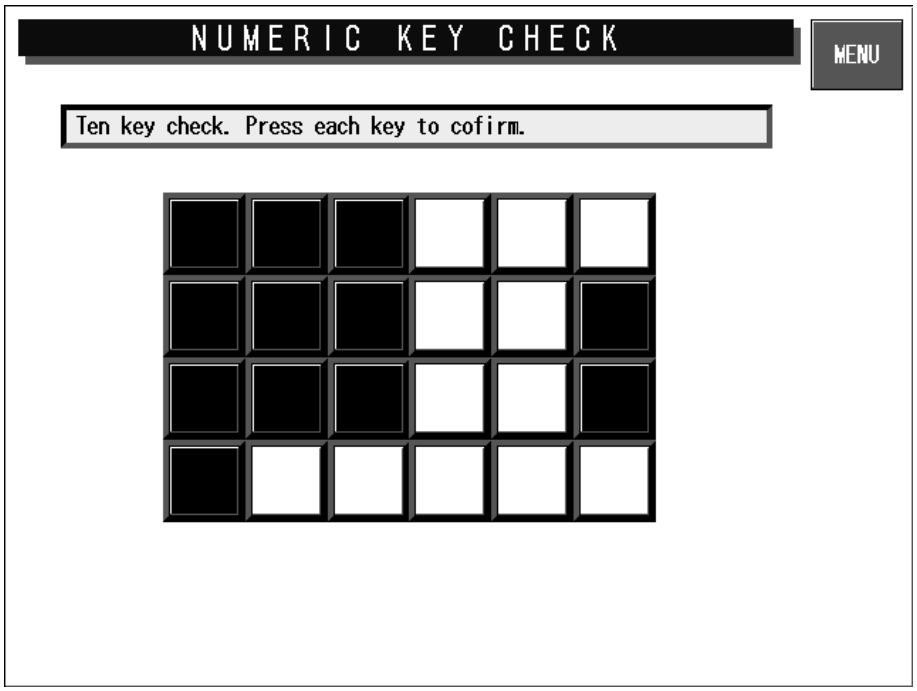
Buttons/Display Fields	Function
MENU	Returns to the Test Menu 1/2 screen.
Numeric Key Check	Changes to the Numeric Key Check screen. Press the stroke keys on the keypad, then the corresponding button will change its color black on the screen.
Touch Panel Adjustment	Changes to the Touch Panel Adjustment screen. Adjust touch panel press position by pressing the center marks (+) on the two buttons located at the top left and the bottom right of the screen using a pointed object, and finally pressing the center mark (+) on the acknowledge button.

3.3.1 STROKE KEY CHECK

Press the [Numeric Key Check] button on the Key Check Menu screen. Then, the Numeric Key Check screen appears. Stroke keys can be tested by pressing each key on the control console. Pressing each numeric key will temporarily change the corresponding button color to black. After checking all stroke keys, press the [MENU] button to return to the Key Check Menu screen.



Numeric Key Check Screen

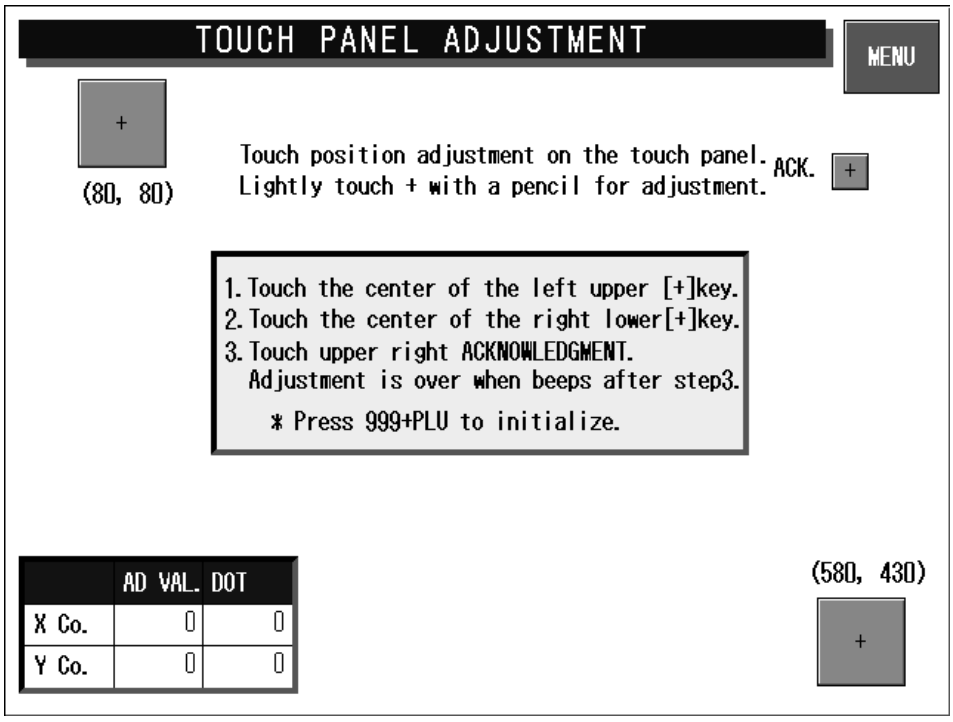


Buttons/Display Fields	Function
MENU	Changes to the Key Check Menu screen.

3.3.2 TOUCH PANEL ADJUSTMENT

Press the [Touch Panel Adjustment] button on the Key Check Menu screen. Then, the Touch Panel Adjustment screen appears. Screen and touch panel positions on the LCD screen can be adjusted on this screen.
Press the two center marks on each button located at the top left and the bottom right of the screen using a pointed object. The pressed button will change its color to black, and the coordinates positional data of the pressed point is displayed.
In the same way, press the center mark on the Acknowledge button to complete the position adjustment.
Press the MENU button to return to the Key Check Menu screen.

Note 1: Be sure to adjust the touch panel after system data has been initialized.
2: If the adjustment cannot be properly completed, enter "999" and press the [PLU] key to return to the default data, then, tray to perform adjustment again.



Touch Panel Adjustment Screen

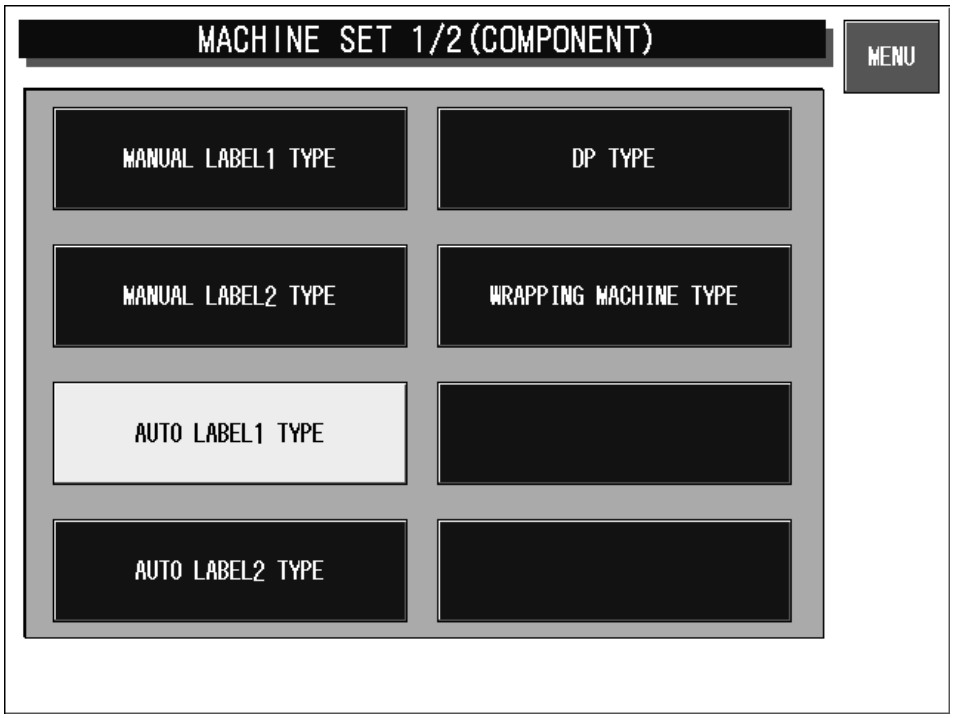
Buttons/Display Fields	Function
MENU	Changes to the Key Check Menu screen.
Position Adjustment [+]	Press only the "+" mark on the buttons located at the top left and the bottom right of the screen. Pressing these buttons will change the button color to black.
Acknowledge [+]	Completes position adjustment.
Coordinate Display Field	Displays coordinate information.

3.4 MACHINE SET 1/2: BASIC COMPONENT

Press the [Machine Setting] button on the Test Menu screen. Then, the Machine Set 1/2 (Component) screen appears.

3.4.1 MACHINE SET 1/2 (COMPONENT)

This procedure is used to determine which program is to be used with this machine.
Press one of the buttons based on the actual machine configuration. When selected, the button color will reverse yellow

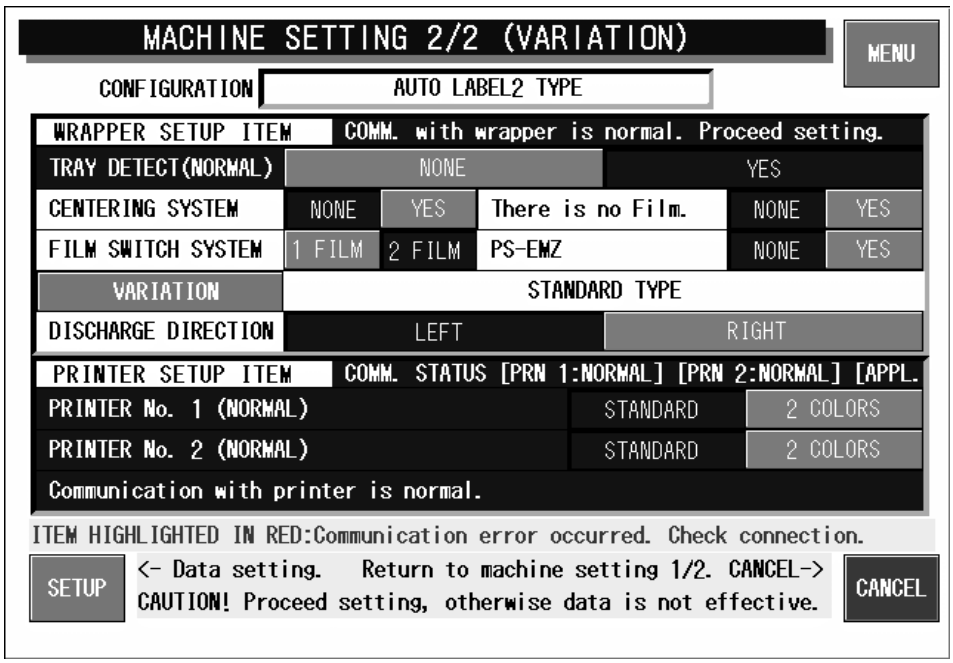


Machine Set 1/2 (Component) Screen

Buttons/Display field	Function
MENU	Changes to the Test Menu 1/2 screen.
Manual Label 1 Type	Used when no applicator is provided, and only one printer is equipped.
Manual Label 2 Type	Used when no applicator is provided, and two printers are equipped.
Auto Label 1 Type	Used when the applicator is provided, and only one printer is equipped.
Auto Label 2 Type	Used when the applicator is provided, and two printers are equipped.
DP Type	Used when no wrapping unit is equipped.
Wrapping Machine Type	Used when the wrapping unit is equipped only.

3.4.2 MACHINE SET 2/2 (VARIATION)

On this screen, further detailed settings can be performed.



Machine Setting 2/2 (Variation) Screen

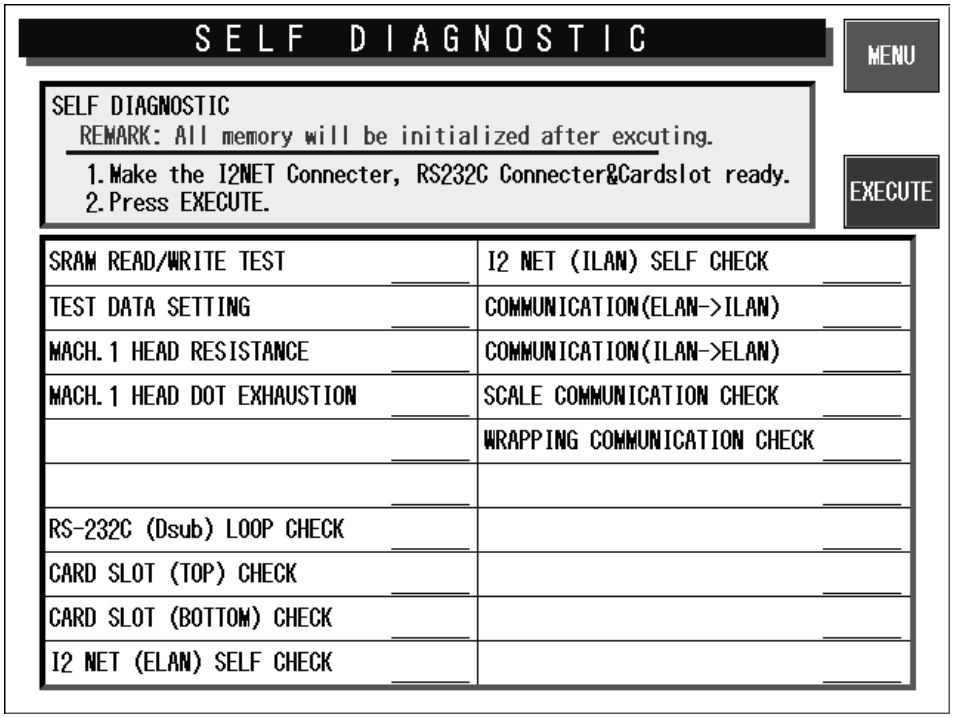
Buttons/Display Fields	Function
MENU	Returns to Test Menu 1/2 screen.
SETUP	Displays confirmation dialog screen. Press the [EXECUTE] button to register the set contents. Simultaneously executes a connection check for all connected equipment based on settings (Connection check will not be executed when an item is set).
CANCEL	Cancels changes and returns to Machine Set 1/2 screen.
Wrapper Setup Item	Displays wrapper connection results.
Tray Detect	Whether or not to use tray detection is selected. Press “Yes” when the camera is use, otherwise “None”. The selected button will change to blue.
Centering System	Whether or not to use the centering conveyor is selected. Press “None” or “Yes” to select. The selected button will change to blue
There is no Film.	Whether or not to use film presence error detection by the film passing sensor is selected. Press “None” or “Yes” to select. The selected button will change to blue.
Film Switch System	Selects one or two film rolls. “1 Film”: One film roll “2 Film”: Two film rolls The selected button will change to blue.
PM-EMZ	Selects whether or not to use the automatic supply device.
Variation	Selects the machine variation. *Note: IF the variation is mistakenly set, the machine does not operate normally because the hard composition of the wrapping machine is different from the variation.*

Buttons/Display Fields	Function
Discharge Direction	Selects pack discharge direction. "Left": Discharge left "Right": Discharge right The selected button will change to blue.
Printer Setup Item	Displays connection results with various printers and the applicator.
Printer No.1	Selects printer #1. Press the "Standard" or "2 colors" button to select. Default data: "Standard"
Printer No.2	Select printer #2. Press the "Standard" or "2 colors" button to select. Default data: "Standard"

3.5 SELF DIAGNOSTIC

Press the [Self Diagnostic] button on the Test Menu screen. Then, the Self Diagnostic screen appears. This procedure is used to perform self-diagnosis for the listed items.
Make sure that the I2Net connecters, RS232C connectors, and card slot are provided.

Note: All memory will be initialized after executing this procedure.



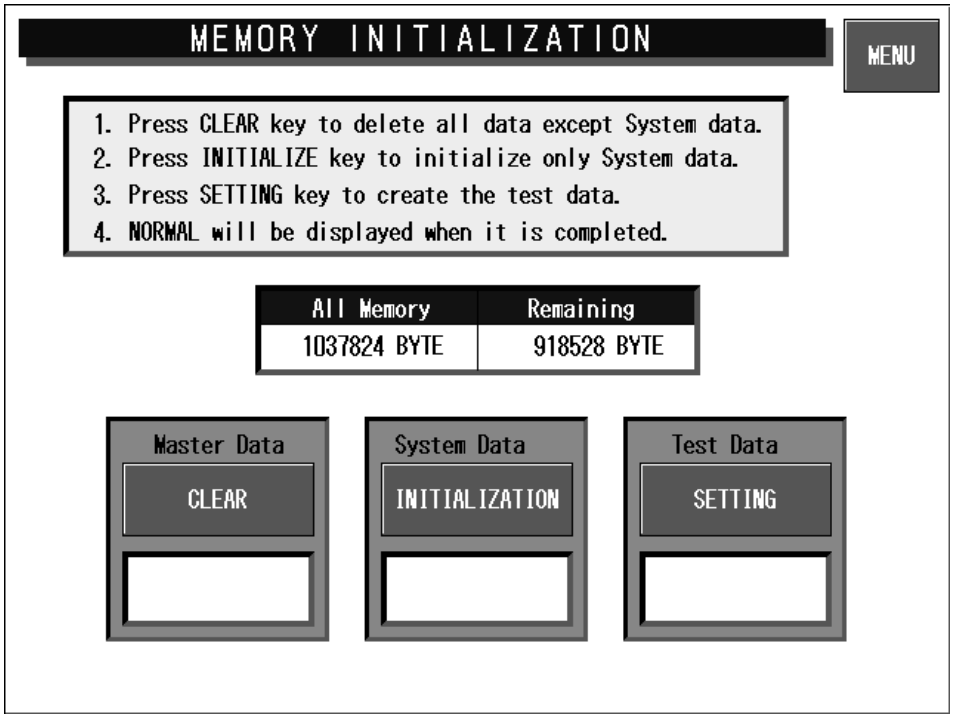
Self-diagnostic Screen

Buttons/Display Fields	Function
MENU	Returns to the Test Menu 1/2 screen.
EXECUTE	Press the [EXECUTE] button to execute cable, memory, printer head, display operation checks, and initialization.
Execution Item	Displays execution results (Operating/Normal/Abnormal) to the right of each item.

3.6 MEMORY INITIALIZATION

Press the [Memory Initialization] button on the Test Menu screen. Then, the Memory Initialization screen appears.
This procedure is used to delete all data except system data, initialize system data only, and create test data.

Note: Repeat the procedure if memory initialization ends abnormally.



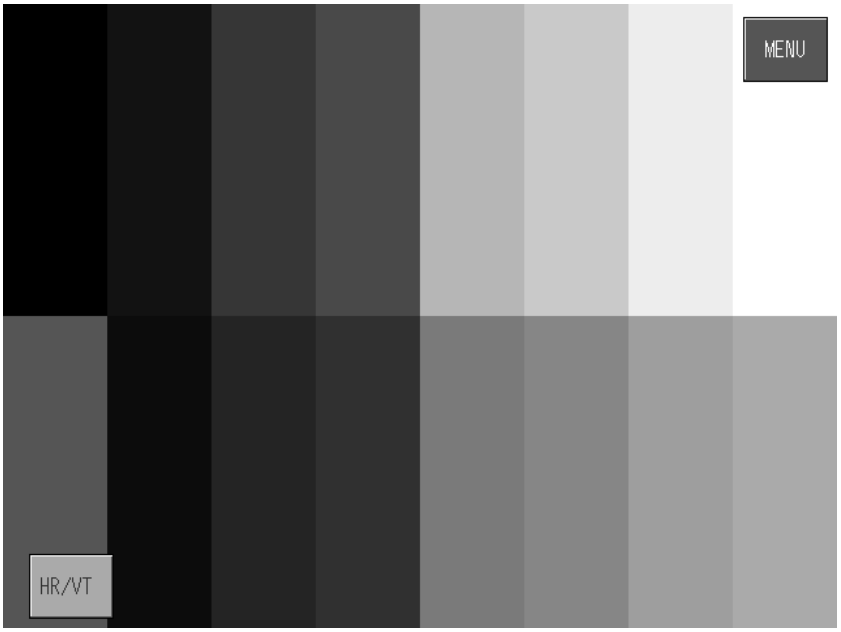
Memory Initialization Screen

Buttons/Display Fields	Function
MENU	Returns to the Test Menu 1/2 screen.
Master Data CLEAR	Clear master data. “Processing” is displayed during execution. “Normal” is displayed when the execution has ended normally. “Abnormal” is displayed when execution has ended abnormally.
System Data INITIALIZATION	Initialize system data (system master and machine master data). “Processing” is displayed during execution. “Normal” is displayed when the execution has ended normally. “Abnormal” is displayed when execution has ended abnormally.
Test Data SETTING	Set test data after master data has been cleared and system data has been initialized. “Processing” is displayed during execution. “Normal” is displayed when the execution has ended normally. “Abnormal” is displayed when execution has ended abnormally.

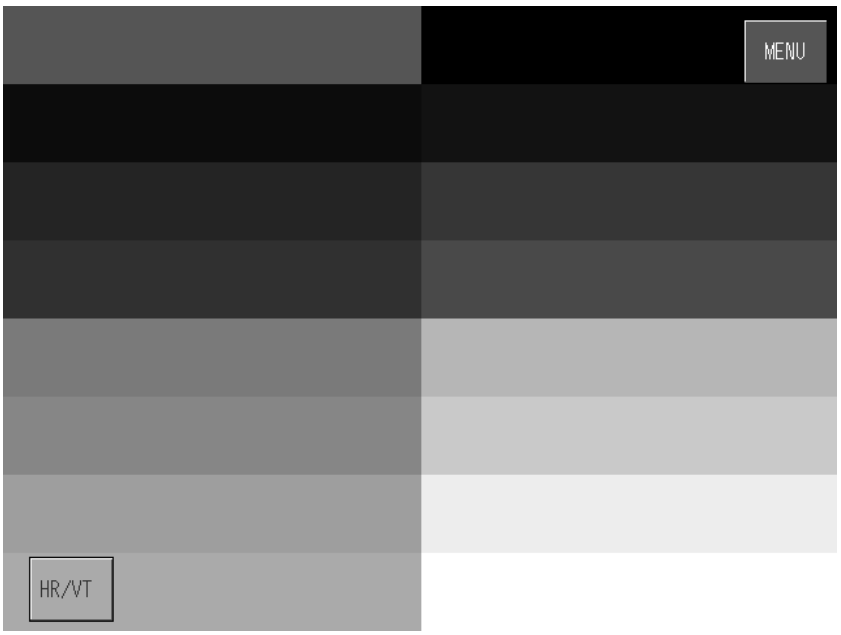
Note: Repeat the procedure if memory initialization ends abnormally.

3.7 DISPLAY ADJUSTMENT

Press the [Display Check] button on the Test Menu screen. Then, the display check screen appears. This procedure is used to check whether the screen shows an ideal color contrast or not. To adjust the color contrast, turn the knob on right side of the operating console.



Display Adjustment Screen (Vertical)



Display Adjustment Screen (Horizontal)

Buttons/Display Fields	Function
MENU	Returns to the Test Menu 1/2 screen.
Horizontal/Vertical	Changes between horizontal and vertical color patterns.

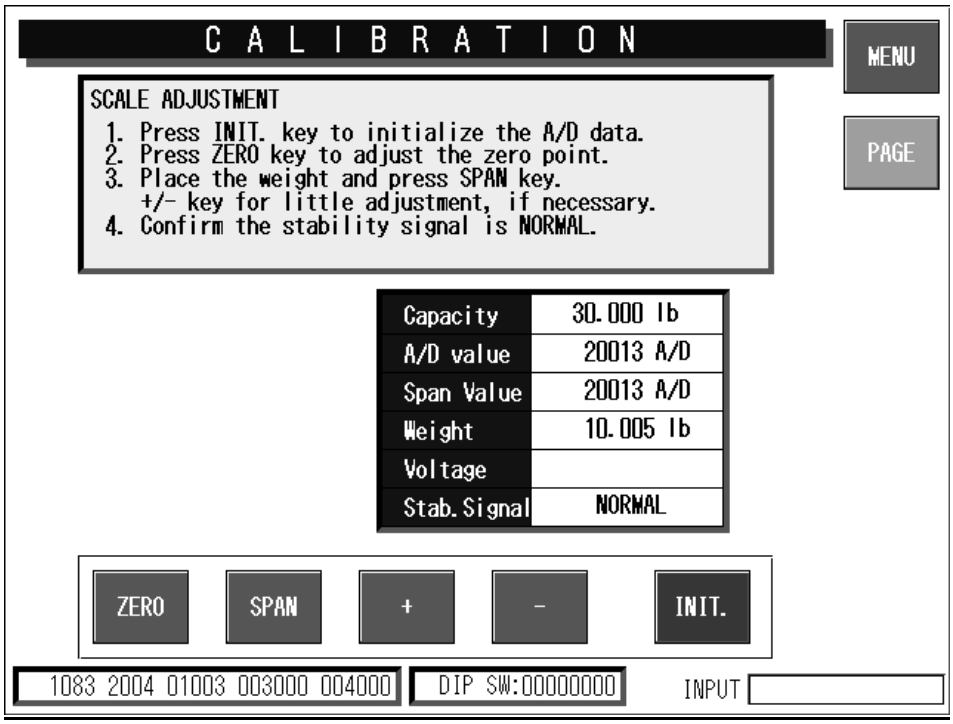
Turn the knob on right side of the operating console to adjust color contrast.

3.8 SCALE CALIBRATION

Press the [Calibration] button on the Test Menu screen. Then, the Calibration screen appears.

3.8.1 A/D DATA INITILAIZATION, ZERO POINT/SPAN ADJUSTMENT

This procedure is used to initialize the A/D data, adjust the zero point, and perform span adjustment of the scale.



Calibration Screen

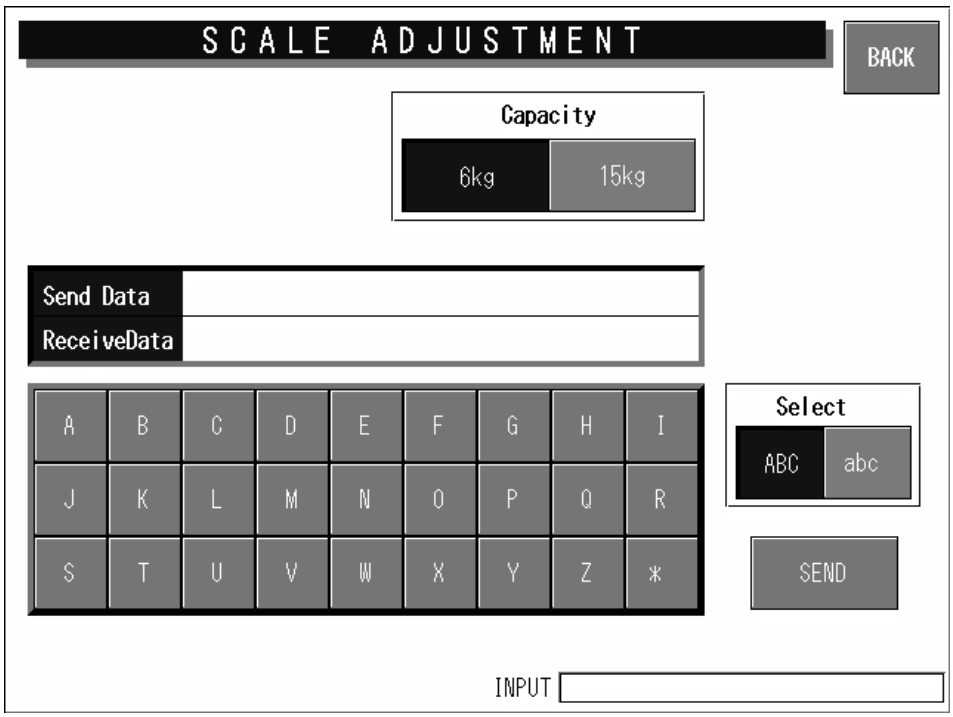
Buttons/Display Fields	Function
MENU	Returns to the Test Menu 1/2 screen.
PAGE	Changes to the scale adjustment screen after password has been entered. Inputting the command sends it directly to the scale board.
ZERO	Executes zero point adjustment.
SPAN	Executes span adjustment.
[+] [-]	Executes fine span adjustment using these buttons.
INITIALIZE	Executes the scale board initialization.
Capacity	Displays weighing capacity in “kg” based on scale board information.
A/D Value	Displays A/D (read) data (count value) in A/D units.
Span Value	Subtracts span data from the read data (the above mentioned A/D value) and displays the value (count value) in A/D units.
Weight	Displays the weight value in “kg” calculated form the A/D value based on the set district information.
Voltage	Displays the voltage.
Stability Signal	“Normal” is displayed when the first stability signal is received normally. The display goes blank if communication is unsuccessful.
Scale Setting Information	Displays basic performance data and country specific scale setting data.
DIP Switch Data	Displays scale board DIP switch setting status. Refer to the table below.

■ DIP Switch Settings

DIP SW bit	Content
0	Board No. 0: Set with “X” command 1: “0” fixed
1	Storage command 0: “W” command prohibited 1: “W” command allowed
2	Test mode 0: “∗” command prohibited 1: “∗” command allowed
3	Movement average 0: 8 times 1: None
4	Zero bias 0: Yes 1: No
5	Sending weight 0: No 1: 20msec
6	A/D data 0: ASC-HEX 5byte 1: ASC-HEX 6byte
7	Analog filter 0: Software 1: Hardware

3.8.2 SCALE ADJUSTMENT

This procedure is used to select the weighing capacity and create a command message to be sent to the scale.



Scale Adjustment Screen

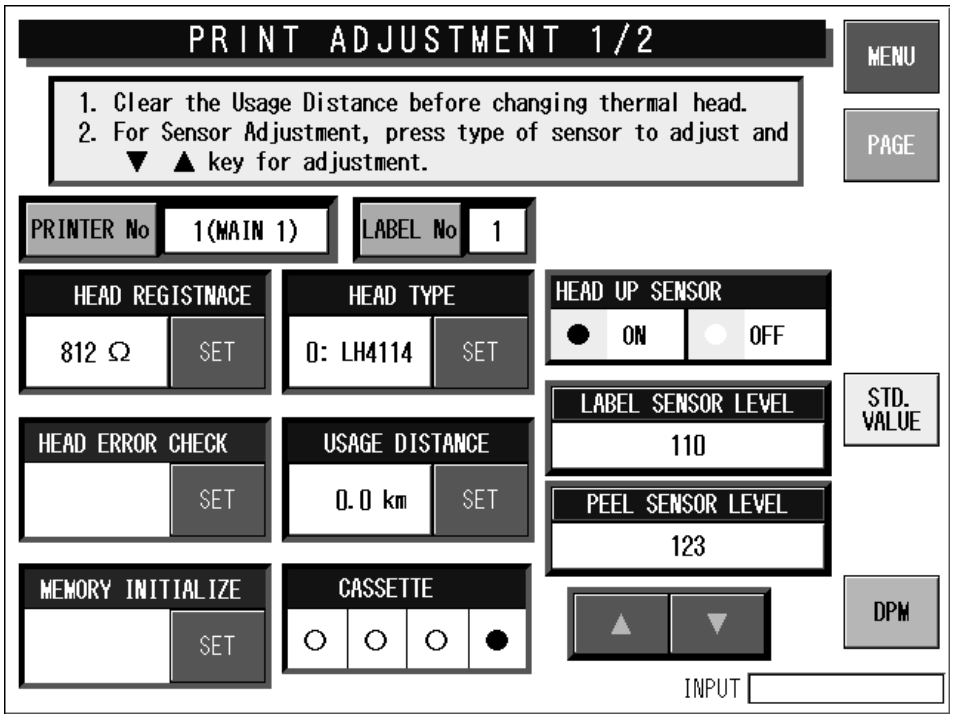
Buttons/Display Fields	Function
BACK	Returns to the Calibration screen.
Capacity	Select either “6kg” or “15kg”. Press the button that corresponds to the capacity to be selected. The button color will change to blue.
SPAN	Executes span adjustment.
Select [ABC] [abc]	Select either “ABC” or “abc”. These buttons select upper or lowercase letters for alphabetic input when creating a command message to send to the scale board. Select letter type by pressing the corresponding button. The button color will change to blue.
SEND	Send the command message to the scale unit.
Send Data	Displays command message data sent to the scale board.
Receive Data	Displays command message data received from the scale board.

3.9 PRINT ADJUSTMENT 1/2: PRINTER HEAD

Press the [Print Adjustment] button on the Test Menu screen. Then, the Print Adjustment 1/2 screen appears.

3.9.1 PRINT ADJUSTMENT 1/2

This procedure is used to set various printing conditions, and adjust various sensor levels for the selected printer.



Print Adjustment 1/2 Screen

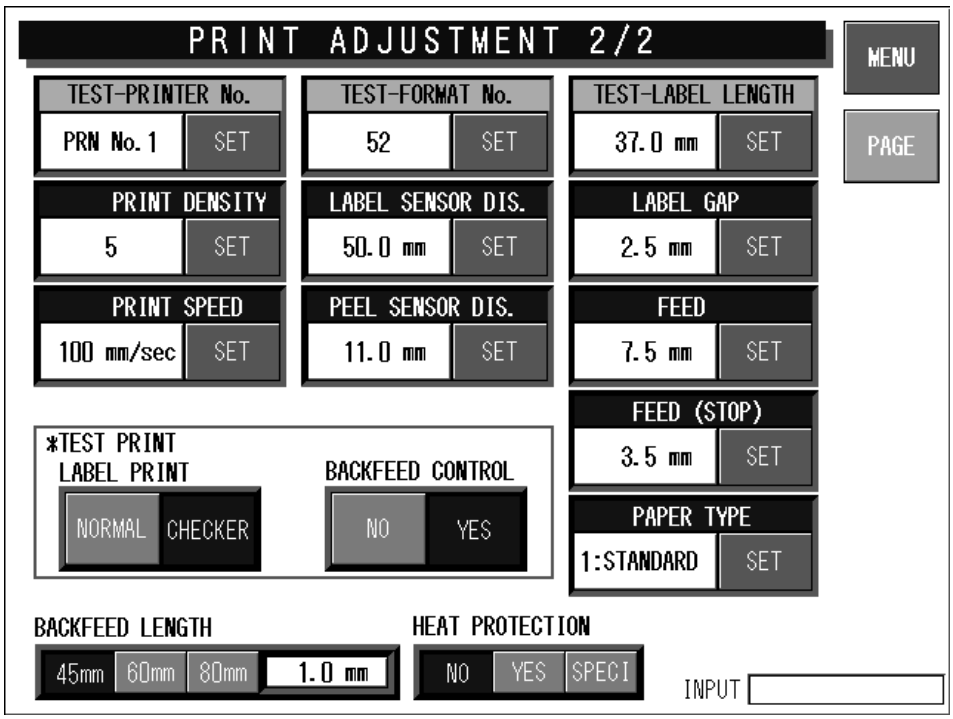
Buttons/Display Fields	Function
MENU	Returns to Test Menu 1/2 screen.
PAGE	Changes to Print Adjustment 2/2 screen.
DPM (Digital Potentiometer)	Adjust the sensitivity of each label sensor and peel sensor. Changes the label and peel sensor value Display Fields to green and makes it possible to change data. Adjust sensitivity by pressing one of the sensor value Display Fields and making a numeric entry. Sensitivity can be adjusted by pressing one of sensor value Display Fields after numeric entry. Press this button again to exit sensitivity adjustment mode and return the color to white.

Buttons/Display Fields	Function
STANDARD VALUE	Changes the peel sensor standard (threshold) value data. Press this button to change the peel sensor level display field title to the peel sensor standard value and displays the present peel sensor level and standard value data. Press the display field after numeric entry to enable the standard value adjustment by pressing [△] and [▽] buttons. Change label sensor standard (threshold) value data. Press this button to change the label sensor level display field title to the label sensor standard value and display present label sensor level and standard value data. Press the display field after numeric entry to enable the standard value adjustment by pressing [△] and [▽] buttons.
Printer No.	Displays the printer number to be adjusted. Press the [SET] button after numeric entry to set a new printer to be adjusted. Data range is 1-4.
Label No.	Displays the label number that is linked with the numbers of the printer and the cassette to be adjusted. Set the label number in the label detail screen in System Mode. Default data: “1” for printer #1, “2” for printer #2, “6” for PP printer. Set the above-mentioned label sensor threshold (standard) value for each label number.
Head Resistance	Displays thermal head resistance (Ω, zero suppression). Press the [SET] button after numeric entry to set new head resistance. Data range is 0-999. The buzzer will sound if data is set beyond the specified range. Press the [SET] button without numeric entry to automatically set head resistance. “Auto Setting” is displayed during the execution of automatic settings.
Head Error Check	Execute thermal head error check. “Processing” is displayed during processing. “Normal” is displayed when processing has ended normally. “Abnormal” is displayed when processing has ended abnormally.
Memory Initialization	Initialize printer memory. “Processing” is displayed during processing. “Normal” is displayed when processing has ended normally. “Abnormal” is displayed when processing has ended abnormally. Execute sensor levels, back feed calibration, initialization of the protection setting value against head temperature rise, and acquisition of the head resistance, and initialization of label and cassette master data for the selected printer. Be sure to execute this procedure when the P-910 has been replaced.
Head Type	Displays thermal head type name. One of the following three types can be set: Press the [SET] button after numeric entry to set the desired head type. Default data: “0” LH4114 (milli 8 standard). 1: LH4116 (milli eight history control).Printing is not possible with the LH4116 head (milli 8 history control) installed. Printing can be normally performed when “1” is set and the LH4114 installed. 2: BHP4312 Set the BHP4312 (milli 82 colors) when using two color specifications. Set the DIP switch on the thermal board and "Thermal paper type" in “Print Adjustment 2/2” screen to “2: 2 color label”.
Usage Distance	Thermal head movement distance (“km”, zero suppression) is displayed. Press the [SET] button to clear head movement distance.

Buttons/Display Fields	Function
Cassette Status	Refer only when adjusting the cassette applicable printer. ○○○○: No cassettes are inserted. ○○○●: Cassette 1 is inserted. ●○○●: Cassette 2 is inserted. ●●○●: Cassette 3 is inserted. ○○●●: Cassette 4 is inserted. ●○●●: Cassette 5 is inserted. ○●●●: Cassette 6 is inserted. ●●●●: Cassette 7 is inserted.
Head Up Sensor	Displays head status. “ON” is illuminated when the head is set normally. “OFF” is illuminated when the head is up.
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. Press this button to finely adjust the peel 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.

3.9.2 PRINT ADJUSTMENT 2/2

This procedure is used to set printing conditions, label and peel sensor distances, and various labeling conditions for test label printing.



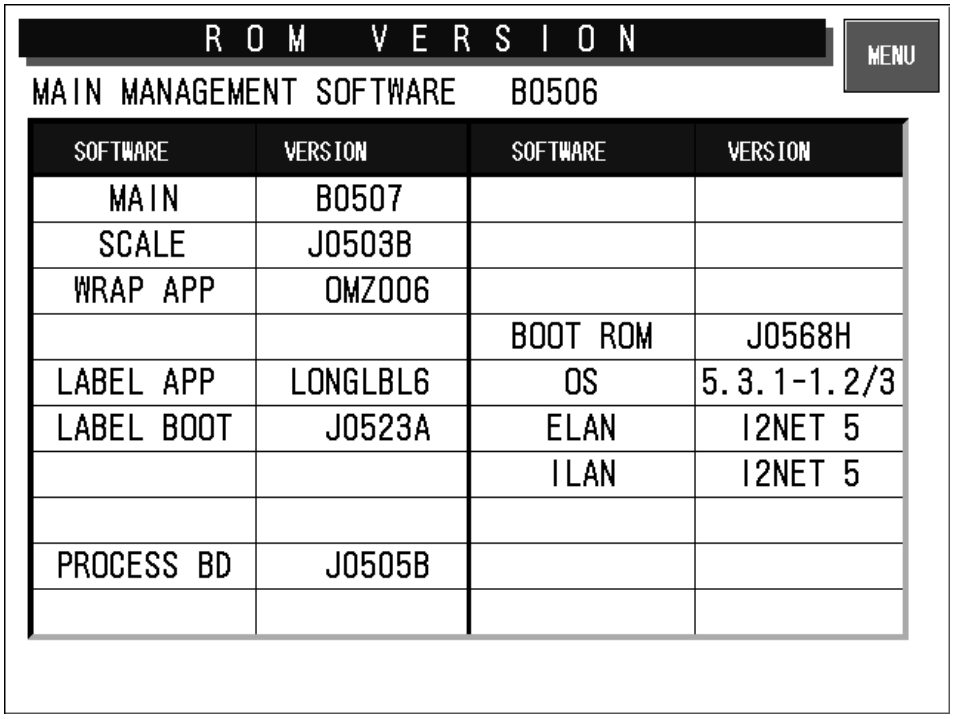
Print Adjustment 2/2 Screen

Buttons/Display Fields	Function
MENU	Returns to the Test Menu 1/2 screen.
PAGE	Changes to the print adjustment (head information) screen.
Printer No.	Displays the number of the printer to be adjusted. Press the [SET] button after a numeric entry to change the number of the printer to be adjusted. The data range is 1-4. The buzzer will sound if data is entered outside the range or no data is entered.
Print Density	Displays the set print density. Press the [SET] button after a numeric entry to set the print density. The data ranges from 0 (lightest) to 9 (darkest), and the buzzer will sound if data is entered outside the range or no data is entered. The default value is “5”.
Print Speed	Displays the set print speed (mm/sec). Press the [SET] button after a numeric entry to set the print speed. The data range is 60-130 (in units of 10mm/sec.). The default value is “100mm/sec.”. A slower print speed results in a higher print quality.
Test Format No.	Displays the test label format number (2 digits) to be referred to for test printing or label feeding. Press this button after a numeric entry to set the label format for the test print. The data range is 1-99, and the buzzer will sound if data is entered outside the range or no data is entered. The default value is the default format set in the printer.
Label Sensor Distance	Displays the set label sensor distance (mm). The entered data can be set as the printer label sensor distance by pressing the [SET] button after a numeric entry. The data range is 1-999 in increments of 0.1mm. The default value is 41.0mm.
Peel Sensor Distance	Displays the set peel sensor distance (mm). The entered data can be set as a peel sensor distance of the objective printer by pressing the [SET] button after a numeric entry. The data range is 1-999 in increments of 0.1mm. The default value is 11.0mm.
Test Label Length	Displays label length (mm) for test printing. The entered data can be set as the printer label length by pressing the [SET] button after a numeric entry. The data range is 1-9999 in increments of 0.1mm. A buzzer will sound if data is entered outside the range or no data is entered. The default value is the label length of the above-mentioned test format number. The label will be fed for the distance of the label and gap lengths.
Label Gap	Displays the set gap length (mm). The entered data can be set as a gap length of the printer by pressing the [SET] button after a numeric entry. The data range is 1-999 in increments of 0.1mm. A buzzer will sound if data is entered outside the range or no data is entered. The default value is 2.5mm.
Feed	Displays the set feed length (mm). The entered data can be set as the printer feed length by pressing the [SET] button after a numeric entry. The data range is 1-999 in increments of 0.1mm. The default value is 7.5mm. This data becomes the back feed length when the back feed control is performed.
Feed (Stop)	This is effective only when the automatic label applicator is used. A label is issued leaving the set feed stop length, and fed for the length immediately before it is sucked by the applicator. The set feed stop length is displayed. Press the [SET] button after a numeric entry to set the feed stop length of the printer. The data range is 1-999 in units of 0.1mm. The default value is 3.5mm.
Test Print (Label Print)	Select the print pattern when test printing is performed. Press either “Normal” or “Checker” to select the item and change the button color to blue. When test printing is performed, this selection information will be used. The default data is “Checker”.

Buttons/Display Fields	Function
Test Print (Back Feed Control)	Select the back feed function when test printing is performed. Press either “YES” or “NO” to select the desired function and change the button color to blue. *Note: This setting is applied only to the test print. Back feed settings for normal printing can be performed in the Label Detail Settings in the System Menu.*
Paper Type	Displays the type of thermal paper selected. Press the [SET] button after a numeric entry to set the type of thermal paper to be used in the printer. The data range is 0-9 with the following parameters: 1: Standard label 2: Two color label 3-9: Not registered The default value is “1”.
Back Feed Length	A loss is caused in the feeding length for each roller due to the reverse rotation of the motor, gears, and print roller during back feed operation. This function is used to make up that loss. It does not influence the store name, address, and ruled lines for each existing format. However, it is used in the case of a format without sufficient space. The top and bottom dimensions (approximation) of the set label and the back feed correction length (mm). Press the top/bottom select button to determine the label top/bottom type for correction length. Select one of three types: 45mm, 60mm, or 80mm. The selected size field changes to blue. Press the correction length display field after a numeric entry to set the correction length for the selected top and bottom dimensions. The data range is 0.0-9.9mm.
Heat Protection	Displays the heat protection selection for the set head. Press the [SELECT] button to select head temperature increase protection. The button color will change to blue. No: Print even if the head temperature increases. (Default) Yes: Stop printing for about 0.5 seconds if the head temperature increases. The print density is high, and it is a level where the temperature over rises by 1000 piece continuous printing. The print density is high and the head will overheat after continuously printing 1000 labels. Usually set to “No”.

3.10 ROM VERSION DISPLAY

Press the [ROM Version] button on the Test Menu screen. Then, the ROM Version screen appears.
This procedure is used to display the ROM version of connected devices.
It cannot display devices that are not connected.

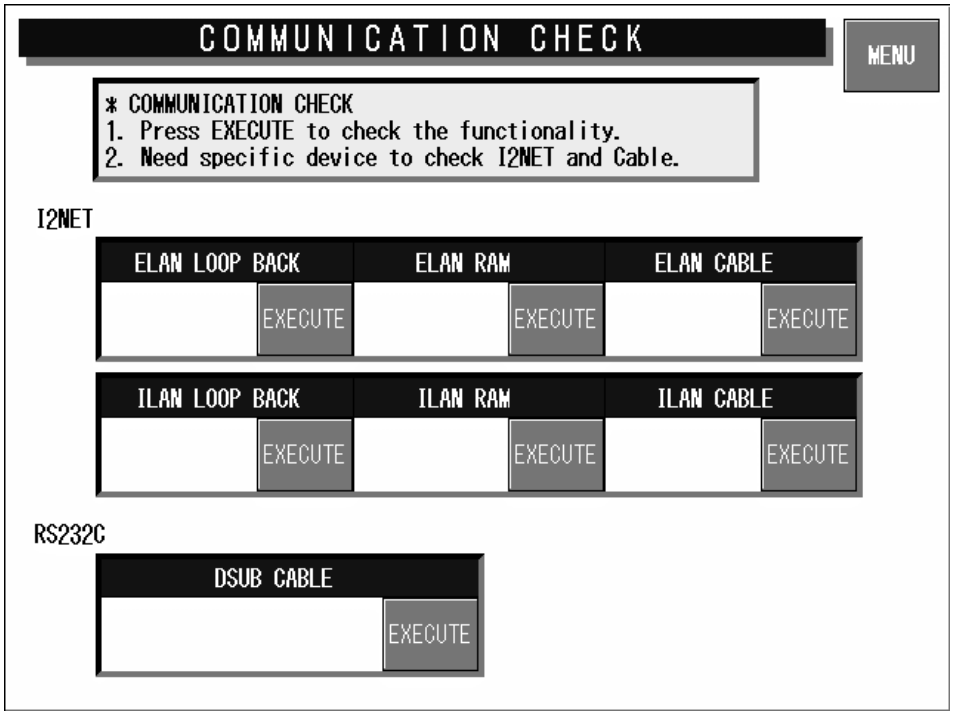


ROM Version Display

Buttons/Display Fields	Function
MENU	Returns to the Test Menu 1/2 screen.
Version Display	Displays the ROM version of connected devices. The sample data for the above-mentioned display is different from actual ROM version numbers. Cannot display devices that are not connected.

3.11 COMMUNICATION CHECK

Press the [Communication Check] button on the Test Menu screen. Then, the Communication Check screen appears. This procedure is used to perform various communication checks.

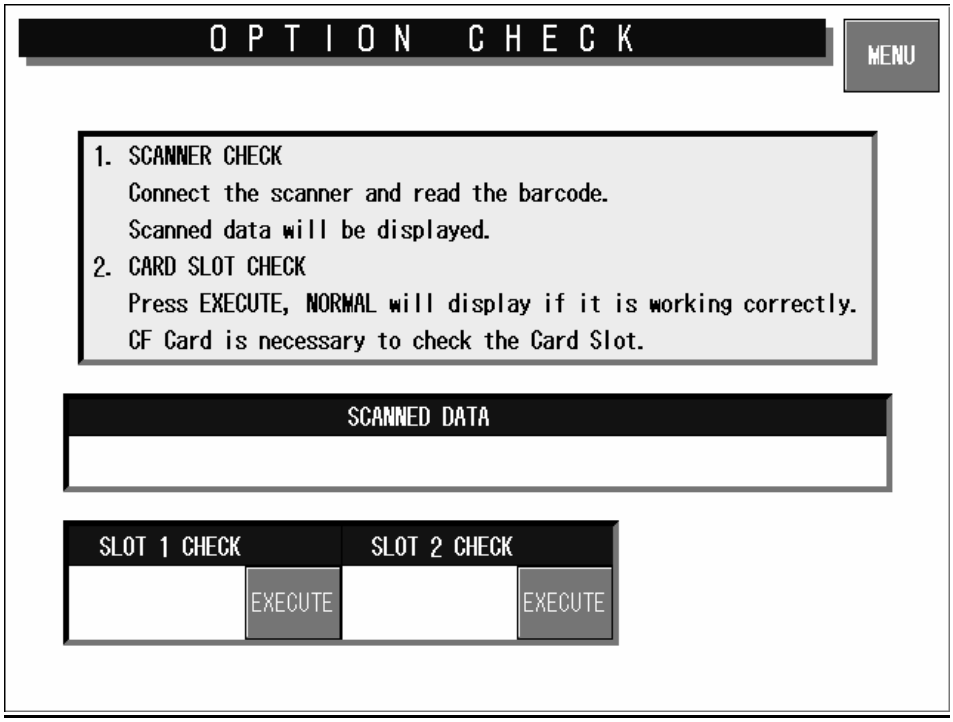


Communication Check Screen

Buttons/Display Fields	Function
MENU	Returns to the Test Menu 1/2 screen.
ELAN Loop Back	Press the [EXECUTE] button to execute a send and receive loop test within the board.
ELAN RAM	Press the [EXECUTE] button to execute a send and receive buffer memory test.
ELAN Cable	Connect the IF-21FD to the cable to confirm the response. Press the [EXECUTE] button to execute a cable test.
ILAN Loop Back	Press the [EXECUTE] button to execute a loop back test.
ILAN RAM	Press the [EXECUTE] button to execute an ILAN RAM test.
ILAN Cable	Connect the IF-21FD to the cable to confirm the response. Press the [EXECUTE] button to execute a cable test.
RS232C Dsub Cable	Press the [EXECUTE] button to execute a cable test and RS-232C input/output check. Use the loop back connector for testing.
Display Status	“Operating” is displayed during execution. “Normal” is displayed when the execution has ended normally. “Abnormal” is displayed when execution has ended abnormally.

3.12 OPTION CHECK

Press the [Option Check] button on the Test Menu screen. Then, the Option Check screen appears. This procedure is used to perform scanner and card slot checks.

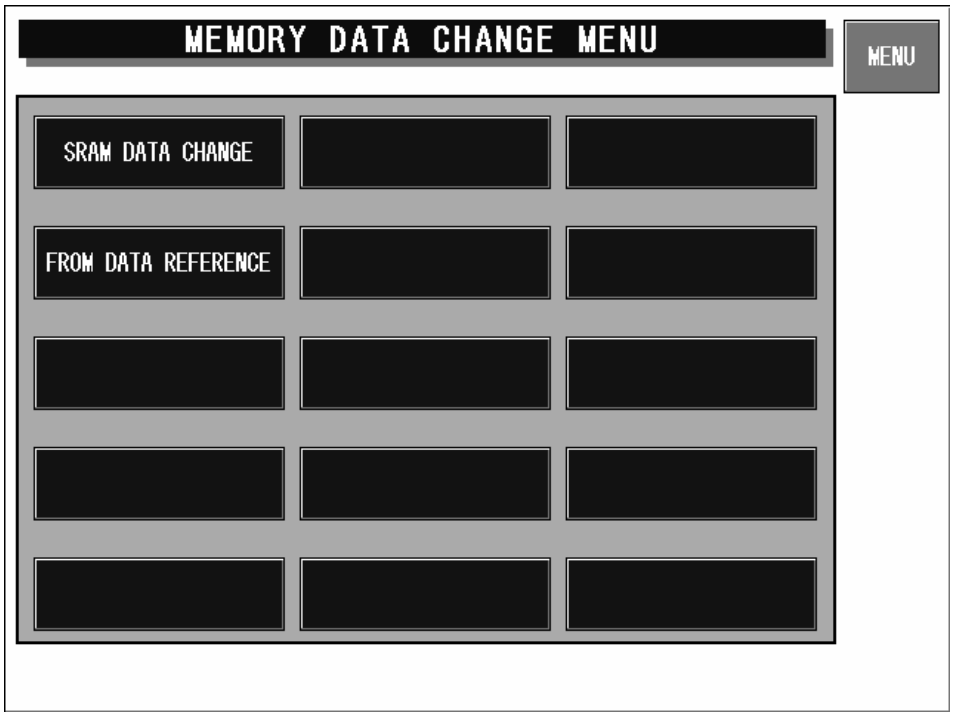


Option Check Screen

Buttons/Display Fields	Function
MENU	Returns to the Test Menu 1/2 screen.
Scanned Data	Displays the OCR data when a barcode is read with the scanner.
Slot 1 Check	Insert the formatted CF card (8M, 16M) and press the [EXECUTE] button to execute an operation check.
Slot 2 Check	Insert the formatted CF card (8M, 16M) and press the [EXECUTE] button to execute an operation check.
Display Status	“Operating” is displayed during execution. “Normal” is displayed when the execution has ended normally. “Abnormal” is displayed when execution has ended abnormally.

3.13 MEMORY DATA CHANGE MENU

Press the [Memory Data Change] button on the Test Menu screen. Then, the Memory Data Change Menu screen appears.

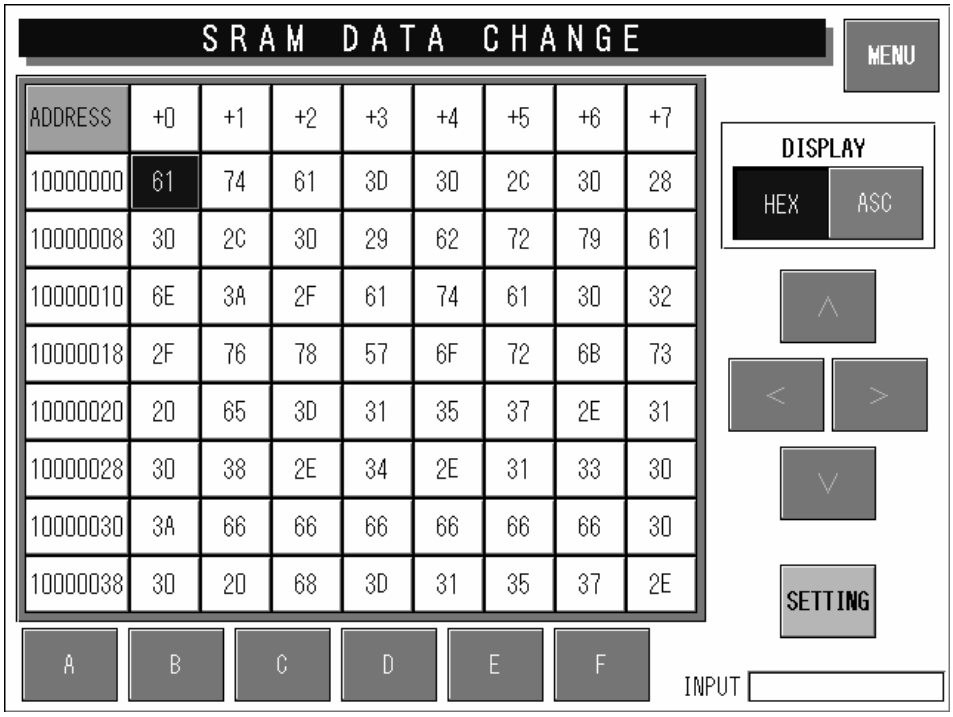


Memory Data Change Menu Screen

Buttons/Display Fields	Function
MENU	Returns to the Test Menu 1/2 screen.
SRAM Data Change	Press this button to change the display to the SRAM data change screen. SRAM data can be changed and confirmed on the memory dump list.
FROM Data Reference	Changes to the FROM data reference screen. FROM data can be confirmed on the memory dump list.

3.13.1 SRAM DATA CHANGE

Press the [SRAM Data Change] button on the Memory Data Change Menu screen. Then, the SRAM Data Change screen appears. This procedure is used to confirm or change SRAM data on the memory dump list.

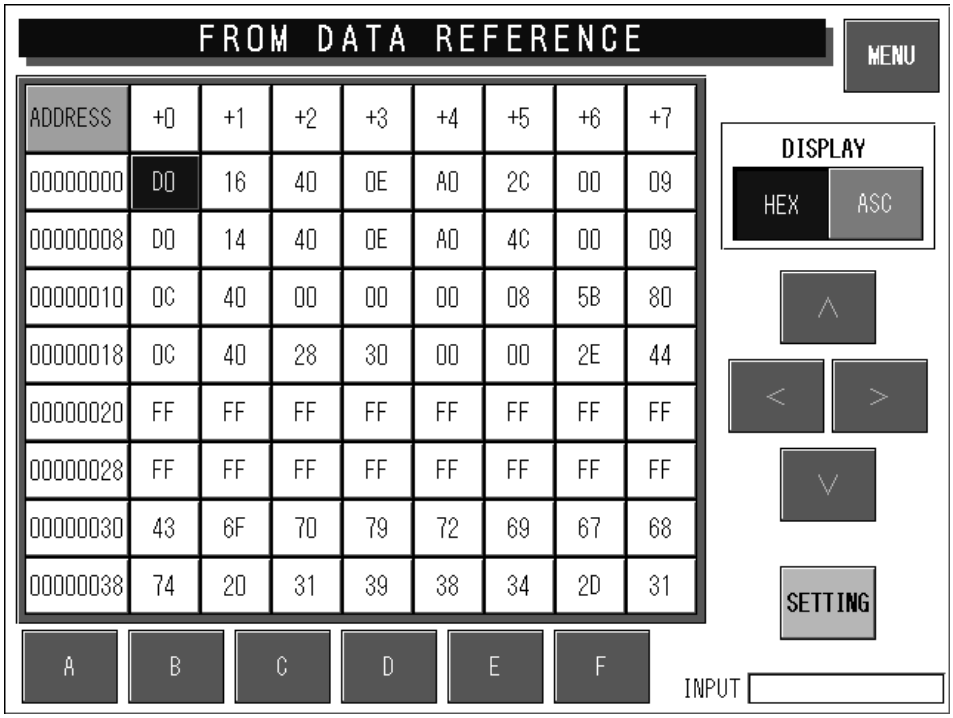


SRAM Data Change Screen

Buttons/Display Fields	Function
MENU	Returns to the Memory data change menu screen.
SRAM Data Button	Press any button (address position) to change its color to blue and enable settings for modification. The memory data status is displayed.
Display	Select either “HEX” or “ASC” data formats. Press one of these buttons to select the data format and the selected button will change to blue. The data display format will change in the SRAM data display field.
Up/Down Left/Right	Press these buttons to move active SRAM data (address) positions. Press these buttons without a numeric entry to move the cursor in the desired direction. Press one of these buttons after a numeric entry to move the cursor to the entered address position.
SETTING	Press this button after numeric entry to set the entered data to the memory data to be changed (RAM data field is blue). The data range is 0-FF. An operation error buzzer will sound if data is entered outside the range or there is no numeric entry made.

3.13.2 FROM DATA REFERENCE

Press the [FROM Data Reference] button on the Memory Data Change Menu screen. Then, the FROM Data Reference screen appears. This procedure is used to confirm FROM data on the memory dump list.

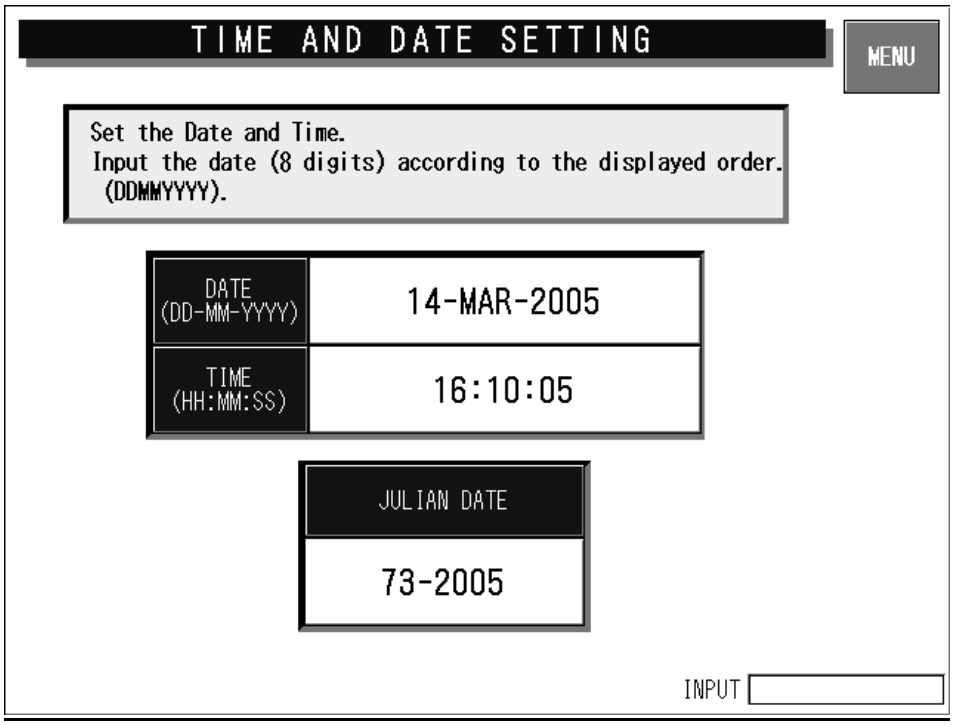


FROM Data Reference Screen

Buttons/Display Fields	Function
MENU	Returns to the Memory data change menu screen.
FROM Data Button	Press any button to change its color to blue and display the set memory data.
Display	Select either “HEX” or “ASC” data formats. Press one of these buttons to select the data format and the selected button will change to blue. The data display format will change in the FROM data display field.
Up/Down Left/Right	Press these buttons to move the displayed FROM data position. Press these buttons without a numeric entry to move the cursor in the desired direction. Press one of these buttons after a numeric entry to move the cursor to the entered address position.
SETTING	This screen is used only for data reference and an error will occur if this button is pressed.

3.14 TIME AND DATE SETTING

Press the [Time & Date Setting] button on the Test Menu screen. Then, the Time and Date Setting screen appears. Enter the date (DD-MM-YYYY) and press the Date field to set. In the same manner, enter the time (HH:MM:SS) and press the Time field to set.

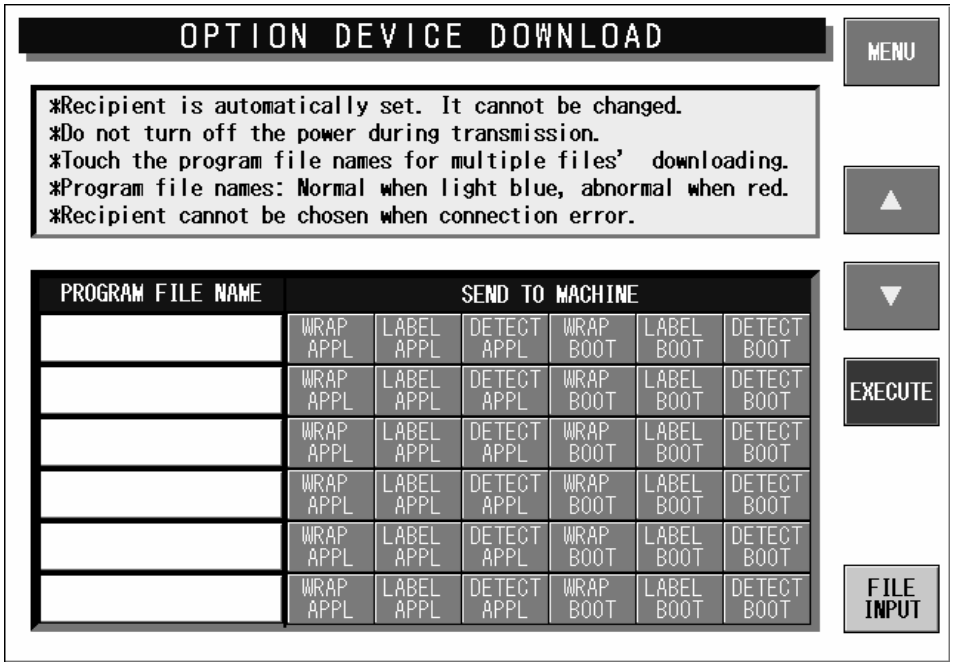


Time and Date Setting Screen

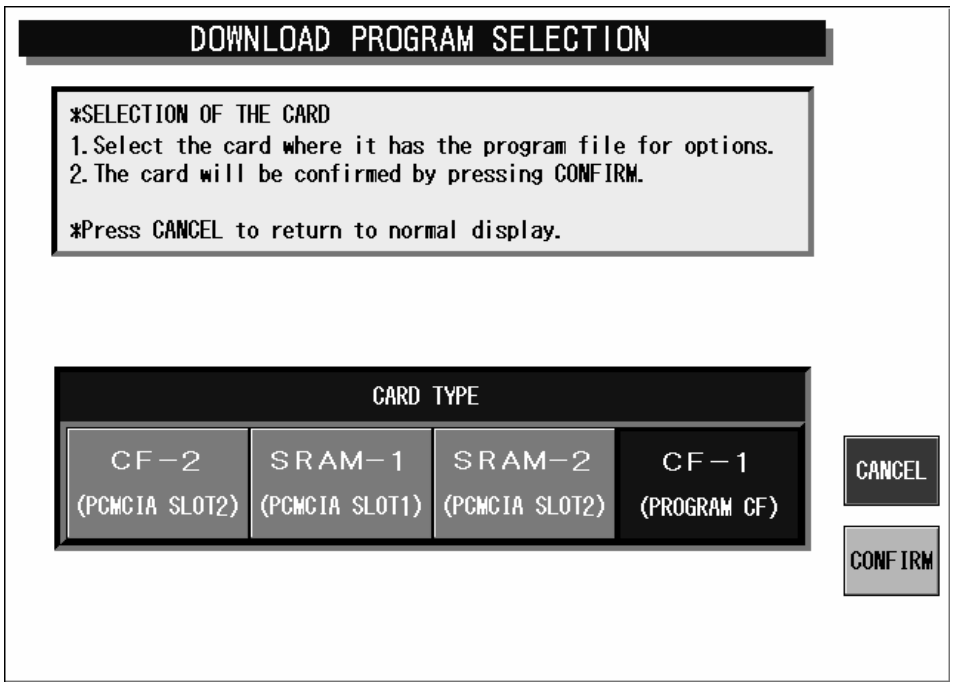
Buttons/Display Fields	Function
MENU	Returns to the Test Menu 1/2 screen.
DATE	Press this button after a numeric entry to set the date. Non-existent calendar dates cannot be set. Data format is day (2 digits), month (2 digits), and year (4 digits).
TIME	Press this button after a numeric entry to set the time. Data format is hour (2 digits), minute (2 digits), and seconds (2 digits). The data range is 0-235959. Press this button without a numeric entry to set seconds to “00”.

3.15 PROGRAM DOWNLOAD

Press the [Program Download] button on the Test Menu screen. Then, the Option Device Download screen appears.
There are four programs that operate this machine; Main control program that operates the PC board, the program that operates the label applicator, the program that operates the camera detection, and the program that operates the wrapping unit. On this screen, three programs are displayed.
The main control program boots the data in the CF card to the PC board when the power is turned ON.



Option Device Download Screen



Download Program Selection Screen

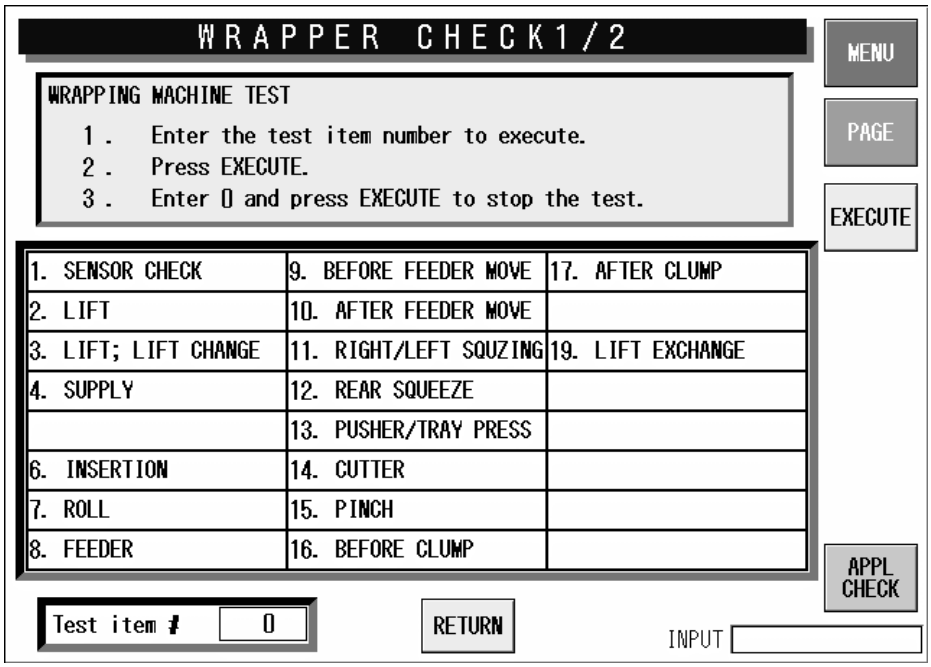
Buttons/Display Fields	Function
MENU	Returns to the Test Menu 1/2 screen.
EXECUTE	Displays the execution confirmation screen. Press the [EXECUTE] button again to send the selected program file(s) to the destination device. Press the [CANCEL] button to cancel the transaction.
FILE INPUT	Displays the Download Program Selection screen. Press to select the media that stores the program to be downloaded. Press the [CONFIRM] button to display the Download Program Selection screen appears again for the selected media.
Program File Name	Peripheral program file names existing in the program CF are displayed.
Card Type	Destination is automatically judged by the peripheral program file existing in the program CF, and the button color changes to blue.

3.16 WRAPPER / APPLICATOR ADJUSTMENT

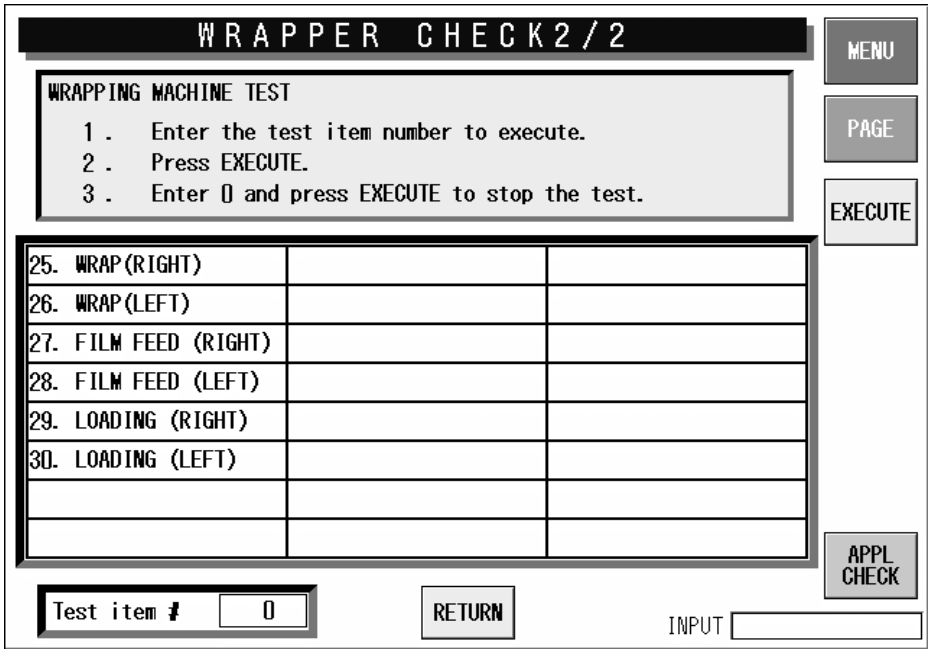
Press the [Wrapper/Applicator Adjust] button on the Test Menu screen. Then, the Wrapper Check screen appears.

3.16.1 WRAPPER CHECK

Enter the test item number using the numeric keys or press the desired item field on the screen, then press the [EXECUTE] button to perform operation check.
To stop operation check, enter “0” and press the [EXECUTE] button.



Wrapper Check 1/2 Screen

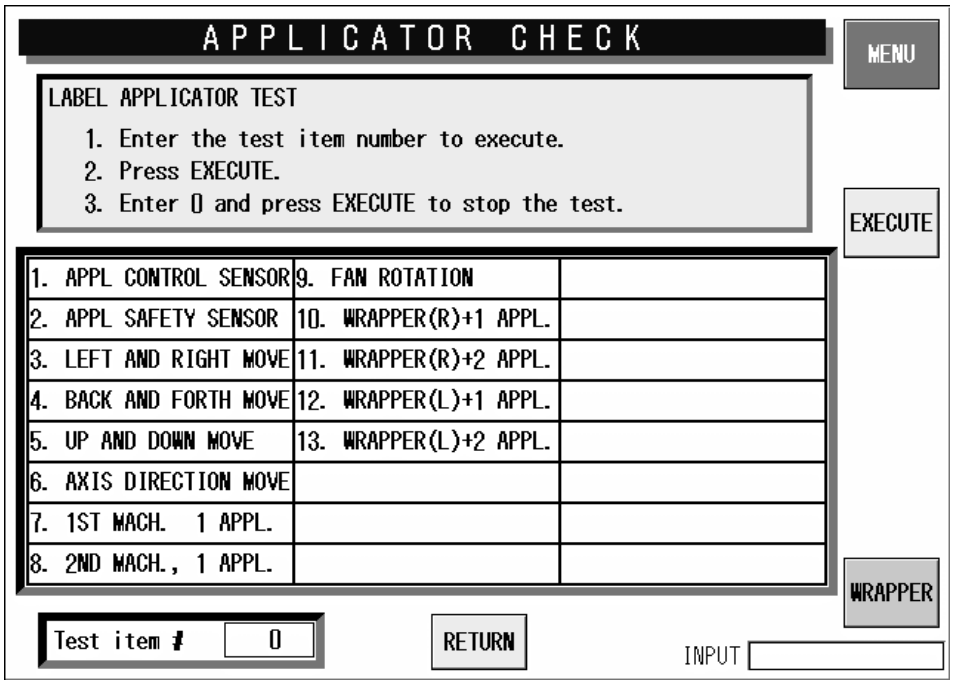


Wrapper Check 2/2 Screen

Buttons/Display Fields	Function
MENU	Returns to the Test Menu 1/2 screen. Displays the dialog screen when there is a commodity on the list through an operation series execution.
PAGE	Turns over the screens.
APPLICATOR CHECK	Press this button to change to the Applicator Check screen. The button name changes between "Applicator Check" and "Wrapper Check".
EXECUTE	Executes a specified test operation by pressing this button after entering the operation test number. The display field color changes to light blue during operation. The operation will stop when “0” is entered or no entry is made.
RETURN	Press this button to resume wrapper operation.
Test Item	Press the [EXECUTE] button after entering a test item number to start operation. Press the [EXECUTE] button after entering “0” to stop operation.

3.16.2 APPLICATOR CHECK

Press the [APPLICATOR CHECK] button on the Wrapper Check screen. Then, the Applicator Check screen appears.
Enter the test item number using the numeric keys or press the desired item field on the screen, then press the [EXECUTE] button to perform operation check.
To stop operation check, enter “0” and press the [EXECUTE] button.

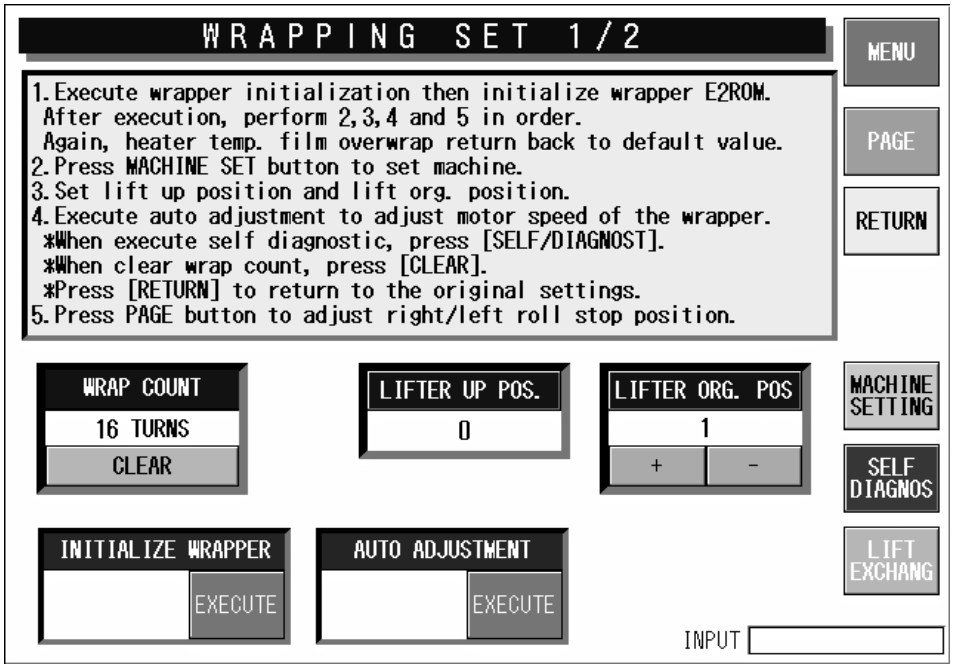


Applicator Check Screen

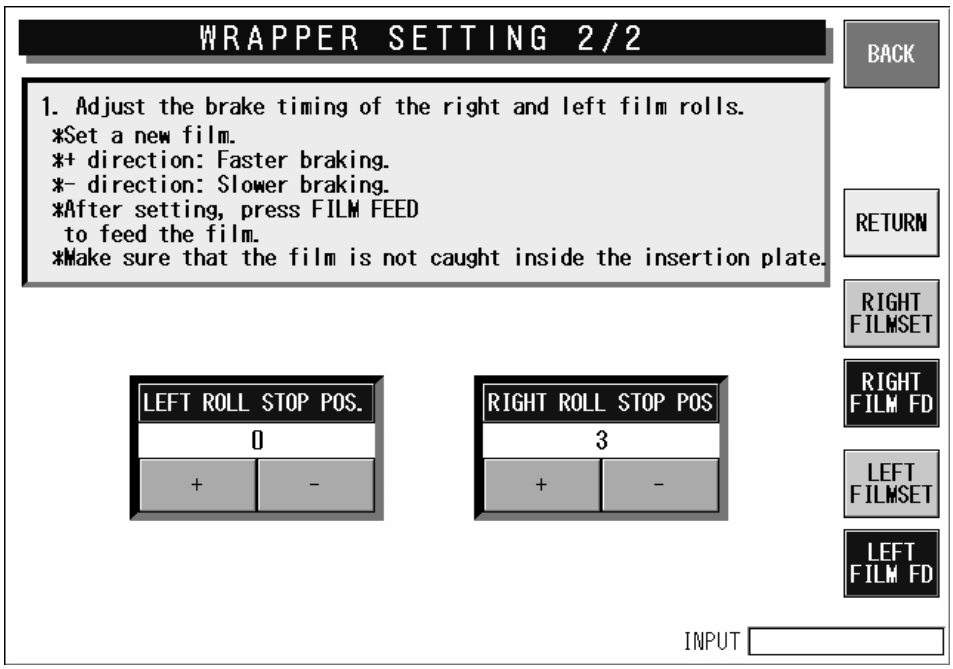
Buttons/Display Fields	Function
MENU	Returns to the Test Menu 1/2 screen. Displays the dialog screen when there is a commodity on the lift through an operation series execution.
WRAPPER	Changes to the Wrapper Check screen. Press this button during operation to change to the Wrapper Check screen after operation stops.
EXECUTE	Executes a specified test operation by pressing this button after entering the operation test number. The display field color changes to light blue during operation. The operation will stop when “0” is entered or no entry is made.
RETURN	Press this button to resume automatic applicator operation.
Test Item	Press the [EXECUTE] button after entering a test item number to start operation. Press the [EXECUTE] button after entering “0” to stop operation.

3.17 WRAPPER SETTING

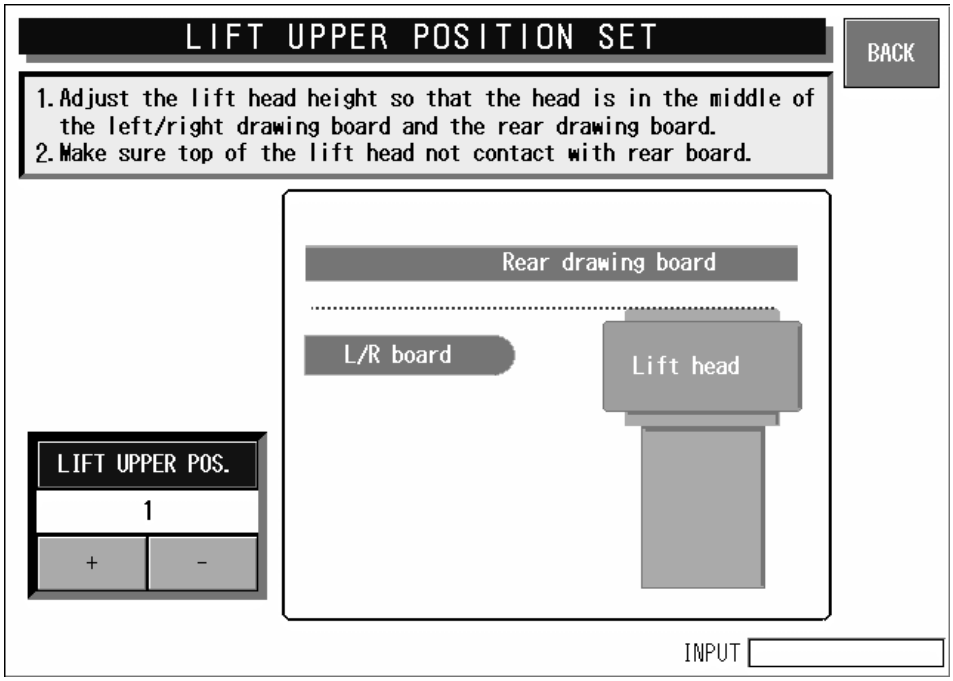
Press the [Wrapper Setup] button on the Test Menu screen. Then, the Wrapper Set 1/2 screen appears. This procedure is used to perform the wrapper initialization, set various machine conditions, adjust the roll and film positions, and set the labeling direction.



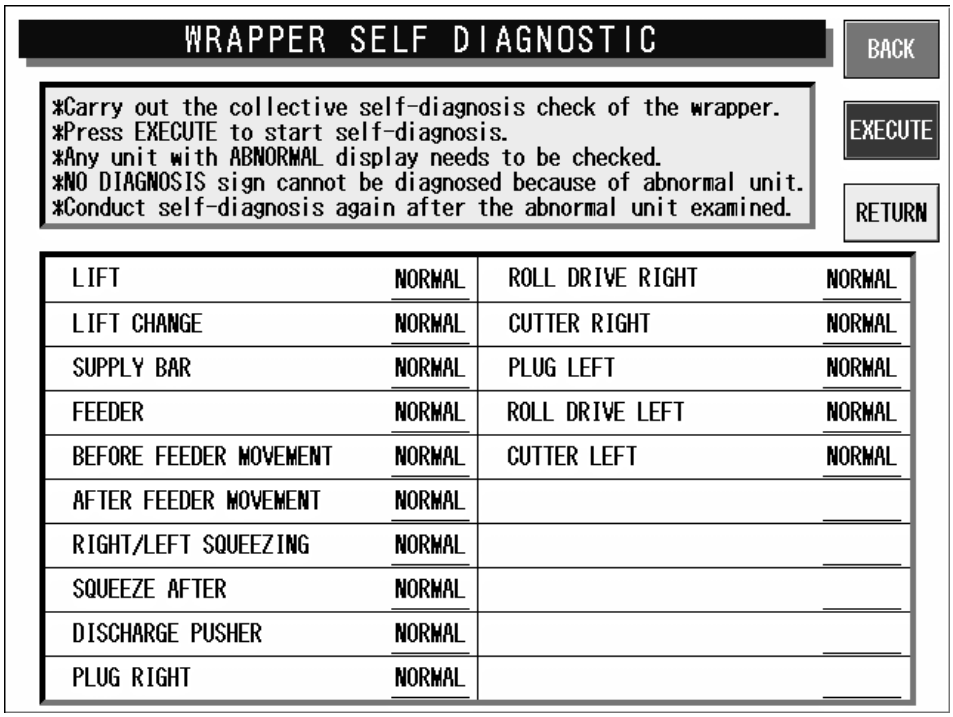
Wrapper Set 1/2 Screen



Wrapper Set 2/2 Screen



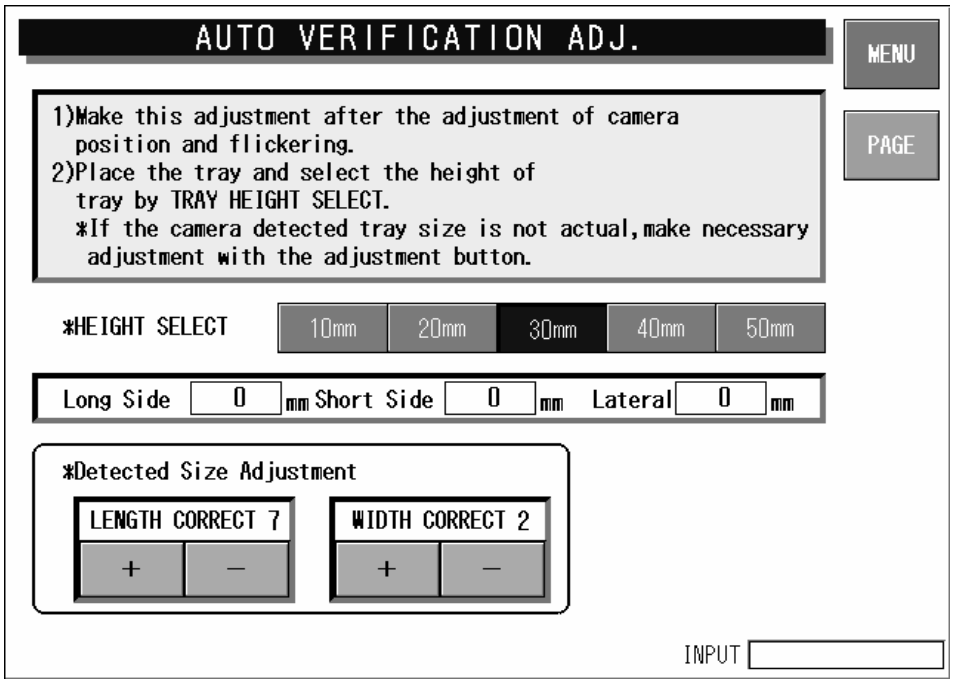
Lift Upper Position Set Screen



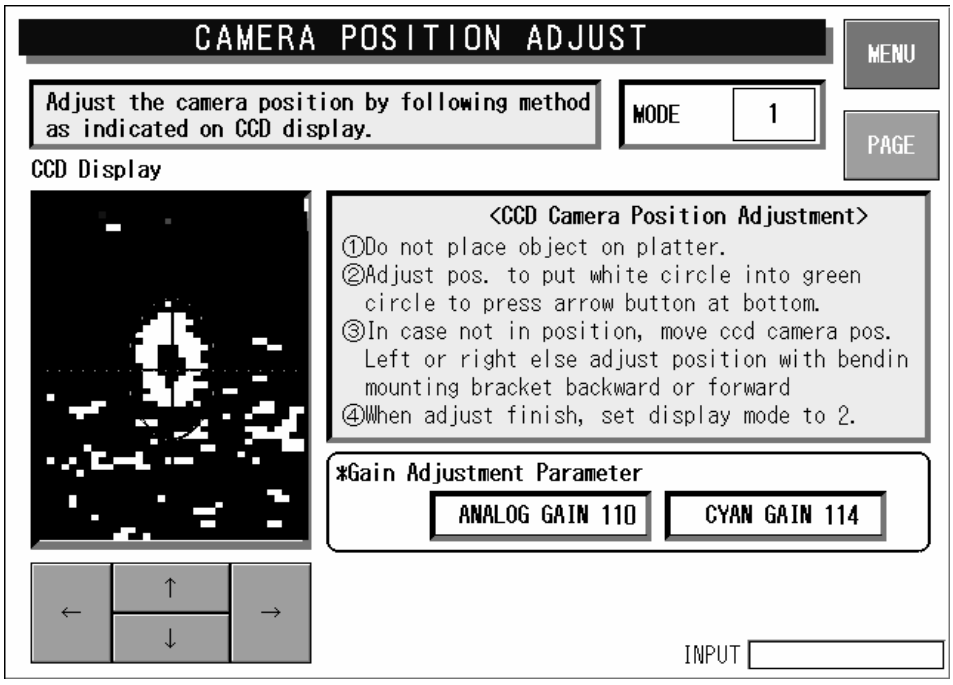
Buttons/Display Fields	Function
MENU	Returns to the Test Menu 1/2 screen.
PAGE	Turns over the screens. During operation, this page will change after a process has stopped.
Wrap Count	Displays the total wrapping frequency. Press the [CLEAR] button to display the clear confirmation dialog. Press the [EXECUTE] button to clear the wrap count. Press the [CANCEL] button to close the dialog screen without clearing the wrap count.
Lifter Up Position	Displays the lifter up position. The data range is 0-99. (Default value: 0) The lift moves to the upper center position when the data is set. If an automatic applicator is used, an error will occur if the applicator cover is closed when the lift starts moving. This becomes the default value when the wrapper is initialized.
Lifter Original Point Position	Displays the lifter original point position data. The data range is 0-99. (Default value: 0) The lift moves to the original position when the data is set. If an automatic applicator is used, an error will occur if the applicator cover is closed when the lift starts moving. This becomes the default value when the wrapper is initialized.
[+] [-] (Common to upper dead center and original positions)	One point is added to the set data by pressing the [+] button without a data entry. One point is subtracted from the set data by pressing the [-] button without a data entry. The entered data is set as the plus data by pressing the [+] button with a data entry. The entered data is set as the minus data by pressing the [-] button with a data entry. The lift will start moving according to the data after it is set.
RETURN	Resume wrapper and automatic applicator operation.
Initialize Wrapper	Press the [EXECUTE] button to display the initialization confirmation dialog. Press the [EXECUTE] button to execute wrapper E2ROM initialization. Press the [CANCEL] button to cancel initialization and close the dialog. “Operating” is displayed during execution. “Normal” is displayed when the execution has ended normally. “Abnormal” is displayed when execution has ended abnormally.
Auto Adjustment	Press the [EXECUTE] button to display the confirmation dialog. Press the [EXECUTE] button to adjust the auto speed for the following items: **Auto adjustment items** (1) Film feeder (2) Front feeder, Rear feeder (3) Roll right/left (4) Insert right/left (5) Side drawers, Rear drawer (6) Pusher Press the [CANCEL] button to cancel auto adjustment and close the dialog. The dialog screen is displayed while executing auto adjustment. “Normal” is displayed when the execution has ended normally. “Abnormal” is displayed when execution has ended abnormally.

Buttons/Display Fields	Function
SELF-DIAGNOSTIC	The following operations are executed to detect abnormal operation: **Self-diagnostic items** (1) Film feeder (2) Front feeder, Rear feeder (3) Roll right/left (4) Insert right/left (5) Side drawers, Rear drawer (6) Pusher (7) Lift (8) Lift change (The lift does not operate in case of an abnormality) (9) Infeed (10) Centering (11) Cutter right/left
MACHINE SETTING	Changes to the Machine Setting 2/2 (Variation setting) screen.
LIFT EXCHANGE	Changes the lift size. Press this button again to stop operation.

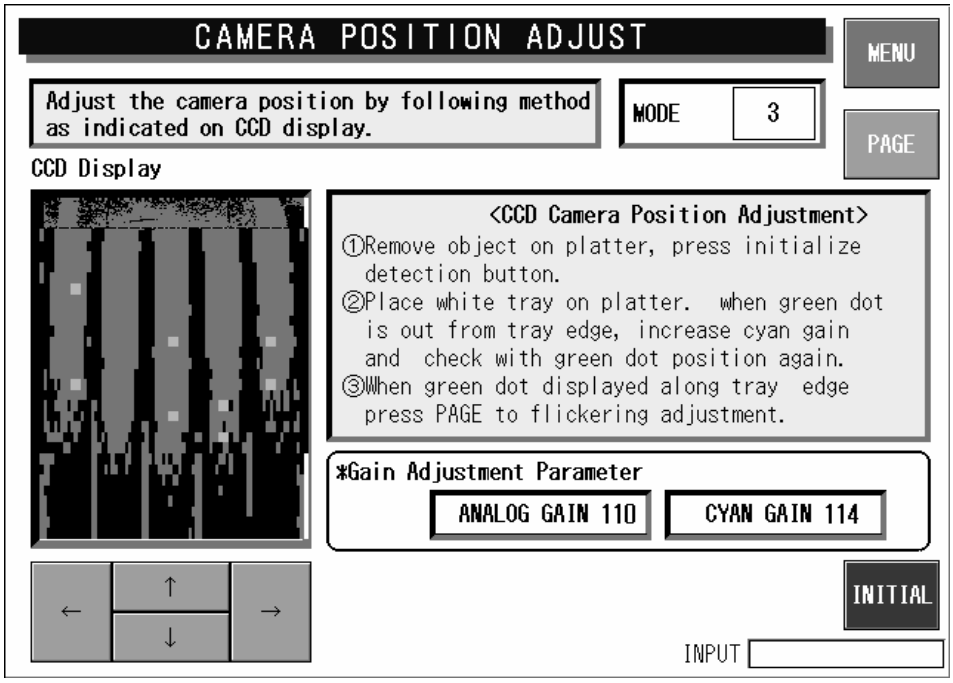
3.18 AUTO VERIFICATION ADJUSTMENT



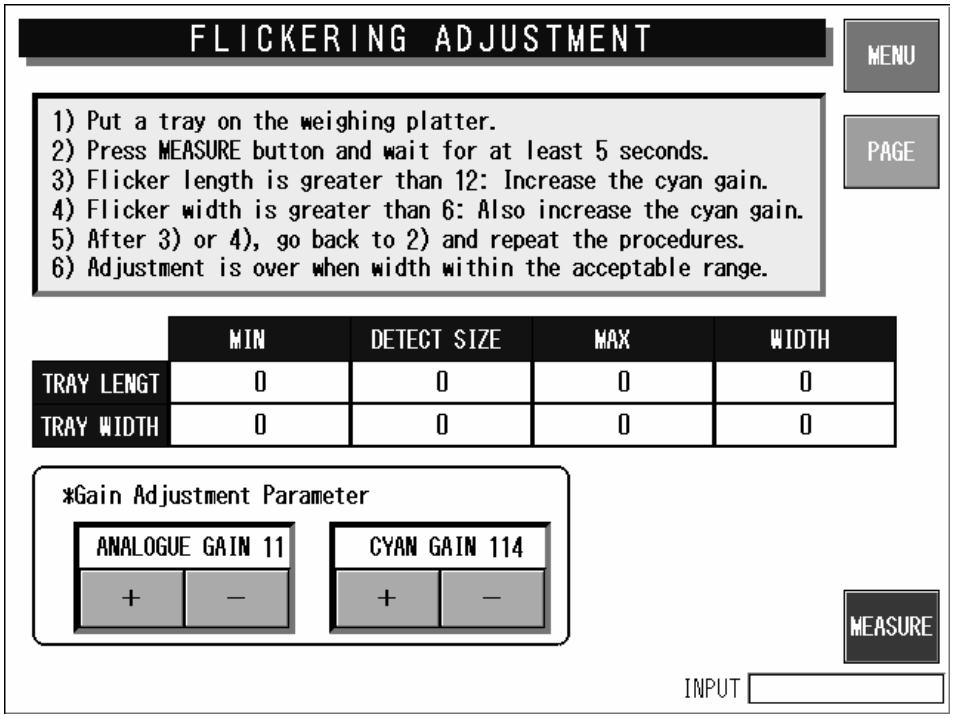
Automatic Verification Adjustment Screen



Camera Position Adjustment Screen



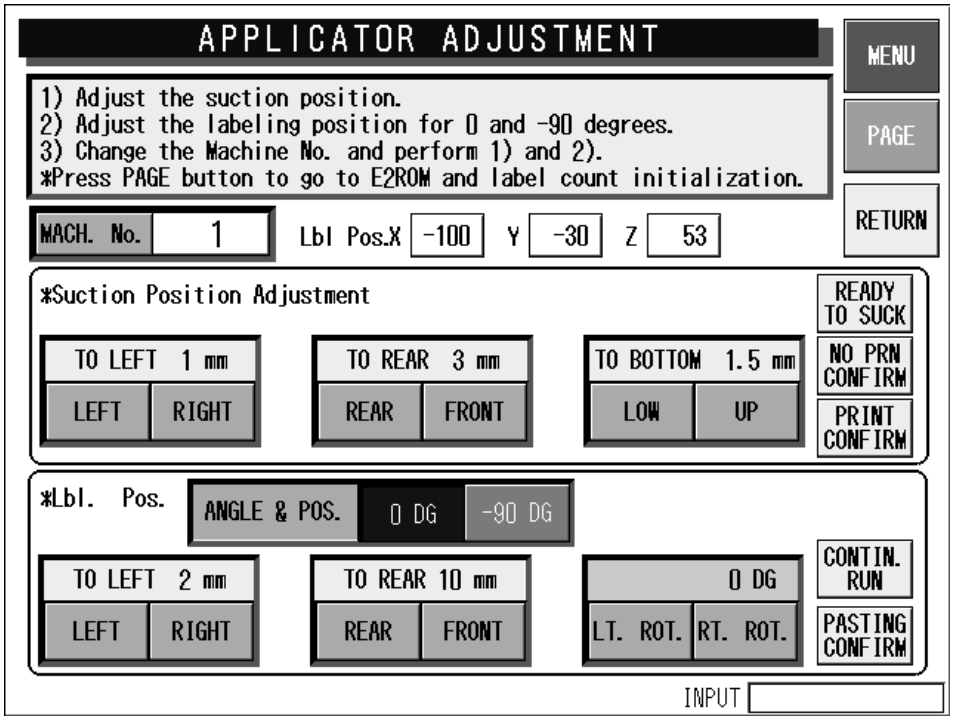
Camera Position Adjustment Screen



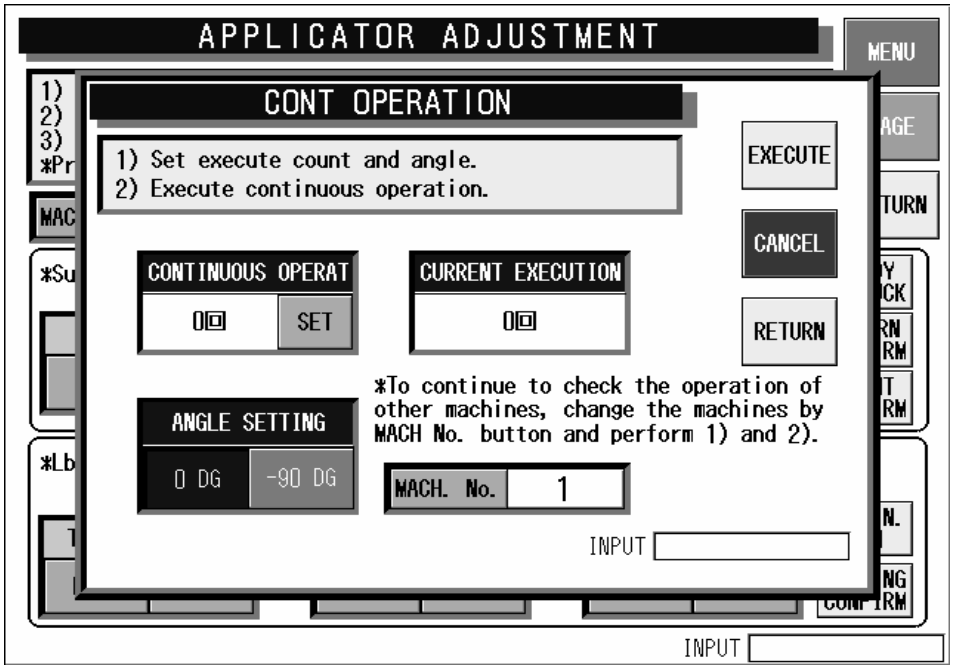
Automatic recognition adjustment (camera adjustment-flicker adjustment) screen

3.19 APPLICATOR ADJUSTMENT

Press the [Applicator Adjustment] button on the Test Menu screen. Then, the Applicator Adjustment screen appears. This procedure is used to perform the applicator related adjustment such as the suction position, the labeling position, etc. On the Initialize Applicator screen, confirm and clear the applicator pasting count and initialize applicator memory.



Applicator Adjustment 1/2 Screen



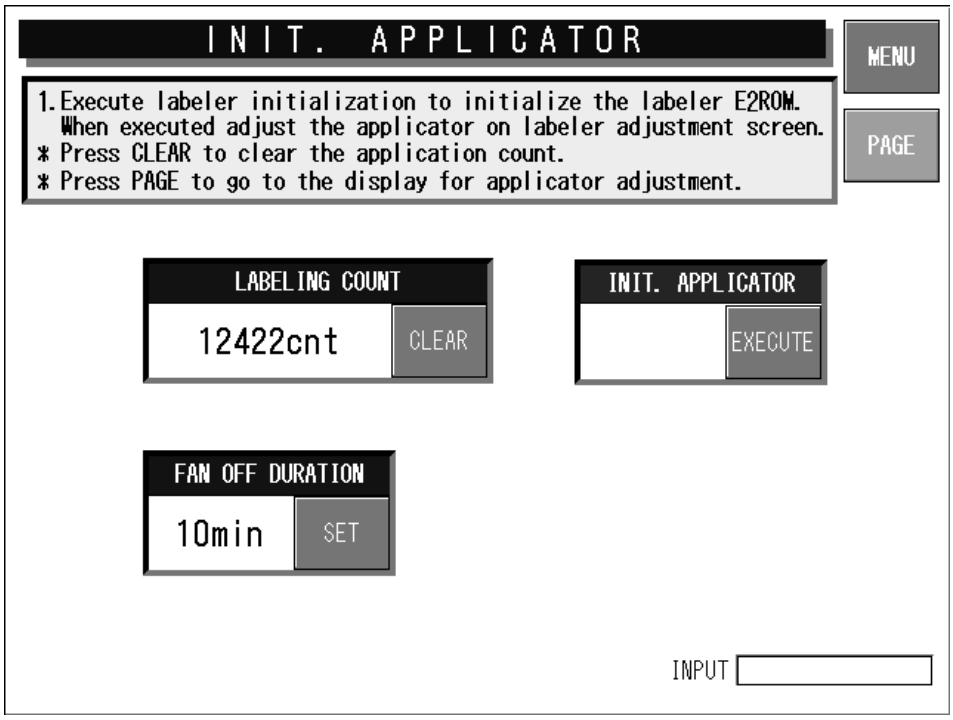
Continual Run Screen

Buttons/Display Fields	Function
MENU	Returns to the Test Menu screen after saving adjustment data.
RETURN	Press this button to resume wrapper and automatic applicator operation.
Machine No.	Displays the printer number to be adjusted. Change the number by pressing after a numeric entry. The data range is 1-4. Do not have the meaning excluding 1 and 2 though (However, 4 or less in the connected machine).
Suction position right/left adjustment	Displays right/left suction position data (0mm, 1-3 mm left; 0 mm, 1-3 mm right). Press the [RIGHT] or [LEFT] button without data entry to adjust the position in 1mm increments. Press the [RIGHT] or [LEFT] button after a numeric entry to set position data. Default value: (0 mm…No correction)
Suction position front/rear adjustment	Displays front/rear adjustment data (0mm, 1-3mm front; 0mm, 1-3 mm rear). The data range is 0-3. Press the [FRONT] or [REAR] button without data entry to adjust the position in 1mm increments. Press the [FRONT] or [REAR] button after a numeric entry to set position data. Default value: (0mm…No correction)
Suction position up and down adjustment	Displays up and low position adjustment data (0 mm, 1-3.0 mm up; 0 mm, 1-3.0 mm down). The data range is 0.0-3.0 Press the [UP] or [LOW] button without a data entry to adjust the position in increments of 0.1 mm. Press the [UP] or [LOW] button after a numeric entry to set position data. Default value: (0 mm…no correction)
Ready to suck	The applicator stands by in the uppermost position in front of the called printer.
No print confirmation	The applicator starts suction (based on the adjustment data) for the called printer. The label is not printed. Confirm the suction position and set the adjustment data again if necessary.
Print confirmation	The applicator starts suction (based on the adjustment data) for the called printer. The label is printed. Confirm the suction position and set the adjustment data again if necessary.
Label pasting position right/ left adjustment	Displays right and left position adjustment data for label pasting (0 mm, 1-8 mm left; 0 mm, 1-8 mm right). The data range is 0-8. Press the [RIGHT] or [LEFT] key without a data entry to adjust the position in 1mm increments. Press the [RIGHT] or [LEFT] key after a numeric entry to set the position adjustment data. Default value: (0 mm…No correction)
Label pasting position front/rear adjustment	Displays front and rear position adjustment data for label pasting (0mm, 1-10mm left; 0mm, 1-10 mm right). The data range is 0-10. Press the [FRONT] or [REAR] key without a data entry to adjust the position in 1 mm increments. Press the [FRONT] or [REAR] key after a numeric entry to set the position adjustment data. Default value: (0 mm…No correction)
Label pasting position rotation adjustment	Displays rotation angle position adjustment data for label pasting (0°, 1°-5° left; 1°-5° right). The data range is from 0 to 5. Press the [RIGHT ROTATION] or [LEFT ROTATION] button without a data entry to adjust the position 1° increments. Press the [RIGHT ROTATION] or [LEFT ROTATION] button after a numeric entry to set the position adjustment data. Default value: (0°…No correction)
Pasting confirmation	Label feeding is executed from the called printer and the applicator performs label suction and pasting operation. After sucking the label, the discharge pusher is pushed out and label pasting is performed to the discharge pusher. After confirming the result of pasted label on the pusher, set the adjustment data again if necessary.
Continual run	Changes to the continual run screen. Press the [EXECUTE] button to run the continual pasting test after the continual run count and pasting angle have been set.

Buttons/Display Fields	Function
PAGE	Changes to the applicator initialization screen. Confirm and clear the applicator pasting count and initialize applicator memory.

Note:
Label feeding is executed with the default label size for the selected printer by pressing the [FEED] key. An automatic applicator error will occur if the applicator cover is closed.

APPLICATOR INITIALIZATION

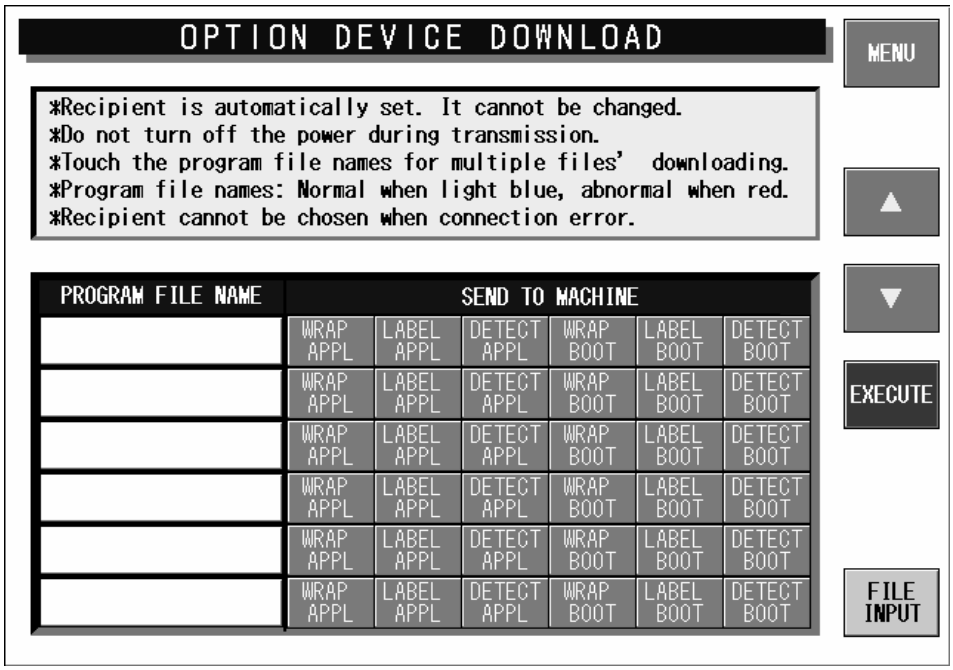


Applicator Initialization Screen

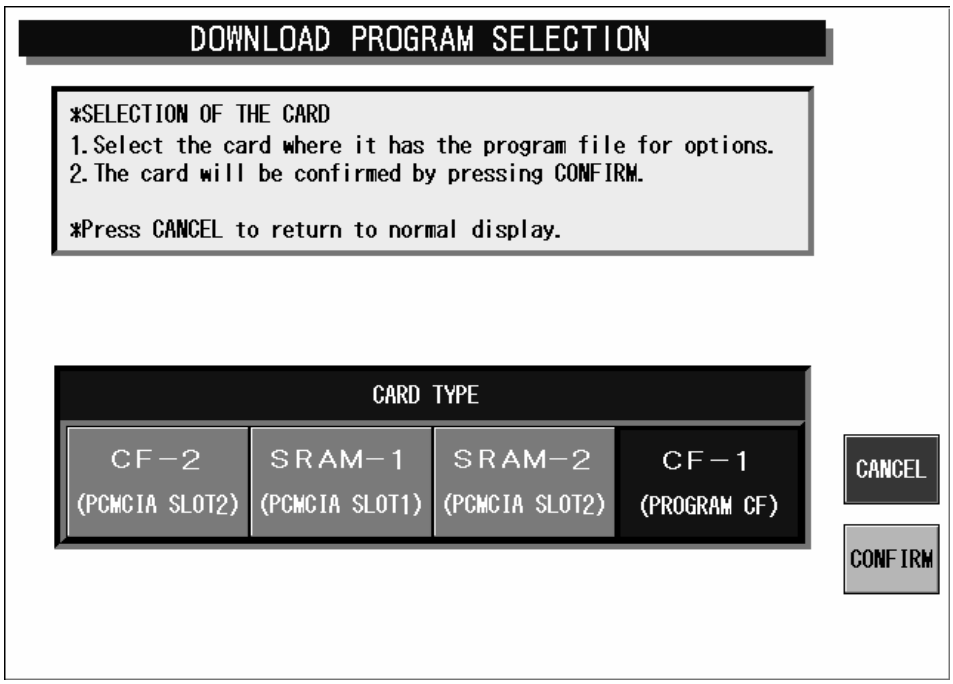
Buttons/Display Fields	Function
MENU	Returns to the Test Menu screen.
Labeling count	Displays the total number of labels pasted. Press the [CLEAR] button to display the clear confirmation dialog. Press the [EXECUTE] button to clear the label count and “0” will be displayed. Press the [CANCEL] button to close the dialog without clearing the lavel count.
Initializing applicator	Press the [EXECUTE] button to display the initialization confirmation screen. Press the [EXECUTE] button again to initialize E2ROM. Press the [CANCEL] button to cancel initialization. “Operating” is displayed during execution. “Normal” is displayed when the execution has ended normally. “Abnormal” is displayed when execution has ended abnormally.
Fan OFF duration	Set the fan shut down delay time after label pasting. Press the [SET] button after a numeric entry to set this value. The fan does not stop when “0” minutes are set. The default value is 10 minutes.

Note:
The applicator adjustment settings data is stored in the applicator control board and backed up to the CF-1 (file name haridata.csv). When applicator initialization is executed, the applicator initialization control board is initialized and an inquiry is made whether or not to recover when there is backup data on CF-1.

3.20 OPTION DEVICE PROGRAM DOWNLOAD



Option Device Download Screen



Download Program Selection Screen

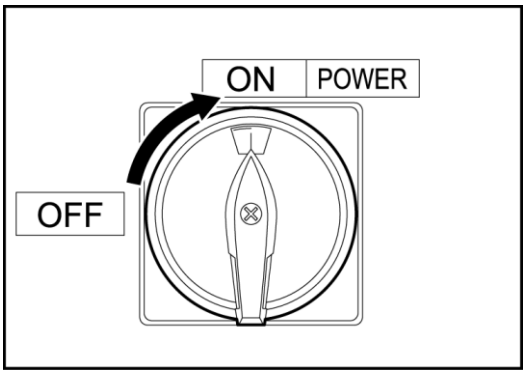
Buttons/Display Fields	Function
MENU	Returns to the Test Menu 1/2 screen.
EXECUTE	Display the download execution confirmation dialog. Press the [EXECUTE] button on the dialog screen to transmit the selected program file to the selected destination. Press the [CANCEL] button on the dialog screen to cancel downloading and close the screen. Be sure not to turn off the power while downloading.
Program File Name	Displays the option program file names stored in the program CF. Press the display field to select the file name and change its color to yellow.
FILE INPUT	Press this button to display the download program selection screen. Press the corresponding button to select the media where the downloaded program file is stored. Press the [CONFIRM] button to re-display the option device download screen for the selected media.
Send to Machine	The option device program file stored in the program CF will automatically select the destination and the button color will change to blue.

4 SYSTEM MODE

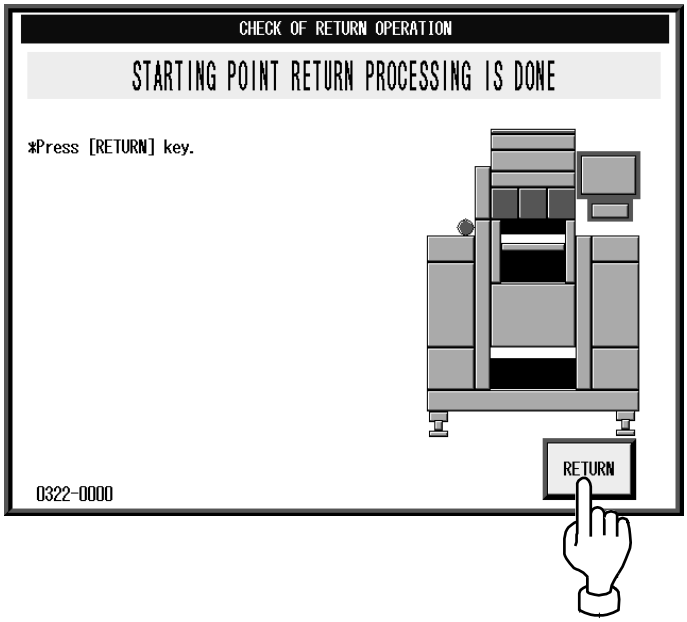
CONTENTS

4.1 STARTING PROCEDURE

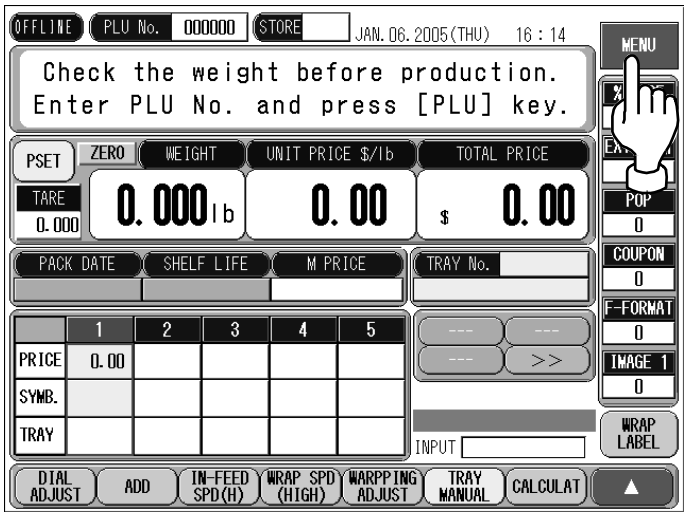
1. Turn the Main Power Switch lever clockwise to power ON the machine.



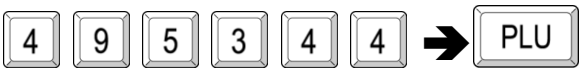
2. The Check of Return Operation screen appears. Press the [RETURN] button.

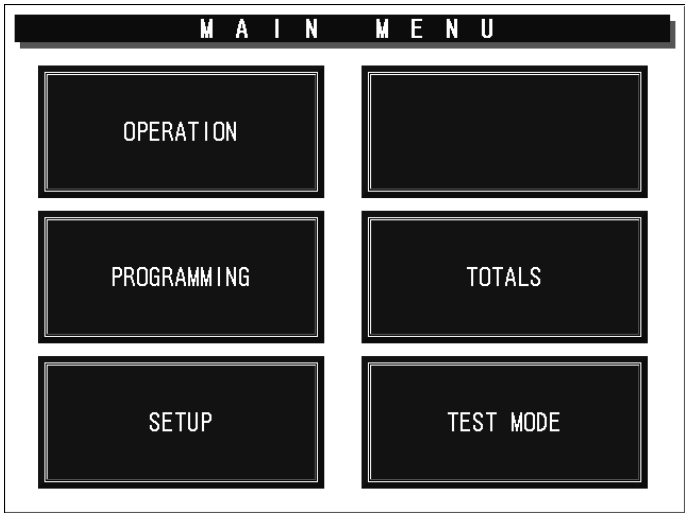


3. The initial screen appears. Press the [MENU] button on the screen.

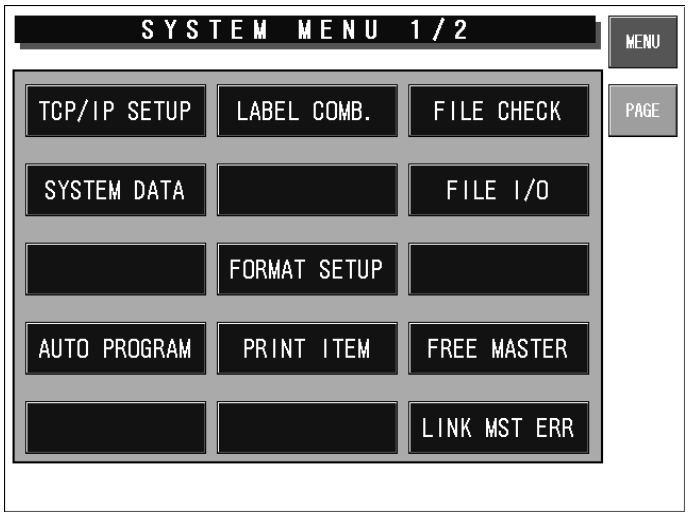


4. Enter “495344” using the numeric keys and press the [PLU] stroke key.

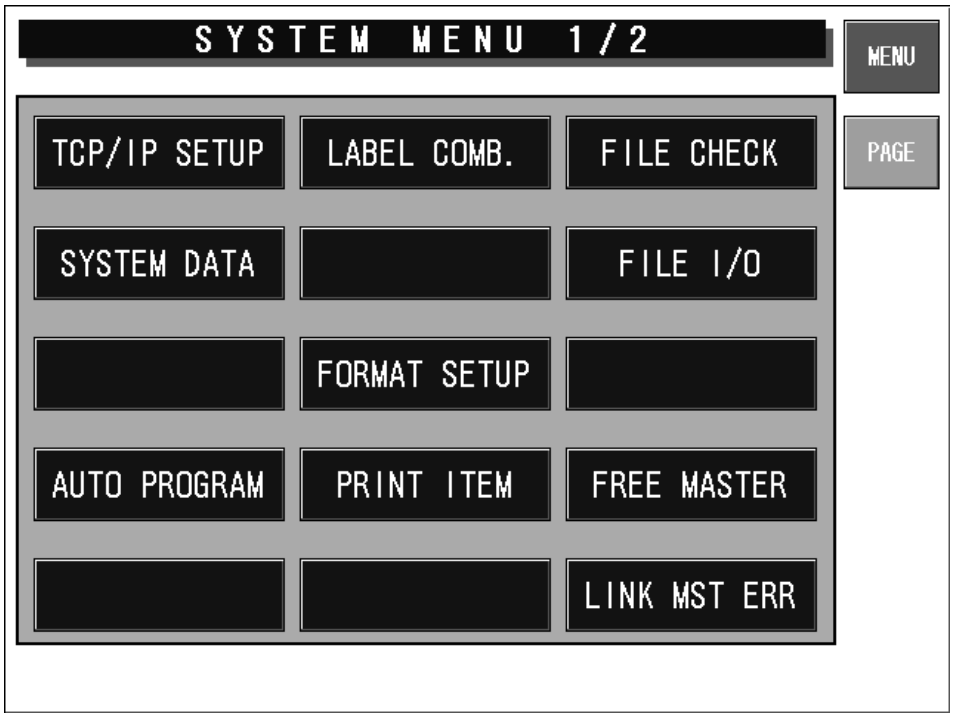




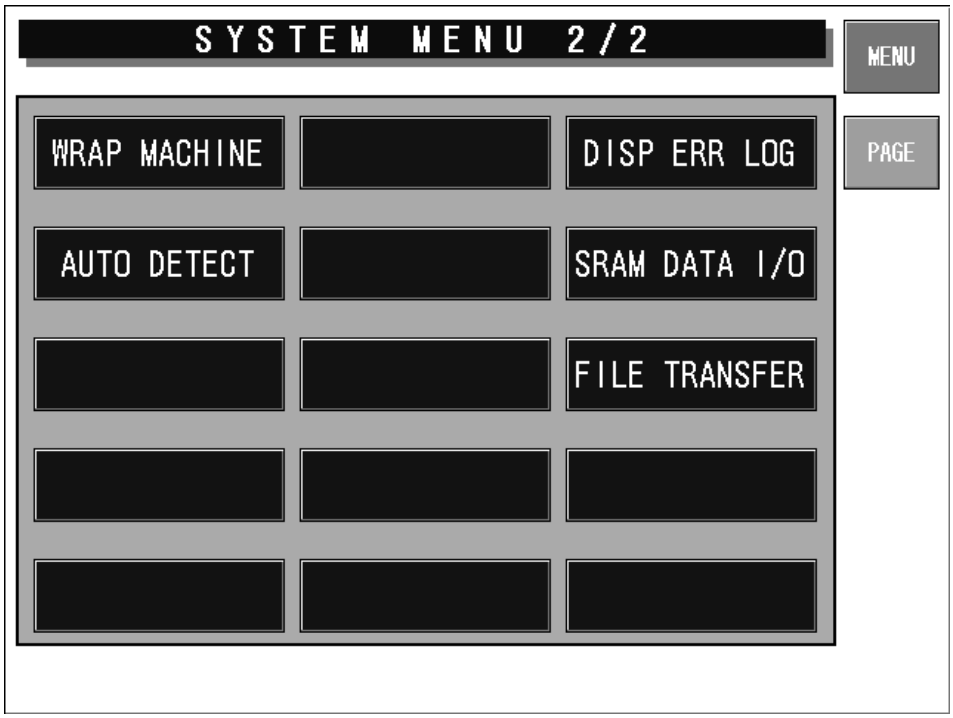
5. The System Menu screen appears.



4.2 SYSTEM MENU



System Menu 1/2 Screen

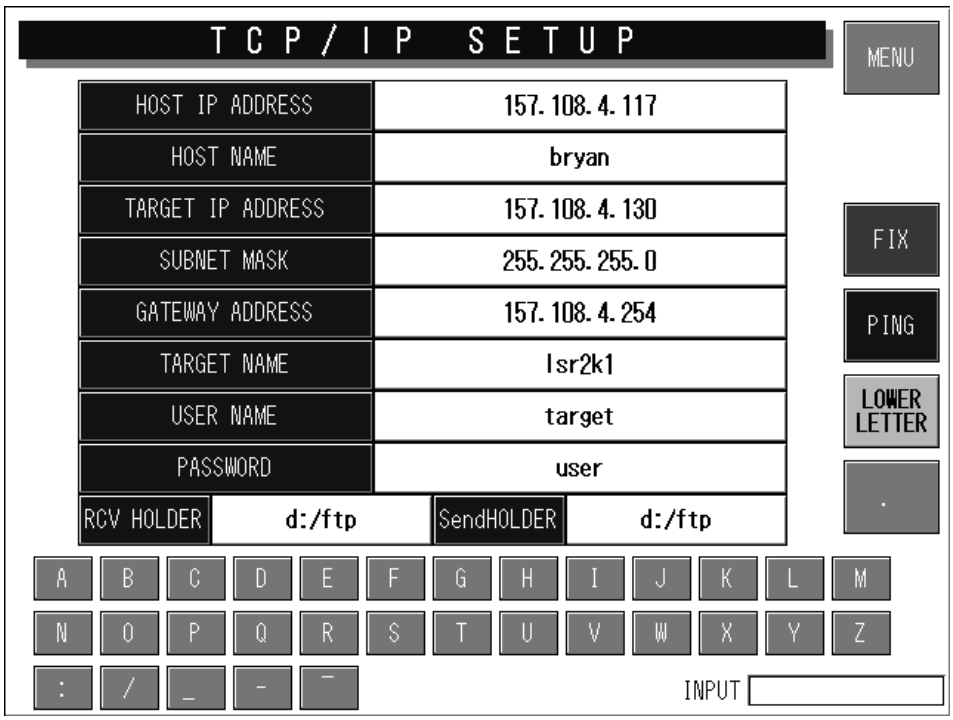


System Menu 2/2 Screen

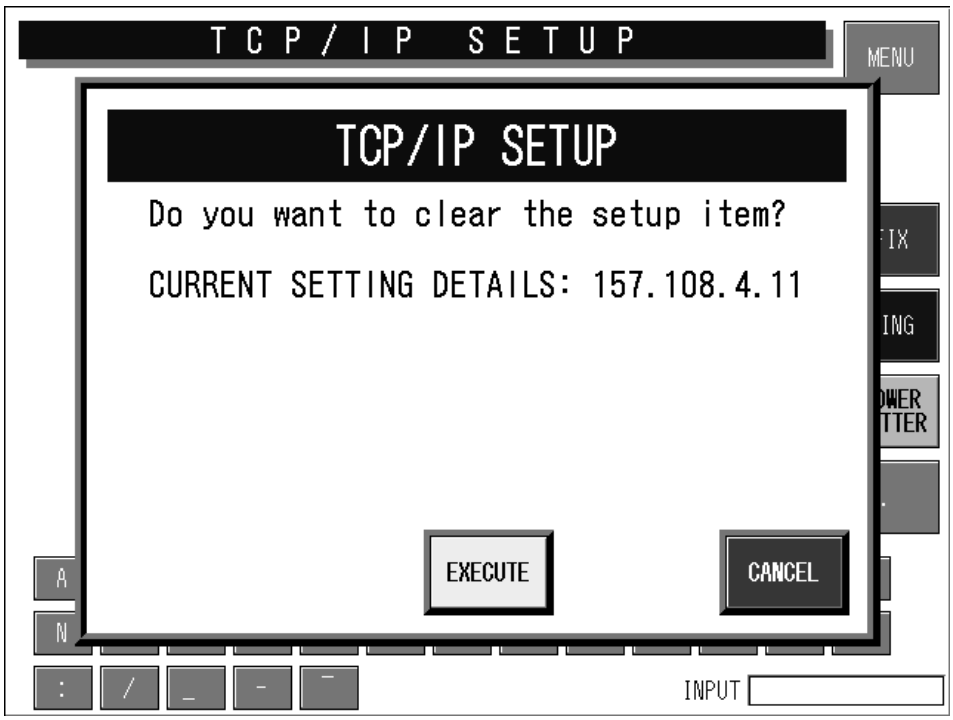
Buttons/Display Fields	Function
MENU	Changes to the System Menu 1/2 screen.
PAGE	Press to turn over the screen.
TCP/IP Setup	Changes to the TCP/IP Setup screen. Various data can be set according to consultation of your SE when this machine is connected to a computer.
System Data	Changes to the System Data Setup screen. Processing can be selected when the production order is completed. Select master file change (each PLU/unit price).
Auto Program	Changes to the Auto Program Setting screen. Select whether or not to update data and reflect it to the PLU master file automatically for each item.
Label Combination	Changes to the Label Print Combination Set screen. Set the label type, format, and details. Changing to the label details setting and the format edit screen is also possible as an extended screen. This is not displayed when no printer is connected.
Format Setup	Changes to the Format Setup screen. Create, edit, and delete the label formats.
Print Items	Changes to the Print Item Setting screen. Set the label print items and print position.
File Check	Changes to the File Check screen. Initialize all internal master files.
File I/O	Changes to the File I/O screen. Perform master file I/O processing with the IF-21FD.
Free Master	Changes to the Free Message Name Registration screen. Set the free master names 1-5.
Link Master Error	Changes to the Link Master Error Setup screen. Set the error processing when the character string master file linked with a PLU is not registered.
Wrap Machine	Changes to the Wrapper Setting screen. Set various conditions for wrapping tray.
Auto Detect	Changes to the Auto Recognition Set screen. Set various conditions for automatic recognition. This is not displayed when no sensor is connected.
Display Error Log	Changes to the Display Error Log screen. Check past error history (500 or less).
SRAM Data I/O	Changes to the SRAM Data Input/Output screen. Set IF-21FD and the SRAM data I/O.
File Transfer	Changes to the File Transfer Menu screen. Perform CF card and SRAM data input and output.

4.3 TCP/IP SETUP

When this machine is connected to a computer, set the required data according to your SE's advice.



TCP/IP Setup Screen

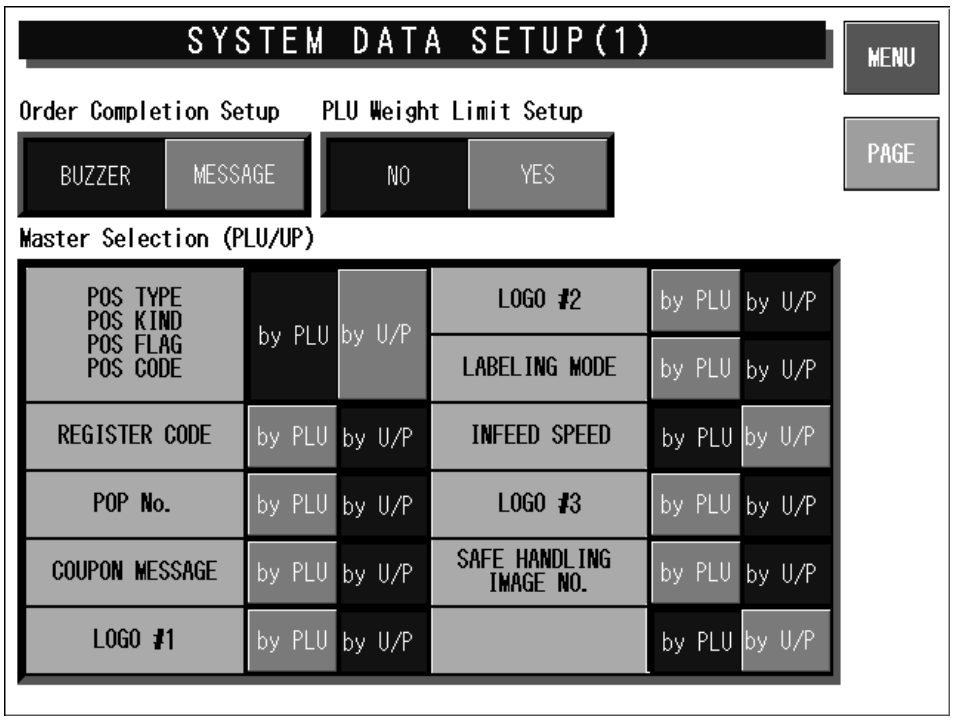


Execution Confirmation Screen

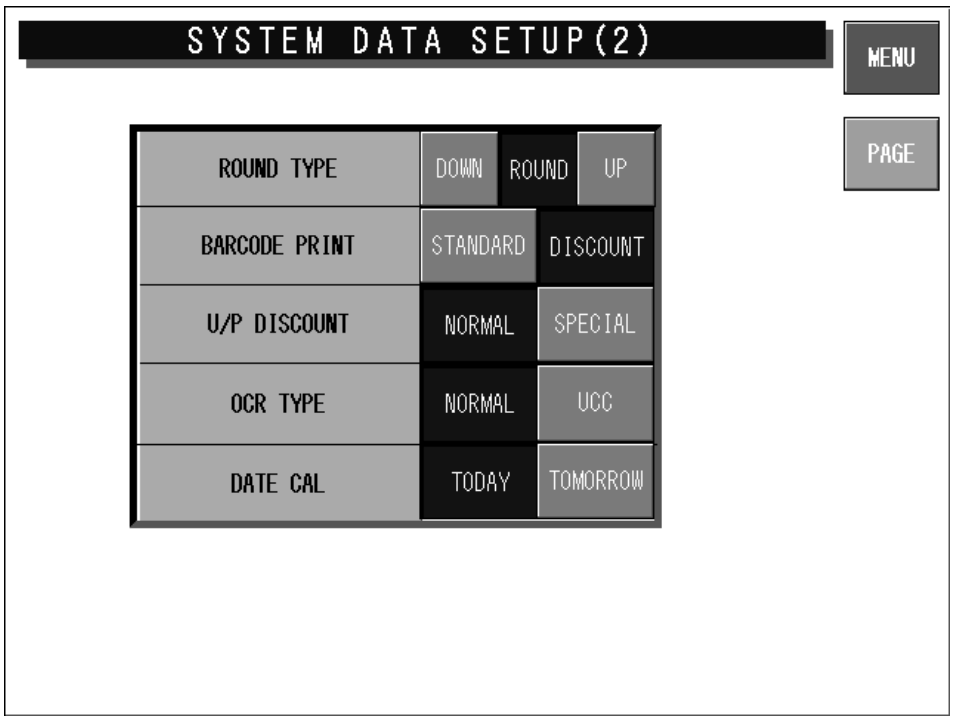
Buttons/Display Fields	Function
MENU	Returns to the System Menu 1/2 screen.
FIX	Displays the confirmation screen. Press the [EXECUTE] button on the confirmation screen The machine is automatically turned OFF, and turned ON again to apply parameter table settings.
PING	Press to execute a communication test with the host computer.
LOWER LETTER/ UPPER LETTER	Press to select upper or lower case letters for character entry.
Character buttons (A, B, C, etc.)	Press 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 press the [EXECUTE] button on the confirmation screen.
EXECUTE	Execute processing.
CANCEL	Cancels execution.

4.4 SYSTEM DATA SETUP

There are two System Data Setup screens. On these screens, select the basic machine conditions.



System Data Setup (1) Screen

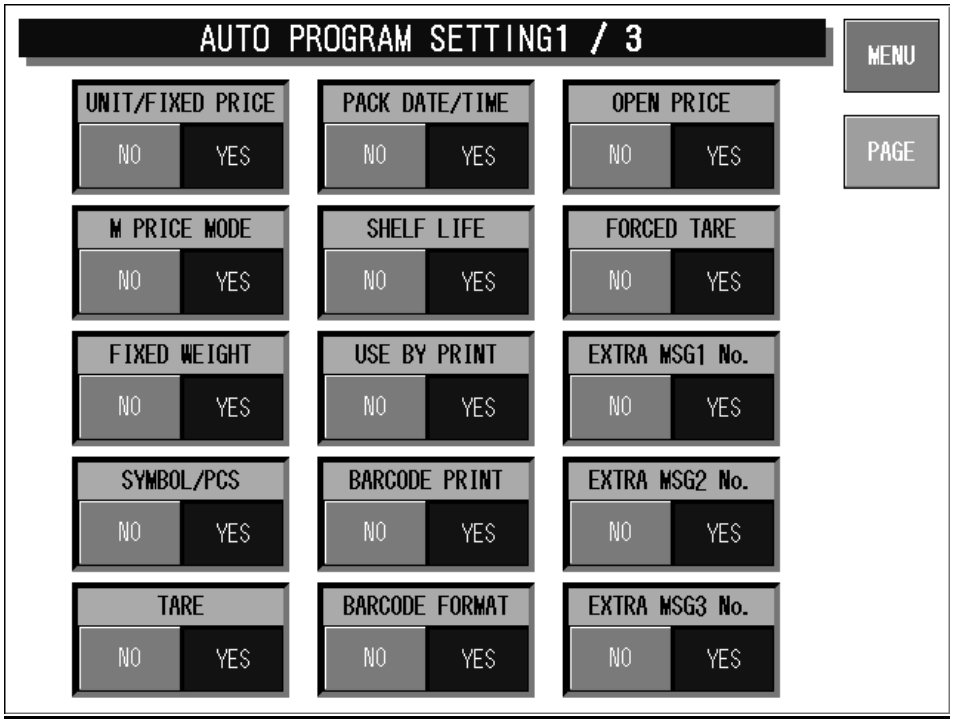


System Data Setup (2) Screen

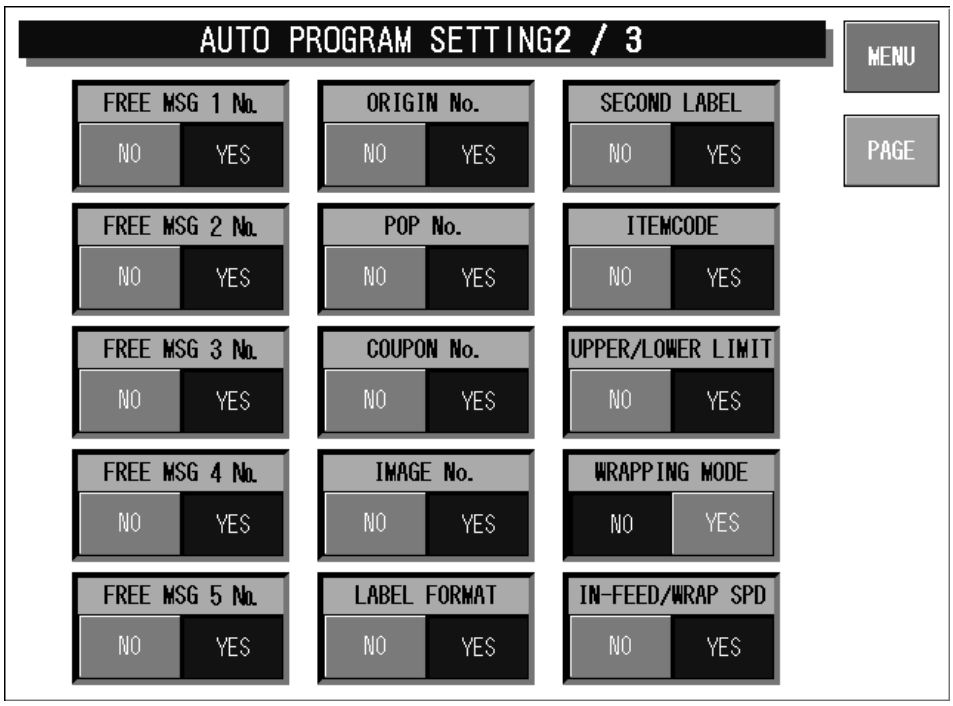
Buttons/Display Fields	Function
MENU	Returns to the System Menu 1/2 screen.
PAGE	Turns over the screens.
Order Completion Setup	The end process can be selected when the production quantity reaches the set order number. Press the desired button to select either “Buzzer” or “Message.” The selected button color will change to blue. Default data: “Buzzer”
PLU Weight Limit Setup	Selects whether to use the upper/lower weight limit check or not when processing a weighing commodity. Press to select the item and the button color will change to blue Default data: “No”
Master Selection (PLU/Unit price)	Press the corresponding button to select “By PLU” or “By Unit Price” The selected button will change to blue. Default data: “By U/P” except POS related data and infeed speed.

4.5 AUTO PROGRAM SETTING

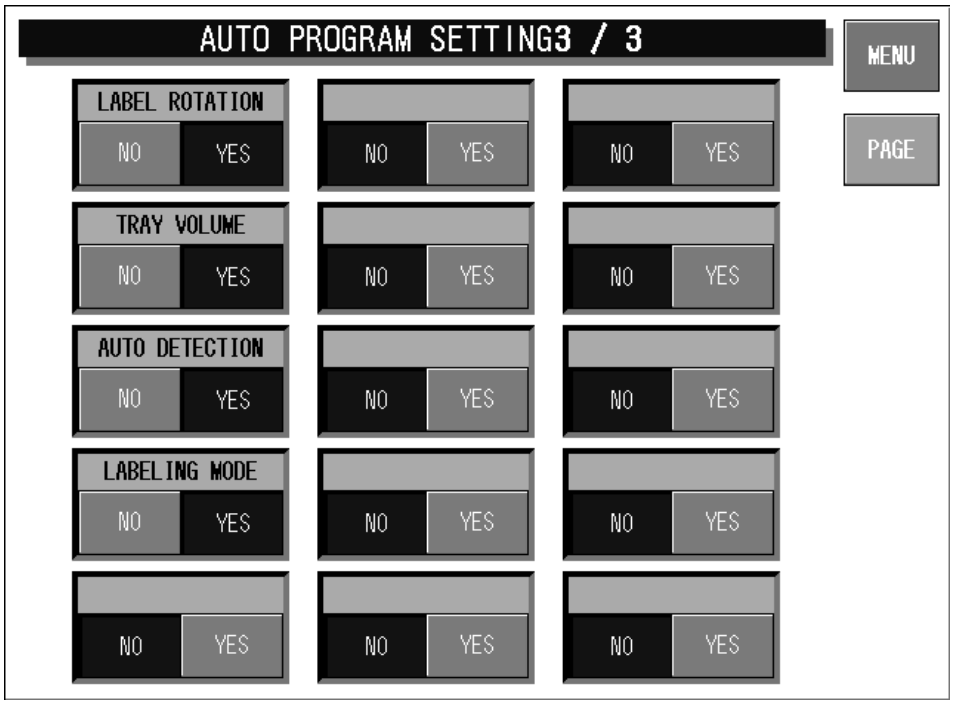
There are three Auto Program Setting screens. On these screens, select whether or not to update data and reflect it to the PLU master file automatically for each item.



Auto Program Setting 1/3 Screen



Auto Program Setting 2/3 Screen



Auto Program Setting 3/3 Screen

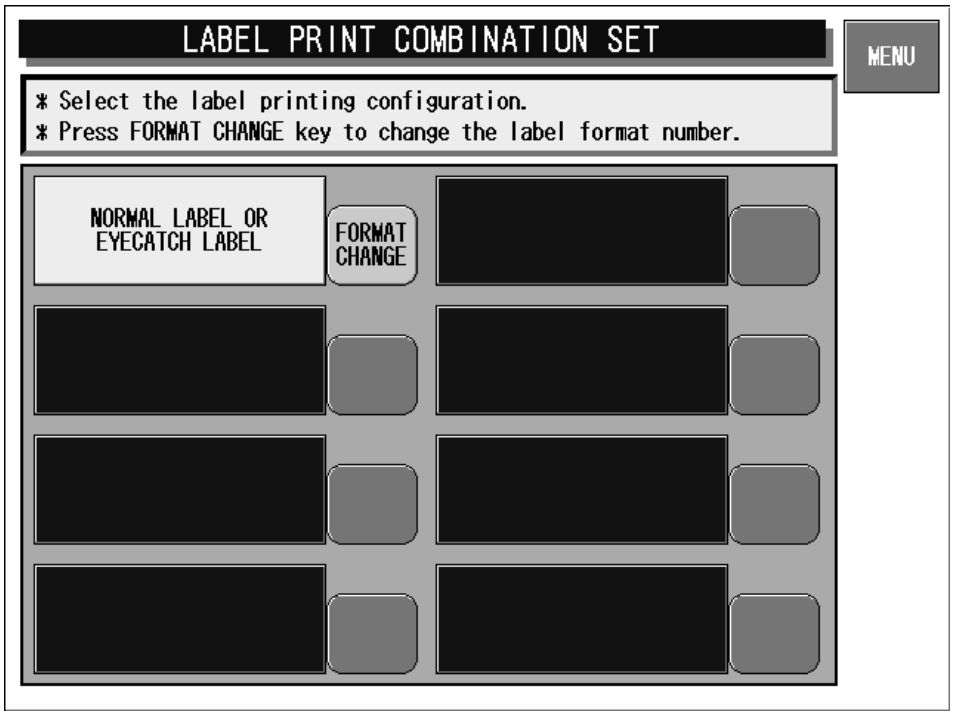
Buttons/Display Fields	Function
MENU	Returns to the System Menu 1/2 screen.
PAGE	Turns over the screen.
Automatic Update Select	Reflect changes made in normal mode in the master file. • "No": The master file is not updated. • "Yes": The master file is updated. • Press to select the item. Default data: See the table below.

AUTOMATIC UPDATE ITEMS

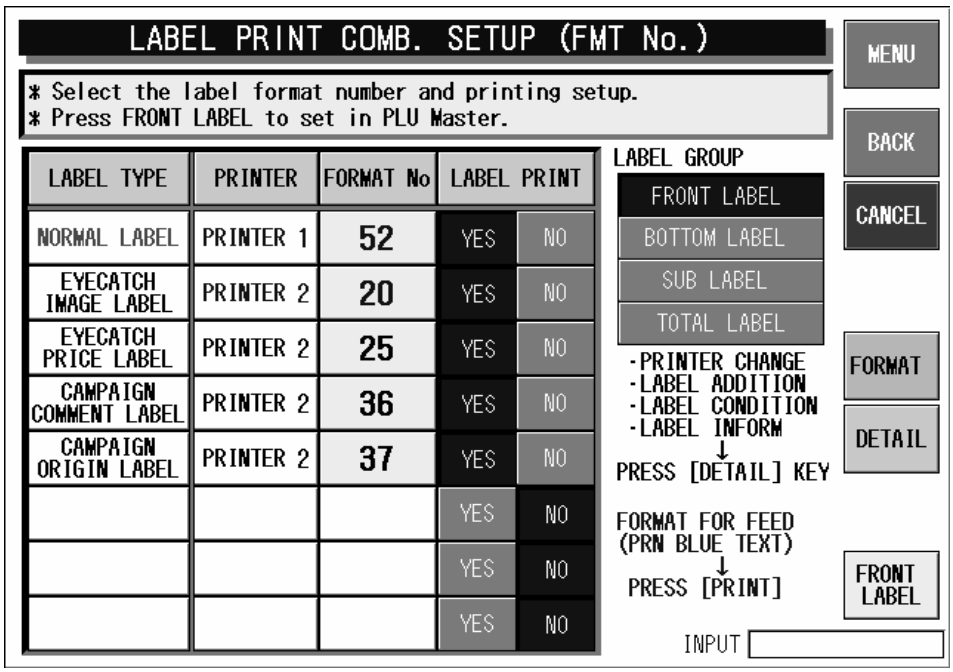
Auto Update Item	Update Object Master File	Default
UNIT/FIXED PRICE	Weighing mode, Unit price, Fixed price, Unit price number	Yes.
M PRICE MODE	Markdown flag, Markdown price	Yes
FIXED WEIGHT	Fixed weight, Weighing mode, Fixed price quantity	Yes
SYMBOL/PCS	Fixed price sign, Fixed price quantity	Yes.
TARE	Tare weight	Yes
PACK DATE/TIME	Pack date print flag, Pack time print flag, Pack time selection flag, Pack time	Yes.
SHELF LIFE	Shelf life date print flag, Shelf life time print flag, Shelf life period, Shelf life time (relative time)	Yes
USE BY PRINT	Use-by date print selection	Yes
BARCODE PRINT	Barcode print flag	Yes.
BARCODE FORMAT	Barcode format	Yes.
OPEN PRICE	Open price	Yes.
FORCED TARE	Forced tare	Yes.
EXTRA MSG1	Comment No.1	Yes.
EXTRA MSG2	Comment No.2	Yes.
EXTRA MSG3	Comment No.3	Yes.
FREE MSG 1 No.	Free message No.1	Yes.
FREE MSG 2 No.	Free message No.2	Yes.
FREE MSG 3 No.	Free message No.3	Yes.
FREE MSG 4 No.	Free message No.4	Yes.
FREE MSG 5 No.	Free message No.5	Yes.
POP No.	POP number	Yes
COUPON No.	Coupon number	Yes
IMAGE No.	Image number	Yes
LABEL FORMAT	Label format number	Yes
SECOND LABEL	Second label	Yes
ITEM CODE	PLU code	Yes
UPPER/LOWER LIMIT	Upper weight limit data, Lower weight limit data	Yes
WRAPPING MODE	Wrapping mode	No
IN-FEED/WRAP SPD	Infeed speed	Yes
LABEL ROTATION	Label pasting direction	Yes
TRAY VOLUME	Piling height	Yes
AUTO DETECTION	Automatic recognition	Yes
LABELING MODE	Wrapping mode	Yes

4.6 LABEL PRINT COMBINATION SETUP

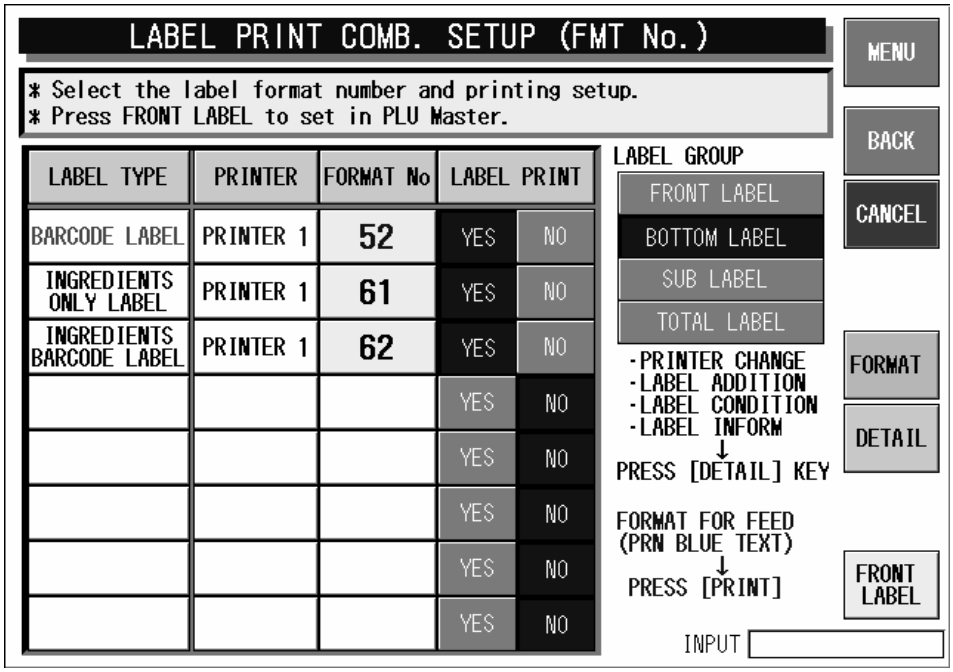
On this Label Print Combination Setup screen, select the label printing configuration, set various conditions for each label, and change the label format.



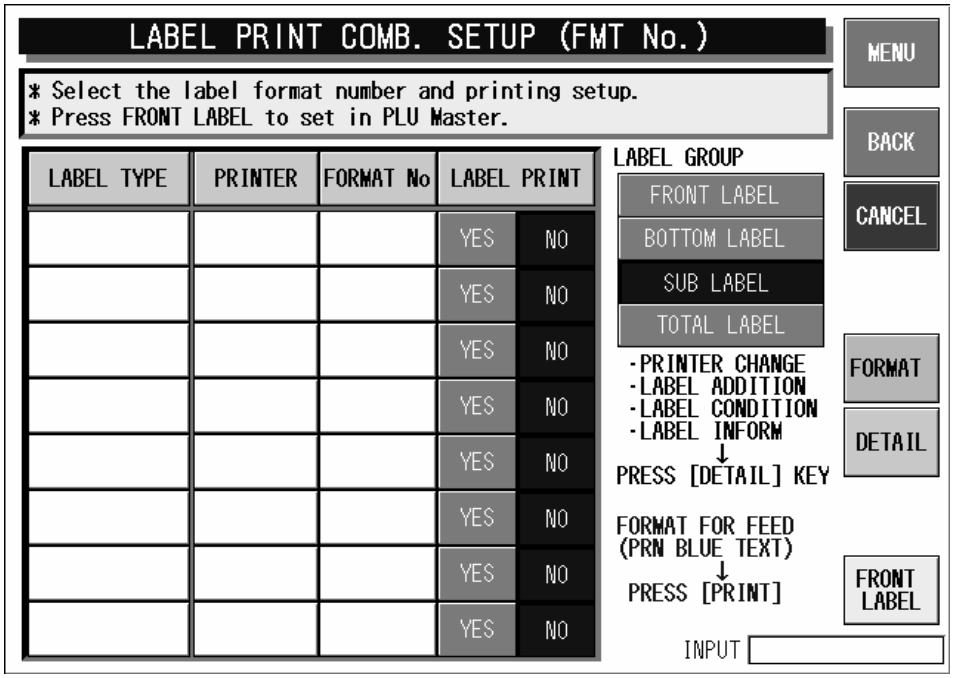
Label Print Combination Setup screen



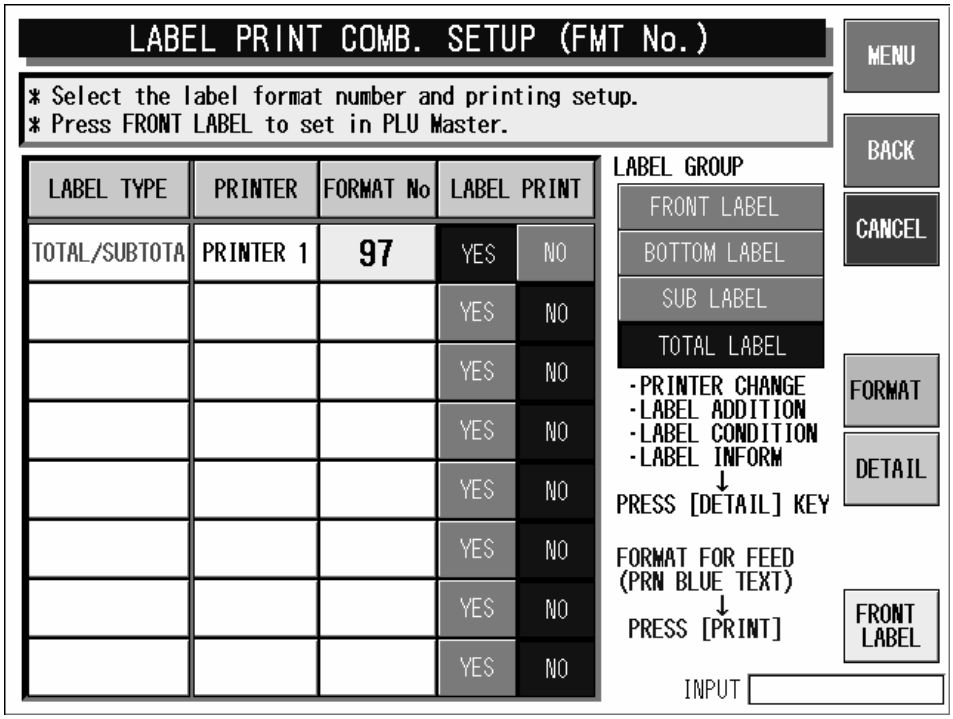
Label Print Combination Setup Screen: Front Label



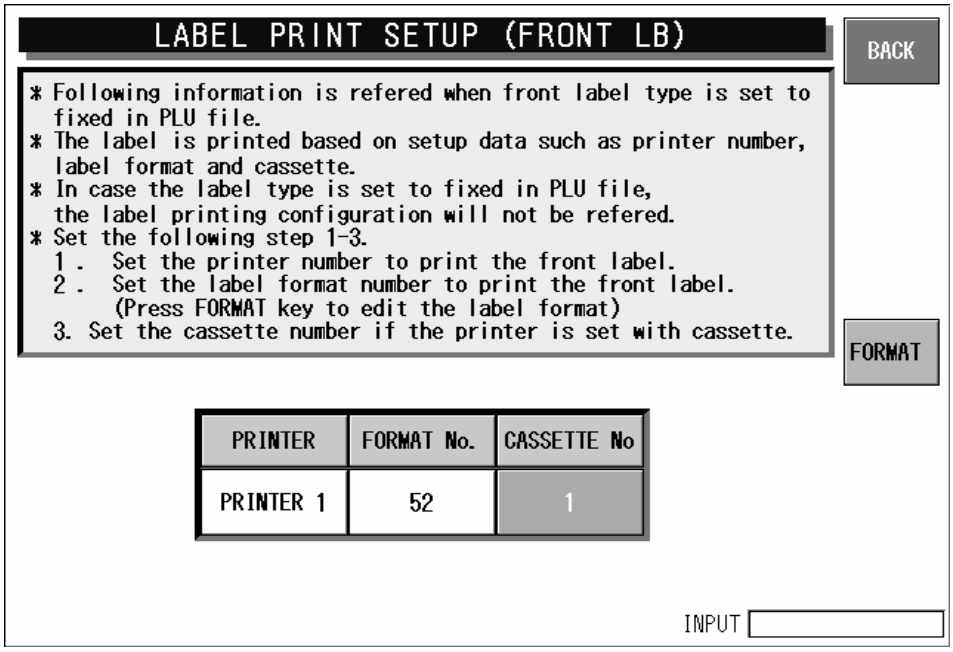
Label Print Combination Setup Screen: Bottom Label



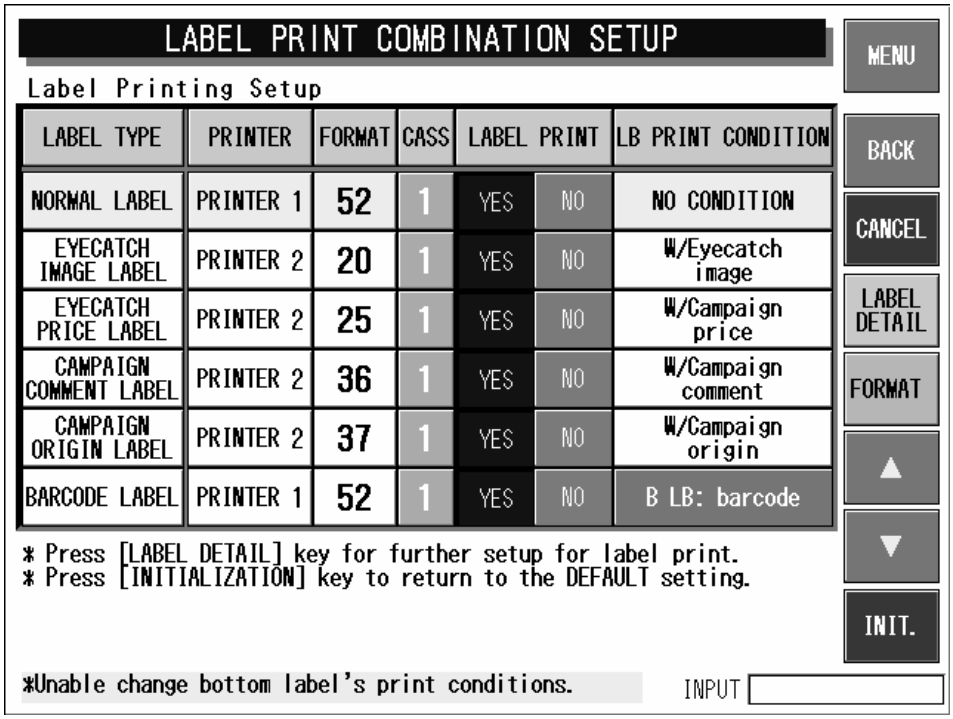
Label Print Combination Setup Screen: Sub-label



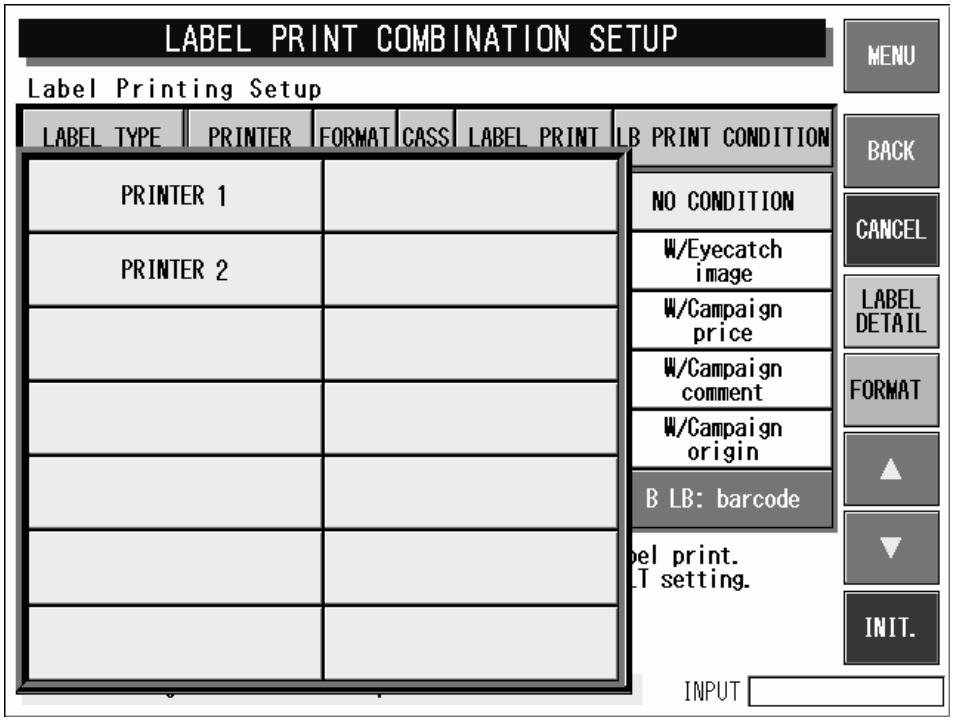
Label Print Combination Setup Screen: Total Label



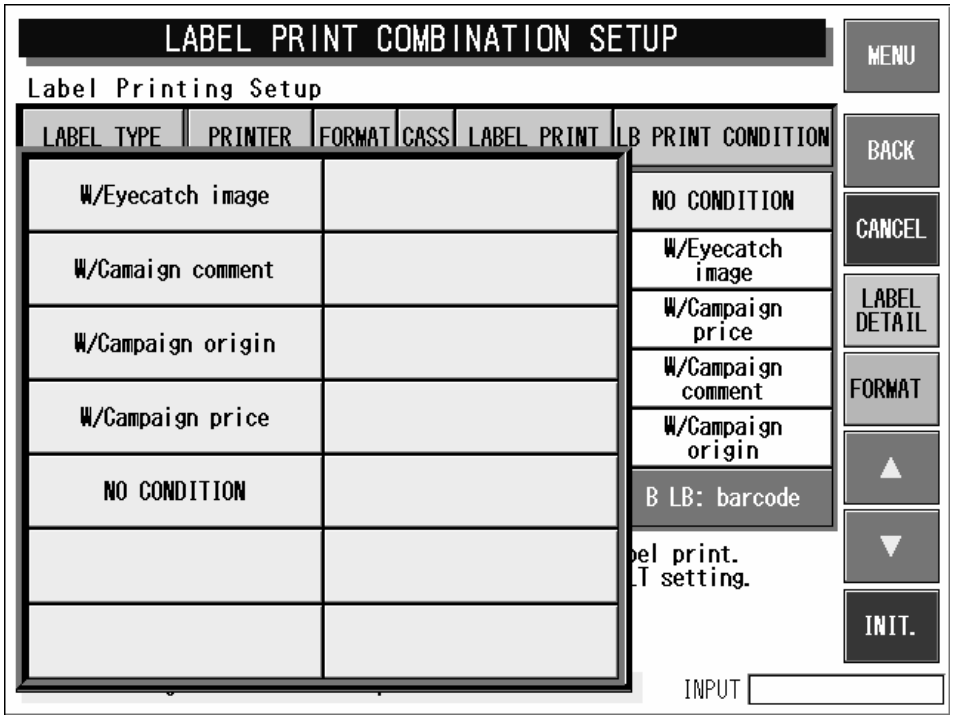
Label Print Setup (Front Label) Screen



Label Print Combination Setup Screen



Printer Number Selection Pop-up Screen



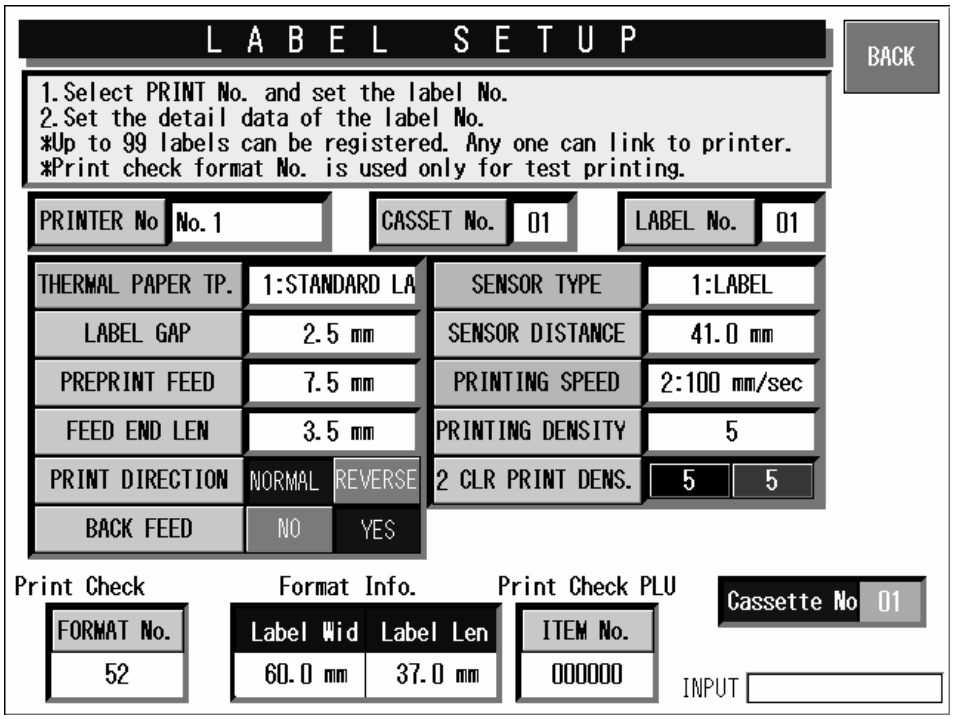
Label Content Selection Pop-up Screen

Buttons/Display Fields	Function
MENU	Returns to System Menu 1/2 screen.
BACK	Saves data changes and returns to the Label Print Combination Setup screen.
FORMAT CHANGE	Displays the printing conditions for each label type. Press to change the label format number Change the label format number.
CANCEL	Cancels data changes and returns to the Label Print Combination Setup screen.
FORMAT	Pressing without numeric entry changes to the format edit screen for the format number of the selected label type. Pressing after numeric entry changes to the format edit screen for the entered number.
DETAIL	Changes to the Print Combination Detail Setup screen. • Printer selection • Print item addition • Format number setting • Print condition setting • Label print detail information setting • Label type addition
FRONT LABEL	Changes to the printer, format number, and cassette number setup screen for a label to be attached on the tray top.
LABEL DETAIL	Change to the label detail setup data (print density, sensor distance, etc.). The current label format number displayed on the label detail setup screen becomes the format number at the present cursor position (highlighted yellow).
INITIALIZE	Returns the print combination data to the default data.
▼ ▲	Moves the cursor up or down.
Label Type	Displays the printer name for each label type. Press the label type field to enable the current label selection. Edit the format number of the selected label type after selection by pressing the [FORMAT] button.
Printer	Select the printer (number) that will be used to print the labels. Press to display the pop-up screen. Select the printer on the pop-up screen.
Format No.	Displays the set format number for each label variation. The default format number is displayed at the initial setting. Press the display field after entering a format number to set the number. The format number is automatically set as the default printer format for the specified format number. When two or more format numbers are set to one printer, the higher-ranked format number will be enabled.
Label Print	Select label printing. "Yes": Labels will be printed. "No": Labels will not be printed. In this case, the item will not be displayed on the Format Setup screen the next time it is displayed. The selected data will become invalid for total labels.
Label Print Condition	Set the label print condition. The priority level when a number of print conditions agree is fixed in the order that is displayed on the pop-up screen (from top left to bottom right of the screen). Press to display the pop-up screen.
Label Group	Press the desired button to display the label type items of the selected group and change the color to blue.

CONNECTED PRINTER / PATTERN SELECTION ITEMS

Pattern Selection Item	Main printer only	Two printers	Main printer and Sub (PP)	Two printers and Sub (PP)
Normal label only	●			
Normal label or eye-catching label		●	●	
Normal label or mini eye-catching label	●			
Normal label and sub-label		●	●	
Normal label and batch raw material label		●		
Normal label or eye-catching label and sub-label				●
Normal label or mini eye-catching label and sub-label		●	●	
Normal label or eye-catching label and batch raw material label				●
Normal label or mini eye-catching label and batch raw material label		●		

LABEL DETAIL SETUP



Label Print Pattern (Label Details) Setup Screen

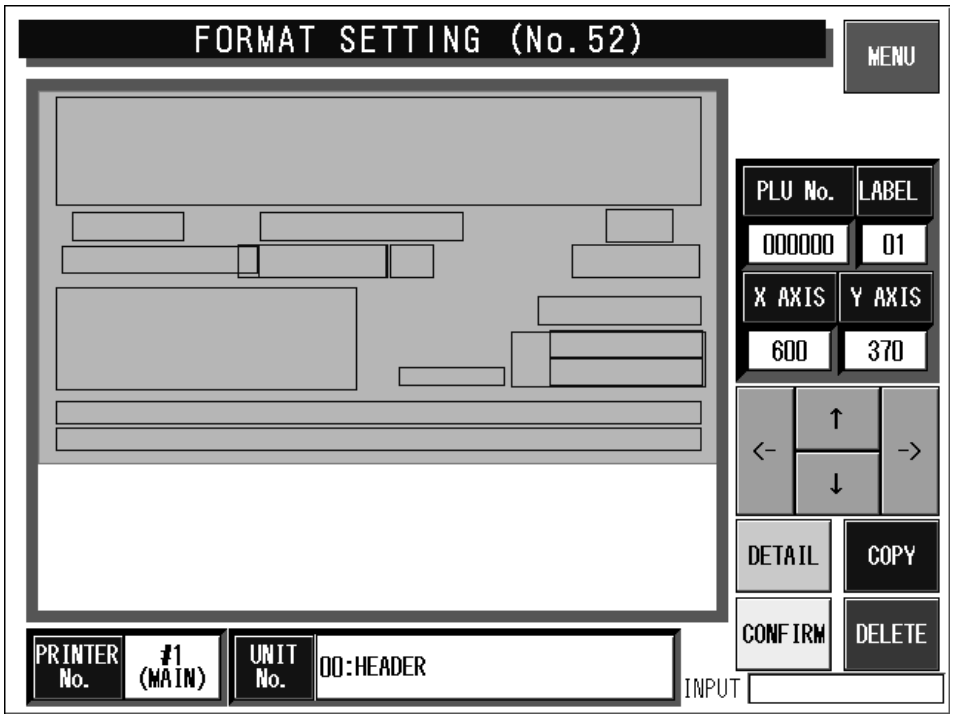
Buttons/Display Fields	Function
BACK	Save data changes and return to the label print pattern detail setup screen.
Printer No.	Press after numeric entry to display the label information of the entered printer and enable label information change and confirmation (test print). Printer numbers are defined as follows: Printer #1: Main printer 1 Printer #2: Main printer 2 Printer #3: PP printer (and Sub printer)
Cassette No.	Press after numeric entry to display the label information of the entered cassette and enable label information change and confirmation (test print). The data range is 1-7. An error screen is displayed if the corresponding cassette is not inserted. The cassette number becomes “1” when a non-applicable printer is called.
Label No.	This is used when label print information is different for each printer and cassette. Press after numeric entry to call the label print information. The data range is 1-99. The same default number is set for each printer and cassette. This data is not usually changed. The label sensor distance is associated with the label number. For example, if the same number is set for printers #1 and #3, the label sensor distance will be the same for both printers and will result in a misalignment.
Thermal Paper Type	Set label type. Press one of these buttons after numeric entry to set the paper type. Press one of these buttons without numeric entry to display the pop-up screen. Next, press the desired button to set the paper type.
Label Gap	Set label gap. Press after numeric entry to set the gap length. The data range is 0-999 (0.0 mm – 99.9 mm on the screen). Default data: 2.0 mm

Buttons/Display Fields	Function
Preprint Feed	Set the preprint feed length. Press after numeric entry to set the feed length. The data range is 0-999 (0.0 mm – 99.9 mm on the screen). Default data: 7.5 mm
Feed End Length	Displays the set feed end length (unit: mm). Press after numeric entry to set the feed end length. The data range is 1-999 (0.1 mm – 99.9 mm on the screen). Default data: 3.0 mm The label is issued leaving the set length behind and fed immediately before the label is sucked.
Print Direction	“Normal rotation” and “Reverse rotation” can be set as the label print direction. The selected item will change color to blue. Default data: “Normal rotation”
Back Feed	Select the back feed availability at the start of label printing. The selected item will change its color to blue. Default data: “Yes” When “Yes” is selected the label is back fed in the above-mentioned preprint feed length and printing starts. Make sure “Yes” is selected at all times.
Sensor Type	Set the label feed availability using the label sensor control. Press after numeric entry to set the sensor type. Press without numeric entry to display the pop-up screen. Press the desired button to make a selection. Default data: “1” (Label sensor)
Sensor Distance	Set the distance between the label sensor position and the printer head end. Press after numeric entry to set the distance. The data range is 0-999 (0.0 mm – 99.9 mm on the screen). Default data: 17.5 mm The label feed amount will increase when the data is increased, and decrease when the data is decreased.
Printing Speed	Set the label print speed. Enter either “1” or “2” (1:80mm/sec 2:100mm/sec) and press this button. Press without numeric entry to display the pop-up screen. Press the desired button to make a selection. Default data: “2” (100 mm/sec)
Printing Density (0 - 9)	Set the print density when using the monochrome thermal head. Press after numeric entry to set the density. The data range is 0-9. (0:lightest 9:darkest) Default data: “5”
2 Color Print Density (0 - 9)	Set the print density for black and red when the two color thermal head is used. Press one of these buttons after numeric entry to set the density. The data range is 0-9. (0:lightest 9:darkest) Default data: “5” for both black and red
Print Check Format No.	Set the test print format. Press after numeric entry to set the number. The data range is 1-99. Default data: 52 (37 x 60 mm) for printers #1, #3, and #4 20 (55 x 60 mm) for printer #2
Format Information	Displays the label size of the set default format number. Confirm that the set format number is correct. This function is display only and the data cannot be changed.
Item No.	Set the test item number for print confirmation. Press after numeric entry to set the number. The checker pattern is printed when the item number is “0.”

Buttons/Display Fields	Function
Cassette No.	This is effective only when the cassette applicable printer number is selected. Displays the number of the inserted cassette. “1” is displayed when the cassette non-applicable printer is used. Make sure the cassette number called is same as the inserted cassette number. An error screen will appear if it is different. This function is display only and the data cannot be changed.

4.7 FORMAT SETTING

With this machine, a maximum of 99 label formats can be set from “1” to “99”.
A maximum of 63 items can be printed in one format that is called as “unit”.

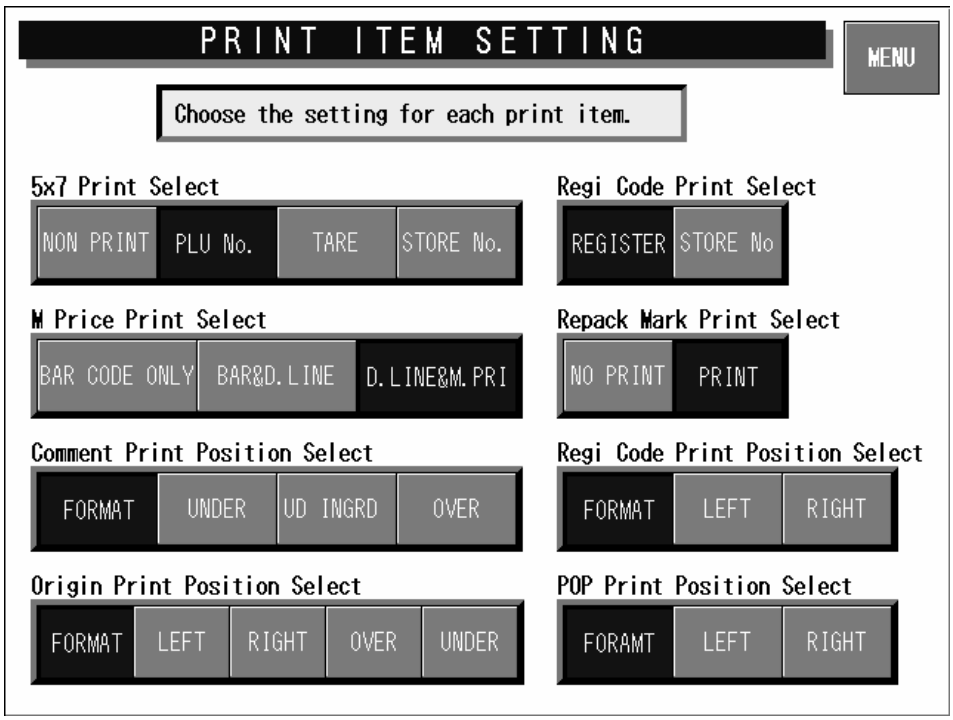


Format Setting Screen

Buttons/Display Fields	Function
MENU	Displays the copy confirmation screen to finish settings.
[←] [↑] [→] [↓]	Moves the selected unit position. “X “ and “Y” axis coordinates change accordingly.
Unit No.	Displays the called unit. Enter the numeric value and press this field to call up the desired unit.
DETAIL	Checks the detailed data for the selected unit,
CONFIRM	Confirms that the change has been made on the screen. Returns to the Format Setting screen.
COPY	Specifies the copy source by entering a numeric value.
DELETE	Deletes the called screen data.

4.8 PRINT ITEM SETTING

On this Print Item Setting screen, select the setting for each print item.



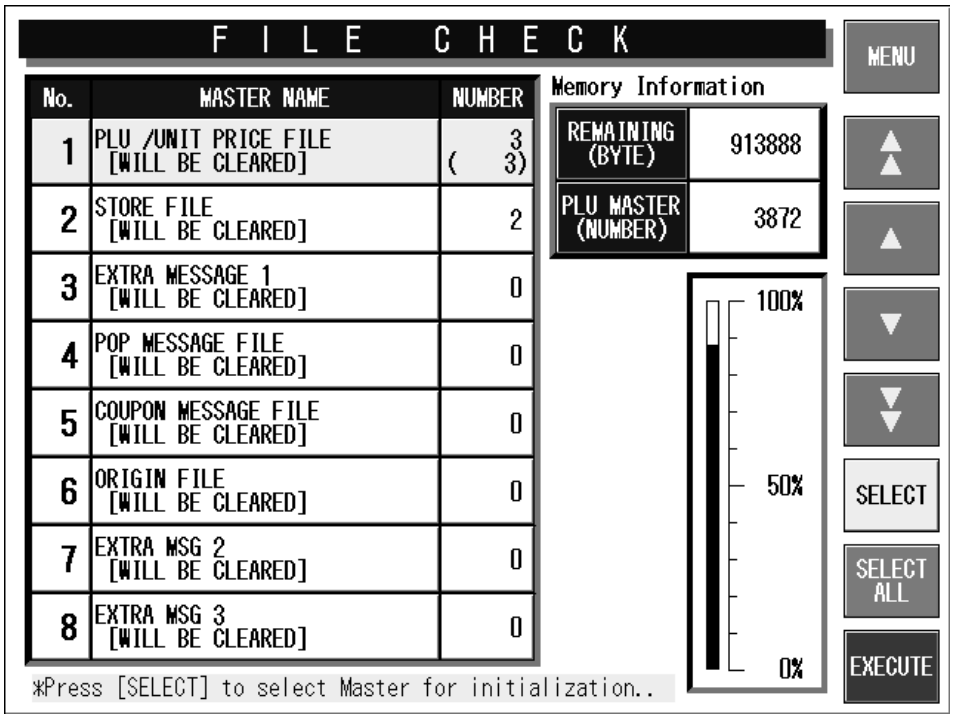
Print Item Setting Screen

Buttons/Display Fields	Function
MENU	Apply the set data and return to the Setup Menu 1/2 screen.
5 X 7 Print Select	Select one of the print items to be printed in 5 X 7 size. Press the desired button to select the item and change the button color to blue.
M Price Print Select	Select either “Label print price” or “Barcode price” when printing the mark down price label. Select one of the following 3 types: Barcode Only: The markdown price is reflected only in the barcode, and the normal price (before markdown) is printed in the price print field. Barcode and Double line The markdown price is reflected only in the barcode, and two strikeout lines are printed over the normal price (before markdown). Double line and M price: The markdown price is reflected in the barcode and two strikeout lines are printed on the normal price (before markdown) and the price after markdown is printed. Press the desired button to select the type and change the button color to blue. Default data: “Double line and M price” *Note: Two strikeout lines and the markdown price are printed for commodities which the markdown price is registered.*

Buttons/Display Fields	Function
Comment Print Position Select	Select the comment character string print position when it is included in the PLU name extension field. Select one of the following 4 types: Format: Printed in the position specified by the format. Under: Printed under the PLU name. Under Ingredient: Printed under the ingredient. Over: Printed above the PLU. Press the desired button to select the type and change the button color to blue. Default data: “Format”
Origin Print Position Select	Select the origin name character string print position when it is included in the PLU name extension field. Select one of the following 3 types: Format: Printed in the position specified by the format. Left: Printed on the left of the PLU. Right: Printed on the right of the PLU. Press the desired button to select the type and change the button color to blue. Default data: “Format”
Register Code Print Select	Select the item to be printed in the register code print field. Select either “Register” or ”Store No.” Press the desired button to select the type and change the button color to blue. Default data: “Register”
Repack Mark Print Select	Select the printing of “.” and the Use-by date on the end of each pack. Select either “No Print” or “Print.” Press the desired button to select the type and change the button color to blue. Default data: “Print”
Register Code Print Position Select	Select register code print position when it is included in the PLU name extension field. Select one of the following 3 types: Format: It is printed at the position specified by the format. Left: It is printed on the left of the PLU name. Right: It is printed on the right of the PLU name. Press the desired button to select the type and change the button color to blue. Default data: “Format”
POP Print Position Select	Select POP character string print position when it is included in the PLU name extension field. Select one of the following 3 types: Format: Printed at the position specified by the format. Left: Printed on the left of the PLU name. Right: Printed on the right of the PLU name. Press the desired button to select the type and change the button color to blue. Default data: “Format”

4.9 FILE CHECK

This screen is used to confirm master files such as PLU master, Store master, Extra message master files, etc. registered in this machine



File Check Screen

Buttons/Display Fields	Function
MENU	Returns to the System Menu 1/2 screen.
Master Name	Displays master names (only master files that can be processed by the IF-21FD and master files with the number “0”). Press the desired field to make a selection and change the color to light blue.
Number	Displays the number of data registered in the machine (only master files that can be processed by the IF-21FD and master files with the number “0”). Press the desired field to make a selection and reverse the color to light blue.
Memory Information	Displays remaining SRAM memory in bytes. (Zero suppression, Max.8 digits)
PLU Master	Calculates the number of items that can be registered based on the amount of remaining memory. Number of Items = Remaining amount ÷ (Fixed PLU master parts + PLU name character string 128 bytes + One unit price master)
Memory Remaining Display Bar	Displays the amount of memory remaining in black.
▼▲ ▼▲	Press to move the master information list display page up/down.
▼▲	Press to move the cursor position in the master information list display up/down (cursor is yellow).
SELECT	Select master files for initialization. Press the desired field where the cursor is positioned to select a master file. This will select an unselected field or unselect a selected field. Selecting a field will change the field where the cursor is positioned light blue. Placing the cursor on a selected item will change the color of the field to green.

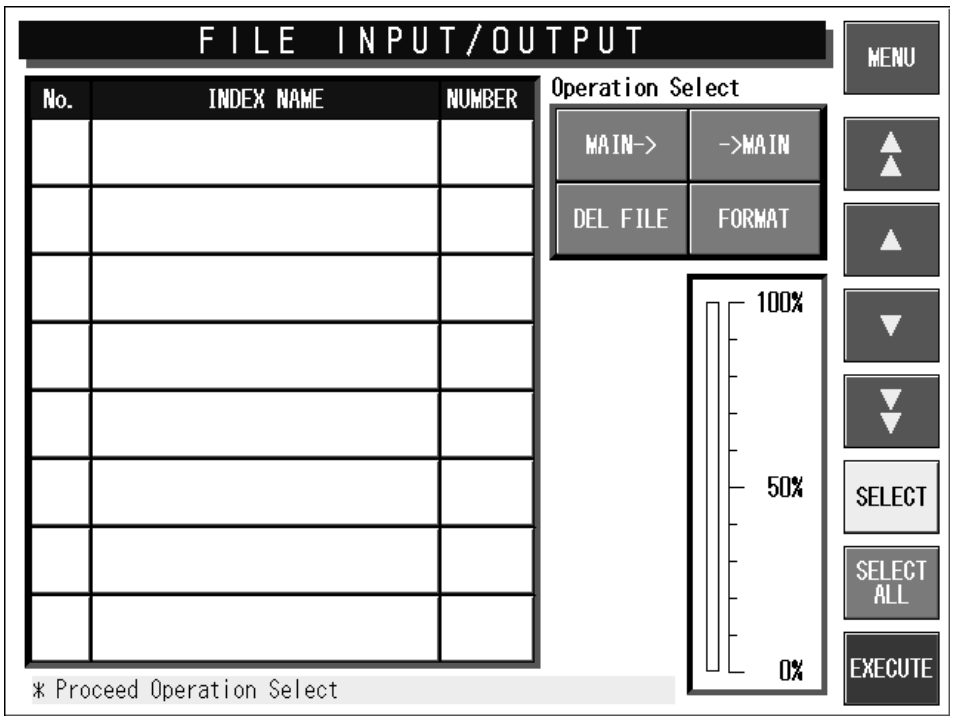
Buttons/Display Fields	Function
SELECT ALL	Select or cancel all master files for initialization. All items on the list will be selected even if there is only one unselected item on the list. When all items are already selected, they will be canceled. Selecting will change the color of the entire field to light blue.
EXECUTE	Press to initialize the selected master files. Processing is different for each master file. • Clear: Delete existing master files. • Initialize: Existing master files will be deleted and initialized to default values. • Number reference: Confirm the number of existing master files without execution.

Note: Processing guidance is displayed at the bottom of the screen.

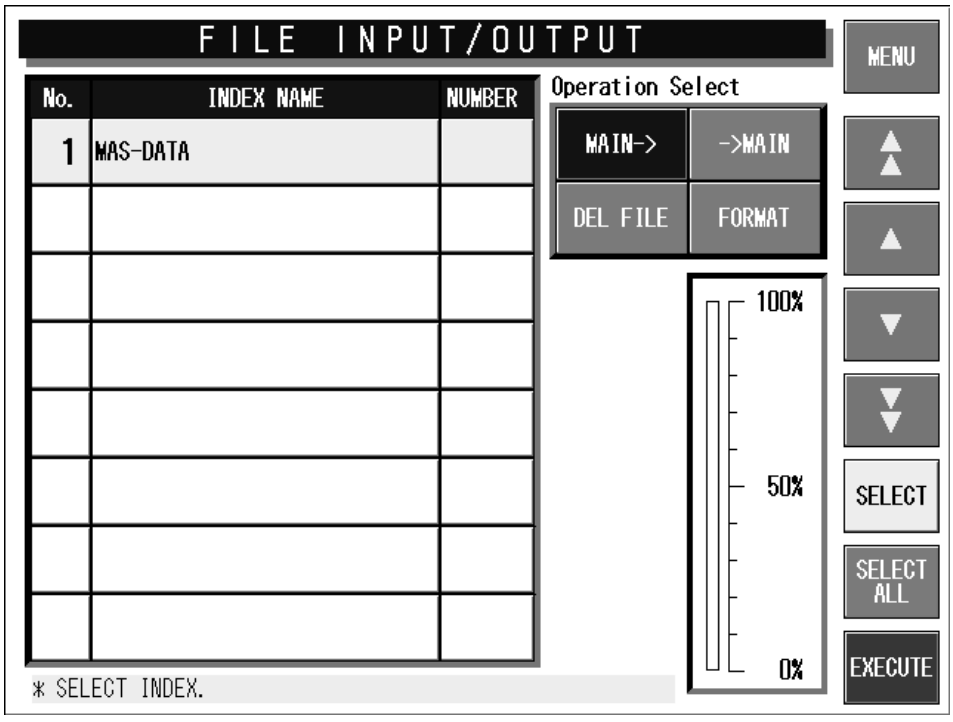
4.10 FILE INPUT/OUTPUT

Master files stored in this machine can be input and output to or from a floppy disk via IF21 or to the CF card via DataRapid. Note that the PLU master data must be downloaded first when downloading PLU and Unit price master data individually to the main body.

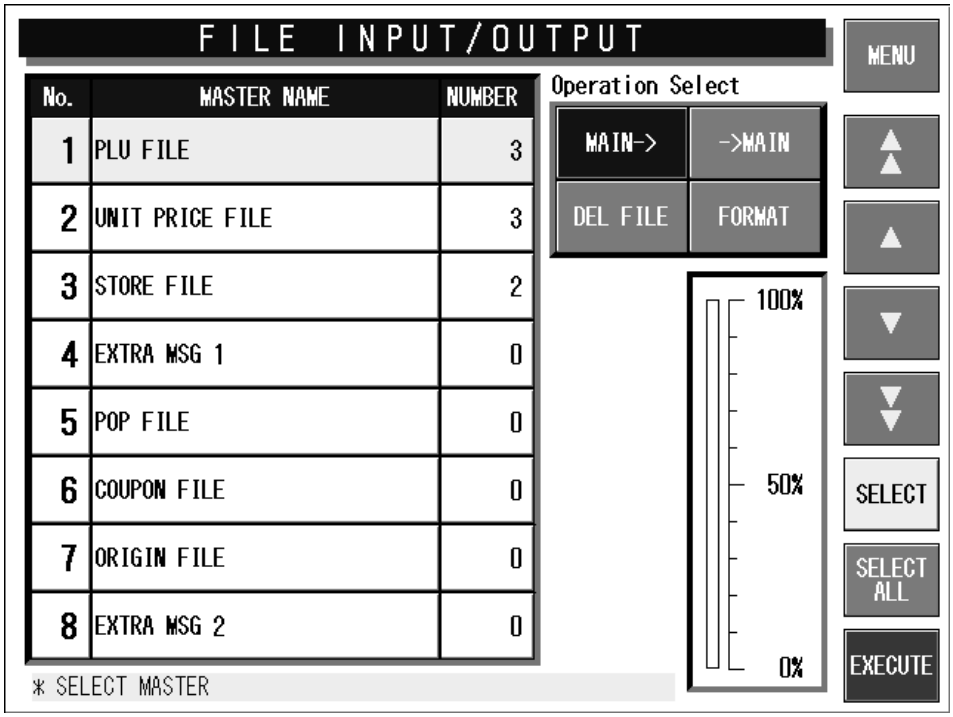
Note: Connect the IF-21FD with the I2NET INLINE (Dsub-9).



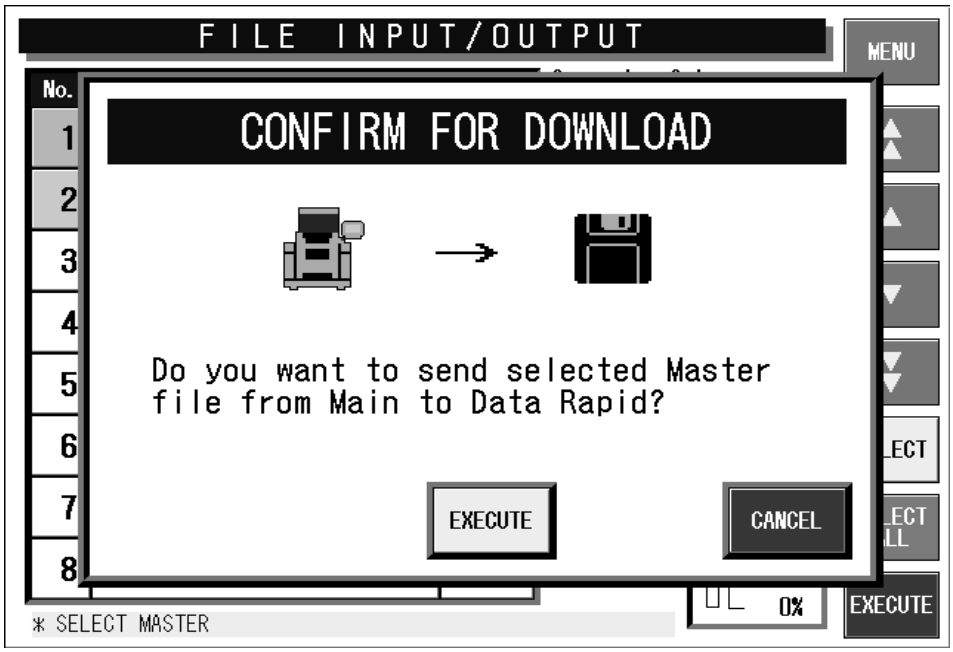
File Input/Output Screen



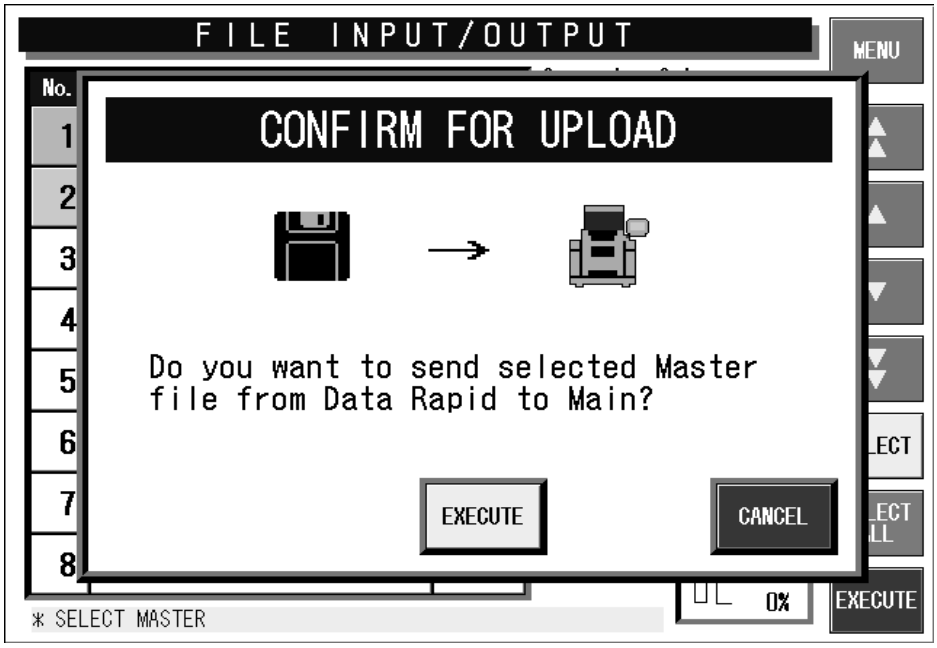
File Input/Output Index Screen



File Input/Output Master File Screen



Download Confirmation Screen (Main Body → IF-21FD)



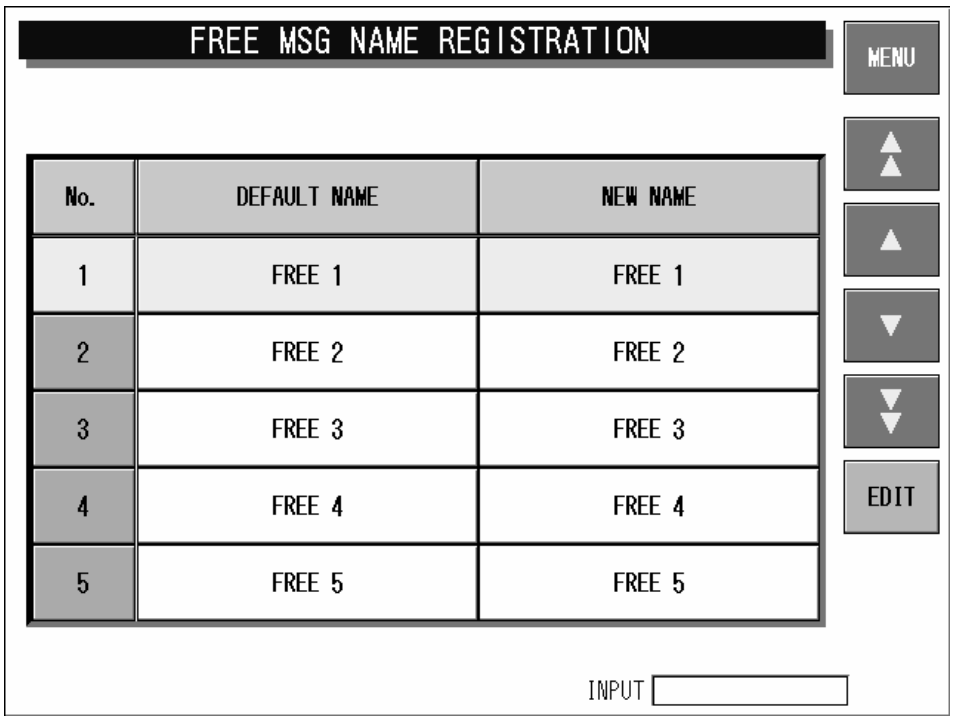
Upload Confirmation Screen (IF-21FD → Main Body)

Buttons/Display Fields	Function
MENU	Returns to the System Menu 1/2 screen.
Operation Select	Select file I/O processing. Select "Main body →" "→ Main body" "File delete" or "Format". Press the button to request the index information acquisition from the IF-21FD and change to the index screen. Press it again to re-display the index screen.
Bar Graph	Shows the processing progress of each master file.
▼ ▲ ▼ ▲	Press to move the master information list display page up/down.
▼ ▲	Press to move the cursor position (highlighted yellow) in the master information list display up/down. Only existing index columns can be moved when "→Main body" or "File Delete" is selected.
Index Information	Displays the index numbers and names of files in the IF-21FD. Processing differs according to the processing item selected. Main body→: Changes to the master display screen when the index is selected via the index name edit screen. →Main body: Changes to the master display screen when the index is selected via the index name edit screen. However, it is only possible to select an item displayed in the index list. File Delete: The selected index is displayed in light blue when the indexes are selected. Format: This screen is used solely for confirmation files existing in the IF-21FD and selection is not possible.
SELECT	Select master files for input/output. Press the desired field where the cursor is positioned to select a master file. This will select an unselected field or unselect a selected field. Selecting a field will change the field where the cursor is positioned light blue. Placing the cursor on a selected item will change the color of the field to green.
SELECT ALL	Select or cancel all master files for input/output. All items on the list will be selected even if there is only one unselected item on the list. When all items are already selected, they will be canceled. Selecting will change the color of the entire field to light blue.

4.11 FREE MESSAGE NAME REGISTRATION

With this machine, master files are prepared at the factory.
On this screen, there are five areas named Free 1 through Free 5 you can freely use. You can change these master name as you like.

Note: When a free master name is changed the updated master name is displayed thereafter.

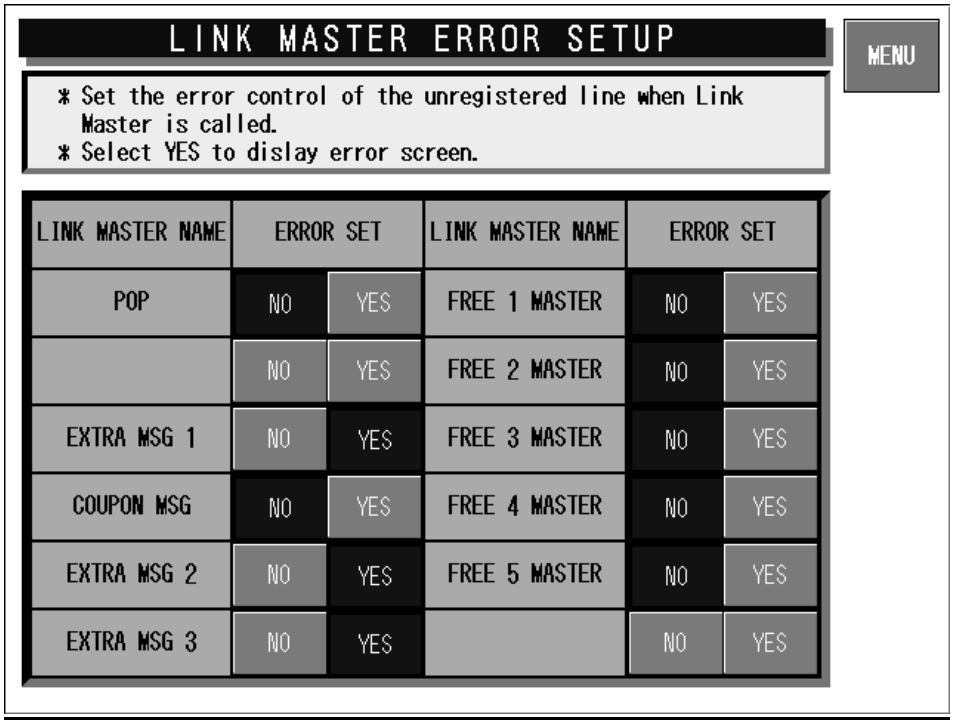


Free Message Name Registration Screen

Buttons/Display Fields	Function
MENU	Returns to the System Menu 1/2 screen.
▼ ▲	Press to move the cursor position (highlighted yellow) up/down.
▼ ▲ ▼ ▲	Press to move the cursor position to either Free 1 or Free 5.
EDIT	Press change to the free master name edit screen at the present cursor position.

4.12 LINK MASTER ERROR SETUP

A master data that is linked with the PLU master data is called “Link Master”.
This “YES” or “No” setting decides whether an error is displayed or not when the PLU master data is called, and the corresponding producer master data is not found.

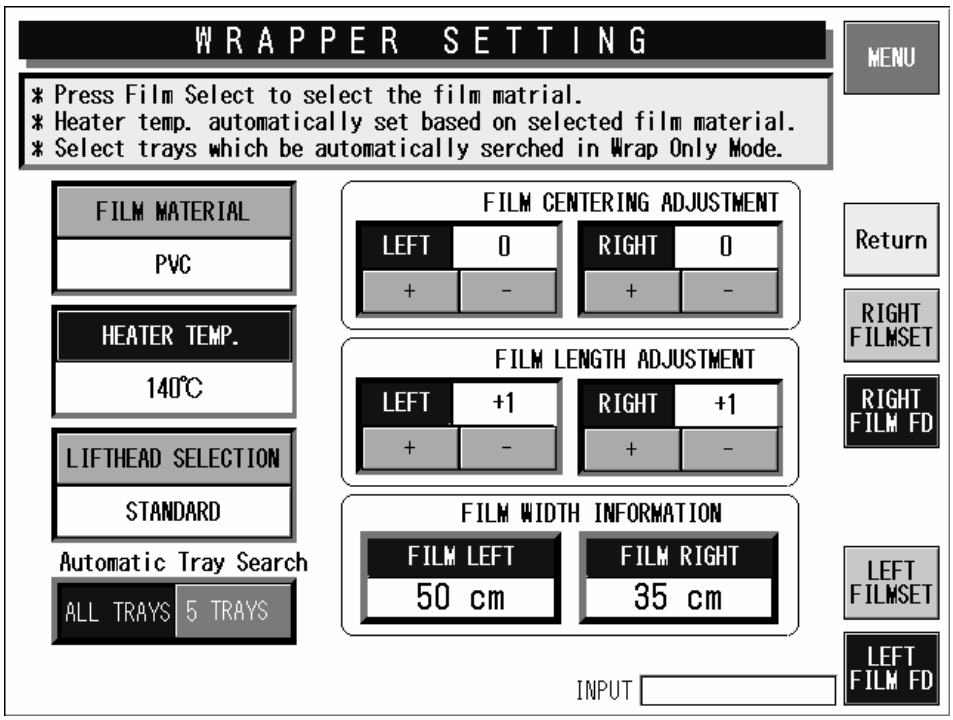


Link Master Error Setup Screen

Buttons/Display Fields	Function
MENU	Returns to the System Menu 1/2 screen.
Error Set	Select error screen display for each link master if the character string is not registered when a link master is called. Press either “NO” or “YES” to select and the selected button color will change to blue.

4.13 WRAPPER SETTING

On this screen, perform the required settings and adjust the film conditions.

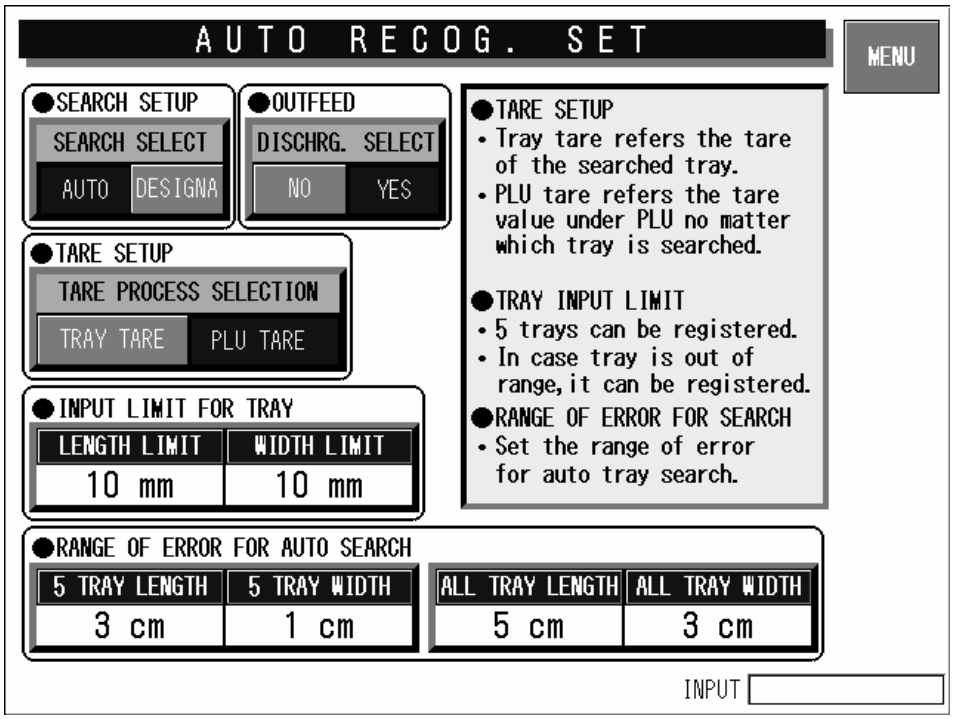


Wrapper Setting Screen

Buttons/Display Fields	Function
MENU	Returns to the System Menu 1/2 screen.
Return	Resumes wrapper and applicator operation.
Film Material	Select film material and type. Press to display a pop-up screen. Next, select the desired film type. The heater temperature is set to the default value upon selection.
Heater Temperature	Set heater temperature. Press the display field after numeric entry to set the heater temperature (°C) and display it in the display field. The data range is 80 - 180 and the default value is determined according to the film material.
Lift Head Selection	Password entry is required to change the shape. Select either “Standard” or “ Rectangular” according to the shape of the lift head. It is possible that the lift head will push against the side wrapping plates if the lift head shape is improperly selected.
Automatic Tray Search	Select either “All trays” or “5 trays.” The selected button color changes to blue. Default data: “All trays”
Film Centering Adjustment	Adjust film centering. Press [-] or [+] without numeric entry to adjust film centering in increments of 1 mm. Press [-] or [+] after numeric entry to set the film centering adjustment correction data. The data range is 0 - 99. Default data: 0 mm
Film Length Adjustment	Adjust the film feed length. This procedure is similar to the film centering adjustment procedure.
Film Width Information	Displays film width information (cm). Data setting is not possible.

Buttons/Display Fields	Function
FILM SET (Right/Left)	Press to start film set operation.
FILM FEED (Right/Left)	Press to start film feeding operation.

4.14 AUTOMATIC RECOGNITION SETUP



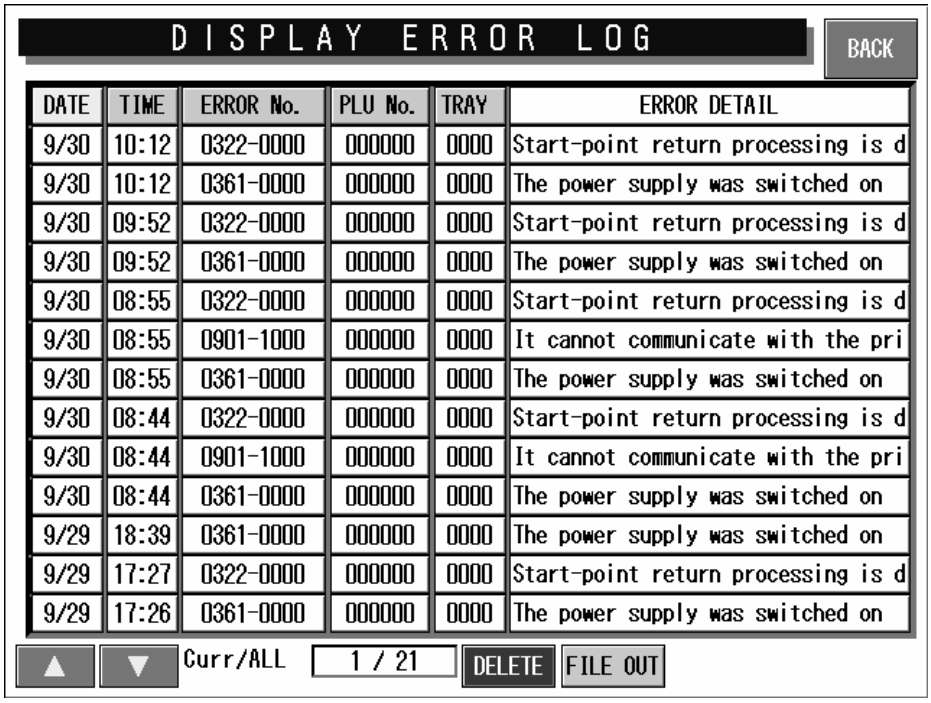
Auto Recognition Set screen

Buttons/Display Fields	Function
MENU	Returns to the System Menu 1/2 screen.
Search Setup	Select the normal mode tray search method. Select either “AUTO” or “DESIGNATED” by pressing the corresponding button. The selected button color changes to blue.
Discharge Setup	Select automatic discharge of the PLU on the lift in normal mode. Select either “NO” or “YES” by pressing the corresponding button. The selected button color changes to blue. Default data: “YES” When “YES” is selected and the previously processed PLU remains on the lift, the next PLU is detected by the camera. The PLU will be automatically discharged if another PLU is not detected.
Tare Setup	Select tare data acquisition processing in normal mode. Select either “TRAY TARE” or “PLU TARE” by pressing the corresponding button. The selected button color changes to blue.
Input Limits For Tray Wide/Narrow sides	Difference between the wide side and the narrow side that can be set in case of 5 tray setting can be selected. Press either “LENGTH LIMIT” or “WIDTH LIMIT” after numeric entry to set the value. The value is displayed in the corresponding field. The data range is from 1 to 99.
Range of Error for Auto Search 5 trays/All trays Wide/Narrow sides	Coincidence error margin between the detected size and the wide and narrow sides can be set when 5 or all trays are detected. Press the field to set and display the entered value. The data range is from 1 to 99.

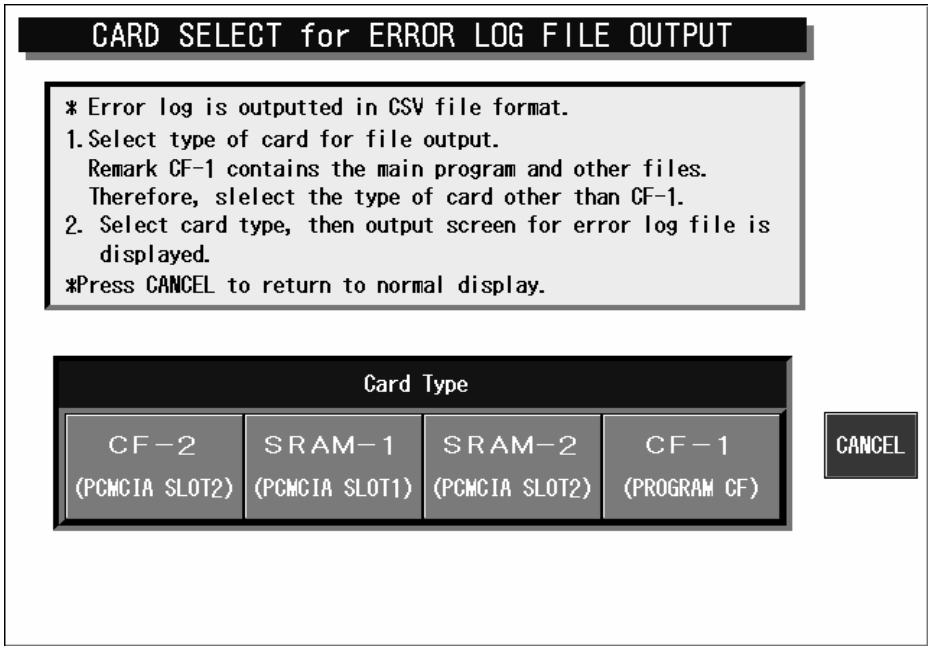
4.15 DISPLAY ERROR LOG

With this machine, the display error log can be recorded. To save the error log data to the CF card, press the FILE OUT button. Press to select one of four card types to which the log data is stored. Usually, main program is stored in the CF-1. Therefore, select the card type other than the CF-1.

Note 1: Press the [PRINT] key to print the error log label. (Journal output is performed when the journal printer is connected)
Note 2: Error logs are output in CSV format.
Note 3: The error log can be analyzed by opening spreadsheet software (Excel and Lotus123) or database software (Access).



Display Error Log Screen

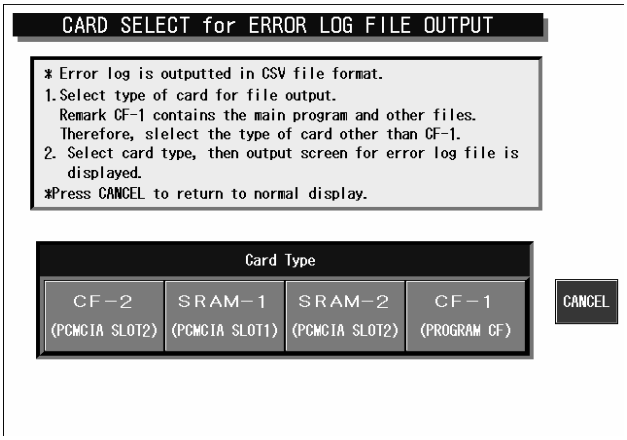


Error Log File Output Screen

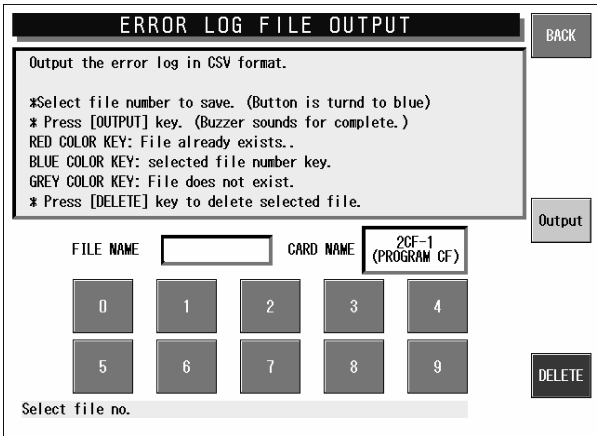
Buttons/Display Fields	Function
MENU	Returns to the System Menu 1/2 screen.
Date	Press to display the selected items in order.
Time	
Error No.	
PLU No.	
Tray No.	
▼ ▲	Press to change the error list page.
DELETE	Press to initialize the confirmation screen. Press [EXECUTE] to clear the error log information. Press [CANCEL] to close the dialog without deleting data.
FILE OUTPUT	Changes to the error log file output select/execute screen.
CANCEL	Return to the error log screen without executing file output.
EXECUTE	Press to output the error log in CSV format to the selected card.
Card Type	Press the corresponding button to select one of the four cards as the error log file output destination. CF-2 / SRAM-1 / SRAM-2 / CF-1 The selected button changes to blue.

ERROR LOG FILE OUTPUT PROCEDURE

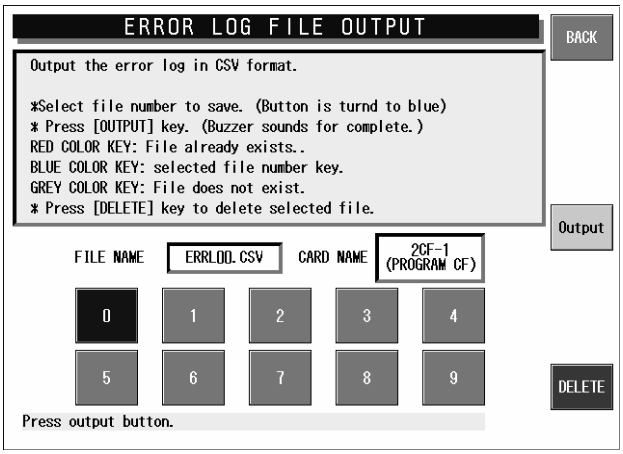
(1) Select the card type



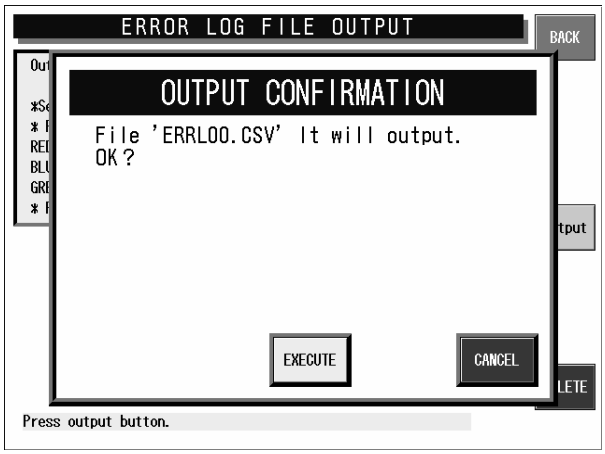
(2) Select the file number.



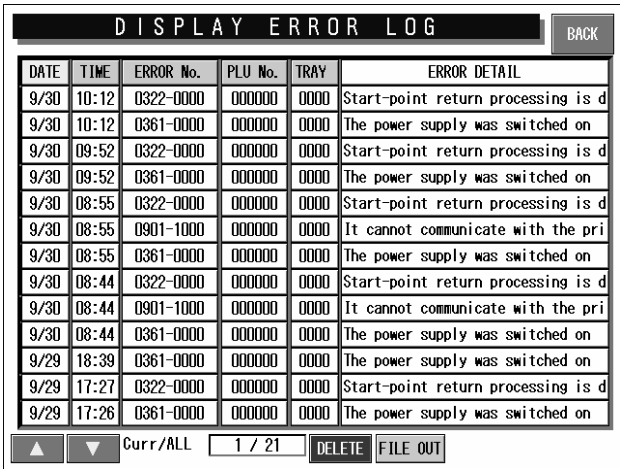
(3) Output the file.



(4) The confirmation screen appears.

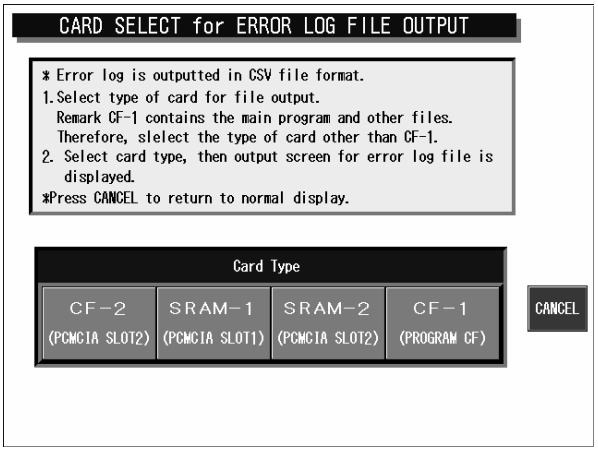


(5) The Display Error Log screen appears.

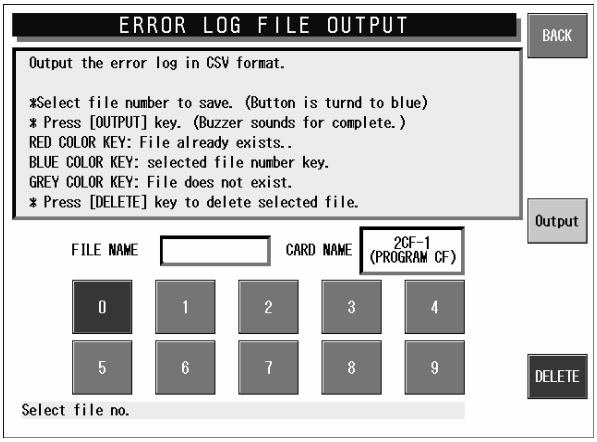


ERROR LOG FILE OUTPUT DELETE PROCEDURE

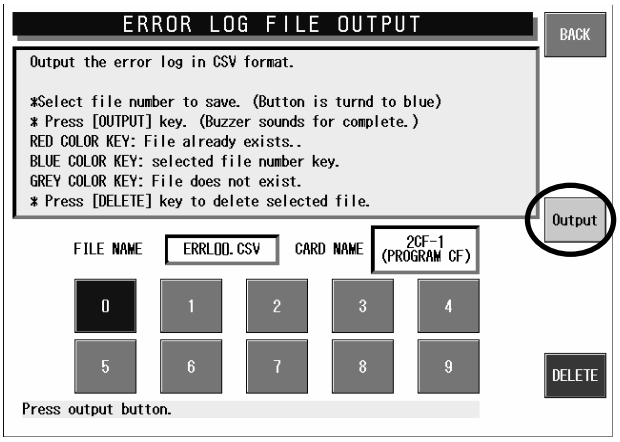
(1) Select the card type.



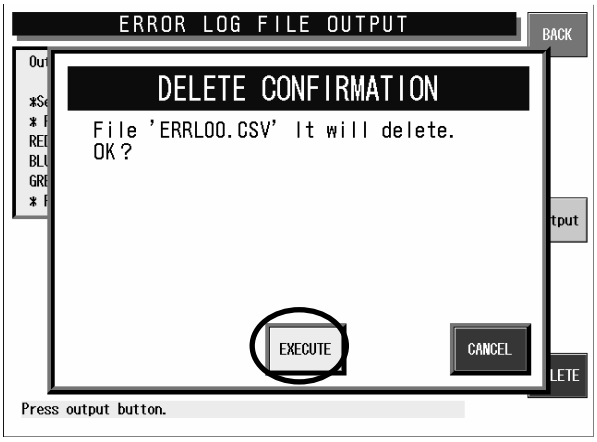
(2) Select the file number.



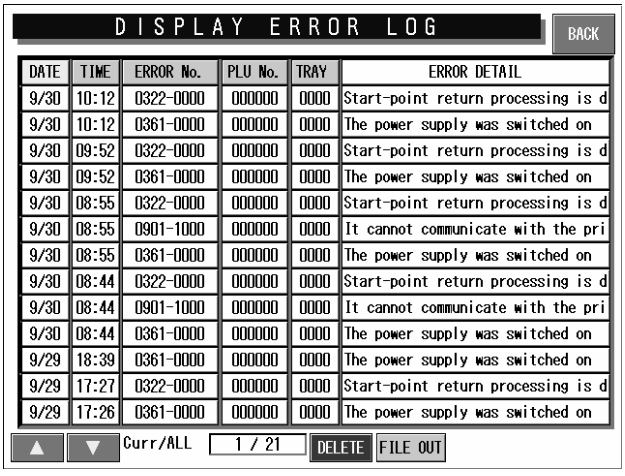
(3) Delete the file.



(4) The confirmation screen appears.



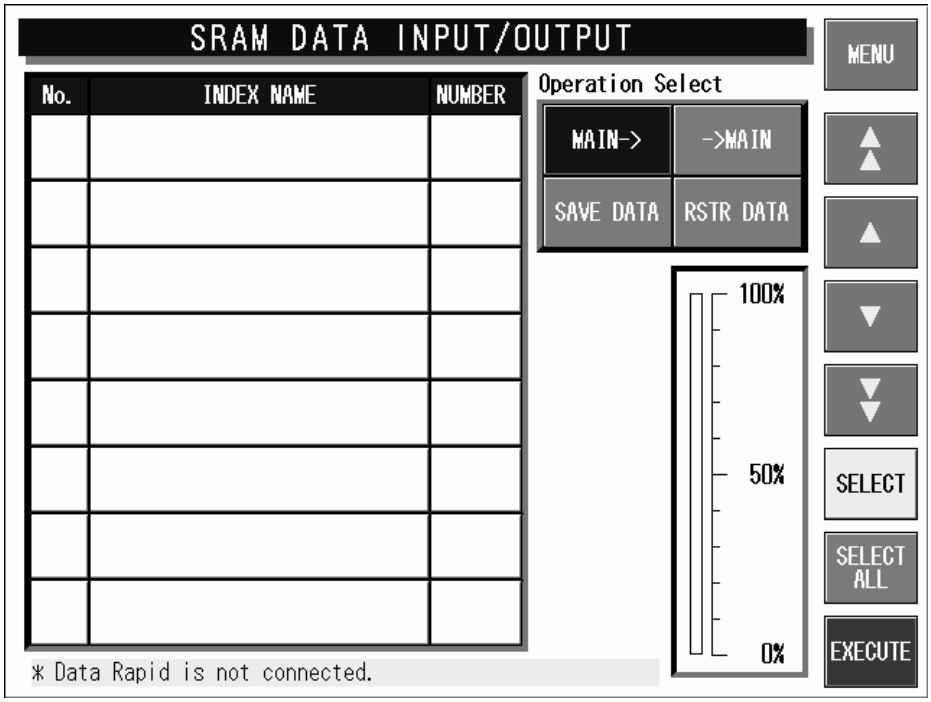
(5) The Display Error Log screen appears.



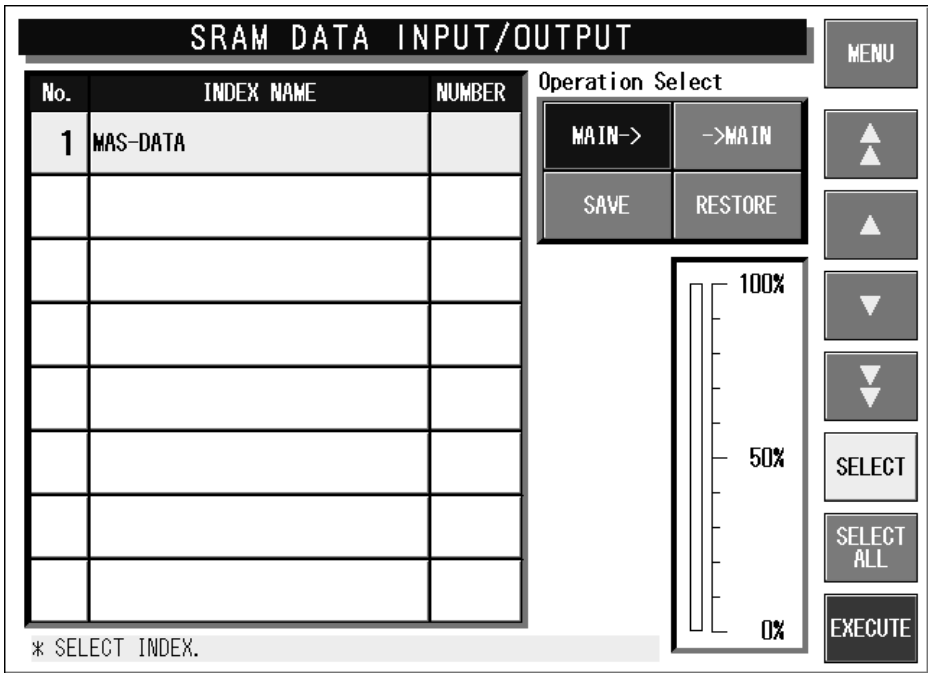
4.16 SRAM DATA INPUT/OUTPUT

This function is used to back up the Static RAM data.
The following items are stored in the CF-1 card.

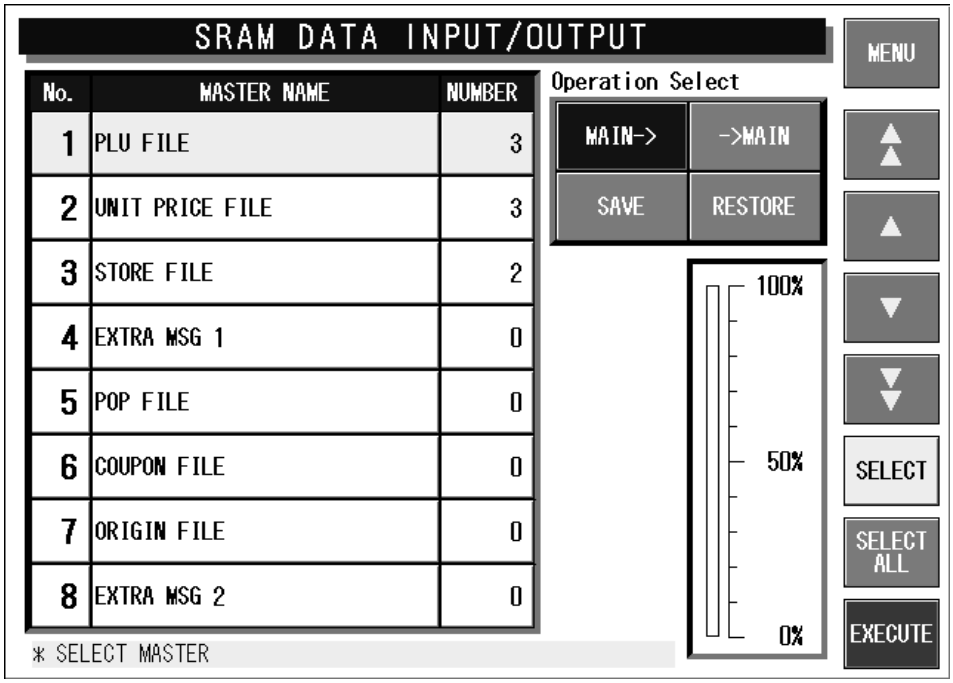
- Items selected in the machine setup screen
- Calendar
- Head run distance
- Wrapping count
- Pasting count
- Wrapper error correction data



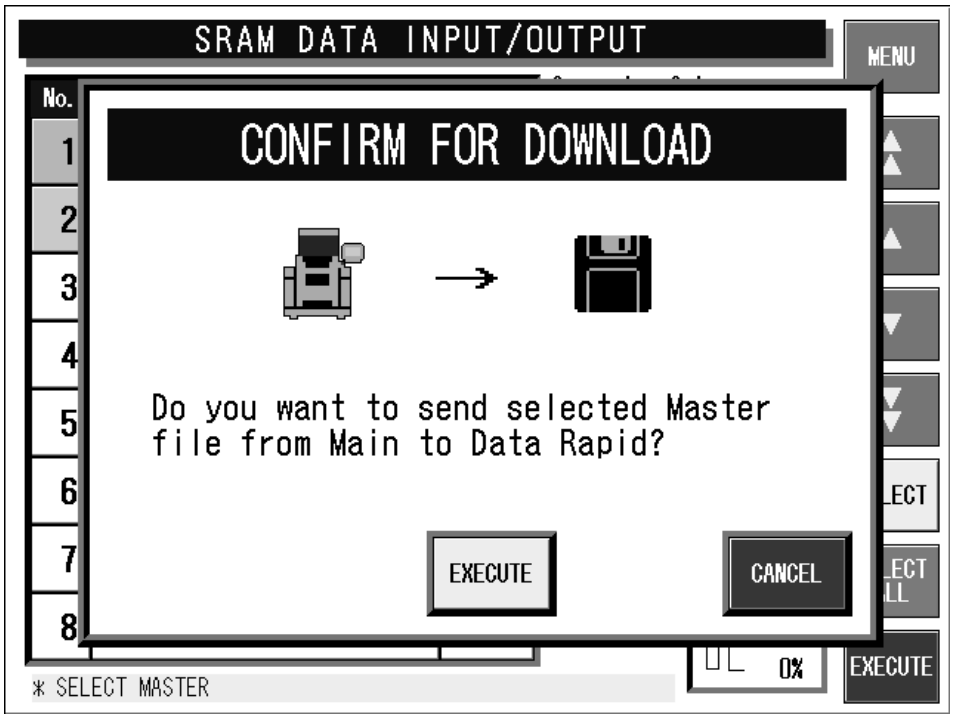
SRAM Data Input/Output Screen



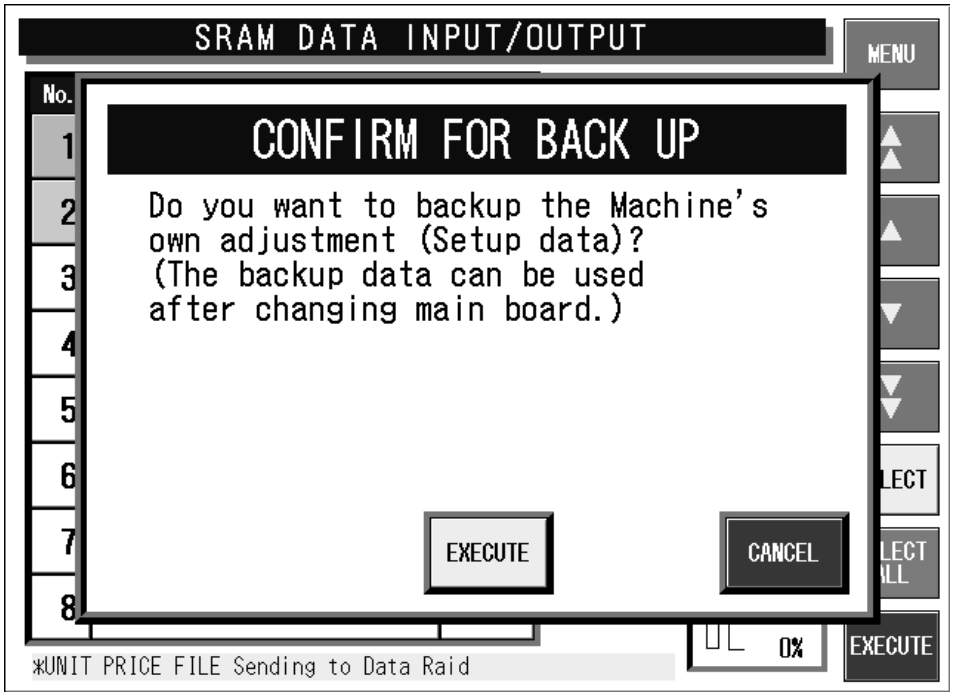
SRAM Data I/O (Main body→) Screen



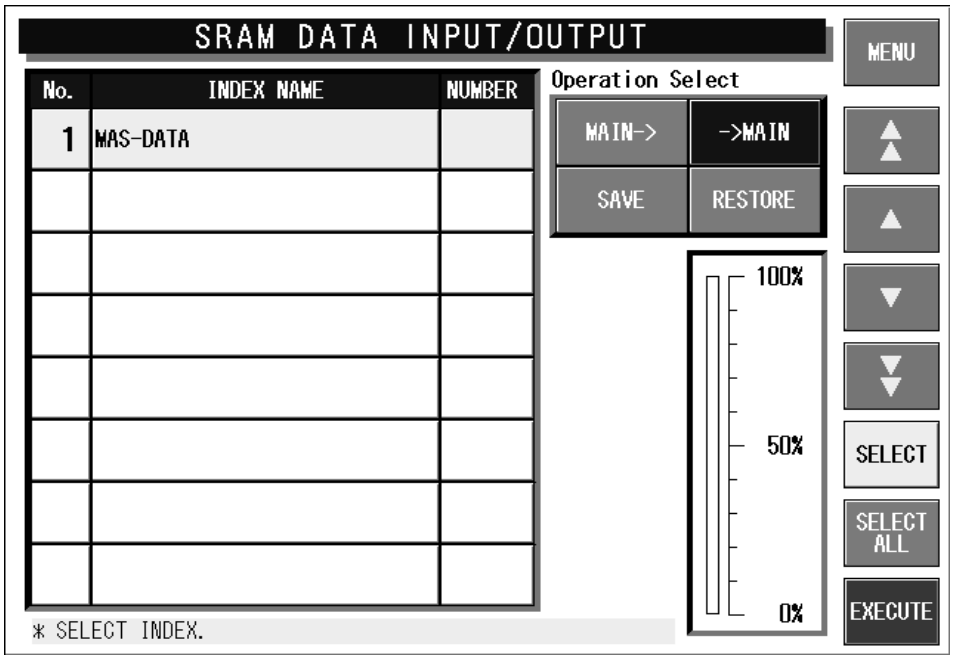
Output Master Data Selection Screen



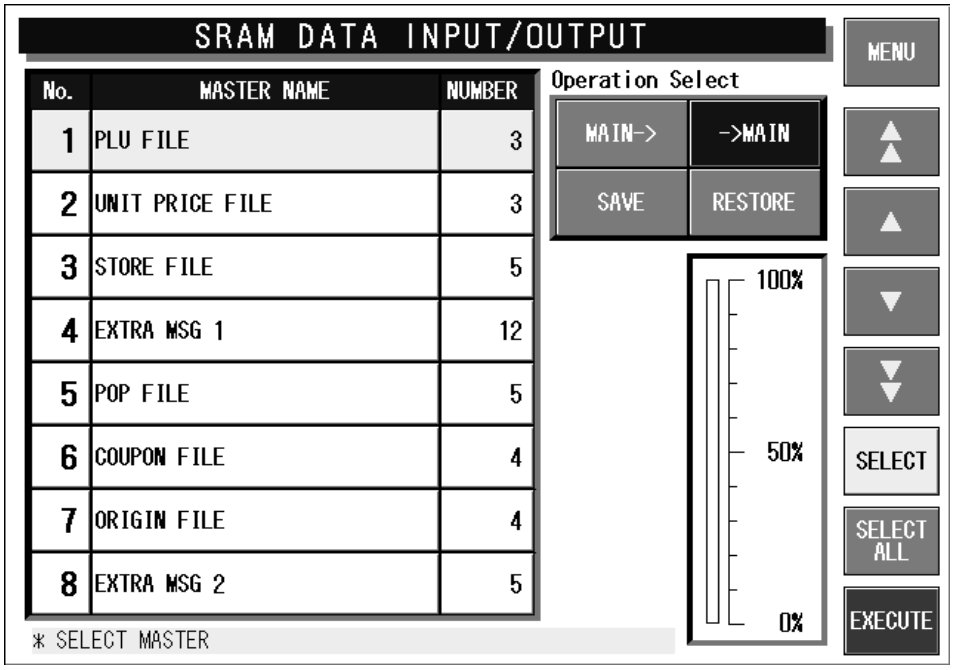
Download Confirmation Screen



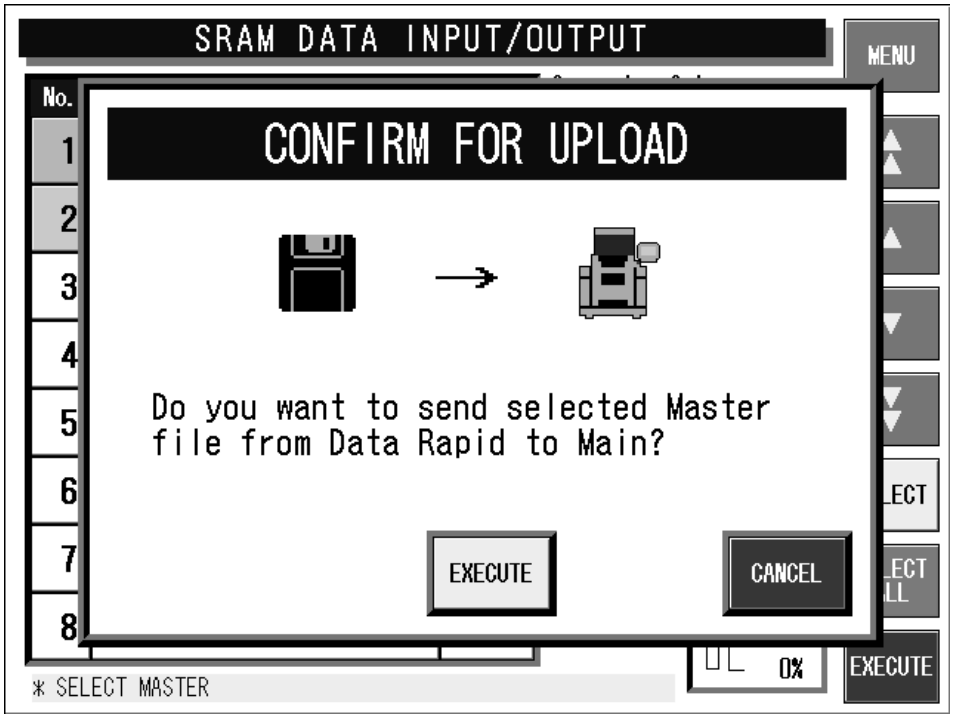
Backup Confirmation Screen



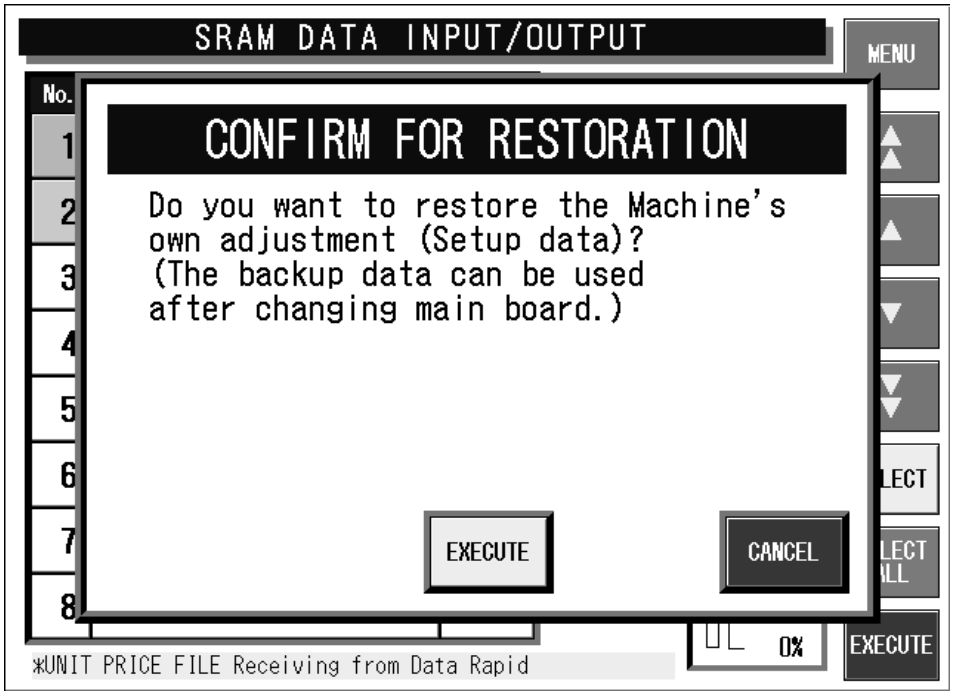
SRAM Data I/O (→ Main body) Screen



Input Master Data Selection Screen



Upload Confirmation Screen

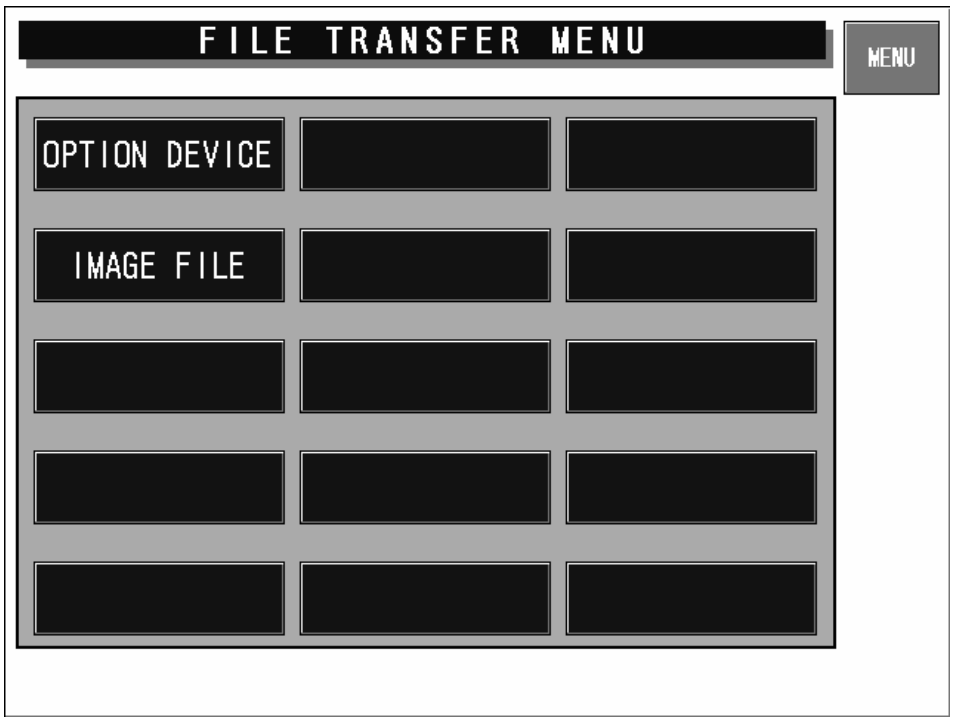


Restoration Confirmation Screen

Buttons/Display Fields	Function
MENU	Returns to the System Menu 1/2 screen.
Operation Select	MAIN→ Select to output main body master data to the IF-21FD FD and SRAM main body data (set system data for each machine) to the CF-1 (main program CF). (File name: sram.dat) → MAIN Select when replacing the main board or copying all data to another machine. Backup master data and permanent storage field data (system data for each machine) can be input to SRAM. (File name: sram.dat.) SAVE DATA Select to save the set the machine unique data in the CF-1. (File name: sram.dat.) RESTORE DATA Select to restore machine unique data (file name: sram.dat.) stored in the CF-1.
Index Name Setting / Select	Press the corresponding button to set (edit) or select the desired index name(s). The output master data selection screen is displayed when the index name is fixed.
File Name Select (SELECT/ ALL SELECT)	Press one of these buttons to select the desired output file.
▼▲ ▼▲	Press to move the list index information display page up/down.
▼▲	Press to move the cursor position in the index information list display (highlighted yellow) up/down.
EXECUTE	Output the selected file. The confirmation screen is displayed. Press [EXECUTE] to initiate processing. Press [CANCEL] to cancel processing and return to the previous screen. The permanent storage data backup confirmation screen is displayed when file output ends normally. Press [EXECUTE] to copy SRAM permanent storage data to the main program CF. (File name: sram.dat)

4.17 FILE TRANSFER MENU

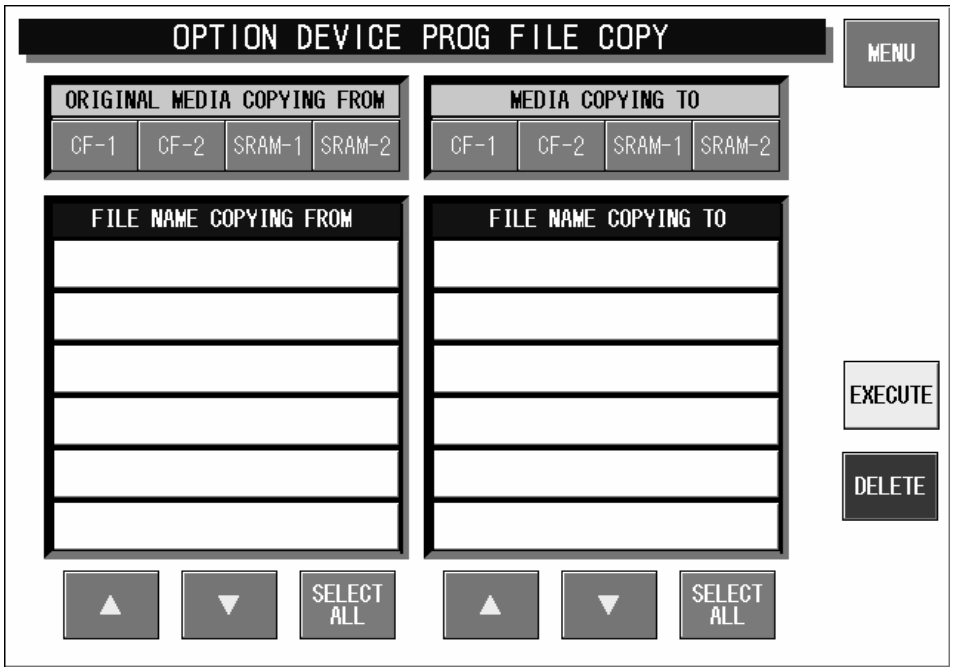
This function is used to copy data stored in the CF card to another CF card.



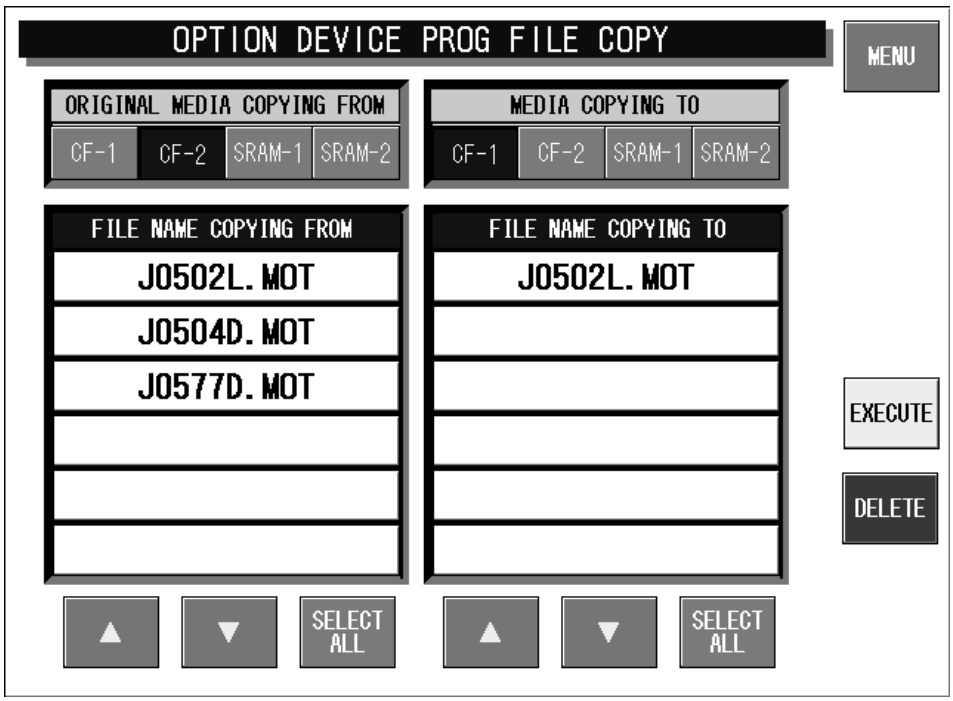
File Transfer Menu Screen

Buttons/Display Fields	Function
MENU	Returns to the System Menu 1/2 screen.
OPTION DEVICE	Press to transfer the option device program.
IMAGE FILE	Press to transfer (copy, delete) the image file.

OPTION DEVICE PROGRAM FILE COPY



Option Device Program File Copy Screen



Option Device Program File Copy Screen (Example)

Buttons/Display Fields	Function
MENU	Returns to the System Menu 1/2 screen.
Copying from/ Copying to	Select copy origin and destination from the 4 card types: Press the desired button to make a selection. The selected button will change to blue.
▼ ▲	Press to move the file selection cursor up/down.
EXECUTE	The program file stored in the selected card is copied to the copy destination. Displays the execution confirmation screen. Press [EXECUTE] to copy. Press [CANCEL] to cancel and close the confirmation screen.
DELETE	Deletes the selected file.

Note: Do not turn off the power supply while copying.

IMAGE FILE COPY

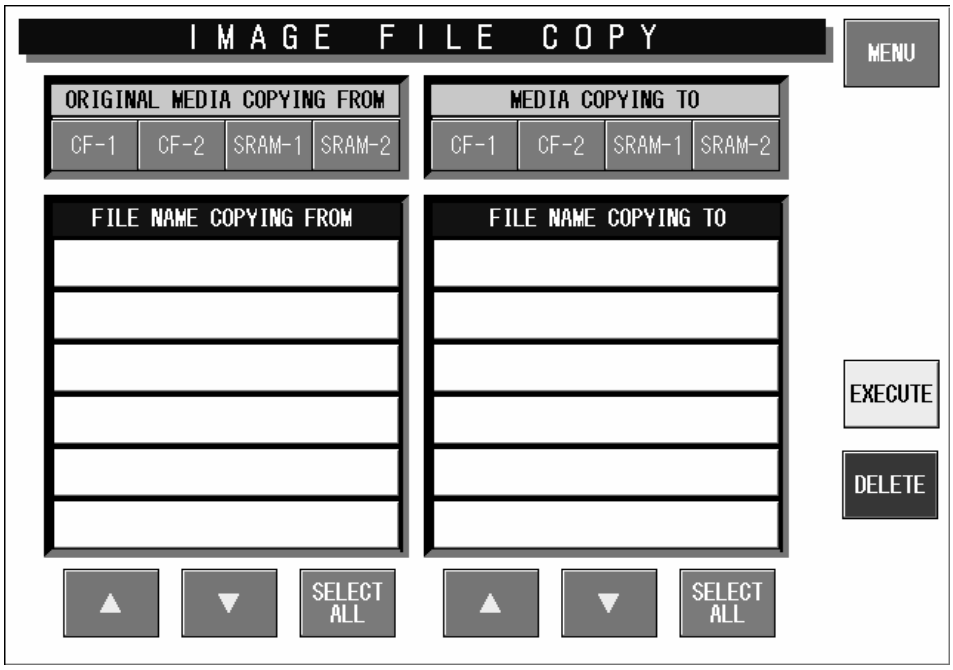


Image File Copy Screen

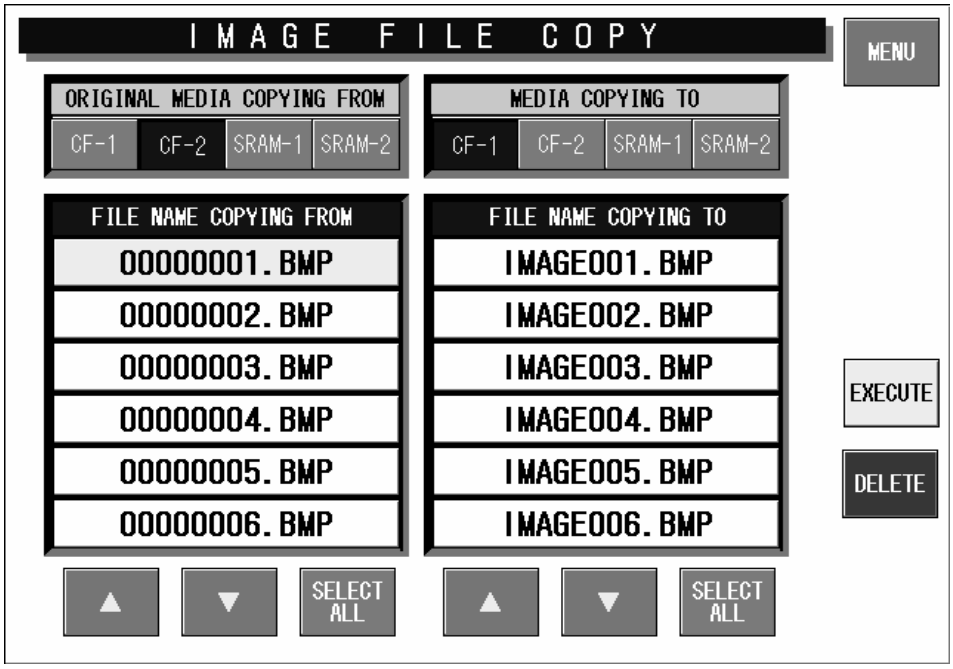


Image File Copy Screen (Example)

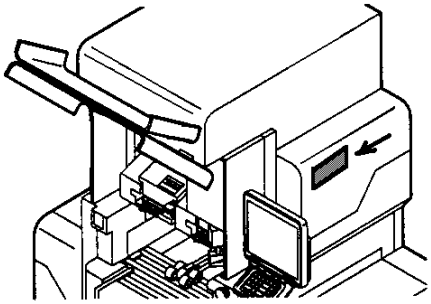
Buttons/Display Fields	Function
MENU	Returns to the System Menu 1/2 screen.
Copying from/ Copying to	Select copy origin and destination from the 4 card types: Press the corresponding button to make a selection. The selected button will change to blue.
▼ ▲	Press to move the cursor up/down.
EXECUTE	The image file (BMP) stored in the selected card is copied to the copy destination. Displays the execution confirmation screen. Press [EXECUTE] to copy. Press [CANCEL] to cancel and close the confirmation screen.
DELETE	Deletes the selected file.

5 ELECTRIC SIGNALS

CONTENTS

5.1 MAIN PC BOARD (P-910H-2)

Main board controls the entire machine.
It is located in the right side cover on 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 has been replaced.

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+24[V]	→	
34-38	GND	-	
39-40	Not used	-	

XJ2

No.	Signal name	Direction	Other end
1	DC+5[V]	←	・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-909 and P-910	←→	P-909 (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+5[V]	→	
6	RS232C SG	-	
7	RS232C FG	-	

XJ6

No.	Signal name	Direction	Other end
1	DC+24[V]	←	P-909 (XJ9)
2	GND	-	

XJ7

No.	Signal name	Direction	Other end
1-18,27,30	Not used	-	P-918 (XJ4)
19	Request signal for wrapper state	←	
20	General-purpose input 1	←	
21	General-purpose input 2	←	
22	Request signal for applicator state	←	
23	Not used	-	
24	Applicator label apply timing signal	←	
25-26	DC+5[V]	→	
28,29	GND	-	

XJ8

No.	Signal name	Direction	Other end
1	Scale stability signal	←	P-930 (XJ1,4,5)
2	Not used	-	
3	Not used	-	
4-5	RS-485 (Scale communication)	←→	
6	DC+12[V]	→	
7	GND	-	
8	Not used	-	
9	GND	-	

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+5[V]	→	
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

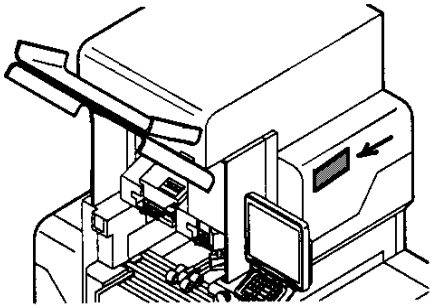
No.	Signal name	Direction	Other end
1	DC+12[V]	→	P-919 (XJ6) To P-917 via the above-mentioned PC board.
2	GND	-	
3	Buzzer ON/OFF	→	
4-5	Not used	-	

XJ18

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

5.2 THERMAL PC BOARD (P-909C-3)

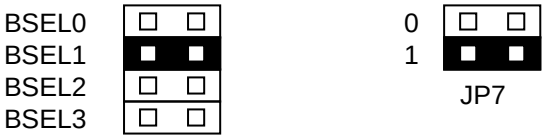
Thermal board controls the printer.
It is located on the right side of the main body.



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

PC board for Printer #2



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

I/O SIGNALS

XJ1

No.	Signal name	Direction	Other end
A1-A26 B1-B26	Signal between P-909 and P-909	←→	Printer #1 (Printer #2) P-909 (XJ1)

Note: Use only for two printer specification.

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+24[V]	→	
13	DC+5[V]	→	
12,14,34	Thermal head control signal	←→	

XJ7

No.	Signal name	Direction	Other end
1	DC+24[V]	→	DC winding motor
2	GND	-	

XJ9

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

XJ10

No.	Signal name	Direction	Other end
1-3	DC+24[V]	←	Switching power supply (CN5)
4-6	GND	-	Printer #2 (CN6)

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	-	

XJ18

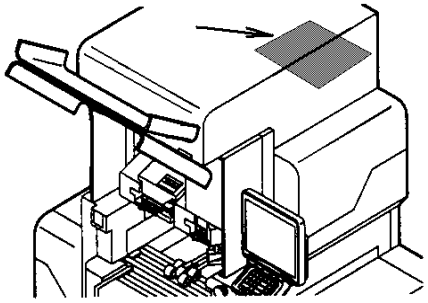
No.	Signal name	Direction	Other end
1-4	Not used	-	Preliminary sensor
5	GND	-	
6	Sensor input signal	←	
7-8	Not used	-	

XJ100

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

5.3 APPLICATOR CONTROL PC BOARD (P-916B)

This board controls the applicator.
It is located under the upper cover of the main body.



REFERENCE
The sucking position data and the labeling position data are memorized in the applicator PC board. Moreover, it is backed up in the program CF of the main control PC board (P-910) (file name Haridata.csv). The machine inquires whether to restore data in the program CF when the applicator PC board is initialized.

- **Main storage data**
  - Sucking position data
  - Label position data
- **Work after PC board has been replaced (execution of adjustment)**
  - Initialize the applicator.
  - Confirm the sucking position and the labeling position.

DIP SWITCH SETTING

Switch No.	1	2	3	4
S1	OFF	OFF	OFF	OFF

I/O SIGNALS

XJ1

No.	Signal name	Direction	Other end
1	B#	←	W axis motor
2	B	←	
3	A#	←	
4	A	←	
5	BCOM(DC+24[V])	→	
6	ACOM(DC+24[V])	→	

XJ3

No.	Signal name	Direction	Other end
1	OUT	→	Sucking fan
2	GND	-	

XJ4

No.	Signal name	Direction	Other end
1	OUT	→	Cooling fan
2	GND	-	

XJ5

No.	Signal name	Direction	Other end
1	B#	←	X axis motor
2	B	←	
3	A#	←	
4	A	←	
5	BCOM(DC+24[V])	→	
6	ACOM(DC+24[V])	→	

XJ8

No.	Signal name	Direction	Other end
1	B#	←	Z axis motor
2	B	←	
3	A#	←	
4	A	←	
5	BCOM(DC+24[V])	→	
6	ACOM(DC+24[V])	→	

XJ9

No.	Signal name	Direction	Other end
1	B#	←	Y axis motor
2	B	←	
3	A#	←	
4	A	←	
5	BCOM(DC+24[V])	→	
6	ACOM(DC+24[V])	→	

XJ11

No.	Signal name	Direction	Other end
1	OUT+	←	Label issue timing signal P-918 XJ2
2	OUT-	←	
3	VH(DC+24[V])	→	
4	GND	-	

XJ13

No.	Signal name	Direction	Other end
1	FG	-	Frame ground

XJ15

No.	Signal name	Direction	Other end
1	RS232C-TxD	→	Not used
2	RS232C-RTS	→	
3	RS232C-RxD	←	
4	RS232C-CTS	←	
5	VCC(DC+5[V])	→	
6	SG	-	
7	FG	-	

XJ16

No.	Signal name	Direction	Other end
1	RS485-OUT+	←	Not used
2	RS485-OUT-	←	
3	RS485-D	←→	
4	RS485-D#	←→	
5	SG	-	
6	FG	-	
7	NC		

XJ17

No.	Signal name	Direction	Other end
1	RS485-OUT+	←	RS485 Host-to-host communication P-918 XJ8
2	RS485-OUT-	←	
3	RS485-D	←→	
4	RS485-D#	←→	
5	SG	-	
6	FG	-	
7	NC		

XJ18

No.	Signal name	Direction	Other end
1	VH(DC+24[V])	→	Safety sensor emitter side
2	VCC(DC+5[V])	→	
3	P_IN	←	
4	GND	-	
5	VH(DC+24[V])	→	Safety sensor receiver side
6	VCC(DC+5[V])	→	
7	P_IN	←	
8	GND	-	
9	VH(DC+24[V])	→	Electromagnetic contactor auxiliary contact signal
10	VCC(DC+5[V])	→	
11	P_IN	←	
12	GND	-	
13	VH(DC+24[V])	→	Sticking timing signal (P-920 XJ35)
14	VCC(DC+5[V])	→	
15	P_IN	←	
16	GND	-	

XJ19

No.	Signal name	Direction	Other end
1	VH(DC+24[V])	→	X printer 2 sensor
2	VCC(DC+5[V])	→	
3	P_IN	←	
4	GND	-	

XJ20

No.	Signal name	Direction	Other end
1	VH(DC+24[V])	→	Sticking detection sensor
2	VCC(DC+5[V])	→	
3	P_IN	←	
4	GND	-	
5	VH(DC+24[V])	→	Label existence sensor
6	VCC(DC+5[V])	→	
7	P_IN	←	
8	GND	-	
9	OUT	→	
10	GND	-	

XJ21

No.	Signal name	Direction	Other end
1	VH(DC+24[V])	→	Z upper sensor
2	VCC(DC+5[V])	→	
3	P_IN	←	
4	GND	-	
5	VH(DC+24[V])	→	Z middle sensor
6	VCC(DC+5[V])	→	
7	P_IN	←	
8	GND	-	
9	VH(DC+24[V])	→	Not used
10	VCC(DC+5[V])	→	
11	P_IN	←	
12	GND	-	

XJ22

No.	Signal name	Direction	Other end
1	VH(DC+24[V])	→	X right sensor
2	VCC(DC+5[V])	→	
3	P_IN	←	
4	GND	-	
5	VH(DC+24[V])	→	X printer 1 sensor
6	VCC(DC+5[V])	→	
7	P_IN	←	
8	GND	-	
9	VH(DC+24[V])	→	X left sensor
10	VCC(DC+5[V])	→	
11	P_IN	←	
12	GND	-	

XJ23

No.	Signal name	Direction	Other end
1	VH(DC+24[V])	→	Not used
2	VCC(DC+5[V])	→	
3	P_IN	←	
4	GND	-	
5	VH(DC+24[V])	→	
6	VCC(DC+5[V])	→	
7	P_IN	←	
8	GND	-	
9	VH(DC+24[V])	→	
10	VCC(DC+5[V])	→	
11	P_IN	←	
12	GND	-	
13	VH(DC+24[V])	→	
14	VCC(DC+5[V])	→	
15	P_IN	←	
16	GND	-	

XJ24

No.	Signal name	Direction	Other end
1	VH(DC+24[V])	→	X right sensor
2	VCC(DC+5[V])	→	
3	P_IN	←	
4	GND	-	
5	VH(DC+24[V])	→	X printer 1 sensor
6	VCC(DC+5[V])	→	
7	P_IN	←	
8	GND	-	
9	VH(DC+24[V])	→	X left sensor
10	VCC(DC+5[V])	→	
11	P_IN	←	
12	GND	-	

XJ25

No.	Signal name	Direction	Other end
1	VH(DC+24[V])	→	Y rear sensor
2	VCC(DC+5[V])	→	
3	P_IN	←	
4	GND	-	
5	VH(DC+24[V])	→	Y front sensor
6	VCC(DC+5[V])	→	
7	P_IN	←	
8	GND	-	
9	VH(DC+24[V])	→	Not used
10	VCC(DC+5[V])	→	
11	P_IN	←	
12	GND	-	

XJ27

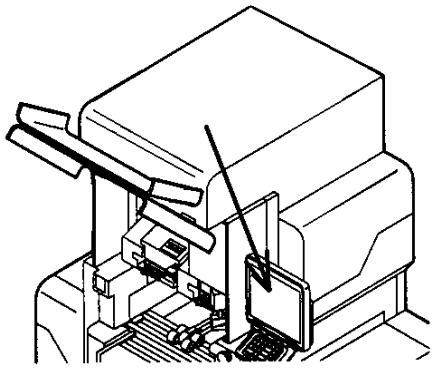
No.	Signal name	Direction	Other end
1	VH(DC+24[V])	←	Switching power supply for wrapping section
2	VH(DC+24[V])	←	
3	VH(DC+24[V])	←	
4	GND	-	
5	GND	-	
6	GND	-	

XJ28

No.	Signal name	Direction	Other end
1	VH(DC+24[V])	←	Power supply for applicator
2	VH(DC+24[V])	←	
3	VH(DC+24[V])	←	
4	GND	-	
5	GND	-	
6	GND	-	

5.4 CONTROL CONSOLE PC BOARD (P-917-1)

It is located In the display unit.



I/O SIGNALS

XJ8

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

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+12[V]	-	P-919 (XJ2)

XJ14

No.	Signal name	Direction	Other end
1-8	LCD control signal	←→	TFT LCD display
9	DC+5[V]	→	
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

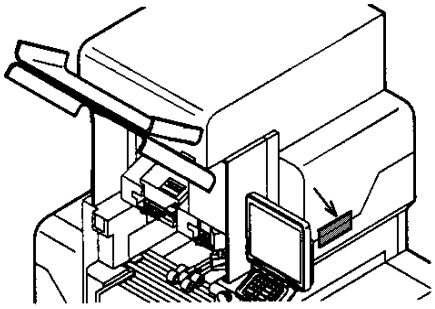
No.	Signal name	Direction	Other end
1-3	DC+12[V]	-	LCD inverter
4,5	GND	-	
6	VR-2	-	
7	VR-1	-	

XJ19

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

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

This board connects the I2NET and the options. It is located in the right side cover of the main body.



I/O SIGNALS

XJ2

No.	Signal name	Direction	Other end
1	DC+5[V]	→	P-916 (XJ11)
2	Applicator label issue timing signal	←	

XJ4

No.	Signal name	Direction	Other end
1	Request signal for wrapper state	→	P-910 (XJ7)
2	General-purpose input 1	→	
3	General-purpose input 2	→	
4	Request signal for applicator state	→	
5	Not used	-	
6	Applicator label issue timing signal	→	
7-8	DC+5[V]	←	
9-10	GND	-	

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+24[V]	←	
21-24	GND	-	

XJ6

No.	Signal name	Direction	Other end
1	RS-485 D	←→	P-915 (XJ4)
2	RS-485 $\overline{D}$	←→	
3-4	GND	-	

XJ7

No.	Signal name	Direction	Other end
1-2	GND	-	P-915(XJ7)
3	DC+24[V]	→	

XJ8

No.	Signal name	Direction	Other end
1-2	Not used	-	P-916(XJ17)
3	DC+5[V]	→	
4	Request signal for applicator state	←	
5	RS-485 D	←→	
6	RS-485 $\overline{D}$	←→	
7	GND	-	
8	FG	-	

XJ9

No.	Signal name	Direction	Other end
1	DC+5[V]	→	P-920(XJ23)
2	Request signal for wrapper state	←	
3	RS-485 D	←→	
4	RS-485 $\overline{D}$	←→	
5	GND	-	
6	Not used		

XJ11

No.	Signal name	Direction	Other end
1	I2NET D	←→	ILAN (Option 1)
2	I2NET $\overline{D}$	←→	
3	I2NET EN	←→	
4	I2NET $\overline{E}\overline{N}$	←→	
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 $\overline{E}\overline{N}$	←→	
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 $\overline{E}\overline{N}$	←→	
9	I2NET $\overline{D}$	←→	

XJ14

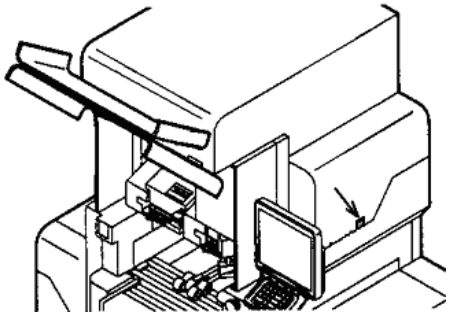
No.	Signal name	Direction	Other end
1	Not used	-	ELAN (INLINE)
2	Not used	-	
3	GND	-	
4	I2NET EN	←→	
5	I2NET D	←→	
6	Not used	-	
7	FG	-	
8	I2NET $\overline{EN}$	←→	
9	I2NET $\overline{D}$	←→	

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	←→	

5.6 LAN PC BOARD (P-967-1)

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



I/O SIGNALS

XJ1

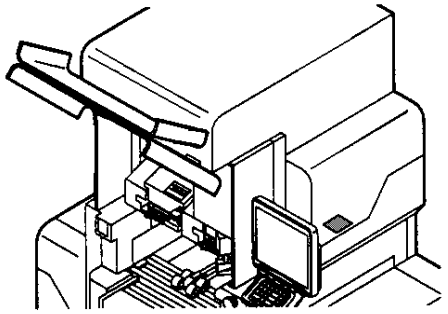
No.	Signal name	Direction	Other end
1	LAN TD+	←	P-910 (XJ18)
2	LAN TD-	←	
3	LAN RD+	→	
6	LAN RD-	→	
4.5.7.8	GND	-	

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	-	

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

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



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+12[V]	-	P-917 (XJ13)

XJ3

No.	Signal name	Direction	Other end
1-8	LCD control signal	←→	P-910 (XJ9)
9	DC+5[V]	←	
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+5[V]	←	
6	RS232C SG	-	
7	RS232C FG	-	

XJ6

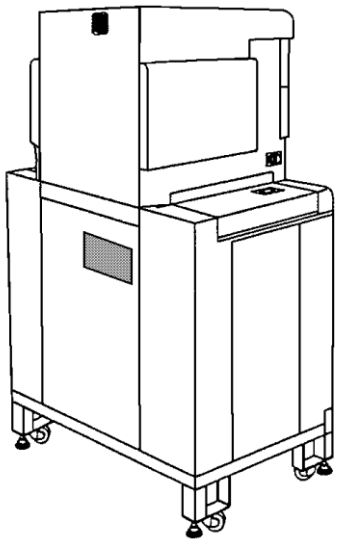
No.	Signal name	Direction	Other end
1	DC+12[V]	←	P-910(XJ11)
2	GND	-	
3	Buzzer ON/OFF	←	

XJ7

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

5.8 WRAPPER CONTROL PC BOARD (P-920A-0/ P-920A-2)

This board is located in the wrapper control unit at the rear side of the main body.



DIP SWITCH SETTING

Switch No.	1	2	3	4
SW1	OFF	OFF	OFF	OFF

PC BOARD INTERCHANGEABILITY

Mounted parts are different between type “B” (with back discharging function)” and other type (without rear discharging function).

Model	PC board No.	XJ20
WM-4000-B	P-920*-2	Mount
Other than WM-4000-B	P-920*-0	Not mounted

I/O SIGNALS

XJ3

No.	Signal name	Direction	Other end
1,2	DC+24[V]	←	Switching power supply (CN5)
4,5	GND	-	
3,6	Not used		

XJ4

No.	Signal name	Direction	Other end
1-10	Not used		

XJ5

No.	Signal name	Direction	Other end
1	Conserve wiring serial clock	→	P-922(XJ9) Delivery unit (right)
3	Conserve wiring serial data	←→	
5	DC+24[V]	→	
2,4,6	GND	-	
7-10	Not used		

XJ6

No.	Signal name	Direction	Other end
1	Conserve wiring serial clock	→	P-922(XJ9)
3	Conserve wiring serial data	←→	
5	DC+24[V]	→	
2,4,6	GND	-	
7-10	Not used		

XJ7

No.	Signal name	Direction	Other end
1	Conserve wiring serial clock	→	P-922 (XJ9) Heater control unit
3	Conserve wiring serial data	←→	
5	DC+24[V]	→	
2,4,6	GND	-	
7-10	Not used		

XJ8 (Not connect in one film roll specification)

No.	Signal name	Direction	Other end
1	Conserve wiring serial clock	→	P-922(XJ9) Delivery unit (left addition)
3	Conserve wiring serial data	←→	
5	DC+24[V]	→	
2,4,6	GND	-	
7-10	Not used		

XJ9

No.	Signal name	Direction	Other end
1	Conserve wiring serial clock	→	P-921(XJ4) Infeed unit
3	Conserve wiring serial data	←→	
5	DC+24[V]	→	
2,4,6	GND	-	
7-10	Not used		

XJ18

No.	Signal name	Direction	Other end
1	DC+5[V]	→	For discharge heater Front thermistor
2	Analog input	←	
3	DC+5[V]	→	For discharge heater Rear thermistor
4	Analog input	←	

XJ20 (Connect in the back discharge specification only)

No.	Signal name	Direction	Other end
1	TxD	→	Metal detector
2	RTS	←	
3	RxD	←	
4	CTS	-	
5	Not used	-	
6	GND	-	
7	FG	-	

XJ22

No.	Signal name	Direction	Other end
1	FG	-	Frame

XJ23

No.	Signal name	Direction	Other end
1	DC+5[V]	←	P-918 (XJ9)
2	Request signal for wrapper state	→	
3	RS485 D+	←→	
4	RS485 D-	←→	
5	GND	-	
6	Not used		

XJ24

No.	Signal name	Direction	Other end
1	DC+5[V]	→	Stepping driver for the infeed bar (CN2)
2	GND	-	
3	Pulse	→	
4	CW/CCW	→	
5	Current ON/OFF	→	
6	Full step/half step	→	
8	DC+5[V]	→	Stepping driver for centering function (CN1)
9	GND	-	
10	Pulse	→	
11	CW/CCW	→	
12	Current ON/OFF	→	
13	Full step/half step	→	
7,14	Not used		

XJ25

No.	Signal name	Direction	Other end
1	Start/stop	→	Servo amplifier for the lift unit (CN1B,CN3)
5	Descent stroke limit	→	
6	Positioning completion	←	
7	Range of position	←	
8	Breakdown	←	
9	DC+24[V]	→	
10,11	GND	-	
13	RS422 SD+	→	
14	RS422 SD-	→	
15	RS422 RD+	←	
16	RS422 RD-	←	
17	RS422 TRE	→	
2-4, 12,18	Not used		

XJ27

No.	Signal name	Direction	Other end
2	DC+5[V]	→	Large lift change sensor
3	Input	←	
4	GND	-	
6	DC+5[V]	→	Small lift change sensor
7	Input	←	
8	GND	-	
21	DC+24[V]	→	Lift lower limit sensor
23	Input	←	
24	GND	-	
1,5, 9-20, 22,25, 26	Not used		

XJ28 (Back discharge specification only)

No.	Signal name	Direction	Other end
5	DC+24[V]	→	Full sensor
7	Input	←	
8	GND	-	
1-4.6 9-12	Not used	→	

XJ29

No.	Signal name	Direction	Other end
2	DC+5[V]	→	Rear squeezing board original point sensor
3	Input	←	
4	GND	-	
6	DC+5[V]	→	Left/right squeezing board original point sensor
7	Input	←	
8	GND	-	
10	DC+5[V]	→	Discharge pusher Original point sensor
11	Input	←	
12	GND	-	
15	Input	←	Electromagnetic contactor (for DC24V)
16	GND	-	Auxiliary contact point
19	Input	←┐	Short circuit
20	GND	┘	
1,5,9, 13,14, 17-18	Not used		

XJ30

No.	Signal name	Direction	Other end
1	DC+24[V]	→	DC brushless driver for the right film roll drive (CN2)
2	GND	-	
3	Start/stop	→	
4	Brake ON/OFF	→	
5	CW/CCW	→	
6	Alarm reset	→	
8	Rotation pulse	←	
9	Alarm state	←	
10	Alarm type	←	
11	Speed analog data	→	
12	GND	-	
13	DC+24[V]	→	DC brushless driver for the right film insertion (CN2)
14	GND	-	
15	Start/stop	→	
16	Brake ON/OFF	→	
17	CW/CCW	→	
18	Alarm reset	→	
20	Rotation pulse	←	
21	Alarm state	←	
22	Alarm type	←	
23	Speed analog data	→	
24	GND	-	
7,19	Not used		

XJ31

No.	Signal name	Direction	Other end
1	DC+24[V]	→	DC brushless driver for the front feeder move (CN2)
2	GND	-	
3	Start/stop	→	
4	Brake ON/OFF	→	
5	CW/CCW	→	
6	Alarm reset	→	
8	Rotation pulse	←	
9	Alarm state	←	
10	Alarm type	←	
11	Speed analog data	→	
12	GND	-	
13	DC+24[V]	→	For after feeder moves DC Brushless driver (CN2)
14	GND	-	
15	Start/stop	→	
16	Brake ON/OFF	→	
17	CW/CCW	→	
18	Alarm reset	→	
20	Rotation pulse	←	
21	Alarm state	←	
22	Alarm type	←	
23	Speed analog data	→	
24	GND	-	
7,19	Not used		

XJ32 (Connect in the back discharge specification only)

No.	Signal name	Direction	Other end
1	DC+24[V]	→	Commodity transportation motor
2	Output	→	
3-15	Not used		

XJ33

No.	Signal name	Direction	Other end
1	DC+24[V]	→	DC brushless driver for the rear squeezing board (CN2)
2	GND	-	
3	Start/stop	→	
4	Brake ON/OFF	→	
5	CW/CCW	→	
6	Alarm reset	→	
8	Rotation pulse	←	
9	Alarm state	←	
10	Alarm type	←	
11	Speed analog data	→	
12	GND	-	
13	DC+24[V]	→	DC brushless driver for the left/right squeezing boards (CN2)
14	GND	-	
15	Start/stop	→	
16	Brake ON/OFF	→	
17	CW/CCW	→	
18	Alarm reset	→	
20	Rotation pulse	←	
21	Alarm state	←	
22	Alarm type	←	
23	Speed analog data	→	
24	GND	-	
7,19	Not used		

XJ34

No.	Signal name	Direction	Other end
1	DC+24[V]	→	SSR for the lift change motor
2	Output	→	
3-6	Not used		

XJ35 (Not connect in manual labeling specification)

No.	Signal name	Direction	Other end
2	Output	→	P-916 (XJ18)
3	GND	-	
1	Not used		

XJ36

No.	Signal name	Direction	Other end
1	DC+24[V]	→	DC brushless driver for the discharge pusher (CN2)
2	GND	-	
3	Start/stop	→	
4	Brake ON/OFF	→	
5	CW/CCW	→	
6	Alarm reset	→	
8	Rotation pulse	←	
9	Alarm state	←	
10	Alarm type	←	
11	Speed analog data	→	
12	GND	-	
13	DC+24[V]	→	DC brushless driver for the feeder unit (CN2)
14	GND	-	
15	Start/stop	→	
16	Brake ON/OFF	→	
17	CW/CCW	→	
18	Alarm reset	→	
20	Rotation pulse	←	
21	Alarm state	←	
22	Alarm type	←	
23	Speed analog data	→	
24	GND	-	
7,19	Not used		

XJ37

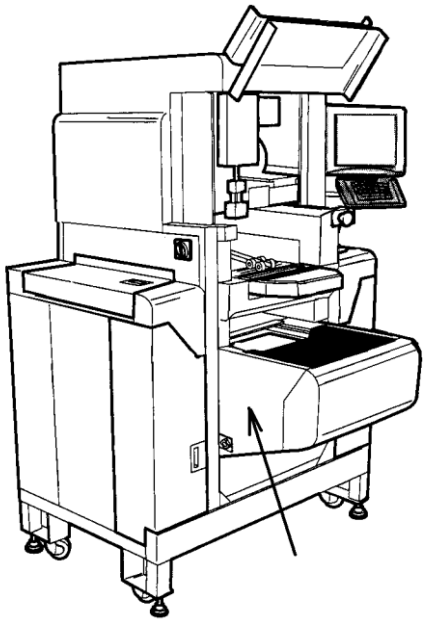
No.	Signal name	Direction	Other end
1	DC+24[V]	→	SSR for the tray press Descent
2	Output	→	
4	DC+24[V]	→	SSR for tray press Ascent
5	Output	→	
3,6-12	Not used		

XJ38 (Not connect in one film roll specification)

No.	Signal name	Direction	Other end
1	DC+24[V]	→	DC brushless driver for the left film insertion (CN2)
2	GND	-	
3	Start/stop	→	
4	Brake ON/OFF	→	
5	CW/CCW	→	
6	Alarm reset	→	
8	Rotation pulse	←	
9	Alarm state	←	
10	Alarm type	←	
11	Speed analog data	→	
12	GND	-	
13	DC+24[V]	→	DC brushless driver for the left film roll drive (CN2)
14	GND	-	
15	Start/stop	→	
16	Brake ON/OFF	→	
17	CW/CCW	→	
18	Alarm reset	→	
20	Rotation pulse	←	
21	Alarm state	←	
22	Alarm type	←	
23	Speed analog data	→	
24	GND	-	
7,19	Not used		

5.9 I/O PC BOARD (P-921A-1)(INFEED UNIT)

This board is located in the infeed unit.



DIP SWITCH SETTING

Switch No.	1	2	3	4
SW1	ON	ON	ON	OFF

I/O SIGNALS

XJ4

No.	Signal name	Direction	Other end
1	Conserve wiring serial clock	←	P-920 (XJ9) Wrapper control unit
3	Conserve wiring serial data	←→	
5	DC+24[V]	←	
2,4,6	GND	-	
7-12	Not used		

XJ5

No.	Signal name	Direction	Other end
1	FG	-	Frame

XJ6

No.	Signal name	Direction	Other end
1	VH	→	Centering original point sensor
3	Input	←	
4	GND	-	
2	Not used		

XJ7

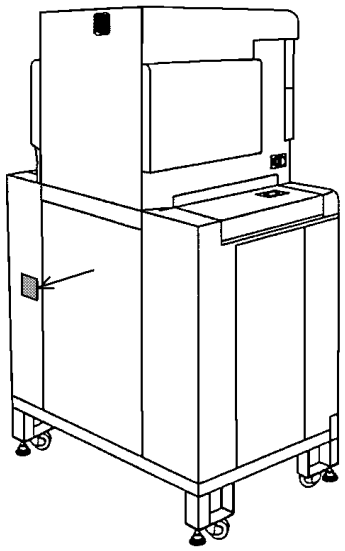
No.	Signal name	Direction	Other end
3	Input	←	Infeed unit drawer switch
4	GND	-	
7	Input	←	Infeed unit under cover switch
8	GND	-	
1,2,5,6	Not used		

XJ8

No.	Signal name	Direction	Other end
2	DC+5[V]	→	Infeed bar original point sensor
3	Input	←	
4	GND	-	
6	DC+5[V]	→	Infeed bar count sensor
7	Input	←	
8	GND	-	
1,5,9	Not used		

5.10 I/O BOARD A2 (P-922A-1) (RIGHT DELIVERY UNIT)

This board is located on the right back of the main body.



DIP SWITCH SETTING

Switch No.	1	2
SW1	ON	ON

I/O SIGNALS

XJ3

No.	Signal name	Direction	Other end
1	DC+24[V]	→	Right roll brake
2	Output	→	
3	Not used		

XJ6

No.	Signal name	Direction	Other end
1	DC+24[V]	→	Right solenoid of the front cutter
2	Output	→	
4	DC+24[V]	→	Right solenoid of the rear cutter
5	Output	→	
3,6	Not used		

XJ7

No.	Signal name	Direction	Other end
1	DC+24[V]	←	Electromagnetic contactor (for DC24V) (6/T3)
3	GND	-	Switching power supply (CN5)
5	DC+24[V]	┐	Short-circuit
6	DC+24[V]	↵	
2,4,7	Not used		

XJ8

No.	Signal name	Direction	Other end
1	Conserve wiring serial clock	→	P-922(XJ9) Feeder move unit
3	Conserve wiring serial data	←→	
5	DC+24[V]	→	
2,4,6	GND	-	
7-10	Not used		

XJ9

No.	Signal name	Direction	Other end
1	Conserve wiring serial clock	←	P-920(XJ5) Wrapper control unit
3	Conserve wiring serial data	←→	
5	DC+24[V]	←	
2,4,6	GND	-	
7-12	Not used		

XJ10

No.	Signal name	Direction	Other end
1	FG	-	Frame

XJ13

No.	Signal name	Direction	Other end
2	DC+5[V]	→	Film end right sensor
3	Input	←	
4	GND	-	
1	Not used		

XJ14

No.	Signal name	Direction	Other end
2	DC+5[V]	→	The right of detection of width of film sensor
3	Input	←	
4	GND	-	
6	DC+5[V]	→	Cutter original point right sensor
7	Input	←	
8	GND	-	
1,5	Not used		

XJ15

No.	Signal name	Direction	Other end
2	DC+5[V]	→	Film insertion original point right sensor
3	Input	←	
4	GND	-	
6	DC+5[V]	→	Film insertion opening right sensor
7	Input	←	
8	GND	-	
1,5,9	Not used		

5.11 I/O BOARD A3 (P-922A-1) (FEEDER MOVE UNIT; BACK)

DIP SWITCH SETTING

Switch No.	1	2
SW1	OFF	ON

I/O SIGNALS

XJ1

No.	Signal name	Direction	Other end
2	DC+5[V]	→	Rear feeder move Loading sensor
3	Input	←	
4	GND	-	
6	DC+5[V]	→	Rear feeder move Coming near limit small sensor
7	Input	←	
8	GND	-	
10	DC+5[V]	→	Rear feeder move Coming near limit large sensor
11	Input	←	
12	GND	-	
1,5,9,13,14	Not used		

XJ3

No.	Signal name	Direction	Other end
2	Output	→	Rear clamp right solenoid
1,3	Not used		

XJ4

No.	Signal name	Direction	Other end
2	Output	→	Rear clamp center solenoid
1,3,4	Not used		

XJ5

No.	Signal name	Direction	Other end
2	Output	→	Rear clamp left solenoid
5	Output	→	Auxiliary rear clamp right solenoid
8	Output	→	Auxiliary rear clamp left solenoid
1,3,4,6,7,9	Not used		

XJ6

No.	Signal name	Direction	Other end
1	DC+24[V]	→	Rear clamp right solenoid Rear clamp center solenoid Rear clamp left solenoid Auxiliary rear clamp right solenoid Auxiliary rear clamp left solenoid Rear film pinch right solenoid Rear film pinch left solenoid
2	Output	→	Rear film pinch right solenoid
5	Output	→	Rear film pinch left solenoid
3,4,6	Not used		

XJ7

No.	Signal name	Direction	Other end
1	DC+24[V]	←	Switching power supply (CN5)
3	GND	-	
2	DC+24[V]	⌐	Short-circuit
6	DC+24[V]	↵	
4,5,7	Not used		

XJ8

No.	Signal name	Direction	Other end
1	Conserve wiring serial clock	→	P-922(XJ9) Feeder move unit; front
3	Conserve wiring serial data	←→	
5	DC+24[V]	→	
2,4,6	GND	-	
7-10	Not used		

XJ9

No.	Signal name	Direction	Other end
1	Conserve wiring serial clock	←	P-922(XJ8) Right delivery unit
3	Conserve wiring serial data	←→	
5	DC+24[V]	←	
2,4,6	GND	-	
7-12	Not used		

XJ10

No.	Signal name	Direction	Other end
1	FG	-	Frame

XJ13

No.	Signal name	Direction	Other end
1	DC+24[V]	→	On-the-lift item detection sensor
3	Input	←	
4	GND	-	
2	Not used		

XJ14

No.	Signal name	Direction	Other end
2	DC+5[V]	→	Rear film right existence sensor Rear film left existence sensor
3	Input	←	Rear film right existence sensor
4	GND	-	Rear film right existence sensor Rear film left existence sensor
7	Input	←	Rear film left existence sensor
1,5,6,8	Not used		

5.12 I/O BOARD A4 (P-922A-1) (FEEDER MOVE UNIT; FRONT)

DIP SWITCH SETTING

Switch No.	1	2
SW1	ON	OFF

I/O SIGNALS

XJ1

No.	Signal name	Direction	Other end
2	DC+5[V]	→	Rear film right existence sensor Rear film left existence sensor Emergency stop button
3	Input	←	
4	GND	-	
7	Input	←	Film removal cover right switch
8	GND	-	
11	Input	←	Film replacement cover right switch
12	GND	-	
1,2,5,6,9, 10,13,14	Not used		

XJ3

No.	Signal name	Direction	Other end
2	Output	→	Front clamp right solenoid
1,3	Not used		

XJ4

No.	Signal name	Direction	Other end
2	Output	→	Front clamp center solenoid
1,3,4	Not used		

XJ5

No.	Signal name	Direction	Other end
2	Output	→	Front clamp left solenoid
5	Output	→	Auxiliary front clamp right solenoid
8	Output	→	Auxiliary front clamp left solenoid
1,3,4 6,7,9	Not used		

XJ6

No.	Signal name	Direction	Other end
1	DC+24[V]	→	Front clamp right solenoid Front clamp center solenoid Front clamp left solenoid Auxiliary front clamp right solenoid Auxiliary front clamp left solenoid Front film pinch right solenoid Front film pinch left solenoid
2	Output	→	Front film pinch right solenoid
5	Output	→	Front film pinch left solenoid
3,4,6	Not used		

XJ7

No.	Signal name	**Direction**	Other party side
1	DC+24[V]	←	Switching power supply (CN5)
3	GND	-	
2	DC+24[V]	┐	Short-circuit
6	DC+24[V]	↵	
4,5,7	Not used		

XJ9

No.	**Signal name**	**Direction**	**Other end**
1	Conserve wiring serial clock	←	P-922(XJ8) Feeder move unit; Back
3	Conserve wiring serial data	←→	
5	DC+24[V]	←	
2,4,6	GND	-	
7-12	Not used		

XJ10

No.	**Signal name**	**Direction**	**Other end**
1	FG	-	Frame

XJ11

No.	**Signal name**	**Direction**	**Other end**
2	DC+5[V]	→	Discharge unit safety sensor (emitter)
3	GND	-	
1	Not used		

XJ13

No.	**Signal name**	**Direction**	**Other end**
2	DC+5[V]	→	Heater cover sensor
3	Input	←	
4	GND	-	
1	Not used		

XJ14

No.	**Signal name**	**Direction**	**Other end**
2	DC+5[V]	→	Front film existence right sensor Front film existence left sensor
3	Input	←	Front film existence right sensor
4	GND	-	Front film existence right sensor Front film existence left sensor
7	Input	←	Front film existence left sensor
1,5,6,8	Not used		

XJ15

No.	**Signal name**	**Direction**	**Other end**
2	DC+5[V]	→	Infeed unit safety sensor (receiver)
3	Input	←	
4	GND	-	
6	DC+5[V]	→	Front feeder move original position sensor
7	Input	←	
8	GND	-	
1,5,9	Not used		

5.13 I/O BOARD A5 (P-922A-1) (HEATER CONTROL UNIT)

DIP SWITCH SETTING

Switch No.	1	2
SW1	ON	ON

I/O SIGNALS

XJ1

No.	Signal name	Direction	Other end
3	Input	←	Front cover switch
4	GND	-	
7	Input	←	Film removal cover left switch
8	GND	-	
11	Input	←	Film replacement cover left switch
12	GND	-	
1,2,5,6,9, 10,13,14	Not used		

XJ3

No.	Signal name	Direction	Other end
1	DC+24[V]	→	Wrapping part buzzer
2	Output	→	
3	Not used		

XJ5

No.	Signal name	Direction	Other end
1	DC+24[V]	→	SSR for front discharge heater
2	Output	→	
4	DC+24[V]	→	SSR for rear discharge heater
5	Output	→	
3,6-9	Not used		

XJ7

No.	Signal name	Direction	Other end
5	DC+24[V]	⌐	Short-circuit
6	DC+24[V]	↵	
1-4,7	Not used		

XJ9

No.	Signal name	Direction	Other end
1	Conserve wiring serial clock	←	P-920 (XJ7) Wrapper control unit
3	Conserve wiring serial data	←→	
5	DC+24[V]	←	
2,4,6	GND	-	
7-12	Not used		

XJ10

No.	Signal name	Direction	Other end
1	FG	-	Frame

XJ11

No.	Signal name	Direction	Other end
2	DC+5[V]	→	Infeed unit safety sensor (emitter)
3	GND	-	
1	Not used		

XJ13

No.	Signal name	Direction	Other end
3	Input	←	Electromagnetic contactor (for AC200V)
4	GND	-	Auxiliary contact point
1,2	Not used		

XJ14

No.	Signal name	Direction	Other end
2	DC+5[V]	→	Discharge unit safety sensor (receiver)
3	Input	←	
4	GND	-	
6	DC+5[V]	→	Discharge unit flip-up sensor
7	Input	←	
8	GND	-	
1,5	Not used		

5.14 I/O BOARD A7 (P-922A-1) (LEFT ADDITION DELIVERY UNIT)

DIP SWITCH SETTING

Switch No.	1	2
SW1	OFF	OFF

I/O SIGNALS

XJ3

No.	Signal name	Direction	Other end
1	DC+24[V]	→	Left roll brake
2	Output	→	
3	Not used		

XJ6

No.	Signal name	Direction	Other end
1	DC+24[V]	→	Front cutter left solenoid
2	Output	→	
4	DC+24[V]	→	Rear cutter left solenoid
5	Output	→	
3,6	Not used		

XJ7

No.	Signal name	Direction	Other end
1	DC+24[V]	←	Electromagnetic contactor (for DC24V) (6/T3)
3	GND	-	Switching power supply (CN5)
5	DC+24[V]	⌐	Short-circuit
6	DC+24[V]	↵	
2,4,7	Not used		

XJ9

No.	Signal name	Direction	Other end
1	Conserve wiring serial clock	←	P-920(XJ8) Wrapper control unit
3	Conserve wiring serial data	←→	
5	DC+24[V]	←	
2,4,6	GND	-	
7-12	Not used		

XJ10

No.	Signal name	Direction	Other end
1	FG	-	Frame

XJ13

No.	Signal name	Direction	Other end
2	DC+5[V]	→	Film end Left sensor
3	Input	←	
4	GND	-	
1	Not used		

XJ14

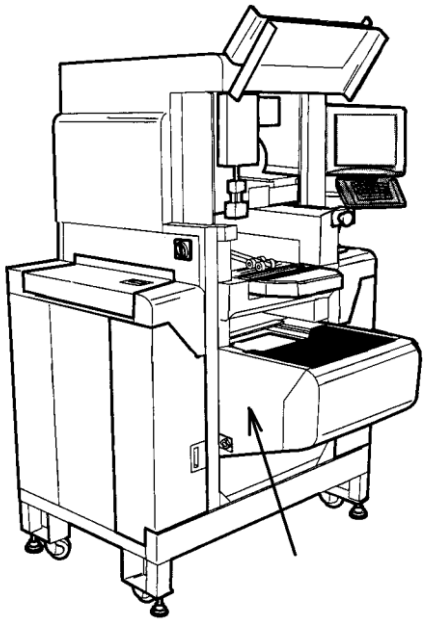
No.	Signal name	Direction	Other end
2	DC+5[V]	→	Film width detection Left sensor
3	Input	←	
4	GND	-	
6	DC+5[V]	→	Cutter original point Left sensor
7	Input	←	
8	GND	-	
1,5	Not used		

XJ15

No.	Signal name	Direction	Other end
2	DC+5[V]	→	Original point Left sensor
3	Input	←	
4	GND	-	
6	DC+5[V]	→	Opening Left sensor
7	Input	←	
8	GND	-	
1,5,9	Not used		

5.15 SCALE BOARD (P-930A-1) (SCALE UNIT)

This board is located in the scale unit of the the infeed unit.



DIP SWITCH SETTING

Switch No.	1	2	3	4	5	6	7	8
S3	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF

DIP switch bit	Function	Set content
1	Board number	OFF: Command set ON: “0” fixed
2	Storage command	OFF: Command prohibited ON: Command allowed
3	Test mode	OFF: Command allowed ON: Command prohibited
4	Move average	OFF: 8 times ON: None
5	Zero bias	OFF: Yes ON: No
6	Weight when transmitting	OFF: None ON: 20msec
7	A/D data	OFF: ASC-HEX 5byte ON: ASC-HEX 6byte
8	Analog filter	OFF: Soft ON: Hard

I/O SIGNALS

XJ1

No.	Signal name	Direction	Other end
1	OUT+1 (measurement completion signal)	←	P-910 (main board) XJ8
2	OUT+2		
3	OUT- (measurement completion signal)	←	

XJ2

No.	Signal name	Direction	Other end
1	IN+		Not used
2	IN-1		
3	IN-2		
4	NC		

XJ3

No.	Signal name	Direction	Other end
1	VEX (DC+8 V load cell power supply output)		Not used
2	GND		
3	IN+(load cell input signal)		
4	IN-(load cell input signal)		
5	SHIELD		

XJ4

No.	Signal name	Direction	Other end
1	VEX+ (DC+12 V) power supply input)	←	P-910 (main board) XJ8
2	GND	-	
3	VEX-		
4	FG	-	

XJ5

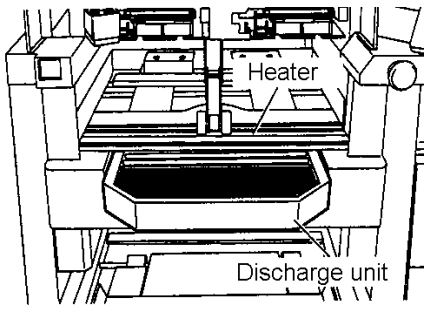
No.	Signal name	Direction	Other end
1	D# (RS485 communication signal)	←→	P-910(main board) XJ8
2	D (RS485 communication signal)	←→	
3	TXVCC		
4	TXGND		
5	FG	-	

XJ6

No.	Signal name	Direction	Other end
1	RES		Not used
2	I/O0		
3	I/O1		
4	I/O2		
5	TXD		
6	RXD		
7	MD1		
8	VCC		
9	GND		

5.16 DETECTION BOARD (P-915B-1) CAMERA UNIT

This board is located in the discharge unit.



- **Main storage data**
- Gain adjustment data
- Height and length correction data
- Detection size correction
- **Work after PC board has been replaced (execution of adjustment)**
- Adjust the tray detection unit.

DIP SWITCH SETTING

Switch No.	1	2	3	4
SW1	OFF	OFF	ON	OFF

JP SWITCH SETTING

JP1 ..1-2.. short-circuit

I/O SIGNALS

XJ2

No.	Signal name	Direction	Other end
1,21,27, 29,30	GND	-	CCD camera
2,3,4	DC+5[V]	→	
5	Y7 (Brightness data MSB)	←	
6	Y6 (Brightness data)	←	
7	Y5 (Brightness data)	←	
8	Y4 (Brightness data)	←	
9	Y3 (Brightness data)	←	
10	Y2 (Brightness data)	←	
11	Y1 (Brightness data)	←	
12	Y0 (Brightness data LSB)	←	
13	U/V7 (Chroma data MSB)	←	
14	U/V6 (Chroma data)	←	
15	U/V5 (Chroma data)	←	
16	U/V4 (Chroma data)	←	
17	U/V3 (Chroma data)	←	
18	U/V2 (Chroma data)	←	
19	U/V1 (Chroma data)	←	
20	U/V0 (Chroma data LSB)	←	
22	Horizontal synchronization	←	
23	Field	←	
24	Serial data	←→	
25	Serial clock	→	
26	Data output synchronization	←	
28	Vertical synchronization	←	

XJ3

No.	Signal name	Direction	Other end
1	RESET	←	Flash ROM Writing TOOL
2,3,4	-	-	
5	Verify data	→	
6	Write data	←	
7	DC+5[V]	→	
8	GND	-	

XJ4

No.	Signal name	Direction	Other end
1	Photo coupler 1 collector	→	P-918 (XJ6)
2	Photo coupler 2 emitter	→	
3,4	GND	-	
5	RS485 D#	←→	
6	RS485 D	←→	

XJ5

No.	Signal name	Direction	Other end
1	Photo coupler 5 emitter	→	None
2	Photo coupler 2 cathode	←	
3	Photo coupler 5 collector	→	
4	Photo coupler 2 anode	←	
5	Photo coupler 4 emitter	→	
6	Photo coupler 3 cathode	←	
7	Photo coupler 4 collector	→	
8	Photo coupler 3 anode	←	
9	GND	-	
10	DC+5[V]	→	

XJ6

No.	Signal name	Direction	Other end
1	DC+24[V]	→	Fan
2	Fan drive (+)	→	
3	Fan drive (-)	→	
4	GND	-	

XJ7

No.	Signal name	Direction	Other end
1	GND	-	P-918 (XJ7)
2	GND	-	
3	DC+24[V]	←	

TP

No.	Signal
1	GND
2	RESET input (Low Active)
3	NMI interrupt input
4	High 8bit write enable output (Low Active)
5	Read enable output (Low Active)
6	Low 8bit write enable output (Low Active)
7	Digital output CCD camera vertical synchronizing signal output

5.17 INVERTER BOARD (C07-D24-6(A)) (LIGHTING UNIT)

I/O SIGNALS

CN1

No.	Signal name	Direction	Other end
1	DC+24[v]	←	P-918 (XJ7)
2	GND	-	
3	Lighting signal (GND)	←	
4,5	-	-	

CN2

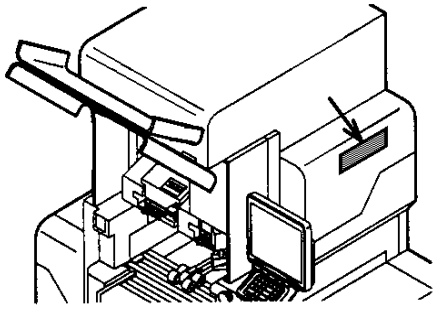
No.	Signal name	Direction	Other end
1	Lighting voltage (low-voltage side)	→	Cold-cathode tube CF220T4EN
2	-	-	
3	Lighting voltage (high-voltage side)	→	

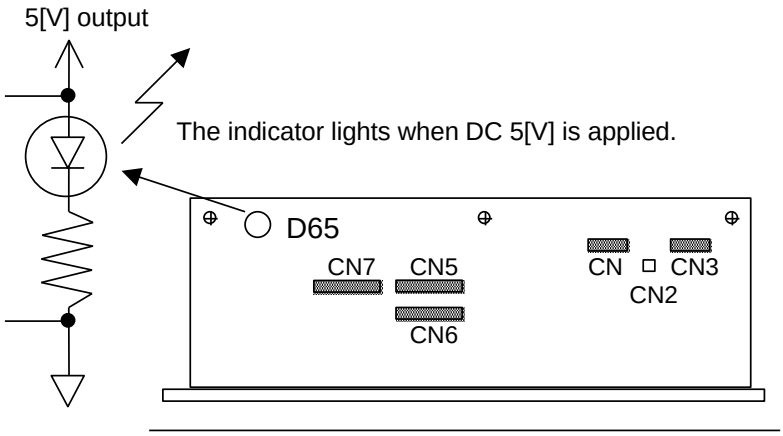
CN3

No.	Signal name	Direction	Other end
1	Lighting voltage(low-pressure side)	→	Cold-cathode tube CF220T4EN
2	-	-	
3	Lighting voltage(high-pressure side)	→	

5.18 SWITCHING POWER SUPPLY (DL912W) U220

This unit is located on the right side of 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.

- **200V specification input setting**
- Connect the PN3 harness to the PN1.
- The PN2 is not connected.

I/O SIGNALS

CN1

No.	Signal name	Direction	Other end
1-3	Not used		

CN2

No.	Signal name	Direction	Other end
1-2	Not used		

CN3

No.	Signal name	Direction	Other end
2	AC200[V]	←	Fuse
5	AC200[V]	←	
1,3,4	Not used		

CN5

No.	Signal name	Direction	Other end
1-3	DC24[V]	→	Printer #1
4-6	GND	-	P-909 (XJ10)

CN6

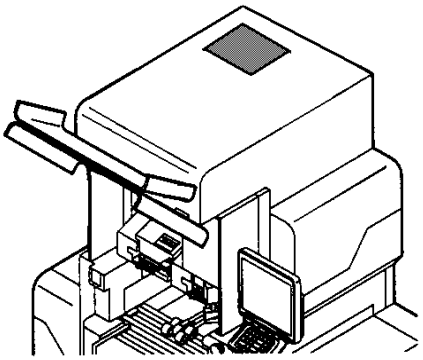
No.	Signal name	Direction	Other end
1-3	DC24[V]	→	Printer #2
4-6	GND	-	P-909 (XJ10)

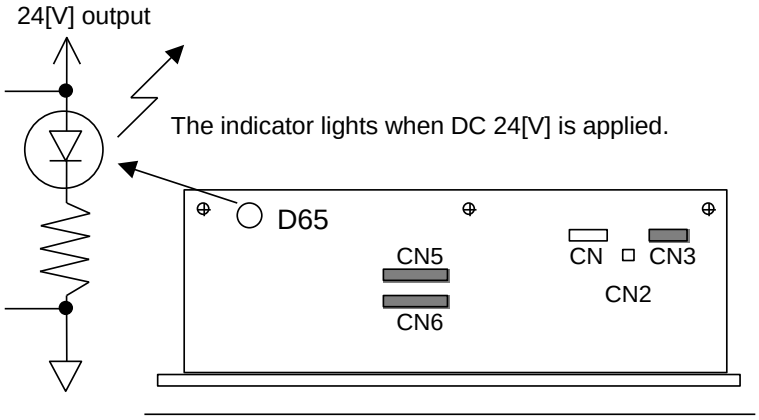
CN7

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

5.19 SWITCHING POWER SUPPLY (DL912W-1) U51

This unit is located in the upper cover of the main body.
(Not mounted in the manual labeling specification)





CAUTION

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

- **200V specification setting**

・Connect the harness that is connected with PN3 to the PN1.

・The PN2 is not connected.

I/O SIGNALS

CN1

No.	Signal name	Direction	Other end
1-3	Not used		

CN2

No.	Signal name	Direction	Other end
1-2	Not used		

CN3

No.	Signal name	Direction	Other end
2	AC200[V]	←	Fuse
5	AC200[V]	←	
1,3,4	Not used		

CN5

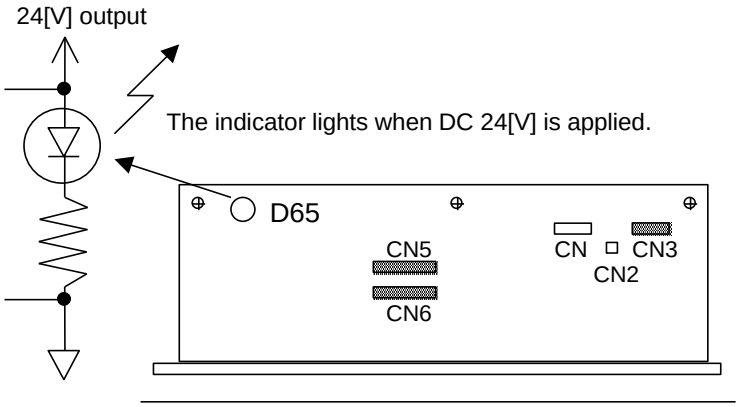
No.	Signal name	Direction	Other end
1-3	DC24[V]	→	P-916(XJ28)
4-6	GND	-	

CN6

No.	Signal name	Direction	Other end
1-6	Not used		

5.20 SWITCHING POWER SUPPLY (DL912W-1) U1

Product number 69-2405-02



⚠CAUTION

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

- **200V input setting**

・Connect the PN3 harness to the PN1.

・The PN2 is not connected.

I/O SIGNALS

CN1

No.	Signal name	Direction	Other end
1-3	Not used		

CN2

No.	Signal name	Direction	Other end
1-2	Not used		

CN3

No.	Signal name	Direction	Other end
2	AC200[V]	←	Fuse
5	AC200[V]	←	
1,3,4	Not used		

CN5

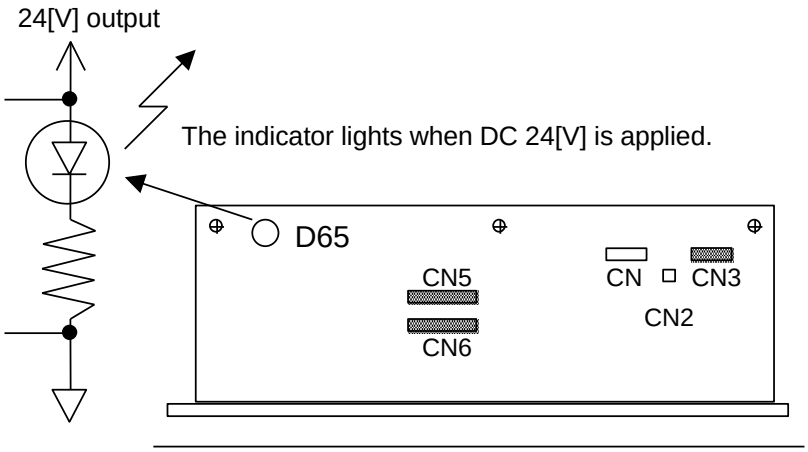
No.	Signal name	Direction	Other end
1,2	DC24[V]	→	P-920 (XJ3)
4,5	GND	-	
3	DC24[V]	→	P-922 (XJ7) Front feeder move unit P-922 (XJ7) Rear feeder move unit Driver cooling fan
6	GND	-	

CN6 (Not connect in the manual labeling specification)

No.	Signal name	Direction	Other end
1-3	DC24[V]	→	P-916 (XJ27)
4-6	GND	-	

5.21 SWITCHING POWER SUPPLY (DL912W-1) U2

Product number 69-2405-02



CAUTION

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

- **200V input setting**
- Connect the PN3 harness to the PN1.
- The PN2 is not connected.

I/O SIGNALS

CN1

No.	Signal name	Direction	Other end
1-3	Not used		

CN2

No.	Signal name	Direction	Other end
1-2	Not used		

CN3

No.	Signal name	Direction	Other end
2	AC200[V]	←	Fuse
5	AC200[V]	←	
1,3,4	Not used		

CN5

No.	Signal name	Direction	Other end
1-3	DC24[V]	→	Electromagnetic contactor (for DC24V)
4-6	GND	-	・P-922 (XJ7) Right delivery unit ・P-922 (XJ7) Left delivery unit (addition) (Not connected in the one film roll specification) ・Lift holding solenoid ・Heater cover A solenoid ・Heater cover B solenoid ・Stepping driver for infeed bar (CN1) ・Stepping driver for centering function (CN1)

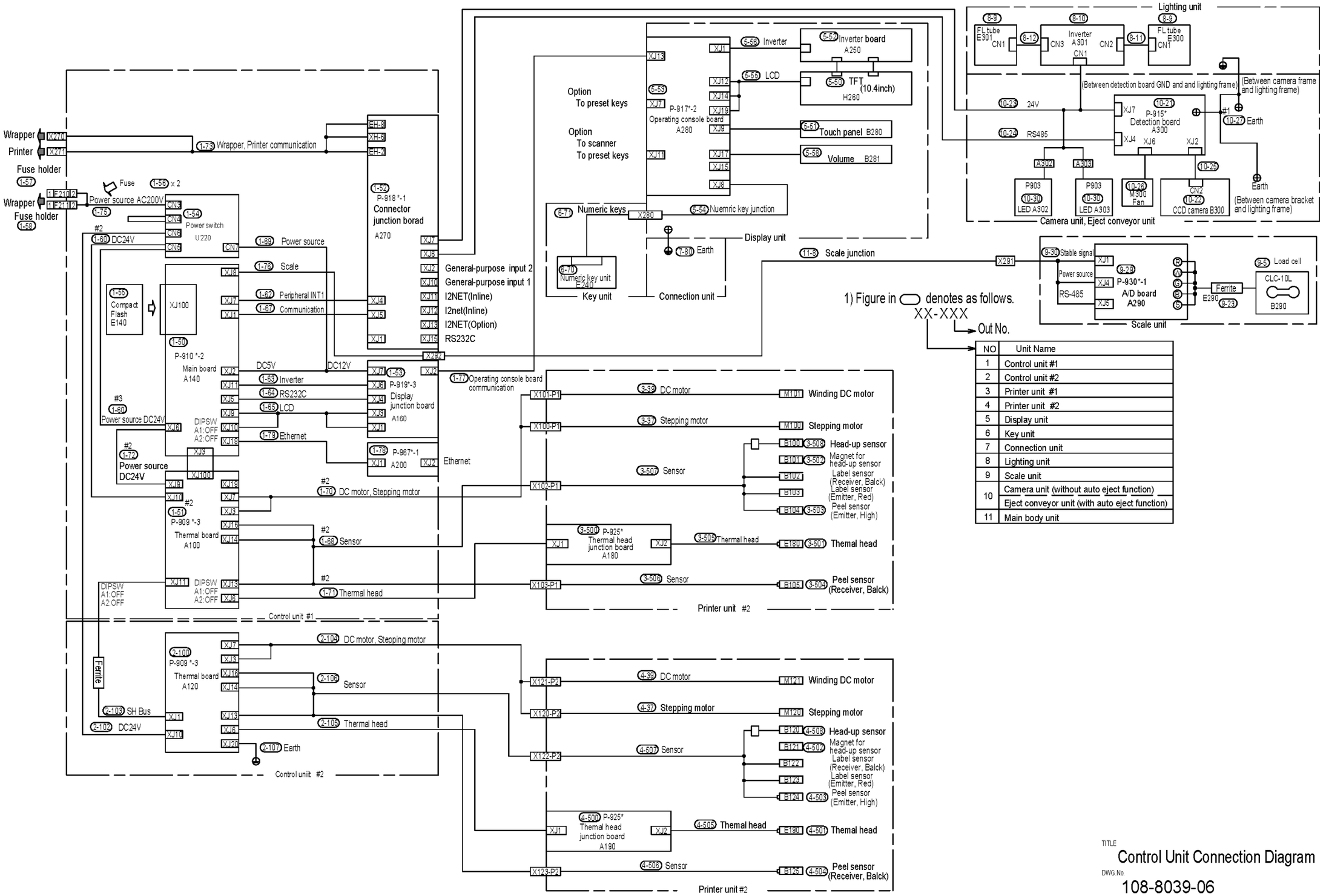
CN6

No.	Signal name	Direction	Other end
1	DC24[V]	→	Front cover switch
4	GND	-	Electromagnetic contactor (for AC200V)
5	GND	-	Electromagnetic contactor (for DC24V)
2,3,6	Not used		

6 WIRING DIAGRAMS

CONTENTS

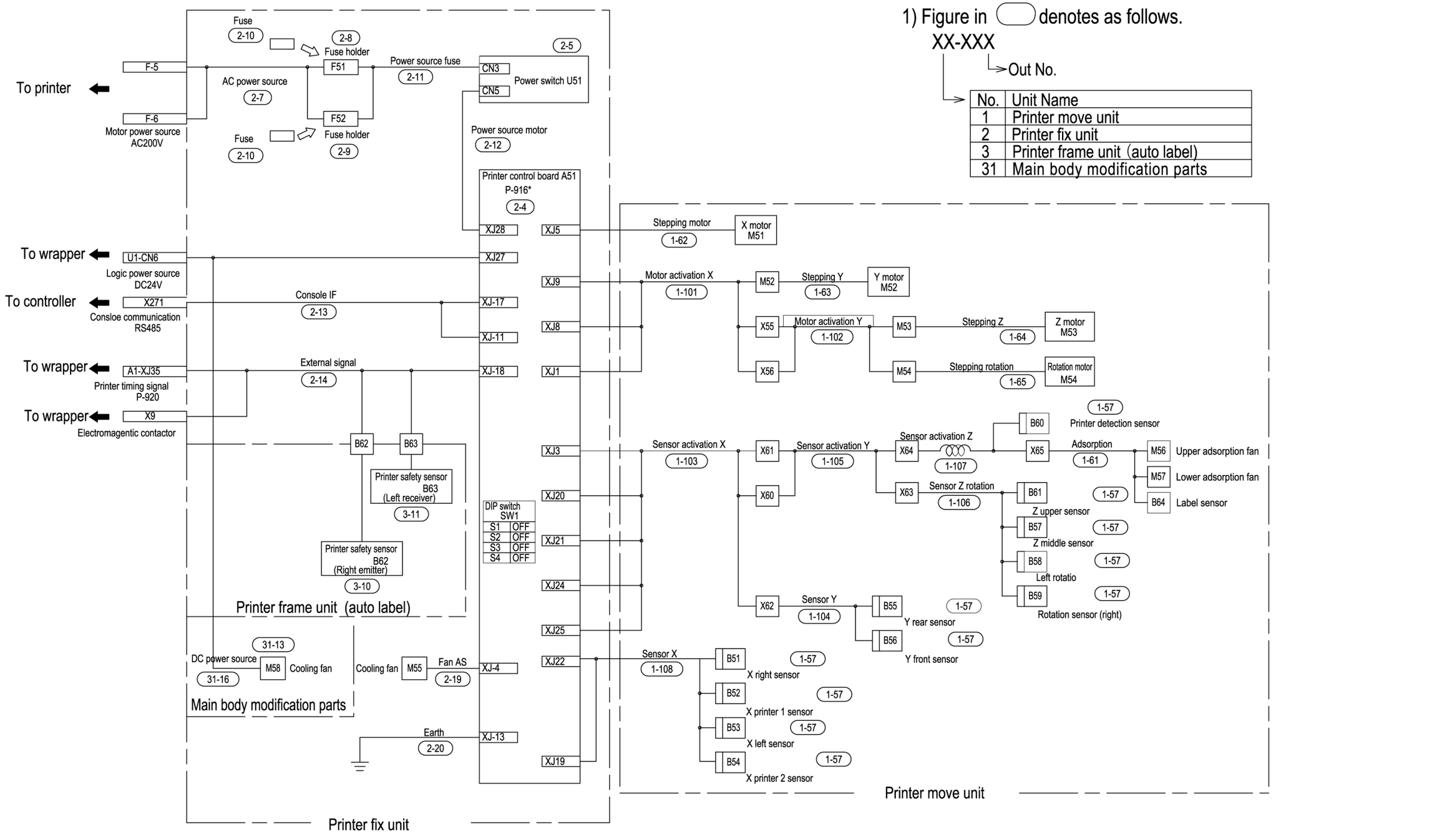
6.1 CONTROL UNIT CONNECTION DIAGRAM



NO	Unit Name
1	Control unit #1
2	Control unit #2
3	Printer unit #1
4	Printer unit #2
5	Display unit
6	Key unit
7	Connection unit
8	Lighting unit
9	Scale unit
10	Camera unit (without auto eject function) Eject conveyor unit (with auto eject function)
11	Main body unit

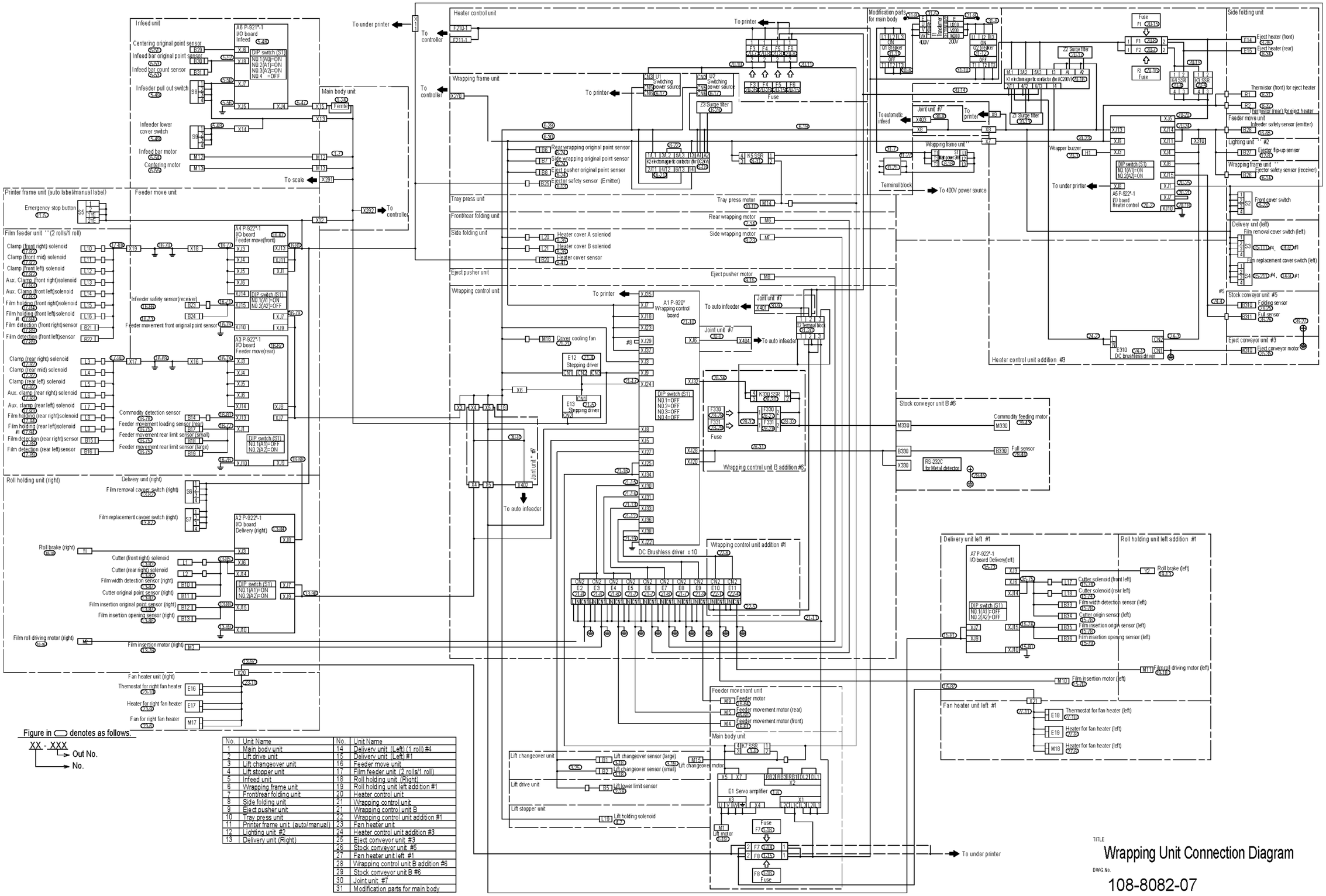
TITLE
Control Unit Connection Diagram
DWG.No.
108-8039-06

6.2 PRINTER CONNECTION DIAGRAM



TITLE
Printer Connection Diagram
DWG.No.
108-8081-03

6.3 WRAPPING UNIT CONNECTION DIAGRAM



No.	Unit Name	No.	Unit Name
1	Main body unit	14	Delivery unit (Left) (1 roll) #4
2	Lift drive unit	15	Delivery unit (Left) #1
3	Lift changeover unit	16	Feeder move unit
4	Lift stopper unit	17	Film feeder unit (2 rolls/1 roll)
5	Infeed unit	18	Roll holding unit (Right)
6	Wrapping frame unit	19	Roll holding unit left addition #1
7	Front/rear folding unit	20	Heater control unit
8	Side folding unit	21	Wrapping control unit
9	Eject pusher unit	22	Wrapping control unit B
10	Tray press unit	23	Wrapping control unit addition #1
11	Printer frame unit (auto/manual)	24	Fan heater unit
12	Lighting unit #2	25	Heater control unit addition #3
13	Delivery unit (Right)	26	Eject conveyor unit #3
		27	Stock conveyor unit #5
		28	Fan heater unit left #1
		29	Wrapping control unit B addition #6
		30	Stock conveyor unit B #6
		31	Joint unit #7
		32	Modification parts for main body

TITLE
Wrapping Unit Connection Diagram

DWG.No.
108-8082-07