

# **DURA** **PRINTER** **S1600**

## **THERMAL PRINTER** **INSTRUCTION MANUAL**

**Nitto** Nitto Denko Corporation



# PREFACE

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We appreciate your using (Nitto)'s DURA PRINTER SI600.

“DURA PRINTER SI600” is a high quality thermal transfer label printer with excellent workability and durability, which can print transmissions and/or others clearly and quickly.

This manual explains how to manage and maintain the DURA PRINTER SI600, maintaining it in optimum condition for as long a period as possible. Please read through this “Instruction Manual” before use.

Please store the manual carefully when not in use.

**The DURA PRINTER SI600 can be used in either of the following two ways.**

- 1) After a Windows printer driver has been installed on a PC.

After the DURA PRINTER SI600 printer driver is installed on a PC, printing can be carried out via any Windows application capable of printing image data.

For driver installation and setup procedures, refer to the “DURA PRINTER SI600 Printer Driver Instruction Manual” on the accompanying CD.

Label printing software for FA, “Label Studio”, is available and makes label printing easier.

- 2) By transmitting exclusive commands (character data) from a PC or other devices to the printer and using fonts and barcodes stored in the printer's memory.

For information on the commands, refer to the “DURA PRINTER SI600 Command Reference Manual” on the accompanying CD; for information on the interface required when issuing the commands, refer to the “DURA PRINTER SI600 Interface Manual”. It is necessary for proper printing that the operator familiarize himself/herself with the commands before transmitting these to the printer.

- Duplication of this manual without permission is not allowed.
- Difference between the product and the contents in this manual may result from improvement and/or other modification of the product.
- The contents in this manual may be subject to future change without notice.
- This manual is created with assurance of perfection, but if anything about the contents appears to be incorrect or if you have any suggestion, please feel free to contact us.

- Microsoft<sup>®</sup> and Windows<sup>®</sup> are either registered trademarks or trademarks of Microsoft Corporation in the U.S. and/or other countries.
- Acrobat Reader and Adobe are the trademarks of Adobe Systems Incorporated.
- “QR Code” is the registered trademark of DENSO Corporation. “PDF417” is the registered trademark of Symbol Technologies, Inc.
- “Maxi Code” is the registered trademark of United Parcel Service, Inc. “Data Matrix” is the registered trademark of ID Matrix.

# IMPORTANT INFORMATION

**⚠ WARNING**

- This product has potential dangers. Please install, operate and maintain/examine the product in accordance with the instructions in this manual.
- If you do not follow the instructions, or if any harm or injury occurs caused by carelessness, misuse/unpermitted modification or other action, NITTO DENKO takes no responsibility.

- In the industrial device industry, as new materials, processing methods as well as acceleration of the mechanical devices, more and more potential dangers show up. These dangers could not be predicted under all circumstances. Moreover, “things that cannot be done” and “things that mustn’t be done” exist in large amount, which is not possibly to be all listed in this manual. If it is NOT indicated in the manual as “things that can be done”, please regard it as “things that cannot be done”. During the installation, operation and/or maintenance/examination of this product, please give full consideration to not only those points written in this manual and/or indicated on the main part of the product, but also general safety measures.
- A blade used to cut label off is set in the optional Cutter Unit. If you put your finger tips close to this part, pinching or cutoff injuries will happen. When you fasten or remove the Cutter Unit, please set the power switch as OFF.
- In order to prevent potential trouble or malfunction, please keep regular maintenance. Refer to “4.1 Cleaning the Interior of the Printer” described in chapter 4 of the manual.
- The copyright of this manual belongs to NITTO DENKO and NITTO DENKO keeps all rights. Please do not duplicate or publicize any picture and/or technical data without a previous written consent from NITTO DENKO.
- If you have any question about this manual or you need more detailed information, please go to the shop you purchased this product or our customer window for enquiry and bring with you the type (model) and serial number indicated on the plate, and please do not proceed with your operation before you ask your questions and receive the answer.

**⚠ CAUTION**

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.





# WARRANTY LIMITATIONS



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- NITTO DENKO Corporation is responsible for repair and/or replacement of product in accordance with following conditions, provided that the purchased material or finished product has defect acknowledged by NITTO DENKO.
  - If the reason for inappropriateness is obviously the defect in the design/manufacture of the delivered product or the harm occurred during manufacture and/or on the way of transportation, the relevant part(s) is (are) provided or repaired free of charge.
  - If the reason for inappropriateness is force majeure or product not delivered by us, such circumstances are excluded;
  - If the reason for inappropriate is not clear, solution to the problem shall be decided on the basis of agreement.
- The company shall not be responsible for direct or indirect malfunctions or expenses incurred arising from use of the product supplied.  
We assume no liability with regard to problems such as a system shutdown, or expenses incurred as a result of misuse or mishandling of the machine.
- The warranty period shall last for a period of 6 months from the date of delivery.

# ALERT SYMBOLS AND MEANINGS

The symbols used in this manual are categorized into 2 classes according to the degree of danger and the scale of the assumed accident. Please understand the meaning of the symbols listed below and abide by the instructions in this manual or on the warning sheet pasted on the main part of this product.

Symbols	Meaning
 WARNING	Used under very dangerous situation when death or serious injury will be suffered if not avoided.
 CAUTION	Used under dangerous situation when the machine/device will be harmed or when minor injury or impairment at intermediate level will be suffered, if not avoided.

<u>POINT</u>	Used to promote special attention and to convey emphasized information.
 NOTE	Used to provide reference information in operation.
 REFERENCE	Used to indicate reference page in operation.

# PRECAUTIONS WHEN USING THE PRINTER

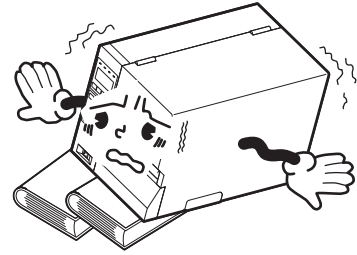
For safe handling of this machine, some of the important points must be explained and obeyed.

**⚠ WARNING**

- Please keep the machine in a place without vibration and set it horizontally level plane for use.

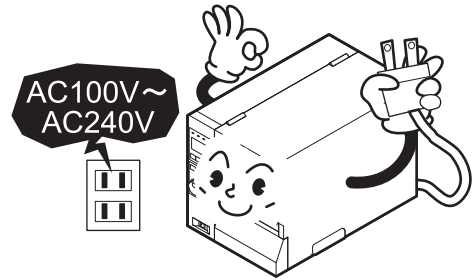
If not set in a place without vibration and horizontally stable, clear printing cannot be produced.

In addition, if the main part falls down injury and malfunction will also happen.



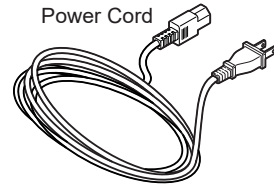
- Please make sure that power source is AC 100V - AC 240V.

If power source other than AC 100V – AC 240V is used, it will cause fire accident.



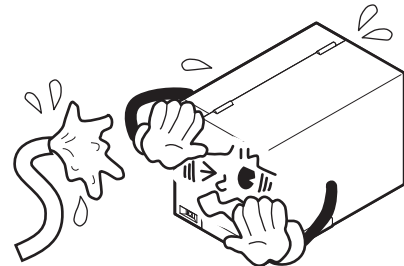
- Please use the power cord provided in your package as accessory.

Power Cord



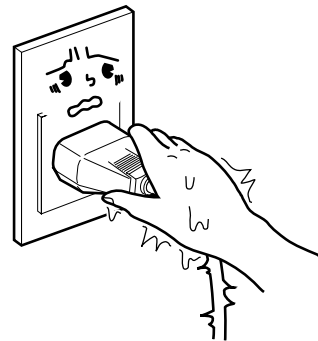
- Please be sure that the main part, terminals and other parts are not wet.

Parts carrying water will cause fire accident or malfunction.



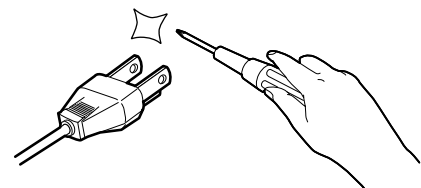
- Please do not unplug the power cord from socket outlet with wet hand(s).

Such action will cause electric shock and/or short circuit.



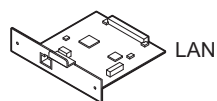
- Please do not modify the socket outlet or power cord.

It will cause fire accident and/or electric shock.

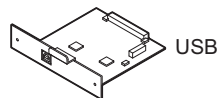


- When installing the options, please unplug the power plug.

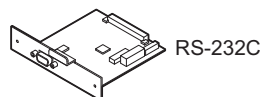
● Option Interfaces



LAN

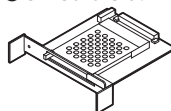


USB



RS-232C

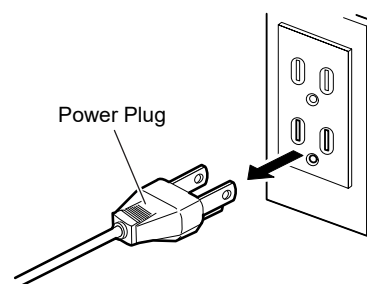
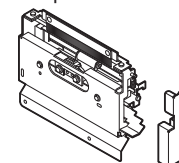
● CF Card Slot



● Cutter Unit



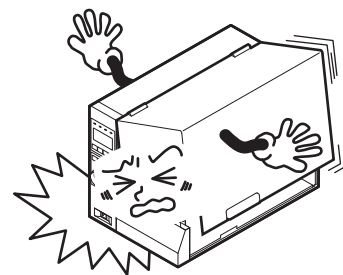
● Dispenser Unit



- Please do not hold the side cover when moving the printer main part.

If the main part fell down, the side cover will be opened and injury and malfunction would happen.

Please close the side cover and hold the bottom of the printer main part to move it.

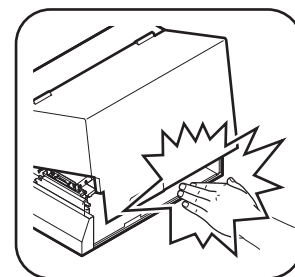


- Please be careful when opening and/or closing the side cover.

Put your hands in the opening/closing area will cause injury.

And, when opening the side cover please open the cover completely until the upper surface of the cover adheres to the printer main part; when closing it, please hold the handle and close it slowly.

If you release your hands when it is still open in the midway or in the course of opening and/or closing, the cover will fall and will cause injury or malfunction.



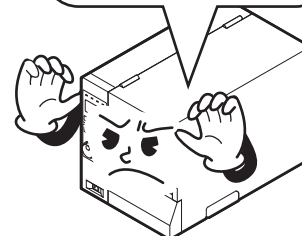
- Please be careful when opening and/or closing the thermal head and/or the press-down area.

Placing your fingers and/or hands in the area where the thermal head is tuned to move up and down will cause injury.

Moreover, when opening the presser, please confirm that the presser is completely opened and fastened with magnet.

When closing it, please hold the handle and close it slowly.

If you release your hands when it is still open in the midway or in the course of opening and/or closing, the presser will fall and will cause injury or malfunction.



- When the thermal head is hot, please don't touch it.

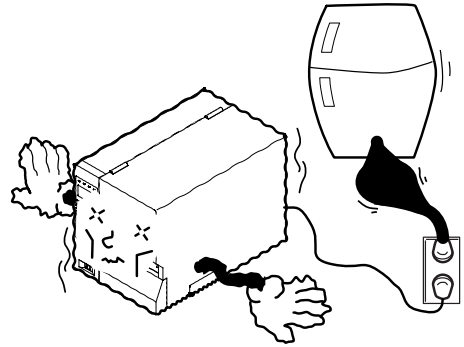
- Please don't touch the driving parts such as the platen roller during printing or feeding in/out paper.

**CAUTION**

- Please supply electricity from power source that has less fluctuation of voltage.

Please do not supply electricity from the same power source or nearby power source which provide electricity to large electronic products that consume large quantity of electricity, like heater, refrigerator, crane, etc.

Improper operation will cause malfunction.



- This is a precision instrument. Please avoid sudden shock.

Please do not disassemble it. Disassembly will cause malfunction.

- When transporting or moving the printer main part, please remove label and thermal transfer ribbon.

- Please do not use it in places where it is exposed to direct rays of the sun for a long time.

It will cause malfunction.

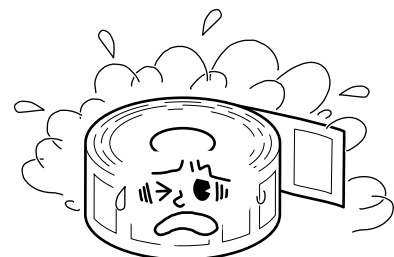
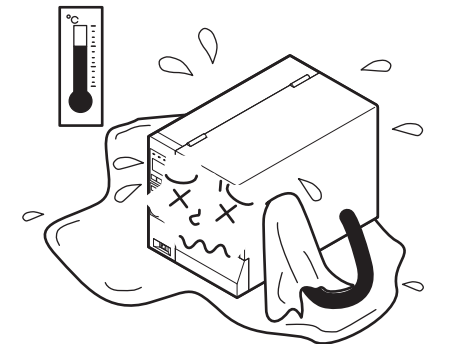
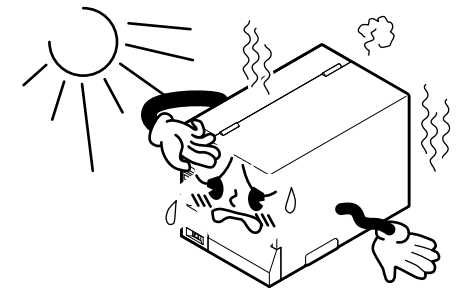
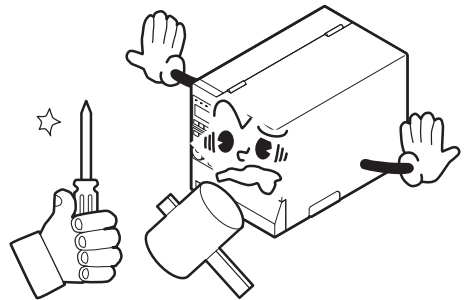
- Please do not use it in places where temperature and humidity is high.

It will cause malfunction.

- Please choose the label and thermal transfer ribbon that are made by Nitto Denko.

- Please do not keep the label and thermal transfer ribbon in places where temperature and humidity is high.

It will cause error.



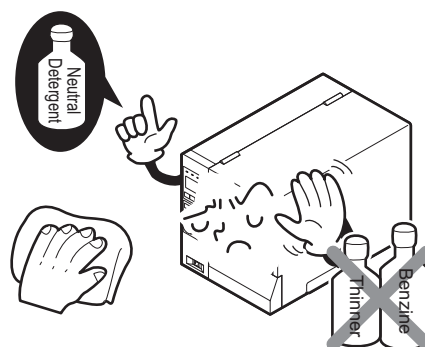
- Please do not use it in dusty places.

Accumulated dust will cause unclear printing. It not only causes malfunction, but also will shorten service life of the printer.



- For maintenance of the printer main part, please wipe it with a soft dry cloth and neutral detergent.

Using of thinner and/or others will cause deformation and/or malfunction. Please never use such substances.

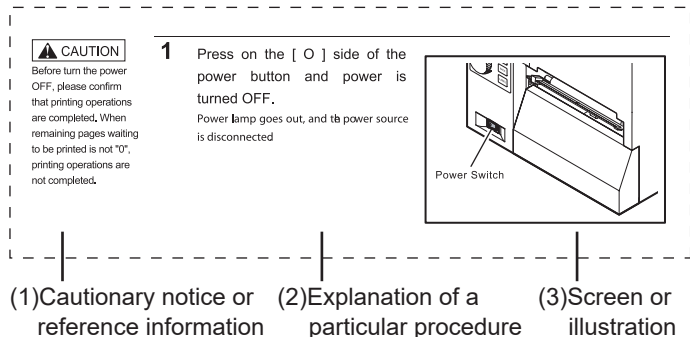


# ABOUT THE MANUAL

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In this manual, each page is divided into sections, as follows:

## ● Procedure layout



- (1) Describes cautionary remarks, notes, and reference pages on the left-hand side of each page.
- (2) Explains a particular procedure.
- (3) Follow the operation procedures to show LCD messages or illustration.

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# Chapter 1

## BEFORE OPERATION

Here is an introductory explanation of the printer. For a better understanding and correct use of this printer, please refer to this part too.

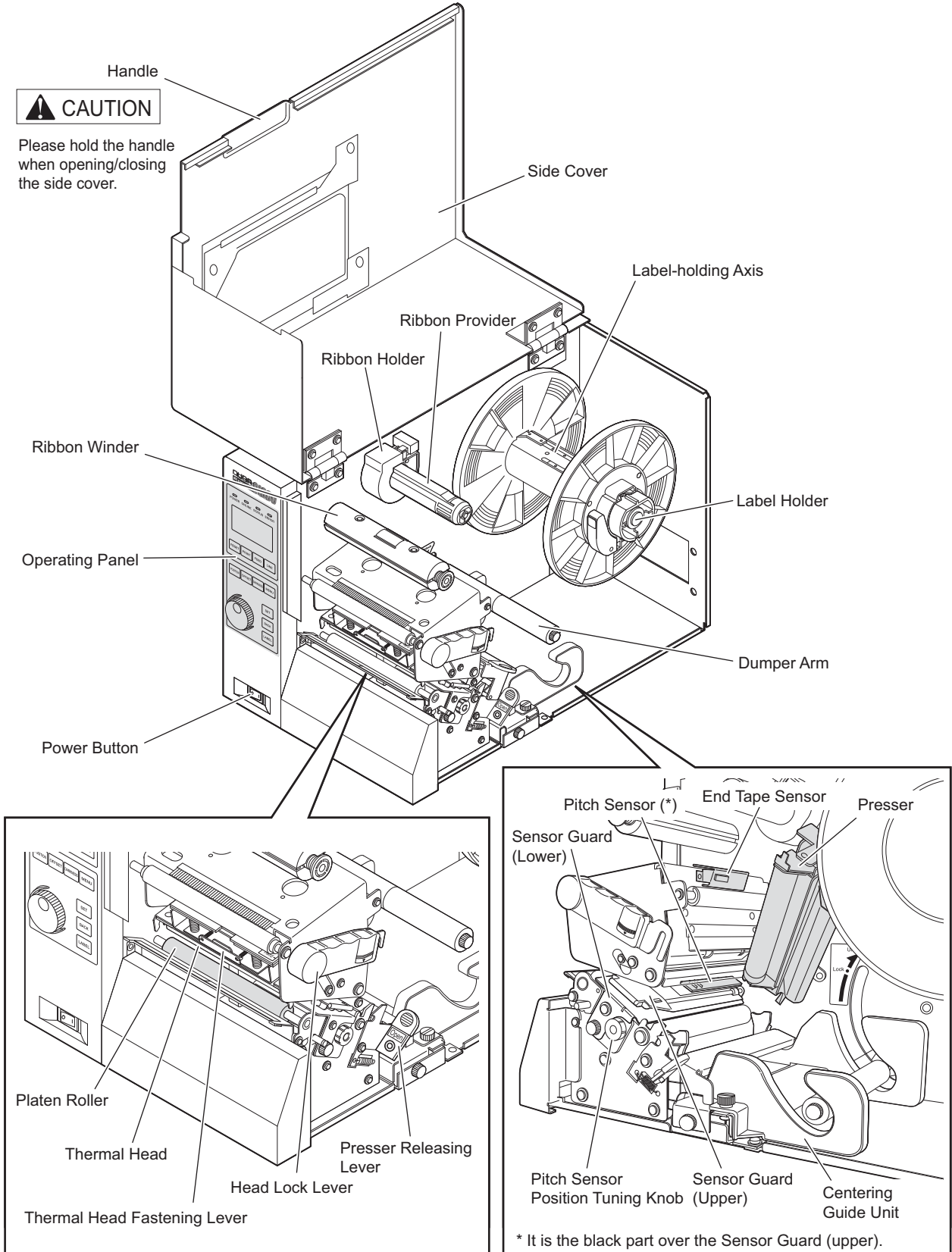
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# 1.1 Names and Functions of the Components

The names of the parts together with their functions are explained.

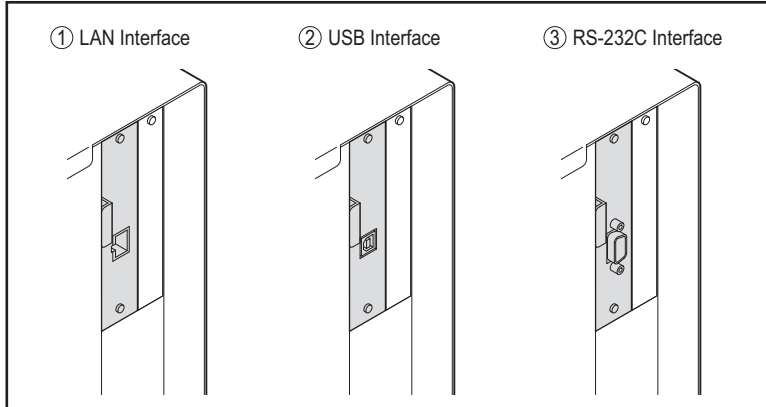
Explanation in this manual is given using the following names. Please remember these names and read next pages.

## Front View

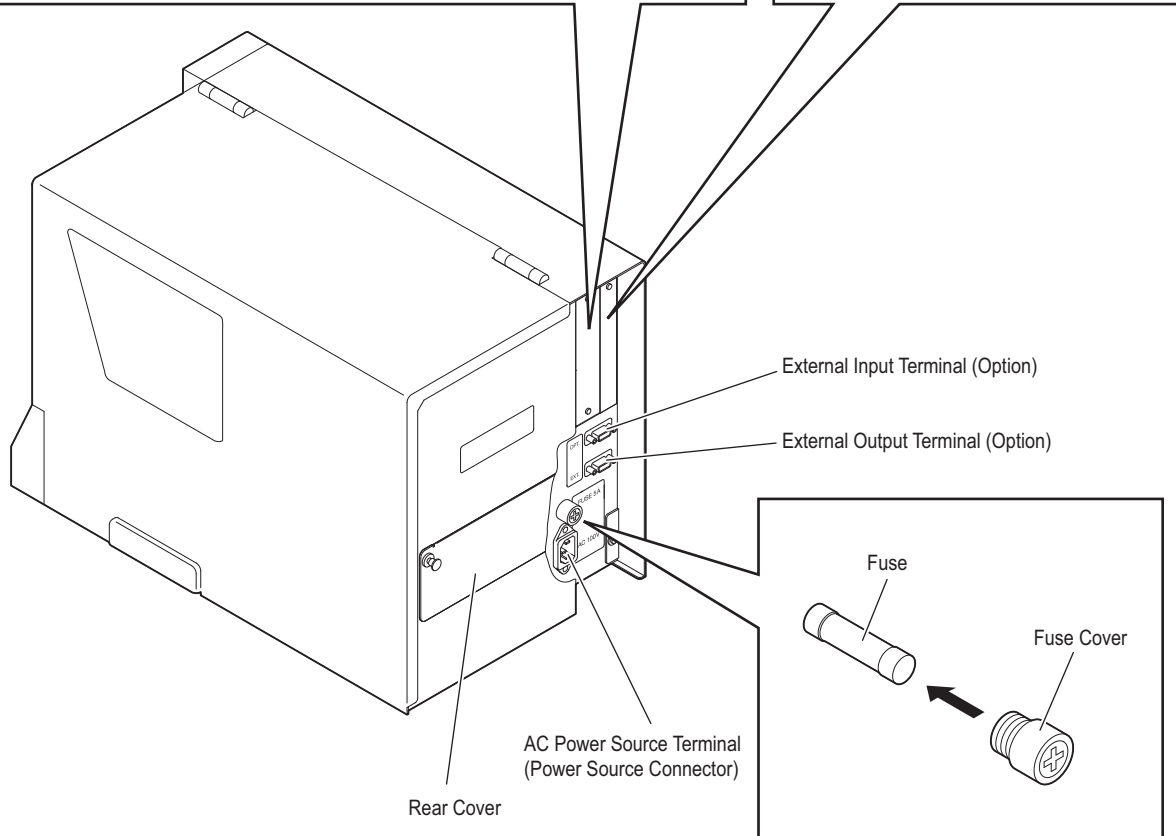
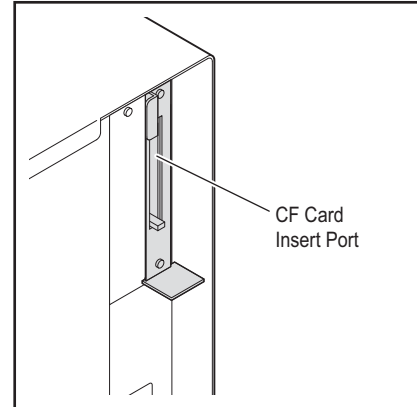


## Rear View

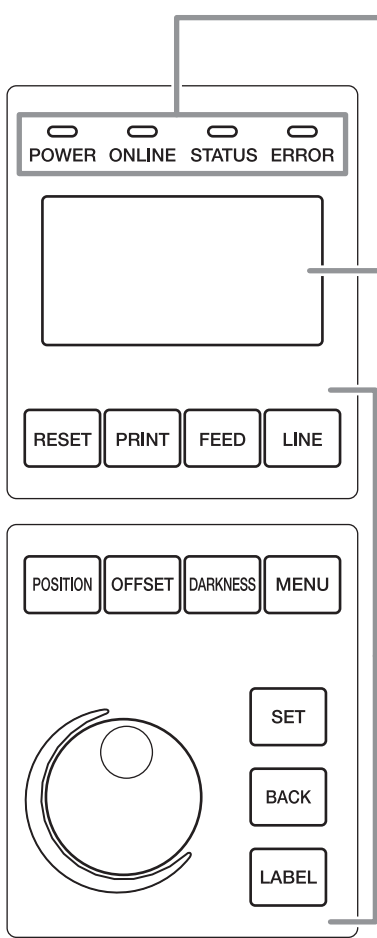
### Interface (Option) Installation



### CF Card Slot (Option) Installation



**Operating Panel**



**Status**

- POWER Lamp (Green) : When power is connected, the lamp lights up.
- ONLINE Lamp (Green) : When the printer is online the lamp lights up.
- STATUS Lamp (Green) : When the printer is receiving data the lamp blinks; when there is data in the signal transfer buffer the lamp lights up.
- ERROR Lamp (Red) : When error occurs the lamp lights up.

**LCD**

Online/Offline status, error messages and operation messages are shown here. When the Online/Offline status is shown here, the number of remaining pages to be printed (when the status of communication protocol is L, number is pages printed) is shown here.

**Operational Keys**

- RESET : Used under Offline status. It deletes the received data. (Refer to P.2-7)
- PRINT : Used under Offline status. It prints the previous contents again. (Refer to P.2-6)
- FEED : Used under Offline status. Press it and Label will rewind to the beginning part. (Refer to P.2-6)
- LINE : Switch between Online and Offline status. Press it during printing and the printer turns to be Offline and stops. Press it again and the printer returns to be Online and continues printing.
- POSITION : Used under Offline status. It shows the scene of adjusting the position where Label stops. (Refer to P.2-8)
- OFFSET : Used under the Offline status. It shows the scenes of adjusting the position where operation of each mode (Cut/Peel Off/Tear Off) stops. (Refer to P.2-9)
- DARKNESS : Show the Scene of adjusting print density. (Refer to P.2-10)
- MENU : Used under Offline status. Switch between each mode. (Refer to Chapter 3)
- SET : Confirm the altered contents.
- BACK : Cancel the altered contents.
- LABEL : Used under Offline status. Choose print settings (Label No.). (Refer to P.2-7)

**POINT** POSITION, OFFSET, DARKNESS, MENU, LABEL keys cannot be used when the printer is receiving data to be printed.



For this printer, after power is turned on, operation of any key other than the FEED key requires input of password (maximum 8 digits). For details about password settings, please refer to "3.4.25 Registration of Password".

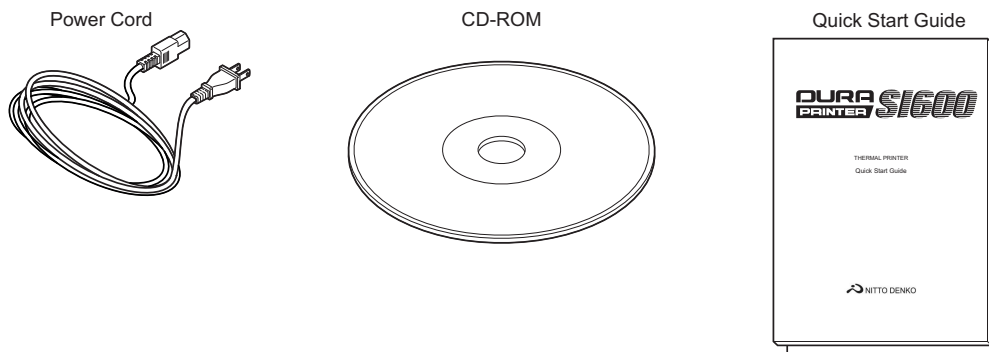


# 1.2 Checking the Supplied Items/Consumables/Optional Units

## 1.2.1 Checking the Supplied Items

Open the package, and please confirm that the following accessories are packed within.

If there is anything missing, please contact the shop where you bought this printer or our customer window.

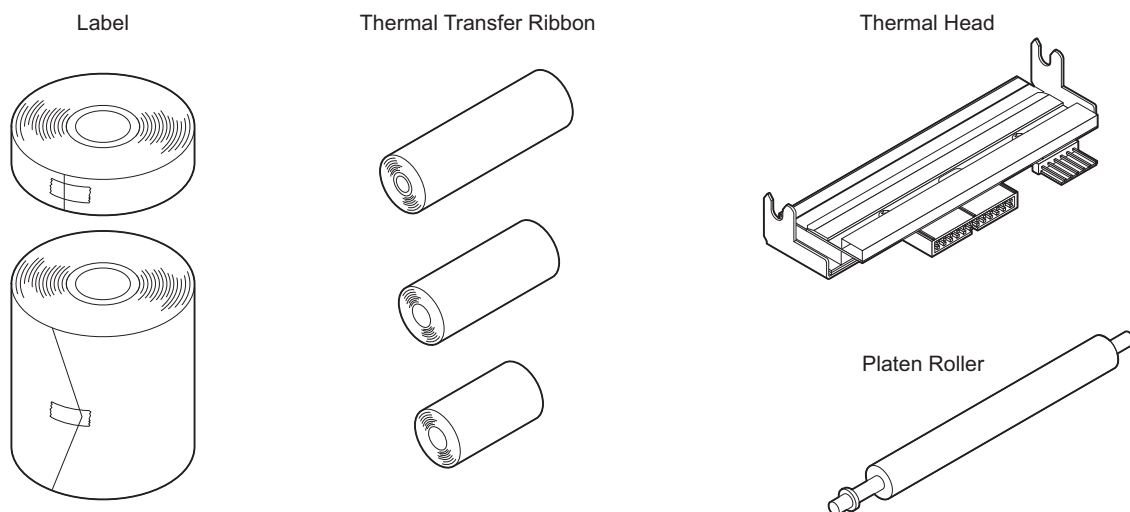


### POINT

- The connecting cord used to connect this printer and your computer is not one of the accessories. As the connecting cord is different based on the types of computer you use and this printer, please prepare a connecting cord separately according to the User's Guide for your computer.

## 1.2.2 Consumables

Please use labels and ribbons made by NITTO DENKO.



### CAUTION

If the Ribbon width is too large compared with Label width, there will be wrinkles on the Ribbon and the print might have missed contents. Please use thermal transfer ribbon that is 5mm longer at both left and right side than the label width.

### POINT

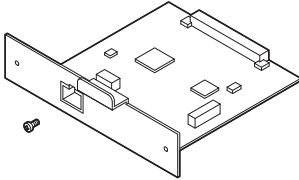
The thermal head and the platen roller are wearable parts. Please always prepare them as backup parts.

### 1.2.3 Optional Unit

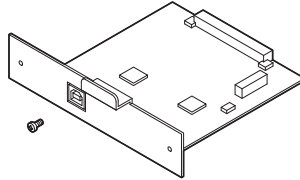
The following option parts are supported by this printer.

If you bought any of these options, please confirm that the option unit is loaded together with the package.

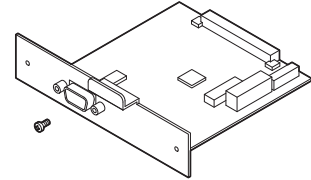
LAN Interface



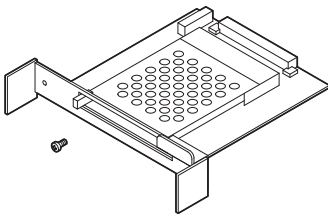
USB Interface



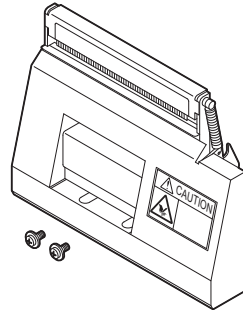
RS-232C Interface



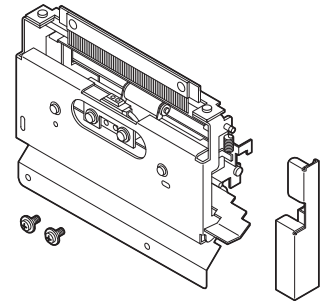
CF Card Slot



Cutter Unit



Dispenser Unit



\* The Interface Unit does not function as print server.  
So it cannot execute synchronous printing from multiple computers.

# 1.3 Installation Procedure

Here is an explanation of how to connect the cables, how to connect power source and how to disconnect power source.

## 1.3.1 Connecting Cables

When connecting this printer to the computer that sends print command, please follow the instructions given below.

### CAUTION

Please set the printer in a stabilized level place. Otherwise it cannot produce clear print.

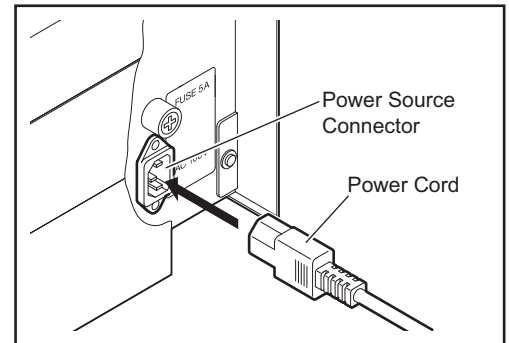
### CAUTION

When connect the printer to your computer, please turn the power switch as OFF before you start.

**1** Set the printer on a stabilized level place.

**2** Connect the Power Cord to the printer.

Plug the Power Cord into Power Source Connector.

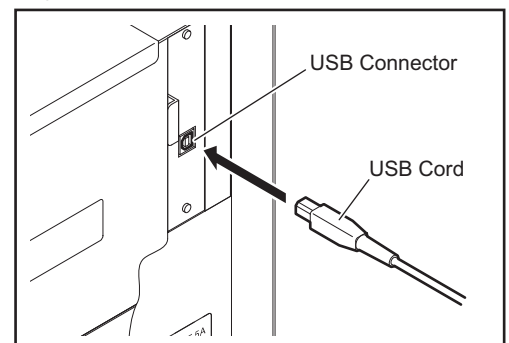


**3** Connect the Connecting Cord to the printer.

Please prepare a Connecting Cord supported by the interface installed to the printer and plug it in.

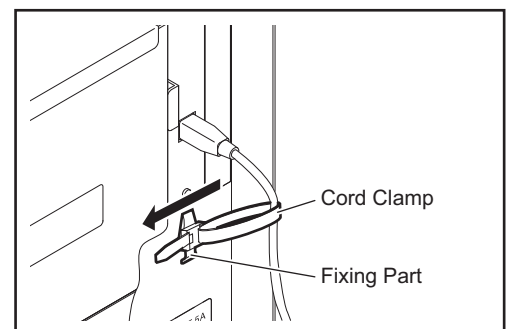
Any question about the optional units, please contact the shop where you bought this printer or our customer window.

E.g., When USB Board is installed

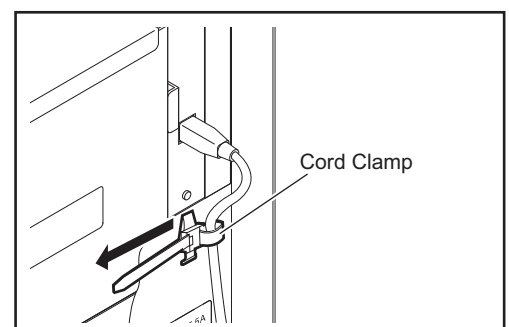


**4** The connection cord is installed to the cord clamp.

① The front end of the cord clamp is inserted into the fixing part.



② Pull the front end of the cord clamp and fix the connection cord.

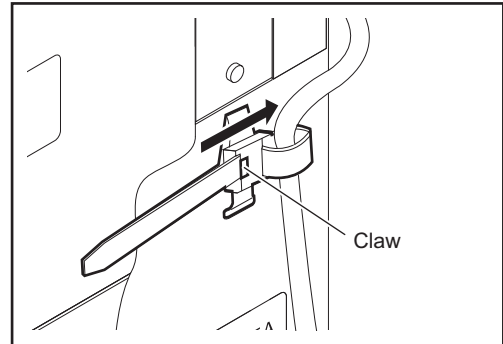


### CAUTION

Please don't over tighten the cord clamp. Otherwise, the wire may get broken.

Method to uninstall the cord clamp

Hold up the claw of the fixing part, the pull out the cord clamp.



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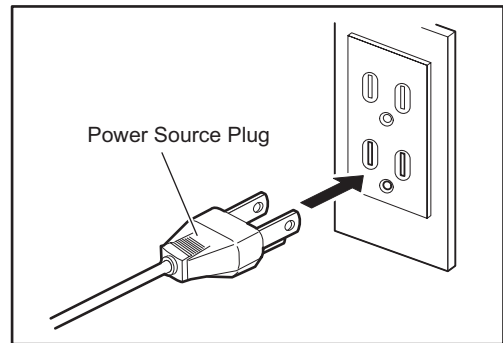
**5** Connect the Connecting Cord to your computer.

 **WARNING**

Please never do octopus foot wiring for Power Cord. It might cause fire.

---

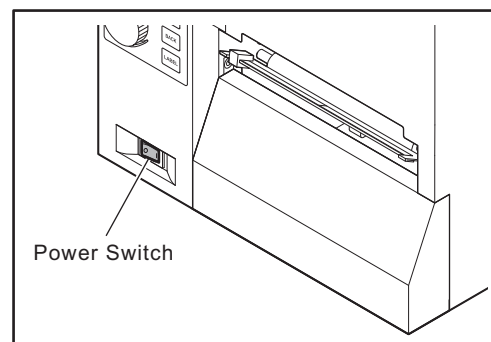
**6** Connect the Power Source Plug to the socket outlet.



### 1.3.2 Turning on the Power

- 1 Press on the [ | ] side of Power Switch and power is turned ON.

Power lamp lights up, and product name, head density as well as version information will be displayed on the LCD for about 2 seconds.



#### POINT

The printer is delivered with default language settings of Japanese. If you want to change the language settings to be English, please refer to "3.4.24 Setting of Display Language" on P.3-62.



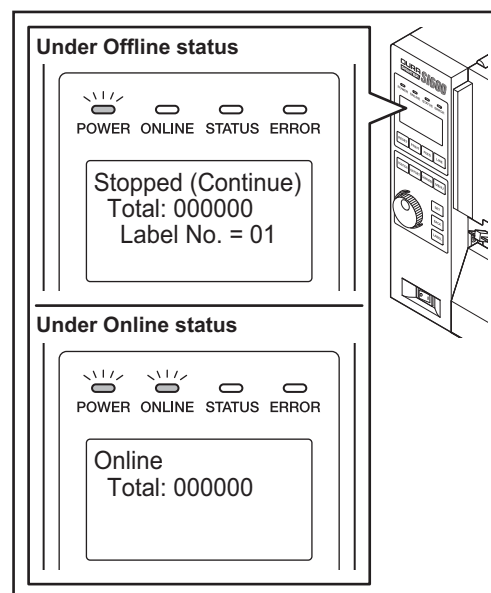
After power is turned on, it is required to input password (maximum 8 digits) in order to operate the keys other than the FEED and LINE keys. For details about password settings, please refer to "3.4.25 Registration of Password".

And the printer is started online or offline.

- \* The printer is delivered with default settings of online start.

Start settings (online/offline) can be changed.

For details, please read "3.4.8 Setting of Auto Online" on P.3-49.



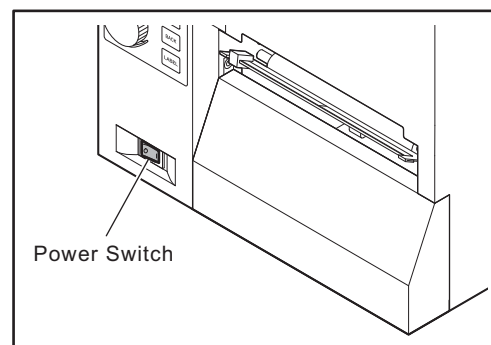
### 1.3.3 Turning off the Power

#### CAUTION

Before turn the power OFF, please confirm that printing operations are completed. When remaining pages waiting to be printed is not "0", printing operations are not completed.

- 1 Press on the [ O ] side of the power button and power is turned OFF.

Power lamp goes out, and the power source is disconnected.



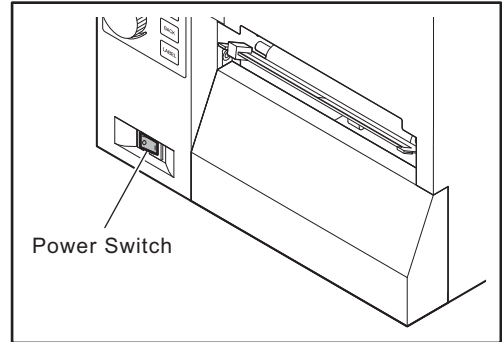
# 1.4 Installing the Thermal Transfer Ribbon

Here is an explanation of how to install the thermal transfer ribbon.

When heat-sensitive label is used, it is not necessary to install thermal transfer ribbon.

## 1.4.1 Installing the Thermal Transfer Ribbon

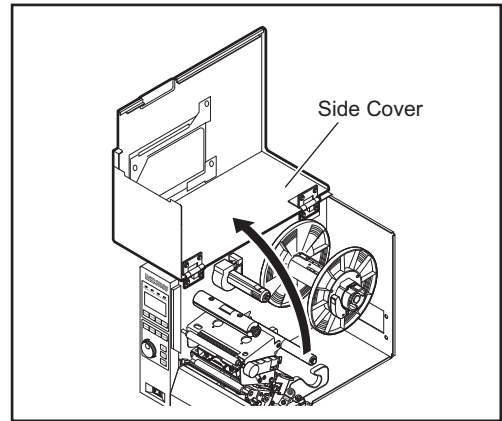
- 1 Press on the [ | ] side of the Power Switch and power source is turned ON.  
Power lamp lights up and the printer is started.



**CAUTION**

When opening the side cover, please open it completely until the top surface of the cover touches the printer main part. If you release your hands when the cover is half open or in the midway of opening/closing it, the cover might fall and result in injury and/or malfunction.

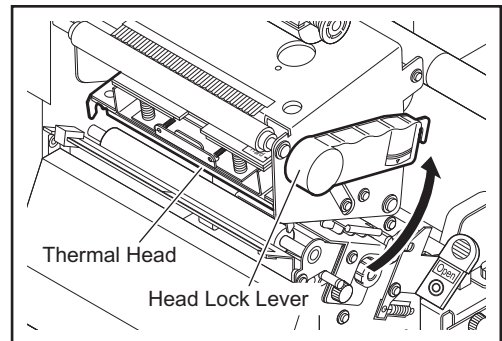
- 2 Open the Side Cover.



**CAUTION**

When handling the Head Lock Lever, please do not put your fingers and/or hands near the tuning area of thermal head. It might cause injury.

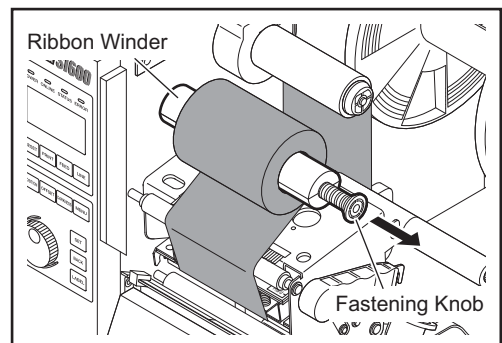
- 3 Pull the Head Lock Lever upwards and towards available directions.  
The Thermal Head is lifted.



**NOTE**

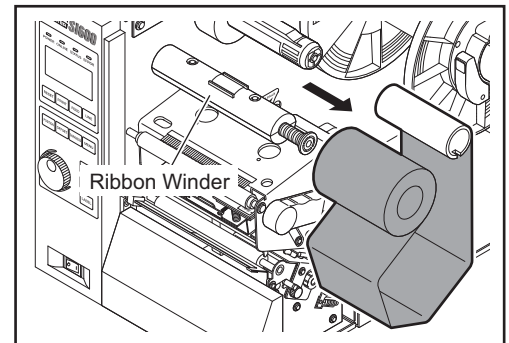
When the optional unit for rolling the paper-roll ribbon is used, this operation is not required.

- 4 Pull the knob that fastens the Ribbon Winder.



## 5 Take out the used ribbon and paper spool.

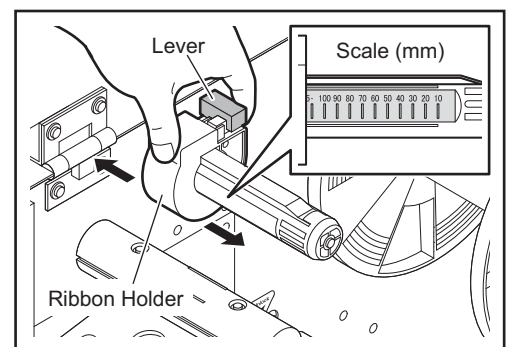
Press the Ribbon Winder with your finger to constrict the axis diameter and take out the used ribbon.



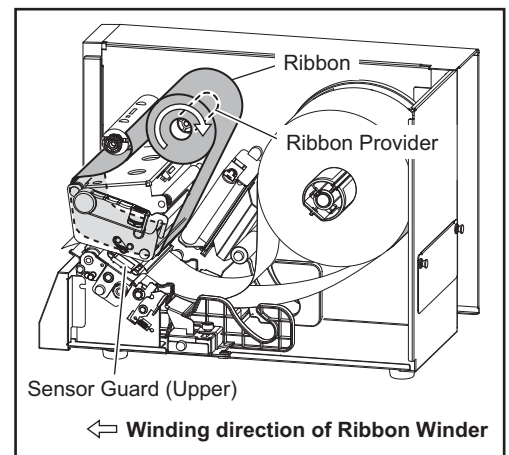
## 6 Set the width of ribbon.

Tune the Ribbon Holder Lever and move the Ribbon Holder until it arrives at a suitable position.

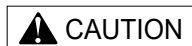
Please refer to the scale while moving the Ribbon Holder.



## 7 Install the ribbon to the Ribbon Provider, and let the tip of ribbon pass as shown in the picture.



Hold the tip of the ribbon, plug in from the horizontal side and the ribbon can be set in smoothly.

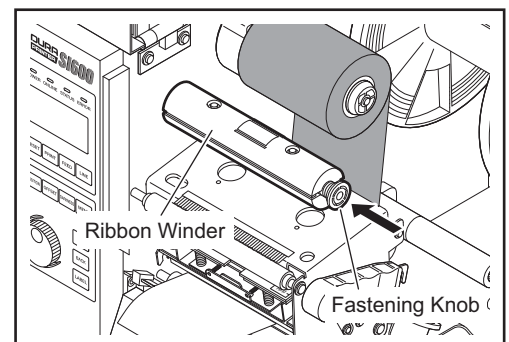


Please let the ribbon run through the Sensor Guard (Upper).



When the optional unit for rolling the paper-roll ribbon is used, please install the paper-roll with 1 inch internal diameter to the ribbon rolling axle.

## 8 Keep the knob that fastens the Ribbon Winder pressed-down.





When the optional unit for rolling the paper-roll ribbon is used, please align the paper-roll to the front end of the ribbon.



When the bonding force of the adhesive sheet becomes weak, please replace it.

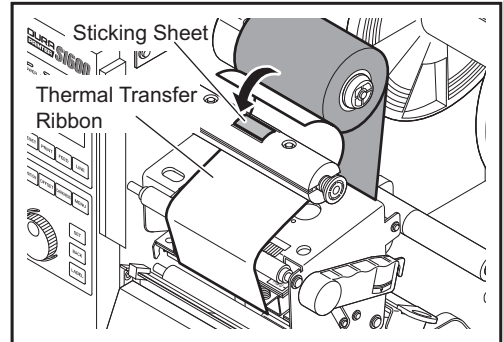


Please wind the ribbon tightly so that the ribbon does not slide off the Ribbon Winder. Otherwise, it might cause poor printing.

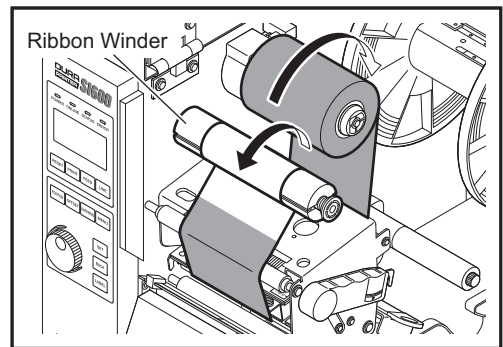


If you turn the ribbon feeder clockwise, winding will be easier.

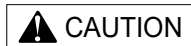
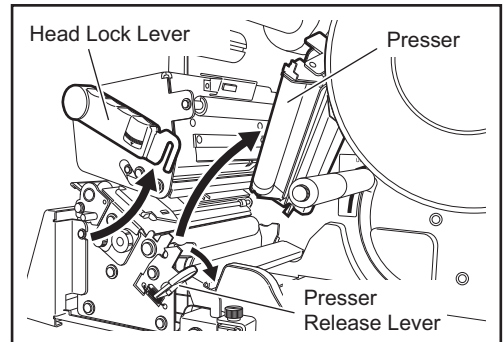
**9** Stick the tip of the ribbon onto the Sticking Sheet on the Ribbon Winder.



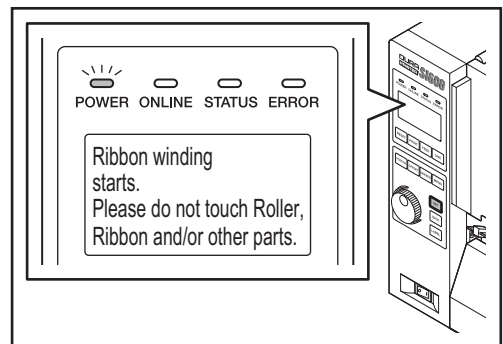
**10** Turn the Ribbon Winder counterclock-wise and wind the ribbon until the carbon part is shown in the front.



Push the **FEED** button when Head Lock Lever and Presser are free, a message telling ribbon winding starting will be shown; push the **FEED** button again and Thermal Transfer Ribbon will start winding by about 100 mm.



Please be carefull not to touch the Platen Roller with your hands or other parts of your body while proceeding with this operation.

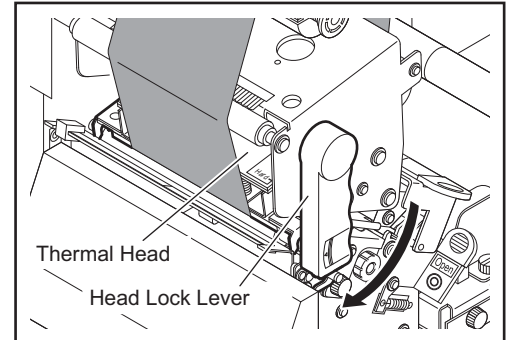




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**11** Lower the Head Lock Lever towards the lock.

Thermal Head is lowered.

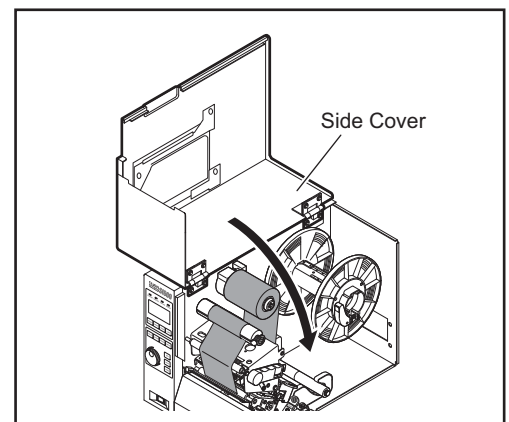


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**12** Close the Side Cover.

And the installation of Thermal Transfer Ribbon is completed.

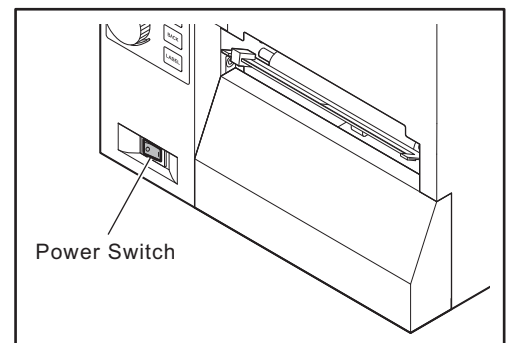
\* If the Label Roll is still not installed, please read "1.5 Installing the Label Roll" on page 1-14 first and proceed with your operation.



---

**13** Press on the [ | ] side of the Power Wwitch and power source is turned ON.

Power lamp lights up and the printer is started.

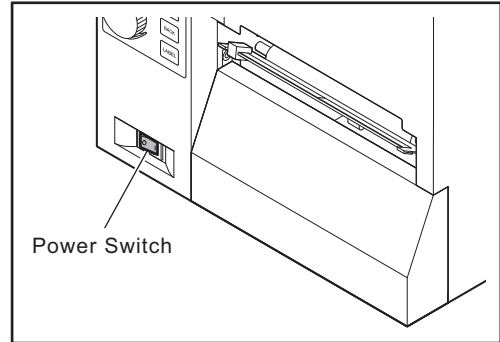


# 1.5 Installing the Label Roll

## 1.5.1 Installing the Label Roll

Here is an explanation of how to install the Label Roll.

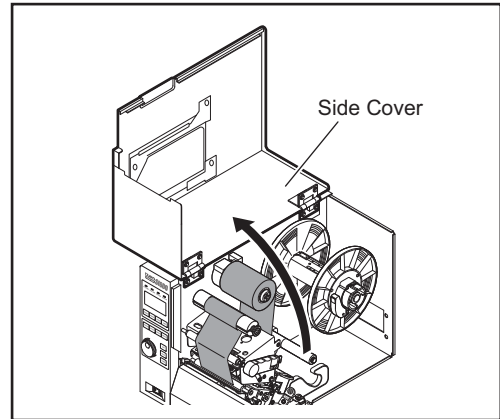
- 1** Press on the [ O ] side of the Power Switch and power is turned OFF.  
Power Lamp goes out, and the power source is disconnected.



**CAUTION**

When opening the side cover, please open it completely until the top surface of the cover touches the printer main part. If you release your hands when the cover is half open or in the midway of opening/closing it, the cover might fall and result in injury and/or malfunction.

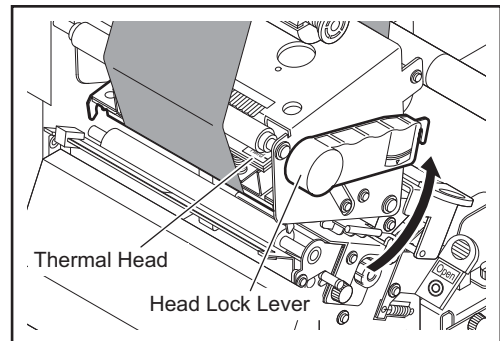
- 2** Open the Side Cover.



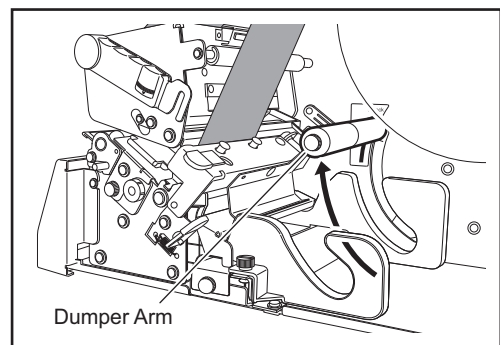
**CAUTION**

When handling the Head Lock Lever, please do not put your fingers and/or hands near the tuning area of thermal head. It might cause injury.

- 3** Pull the Head Lock Lever upwards and towards available directions.  
The Thermal Head is lifted.



- 4** Keep the Dumper Arm released.  
Hold and lift the Dumper Arm upwards to its maximum limit till it gives a clicking sound indicating that it is fastened.



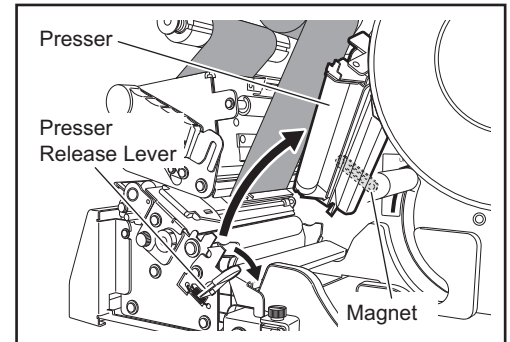
**CAUTION**

Please confirm that after the Presser is released it is well fastened with the Magnet.

If you release your hands in the midway of opening/closing, the Presser might fall and result in injury.

**5 Release the Presser.**

- ① Push the Presser Release Lever and the Presser is released.
- ② Lift the Presser and fasten it with Magnet.

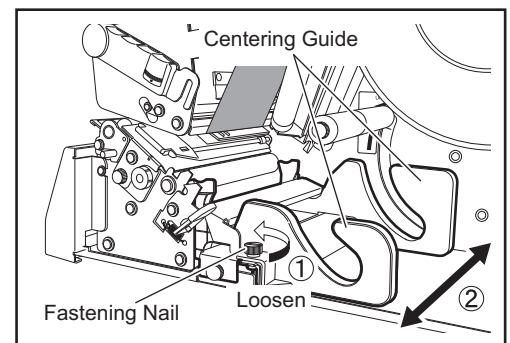
**POINT**

Please do not turn the Fastening Nail more than 3 turns.

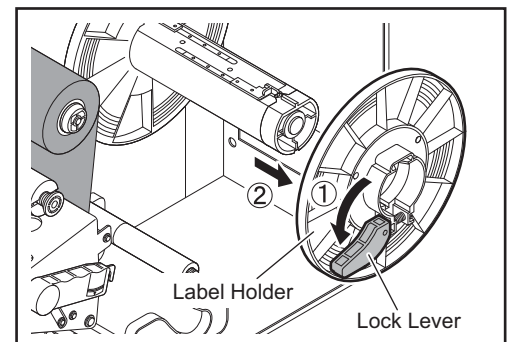
**6 Broaden the Centering Guide.**

Loosen the Fastening Nail with your fingers and broaden the Centering Guide slowly.

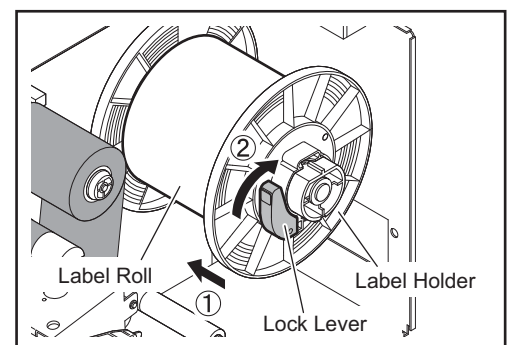
If you move the Centering Guide in front of you, the inside Centering Guide linked to it will also be moved.

**7 Remove the Label Holder from the Label-holding Axis.**

Release the lock lever of Label Holder, and remove the Label Holder from the Label-holding Axis.

**8 Install the Label Roll onto the Label-holding Axis, decide its position with the Label Holder and fasten it.**

- ① Install Label Roll onto the Label-holding Axis.
- ② Install the Label Holder onto the Label-holding Axis and push it in, and fasten it with the lock lever so that there is no clearance from Label Roll.



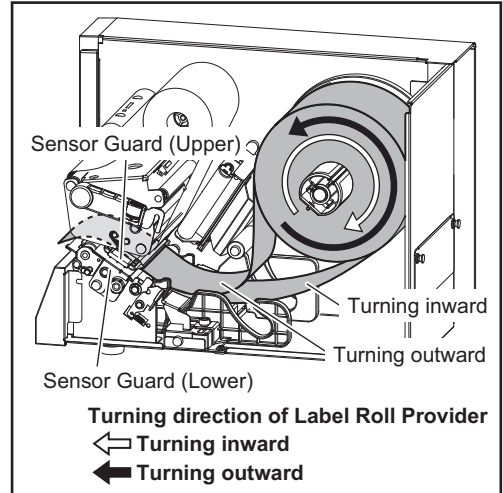
**CAUTION**

Please make sure that Label Roll passes in between the Sensor Guard (Upper) and Sensor Guard (Lower).

**NOTE**

Hold the tip of Label Roll, plug in from the horizontal side and the Label Roll can be installed smoothly.

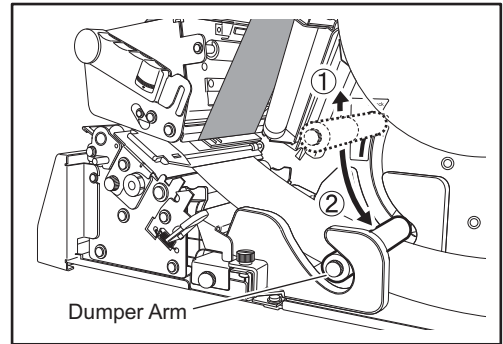
**9** Let the tip of Label Roll pass as shown in the picture.



**CAUTION**

When releasing the Dumper Arm, please do not pull it down forcibly.

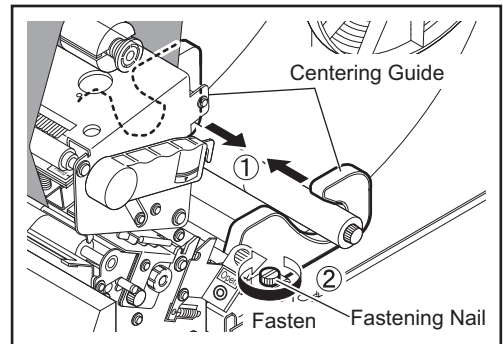
**10** Lower the Dumper Arm.  
Hold and lift the Dumper Arm upward to its maximum limit till it gives a clicking sound indicating it is released, and lower the Dumper Arm without releasing your hands.



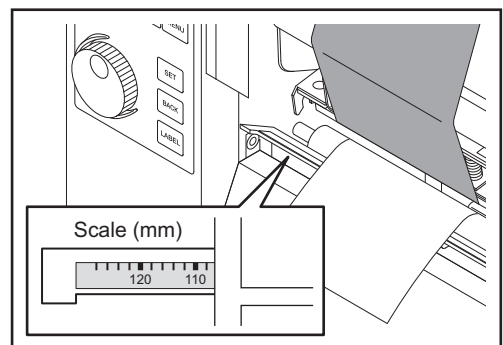
**CAUTION**

Please set Centering Guide wide enough for Label to pass smoothly. If label width is too narrow, it will lead to trouble in feeding labels. Moreover, please do not turn the Fastening Nail more than 3 turns.

**11** Fit the Centering Guide with the Label and fasten it.

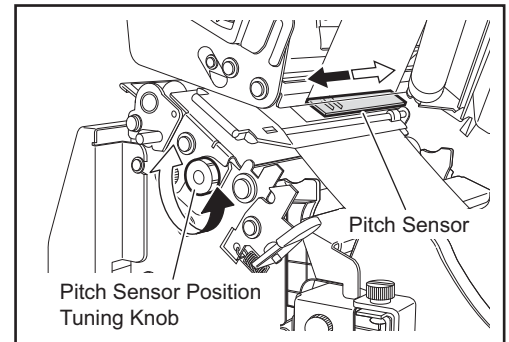


**12** Align the label mat side to the scale mark.  
Set the label mat width to the number suitable for the mat width.



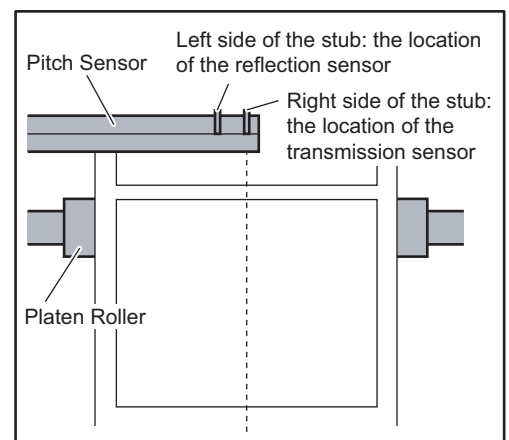
### 13 Use the Pitch Sensor Position Tuning Knob to tune the position of Pitch Sensor.

Turn the Pitch Sensor Position Tuning Knob clockwise to move towards label core, and counterclockwise to move towards label tip.



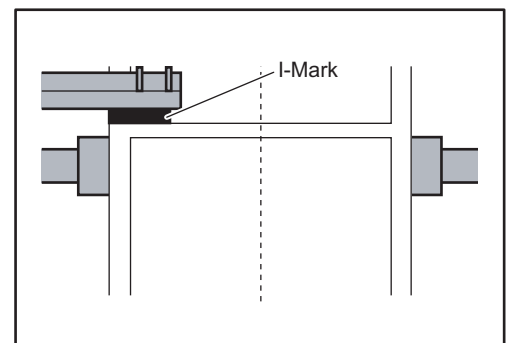
#### When the transmission sensor is used

Turn the lever to make the transmission sensor be located at the center of the label width.



#### When the reflection sensor is used

Turn the lever to make the reflection sensor be located at the center of the I-mark that is located at the back side of the label mat.



#### POINT

When locking the Presser, please drag the label so that the label is tight without loosened space.

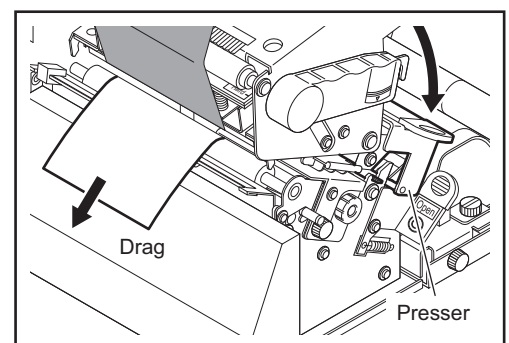


To fix the presser, it is necessary to align the end of the backing paper of label to the scale mark.

For details, please refer to step 12 on Page 1-16.

### 14 Fasten the Presser.

Lower the Presser towards the lock till it gives a clicking sound indicating it is Fastened.

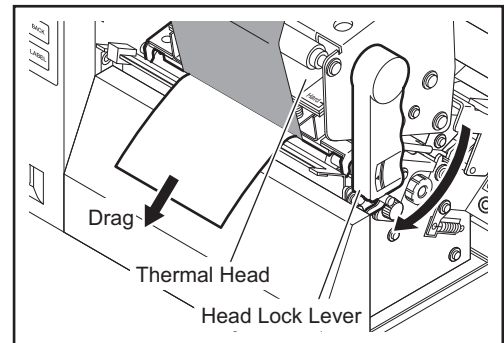


**POINT**

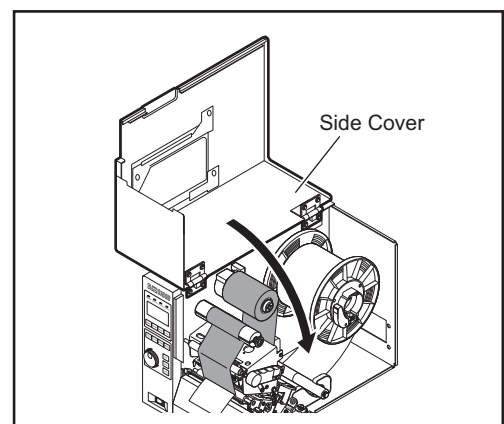
When lowering the Thermal Head, please drag the label so that the it is tight.

**15** Lower the Head Lock Lever towards the lock.

Thermal Head is lowered.

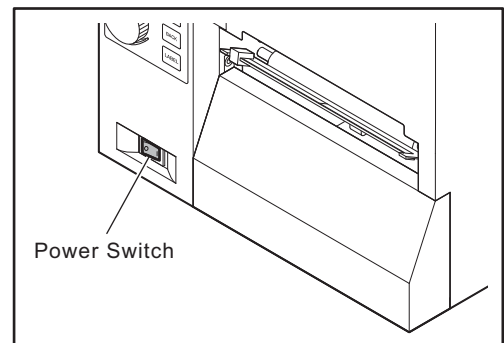


**16** Close the Side Cover.



**17** Press on the [ | ] side of the Power Switch and power source is turned ON.

Power lamp lights up and the printer is started.





By pressing the button **FEED** several times, Label pitch can be saved.

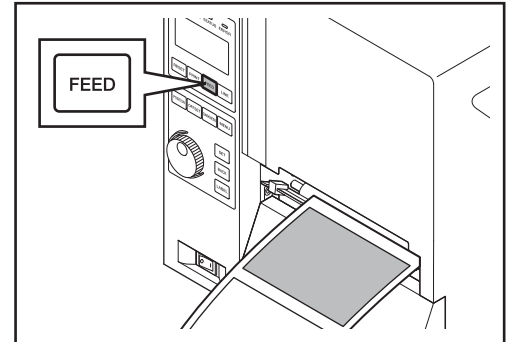


Under Tear-off mode, send the label till it reaches the Tear-off position.

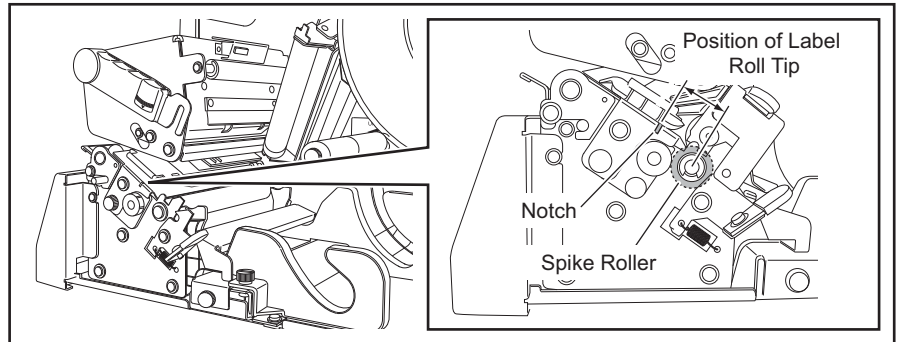
## 18 Locate the beginning of the Label.

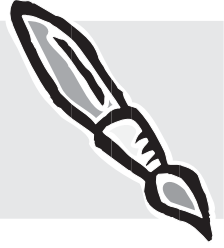
Press the button **LINE** to set the printer offline and press the button **FEED** several times

- \* Please confirm that the Label can be fed smoothly.  
If the Label Roll is set slant, please re-confirm the running of Label Roll and the width of Centering Guide.



- \* After arranging the tip of Label Roll within the area shown in the picture and installing Label Roll, press **FEED** button till the tip of Label Roll is at the beginning position and stop.  
For settings of Label Size ("3.3.8 Setting of Label Size" on pages 3-21), if Label pitch is set up in advance label can be printed online.





A series of horizontal dotted lines for writing, extending across the width of the page.



# Chapter 2

## BASIC OPERATIONS

Following is an explanation of the basic operations of this printer.

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# 2.1 Before Starting Work

This section explains how to check the machine before operation and how to switch between online and offline statuses.

## 2.1.1 Checks Before Operation

In order to keep the pinter in good condition for regular use, please check the following places before you actually start any operation of the printer.

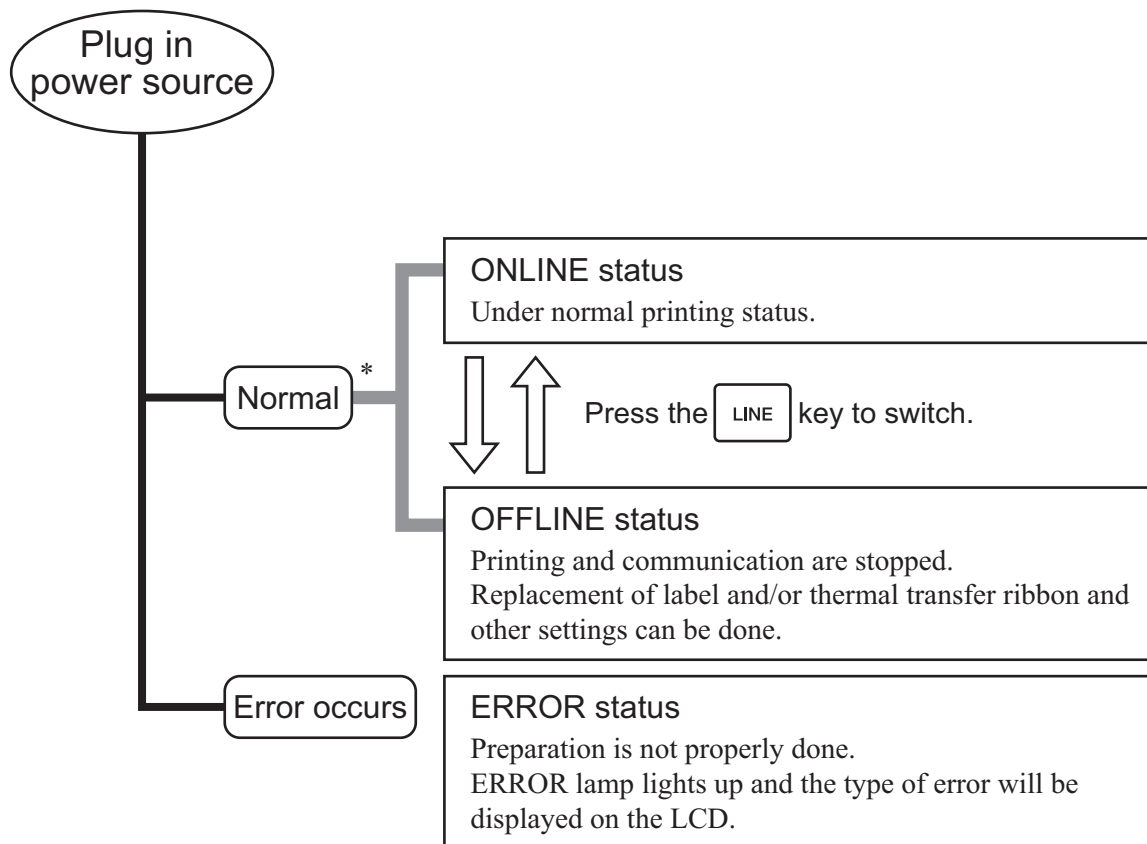


Before checking the printer, please press the **LINE** key to turn the printer online.

Place for Checking	Solution
Dirtiness on the exterior parts	Please wipe the dirty places with hardly squeezed soft cloth.
Dirtiness on the interior parts	Wipe the dirty places on the interior parts with cloth. For parts like thermal head and platen roller, please remove dirty and label adhered thereto, then wipe them with a cotton swab soaked with isopropyl alcohol. Please read “4.1 Cleaning the Interior of the Printer” on page 4-2 for details.
Confirm the status of label feed	Press the <b>LINE</b> key to turn the printer online, And press the <b>FEED</b> key to adjust printing position.

## 2.2 Online and Offline

“Online” refers to the status under which the printer is connected to computer and can receive data for printing; “offline” refers to the status under which the printer is disconnected with computer and cannot receive data from the computer. Please turn the printer Offline while setting up the printer on operating panel or doing any cleaning.



\* Start mode can be configured for this printer.  
The default setting is ONLINE start.

## 2.2.1 Operating in Online Mode

When the printer is online, it can finish the following operations.

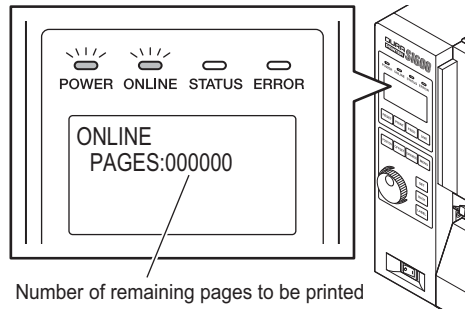
### POINT

When starting printing, please confirm the online/offline status.

■ Receive data from computer and print it out.

■ Press the **LINE** key, switch the printer offline and printing process can be suspended.

### Online Status



If the printer is not online, follow the steps to turn the printer online.

## Switching to Online Mode

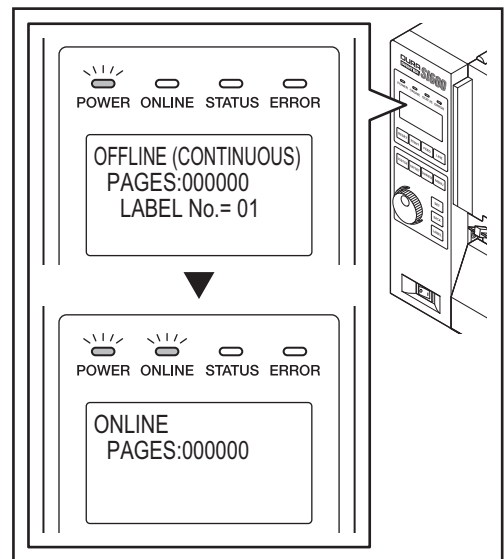
**1** Press the **LINE** key.

Online lamp lights up and the word "ONLINE" will be displayed on the LCD.

If there are labels to be printed, printing will be restarted and the number of remaining labels to be printed will be displayed.

\* If the printer is under error status (ERROR lamp lights up and error message is displayed on the LCD), the printer is not online. Please fix the problem causing the error and then switch the printer online.

\* The printer is not online when you are setting up the machine. Please finish setting up and then switch the printer online.



## 2.2.2 Operating in Offline Mode

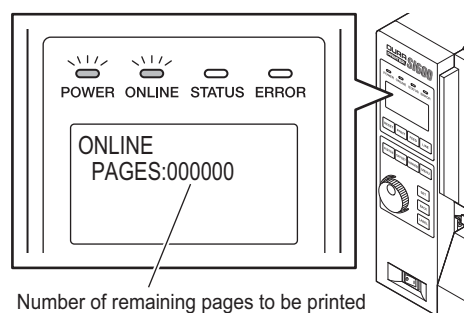
### POINT

When setting or adjustment of label pitch or other operation is to be done, it is necessary to turn the printer offline.

When the printer is stopped, the following operations can be done.

- Press the **LINE** key, and switch the printer online.  
If printing is suspended, printing process will be restarted.
- Press the **FEED** key, and the front end of label will be located.  
Please read “Locating the uptake point of the label roll” on page 2-6 for detailed operation.
- Press the **PRINT** key to print only one piece of lable with the setting of previous printing operation.  
Please read “Re-Print a Label” on page P.2-6 for detailed operation.
- Press the **RESET** key to delete the data received from computer.  
Please read “Delete the Received Data” on page P.2-7 for detailed operation.
- Press the **MENU** key to set up the configuration of this printer.  
Please read “Setup Procedure” on Chapter 3 for detailed operation.
- Press the **LABEL** key to change the configuration (Label No.) of label printing.  
Please read “Change Print Configuration (Label No.)” on page P.2-7 for detailed operation.
- Press the **POSITION** key to adjust the home position of label.  
Please read “Adjust the Home Position of Label” on page P.2-8 for detailed operation.
- Press the **OFFSET** key to adjust operation position.  
Please read “Adjust Tear off Position / Cutter Position / Dispenser Position” on page P.2-9 for detailed operation.  
\* The contents for adjustment differ depending on the operation options in the setting menu of “Printing Mode” that shows the current configuration for printing.
- Press the **DARKNESS** key to adjust print darkness.  
Please read “Adjust Print Darkness” on page P.2-10 for detailed operation.
- Use CF card in which printing data is saved and the printer can complete stand-alone printing.  
Please read “Stand-Alone Printing” on page 2-11 for detailed operations.  
\* Only when the CF card slot (option) is installed and stand-alone printing is enabled, the operation can be completed.

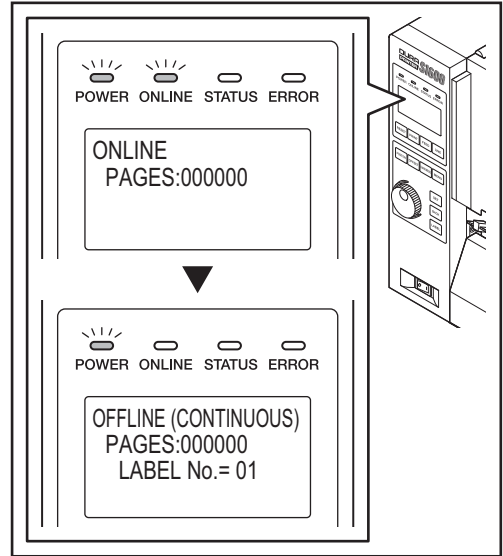
### Offline Status



If the printer is not offline, follow the steps to turn the printer offline.

**Switching to Offline Mode**

- 1 Press the **LINE** key.  
Online lamp goes out, and the word "STOPPED" will be displayed on the LCD.  
If printing is not finished, the process will be suspended.



**Locating the Uptake Point of the Label Roll**

This will be done when the printing of labels ends abruptly or the label has to be replaced.  
By locating the beginning of label, label pitch can be memorized.

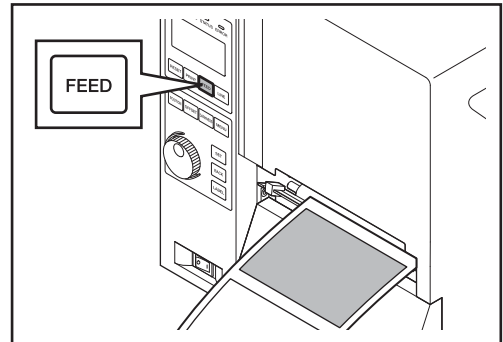
**POINT**

The **FEED** Key can be operated only under offline status.

**POINT**

If it is not stable, please feed 3-4 pieces of label.

- 1 Press the **FEED** key for a number of times.  
The label can be fed until the beginning part is set ready for printing.



**Re-Print a Label**

Re-print the label printed immediately previously.

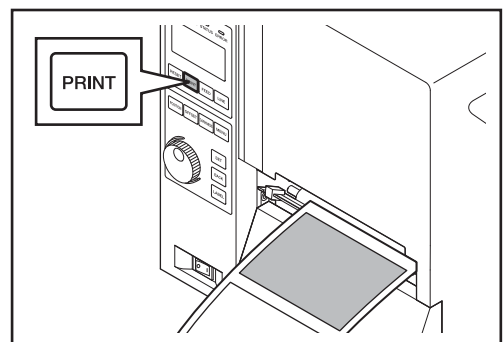
**POINT**

The **PRINT** Key can be operated only under offline status.

**POINT**

Turn off power and data for printing will be deleted. The data cannot be re-printed after restarting.

- 1 Press the **PRINT** key.  
Print 1 piece of label previously printed. If there is no previous printing of any label, this operation is not effective.





If you turn off power, the operation produces the same effect of deletion.

### POINT

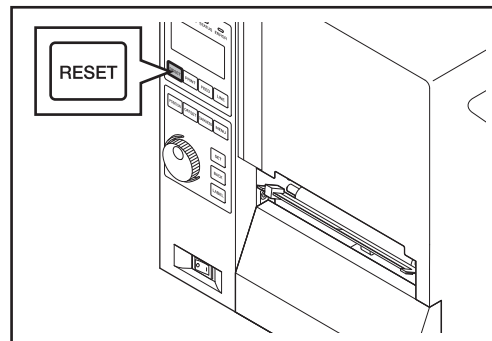
This operation cannot be properly done if the printer is receiving data. Please wait till the computer stops sending data and then press the key.

## Delete the Received Data

Delete the data received from computer.

- 1 Keep pushing **RESET** for over 2 seconds.

The received data will be deleted.



### POINT

If there is data waiting to be printed, this operation cannot be done.

Please go on with this operation after deleting the data or all printings are finished.



Press the **BACK** key, and operation will be suspended.

## Change Print Configuration (Label No.)

Change the configuration (Label No.) that is used for current printing.

[Example] Change Label No. from 1 to 3

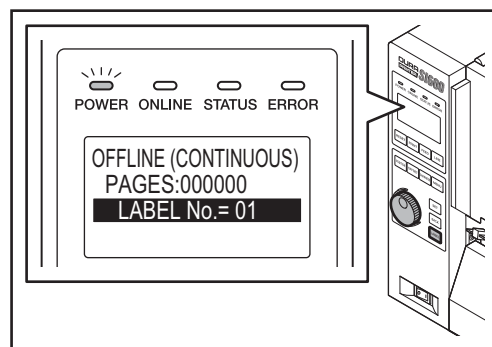
- 1 Press the **LABEL** key.

The label No. line on the LCD will be displayed in reverse video.

- 2 Turn the dial and the label No. used will be displayed.



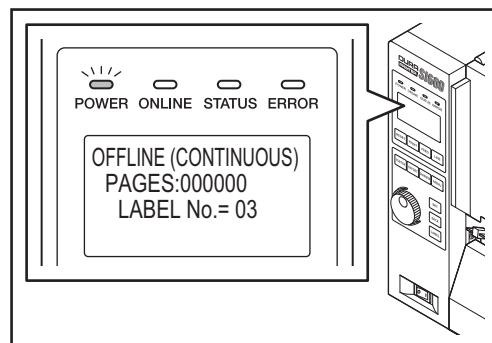
If you turn the dial, the registered Label No.'s will be displayed one by one.



- 3 Press the **SET** key.

Return to the scene showing label No. and the print configuration will be changed.

\* If you want to change the print configuration for different label size, please refer to "1.5 Installing the Label Roll" on page 1-14 for details.



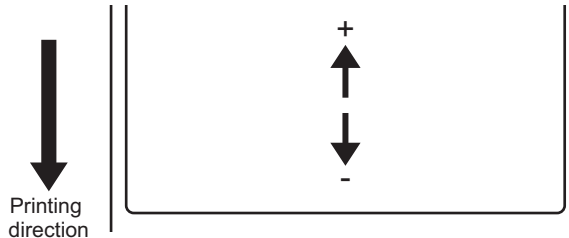
**Adjust the Home Position of Label**

**POINT**

If there is data waiting to be printed, this operation cannot be done. Please go on with this operation after deleting the data or all printings are finished.

If the printed label shows slippage, adjust the home position of label.

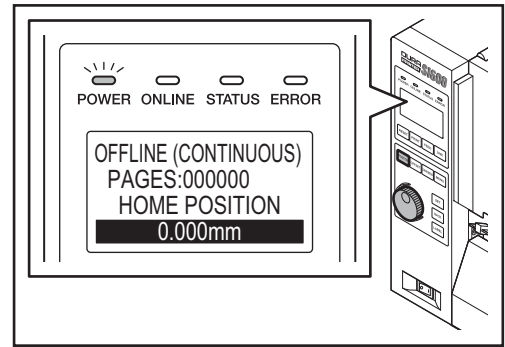
- \* Increase the value for adjustment to the home position of label that has been set up in print configuration, and the results indicates the actual home position.



If you increase adjustment value, the print position will be moved backward.

[Example] Adjust the home position by 0.83 mm.

- 1 Press the **POSITION** key.  
"HOME POSITION" is displayed on the LCD, and the value line is displayed in reverse video.

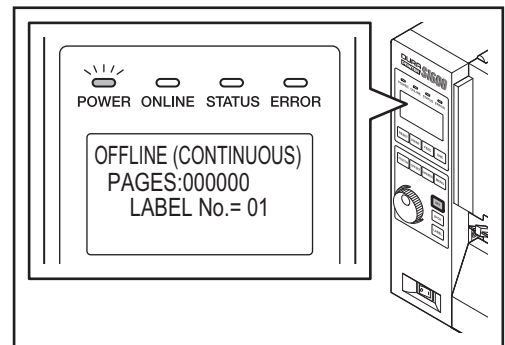


- 2 Turn the dial and change the adjustment value.

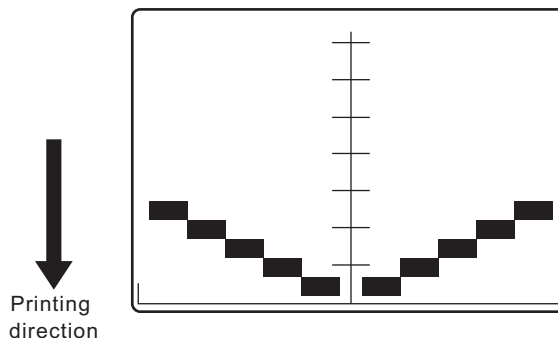


Range for adjustment : -50.000mm ~ 50.000mm  
Adjustment interval : 0.042mm

- 3 Press the **SET** key.  
Confirm the adjustment value to return to previous scene, and one piece of label will be test-printed.



Confirm the printing position shown on the printed label. If further adjustment is necessary, do the operations again from step 1.



The horizontal line on the front is the position where printing starts. Please adjust the horizontal line based on standard.

Horizontal line



Press the **BACK** key, and operation will be suspended.



## Adjust Tear off Position/Cutter Position/Dispenser Position

### POINT

If there is data waiting to be printed, this operation cannot be done.

Please go on with this operation after deleting the data or all printings are finished.

If the printed label shows slippage, adjust the operation positions according to different printing modes.

- \* Increase the value for adjustment to operation position that has been set up in print configuration, and the results indicates the actual operation position.



Please read the following for specific operation positions under different printing modes.

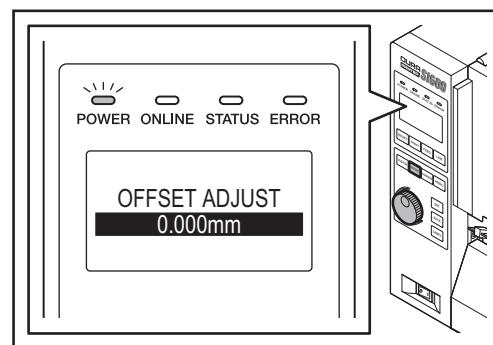
Under TEAR OFF mode: Refer to “3.3.5 Setting of Tear off Position” on page 3-18.

Under CUTTER mode: Refer to “3.3.2 Setting of Cutter Position” on page 3-15.

Under DISPENSER mode: Refer to “3.3.3 Setting of Dispenser Position” on page 3-16.

### 1 Press the **OFFSET** key.

The term of operation position is displayed on the LCD and the value line will be displayed in reverse video.



### 2 Turn the dial and change the adjustment value.



Range for adjustment : -50.000mm ~ 50.000mm

Adjustment interval : 0.042mm



Press the **BACK** key, and operation will be suspended.

### 3 Press the **SET** key.

Confirm the adjustment value to return to previous scene, and testing for the relevant printing mode will start.

Confirm the results of testing. If further adjustment is necessary, do the operations again from step 1.

#### Under TEAR OFF mode

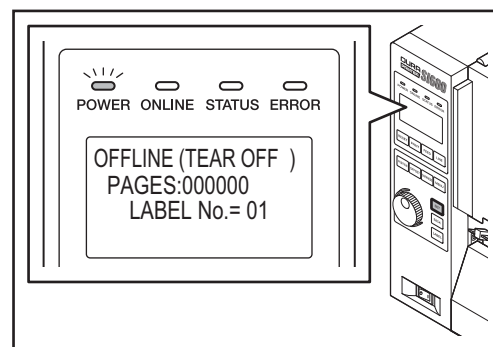
Test-print one piece of label and the tearing off operation will be carried out.

#### Under CUTTER mode

Test-print one piece of label and the cutting operation will be carried out.

#### Under DISPENSER mode

Test-print one piece of label and the dispensing operation will be carried out.



## Adjust Print Darkness

### POINT

If there is data waiting to be printed, this operation cannot be done.

Please go on with this operation after deleting the data or all printings are finished.



Print darkness can be adjusted by the unit of 1%. But, the resulted darkness with adjustment cannot be lower than 10% or higher than 100%.

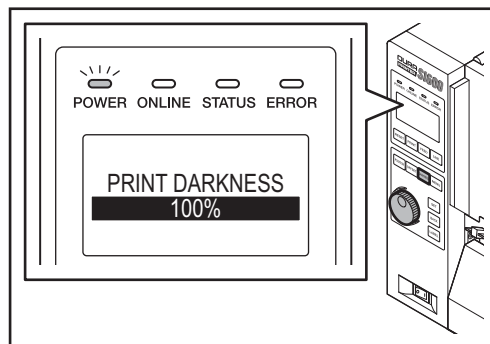


Press the **BACK** key, and operation will be suspended.

If the print on label is too light or too dark, adjustment of print darkness can be done.

- \* Increase the value for adjustment to print darkness that has been set up in print configuration, and the results indicates the actual print darkness.

**1** Press the **DARKNESS** key.  
 "PRINT DARKNESS" is displayed on the LCD, and the value line will be displayed in reverse video.

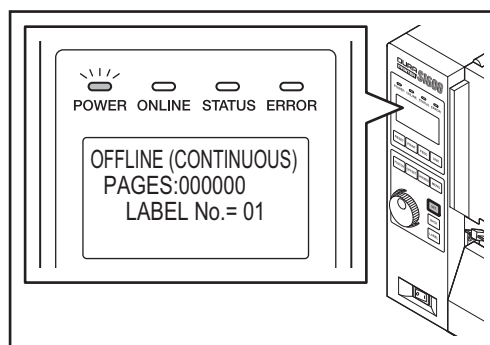


**2** Turn the dial to adjust print darkness.



Range for adjustment : -100% ~ 100%

**3** Press the **SET** key.  
 Confirm the adjustment value to return to previous scene.



## Stand-Alone Printing

Use CF card in which printing data is saved and the printer can complete stand-alone printing.

**POINT** Only when CF card slot (option) is installed and stand-alone printing is enabled, the operation can be completed.

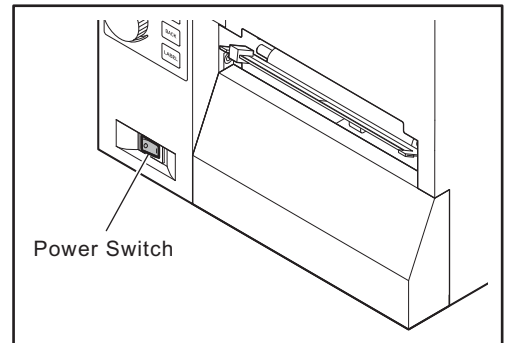
Please read "3.4.12 Setting of Stand-Alone" on page 3-53 for details about the settings of this function.

**CAUTION**

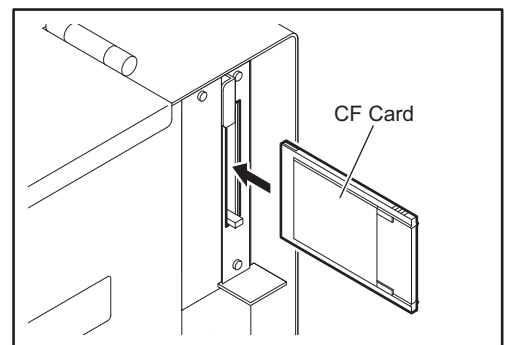
Please turn OFF power before inserting or pulling out the CF card.

**1** Press on the [ ○ ] side of the Power Switch and power is turned OFF.

Power lamp goes out, and the power source is disconnected.

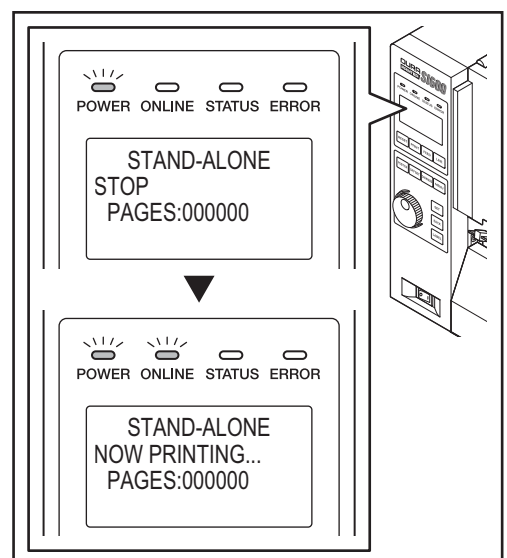


**2** Insert the CF card, in which printing instruction data is saved, into the CF card slot on the rear of the printer.



**3** Press on the [ | ] side of the Power Switch and power is turned ON.

Power lamp lights up and the printer is started under offline status.



**4** Press the **LINE** key.

The printer is switch online. It will read the printing instruction data in the CF card and start printing.

When printing is finished, the printer will be switched offline automatically.

**NOTE**

Press the **LINE** key after printing is finished, the printer will be switched online and reprinting of the data can be done.



A series of horizontal dotted lines for handwriting practice, extending across the width of the page.

# Chapter 3

## SETUP PROCEDURE

This chapter explains how to set the printer.

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# 3.1 Setting Mode

Under setting mode, necessary settings in preparation for printing and test print can be done.

## 3.1.1 Type of Setting Mode

There are 7 types of setting mode, namely “LABEL SET” mode, “ADVANCED” mode, “INTERFACE” mode, “TEST PRINT” mode, “DUMP” mode, “SENSOR CHECK” mode and “VERSION UP” mode; by indicating certain type of mode, items with detailed contents can be selected for setting.

Setting Mode	Contents
LABEL SET	Setting of print configuration like label size, print darkness, etc. can be done. Depending on different usage, Label No. of print configuration can be registered from 01 to 100.
ADVANCED	Settings about the basic operations of the printer like adjustment of LCD brightness and language change can be done.
INTERFACE	Communication setting of installed interface board (option) can be done. Depending on the type of interface, the displayed contents are different.
TEST PRINT	In order to confirm the conditions of printing, test print of demo pattern printing and barcode printing can be done. And, head check for Thermal Head or printing the contents of settings can also be done.
DUMP	Printing of the contents received from computer, or writing the contents into the CF card (option) as a file can be done.
SENSOR CHECK	Checking of operations as for whether the sensor is properly functioning or not can be done.
VERSION UP	Rewriting the program of the printer from computer or from the CF card can be done.



### 3.1.2 Selection of Setting Mode

Here gives the explanation of the operational procedure as for how to change from normal mode to various setting modes.

**1** Change to OFFLINE status.  
By pressing the **LINE** key once at a time, the ONLINE Lamp lights up (ONLINE status) ↔ goes out (OFFLINE status).

**2** Select the print configuration for setting.  
For operational procedures of print configuration selection, please read “Change Print Configuration (Label No.)” on page 2-7.



By pressing the **MENU** key once at a time, mode changes between normal mode (OFFLINE status) and setting mode (LABEL SET).

**3** Press the **MENU** key.  
Change the setting mode, and the setting mode of “LABEL SET” will be displayed on the LCD.

**4** Turn the dial to display a random type of setting mode.

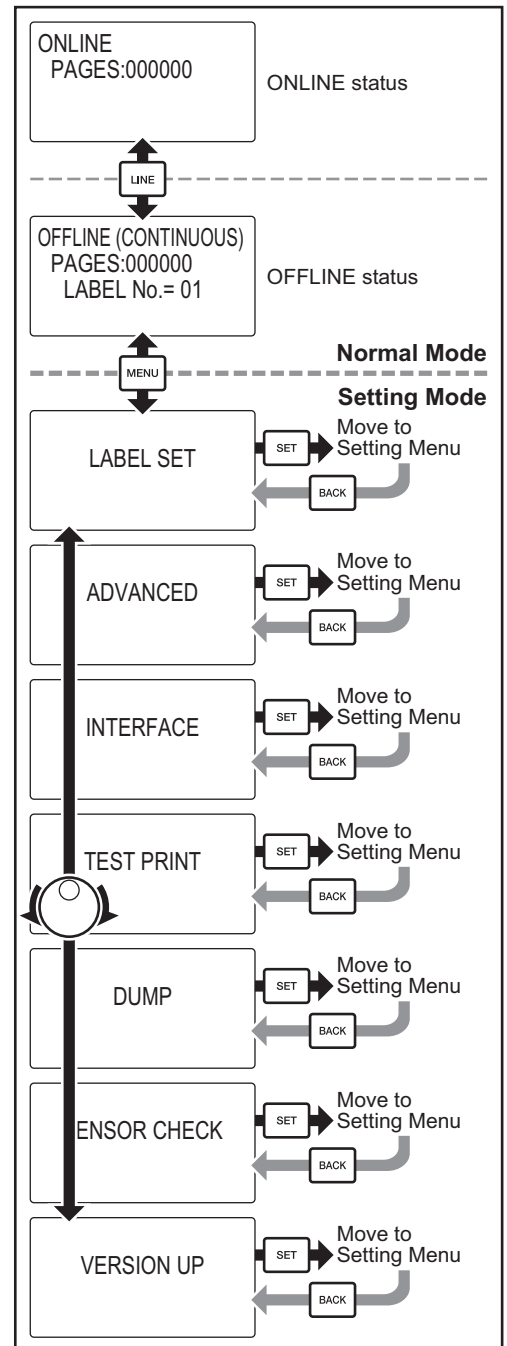


**5** Press the **SET** key.  
Decide the setting mode, and the setting menu will be displayed.

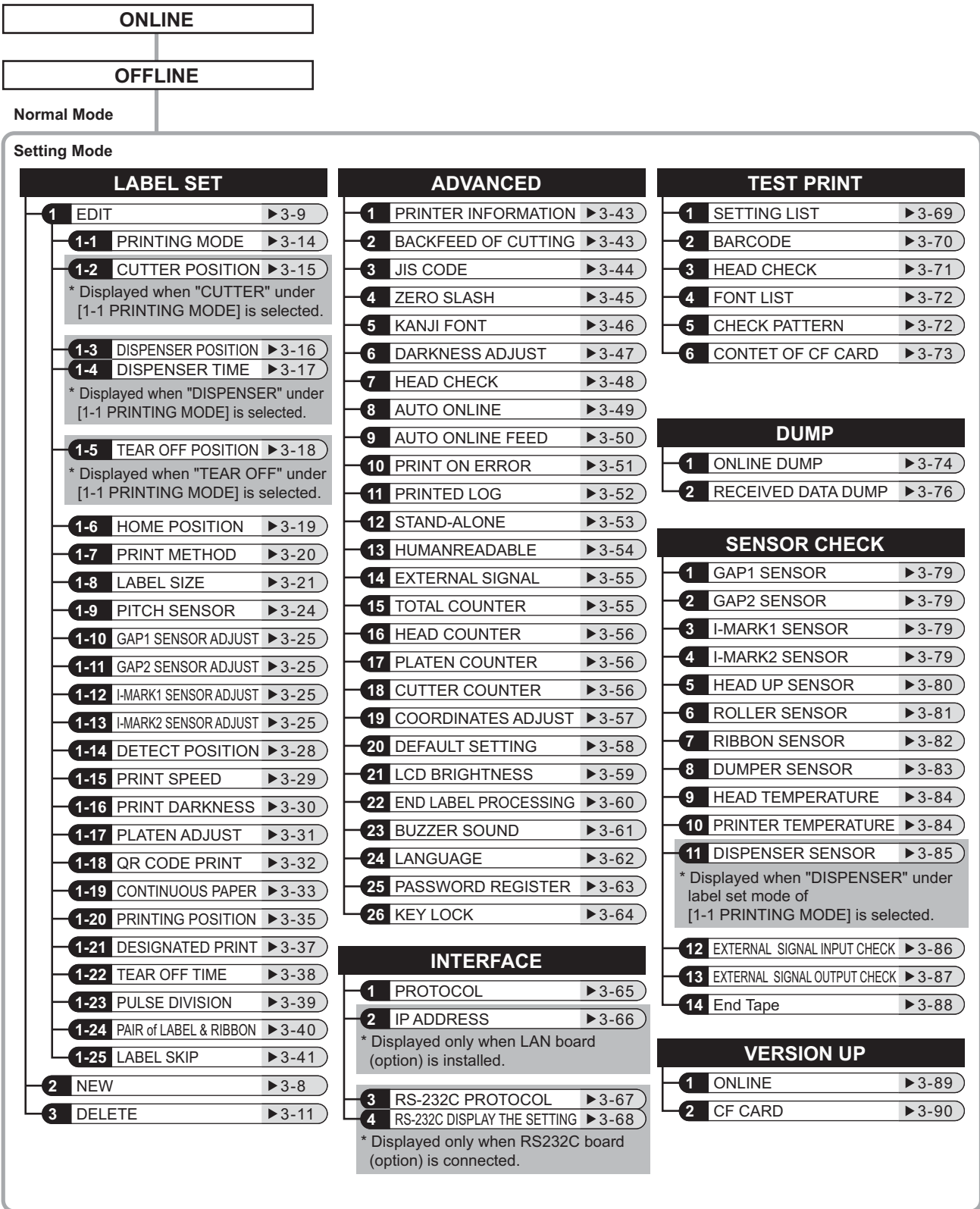


Press the **BACK** key after you have decided the setting mode, you will be back on the selection of setting mode.

- Please read the following pages for operations under various setting menu.
- **LABEL SET Mode**  
Please read “3.2 Operations under LABEL SET Mode” on page 3-7.
  - **ADVANCED Mode**  
Please read “3.4 Operations under Advanced Mode” on page 3-42.
  - **INTERFACE Mode**  
Please read “3.5 Operations under Interface Mode” on page 3-65.
  - **TEST PRINT Mode**  
Please read “3.6 Operations under Test Print Mode” on page 3-69.
  - **DUMP Mode**  
Please read “3.7 Operations under Dump Mode” on page 3-74.
  - **SENSOR CHECK Mode**  
Please read “3.8 Operations under Sensor Check Mode” on page 3-78.
  - **VERSION UP Mode**  
Please read “3.9 Operations under Version Up Mode” on page 3-89.



**3.1.3 Menu Flow of Setting Mode**



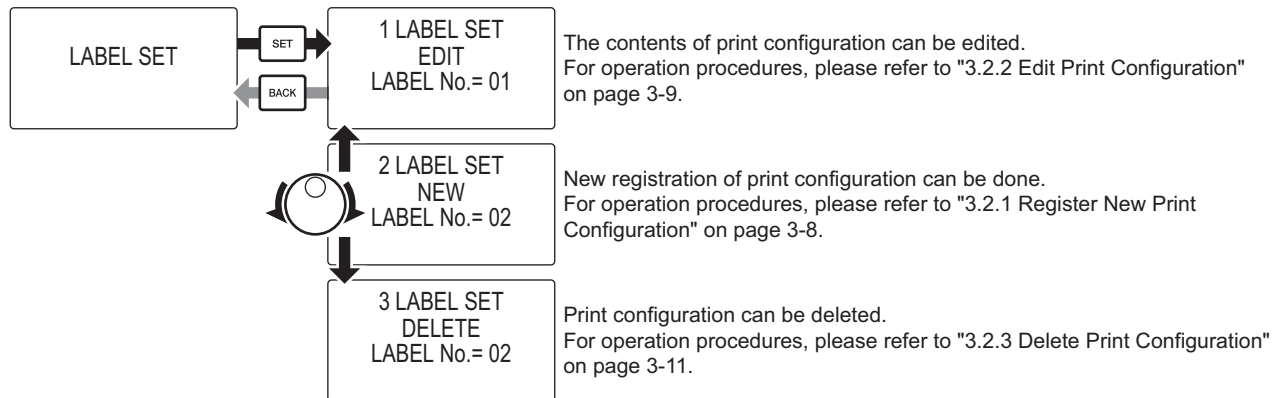
## 3.2 Operations under LABEL SET Mode

Under LABEL SET mode, setting of label print configurations like label size, print darkness, home position of label printing, etc. can be done.

Management of print configuration is done via Label No., and depending on the type and usage of label multiple numbers can be registered.

Label No. can be registered from 01 to 100 for this printer and No.01 is registered as default setting.

After moving to LABEL SET mode, turn the dial to select an option (EDIT/NEW/DELETE) of the print configuration for setting.



**3.2.1 Register New Print Configuration**

Here is an explanation of how to register a new print configuration.

**POINT** Below is only an introduction of how to register the (Label No.) new print configuration. After registration of new Label No., please read "3.2.2 Edit Print Configuration" on page 3-9 for reference to set print configuration.



Press the **BACK** key, and return to selection of setting mode.

**1** Under LABEL SET mode, turn the dial to show "NEW" on the menu.



**2** Press the **SET** key. Move to selection of copy origin and the option line will be displayed in reverse video.

**3** Turn the dial and the print configuration of copy origin will be displayed.



**4** Press the **SET** key. Decide the configuration for copy origin and move to selection of registered Label No.; the option line will be displayed in reverse video.

**5** Turn the dial to display the newly registered print configuration (Label No.).



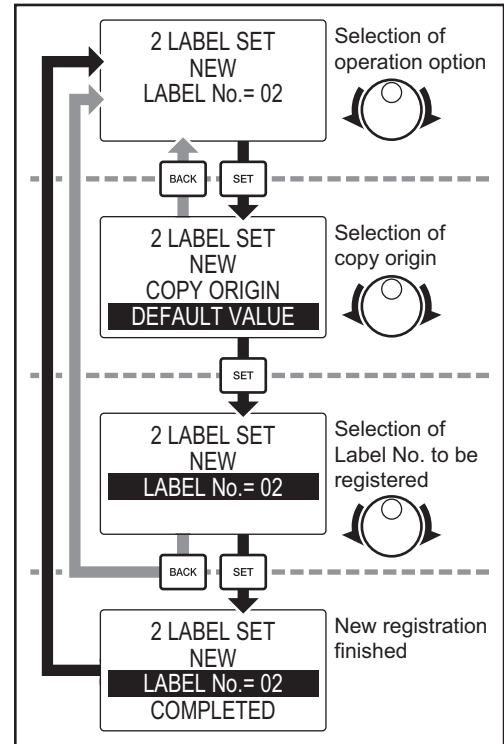
**6** Press the **SET** key. Register the new print configuration and return to selection of operation options. Next, please read "3.2.2 Edit Print Configuration" on page 3-9 for reference to set the various items of the newly registered print configuration.



Press the **BACK** key, operation will be stopped and the menu returns to selection of operation option.



Press the **BACK** key, operation will be stopped and the menu returns to selection of operation option.



### 3.2.2 Edit Print Configuration

Below is an explanation of how to edit print configuration.

**CAUTION** The changed print configuration cannot be restored with the printer alone. Before any change, please keep back-up data in your computer or CF card.



Press the **BACK** key, and return to selection of setting mode.

- 1 Turn the dial under LABEL SET mode to display "EDIT" on the scene.



- 2 Press the **SET** key.

Move to selection of print configuration, and the Label No. line will be displayed in reverse video.

- 3 Turn the dial to display the edited print configuration (Label No.).



- 4 Press the **SET** key.

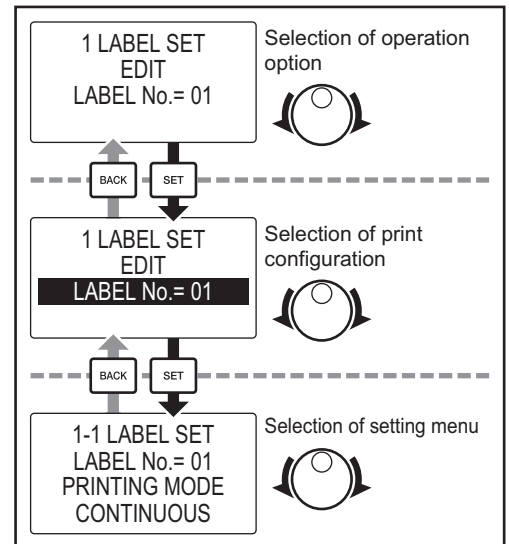
Move to EDIT operation and a message of "PRINTING MODE" will be displayed in the third line of the setting menu on the LCD.

- 5 Turn the dial to display the setting menu.



Please complete all operations on the entire setting menu that need editing.

For the specific options of setting menu for print configuration, please read "■ Setting Menu for Print Configuration" on page 3-10.



Press the **BACK** key, operation will be stopped and the menu returns to selection of operation option.



Press the **BACK** key, and you will return to selection of print configuration.

## ■ Setting Menu for Print Configuration

Setting Menu	Contents	Reference Page
1-1 PRINTING MODE	Set the operations after printing is finished.	P.3-14
1-2 CUTTER POSITION	Set the operation position of where to cut off the media after printing. * Menu displaying and setting can be done only when "CUTTER" is selected under setting menu "1-1 PRINTING MODE".	P.3-15
1-3 DISPENSER POSITION	Set the operation position of where to peel off the media after printing. * Menu displaying and setting can be done only when "DISPENSER" is selected under setting menu "1-1 PRINTING MODE".	P.3-16
1-4 DISPENSER TIME	Set the time for stand-by in order to peel off the media after printing is finished. * Menu displaying and setting can be done only when "DISPENSER" is selected under setting menu "1-1 PRINTING MODE".	P.3-17
1-5 TEAR OFF POSITION	Set the operation position of where to tear off the media after printing is finished. * Menu displaying and setting can be done only when "TEAR OFF" is selected under setting menu "1-1 PRINTING MODE".	P.3-18
1-6 HOME POSITION	Adjust the Detect Position of Pitch Sensor.	P.3-19
1-7 PRINT METHOD	Set the type of print media (thermal paper /heat-transfer paper).	P.3-20
1-8 LABEL SIZE	Set Label Size (width, length and pitch between labels).	P.3-21
1-9 PITCH SENSOR	Set the type of Pitch Sensor that is used for detecting label.	P.3-24
1-10 GAP1 SENSOR ADJUST	Adjust the sensitivity of Gap1 Sensor.	P.3-25
1-11 GAP2 SENSOR ADJUST	Adjust the sensitivity of Gap2 Sensor.	P.3-25
1-12 I-MARK1 SENSOR ADJUST	Adjust the sensitivity of I-Mark1 Sensor.	P.3-25
1-13 I-MARK2 SENSOR ADJUST	Adjust the sensitivity of I-Mark2 Sensor.	P.3-25
1-14 DETECT POSITION	Set the Detect Position of label (front /rear).	P.3-28
1-15 PRINT SPEED	Set print speed.	P.3-29
1-16 PRINT DARKNESS	Set Print darkness.	P.3-30
1-17 PLATEN ADJUST	Adjust the perimeter of Platen Roller.	P.3-31
1-18 QR CODE PRINT	Set print quality for printing of QR code.	P.3-32
1-19 CONTINUOUS PAPER	Set permission for using continuous paper as well as adjust the value related to paper feeding operations during using continuous paper.	P.3-33
1-20 PRINTING POSITION	Adjust the start position of printing.	P.3-35
1-21 DESIGNATED PRINT	Set whether to, or not to, enable the print configuration that is set in the applications either in this printer or in your computer.	P.3-37
1-22 TEAR OFF TIME	Set the time for stand-by in order to complete the operation of tearing off the media after printing. * Menu displaying and settings can be done only when "TEAR OFF" is selected under "1-1 PRINTING MODE" of the setting menu.	P.3-38
1-23 PULSE DIVISION	Set the print method when using thermal head for printing.	P.3-39
1-24 PAIR of LABEL & RIBBON	Set the combination number of the label and the ribbon.	P.3-40
1-25 LABEL SKIP	Set the error condition when label is being peeled off.	P.3-41

### 3.2.3 Delete Print Configuration

Below is an explanation of how to delete print configuration.



**CAUTION** The deleted print configuration cannot be restored with the printer alone. Before any change, please keep back-up data in your computer or CF card.

**POINT**

Label No.01 is registered as default setting, and therefore it cannot be deleted.



Press the **BACK** key, and return to selection of setting mode.

- 1 Turn the dial under LABEL SET mode to display “DELETE” on the scene.



- 2 Press the **SET** key.

Move to selection of data for deletion and the option line will be displayed in reverse video.

- 3 Turn the dial to display the print configuration (Label No.) for deletion.



- 4 Press the **SET** key.

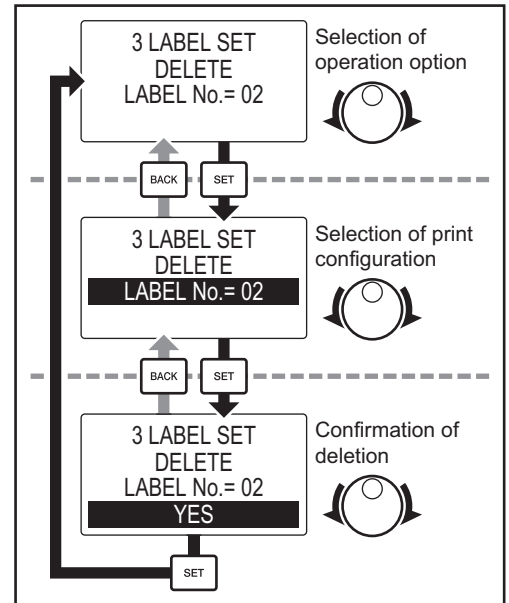
Move to the scene of confirming deletion.

- 5 Turn the dial to display “YES”.



- 6 Press the **SET** key.

Delete the print configuration and return to selection of operation options.



Press the **BACK** key, operation will be stopped and the menu returns to selection of operation option.



Press the **BACK** key, and you will return to selection of print configuration.



Press the **SET** key when “NO” is displayed, and return to selection of operation options without deleting print configuration.

# 3.3 Various Settings of Print Configuration

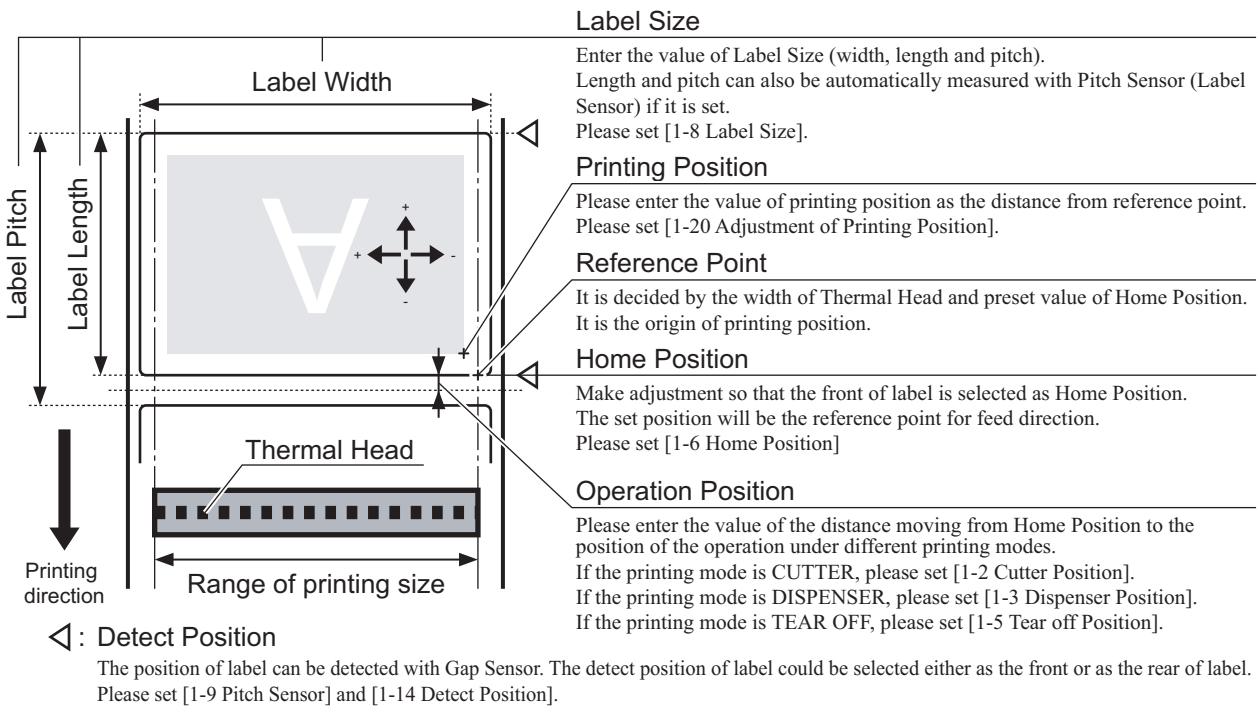
This section explains the operational procedures of various settings under Label Set mode.

Depending on the printing media used, print method of the printer and usage, settings of the print configuration are different. Following is an explanation about the various settings related to different media and the size under different printing modes.

- \* The maximum label width available for setting is within the range of print size range of 109.0 mm. For details about the available label width settings, please read "6.2 Specifications" on page 6-4.

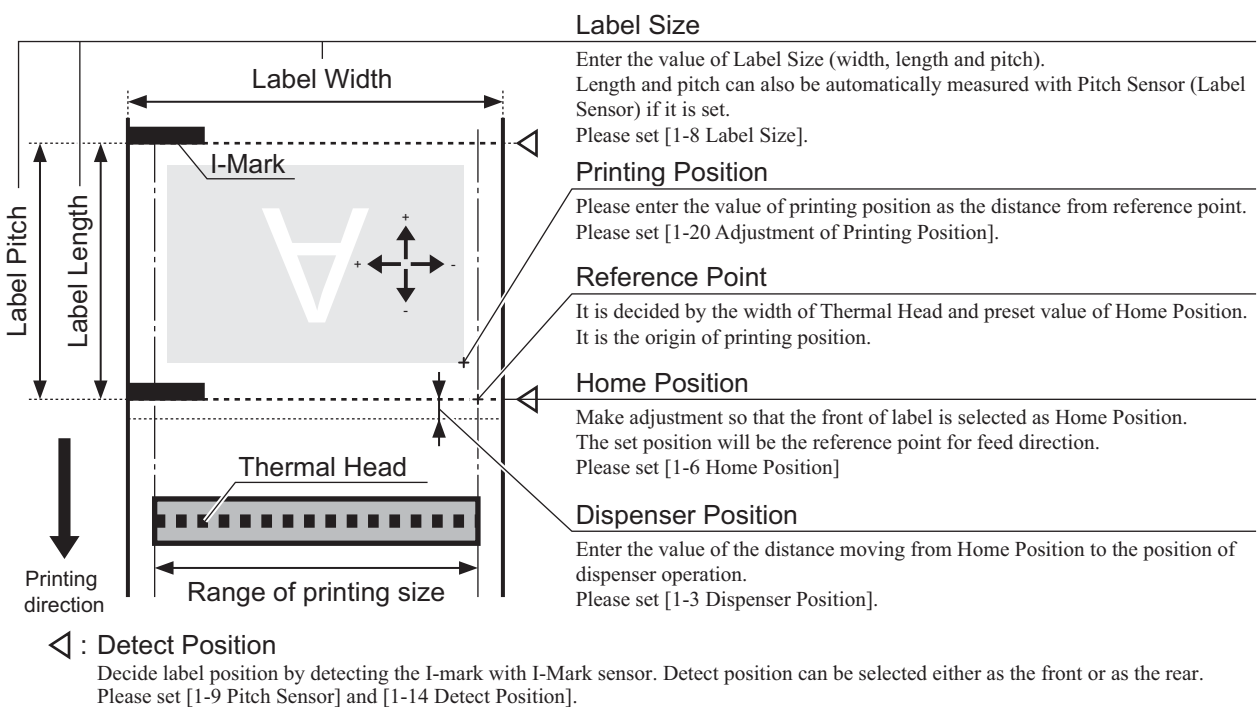
## ■ Using Label with Backing Paper

If label with backing paper is used, it is necessary to complete the settings below like printing position and size of the printed label.



## ■ Using Label with I-Mark

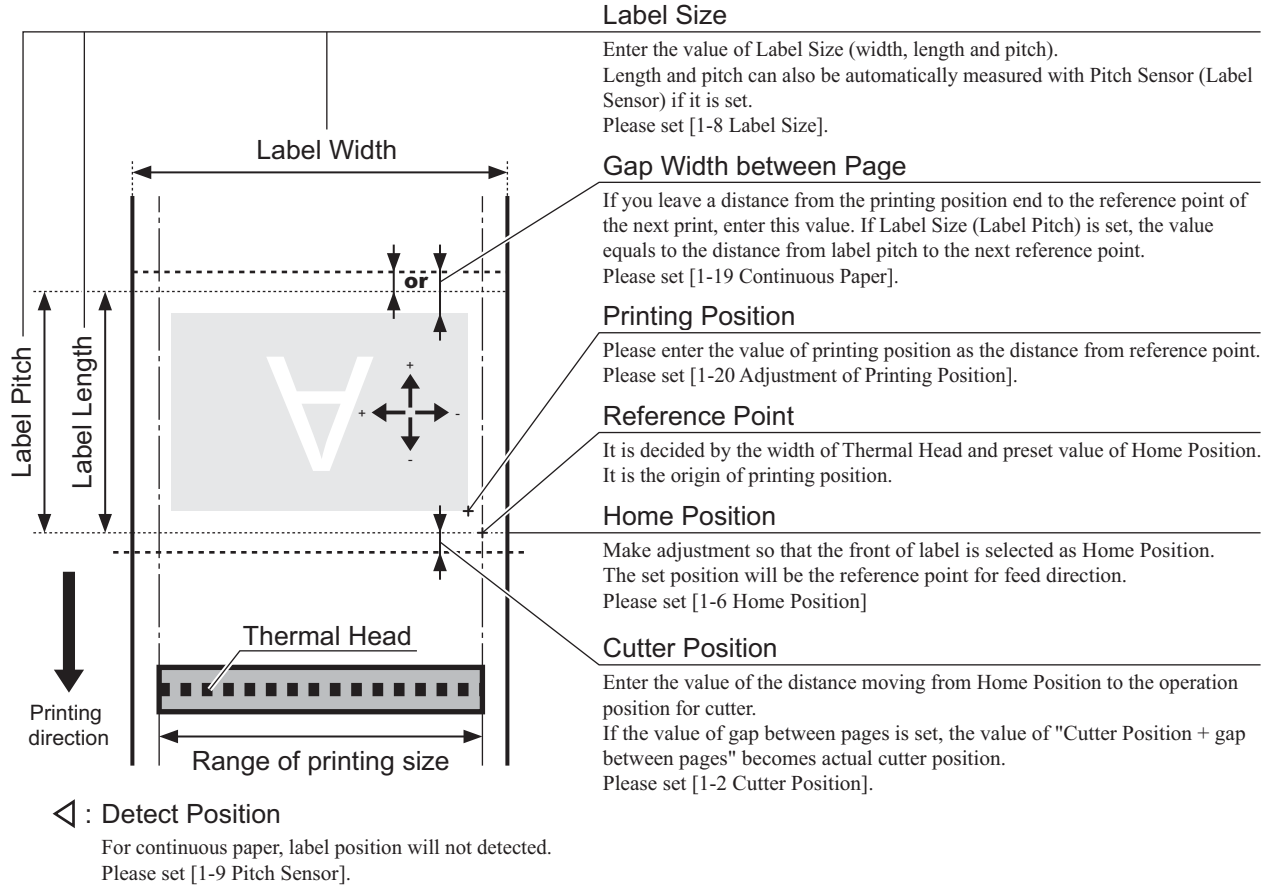
If label with I-Mark is used, it is necessary to complete the settings below like printing position and size of the printed label.





## ■ Using Continuous Paper

If continuous paper is used, it is necessary to complete the settings below like printing position and size of the printed label.



### Label Size

Enter the value of Label Size (width, length and pitch).  
 Length and pitch can also be automatically measured with Pitch Sensor (Label Sensor) if it is set.  
 Please set [1-8 Label Size].

### Gap Width between Page

If you leave a distance from the printing position end to the reference point of the next print, enter this value. If Label Size (Label Pitch) is set, the value equals to the distance from label pitch to the next reference point.  
 Please set [1-19 Continuous Paper].

### Printing Position

Please enter the value of printing position as the distance from reference point.  
 Please set [1-20 Adjustment of Printing Position].

### Reference Point

It is decided by the width of Thermal Head and preset value of Home Position.  
 It is the origin of printing position.

### Home Position

Make adjustment so that the front of label is selected as Home Position.  
 The set position will be the reference point for feed direction.  
 Please set [1-6 Home Position].

### Cutter Position

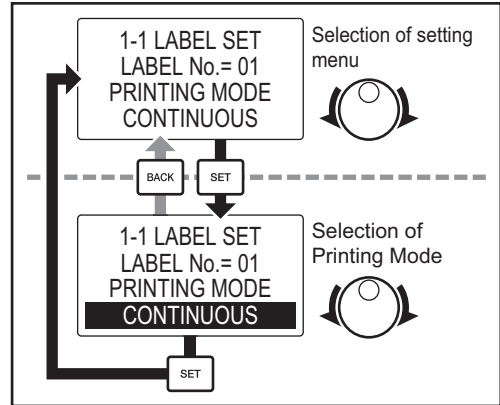
Enter the value of the distance moving from Home Position to the operation position for cutter.  
 If the value of gap between pages is set, the value of "Cutter Position + gap between pages" becomes actual cutter position.  
 Please set [1-2 Cutter Position].

**3.3.1 Printing Mode Settings**

Set the operations after printing is finished.

- 1 Display the "PRINTING MODE" menu under "LABEL SET" (Edit) mode.  
The current preset value will be displayed in the fourth line on the LCD.

- 2 Press the **SET** key.  
Move to selection of PRINTING MODE and the option line will be displayed in reverse video.



Press the **BACK** key and return to selection of a setting menu.

- 3 Turn the dial to display a random type of printing mode.



Printing Mode	Operation
CONTINUOUS	The media will be issued continuously.
TEAR OFF	After cutting off the issued media, rewind back to printing position and go on with the next issuing operation.
CUTTER	Cut off the issued media and move on to the next issuing operation. * It is enabled when the printer is installed with Cutter Unit (option). * The maximum cutting capacity is 40 cut/minute.
DISPENSER	Peel off the issued media, stand by for a certain period of time, and move on to the next issuing operation. * It is enabled when the printer is installed with Dispenser Unit (option).

- 4 Press the **SET** key.  
Confirm the printing mode and return to selection of setting menu.

### 3.3.2 Setting of Cutter Position

Set the operation position of where to cut off the media after printing.

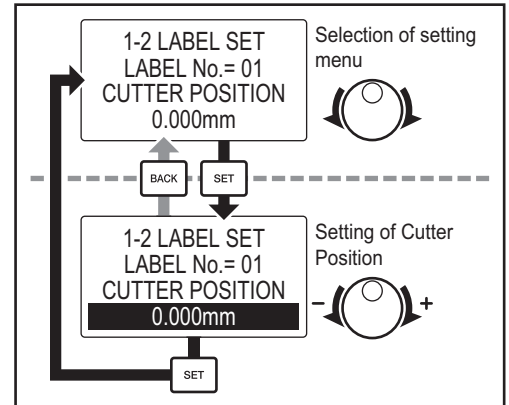
**POINT** It can be displayed only when "CUTTER" under "1-1 PRINTING MODE" is selected.  
Please read "3.3.1 Printing Mode Settings" on page 3-14 for details about operation of selection.

- 1 Display the "CUTTER POSITION" menu under "LABEL SET" (Edit) mode.

The current preset value will be displayed in the fourth line on the LCD.

- 2 Press the **SET** key.

Move to the operation of setting cutter position and the value line will be displayed in reverse video.



- 3 Turn the dial to display the value for setting.



Range for Setting : -50.000mm ~ 50.000mm  
Adjustment Interval: 0.042mm

- 4 Press the **SET** key.

Confirm the cutter position to return to the setting menu of operation selection and 1 piece of label will be printed for test.



NOTE  
Press the **BACK** key and return to selection of a setting menu.

**3.3.3 Setting of Dispenser Position**

Set the operation position of where to peel off the media after printing.

**POINT** It can be displayed only when “DISPENSER” under “1-1 PRINTING MODE” is selected.  
Please read “3.3.1 Printing Mode Settings” on page 3-14 for details about operation of selection.

**1** Display the “DISPENSER POSITION” menu under “LABEL SET” menu under “LABEL SET” (Edit) mode.  
The current preset value will be displayed in the fourth line on the LCD.

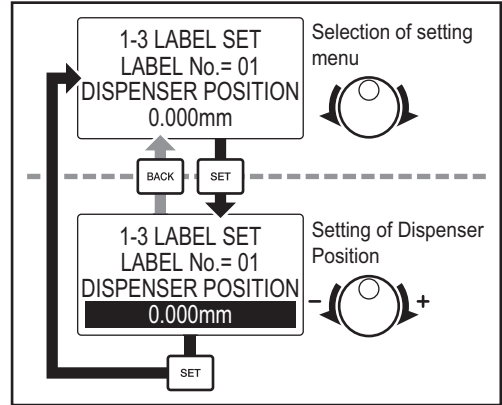
**2** Press the **SET** key.  
Move to the operation of setting dispenser position and the value line will be displayed in reverse video.

**3** Turn the dial to display the value for setting.



Range for Setting : -50.000mm ~ 50.000mm  
Adjustment Interval: 0.042mm

**4** Press the **SET** key.  
Confirm the dispenser position to return to the setting menu of operation selection and 1 piece of label will be printed for test.



Pressthe **BACK** key and return to selection of a setting menu.

### 3.3.4 Setting of Dispenser Time

Set the time for stand-by in order to peel off the media after printing is finished.

**POINT** It can be displayed only when "DISPENSER" under "1-1 PRINTING MODE" is selected.  
Please read "3.3.1 Printing Mode Settings" on page 3-14 for details about operation of selection.

- 1 Display the "DISPENSER TIME" menu under "LABEL SET" (Edit) mode.

The current preset value will be displayed in the fourth line on the LCD.

- 2 Press the **SET** key.

Move to the operation of setting Dispenser Time and the value line will be displayed in reverse video.

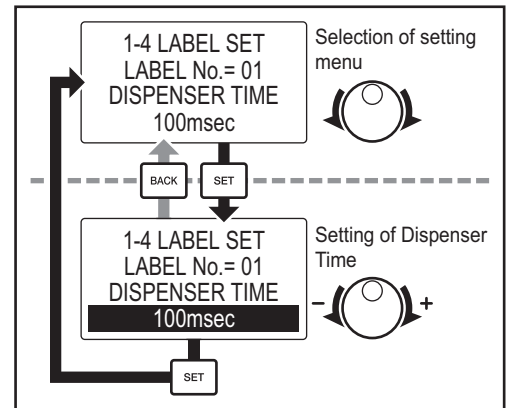
- 3 Turn the dial to display the value for setting.



Range for Setting : 0msec ~ 5000msec

- 4 Press the **SET** key.

Confirm the Dispenser Time and return to selection of setting menu.



Press the **BACK** key and return to selection of a setting menu.



Adjustment can be done by the unit of 1 msec.

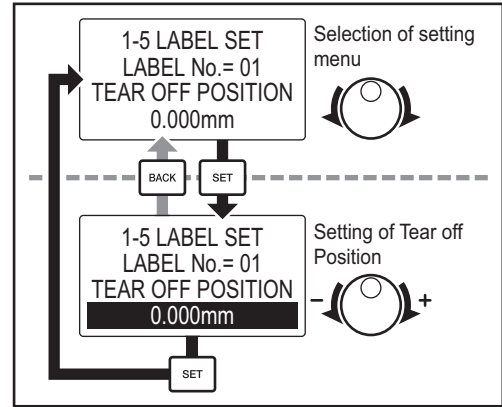
### 3.3.5 Setting of Tear off Position

Set the operation position of where to tear off the media after printing is finished.

**POINT** It can be displayed only when "TEAR OFF" under "1-1 PRINTING MODE" is selected.  
Please read "3.3.1 Printing Mode Settings" on page 3-14 for details about operation of selection.

**1** Display the "TEAR OFF POSITION" menu under "LABEL SET" (Edit) mode.  
The current preset value will be displayed in the fourth line on the LCD.

**2** Press the **SET** key.  
Move to the operation of setting Tear off Position and the value line will be displayed in reverse video.



**3** Turn the dial to display the value for setting.



Range for Setting : -15.000mm ~ 15.000mm  
Adjustment Interval: 0.042mm

**4** Press the **SET** key.  
Confirm the Tear off position to return to the setting menu of operation selection and 1 piece of label will be printed for test.



Press the **BACK** key and return to selection of a setting menu.

### 3.3.6 Setting of Home Position

Set the Home Position of Pitch Sensor (Label Sensor).

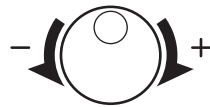
- 1 Display the "HOME POSITION" menu under "LABEL SET" (Edit) mode.

The current preset value will be displayed in the fourth line on the LCD.

- 2 Press the  key.

Move to the operation of setting Home Position and the value line will be displayed in reverse video.

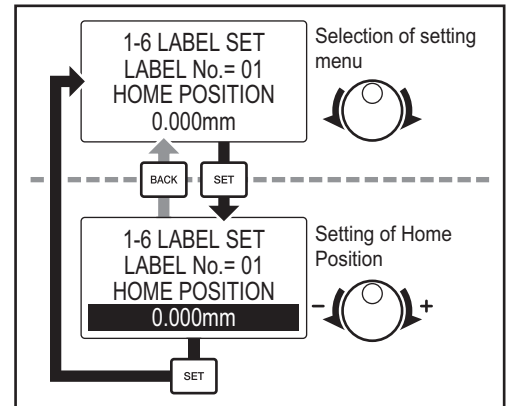
- 3 Turn the dial to display the value for setting.



Range for Setting : -50.000mm ~ 50.000mm  
Adjustment Interval: 0.042mm

- 4 Press the  key.

Confirm the home position to return to the setting menu of operation selection and 1 piece of label will be printed for test.



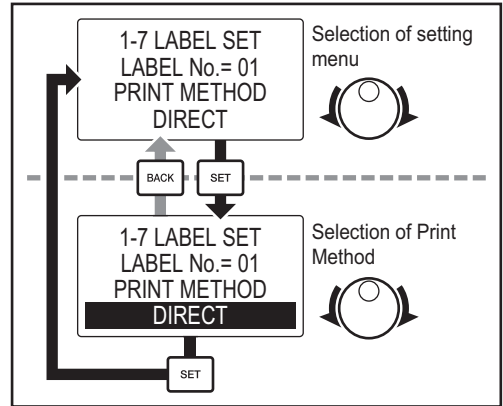
Press the  key and return to selection of a setting menu.

**3.3.7 Setting of Print Method**

Set the type of print media (thermal paper /heat-transfer paper).

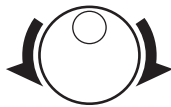
- 1 Display the “PRINT METHOD” menu under “LABEL SET” (Edit) mode.  
The current preset value will be displayed in the fourth line on the LCD.

- 2 Press the **SET** key.  
Move to selection of Print Method and the option line will be displayed in reverse video.



Pressthe **BACK** key and return to selection of a setting menu.

- 3 Turn the dial to display print methods.



Print Method	Content
DIRECT	Thermal paper is used as print media.
TRANSFER	Transfer paper is used as print media.

- 4 Press the **SET** key.  
Confirm the print media and return to selection of setting menu.



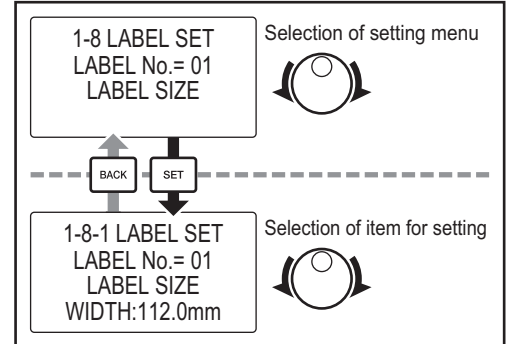
### 3.3.8 Setting of Label Size

Set Label Size (width, length and pitch between labels).

**1** Display the “LABEL SIZE” menu under “LABEL SET” (Edit) mode.

**2** Press the **SET** key.  
Move to selection of setting options and the option of “WIDTH” will be displayed in the fourth line on the LCD.

**3** Turn the dial to display the options for setting.



Press the **BACK** key and return to selection of a setting menu.



To set label size, please do it after confirmation with sections like “Using Label with Backing Paper”, “Using Label with I-Mark” on Page 3-12 and “Using Continuous Paper” on Page 3-13 first.

Option for Setting	Content
WIDTH	Set the width of label. Please read the under mentioned “■ Set Label Width” for operation procedures.
LENGTH	Set the length of label. Please read the under mentioned “■ Set Label Length” for operation procedures.
PITCH	Set the distance (in pitch) from the front of label to the next label. Please read the under mentioned “■ Set Label Pitch” for operation procedures.
AUTO LENGTH MEASURE	Set whether to use the automatically measured value as the length of label when paper is fed. Please read the under mentioned “■ Enable/Disable Auto Length Measure” for operation procedures.

#### ■ Set Label Width.

**1** Display “WIDTH”.  
The current preset value will be displayed in the fourth line on the LCD.

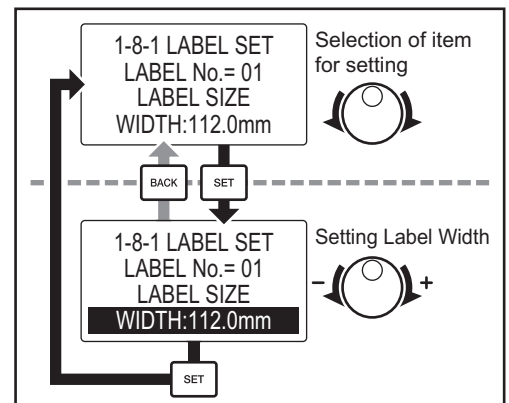
**2** Press the **SET** key.  
Move to the operation of setting label width and the width line will be displayed in reverse video.

**3** Turn the dial to display label width.



Range for Setting : 1.0mm ~ 109.0mm

**4** Press the **SET** key.  
Confirm the label width set and return to selection of options for setting.



Press the **BACK** key to return to selection of items for setting.



Adjustment can be done by the unit of 0.1 mm.

## ■ Set Label Length

**1** Display "LENGTH".  
The current preset value will be displayed in the fourth line on the LCD.

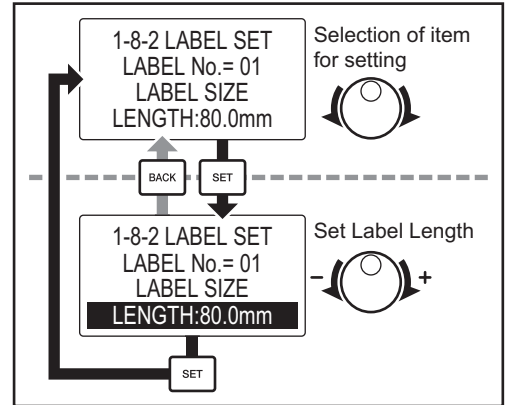
**2** Press the **SET** key.  
Move to the operation of setting label length and the length line will be displayed in reverse video.

**3** Turn the dial to display label length.



Range for Setting : 1.0mm ~ 400.0mm

**4** Press the **SET** key.  
Confirm the label length set and return to selection of options for setting.



Press the **BACK** key to return to selection of items for setting.



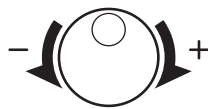
Adjustment can be done by the unit of 0.1 mm.

## ■ Set Label Pitch

**1** Display "PITCH".  
The current preset value will be displayed in the fourth line on the LCD.

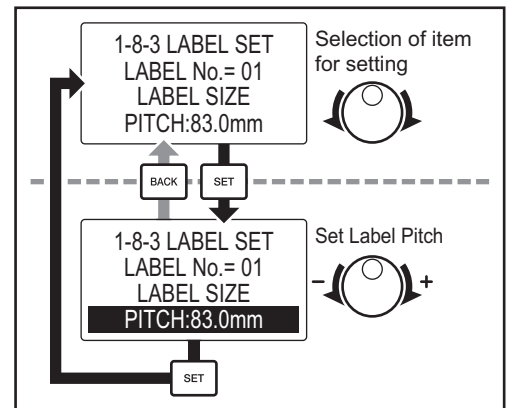
**2** Press the **SET** key.  
Move to the operation of setting label pitch and the pitch line will be displayed in reverse video.

**3** Turn the dial to display label pitch.



Range for Setting : 1.0mm ~ 400.0mm

**4** Press the **SET** key.  
Confirm the label pitch set and return to selection of options for setting.



Press the **BACK** key to return to selection of items for setting.



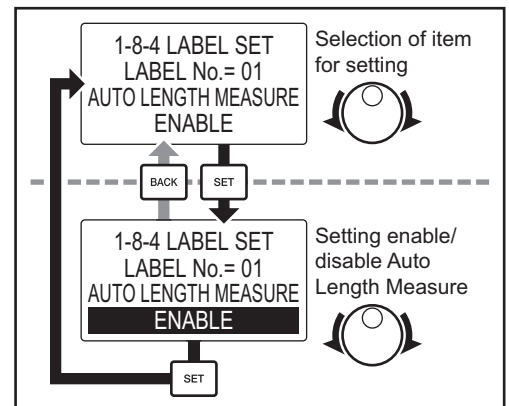
Adjustment can be done by the unit of 0.1 mm.

## ■ Enable/Disable Auto Length Measure

**1** Display "AUTO LENGTH MEASURE".  
The current preset value will be displayed in the fourth line on the LCD.

**2** Press the **SET** key.  
Move to the operation of setting auto length measure and the length line will be displayed in reverse video.

**3** Turn the dial to display "ENABLE/DISABLE".



Press the **BACK** key to return to selection of items for setting.

Auto Length Measure	Content
DISABLE	Manually input a value as the length of label and auto length measure does not take effects.
ENABLE	Set whether to use the Auto Length Measure value automatically measured by pitch sensor (label sensor) as label length.

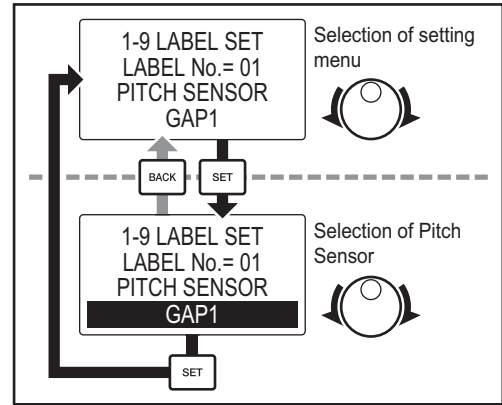
**4** Press the **SET** key.  
Confirm the setting of Auto Length Measure and return to selection of options for setting.  
When Auto Length Measure is enabled, press the **FEED** key and the Auto Length Measure value will become label length when paper is fed.

### 3.3.9 Setting of Pitch Sensor

Set the type of Pitch Sensor that is used for detecting label.  
 Depending on the print media used, the sensors used for label detecting are different.

**1** Display the “PITCH SENSOR” menu under “LABEL SET” (Edit) mode.

The current preset value will be displayed in the fourth line on the LCD.



**2** Press the **SET** key.

Move to selection of Pitch Sensor and the option line will be displayed in reverse video.

**3** Turn the dial to display the pitch sensor to be used.



Pressthe **BACK** key and return to selection of a setting menu.

Pitch Sensor	Content
GAP1	Selected when label is detected according to the rate of penetration through label. Usually GAP1 sensor is used. Media Supported: Label with backing paper * Please use the label pitch (p) to determine one or two GAP1 or GAP2 sensors are used with the following calculation equation. If the label pitch can fit in nowhere, please use Gap1 sensor. If the label pitch can fit in both, either an error or a Skip occurs. (Please select a label pitch that does not fall in this range.) GAP2 sensor <span style="margin-left: 150px;">GAP1 sensor</span> $P = \left[ \frac{36 \pm 1}{N} \right] \quad (N=1 \sim 8) \qquad P = \left[ \frac{41 \pm 1}{N} \right] \quad (N=1 \sim 8)$
I-MARK1	Selected when label is detected according to the reflectivity of label. Normally I-Mark1 sensor is used. Media Supported: Label with I-Mark * Please use the label pitch (p) to determine one or two reflection sensors are used with the following calculation equation. If the label pitch can fit in nowhere, please use one reflection sensor. If the label pitch can fit in both, either an error or a Skip occurs. (Please select a label pitch that does not fall in this range.) I-mark2 sensor <span style="margin-left: 150px;">I-mark1 sensor</span> $P = \left[ \frac{35 \pm 1}{N} \right] \quad (N=1 \sim 8) \qquad P = \left[ \frac{41 \pm 1}{N} \right] \quad (N=1 \sim 8)$
INVALIDITY	Select this option if label detecting is disabled. Media Supported: Continuous paper

**4** Press the **SET** key.

Confirm the pitch sensor to be sued and return to selection of setting menu.

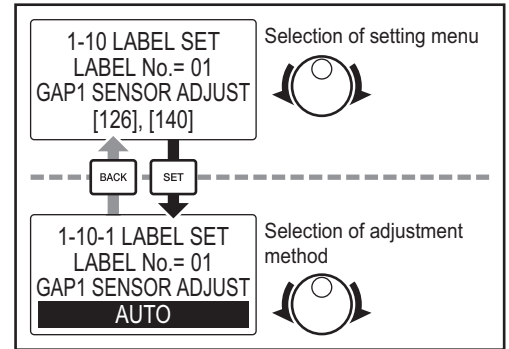
**3.3.10 Adjustment of GAP Sensor/I-Mark Sensor**

Adjust the sensitivity of sensors.

As operational procedures for Gap1 sensor, GAP2 sensor, I-Mark1 sensor and I-Mark2 sensor are all the same, here “Adjustment of GAP1 Sensor” is picked as an example for explanation.

**1** Display the “GAP1 SENSOR ADJUST” menu under “LABEL SET” (Edit) mode.

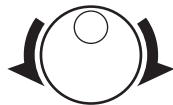
In the fourth line on the LCD, the current preset value (light quantity on the left, threshold value on the right) will be displayed.



**2** Press the **SET** key.

Move to selection of adjustment options and the option line will be displayed in reverse video.

**3** Turn the dial to display a random adjustment option.



Pressthe **BACK** key and return to selection of a setting menu.

Pitch Sensor	Content
AUTO	Automatically adjust pitch sensor. Please read under mentioned “■ Auto Adjustment of Pitch Sensor” for detailed operational procedures.
MANUAL	Manually adjust pitch sensor. Please read under mentioned “■ Manual Adjustment of Pitch Sensor” for detailed operational procedures.

## ■ Auto Adjustment of Pitch Sensor

- 1** Display "AUTO".
- 2** Press the **SET** key.  
Instruction message will be displayed.

**CAUTION**

When opening the side cover, please open it completely until the top surface of the cover touches the printer main part. If you release your hands when the cover is half open or in the midway of opening/closing it, the cover might fall and result in injury and/or malfunction.

**CAUTION**

When handling the Head Lock Lever, please do not put your fingers and/or hands near the tuning area of thermal head. It might cause injury.

**CAUTION**

Please confirm that after the Presser is released it is well fastened with the Magnet.

If you release your hands in the midway of opening /closing, the Presser might fall and result in injury.

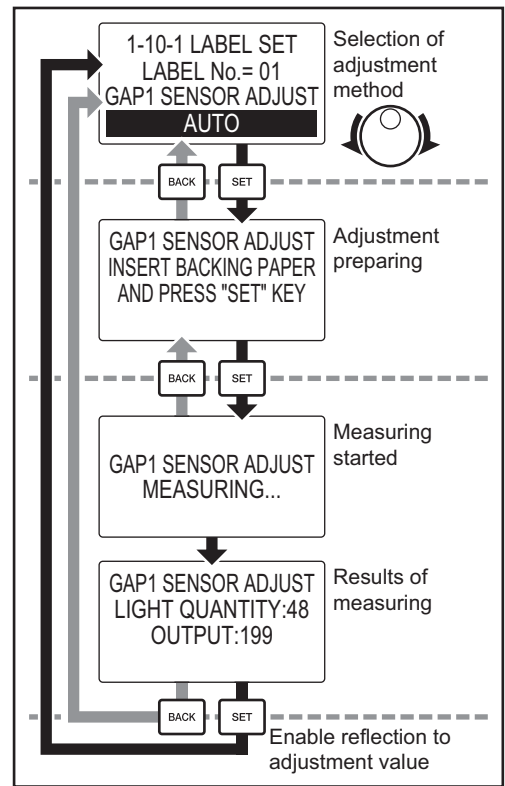
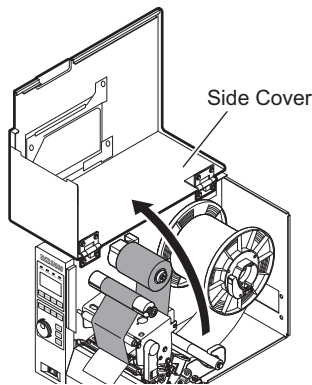
**NOTE**

Press the **BACK** key and return to selection of adjustment options.

**NOTE**

Press the **BACK** key and return to selection of adjustment options without confirming the result of adjustment.

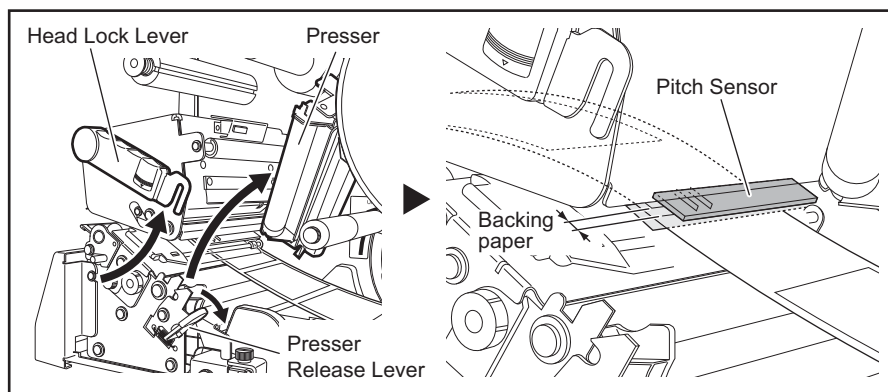
- 3** Open the side cover.



- 4** Lay the backing paper of label on the top of sensor, and press the **SET** key.

Peel off the label and turn to use backing paper only.

Please lift both the head and the presser towards free direction and lay the backing paper of label in between the light emitting and light sensing devices. If label without backing paper is used, please lay the plain part of label in pitch sensor.



Measuring is started.

If the measuring process is being done, the message of "MEASURING" will be displayed.

When measuring finishes, result of adjustment will be displayed.

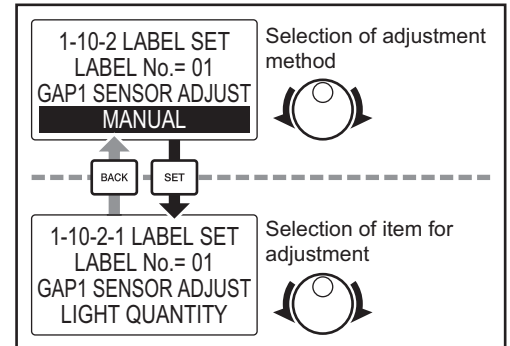
- 5** Confirm the result of adjustment and press the **SET** key.

Confirm the content of adjustment and return to selection of adjustment options.

Please remember to lock the head and the presser, and then close the side cover.

## Manual Adjustment of Pitch Sensor

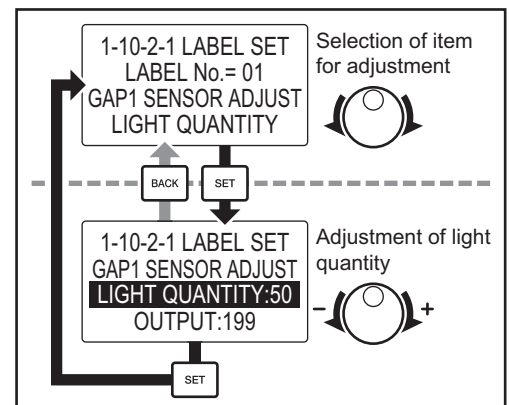
- 1** Display "MANUAL".
- 2** Press the **SET** key.  
Move to selection of items for adjustment.
- 3** Turn the dial to display a random adjustment option.



Pitch Sensor	Content
LIGHT QUANTITY	Adjust the quantity of light for light sensing through sensor. Please read under mentioned "Adjustment of Light Quantity" for detailed operational procedures.
THRESHOLD	Adjust the threshold value of light quantity for light sensing by sensor. Please read under mentioned "Adjustment of Threshold Value" for detailed operational procedures.

## Adjustment of Light Quantity

- 1** Display "LIGHT QUANTITY".
- 2** Set the mat of the label on the sensor, then push **SET**.  
Move to the operation of light quantity adjustment, and the Light Quantity line will be displayed in reverse video.
- 3** Turn the dial to adjust the light volume.



Press the **BACK** key to return to selection of items for adjustment.



Adjustment of light quantity can be done by the unit of 1.

Adjust the light volume to set the output to the following values.

Pitch Sensor	Output value
Transmission	200
Reflection	120

- 4** Press the **SET** key.  
Confirm the value of light quantity and return to selection of items for adjustment.

## Adjustment of Threshold Value

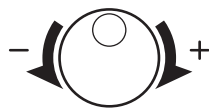
- 1** Display "THRESHOLD".
- 2** Press the **SET** key.  
Move to adjustment of threshold value and the value line will be displayed in reverse video.
- 3** Turn the dial to display a random threshold value.



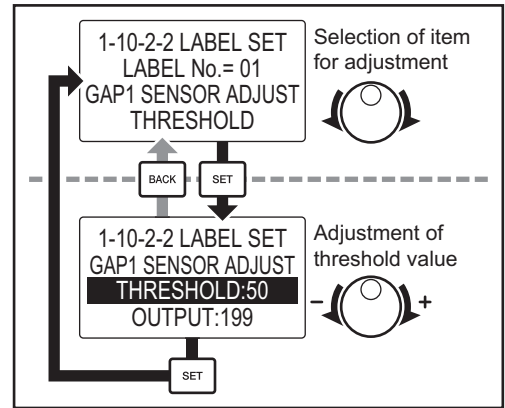
Press the **BACK** key to return to selection of items for adjustment.



Adjustment of threshold value can be done by the unit of 1.



Range for Setting : 0 ~ 255

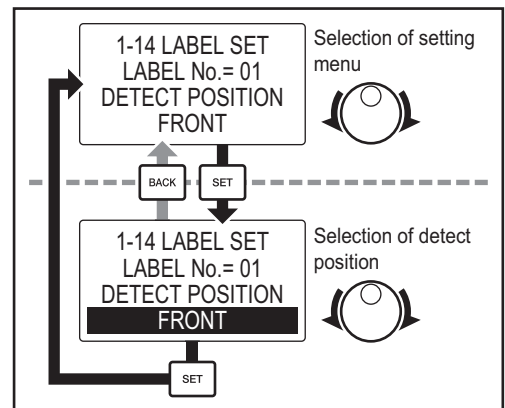


- 4** Press the **SET** key.  
Confirm the threshold value and return to selection of items for adjustment.

### 3.3.11 Setting of Detect Position

Set the Detect Position of label (front /rear).

- 1** Display the "DETECT POSITION" menu under "LABEL SET" (Edit) mode.  
The current preset value will be displayed in the fourth line on the LCD.
- 2** Press the **SET** key.  
Move to selection of DETECT POSITION options and the option line will be displayed in reverse video.



If the label detection position is set to the back end, the printing position may get deviated.



Press the **BACK** key and return to selection of a setting menu.

- 3** Turn the dial to display a random detect position.



Detect Position	Content
FRONT	Set the front of label as detect position.
REAR	Set the rear of label as detect position.

- 4** Press the **SET** key.  
Confirm the detect position and return to selection of setting menu.



### 3.3.12 Setting of Print Speed

Set print speed.

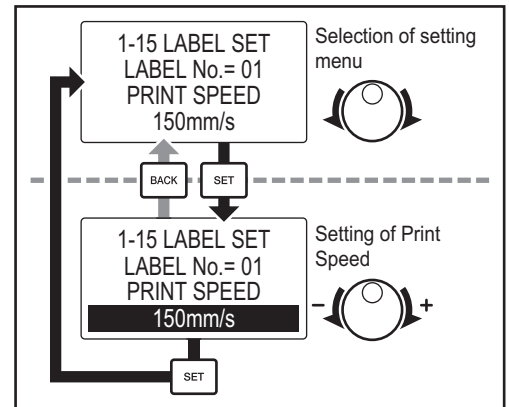
If print quality is not satisfactory, please slow down print speed.

- 1 Display the "PRINT SPEED" menu under "LABEL SET" (Edit) mode.

The current preset value will be displayed in the fourth line on the LCD.

- 2 Press the **SET** key.

Move to the operation of setting print speed and the value line will be displayed in reverse video.



- 3 Turn the dial to display a random print speed.



Range for Setting: 25mm/s ~ 150mm/s

- 4 Press the **SET** key.

Confirm the print speed and return to selection of setting menu.



Press the **BACK** key and return to selection of a setting menu.



Print speed can be adjusted by the unit of 25 mm/s.

**3.3.13 Setting of Print Darkness**

Set Print darkness.

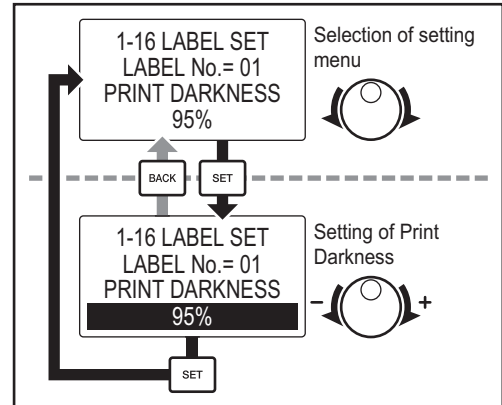
The maximum print darkness is 100%, and please set the ratio of change in print darkness in relation to this percentage.

- 1** Display the “PRINT DARKNESS” menu under “LABEL SET” (Edit) mode.

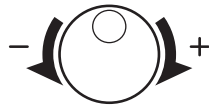
The current preset value will be displayed in the fourth line on the LCD.

- 2** Press the **SET** key.

Move to the operation of setting print darkness and the value line will be displayed in reverse video.



- 3** Turn the dial to display a random print darkness.



Range for Setting : 10% ~ 100%

- 4** Press the **SET** key.

Confirm the print darkness and return to selection of setting menu.



Press the **BACK** key and return to selection of a setting menu.



Print darkness can be adjusted by the unit of 1%.

**3.3.14 Adjustment of Platen Roller**

Adjust the perimeter of Platen Roller.

For the Platen Roller, depending on operating environment and years, the perimeter of paper feed might change.

In such case, please adjust the perimeter so that the paper feed can function properly.

Adjustment value is usually set as 100%. Please set the ratio of change in relation to this percentage.

- 1 Display the "PLATEN ADJUST" menu under "LABEL SET" (Edit) mode.  
The current preset value will be displayed in the fourth line on the LCD.

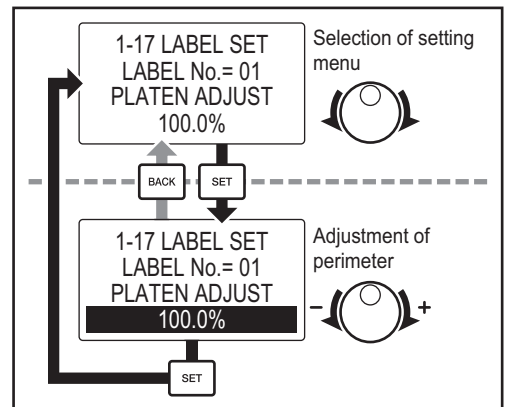
- 2 Press the **SET** key.  
Move to adjustment of Platen Roller and the option line will be displayed in reverse video.

- 3 Turn the dial to display adjustment value.



Range for Setting : 90.0% ~ 110.0%

- 4 Press the **SET** key.  
Confirm the adjustment value for Platen Roller, and return to selection of setting menu.



Press the **BACK** key and return to selection of a setting menu.

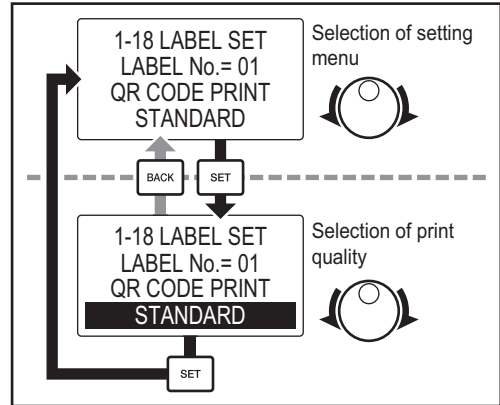


Adjustment can be by the unit of 0.1%.

**3.3.15 Print Setting of QR Code**

Set print quality for printing of QR code.

**1** Display the “QR CODE PRINT” menu under “LABEL SET” (Edit) mode.  
The current preset value will be displayed in the fourth line on the LCD.



**2** Press the **SET** key.  
Move to selection of PRINTING MODE and the option line will be displayed in reverse video.



Pressthe **BACK** key and return to selection of a setting menu.

**3** Turn the dial to display the print quality.



In case print speed is below 50 mm/s, please set the value to match standard.75mm/s.

In case of over 75 mm/s, please set the value appropriately to either of standard, high grade 1 or high grade 2.

\* Depending on the type of label or pulse division settings, the configuration of QR code printing setting may change.

**4** Press the **SET** key.  
Confirm the print quality and return to selection of setting menu.

**3.3.16 Setting of Continuous Paper**

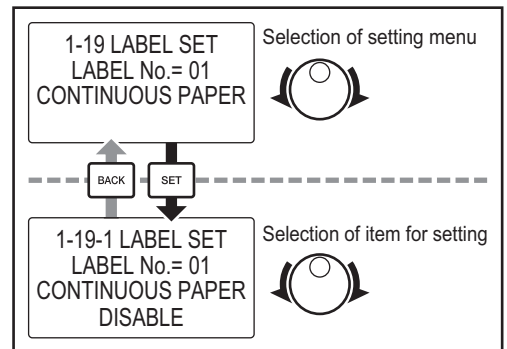
Set permission for using continuous paper as well as adjust the value related to paper feeding operations during using continuous paper.

Continuous paper makes the function possible that during actual printing part of the print data can be printed on one page and the printer stops and starts printing from the beginning of the next page.

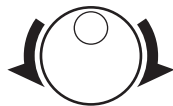
When continuous paper is “enabled”, label position is not detected and the printer will be configured the same as in the case when menu “1-9 Pitch Sensor” is “disabled”.

**1** Display the “CONTINUOUS PAPER” menu under “LABEL SET” (Edit) mode.

**2** Press the **SET** key.  
Move to selection of setting options and the current preset value will be displayed in the fourth line on the LCD.



**3** Turn the dial to display the items for setting.



\* If “DISABLE” is displayed in the fourth line on the LCD, only option “Continuous Paper” can be displayed/selected.



Pressthe **BACK** key and return to selection of a setting menu.

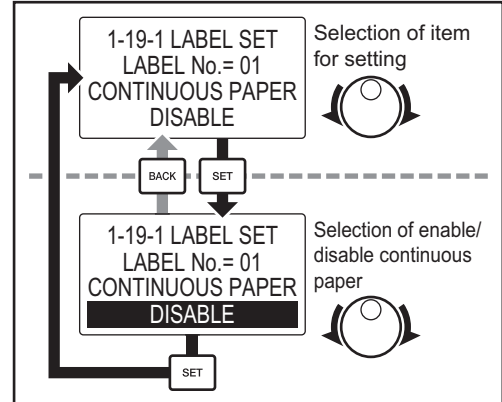
Option for Setting	Content
CONTINUOUS PAPER	Set whether to use continuous paper for current print configuration. Please read under mentioned “■ Selection of Print Media” for detailed operational procedures.
GAP BETWEEN PAGE	Set the gap between current print and the next print. Please read under mentioned “■ Setting of Gap between Page” for detailed operational procedures.

## ■ Selection of Print Media

**1** Display "CONTINUOUS PAPER".  
The current preset value will be displayed in the fourth line on the LCD.

**2** Press the **SET** key.  
Move to selection of enabling/disabling continuous paper and the option line will be displayed in reverse video.

**3** Turn the dial to display "ENABLE/DISABLE".



Press the **BACK** key to return to selection of items for setting.

Continuous Paper	Content
DISABLE	Set not to use continuous paper for current print configuration.
ENABLE	Set to use continuous paper for current print configuration.

**4** Press the **SET** key.  
Confirm the selection of enabling/disabling continuous paper and return to selection of setting options.

When "DISABLE" is selected, setting of continuous paper is finished here and please press the **BACK** key to return to selection of setting menu.

When "ENABLE" is selected, please continue your setting with option "Gap between Page".

## ■ Setting of Gap between Page

**1** Display “GAP BETWEEN PAGE”.  
The current preset value will be displayed in the fourth line on the LCD.

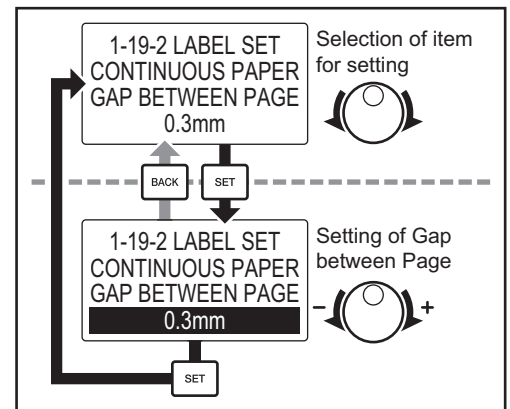
**2** Press the **SET** key.  
Move to setting of gap between page and the option line will be displayed in reverse video.

**3** Turn the dial to display a random value.



Range for Setting : 0.0mm ~ 100.0mm

**4** Press the **SET** key.  
Confirm the selection of enabling/disabling continuous paper and return to selection of setting options.



Press the **BACK** key to return to selection of items for setting.



Adjustment of gap between pages can be done by the unit of 0.1 mm.

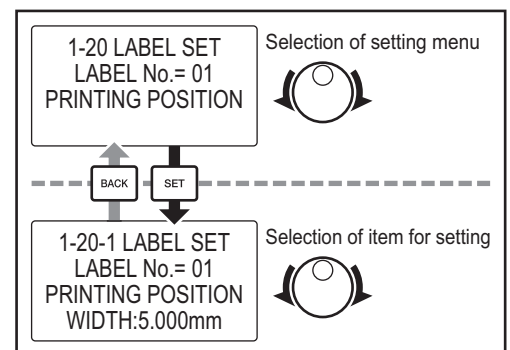
### 3.3.17 Adjustment of Printing Position

Adjust the position of coordinates origin according to command.

**1** Display the “PRINTING POSITION” menu under “LABEL SET” (Edit) mode.

**2** Press the **SET** key.  
Move to selection of setting options and the current preset value will be displayed in the fourth line on the LCD.

**3** Turn the dial to display the options for setting.



Press the **BACK** key and return to selection of a setting menu.

Options for Setting	Content
WIDTH	Set the adjustment value for the origin position of coordinates to be horizontally shifted according to command. Please read “■ Setting of Printing Position (Width)” for detailed operational procedures.
LENGTH	Set the adjustment value for the origin position of coordinates to be vertically shifted according to command. Please read “■ Setting of Printing Position (Length)” for detailed operational

## ■ Setting of Printing Position (Width)

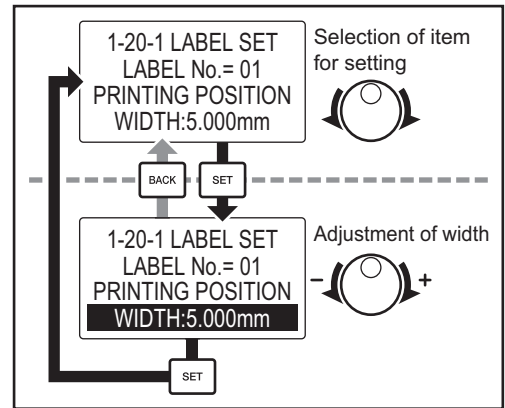
**1** Display "WIDTH".  
The current preset value will be displayed in the fourth line on the LCD.

**2** Press the **SET** key.  
Move to the operation of setting width adjustment and the option line will be displayed in reverse video.

**3** Turn the dial to display a random value.



Range for Setting : -400.000mm ~ 400.000mm  
Adjustment Interval : 0.042mm



Press the **BACK** key to return to selection of items for setting.

**4** Press the **SET** key.  
Confirm the adjustment of width and return to selection of options for setting.

## ■ Setting of Printing Position (Length)

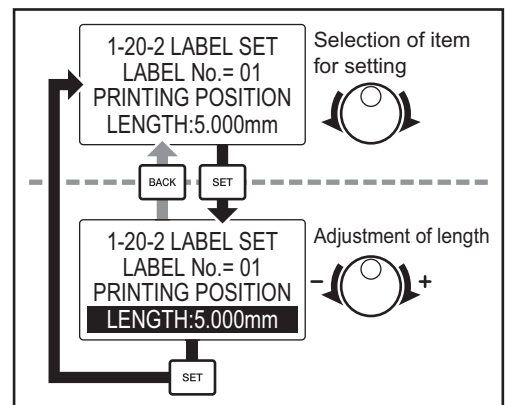
**1** Display "LENGTH".  
The current preset value will be displayed in the fourth line on the LCD.

**2** Press the **SET** key.  
Move to the operation of setting length adjustment and the option line will be displayed in reverse video.

**3** Turn the dial to display a random value.



Range for Setting : -400.000mm ~ 400.000mm  
Adjustment Interval : 0.042mm



Press the **BACK** key to return to selection of items for setting.

**4** Press the **SET** key.  
Confirm the adjustment of length and return to selection of options for setting.



**3.3.18 Setting of Print Configuration**

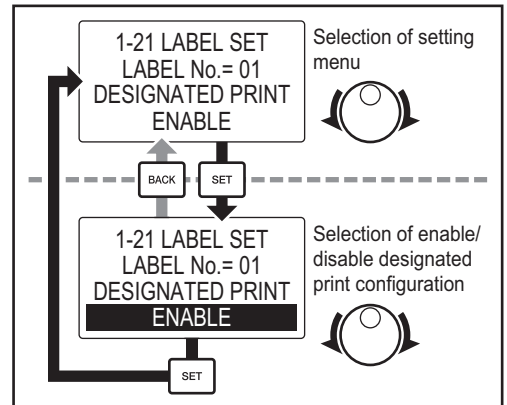
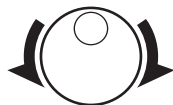
Set to enable either the preset print configuration of this printer or the designated print configuration by command.

For a print configuration without command, the preset configuration of this printer will be enabled.

- 1 Display the “DESIGNATED PRINT” menu under “LABEL SET” (Edit) mode.  
The current preset value will be displayed in the fourth line on the LCD.

- 2 Press the **SET** key.  
Move to selection of designated print configuration options, and the option line will be displayed in reverse video.

- 3 Turn the dial to display “ENABLE/DISABLE”.



Pressthe **BACK** key and return to selection of a setting menu.

Define the printing condition	Content
DISABLE	Apply the settings in the printer as print configuration.
ENABLE	Apply the settings based on command as print configuration.

- 4 Press the **SET** key.  
Confirm the applied print configuration and return to selection of setting menu.

**3.3.19 Setting of Tear Off Time**

If printing mode is set as “TEAR OFF”, set the time lag lasting from the ending of a print to the starting of tearing off operation.

**1** Display the “TEAR OFF TIME” menu under “LABEL SET” (Edit) mode.

The current preset value will be displayed in the fourth line on the LCD.

**2** Press the **SET** key.

Move to the operation of setting tear off time and the value line will be displayed in reverse video.

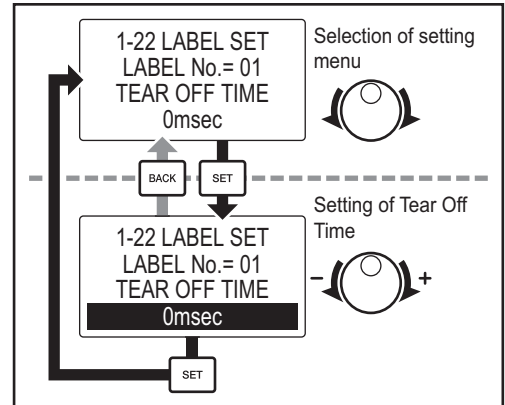
**3** Turn the dial to display the value for setting.



Range for Setting : 0msec ~ 5000msec

**4** Press the **SET** key.

Confirm the tear off time and return to selection of setting menu.



Press the **BACK** key and return to selection of a setting menu.



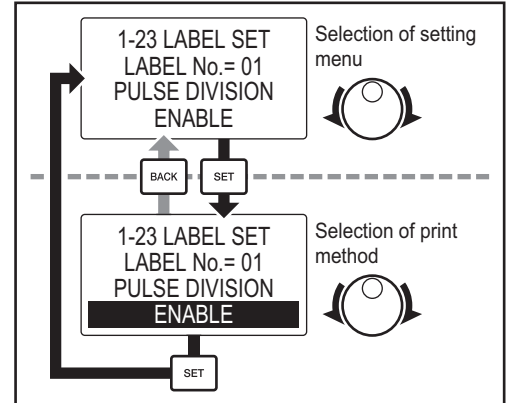
Adjustment can be done by the unit of 1 msec.

**3.3.20 Setting of Print by Pulse Division**

Adjust print darkness in response to the temperature change in thermal head.

- 1 Display the “PULSE DIVISION” menu under “LABEL SET” (Edit) mode.  
The current preset value will be displayed in the fourth line on the LCD.

- 2 Press the **SET** key.  
Move to selection of pulse division and the option line will be displayed in reverse video.



- 3 Turn the dial to display “ENABLE/ DISABLE”.



Pressthe **BACK** key and return to selection of a setting menu.

Pulse-Slicing Printing	Content
DISABLE	Heat the thermal head all together. (The option is selected if both the compatibility between thermal transfer ribbon and thermal transfer paper as well as the transferring effect are good.)
ENABLE	Heat the thermal head in separated parts. (The option is selected if the compatibility between thermal transfer ribbon and thermal transfer paper is good while transferring effect is not satisfactory.)

\* If the printing speed is over 100mm/s, it always becomes invalid status.

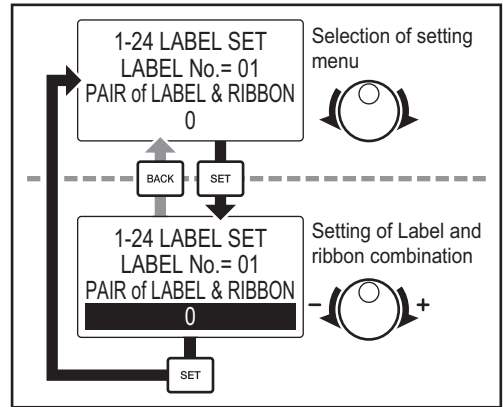
- 4 Press the **SET** key.  
Confirm the applied print configuration and return to selection of setting menu.

**3.3.21 Label and Ribbon Combination**

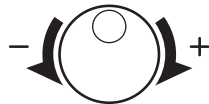
Set the combination number of the label and the ribbon.  
 To obtain the best printing quality, please select a setting from the List of combinations.

**1** Display the “PAIR of LABEL & RIBBON” menu under “LABEL SET” (Edit) mode.  
 The current preset value will be displayed in the fourth line on the LCD.

**2** Press the **SET** key.  
 When you change the row during setting the label and ribbon combination, the selected row will be highlighted.



**3** When you turn the dial the relevant number will be shown.



Range for Setting : 0 ~ 99



Pressthe **BACK** key and return to selection of a setting menu.

The Combination Number of Label and Ribbon	Label	Ribbon
0	General combination	
1	P251H	H
2	P251H	H20
3	PT50NS	H
4	PT50NS	H20
5	10PN	10PN
6~99	General combination	

\* If the printing speed is over 75mm/s, it always uses the general combination for the printing.

**4** Press the **SET** key.  
 Determine the label and ribbon combination, then return to the selection operation of the setting menu.

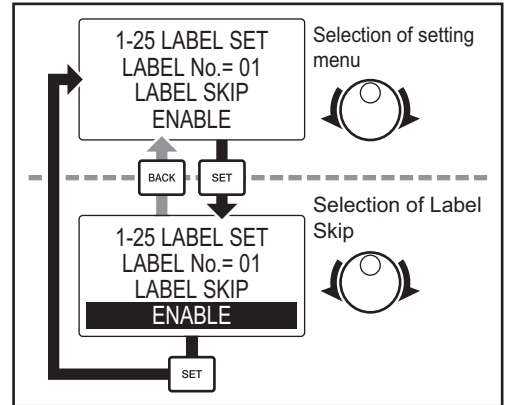
**3.3.22 Label Skip**

When label is peeled off from backing paper, the error of label end occurs. If LABEL SKIP is enabled, the peeled-off label will be skipped over and printing will continue with the next label. (If there are successive 3 pages of label peeled off, error message will still be displayed.)

- 1 Display the "LABEL SKIP" menu under "LABEL SET" (Edit) mode. The current preset value will be displayed in the fourth line on the LCD.

- 2 Press the **SET** key. Move to selection of label skip and the option line will be displayed in reverse video.

- 3 Turn the dial to display "ENABLE/DISABLE".



Pressthe **BACK** key and return to selection of a setting menu.

Label Skip	Content
DISABLE	Error occurs when label is peeled off.
ENABLE	Even if label is peeled off error does not occur and printing continues with the next label.

- 4 Press the **SET** key. Confirm the setting of label skip and return to selection of setting menu.

# 3.4 Operations under Advanced Mode

Settings about the basic operations of the printer like adjustment of LCD brightness and language change can be done.

After moving to advanced mode, turn the dial to select a setting menu.



Setting menu and the corresponding contents are shown below.

Setting Menu	Content	Reference Page
1 PRINTER INFORMATION	Confirm the specification of thermal head and version information here.	P.3-43
2 BACKFEED OF CUTTING	Set the operation of back feed after cutting. * This option can be displayed/set only when the print configuration in which "CUTTER" is selected for the menu "1-1 PRINTING MODE" under LABEL SET mode is applied.	P.3-43
3 JIS CODE	Set the JIS coding system for Japanese Kanji data received from computer.	P.3-44
4 ZERO SLASH	Set print method for printing "0".	P.3-45
5 KANJI FONT	Set the type (Gothic/Mincho) of Kanji font designated in Kanji command (ESC-K1, ESC-K2).	P.3-46
6 DARKNESS ADJUST	Set Print darkness.	P.3-47
7 HEAD CHECK	Set whether to enable Head Check or not.	P.3-48
8 AUTO ONLINE	Set printer status after start-up (Online/Offline).	P.3-49
9 AUTO ONLINE FEED	Set whether to feed paper at start-up.	P.3-50
10 PRINT ON ERROR	Set whether to re-print the label that has been printed immediately previous to error, if error occurs.	P.3-51
11 PRINTED LOG	Set whether to save in CF card data about the number of print pages, type of keys used, etc. * It is enabled only when the printer is installed with CF card slot (option).	P.3-52
12 STAND-ALONE	Set whether to allow stand-alone application depending on CF card. * It is enabled only when the printer is installed with CF card slot (option). * When stand-alone printing is enabled there will be no communication with computer.	P.3-53
13 HUMANREADABLE	Set the handwriting style of the readable text of JAN to be printed below barcode.	P.3-54
14 EXTERNAL SIGNAL	Set whether to allow input/output of external signal. * It is enabled only when input/output terminal for external signal is installed.	P.3-55
15 TOTAL COUNTER	Confirm the total counter of Platen Roller based on its rotation since delivery.	P.3-55
16 HEAD COUNTER	Confirm the counter of head here.	P.3-56
17 PLATEN COUNTER	Confirm the rotation distance of Platen Roller here.	P.3-56
18 CUTTER COUNTER	Confirm cutter counter of Cutter Unit here. * It is enabled only when Cutter Unit (option) is installed.	P.3-56
19 COORDINATES ADJUST	Set the method of adjusting printing position (coordinates) when there is difference between the drawing range of computer and the actually available printing range.	P.3-57
20 DEFAULT SETTING	Restore the settings to default (factory settings).	P.3-58
21 LCD BRIGHTNESS	Adjust the brightness of LCD so that it presents a better view.	P.3-59
22 END LABEL PROCESSING	Set whether to make the last print as an error to indicate running out of label when the last label on the backing paper is printed out.	P.3-60
23 BUZZER SOUND	Set whether to give buzzer sound when malfunction or other abnormality occurs.	P.3-61
24 LANGUAGE	Set the language for message displaying on the LCD.	P.3-62
25 PASSWORD REGISTER	Set the password displayed for operating the keys after start-up.	P.3-63
26 KEY LOCK	Set whether to enable or disable key operations.	P.3-64

### 3.4.1 Confirmation of Printer Information

Confirm the specification of thermal head and version information here.

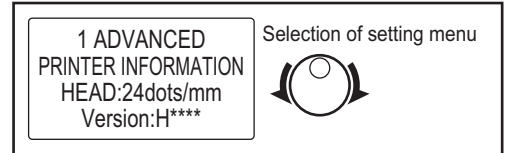


Press the **BACK** key to return to selection of setting mode.

- Under advanced mode, turn the dial to display "PRINTER INFORMATION".



The value of head density and version information will be displayed in the third and fourth line on the LCD respectively.



### 3.4.2 Setting of the Backfeed of Cutting

Set the operation of backfeeding after cutting.

- POINT**
- It is displayed when the print configuration of selecting "CUTTER" for the setting menu "1-1 Printing Mode" under Label Set mode is applied.
  - Setting is necessary only when Cutter Unit (option) is installed.

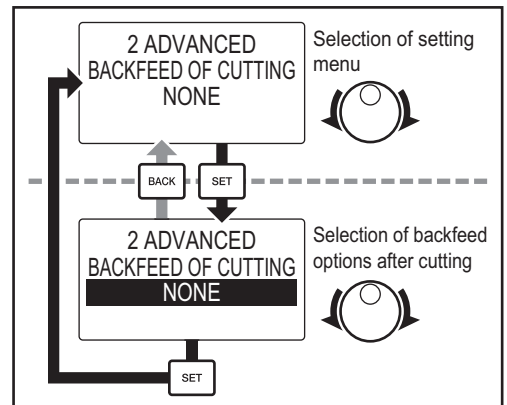


Press the **BACK** key to return to selection of setting mode.

- Under advanced mode, turn the dial to display "BACKFEED OF CUTTING".



The current setting will be displayed in the third line on the LCD.



- Press the **SET** key.

Move to selection of backfeeding operations and the option line will be displayed in reverse video.



Press the **BACK** key and return to selection of a setting menu.

- Turn the dial to display a random setting option.



Setting	Content
BEFORE PRINT	Backfeeding starts from cutter position before printing.
AFTER CUTTING	Backfeeding starts after printing and stops at the next printing position.
NONE	No backfeeding

- Press the **SET** key.

Confirm backfeed setting and return to selection of setting menu.

**3.4.3 Setting of JIS Code**

Set the JIS coding system for Japanese Kanji data received from computer.



Press the **BACK** key to return to selection of setting mode.

- Under advanced mode, turn the dial to display "JIS CODE".

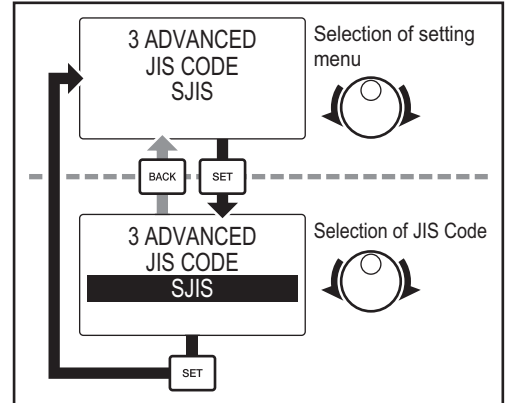


The current setting will be displayed in the third line on the LCD.

- Press the **SET** key.

Move to selection of JIS code and the option line will be displayed in reverse video.

- Turn the dial to display a random coding system.



Press the **BACK** key to return to selection of setting menu.

Setting	Content
JIS	JIS code
SJIS	SJIS code

- Press the **SET** key.

Confirm the settings of JIS code and return to selection of setting menu.



### 3.4.4 Setting of Zero Slash

Set print method for printing “0”.



Press the **BACK** key to return to selection of setting mode.

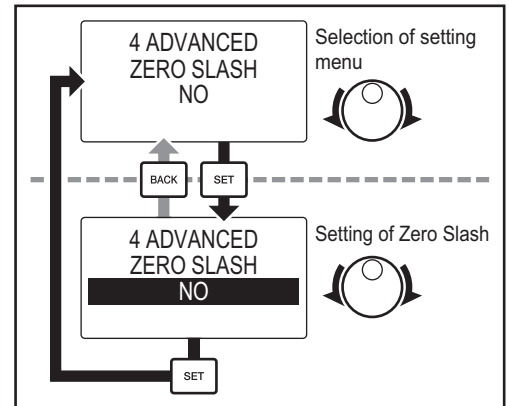
- Under advanced mode, turn the dial to display “ZERO SLASH”.



The current setting will be displayed in the third line on the LCD.

- Press the **SET** key.

Move to selection of zero slash and the option line will be displayed in reverse video.



Press the **BACK** key and return to selection of a setting menu.

- Turn the dial to display a random print method.



Setting	Content	Print Example
NO	Print “Zero” without slash.	0
YES	Print “Zero” with a slash.	0

- Press the **SET** key.

Confirm the settings of zero slash and return to selection of setting menu.

### 3.4.5 Setting of Kanji Font

Set the type (Gothic/Mincho) of Kanji font designated in Kanji command (ESC-K1, ESC-K2).



Press the **BACK** key to return to selection of setting mode.

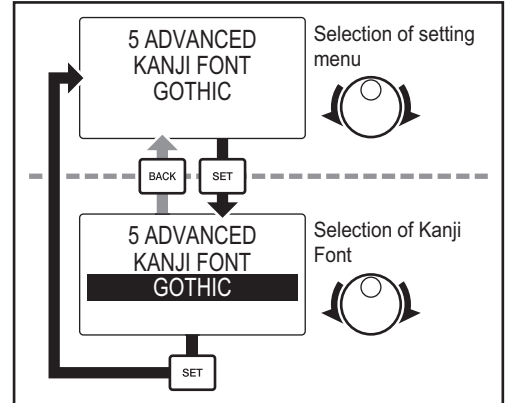
- Under advanced mode, turn the dial to display "KANJI FONT".



The current setting will be displayed in the third line on the LCD.

- Press the **SET** key.

Move to selection of kanji font and the option line will be displayed in reverse video.



- Turn the dial to display a random type of font.



Press the **BACK** key and return to selection of a setting menu.

Setting	Content
GOTHIC	Print the text in Gothic font.
MINCHO	Print the text in Mincho font.

- Press the **SET** key.

Confirm the settings of kanji font and return to selection of setting menu.

**3.4.6 Adjustment of Print Darkness**

Set Print darkness.

**POINT** This menu is used when print configuration is set in computer application. As there are 5 classifications, please set the print darkness for each of the classifications.  
 [Example] Classifications of print darkness 1=60%, 2=70%, 3=80%, 4=90% and 5=100%.



Press the **BACK** key to return to selection of setting mode.

**1** Under advanced mode, turn the dial to display "DARKNESS ADJUST".



**2** Press the **SET** key. Move to selection of print darkness classifications.

**3** Turn the dial to display a random classification.



**4** Press the **SET** key.

Move to the operation of setting print darkness, and the option line will be displayed in reverse video.

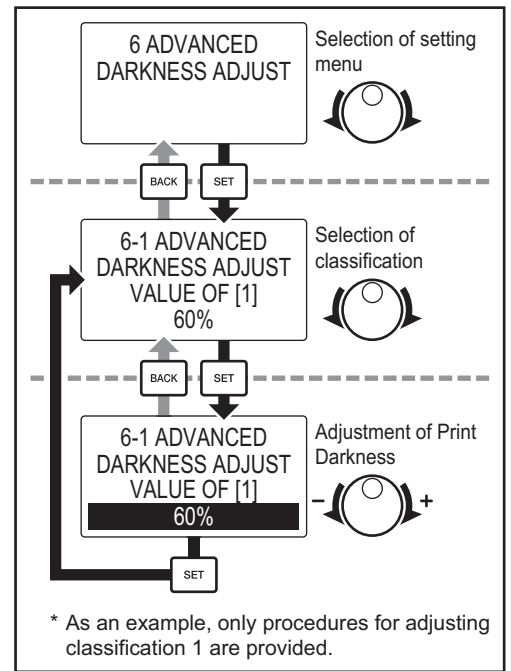
**5** Turn the dial to display a random value.



Range for Setting : 10% ~ 100%

**6** Press the **SET** key.

Confirm the selected classification of print darkness and return to selection of print darkness classifications.



Press the **BACK** key and return to selection of a setting menu.



Press the **BACK** key to return to selection of print darkness classifications.



Print darkness can be adjusted by the unit of 1%.

**3.4.7 Setting of Head Check**

Set whether to enable Head Check or not.

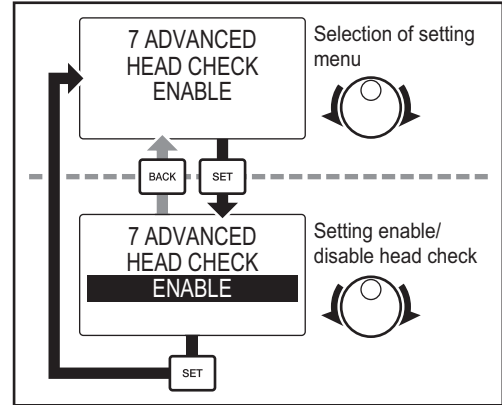


Press the **BACK** key to return to selection of setting mode.

- Under advanced mode, turn the dial to display "HEAD CHECK".



The current setting will be displayed in the third line on the LCD.



- Press the **SET** key.

Move to the operation of setting head check and the option line will be displayed in reverse video.



Press the **BACK** key and return to selection of a setting menu.

- Turn the dial to display a random setting option.



Setting	Content
DISABLE	No head check.
ENABLE	Start head check when the printer stands by.

- Press the **SET** key.

Confirm the settings of Head Check and return to selection of setting menu.

### 3.4.8 Setting of Auto Online

Set printer status after start-up (Online/Offline).



Press the **BACK** key to return to selection of setting mode.

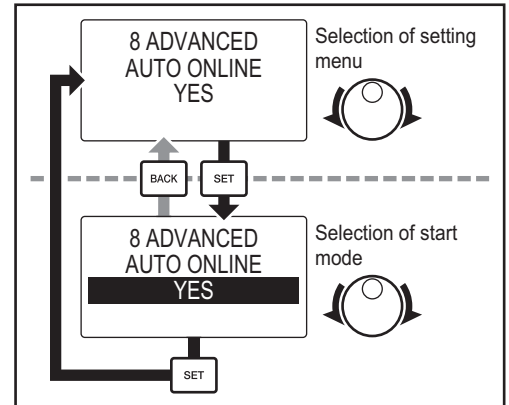
- Under advanced mode, turn the dial to display "AUTO ONLINE".



The current setting will be displayed in the third line on the LCD.

- Press the **SET** key.

Move to the operation of setting start mode and the option line will be displayed in reverse video.



- Turn the dial to display a random setting option.



Press the **BACK** key and return to selection of a setting menu.

Setting	Content
NO	Start the printer offline.
YES	Start the printer online.

- Press the **SET** key.

Confirm the start mode and return to selection of setting menu.

### 3.4.9 Setting of Auto Online Feed

Set whether to feed paper at start-up.

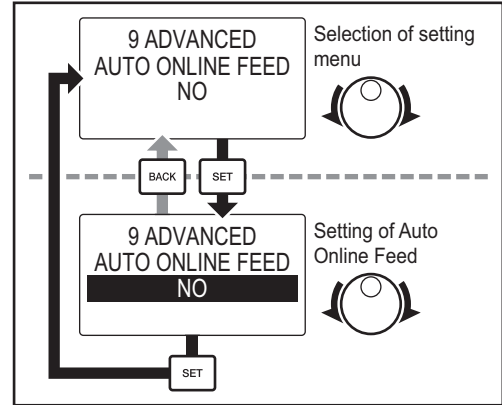


Press the **BACK** key to return to selection of setting mode.

- Under advanced mode, turn the dial to display "AUTO ONLINE FEED".



The current setting will be displayed in the third line on the LCD.



- Press the **SET** key. Move to the operation of setting Auto Online Feed and the option line will be displayed in reverse video.



Press the **BACK** key and return to selection of a setting menu.

- Turn the dial to display a random setting option.



Setting	Content
NO	No paper feeding at start.
YES	Feed 1 page of label at start.

- Press the **SET** key. Confirm the settings of Auto Online Feed and return to selection of setting menu.

### 3.4.10 Setting of Reprint on Error

Set whether to re-print the label that has been printed immediately previous to error, if error occurs.



Press the **BACK** key to return to selection of setting mode.

- Under advanced mode, turn the dial to display "PRINT ON ERROR".

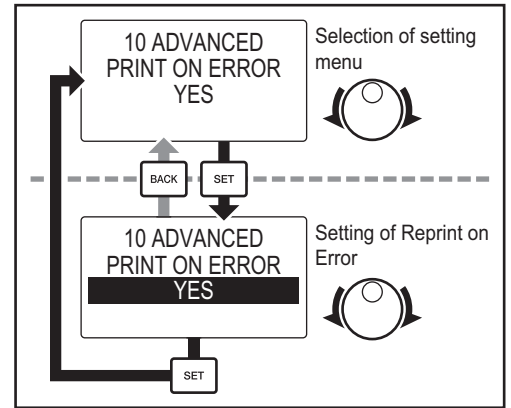


The current setting will be displayed in the third line on the LCD.

- Press the **SET** key.

Move to the operation of setting reprint on error and the option line will be displayed in reverse video.

- Turn the dial to display a random setting option.



Press the **BACK** key and return to selection of a setting menu.

- Press the **SET** key.

Confirm the settings of reprint on error and return to selection of setting menu.

Setting	Content
NO	If error occurs, do not reprint the label that has been printed right before the error. (The printed label is counted as a properly printed one.)
YES	If error occurs, reprint the label that has been printed right before the error.

**3.4.11 Setting of Printed Log**

Set whether to save in CF card data about the number of print pages, type of keys used, etc.

**POINT** It is enabled only when the printer is installed with CF card slot (option).

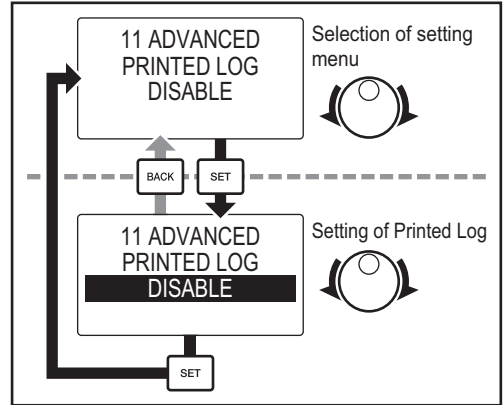


Press the **BACK** key to return to selection of setting mode.

**1** Under advanced mode, turn the dial to display "PRINTED LOG".



The current setting will be displayed in the third line on the LCD.



**2** Press the **SET** key.

Move to selection of printed log and the option line will be displayed in reverse video.



Press the **BACK** key and return to selection of a setting menu.

**3** Turn the dial to display a random setting option.



Setting	Content
DISABLE	Disable the function of printed log.
ENABLE	Enable the function of printed log.

**4** Press the **SET** key.

Confirm the settings of printed log and return to selection of setting menu.



### 3.4.12 Setting of Stand-Alone

Set whether to allow stand-alone application depending on CF card.

- POINT**
- It is enabled only when the printer is installed with CF card slot (option).
  - When stand-alone printing is enabled there will be no communication with computer.  
The data file in CF card necessary for stand-alone printing is created as LABEL SHOT SV.

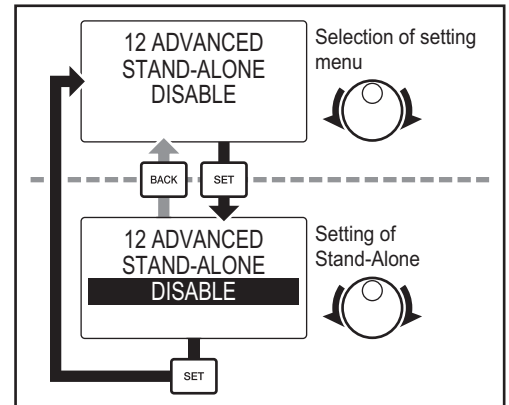


Press the **BACK** key to return to selection of setting mode.

- Under advanced mode, turn the dial to display "STAND-ALONE".



The current setting will be displayed in the third line on the LCD.



- Press the **SET** key.

Move to selection of stand-alone and the option line will be displayed in reverse video.



Press the **BACK** key and return to selection of a setting menu.

- Turn the dial to display a random setting option.



Setting	Content
DISABLE	The printer cannot be used as stand-alone printer.
ENABLE	The printer is set as stand-alone printer, and cannot receive print instructions from computer.

- Press the **SET** key.

Confirm the settings of stand-alone and return to selection of setting menu.

**3.4.13 Setting of Human Readable**

Set the handwriting style of the readable text of JAN/UPC to be printed below barcode.

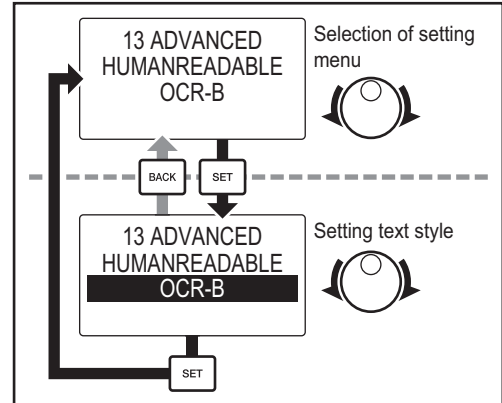


Press the **BACK** key to return to selection of setting mode.

- Under advanced mode, turn the dial to display "HUMANREADABLE".



The current setting will be displayed in the third line on the LCD.



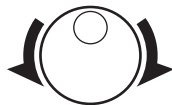
- Press the **SET** key.

Move to the operation of setting text style, and the option line will be displayed in reverse video.



Press the **BACK** key and return to selection of a setting menu.

- Turn the dial to display a random handwriting style.



Option	Print Example
OCR-B	 4 9 0 1 2 3 4 5 6 7 8 9 4
OCR-A	 4 9 0 1 2 3 4 5 6 7 8 9 4
Small	 4 9 0 1 2 3 4 5 6 7 8 9 4

- Press the **SET** key.

Confirm the settings of handwriting style and return to selection of setting menu.

**3.4.14 Setting of External Signal**

Set whether to allow input/output of external signal.

**POINT** It is enabled only when input/output terminal for external signal is installed.

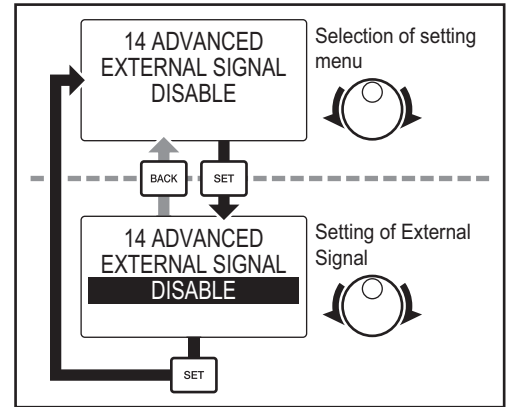


Press the **BACK** key to return to selection of setting mode.

- Under advanced mode, turn the dial to display “EXTERNAL SIGNAL”.



The current setting will be displayed in the third line on the LCD.



- Press the **SET** key.

Move to selection of external signal and the option line will be displayed in reverse video.



Press the **BACK** key and return to selection of a setting menu.

- Turn the dial to display a random setting option.



Setting	Content
DISABLE	External signal cannot be input or output.
ENABLE	External signal can be input or output.

- Press the **SET** key.

Confirm the settings of external signal and return to selection of setting menu.

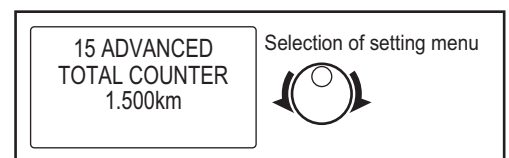
**3.4.15 Confirmation of Total Counter**

Confirm the total counter of Platen Roller based on its rotation since delivery.



Press the **BACK** key to return to selection of setting mode.

- Under advanced mode, turn the dial to display “TOTAL COUNTER”.



The total counter will be displayed in the third line on the LCD.

**3.4.16 Confirmation of Head Counter**

Confirm the counter of head here.

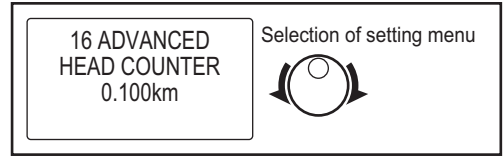


Press the **BACK** key to return to selection of setting mode.

- 1 Under advanced mode, turn the dial to display "HEAD COUNTER".



Head counter is displayed in the third line on the LCD.



**3.4.17 Confirmation of Platen Counter**

Confirm the rotation distance of Platen Roller here.

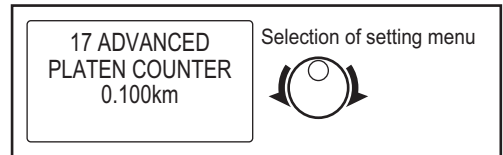


Press the **BACK** key to return to selection of setting mode.

- 1 Under advanced mode, turn the dial to display "PLATEN COUNTER".



Platen counter is displayed in the third line on the LCD.



**3.4.18 Confirmation of Cutter Counter**

Confirm cutter counter of Cutter Unit here.

POINT It is enabled only when Cutter Unit (option) is installed.

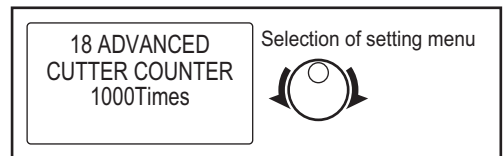


Press the **BACK** key to return to selection of setting mode.

- 1 Under advanced mode, turn the dial to display "CUTTER COUNTER".



Cutter Counter is displayed in the third line on the LCD.



**3.4.19 Setting of Coordinates Adjustment**

Set the method of adjusting printing position (coordinates) when there is difference between the drawing range of computer and the actually available printing range.

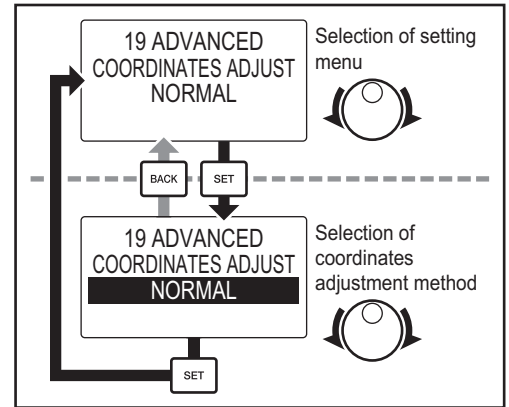


Press the **BACK** key to return to selection of setting mode.

- Under advanced mode, turn the dial to display “COORDINATES ADJUST”.



The current setting will be displayed in the third line on the LCD.



- Press the **SET** key.

Move to the operation of setting adjustment options and the option line will be displayed in reverse video.



Press the **BACK** key and return to selection of a setting menu.

- Turn the dial to display a random option for adjustment.



Setting	Content
NORMAL	No adjustment of printing position.
+ADJUSTMENT	When the label width designated in computer is smaller than the printing width actually available, adjust half the difference by moving towards the right side.
-ADJUSTMENT	When the label width designated in computer is larger than the printing width actually available, adjust half the difference by moving towards the left side.

- Press the **SET** key.

Confirm the adjustment option and return to selection of setting menu.

### 3.4.20 Default Setting

Restore the settings to default (factory settings).

**CAUTION** Initialized settings cannot be recalled by the printer alone. Please back up your settings in computer before initialization.



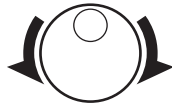
Press the **BACK** key to return to selection of setting mode.

- 1 Under advanced mode, turn the dial to display “DEFAULT SETTING”.



- 2 Press the **SET** key. Confirming message of initialization is displayed.

- 3 Turn the dial to display “YES”.

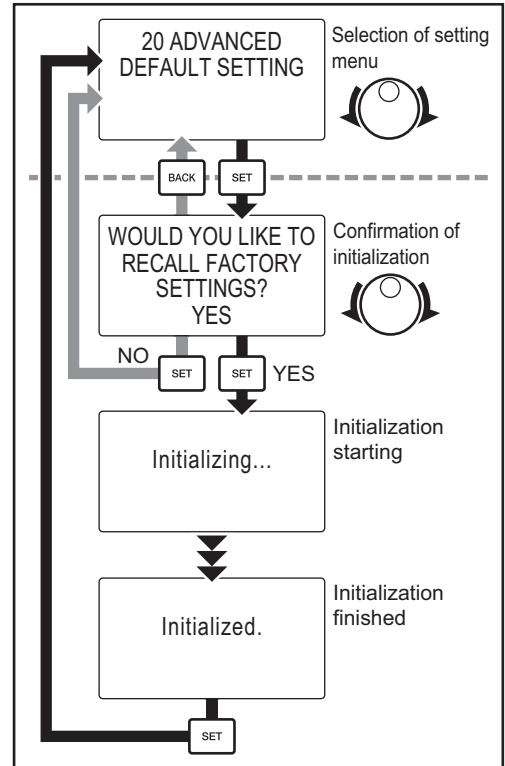


Press the **BACK** key and return to selection of a setting menu.



If “NO” is displayed and selected, the process of initialization will be suspended to return to selection of setting menu.

- 4 Press the **SET** key. Initialization starts. After the process is finished, return to selection of setting menu.



### 3.4.21 Adjustment of LCD Brightness

Adjust the brightness of LCD.

Please adjust the brightness when it is difficult to have a clear view of the LCD.



Press the **BACK** key to return to selection of setting mode.

- Under advanced mode, turn the dial to display "LCD BRIGHTNESS".



The current setting will be displayed in the third line on the LCD.

- Press the **SET** key.

Move to the operation of adjusting LCD brightness and the value line will be displayed in reverse video.

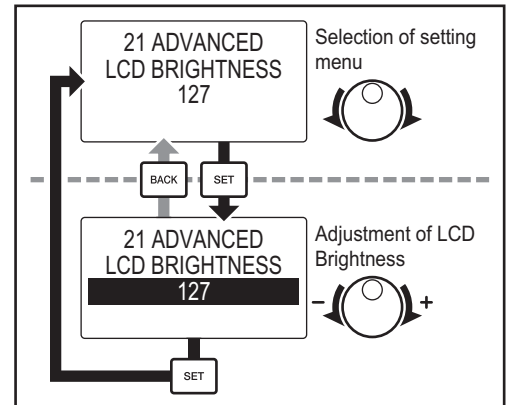
- Turn the dial while looking at the LCD to display a random brightness.



Range for Setting : 0 ~ 254

- Press the **SET** key.

Confirm the LCD brightness and return to selection of setting menu.



Press the **BACK** key and return to selection of a setting menu.



Brightness can be adjusted by the unit of 1.

**3.4.22 Setting of End Label Processing**

Set whether to make the last print as an error to indicate running out of label when the last label on the backing paper is printed out.

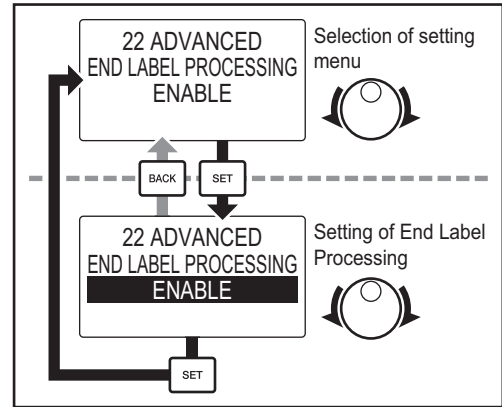


Press the **BACK** key to return to selection of setting mode.

- Under advanced mode, turn the dial to display “END LABEL PROCESSING”.



The current setting will be displayed in the third line on the LCD.



- Press the **SET** key.

Move to selection of end label processing operations and the option line will be displayed in reverse video.



Press the **BACK** key and return to selection of a setting menu.

- Turn the dial to display a random setting option.



Setting	Content
DISABLE	Error occurs to the last label and it is regarded as a label to be disposed of.
ENABLE	Error does not occur to the last label and effective printing of the last page of label can be properly finished.

- Press the **SET** key.

Confirm the settings of end label processing and return to selection of setting menu.



**3.4.23 Setting of Buzzer Sound**

Set whether to give buzzer sound when malfunction or other abnormality occurs.

**POINT** Even if Buzzer Sound is disabled, when confirming the settings of respective sensors under sensor mode it still gives a buzzer sound.

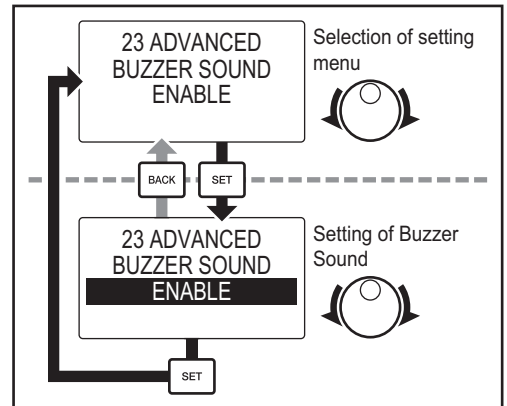


Press the **BACK** key to return to selection of setting mode.

**1** Under advanced mode, turn the dial to display “BUZZER SOUND”.



The current setting will be displayed in the third line on the LCD.



**2** Press the **SET** key.

Move to selection of buzzer sound operations and the option line will be displayed in reverse video.



Press the **BACK** key and return to selection of a setting menu.

**3** Turn the dial to display a random setting option.



Setting	Content
DISABLE	Buzzer sound is disabled.
ENABLE	Buzzer sound rings when abnormality occurs.

**4** Press the **SET** key.

Confirm the settings of buzzer sound and return to selection of setting menu.

### 3.4.24 Setting of Display Language

Set the language for message displaying on the LCD.  
 For this printer, either Japanese or English can be set as display language.



Press the **BACK** key to return to selection of setting mode.

- Under advanced mode, turn the dial to display “LANGUAGE”.

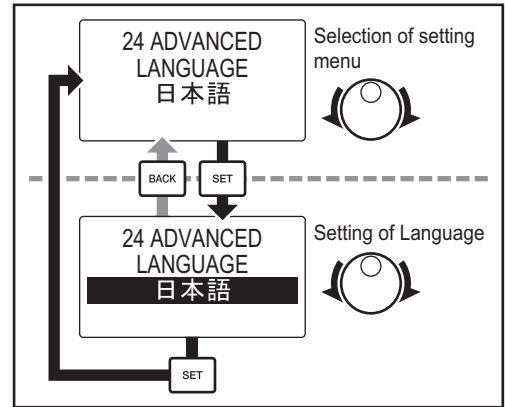


The current setting will be displayed in the third line on the LCD.

- Press the **SET** key.

Move to selection of language and the option line will be displayed in reverse video.

- Turn the dial to display a random language option.



Press the **BACK** key and return to selection of a setting menu.

Setting	Content
日本語	Display in Japanese.
ENGLISH	Display in English.

- Press the **SET** key.

Confirm your choice of display language and return to selection of setting menu.

After confirming the display language, the setting soon is applied. Please read “3.1.3 Menu Flow of Setting Mode” on page 3-6 for details about the display of setting mode under respective language.

### 3.4.25 Registration of Password

Set the password displayed for operating the keys after start-up.



Press the **BACK** key to return to selection of setting mode.

- Under advanced mode, turn the dial to display "PASSWORD REGISTER".



- Press the **SET** key.

Current password is displayed and the value line will be displayed in reverse video.

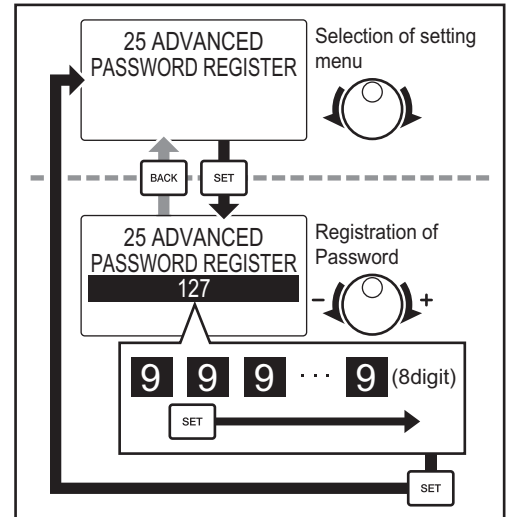
- Turn the dial to display a random value and press the **SET** key to display the next digit.



Range for Setting : 0 ~ 99999999

- Press the **SET** key.

Confirm registration of the password and return to selection of setting menu.



After inputting the number, press the **BACK** key and cursor will move to the previous digit. When cursor moves to the headmost, press the **BACK** key and return to selection of setting menu.



After you have pushed **MENU**, when **BACK** is pushed, the value will be deleted.

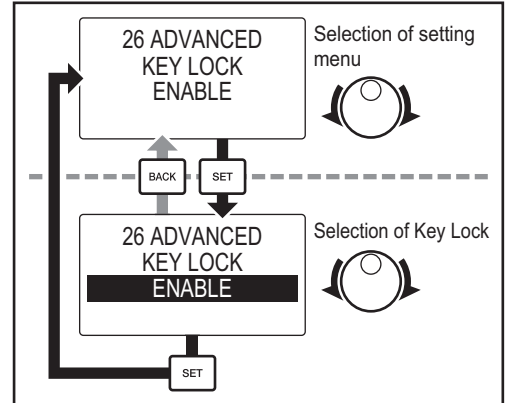
**3.4.26 Setting of Key Lock**

Set whether to enable or disable key operations.

**1** Under advanced mode, turn the dial to display “KEY LOCK”.  
The current setting will be displayed in the third line on the LCD.

**2** Press the **SET** key.  
Move to setting of key lock and the option line will be displayed in reverse video.

**3** Turn the dial to display “ENABLE/ DISABLE”.



Pressthe **BACK** key and return to selection of a setting menu.

Key Lock	Content
DISABLE	All of the keys can be operated.
ENABLE	The registered password becomes effective. If the password does not match correctly, keys cannot be operated; if password matches correctly, all the keys can be operated.

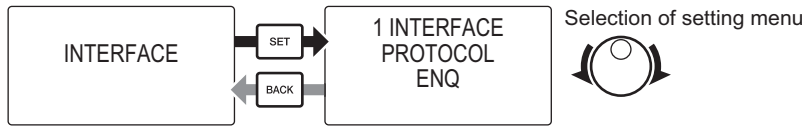
**4** Press the **SET** key.  
Confirm the key lock setting and return to selection of setting menu.

# 3.5 Operations under Interface Mode

Communication setting of installed interface board (option) can be done.

Depending on the type of interface, the displayed contents are different.

After moving to interface mode, turn the dial to select a setting menu.



Setting menu and corresponding contents are shown below.

Setting Menu	Content	Reference Page
1 PROTOCOL	Communication settings of installed interface can be done.	P.3-65
2 IP ADDRESS	Set the IP address and others when LAN interface is installed.	P.3-66
3 RS-232C PROTOCOL	Set communication protocol when RS-232C interface is installed.	P.3-67
4 RS-232C DISPLAY THE SETTING	Confirm the communication setting of RS-232C.	P.3-68

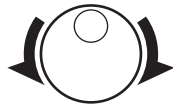
## 3.5.1 Setting of Protocol

Communication settings of installed interface can be done.

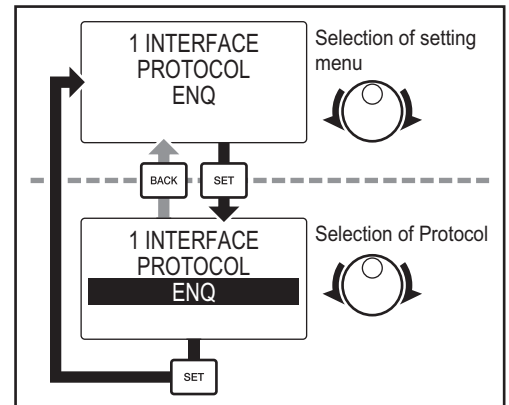


Press the **BACK** key to return to selection of setting mode.

- Turn the dial under certain interface mode to display "PROTOCOL".



The current setting will be displayed in the third line on the LCD.



- Press the **SET** key.

Move to selection of protocol and the option line will be displayed in reverse video.



Press the **BACK** key and return to selection of a setting menu.

- Turn the dial to display a random type of protocol.



- Press the **SET** key.

Confirm the communication settings and return to selection of setting menu.

### 3.5.2 Communication Settings of LAN

Set the address and others when LAN interface is installed.



Press the **BACK** key to return to selection of setting mode.

- 1 Turn the dial under certain interface mode to display "IP Address".



In the respective message line on the LCD (line 2: IP Address, line 3: Subnet Mask and line 4: Gateway) will be displayed current preset value.



Press the **BACK** key and return to selection of a setting menu.

- 2 Press the **SET** key. Current IP address is displayed.

- 3 Press the **SET** key. Move to the operation of setting IP address and the first input area is displayed in reverse video.



Press the **BACK** key, editing of IP address will be suspended and editing of subnet mask will start. Please proceed your operation with step 5.

- 4 Turn the dial to display a random IP address and press the **SET** key (or the **LABEL** key) to switch to the next input area.



When all of the input areas for IP address are set, current value of subnet mask will be displayed.



Press the **MENU** key, settings is confirmed and the printer will be restarted.

- 5 Press the **SET** key. Move to the operation of setting subnet mask and the first input area is displayed in reverse video.

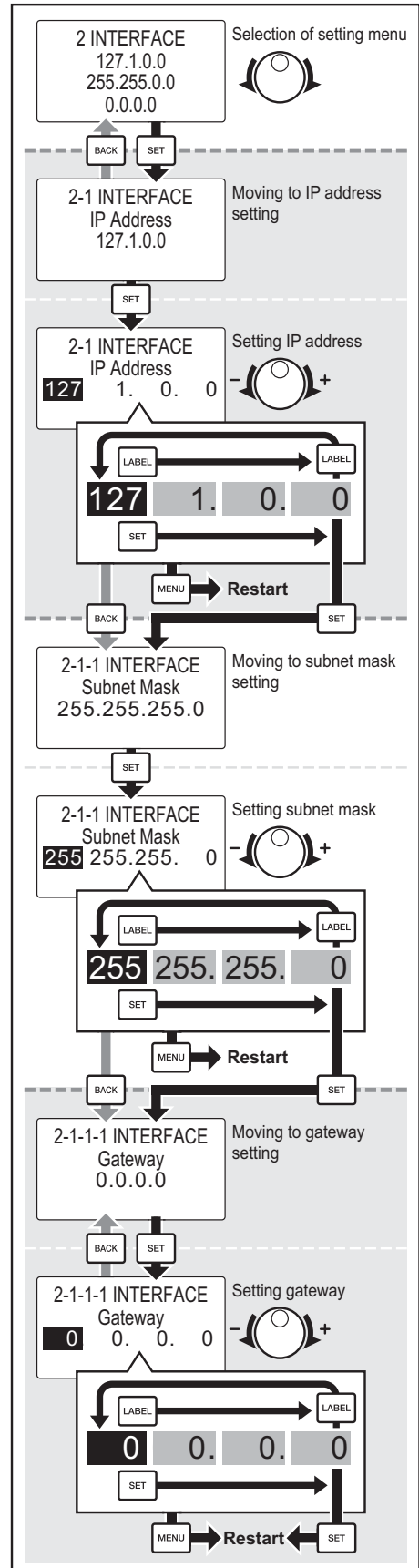


Press the **BACK** key, editing of subnet mask will be suspended and editing of gateway will start. Please proceed your operation with step 7.

- 6 Turn the dial to display a random subnet mask and press the **SET** key (or the **LABEL** key) to switch to the next input area.



When all of the input areas for subnet mask are set, the current preset value of gateway will be displayed.





Press the **MENU** key, settings is confirmed and the printer will be restarted.

- 7** Press the **SET** key.  
Move to the operation of setting gateway and the first input area will be displayed in reverse video.

- 8** Turn the dial to display a random Gateway and press the **SET** key (or the **LABEL** key) to switch to the next input area.



When all of the input areas for gateway value are set, confirm the communication settings and the printer will be restarted.

### 3.5.3 Communication Settings of RS-232C

Set communication protocol when RS-232C interface is installed.



Press the **BACK** key to return to selection of setting mode.

- 1** Turn the dial under certain interface mode to display “RS-232C PROTOCOL”.



The current setting will be displayed in the fourth line on the LCD.

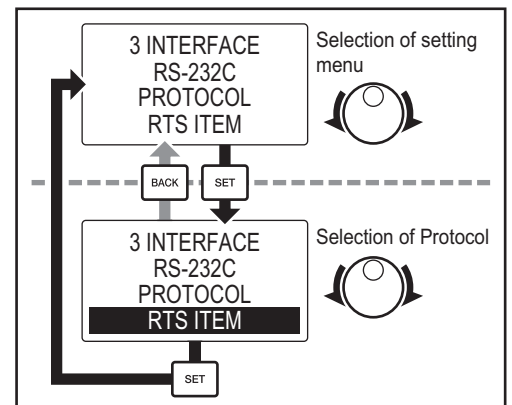
- 2** Press the **SET** key.  
Move to selection of protocol and the option line will be displayed in reverse video.

- 3** Turn the dial to display a random type of protocol.



\* When “STATUS” is selected from the list of protocols, the protocol that has been selected in menu “1 PROTOCOL” (Please refer to “3.5.1 Setting of Protocol” on page 3-65

- 4** Press the **SET** key.  
Confirm the communication settings and return to selection of setting menu.



Press the **BACK** key to return to selection of setting menu.

### 3.5.4 Confirmation of Communication Settings of RS-232C

Below is an explanation of the procedures for confirming the communication settings in the DipSW on the RS-232C interface board.



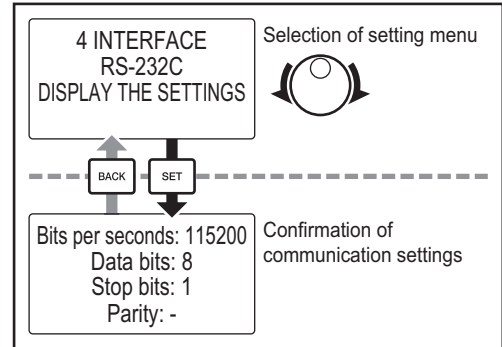
Press the **BACK** key to return to selection of setting mode.

- 1 Turn the dial under certain interface mode to display "RS-232C DISPLAY THE SETTINGS".



- 2 Press the **SET** key.

Communication settings of RS-232C will be displayed.  
Confirm the communication settings, and please press the **BACK** key to return to selection of setting menu.

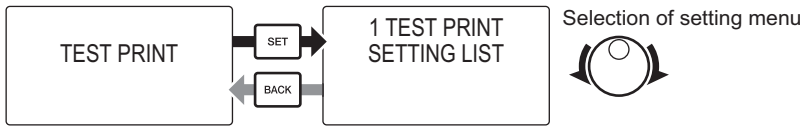




# 3.6 Operations under Test Print Mode

In order to confirm the conditions of printing, test print of demo pattern printing and barcode printing can be done. And, operations like head check or printing the content of settings can also be done.

After moving to test print mode, turn the dial to select a setting menu.



Setting menu and the corresponding contents are shown below.

Setting Menu	Content	Reference Page
1 SETTING LIST	Print out the contents of settings of the selected print configuration.	P.3-69
2 BARCODE	Test-print the coding systems of barcode once at a time.	P.3-70
3 HEAD CHECK	Finish head check and print out the results of head check.	P.3-71
4 FONT LIST	Test-print the fonts supported by this printer.	P.3-72
5 CHECK PATTERN	Print out the check pattern.	P.3-72
6 CONTET OF CF CARD	Print out the contents saved in CF card. * Effective printing can be done only when CF card slot (option) is installed.	P.3-73

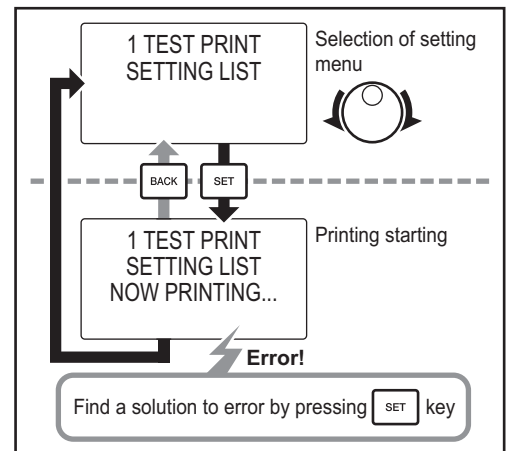
## 3.6.1 Printing of Settings

Print out the contents of settings of the selected print configuration.



Press the **BACK** key to return to selection of setting mode.

**1** Under Test Print mode, turn the dial to display “SETTING LIST”.

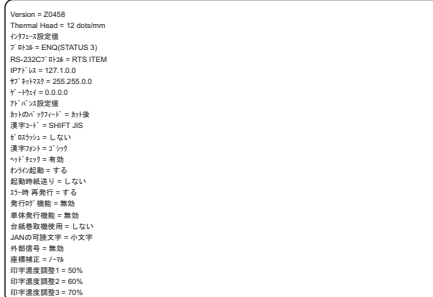


Printing cannot be suspended.

**2** Press the **SET** key.

Print the contents of print configuration and return to selection of setting menu.

### Print Example



In case errors like end label occur during printing, press the **PRINT** key to start reprinting.



### 3.6.2 Printing of Barcode

Test-print the coding systems of barcode once at a time.



Press the **BACK** key to return to selection of setting mode.

- Under Test Print mode, turn the dial to display "BARCODE".



- Press the **SET** key. Print the barcode and return to selection of setting menu.

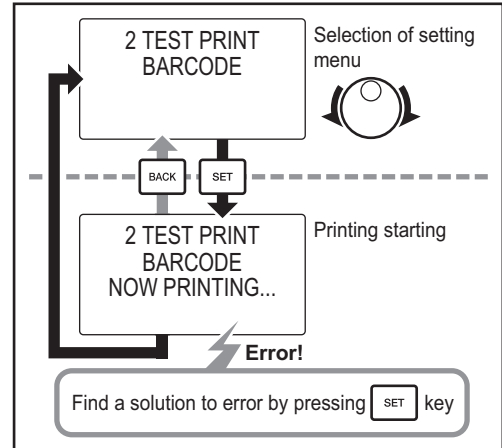
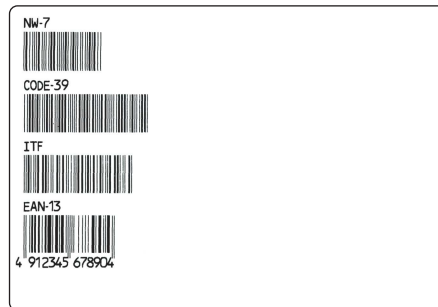


Printing cannot be suspended.



In case errors like end label occur during printing, press the **PRINT** key to start reprinting.

#### Print Example



### 3.6.3 Printing of Head Rank

Finish head check and print out the results of head check.



Press the **BACK** key to return to selection of setting mode.



Printing cannot be suspended.



In case errors like end label occur during printing, press the **PRINT** key to start reprinting.

- Under Test Print mode, turn the dial to display "HEAD CHECK".



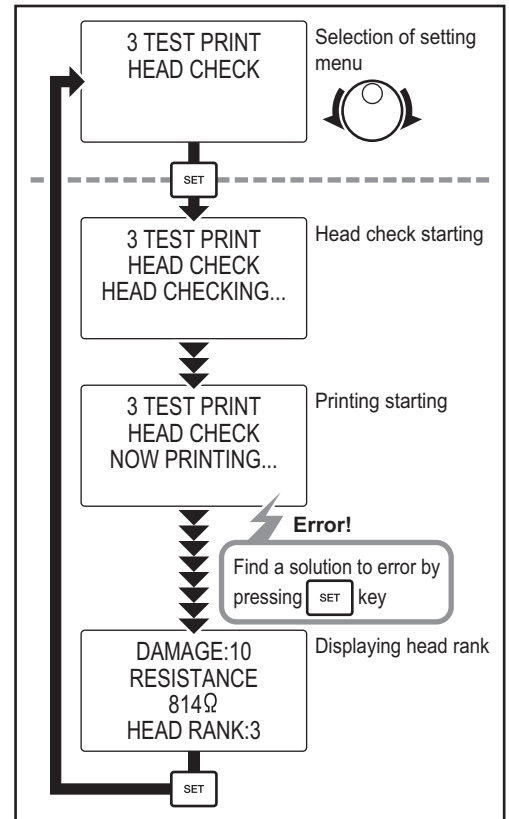
- Press the **SET** key.

Head check is finished and the results of head check are printed.

After printing is finished, head rank will be displayed.

- Confirm head rank.

If head is seriously damaged, please replace thermal head in reference to "4.2 Replacing the Thermal Head" on page 4-8.

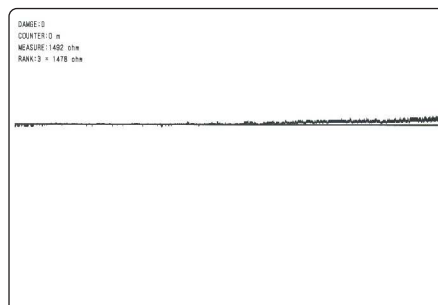


Checking Item		Content
LCD Message	Print	
Damage in dot number	DAMAGE	Show the damage of head in dot number.
—	COUNTER	Show the head counter.
Average Resistance	MEASURE	Show the average resistance of thermal head.
Head Rank	RANK	Show the resistance rank of thermal head.

- Press the **SET** key.

Return to selection of setting menu.

#### Print Example





**3.6.6 Printing of CF Card Content**

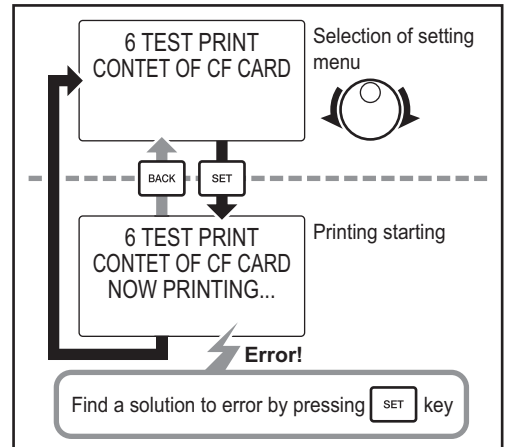
Print out the contents saved in CF card.

**POINT** Effective printing can be done only when CF card slot (option) is installed.



Press the **BACK** key to return to selection of setting mode.

**1** Under Test Print mode, turn the dial to display “CONTEET OF CF CARD”.



Printing cannot be suspended.

**2** Press the **SET** key.

Print the data saved in CF card and return to selection of setting menu.

**Print Example**

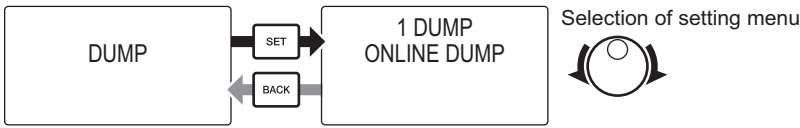


In case errors like end label occur during printing, press the **PRINT** key to start reprinting.

# 3.7 Operations under Dump Mode

Printing of the contents received from computer, or writing the contents into the CF card (option) as a file can be done.

After moving to dump mode, turn the dial to select a setting menu.



Setting menu and the corresponding contents are shown below.

Setting Menu	Content	Reference Page
1 ONLINE DUMP	Receive printing instruction from computer and print the contents or save the contents into CF card.	P.3-74
2 RECEIVED DATA DUMP	Print out the contents of printing instruction or save the contents into CF card.	P.3-76

## 3.7.1 Implementation of Online Dump

Receive printing instruction from computer and print the contents or save the contents into CF card.

In case of printing out onto the label, please refer to “■ Printing of Printing Instruction”, and in case of saving into CF card, please refer to “■ Saving of Printing Instruction”.

### ■ Printing of Printing Instruction



Press the **BACK** key to return to selection of setting mode.

- Under dump mode, turn the dial to display “ONLINE DUMP”.



- Press the **SET** key. Move to selection of output destination.

- Turn the dial to display “LABEL”.

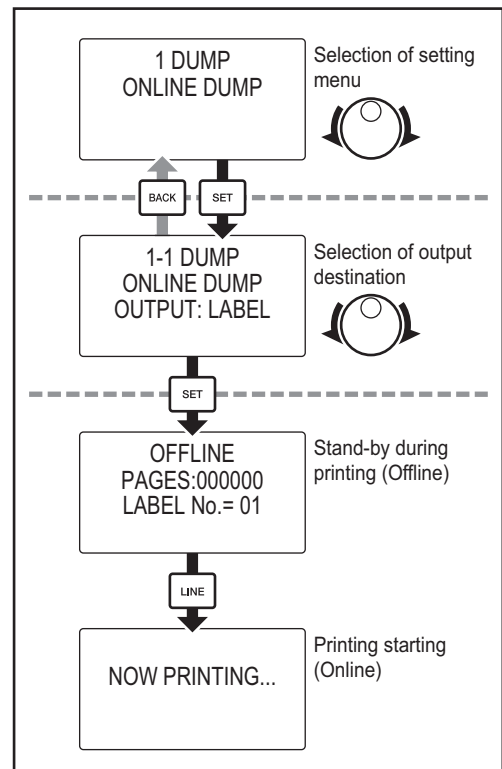


- Press the **SET** key. The printer starts stand-by.

- Press the **LINE** key. The printer is turned online, and after receiving printing instruction from computer, print the instruction out.



Press the **BACK** key and return to selection of a setting menu.



### POINT

Online dump cannot be canceled until power source is disconnected.

## ■ Saving of Printing Instruction



Press the **BACK** key to return to selection of setting mode.

- Under dump mode, turn the dial to display "ONLINE DUMP".



- Press the **SET** key.  
Move to selection of output destination.

- Turn the dial to display "CF CARD".

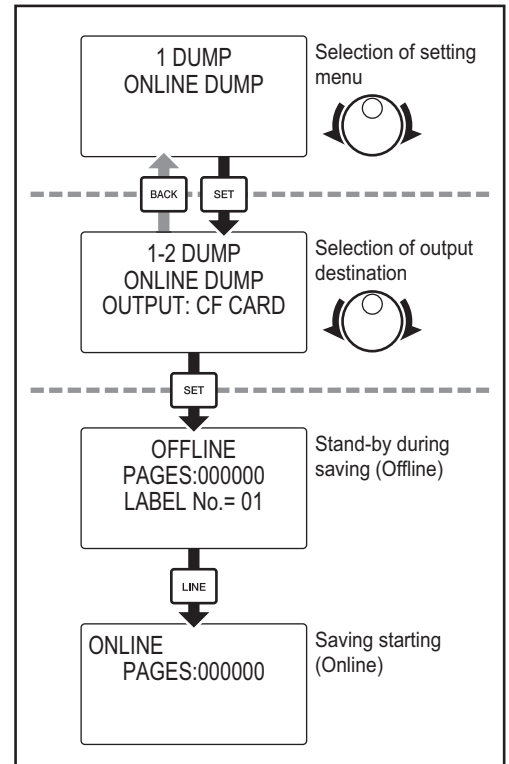


- Press the **SET** key.  
The printer starts stand-by.

- Press the **LINE** key.  
Turn the printer online to receive printing instruction from computer, and save the data into CF card while at the same time regular printing operations continue.



Press the **BACK** key and return to selection of a setting menu.



### POINT

Online dump cannot be canceled until power source is disconnected. Before disconnecting the power source, please be certain to press the **LINE** key so as to temporarily stop the printer.

**3.7.2 Implementation of Dump after Data Receiving**

Print out the contents of printing instruction or save the contents into CF card.  
 In case of printing out onto the label, please refer to “■ Printing of Printing Instruction”, and in case of saving into CF card, please refer to “■ Saving of Printing Instruction”.

**■ Printing of Printing Instruction**



Press the **BACK** key to return to selection of setting mode.

- 1** Under dump mode, turn the dial to display “RECEIVED DATA DUMP”.



- 2** Press the **SET** key. Move to selection of output destination.

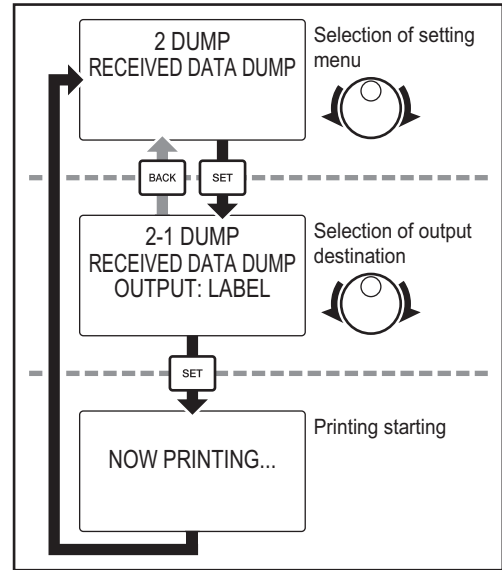
- 3** Turn the dial to display “LABEL”.



- 4** Press the **SET** key. Print out the contents for printing. When printing is finished, return to selection of setting menu.



Press the **BACK** key and return to selection of a setting menu.





## ■ Saving of Printing Instruction



Press the **BACK** key to return to selection of setting mode.

- 1 Under dump mode, turn the dial to display “RECEIVED DATA DUMP”.



- 2 Press the **SET** key. Move to selection of output destination.

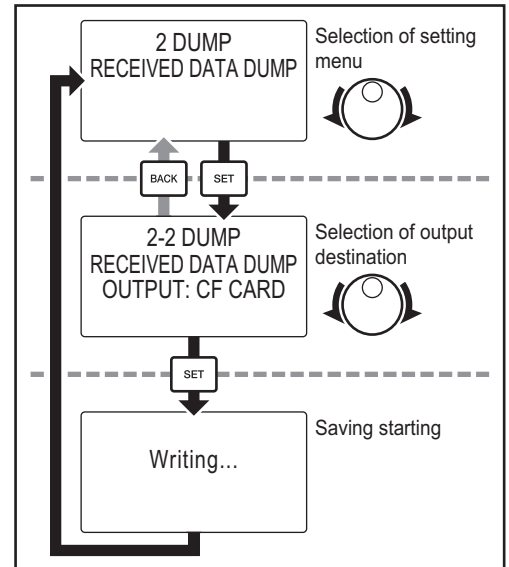
- 3 Turn the dial to display “CF CARD”.



- 4 Press the **SET** key. Save the contents for printing into CF card. When saving is finished, return to selection of setting menu.



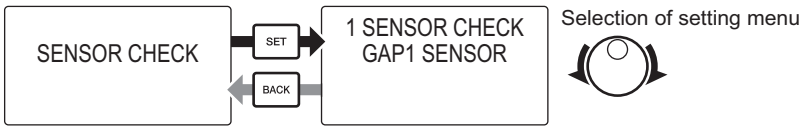
Press the **BACK** key and return to selection of a setting menu.



# 3.8 Operations under Sensor Check Mode

Checking of operations as for whether the sensor is properly functioning or not can be done.

After moving to sensor check mode, turn the dial to select a setting menu.



Setting menu and the corresponding contents are shown below.

Setting Menu	Content	Reference Page
1 GAP1 SENSOR	Feed 1 page of label and check the operation to see whether GAP1 Sensor can detect the label.	P.3-79
2 GAP2 SENSOR	Feed 1 page of label and check the operation to see whether GAP2 Sensor can detect the label.	P.3-79
3 I-MARK1 SENSOR	Feed 1 page of label and check the operation to see whether I-Mark1 Sensor can detect the label.	P.3-79
4 I-MARK2 SENSOR	Feed 1 page of label and check the operation to see whether I-Mark2 Sensor can detect the label.	P.3-79
5 HEAD UP SENSOR	Operate the head and check the operation to see whether head up sensor is properly functioning.	P.3-80
6 ROLLER SENSOR	Operate the feed roller and check the operation to see whether feed roller sensor is properly functioning.	P.3-81
7 RIBBON SENSOR	Turn the new ribbon holder and check the operation to see whether ribbon sensor is properly functioning.	P.3-82
8 DUMPER SENSOR	Please lower the dumper arm first, and check the operation to see whether the dumper sensor is properly functioning.	P.3-83
9 HEAD TEMPERATURE	Check whether the temperature of thermal head is correctly displayed.	P.3-84
10 PRINTER TEMPERATURE	Check whether the temperature inside the printer is correctly displayed.	P.3-84
11 DISPENSER SENSOR	Insert label in between the light emitting and light sensing devices of dispenser sensor and check the operation to see whether the label can be detected. * The option can be displayed/set only when the print configuration of selecting "DISPENSER" for the setting menu "1-1 Printing Mode" under Label Set mode is applied.	P.3-85
12 EXTERNAL SIGNAL INPUT CHECK	Check data communication to see whether input signal from external equipment connected to the input terminal can be properly received.	P.3-86
13 EXTERNAL SIGNAL OUTPUT CHECK	Check the communication to see whether output signal for external equipment connected to the output terminal can be properly sent.	P.3-87
14 End Tape	Insert the thermal transfer ribbon in between the light emitting and light sensing devices of end tape sensor and check the operation to see whether the thermal transfer ribbon can be detected.	P.3-88

**3.8.1 Confirmation of Gap Sensor/I-Mark Sensor**

Feed 1 page of label and check the operation to see whether can detect the label.  
 As operations for Gap1 sensor, Gap2 sensor, I-Mark1 sensor, I-Mark2 sensor are all the same, operation of “Gap1 Sensor” is selected as an example for explanation.



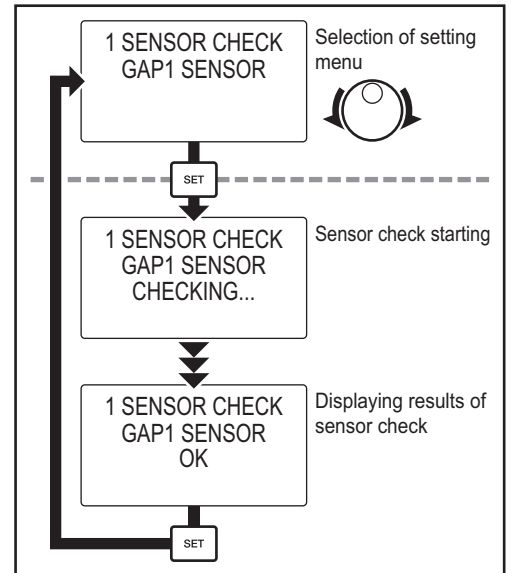
Press the **BACK** key to return to selection of setting mode.

**1** Under Sensor Check mode, turn the dial to display “GAP1 SENSOR”.



**2** Press the **SET** key.

Feed 1 page of label to check the operation as to whether label can be detected or not.  
 After checking, results will be displayed on the LCD.



Results	Content
OK	Label detection successful. Sensor works properly.
NG	Label detection failure. There might be some abnormality.

**3** Press the **SET** key.

Return to selection of setting menu.

**3.8.2 Confirmation of Head Up Sensor**

Operate the head and check the operation to see whether head up sensor is properly functioning.

**POINT** Even buzzer sound is disabled under advanced mode, the buzzer still rings for confirmation.

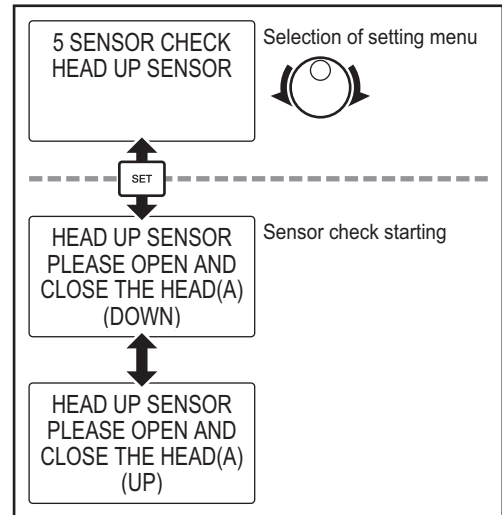


Press the **BACK** key to return to selection of setting mode.

- Under sensor check mode, turn the dial to display "HEAD UP SENSOR".

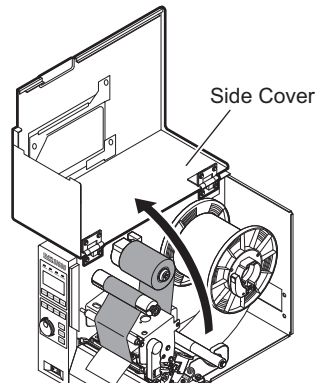


- Press the **SET** key.  
Move to checking of head up sensor operations.



When opening the side cover, please open it completely until the top surface of the cover touches the printer main part. If you release your hands when the cover is half open or in the midway of opening/closing it, the cover might fall and result in injury and/or malfunction.

- Open the side cover.

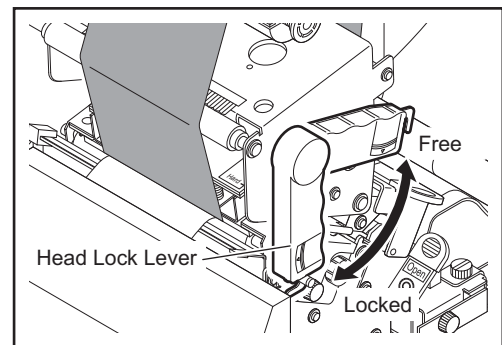


- Operate the head and confirm the sensor operations.

Switch the head lock lever between free and locked status, and confirm the message on the LCD and buzzer sound.

Below is indication of proper operations.

Status	LCD Message	Buzzer Sound
Free	UP (A)	Give beeping sound
Locked	DOWN (A)	Give beeping sound



When handling the Head Lock Lever, please do not put your fingers and/or hands near the tuning area of thermal head. It might cause injury.

- Press the **SET** key.

Return to selection of setting menu.

Please turn the head lock lever into locked status and close the side cover.

### 3.8.3 Confirmation of Feed Roller Sensor

Operate the presser and check the operation to see whether feed roller sensor is properly functioning.

**POINT** Even buzzer sound is disabled under advanced mode, the buzzer still rings for confirmation.



Press the **BACK** key to return to selection of setting mode.

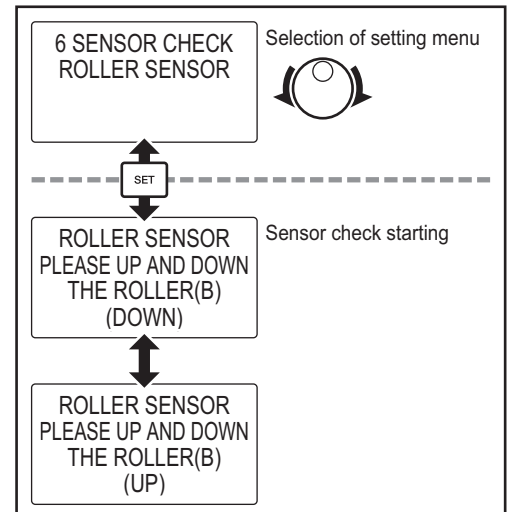
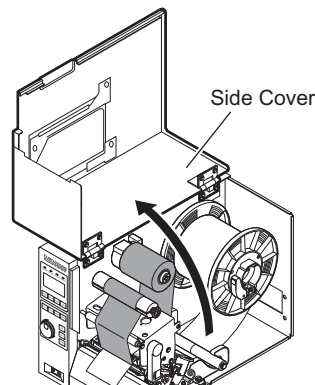
**1** Under Sensor Check mode, turn the dial to display "ROLLER SENSOR".



**2** Press the **SET** key.

Move to checking of feed roller sensor operations.

**3** Open the side cover.



When opening the side cover, please open it completely until the top surface of the cover touches the printer main part. If you release your hands when the cover is half open or in the midway of opening/closing it, the cover might fall and result in injury and/or malfunction.

**4** Operate the presser and confirm the sensor operations.

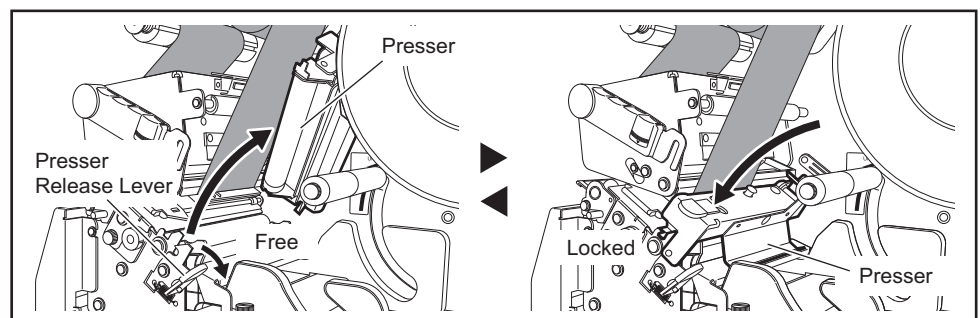
Switch the presser between free and locked status, and confirm the message on the LCD and buzzer sound. Below is indication of proper operations.

Status	LCD MESSAGE	Buzzer Sound
Free	UP (B)	Give beeping sound
Locked	DOWN (B)	Give beeping sound



Please confirm that after the Presser is released it is well fastened with the Magnet.

If you release your hands in the midway of opening /closing, the Presser might fall and result in injury.



**5** Press the **SET** key.

Return to selection of setting menu.

Please turn the presser into locked status and close the side cover.

**3.8.4 Confirmation of Ribbon Sensor**

Turn the ribbon feeder and check whether operations of ribbon sensor are proper or not.

**POINT** Even buzzer sound is disabled under advanced mode, the buzzer still rings for confirmation.

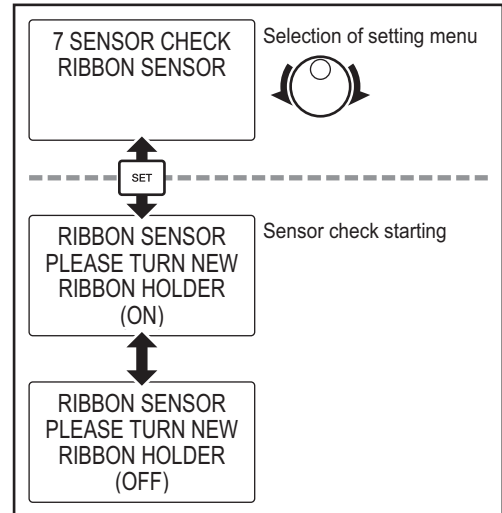


Press the **BACK** key to return to selection of setting mode.

- Under sensor check mode, turn the dial to display "RIBBON SENSOR".

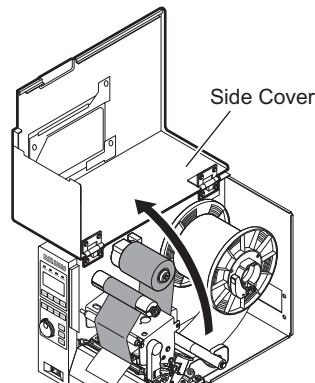


- Press the **SET** key. Move to checking of ribbon sensor operations.



When opening the side cover, please open it completely until the top surface of the cover touches the printer main part. If you release your hands when the cover is half open or in the midway of opening/closing it, the cover might fall and result in injury and/or malfunction.

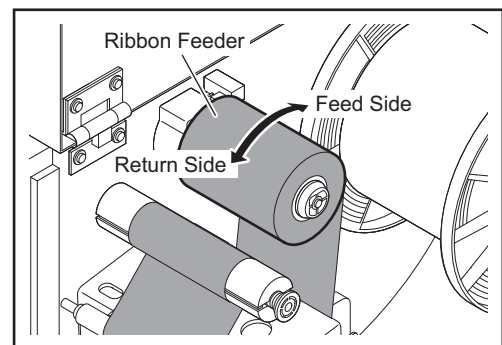
- Open the side cover.



- Turn the ribbon feeder and confirm the sensor operations.

Turn the ribbon feeder from between the feed side and return side and confirm the LCD message as well as buzzer sound. Below is indication of proper operations.

Status	LCD MESSAGE	Buzzer Sound
Feed Side	ON	Give beeping sound
Return Side	OFF	Give beeping sound



- Press the **SET** key. Return to selection of setting menu. Close the side cover.

### 3.8.5 Confirmation of Dumper Sensor

Please lower the dumper arm first, and check the operation to see whether the dumper sensor is properly functioning.

**POINT** Even buzzer sound is disabled under advanced mode, the buzzer still rings for confirmation.



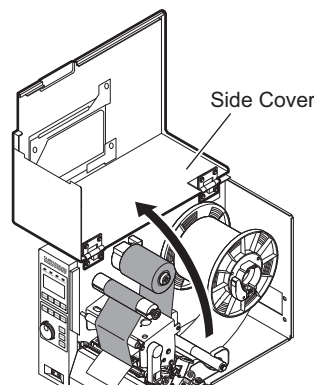
Press the **BACK** key to return to selection of setting mode.

- Under sensor check mode, turn the dial to display "DUMPER SENSOR".



- Press the **SET** key.  
Move to checking of dumper sensor operations.

- Open the side cover.

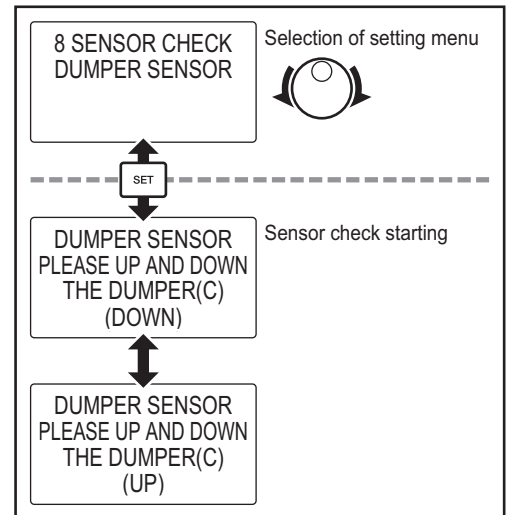


#### CAUTION

When opening the side cover, please open it completely until the top surface of the cover touches the printer main part. If you release your hands when the cover is half open or in the midway of opening/closing it, the cover might fall and result in injury and/or malfunction.

- Operate the dumper arm and confirm the sensor operations.  
Switch the dumper arm between free and locked status, and confirm the message on the LCD and buzzer sound.  
Below is indication of proper operations.

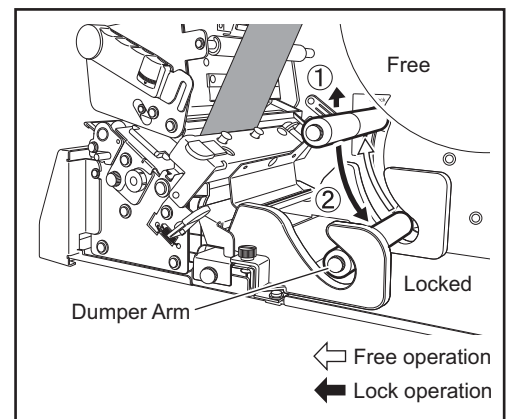
Status	LCD MESSAGE	Buzzer Sound
Free	UP (C)	Give beeping sound
Locked	DOWN (C)	Give beeping sound



- Press the **SET** key.

Return to selection of setting menu.

Please turn the dumper arm into locked status and close the side cover.



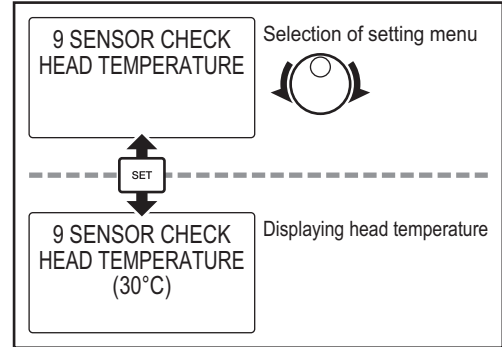
### 3.8.6 Confirmation of Head Temperature

Check whether the temperature of thermal head is correctly displayed.



Press the **BACK** key to return to selection of setting mode.

- 1 Under sensor check mode, turn the dial to display "HEAD TEMPERATURE".



- 2 Press the **SET** key. Head temperature will be displayed in the third line on the LCD.

- 3 Press the **SET** key. Return to selection of setting menu.

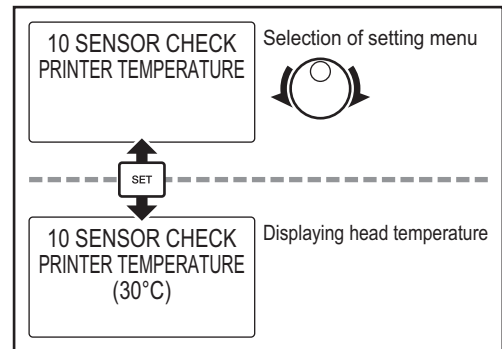
### 3.8.7 Confirmation of Inside Printer Temperature

Check whether the temperature inside the printer is correctly displayed.



Press the **BACK** key to return to selection of setting mode.

- 1 Under sensor check mode, turn the dial to display "PRINTER TEMPERATURE".



- 2 Press the **SET** key. Printer temperature will be displayed in the third line on the LCD.

- 3 Press the **SET** key. Return to selection of setting menu.



**3.8.8 Confirmation of Dispenser Sensor**

Insert label in between the light emitting and light sensing devices of dispenser sensor and check the operation to see whether the label can be detected.

- POINT**
- The option is displayed when the print configuration of selecting “DISPENSER” for the setting menu “1-1 Printing Mode” under Label Set mode is applied.
  - Checking is necessary if Dispenser Unit (option) is installed.
  - Even buzzer sound is disabled under advanced mode, the buzzer still rings for confirmation.

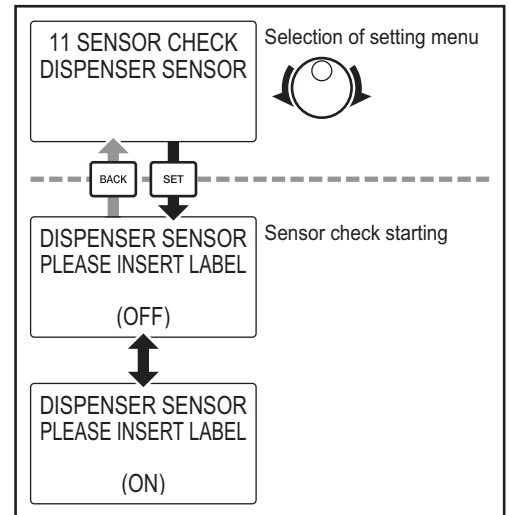


Press the **BACK** key to return to selection of setting mode.

**1** Under sensor check mode, turn the dial to display “DISPENSER SENSOR”.



**2** Press the **SET** key. Move to checking of dispenser sensor operations.



**3** Insert label in between the light emitting and light sensing devices of dispenser sensor, and confirm the operations of the sensor. Confirm the message on LCD. Below is indication of proper operations.

Label Status	LCD MESSAGE
Passed	OFF
Pulled out	ON

**4** Press the **BACK** key. Return to selection of setting menu.

**3.8.9 Confirmation of External Signal (Input)**

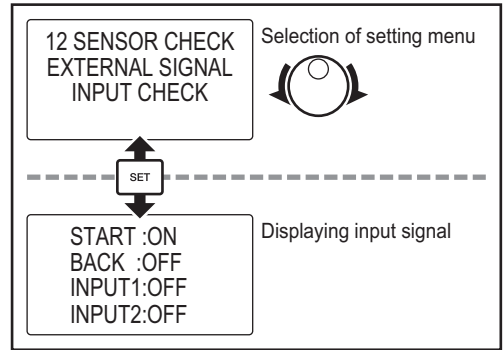
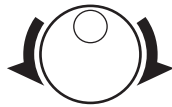
Check data communication to see whether input signal from external equipment connected to the input terminal can be properly received.

**POINT** Checking is only necessary when input terminal (option) for external signal is installed.



Press the **BACK** key to return to selection of setting mode.

- Under sensor check mode, turn the dial to display “EXTERNAL SIGNAL INPUT CHECK”.



- Press the **SET** key.

Status of the input signal will be displayed on the LCD.

Result	Content
ON	Signal ON.
OFF	Signal OFF.

- Press the **SET** key.

Return to selection of setting menu.

### 3.8.10 Confirmation of External Signal (Output)

Check whether the output signal sent to the external equipment connected to the output terminal can change normally.

**POINT** Checking is only necessary when output terminal (option) for external signal is installed.



Press the **BACK** key to return to selection of setting mode.

- Under sensor check mode, turn the dial to display “EXTERNAL SIGNAL OUTPUT CHECK”.



- Press the **SET** key.

Move to setting of BUSY.

- Turn the dial to display “ON/OFF”.



Setting	Content
ON	Turn ON
OFF	Turn OFF

When switching between ON/OFF, the external signal changes too. Therefore please confirm the output signal in the connected external equipment.

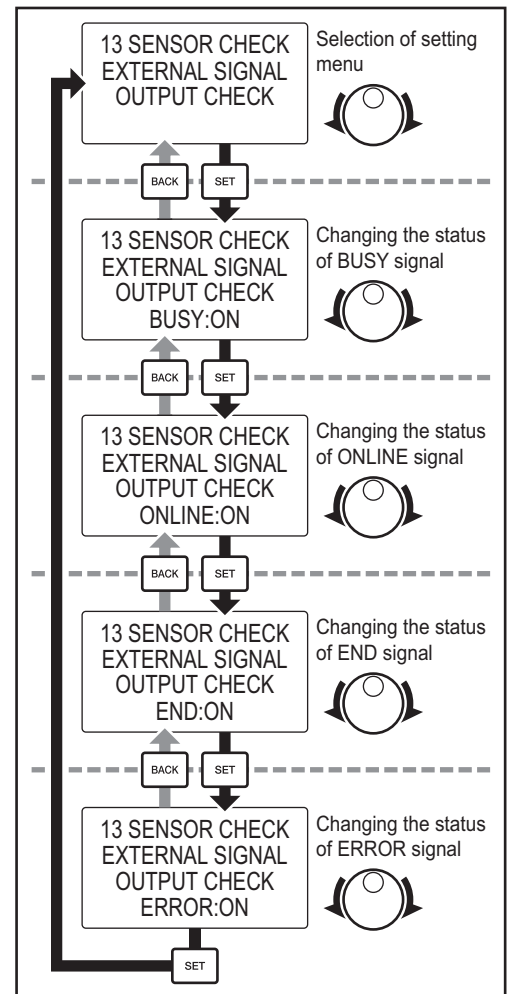
- Press the **SET** key.

Move to setting of ONLINE.

- Repeat step 3 and step 4, and confirm the 4 types of output signal, namely BUSY, ONLINE, END and ERROR.

- After ERROR check, please press the **SET** key.

Return to selection of setting menu.



**3.8.11 Confirmation of End Tape Sensor**

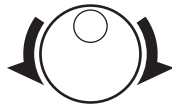
Insert a piece of white paper that can reflect light in between the light emitting and light sensing devices of End Tape Sensor, and check the operation as for whether Thermal Transfer Ribbon can be detected.

**POINT** Confirmation of End Tape Sensor must be done with white paper that can reflect light.

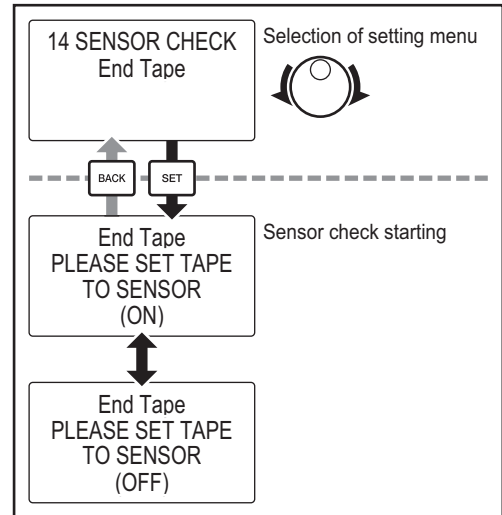


Press the **BACK** key to return to selection of setting mode.

- Under sensor check mode, turn the dial to display "End Tape".

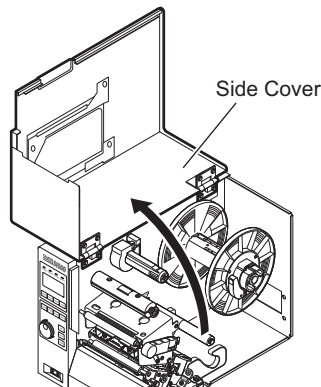


- Press the **SET** key. Move to checking of end tape sensor operations.



When opening the side cover, please open it completely until the top surface of the cover touches the printer main part. If you release your hands when the cover is half open or in the midway of opening/closing it, the cover might fall and result in injury and/or malfunction.

- Open the side cover.

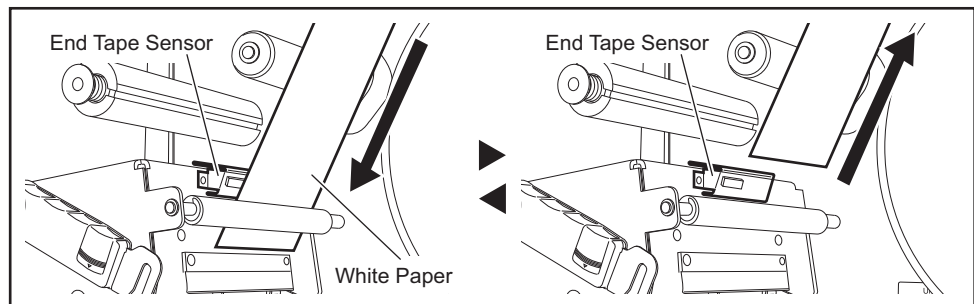


- Insert the white paper in between the light emitting and light sensing devices of end tape sensor, and confirm the operations of the sensor.

Confirm the message on LCD.

Below table shows the operations under normal condition.

White Paper Status	LCD MESSAGE
Passed	OFF
Pulled out	ON

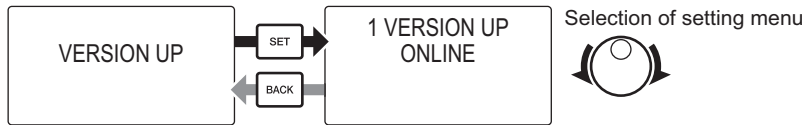


- Press the **BACK** key. Return to selection of setting menu.

# 3.9 Operations under Version Up Mode

Rewriting of the printer program can be done either from computer or from the CF card.

After moving to version up mode, turn the dial to select a setting menu.



Setting menu and the corresponding contents are shown below.

Setting Menu	Content	Reference Page
1 ONLINE	Program data can be received from computer and the program can be rewritten.	P.3-89
2 CF CARD	Program data can be received from CF card and the program can be rewritten. * Operations are enabled only when CF card slot (option) is installed.	P.3-90

## 3.9.1 Online Version Up

Program data can be received from computer and the program can be .



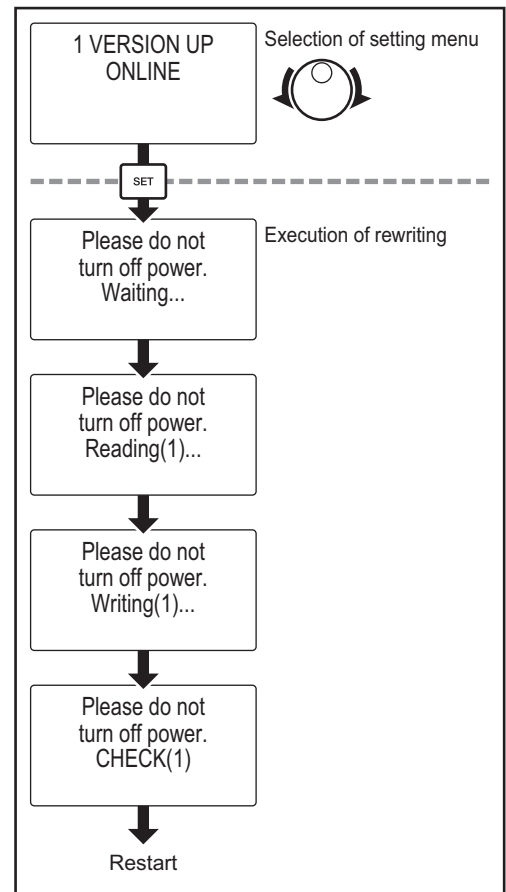
Press the **BACK** key to return to selection of setting mode.

- 1 Under version up mode, turn the dial to display "ONLINE".



- 2 Press the **SET** key.

Communication with computer starts and the program is being rewritten. When rewriting is finished, the printer will be restarted.



### 3.9.2 Version Up through CF Card

Program data can be received from CF card and the program can be rewritten.

**POINT** Operations are enabled only when CF card slot (option) is installed.



Press the **BACK** key to return to selection of setting mode.

**1** Under version up mode, turn the dial to display "CF CARD".

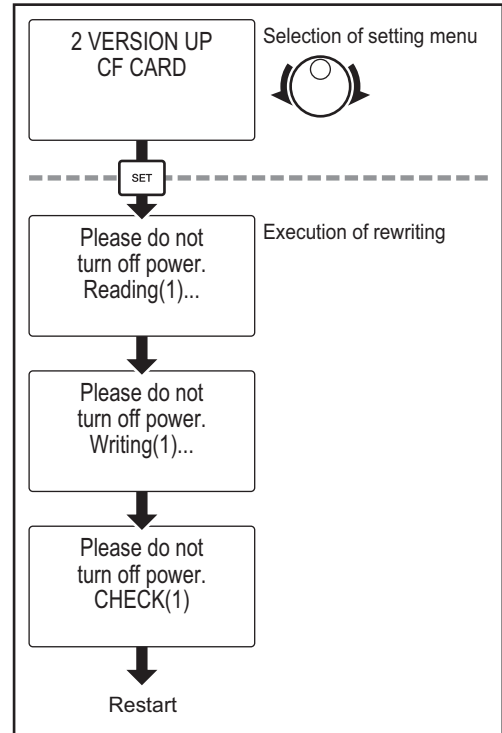


**2** Press the **SET** key.

Search the program in CF card and rewrite the program.

When rewriting is finished, the printer will be restarted.

If there is no program in CF card or if there is no CF card inserted in the slot, a message will be displayed.



# Chapter 4

## MAINTENANCE

This chapter explains how to clean and replace the various parts.

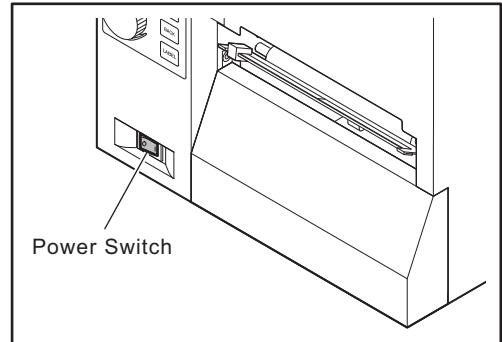
- 4.1 Cleaning the Interior of the Printer.....4-2
- 4.2 Replacing the Thermal Head.....4-8
- 4.3 Replacement of Platen Roller.....4-12

# 4.1 Cleaning the Interior of the Printer

If the parts are not clean, it not only makes the printer unable to produce clear and normal printed label, but also causes malfunction.

Please regularly clean your printer.

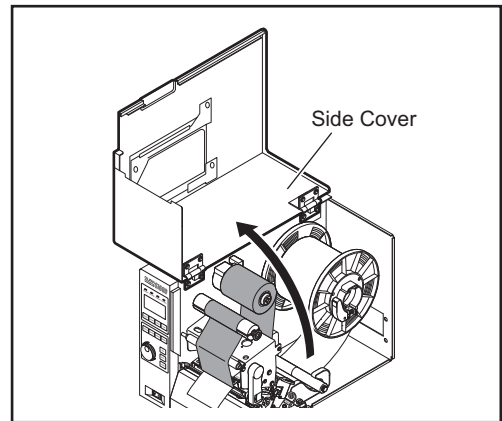
- 1 Press on the [ ○ ] side of the Power Switch and power is turned OFF.  
Power Lamp goes out, and the power source is disconnected.



**CAUTION**

When opening the side cover, please open it completely until the top surface of the cover touches the printer main part. If you release your hands when the cover is half open or in the midway of opening/closing it, the cover might fall and result in injury and/or malfunction.

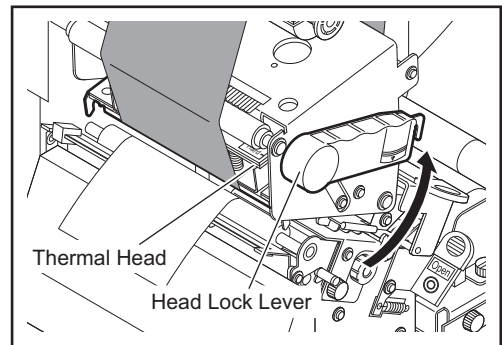
- 2 Open the Side Cover.



**CAUTION**

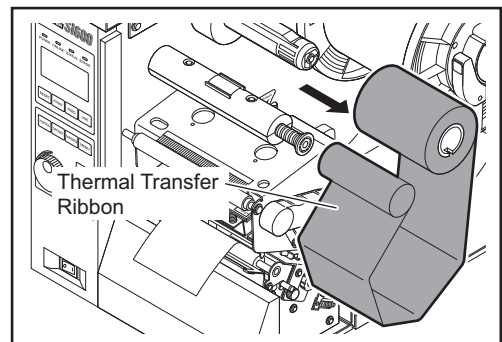
When handling the Head Lock Lever, please do not put your fingers and/or hands near the tuning area of thermal head. It might cause injury.

- 3 Pull the Head Lock Lever upwards and towards available directions.  
The Thermal Head is lifted.



For details about how to remove the thermal ribbon, please read the steps 4 to 5 of "1.4.1 Installing the Thermal Transfer Ribbon" on page 1-10.

- 4 Remove the thermal transfer ribbon.

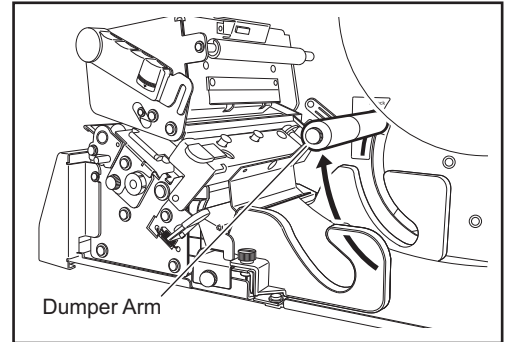


If heat-sensitive label is used, please proceed with the following steps.



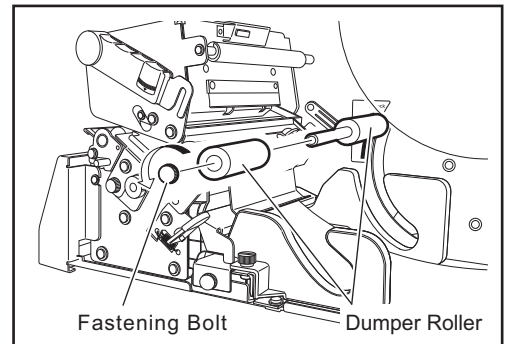
**5** Keep the Dumper Arm released.

Hold and lift the Dumper Arm upwards to its maximum limit till it gives a clicking sound indicating that it is fastened.



**6** Remove the dumper roller, use a cloth soaked with isopropyl alcohol to clean the taints.

Turn the fastening bolt of dumper arm with your finger and remove the dumper roller.



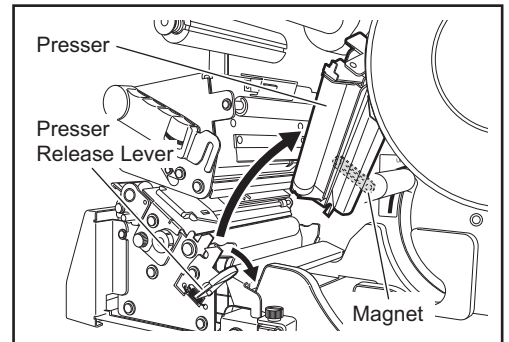
**CAUTION**

Please confirm that after the Presser is released it is well fastened with the Magnet.

If you release your hands in the midway of opening /closing, the Presser might fall and result in injury.

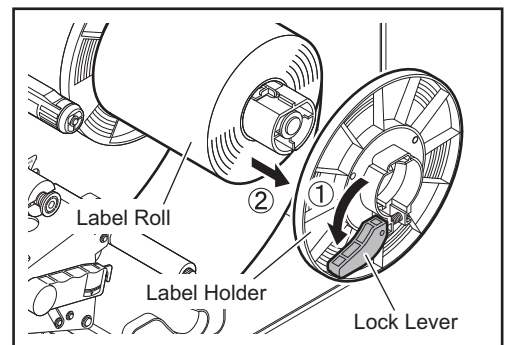
**7** Release the Presser.

- ① Push the Presser Release Lever and the Presser is released.
- ② Lift the Presser and fasten it with Magnet.

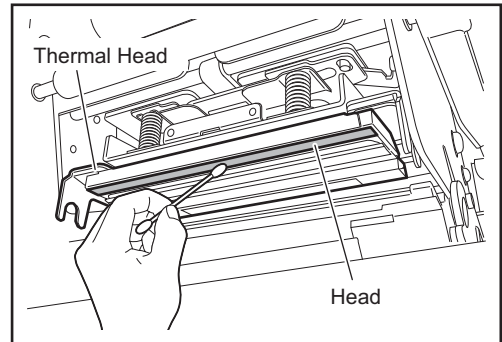


**8** Remove the label holder from label-holding axis, and then remove the label roll.

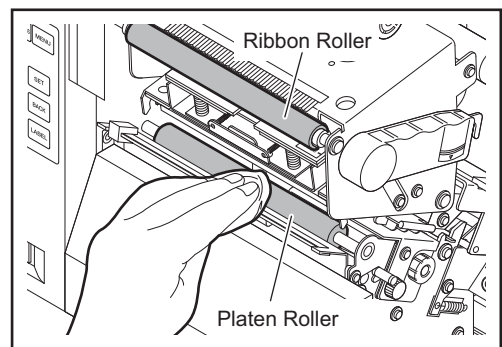
Release the lock lever of Label Holder, and remove the Label Holder from the Label-holding Axis.



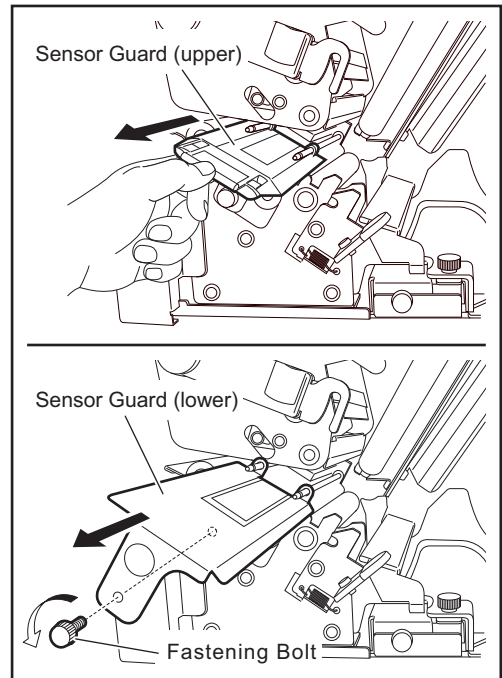
- 9** Use a cotton swab soaked with isopropyl alcohol to wipe the thermal head gently.



- 10** Use a cloth soaked with isopropyl alcohol to wipe the platen roller and the ribbon roller gently.



- 11** Remove the Sensor Guard (upper and lower) and wipe off the dirtiness on the surface.  
Remove the Sensor Guard (upper), and turn the fastening bolt of the Sensor Guard (lower) to remove it.  
After cleaning, install the upper and lower Sensor Guards as it was previously installed.



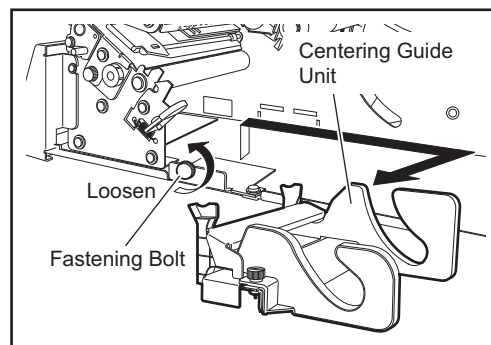
**CAUTION**

To install the part, please insert the projection part of the Centering Guide unit into the grooved hole on the inner side of the frame and then tighten the fastening bolt.

**12** Remove the Centering Guide unit, and wipe off the dirtiness on its surface.

Turn the fastening bolt of Centering Guide with your finger and remove the Centering Guide.

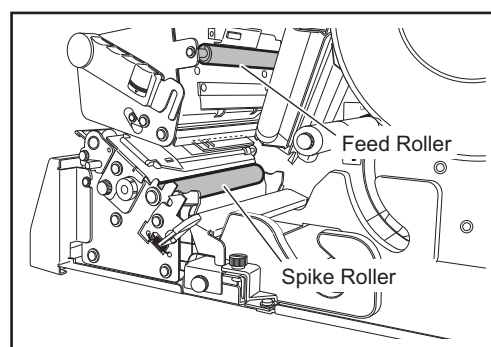
At this point, please also wipe off the dirtiness on the undersurface of the printer.



**13** Clean the Spike Roller and the Feed Roller.

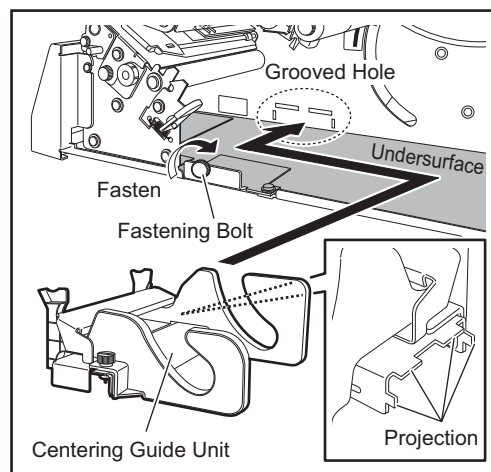
Remove the paper powder attached to the Spike Roller with a tooth brush or other brush.

Use a cloth soaked with isopropyl alcohol to wipe the conveying roller gently.

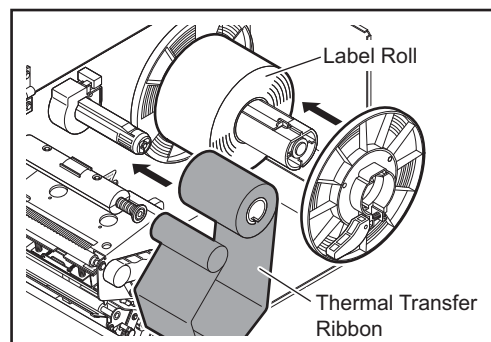


**14** Wipe off the dirtiness on the undersurface of the printer and install the Centering Guide unit as it was previously installed.

Insert the projection part of the Centering Guide unit into the grooved hole on the inner side of the frame and then tighten the fastening bolt.



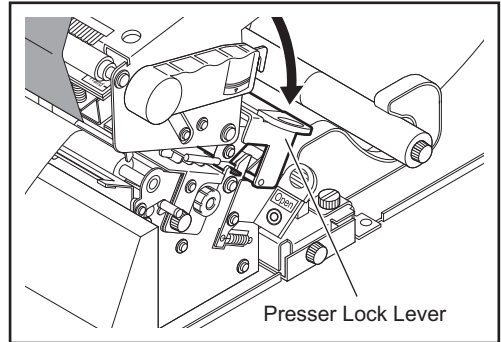
**15** Install the label roll and the Thermal Transfer Ribbon.



For details of how to install the Thermal Transfer Ribbon and Label Roll, please read the steps 6 to 10 of “1.4.1 Installing the Thermal Transfer Ribbon” on page 1-10 and steps 6 to 11 of “1.5.1 Installing the Label Roll” on page 1-14 respectively.

**16** Fasten the presser.

Lower the presser towards the locking direction until it gives a short snapping sound, and the presser is fastened.

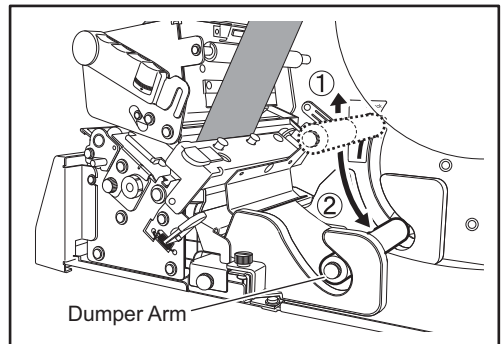


**CAUTION**

When releasing the Dumper Arm, please do not pull it down forcibly.

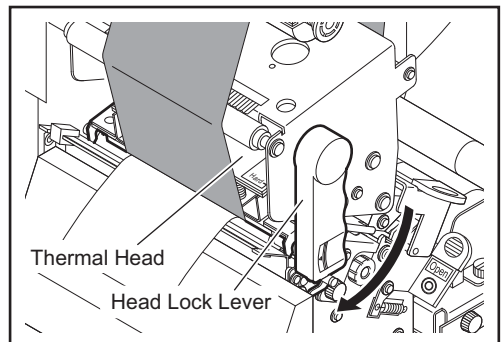
**17** Lower the Dumper Arm.

Hold and lift the Dumper Arm upward to its maximum limit till it gives a clicking sound indicating it is released, and lower the Dumper Arm without releasing your hands.

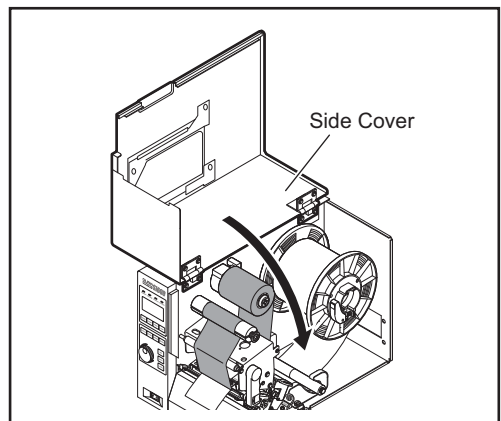


**18** Lower the Head Lock Lever towards the lock.

Thermal Head is lowered.

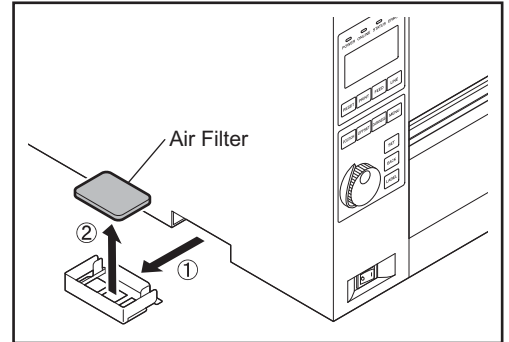


**19** Close the Side Cover.



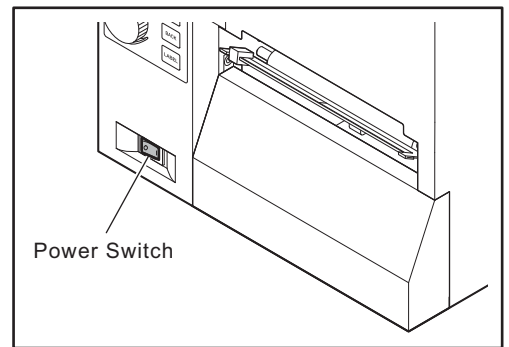
**20** Clean the air filter.

Remove the air filter and wash it with water; after it is completely dry install it as it was previously installed.



**21** Press on the [ | ] side of the Power Switch and power source is turned ON.

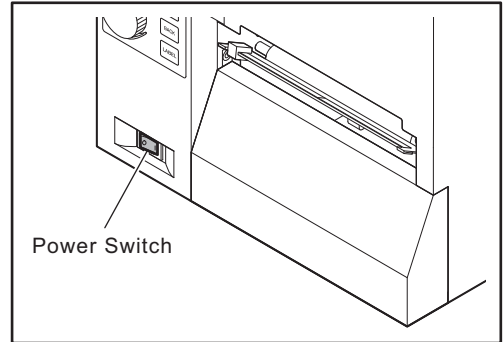
Power lamp lights up and the printer is started.



# 4.2 Replacing the Thermal Head

This section is an explanation of how to replace the Thermal Head.

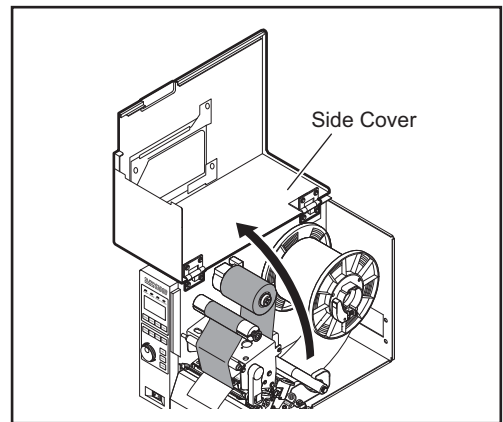
- 1** Press on the [ ○ ] side of the Power Switch and power is turned OFF.  
Power Lamp goes out, and the power source is disconnected.



**CAUTION**

When opening the side cover, please open it completely until the top surface of the cover touches the printer main part. If you release your hands when the cover is half open or in the midway of opening/closing it, the cover might fall and result in injury and/or malfunction.

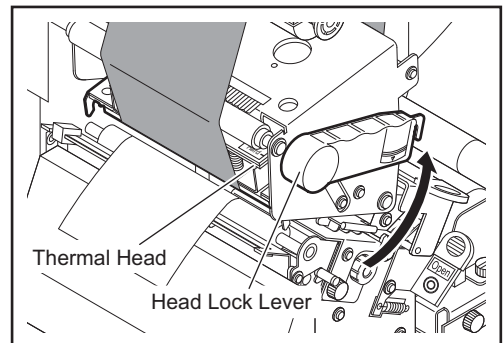
- 2** Open the Side Cover.



**CAUTION**

When handling the Head Lock Lever, please do not put your fingers and/or hands near the tuning area of thermal head. It might cause injury

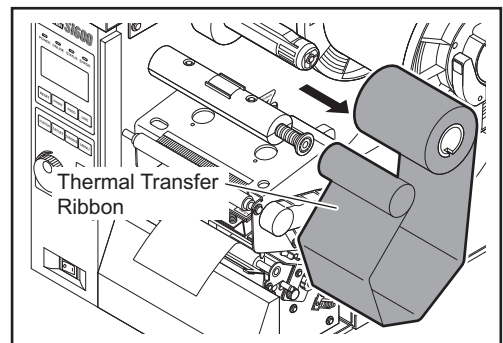
- 3** Pull the Head Lock Lever upwards and towards available directions.  
The Thermal Head is lifted.



**NOTE**

If heat-sensitive label is used, please proceed with the following steps.

- 4** Remove the thermal transfer ribbon.

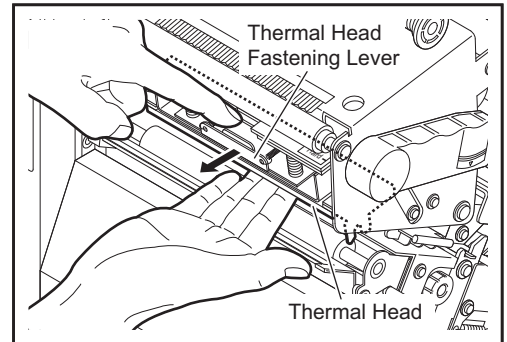


**CAUTION**

Please do not touch the heat-generating part of the Thermal Head with your bare hands. It will cause bad quality in printing.

**5** Uphold the Thermal Head with your hand and pull the fastening lever of the Thermal Head towards you.

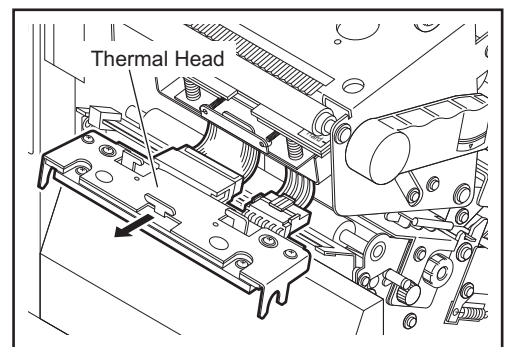
Unfasten the Thermal Head.



**CAUTION**

Please do not drag the Harness forcibly.

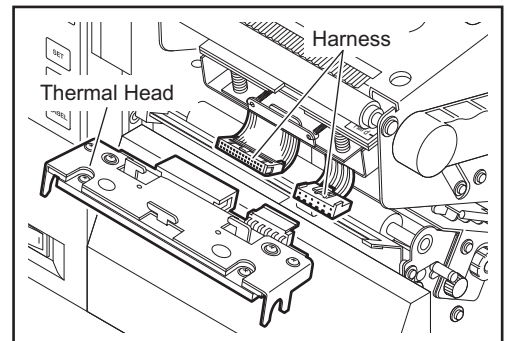
**6** Pull out the Thermal Head carefully.



**CAUTION**

Please install the Harness to its previous position where it does not touch the Thermal Transfer Ribbon.

**7** Unfasten the Harness and install the new Thermal Head

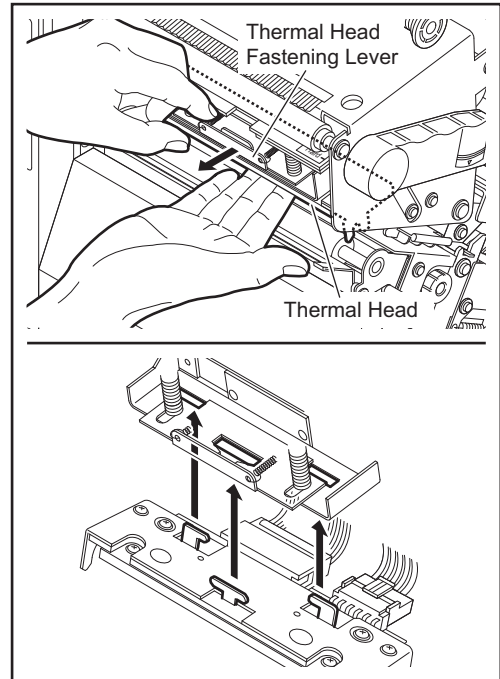


**CAUTION**

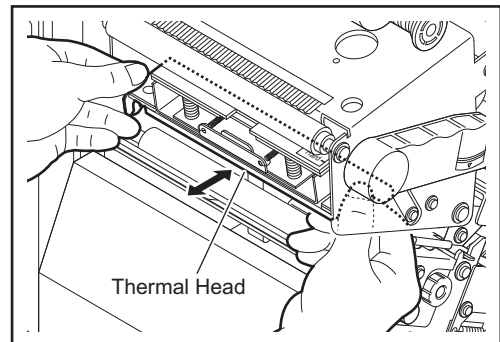
Please do not touch the heat-generating part of the Thermal Head with your bare hands. It will cause bad quality in printing.



- 8** Pull the fastening lever of the Thermal Head towards you, and put the fingernail inside while upholding the Thermal Head with your hand.  
Once your fingernail is inside, restore the fastening lever of the Thermal Head.

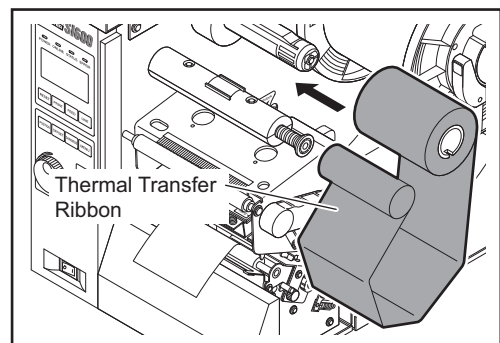


- 9** Move the Thermal Head forward and backward.  
Please move the part forward and backward until it gives a short snapping sound to confirm that the part can move smoothly.



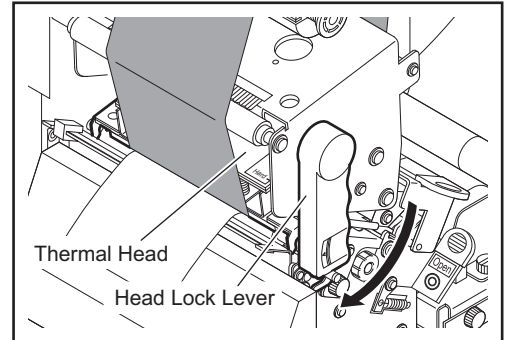
Please read the steps 6 to 10 of "1.4.1 Installing the Thermal Transfer Ribbon" on page 1-10 for details of how to install the Thermal Transfer Ribbon.

- 10** Install the Thermal Transfer Ribbon.

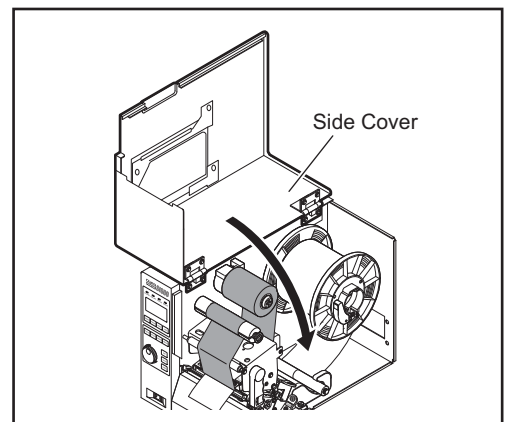




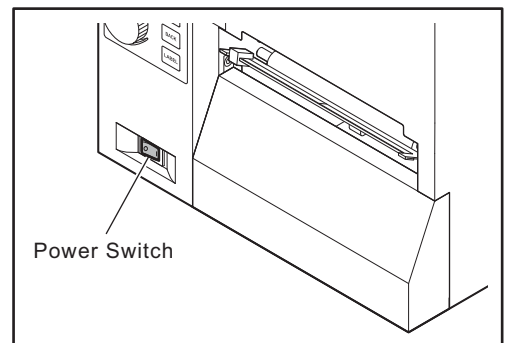
- 11** Lower the Head Lock Lever towards the lock.  
Thermal Head is lowered.



- 12** Close the Side Cover.



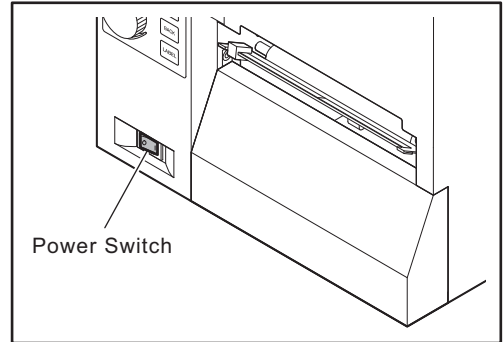
- 13** Press on the [ | ] side of the Power Switch and power source is turned ON.  
Power lamp lights up and the printer is started.



# 4.3 Replacement of Platen Roller

This section is an explanation of how to replace Platen Roller.

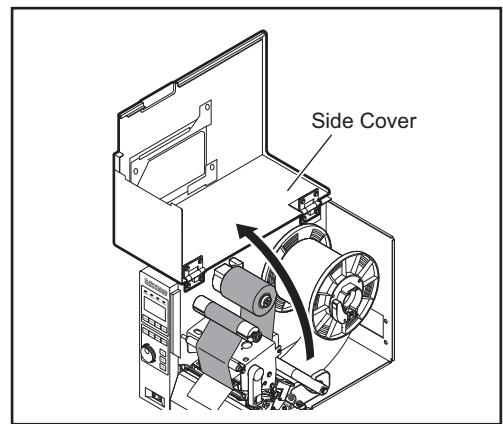
- 1** Press on the [ ○ ] side of the Power Switch and power is turned OFF.  
Power Lamp goes out, and the power source is disconnected.



**CAUTION**

When opening the side cover, please open it completely until the top surface of the cover touches the printer main part. If you release your hands when the cover is half open or in the midway of opening/closing it, the cover might fall and result in injury and/or malfunction.

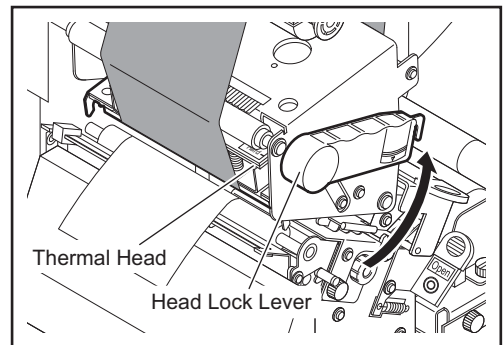
- 2** Open the Side Cover.



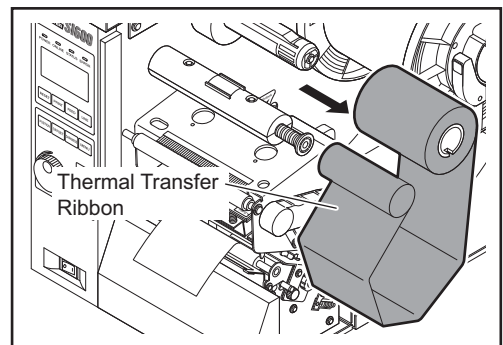
**CAUTION**

When handling the Head Lock Lever, please do not put your fingers and/or hands near the tuning area of thermal head. It might cause injury.

- 3** Pull the Head Lock Lever upwards and towards available directions.  
The Thermal Head is lifted.



- 4** Remove the thermal transfer ribbon.



**REFERENCE**

For details about how to remove the thermal ribbon, please read the steps 4 to 5 of "1.4.1 Installing the Thermal Transfer Ribbon" on page 1-10.

**NOTE**

If heat-sensitive label is used, please proceed with the following steps.

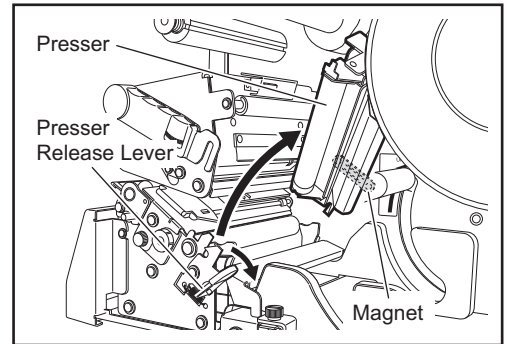
**CAUTION**

Please confirm that after the Presser is released it is well fastened with the Magnet.

If you release your hands in the midway of opening /closing, the Presser might fall and result in injury.

**5 Release the Presser.**

- ① Push the Presser Release Lever and the Presser is released.
- ② Lift the Presser and fasten it with Magnet.

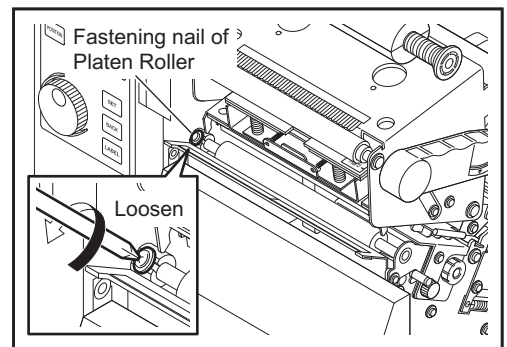


**CAUTION**

Please be careful not to let your hand or fingers hurt by the jag surrounding the Platen Roller.

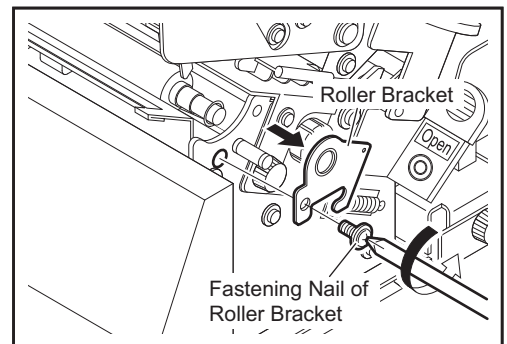
**6 Unfasten the fastening nail of Platen Roller.**

Unfasten the fastening nail of Platen Roller with a plus driver.  
If the fastening nail of Platen Roller is not towards the operating direction, turn the Platen Roller with your hand.



**7 Remove roller bracket.**

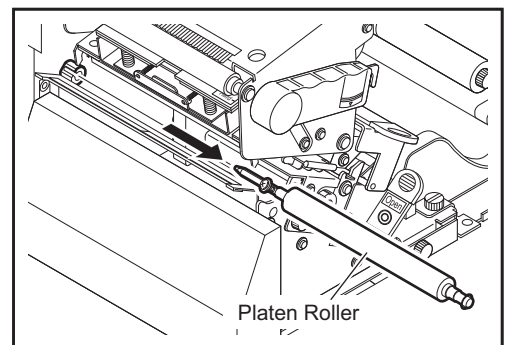
Unfasten the fastening nail of roller bracket with a plus driver and remove the roller bracket.



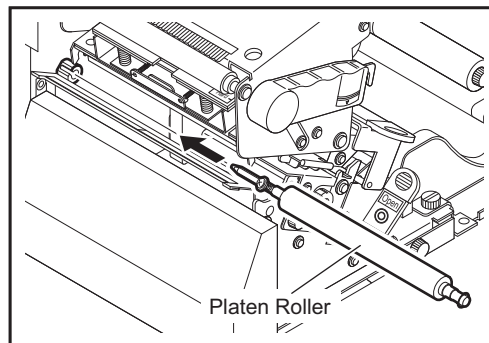
**NOTE**

On the Platen Roller for replacement, there shall be fastening nail for Platen Roller already attached. When pulling out the Platen Roller, please remove the fastening nail together with the Platen Roller.

**8 Pull out Platen Roller.**

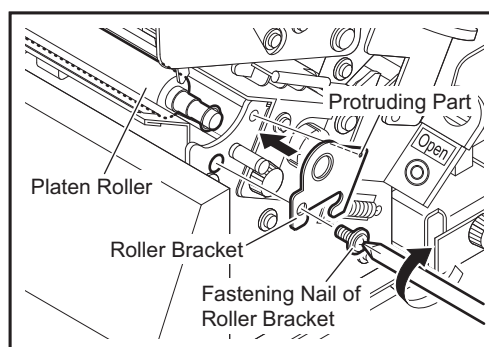


- 9** Insert the new Platen Roller.

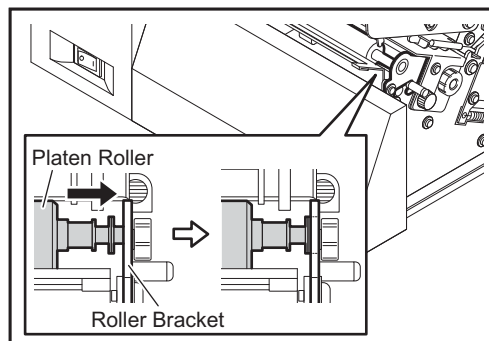


- 10** Install the roller bracket with the roller bracket fastening nail unfastened in Step 7.

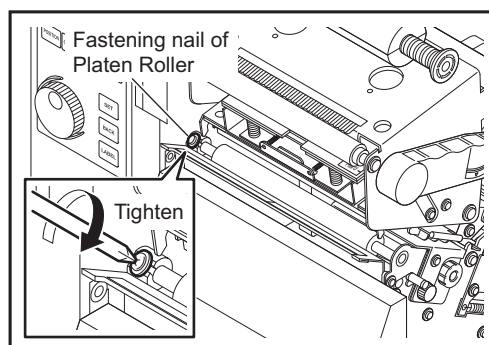
Please set the protruding part of the roller bracket into the hole and fasten it.



- 11** Push in the Platen Roller towards roller bracket so that the rotation base well fits the hole of roller bracket.



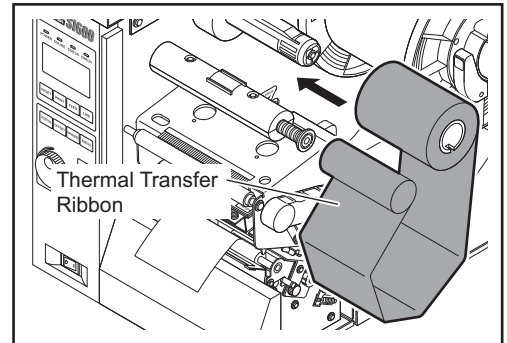
- 12** Tighten the fastening nail of Platen Roller.





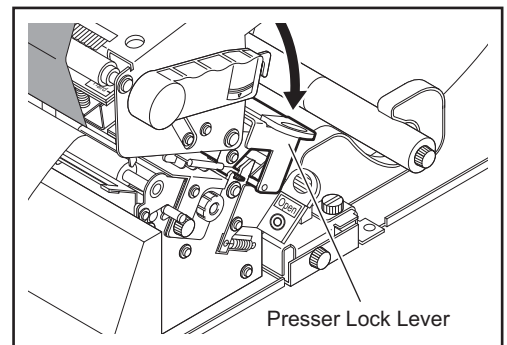
For details about how to install the Thermal Transfer Ribbon, please read the steps 6 to 10 of “1.4.1 Installing the Thermal Transfer Ribbon” on page 1-10.

**13** Install the Thermal Transfer Ribbon.



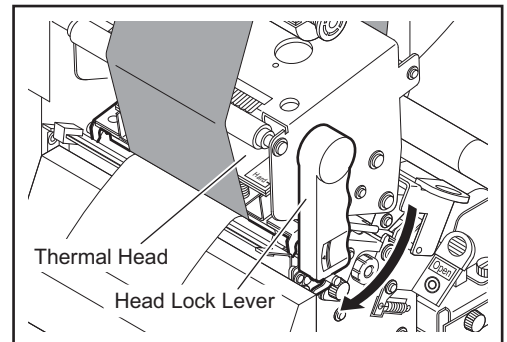
**14** Fasten the presser.

Lower the presser towards the locking direction until it gives a short snapping sound, and the presser is fastened.

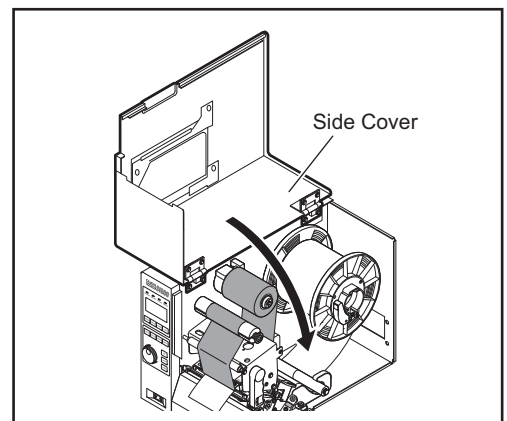


**15** Lower the Head Lock Lever towards the lock.

Thermal Head is lowered.

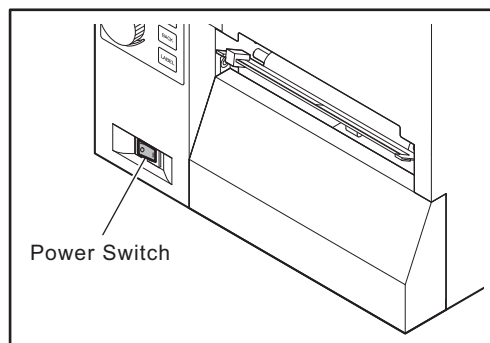


**16** Close the Side Cover.



- 17** Press on the [ | ] side of the Power Switch and power source is turned ON.

Power lamp lights up and the printer is started.



# Chapter 5

## INSTALLING AND REMOVING THE OPTIONAL UNIT

This chapter explains how to install and remove the optional units.

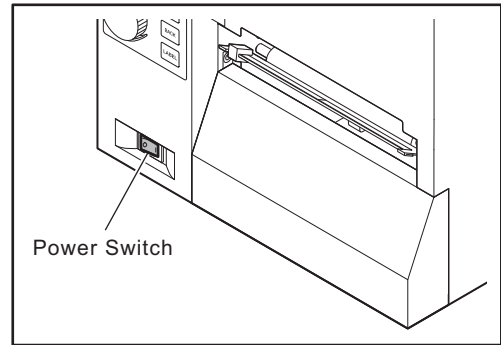
5.1	Installing and Removing the Interface .....	5-2
5.2	Installation and Removal of CF Card Slot.....	5-4
5.3	Installing and Removing the Cutter Unit .....	5-5
5.3.1	Passing the Label Roll through Cutter Unit.....	5-7
5.4	Installing and Removing the Peeling Unit .....	5-8
5.4.1	Passing the Label Roll through the Dispenser Unit .....	5-10

# 5.1 Installing and Removing the Interface

Below is an explanation of how to install and set the interfaces.

For interface options, there are three types, namely LAN, USB, and RS-232C.

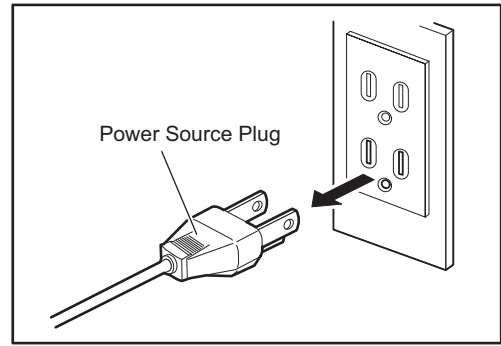
- 1** Press on the [ ○ ] side of the Power Switch and power is turned OFF.  
Power Lamp goes out, and the power source is disconnected.



**⚠ WARNING**

Please be sure that the power source plug is pulled out from the socket outlet. Otherwise, it might cause injury and/or malfunction.

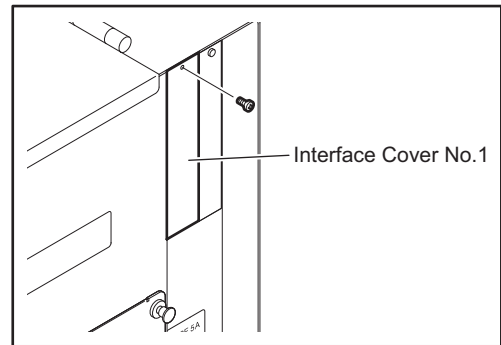
- 2** Pull out the power source plug from the socket outlet.



**⚠ CAUTION**

The unfastened bolt will be used to install the option interface board. Therefore, please be careful that it can be easily found later.

- 3** On the rear of the printer, unfasten 1 bolt and remove the Interface Cover No.1.





**CAUTION**

Please be sure that the interface board is inserted.

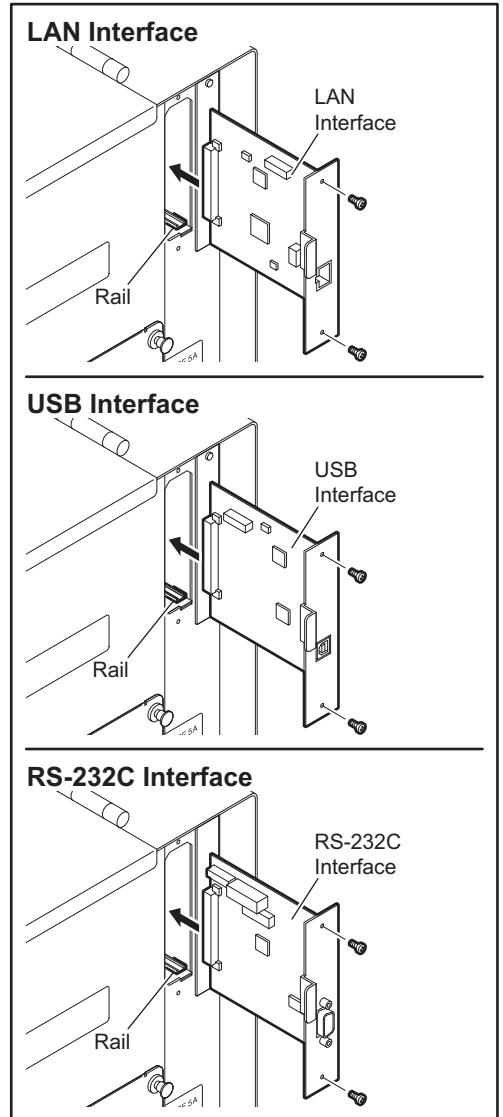
If the insertion is loose the printer might not be able to recognize the interface.

**4** Insert the interface board along the rail and fasten it with the accessory bolt and the unfastened bolt in step 3.

**5** Set up interface communication.  
For details of how to set up the interface, please read "3.5 Operations under Interface Mode" on page 3-65.

<Removing Procedures>

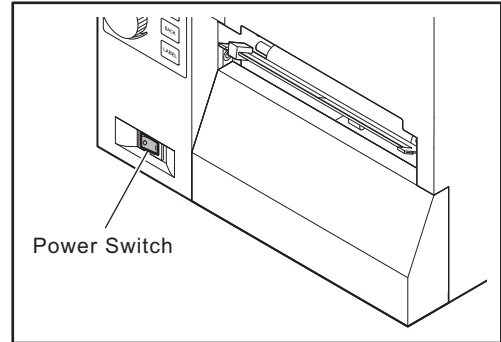
Please complete the operation by following the reversed order of installation procedures starting from step 4.



# 5.2 Installation and Removal of CF Card Slot

Below is an explanation of how to install the CF Card Slot.

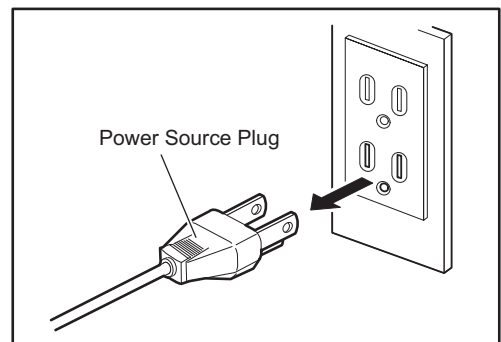
- 1** Press on the [ ○ ] side of the Power Switch and power is turned OFF.  
Power Lamp goes out, and the power source is disconnected.



**⚠ WARNING**

Please be sure that the power source plug is pulled out from the socket outlet. Otherwise, it might cause injury and/or malfunction.

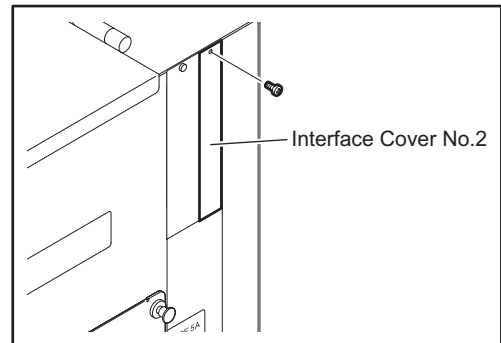
- 2** Pull out the power source plug from the socket outlet.



**⚠ CAUTION**

The unfastened bolt will be used to install the option interface board. Therefore, please be careful that it can be easily found later.

- 3** On the rear of the printer, unfasten 1 bolt and remove the Interface Cover No.2.

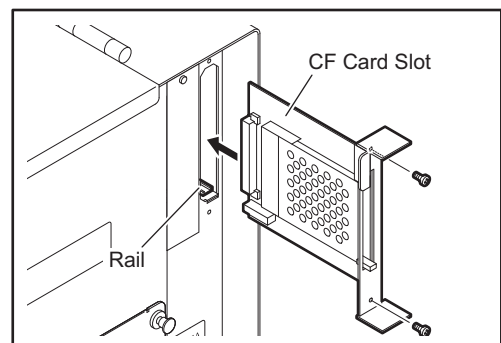


**⚠ CAUTION**

Please be sure that the CF Card Slot is inserted.  
If the insertion is loose the printer might not be able to recognize the interface.

- 4** Insert the CF Card Slot along the rail and fasten it with the accessory bolt and the unfastened bolt in step 3.

<Removing Procedures>  
Please complete the operation by following the reversed order of installation procedures starting from step 4.




## 5.3 Installing and Removing the Cutter Unit

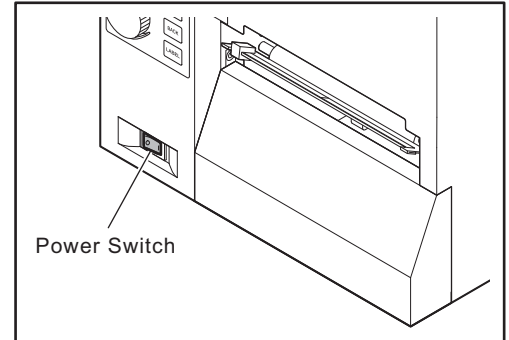
Below is an explanation of how to install the Cutter Unit.

### CAUTION

Before turn the power OFF, please confirm that printing operations are completed. When remaining pages waiting to be printed is not "0", printing operations are not completed.

- 1 Press on the [  ] side of the Power Switch and power is turned OFF.

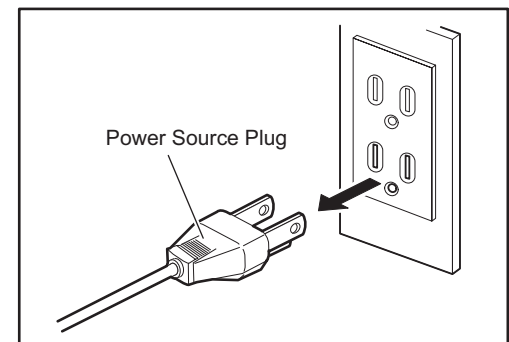
Power Lamp goes out, and the power source is disconnected.



### WARNING

Please be sure that the power source plug is pulled out from the socket outlet. Otherwise, it might cause injury and/or malfunction.

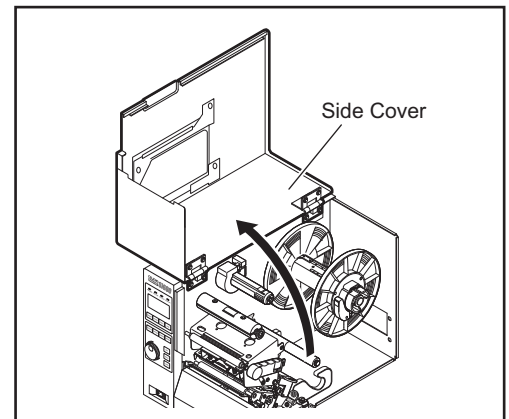
- 2 Pull out the power source plug from the socket outlet.



### CAUTION

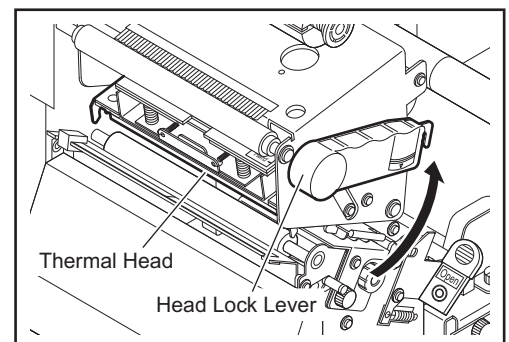
When opening the side cover, please open it completely until the top surface of the cover touches the printer main part. If you release your hands when the cover is half open or in the midway of opening/closing it, the cover might fall and result in injury and/or malfunction.

- 3 Open the Side Cover.

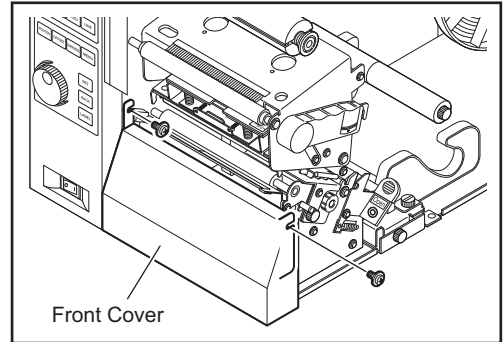


- 4 Pull the Head Lock Lever upwards and towards available directions.

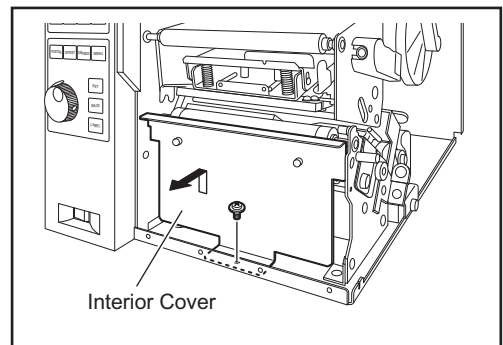
The Thermal Head is lifted.



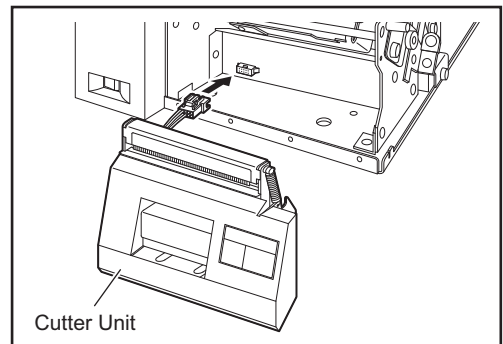
- 5** Unfasten 2 bolts and remove the Front Cover.



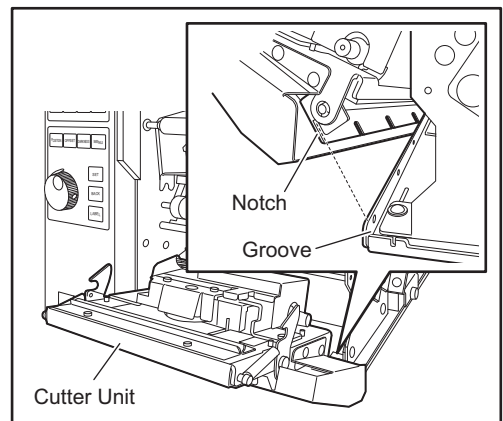
- 6** Unfasten 1 bolt and remove the interior cover.



- 7** Link the connector of the Cutter Unit.



- 8** Insert the cut under the Cutter Unit into the groove of the printer.

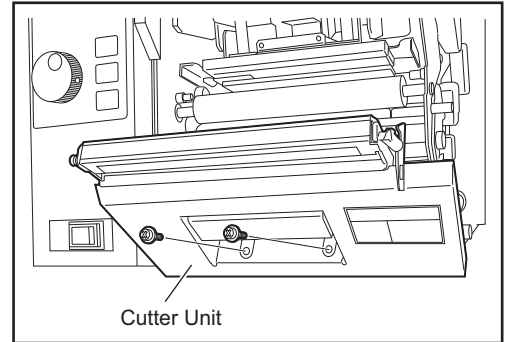


**9** Install the two (2) accessory bolts of the Cutter Unit.

If it is difficult to recognize the bolt holes, please float the Cutter Unit.

<Removing Procedures>

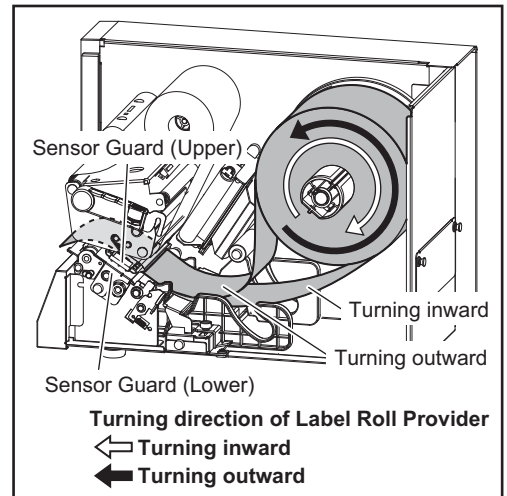
Please complete the operation by following the reversed order of installation procedures starting from step 9.



Next, please read "1.5 Installing the Label Roll" on page 1-14 and install the Label Roll.

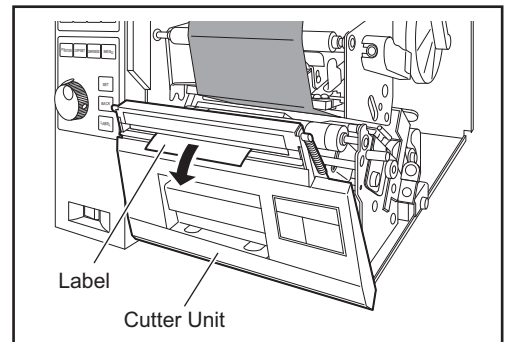
**POINT**

After passing the front of label roll through the Thermal Head, please follow the procedures below to pass the front of label roll through the Cutter Unit.



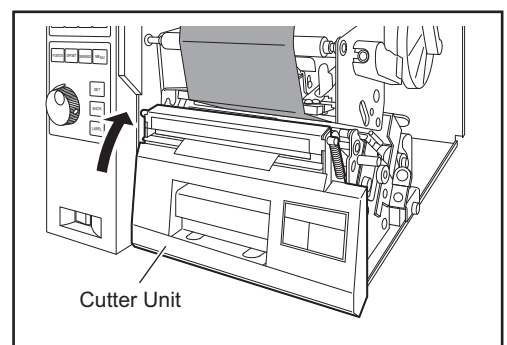
**5.3.1 Passing the Label Roll through Cutter Unit**

**1** Raise the Cutter Unit and pass the label into the Cutter Unit.



**2** Close the Cutter Unit.

Push the Cutter Unit towards the inner side; if it gives a short snapping sound it is fastened.



# 5.4 Installing and Removing the Peeling Unit

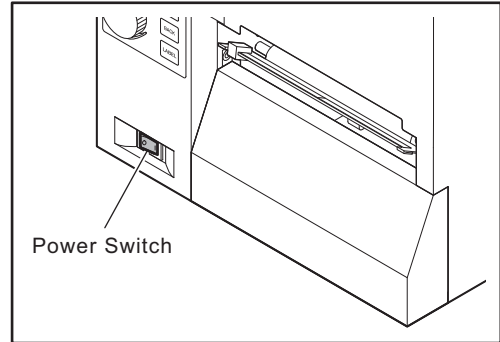
Below is an explanation of how to install the Dispenser Unit.

**CAUTION**

Before turn the power OFF, please confirm that printing operations are completed. When remaining pages waiting to be printed is not "0", printing operations are not completed.

- 1 Press on the [ ○ ] side of the Power Switch and power is turned OFF.

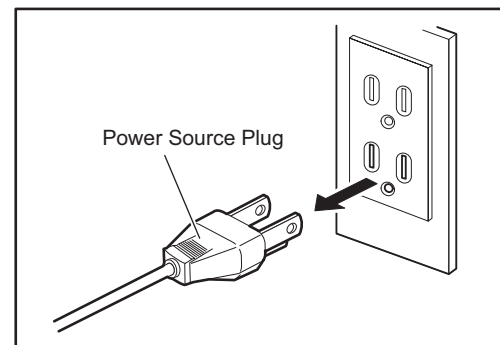
Power Lamp goes out, and the power source is disconnected.



**WARNING**

Please be sure that the power source plug is pulled out from the socket outlet. Otherwise, it might cause injury and/or malfunction.

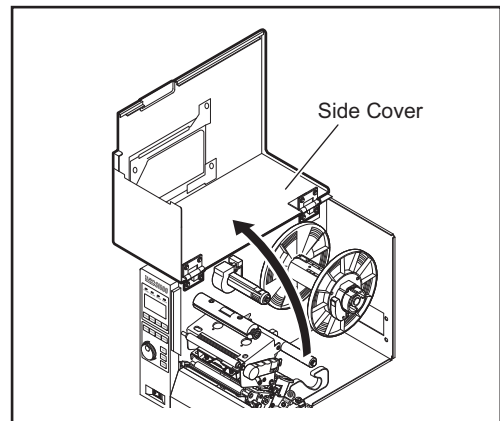
- 2 Pull out the power source plug from the socket outlet.



**CAUTION**

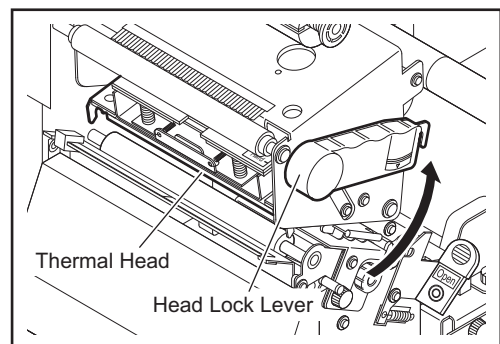
When opening the side cover, please open it completely until the top surface of the cover touches the printer main part. If you release your hands when the cover is half open or in the midway of opening/closing it, the cover might fall and result in injury and/or malfunction.

- 3 Open the Side Cover.



- 4 Pull the Head Lock Lever upwards and towards available directions.

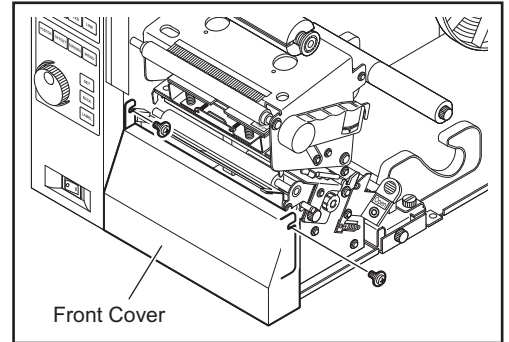
The Thermal Head is lifted.



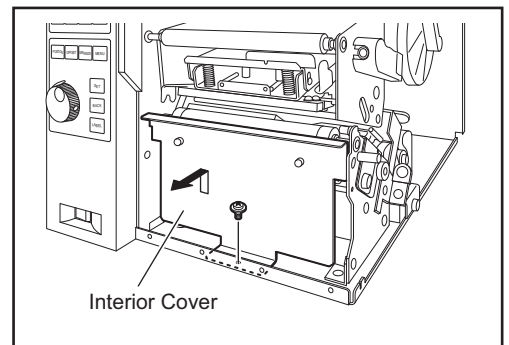
**CAUTION**

The unfastened bolt (A) will be used to install the option interface board. Therefore, please be careful not to throw it away.

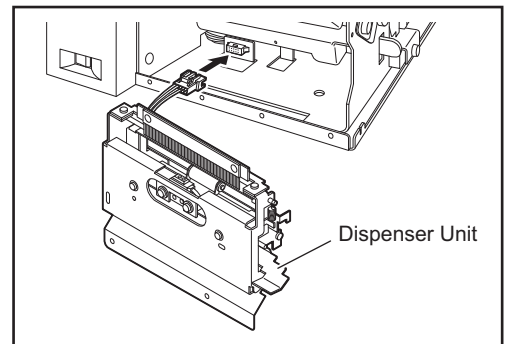
- 5** Unfasten 2 bolts and remove the Front Cover.



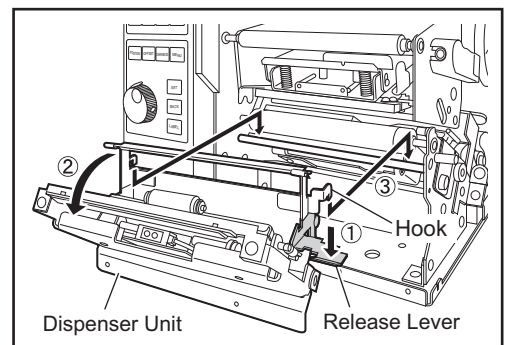
- 6** Unfasten 1 bolt and remove the interior cover.



- 7** Link the connector of the Dispenser Unit.



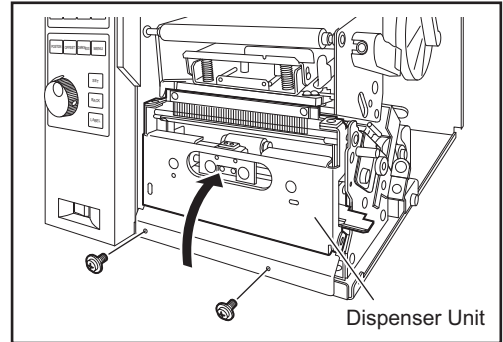
- 8** Press the to open the Dispenser Unit and hitch the hooks (two places) onto the printer.



**9** Close the Dispenser Unit and install the two (2) accessory bolts.

Push the Dispenser Unit towards the inner side; if it gives a short snapping sound it is fastened.

After that, please fasten it with the accessory bolts.



**10** Insert the accessory cover from the cut on the right side of the printer and install it with the bolt (A) unfastened in step 5.

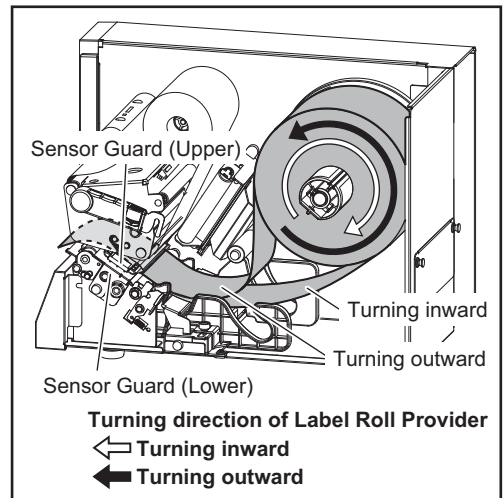
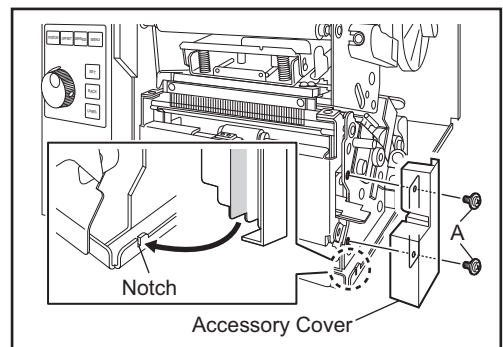
<Removing Procedures>

Please complete the operation by following the reversed order of installation procedures starting from step 10.

Next, please read "1.5 Installing the Label Roll" on page 1-14 and install the Label Roll.

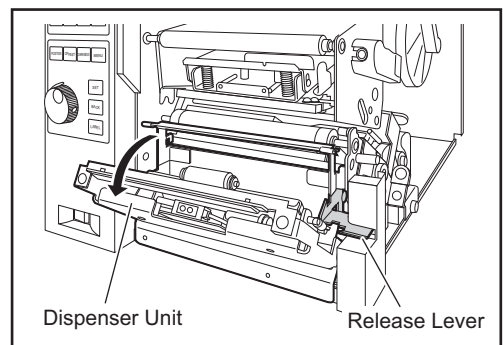
**POINT**

After passing the front of label roll through the Thermal Head, please follow the procedures below to pass the front of label roll through the Cutter Unit.



**5.4.1 Passing the Label Roll through the Dispenser Unit**

**1** Press the Release Lever to open the Dispenser Unit.



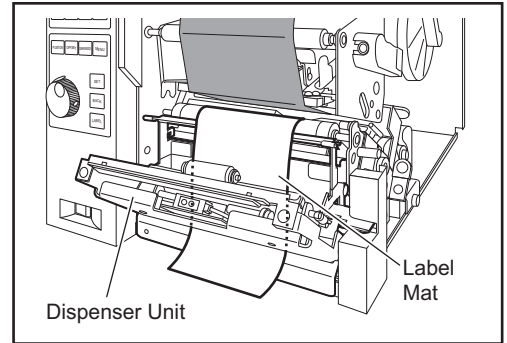


**CAUTION**

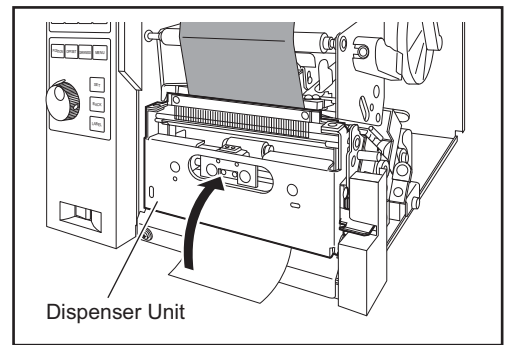
Please keep the label in full tension and then set it.

Otherwise, if the label mat gets loose, the label cannot be normally peeled off.

- 2** Pass the label mat through the peel-off unit.



- 3** Close the Dispenser Unit.  
Push the Dispenser Unit towards the inner side; if it gives a short snapping sound it is fastened.





A series of horizontal dotted lines for writing, spanning the width of the page.

# Chapter 6

## APPENDIX

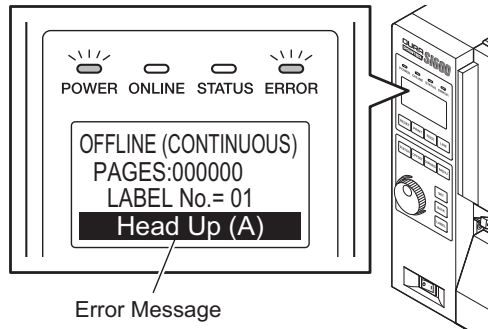
Explain what to do when error message is displayed or other problems occur.

In addition, tables of specifications and list of default settings are also provided.

6.1 Troubleshooting.....	6-2
6.2 Specifications .....	6-4
6.3 List of Default Settings.....	6-5

# 6.1 Troubleshooting

When error occurs to the printer, there will be an error message on the LCD.  
 Besides, together with the error message, buzzer sound rings and error lamp lights up.  
 This section is an explanation of the error messages, their causes and possible solutions.



Error Message	Cause	Measure
<b>Head Up (A)</b>	1. Head is not locked up. 2. There is abnormality with micro switch used for checking the open/close status of head.	Please lower the head lock lever towards locking direction.
<b>Roller Up (B)</b>	Presser is not locked.	Please lower the presser lock lever towards locking direction.
<b>Dumper Up (C)</b>	Dumper arm is opened.	Please lower the dumper arm.
<b>Label End</b>	1. There is no label and/or media. 2. Label and/or media are not properly set.	Please properly set label and/or media and press the <b>FEED</b> key.
<b>Label Size Error</b>	Rewinding of label is not properly done.	Please press the <b>FEED</b> key to feed 2 or 3 pages of label.
<b>Ribbon End</b>	1. There is no ribbon. 2. Ribbon runs out.	1 Please properly set ribbon and press the <b>FEED</b> key. 2. Please clean the ribbon transportation route.
<b>Cutter Error</b>	1. Label and/or media jam occurs in Cutter. 2. The blade of Cutter is not properly restored to the designated position.	1. Please turn off power. 2. Please clean the Cutter. 3. Turn on power again.
<b>Head Damaged</b>	There is damage of head dot.	Please replace head. Press the <b>LINE</b> key to turn the printer online. Before power is re-plugged in, damage of the dot will not be detected.
<b>Head Overheat</b>	Head temperature rises during printing, and the printer is being heated.	Printing will be suspended. But, when head temperature drops to below 60 degree, printing will restart automatically.
<b>Fan Stop</b>	Inside fan stops.	Please disconnect power source for a short period of time and reconnect it. If error still occurs even after this has been done, please contact the store where you bought the printer.
<b>Buffer Over Flow</b>	1. Receiving buffer is receiving data exceeding its size. 2. Communication protocol does not fit.	Please make modification so that the communication protocol fits well.

Error Message	Cause	Measure
<b>RS-232C Parity Error</b>	Communication settings of RS-232C do not fit.	Confirm the communication configuration and make it fit.
<b>RS-232C Framing Error</b>	1. Communication settings of RS-232C are not correct. 2. Cable connection abnormal. 3. Wrong cable type.	1. Please confirm the communication configuration and properly set it. 2. Please confirm the connection of cable. 3. Please confirm that inter-link cable is used.
<b>Head Mismatch</b>	1. Thermal head is not installed. 2. The type of the installed head does not match, such as different head density.	1. Please disconnect power source and install thermal head. 2. Please install the right type of thermal head.
<b>TYPE OF HEAD IS DIFFERENT PLEASE EXCHANGE THE HEAD</b>	The type of the installed head does not match, such as different head density.	Please install the right type of thermal head.
<b>TYPE OF MACHINE IS DIFFERENT. PLEASE ANY KEY TO CHANGE TO UPDATE MODE</b>	Firmware does not match the printer type.	Please update the version so that the firmware matches the printer type.

● If the problem cannot be solved in any way

If you cannot find the cause to your problem, or cannot restore the machine to previous status, please contact the store where you bought the printer. And before that, please first confirm the following and let the service people know the information.

- The type of the printer
- Service conditions
- Phenomenon (under what environment the printer was used, what happened after what you have done, what error message was displayed)
- Date and time of the trouble happening

## 6.2 Specifications

### ■Printer Standard Specifications

Name of Product		DURA PRINTER SI600
Print Method		Thermal transfer and/or direct thermal method
Signal Transfer Buffer		4MB
Print Darkness		24 dot/mm
Print Width (Maximum)		109 mm
Print Length (Maximum)		400 mm
Print Speed (Maximum)		150 mm/s
Thickness of Paper		0.06 ~ 0.268 mm
Label Size		Label Width : 15 ~ 128 mm Cardboard Width : 18 ~ 131 mm Minimum Label Length : Continuous: 5 mm (7.5 mm), Dispenser: 5 mm (7.5 mm), (Minimum Pitch) Cutter: 11 mm (20 mm), Tear Off: 5 mm (7.5 mm)
Type of Paper		Rolled Paper : Maximum outer diameter 180 mm, inside diameter of paper spool: 2 inches or 3 inches, inward and outward rolls
Ribbon		Maximum Ribbon Width : 120 mm (*1) Maximum Outer Diameter : 80 mm Rolling Direction : Inward and/or Outward Inner Diameter of Ribbon Paper Spool : 1 inch *1 label cardboard width + 5~30 mm. But, if the width of cardboard is 111~131mm, use ribbon with width of 120 mm.
Type of Text	Letters/Numbers/Symbols	X20 5 × 9 dot X21 17 × 17 dot
	Katakana	X22 24 × 24 dot
	Font	X23 48 × 48 (Bold) dot X24 48 × 48 (Regular) dot
	Kanji Font	16 × 16 dot JIS Standard No.1 and No.2 (Mincho, Gothic) 22 × 22 dot JIS Standard No.1 and No.2 (Mincho, Gothic) 24 × 24 dot JIS Standard No.1 and No.2 (Mincho, Gothic) 32 × 32 dot JIS Standard No.1 and No.2 (Mincho, Gothic) 40 × 40 dot JIS Standard No.1 and No.2 (Mincho, Gothic)
	Outline Font	Gothic (Letters, Numbers, Symbols and Katakana)
	OCR-A	44 × 66 dot
	OCR-B	64 × 72 dot
1-Dimensional Symbol		JAN/EAN-8, JAN/EAN-13, UPC/A, UPC/E, Code39, Code128, UCC/EAN-128, ITF, NW-7
2-Dimensional Symbol		QR, Micro QR, PDF417, Maxi Code, Data Matrix
Dimensions		W275 × D435 × H325 mm
Weight (Excluding label, ribbon and option unit)		About 20 kg
Power	Input Power	AC100 ~ 240 V (±10 %) 50/60 Hz
	Power Consumption	Maximum During printing: 180 W Stand by: below 25 W
Environment Requirement		Temperature 5 ~ 35 °C Humidity 20 ~ 80 % (not dewy)
Option	Unit	Cut Unit, Dispenser Unit, Peripheral Link Unit
	Interface Board	LAN Board (10BASE-T/100BASE-TX), USB Board (Ver2.0), RS-232C Board (Maximum 115.2 Kbps), PCMCIA Board
Communication Cable		USB Cable, LAN Cable, RS-232C Cable * Communication cable is prepared by customers. Please refer to separate interface manual for specifications of respective cable.

## 6.3 List of Default Settings

### ■Label Set Mode

Label No.		01
Printing mode		Continuous
Cutter position		0.000 mm
Dispenser position		0.000 mm
Dispenser time		100 msec
Tear off position		0.000 mm
Home position		0.000 mm
Print method		Transfer
Label size	Width	109.000 mm
	Length	- (*)
	Pitch	- (*)
	Auto length measure	Enable
Pitch sensor		GAP1
GAP1 sensor adjust	Light quantity	- (*)
	Threshold	140
GAP2 sensor adjust	Light quantity	- (*)
	Threshold	140
I-mark 1 sensor adjust	Light quantity	- (*)
	Threshold	100
I-mark 2 sensor adjust	Light quantity	- (*)
	Threshold	100
Detect position		Front
Print speed		50 mm/s
Print darkness		95%
Platen adjust		100.0%
QR code print		Standard
Continuous paper	Continuous paper specifications	Disable
	Gap between pages	0.0 mm
Printing position	Width	0.000 mm
	Length	0.000 mm
Designated print		Enable
Tear off time		0 msec
Pulse division		Enable
Pair of label & ribbon		0
Label skip		Disable

\* As the value has been adjusted, the set value is different from the default value.

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**■Advanced Mode**

Backfeed of cutting		Before print
JIS code		SJIS
Zero slash		No
Kanji font		Gothic
Darkness adjust	Value of [1]	50%
	Value of [2]	60%
	Value of [3]	70%
	Value of [4]	80%
	Value of [5]	95%
Head check		Enable
Auto online		Yes
Auto online feed		No
Print on error		Yes
Printed log		Disable
Stand-alone		Disable
Humanreadable		Small
External signal		Disable
Total counter		- (*)
Head counter		- (*)
Platen counter		- (*)
Cutter counter		- (*)
Coordinates adjust		Normal
LCD brightness		- (*)
End label processing		Disable
Buzzer sound		Enable
Language		Japanese
Password register		(not customized)
Key lock		Disable

\* As the value has been adjusted, the set value is different from the default value.

**■Interface Mode**

Protocol		ENQ
IP address		127.1.0.0
Subnet mask		255.255.255.0
Gateway		0.0.0.0
RS-232C protocol		RTS ITEM





