

DURA SL PRINTER

THERMAL PRINTER INSTRUCTION MANUAL

Nitto Nitto Denko Corporation

PREFACE

We appreciate your using Nitto Denko's DURA PRINTER SL.

The DURA PRINTER SL is a thermal transfer label printer, which prints on and makes use of proprietary labels and ribbons.

This manual explains how to manage and maintain the DURA PRINTER SL, 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 SL 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 SL 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 SL 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 SL Command Reference Manual" on the accompanying CD; for information on the interface required when issuing the commands, refer to the "DURA PRINTER SL Interface Manual". It is necessary for proper printing that the operator familiarize himself/herself with the commands before transmitting these to the printer.

* The accompanying CD "DURA PRINTER SL Setting Tool" contains the following.

Programming the "DURA PRINTER SL Setting Tool", driver, and various instruction manuals

For a summary, refer to "Chapter 6 About the DURA PRINTER SL Setting Tool".

- Copying or reproducing this manual, in whole or in part, without our prior consent is prohibited.
- There may be some minor inconsistencies between the contents of the manual and the actual product itself due to modifications which have been carried out on the product over time.
- The contents of this manual are subject to change without notice.
- Though extreme care has been taken in preparing this manual, if you find any ambiguous points or errors, or if you would like to make any comments on the manual itself or its content, please contact us directly or, alternatively, one of our authorized dealers.

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IMPORTANT INFORMATION



- There is a potential risk involved in the operation of this product. Follow this manual to install, operate, maintain, and check the product.
- If the instructions within the manual are not observed, or if injuries or damage are caused by carelessness, misuse, or tampering, neither NITTO DENKO corporation nor our dealers shall assume liability.

- With modern industrial equipment, new materials and processing methods as well as high-speed components increase the risk of injury. It is impossible for us to cater for all such risks. Nor can we anticipate and take into account all problems which may arise during operation of the equipment in question. If you feel a particular point is not covered in the manual, it is better to err on the side of caution and consider that the equipment is not capable of carrying out this function. When installing, operating, maintaining, and checking the product, extreme care should be taken, closely observing not only the descriptions and explanations in this manual and indications on the body of the product itself, but also the safety measures.
- The optional simplified cutter unit contains an assembly with a blade to cut labels. Bringing your fingers close to, or in contact with, this assembly exposes you to a risk of injury or laceration. When installing or removing the cutter unit, be sure to turn off the power switch beforehand.
- To avoid any problems or failures, carry out daily maintenance.
Refer to “Cleaning the Thermal Head and Platen Roller” described in chapter 4 of the manual.
- The copyright to this manual is held and reserved by NITTO DENKO corporation. No part of diagrams or technical information may be copied or disclosed without prior written permission of NITTO DENKO corporation.
- If you have any questions regarding the content of this manual or require further information, check the model (type) and serial number on the nameplate of your product, and then contact your dealer or our company directly. Do not proceed with your work until you have received a satisfactory response to your inquiry.

WARRANTY LIMITATIONS

- NITTO DENKO corporation will repair or replace parts only once we acknowledge that product materials supplied by us are defective or our workmanship has been substandard, as follows:
 - If the design or manufacture of our product is defective, or if the product has been damaged during manufacture or transportation, we will repair or replace the relevant parts free of charge.
 - Warranty does not cover malfunctions which result from *force majeure* or components not supplied by us.
 - If the cause of a malfunction cannot be immediately established, repair procedures shall be determined upon consultation between the two parties.
- 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 alert symbols in this manual fall into the following three categories depending on the potential degree of risk and injury. Please have a thorough understanding of the meanings of these symbols as they appear in the manual itself and stickers which are found on the physical unit.

Alert symbol	Meaning
 WARNING	WARNING indicates that a failure to observe instructions may result in death or serious injury to the user.
 CAUTION	CAUTION indicates that a failure to observe instructions may result in minor injury or damage to the device or equipment.

POINT	POINT indicates information which should be observed carefully.
 NOTE	TIP indicates information which the user will find helpful when operating the printer.
 REFERENCE	REFERENCE indicates pages elsewhere within the manual which can be cross-reference for further information when operating the printer.

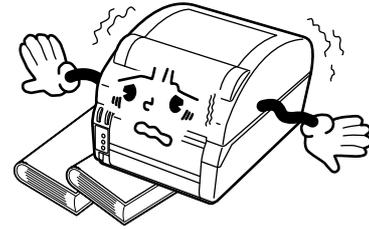
PRECAUTIONS WHEN USING THE PRINTER

This section explains safety precautions which should be observed to operate the printer safely.

⚠ WARNING

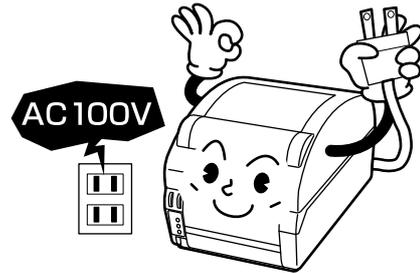
- Be sure to install the printer on level ground and in a location where it will not be subjected to vibration.

Otherwise, accurate printing cannot be guaranteed.
If the printer happens to fall, it may result in injury.



- Use only AC100V for power.

Operating the printer at a voltage other than that specified may cause a fire.

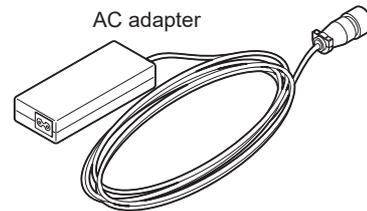


- Use only the supplied power cable and AC adapter.

Power cable



AC adapter



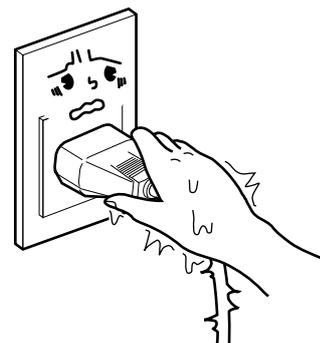
- Be careful not to allow water to come into contact with the main unit and terminals.

Moisture on or in the equipment may cause a fire or malfunction.



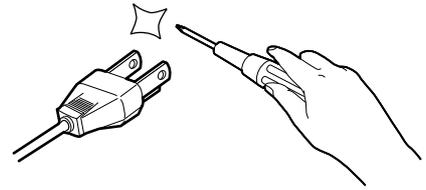
- Do not plug in or unplug the unit with wet hands.

Doing so may cause an electric shock or short circuit.



- Do not modify the power receptacle or power cable.

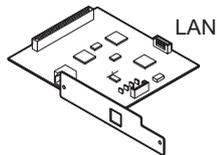
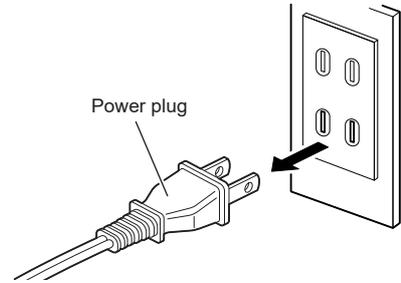
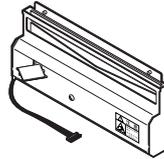
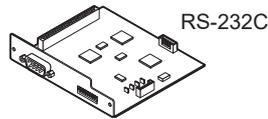
Doing so may cause a fire or electric shock.



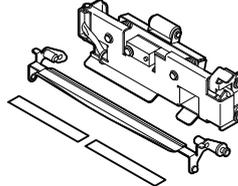
- Be sure to unplug the main unit from the power outlet when installing the optional unit.

● Optional interface

● Simplified cutter unit



● Peeling unit



- When carrying the main unit, do not lift it by its top cover or arm unit.

Doing so may cause the top cover to come loose and fall, resulting in injury or an equipment malfunction.

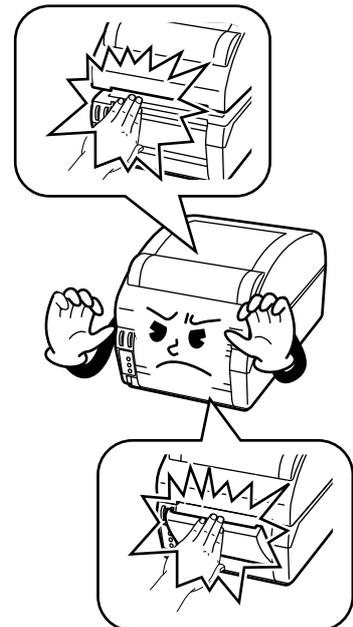
Be sure to carry the main unit with the top cover closed.



- Open and close the cover carefully.

To avoid injury, keep your hands away from the area where the cover opens/closes.

Do not allow the top cover to "slam" shut; continue holding the cover until it is fully closed. Neglecting to do this may result in injury or an equipment malfunction.

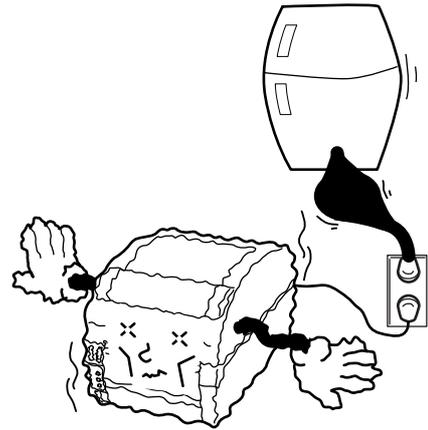


CAUTION

- Run the equipment on a constant power supply, at a voltage which does not fluctuate.

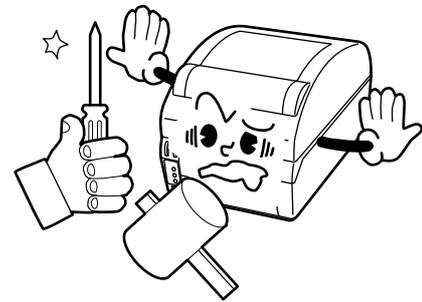
Do not run the printer at the same time as other electrical appliances (including heaters, refrigerators, cranes, press machines, etc) on the same or nearby supply.

Doing so may result in a malfunction.



- Do not subject the unit to excessive shock. It is a precision device and may be damaged.

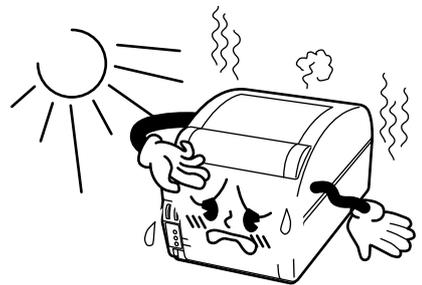
Never disassemble the unit. Disassembly may cause a malfunction.



- When transporting the printer, first remove the label roll and thermal transfer ribbon.

- Do not locate the printer for extended periods in a location exposed to direct sunlight.

Doing so may cause a malfunction.



- Do not locate the printer in a location where the temperature and/or humidity are high.

Doing so may cause a malfunction.

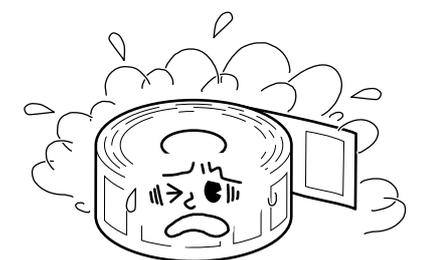


- Use only labels and ribbons recommended by NITTO DENKO corporation.

The labels face toward the spindle.

- Do not store label rolls and thermal transfer ribbons in a location where the temperature and/or humidity are high.

Doing so may cause a malfunction.



- Do not locate the printer in a dusty area.

Dust in the unit may inhibit accurate printing. Dust and grit may not only cause a malfunction but also diminish the longevity of the printer.



- When cleaning, wipe the printer using a soft cloth, dampened with mild detergent and/or water.

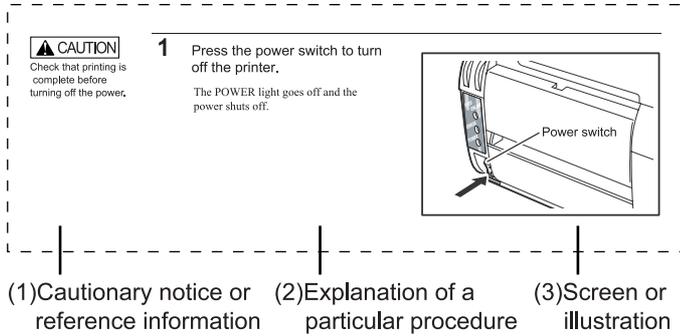
Never use thinner or other solvents. Doing so may damage the unit or result in a malfunction.



ABOUT THE MANUAL

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

● Procedure layout

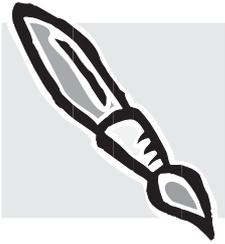


- (1) Describes cautionary remarks, notes, and reference pages on the left-hand side of each page.
- (2) Explains a particular procedure.
- (3) Indicates a particular display or illustration, relating to the procedure in question.

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Chapter 1

BEFORE OPERATION

This chapter provides an overview of the printer. Be sure to read it carefully for a thorough understanding of how the printer operates.

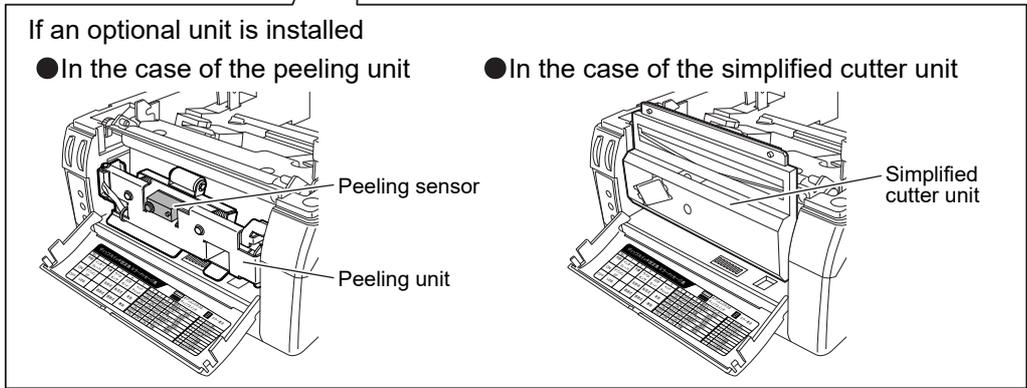
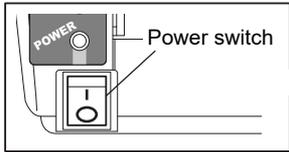
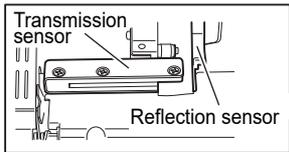
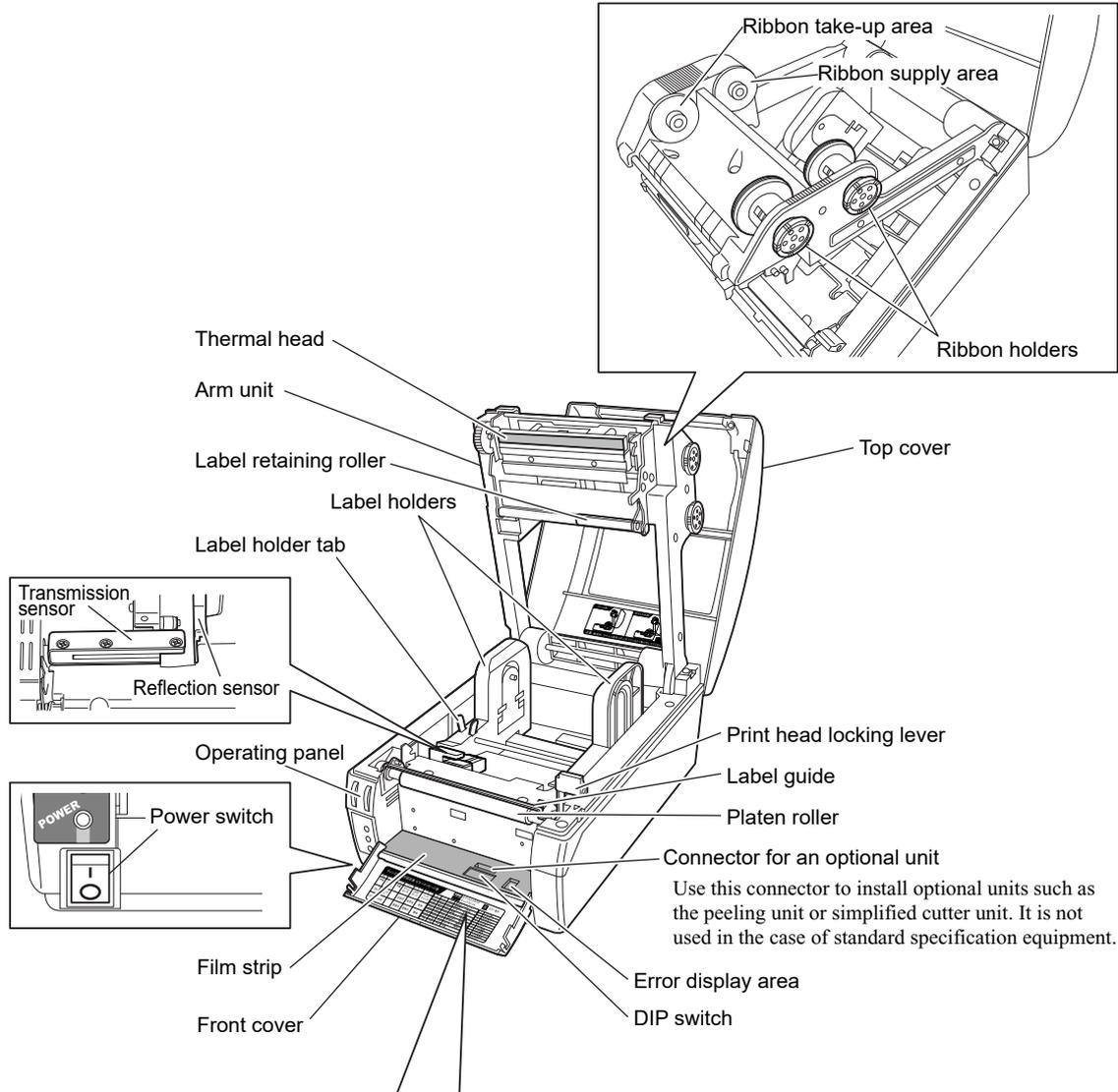
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1.1 Names and Functions of the Components

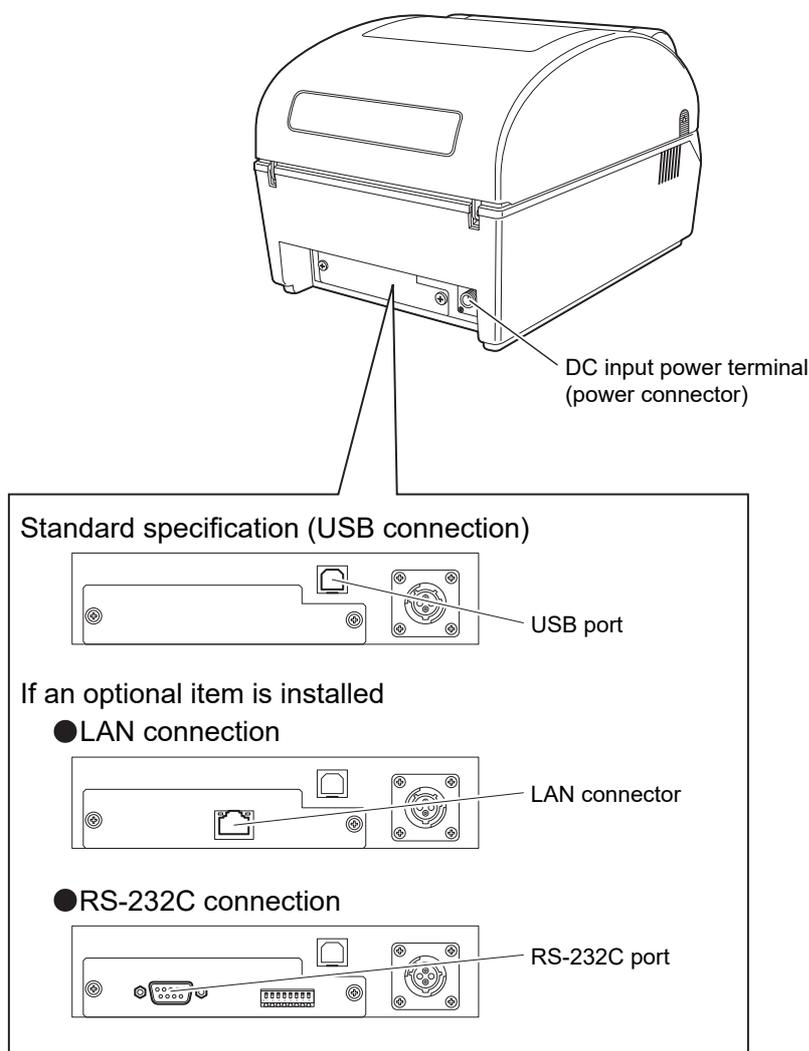
This section presents the names of various components and explains their functions.

Read through the following pages to familiarize yourself with the names of the components of the machine.

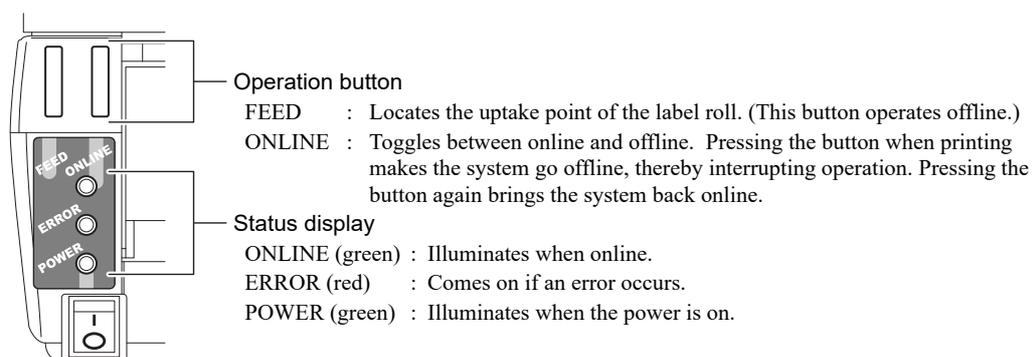
Front view



Rear view



Operating panel

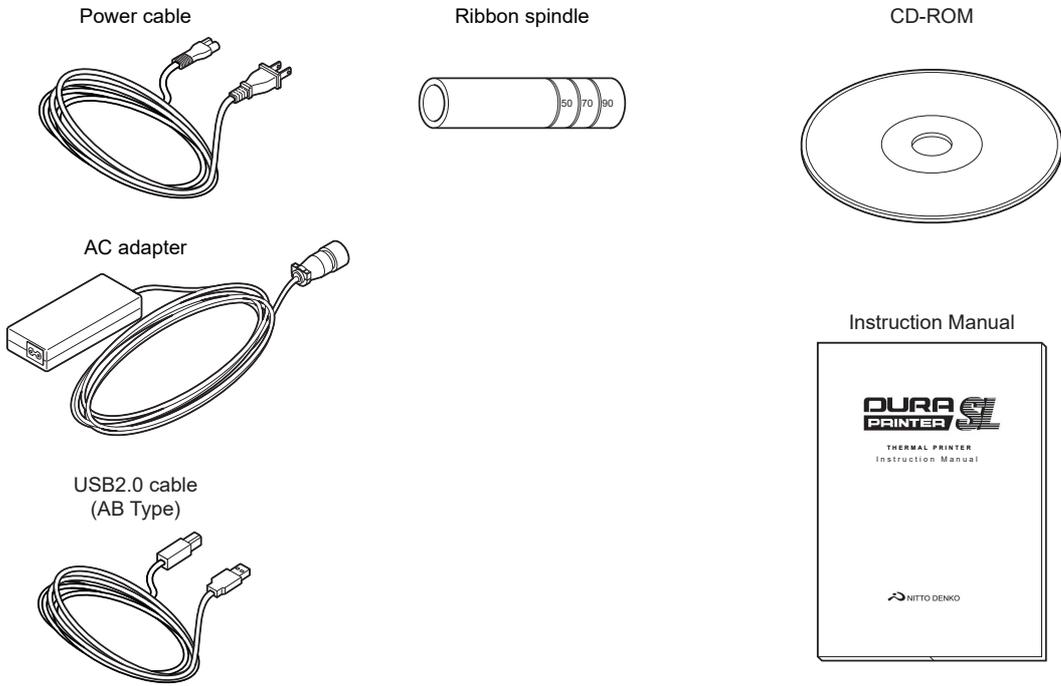


1.2 Checking the Supplied Items/Consumables/Optional Units

1.2.1 Checking the supplied items

When you first open the packaging, check that the following items are present.

If any item is missing, please contact your dealer or our company directly.

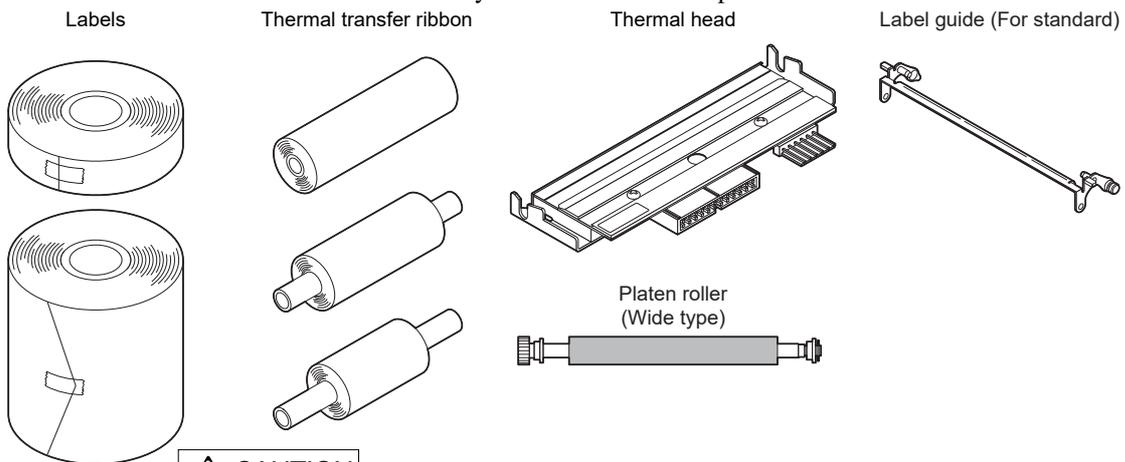


POINT

- To preserve the natural environment, biodegradable materials are used for foam cushioning in the package. These are environmentally-friendly materials. Neither black smoke nor toxic gas is produced during disposal via incineration.

1.2.2 Consumables

Make sure to use labels and ribbons recommended by NITTO DENKO corporation.



CAUTION

If the ribbon width is larger than the label width, the ribbon may crinkle, resulting in illegible prints.
The width of ink ribbon to be used must be approximately 5 mm longer than that of the label backing paper on each side.

POINT

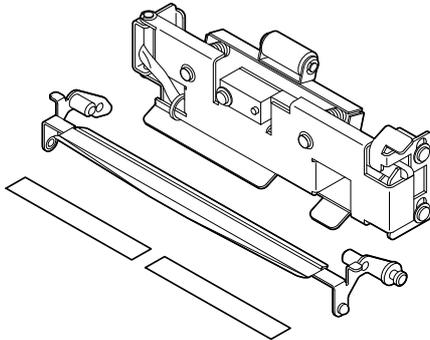
- The thermal head, platen roller, and label guide are consumables. Make sure to have spare items available.

1.2.3 Optional unit

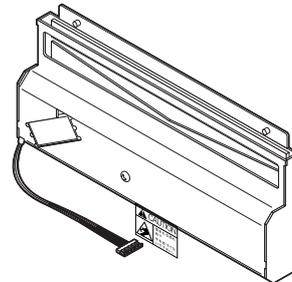
The following optional units are available for this unit.

When you purchase an optional unit, check that all appropriate items are in the package.

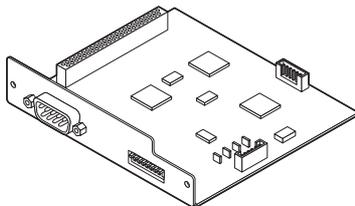
Peeling unit



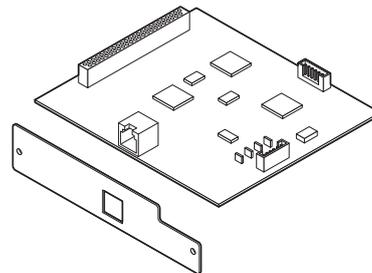
Simplified cutter unit



RS-232C interface



LAN interface (*)



* The equipment does not have a print server function. Therefore, it is not possible to simultaneously print data from multiple computers.

1.3 Installation Procedure

This section explains how to connect cables and turn on and off the power.

1.3.1 Connecting cables

CAUTION

Be sure to install the printer on a level surface. Otherwise, accurate printing cannot be guaranteed.

CAUTION

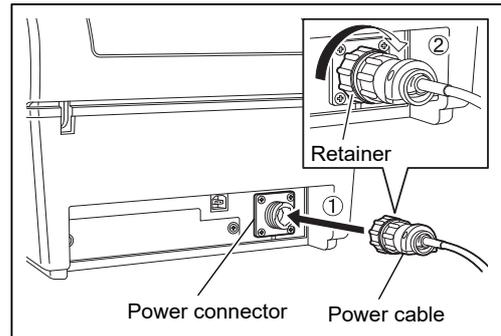
When connecting the printer to the computer, be sure to turn off the power.

Follow the procedure below to connect the printer to a computer.

1 Install the printer on a stable level surface.

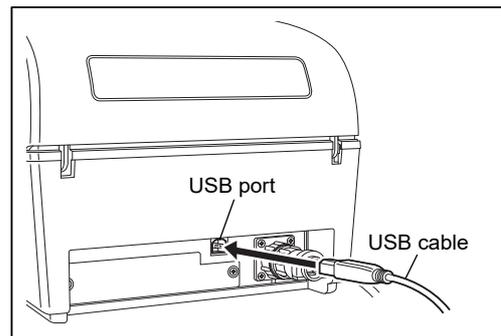
2 Connect the power cable to the printer.

Insert the cable connector into the power connector. Then secure the retainer, turning it clockwise.



3 Connect the USB cable to the printer.

Insert the accompanying USB cable into the USB port. If an optional board (LAN interface or RS-232C interface) has been installed, also connect the corresponding cable.

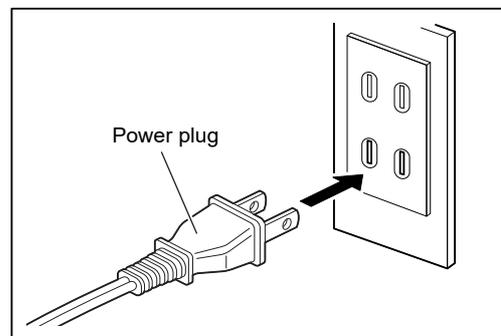


4 Connect the cable to the computer.

5 Insert the power plug into the outlet.

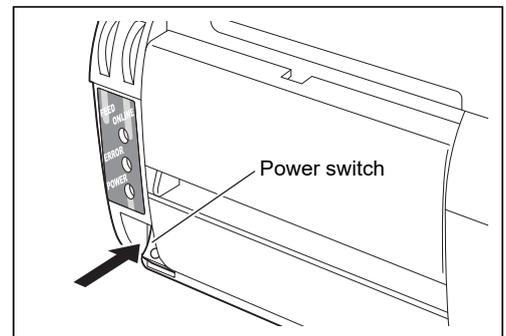
WARNING

Do not plug several power cables into the same outlet, by means of an adapter, for example. An overload may cause a fire.

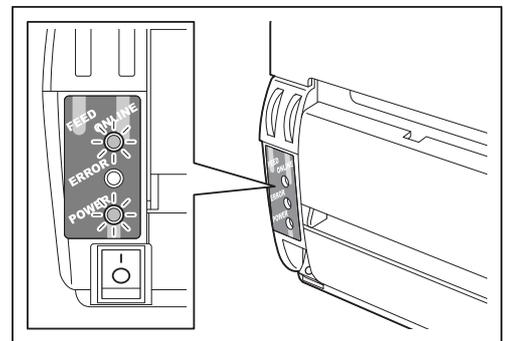


1.3.2 Turning on the power

- 1 Press the power switch to turn on the printer.
The POWER light comes on.



The ONLINE light comes on after a few seconds; the printer is now online.

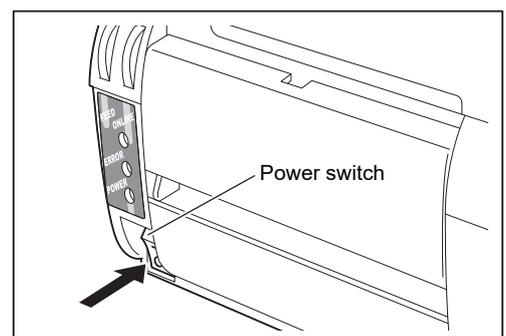


1.3.3 Turning off the power

CAUTION

Check that printing is complete before turning off the power.

- 1 Press the power switch to turn off the printer.
The POWER light goes off and the power shuts off.



1.4 Installing the Thermal Transfer Ribbon

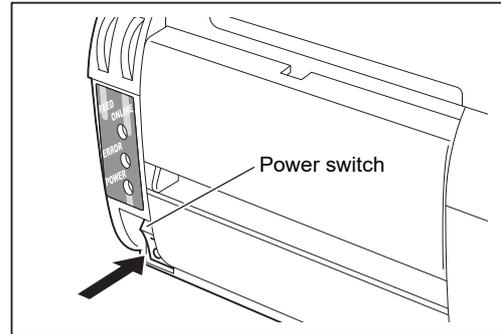
This section explains the procedure for installing the thermal transfer ribbon.

CAUTION

Be sure to turn off the power. Not doing so may result in personal injury or an equipment malfunction.

- 1** Press the power switch to turn off the printer.

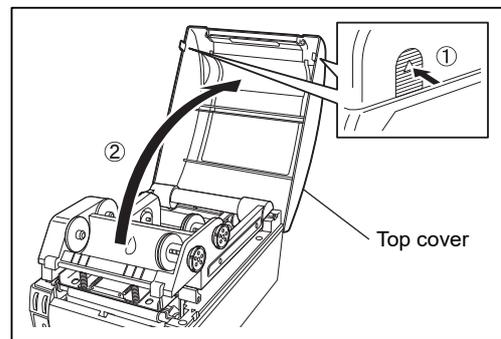
The POWER light goes off and the power shuts off.



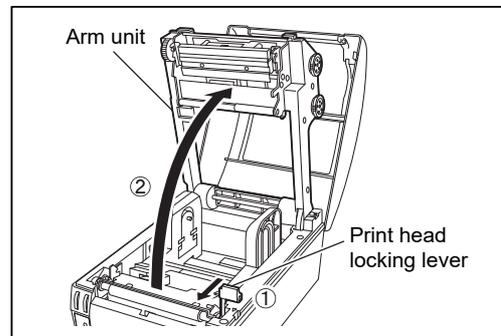
CAUTION

Open the top cover gently. Opening the cover abruptly or extending it beyond 90 degrees to the plane of the printer itself may cause the cover to come loose and fall.

- 2** Open the top cover.
Press the left and right triangle marks on the top cover to unlock and open the cover.



- 3** Pull the print head locking lever toward you and then raise the arm unit.

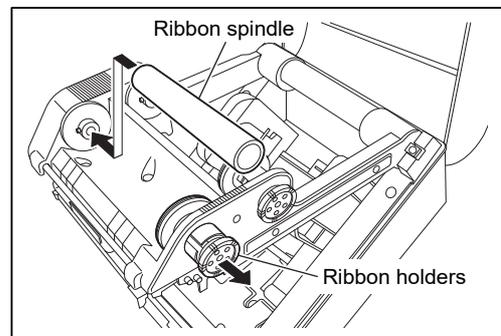


NOTE

When replacing the ribbon, remove the old ribbon spindle from the ribbon supply area and insert it in the take-up area.

- 4** Insert the ribbon spindle into the ribbon take-up area.

Pull and hold the ribbon holder and put the ribbon spindle in position. Then release the holder.



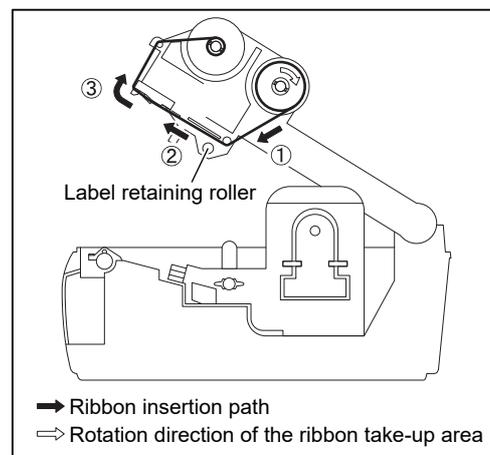
CAUTION

Pass the ribbon between the label retaining roller and the thermal head.

- 5** Install the ribbon in the ribbon supply area and pass the front end of the ribbon through the printer as shown in the illustration.

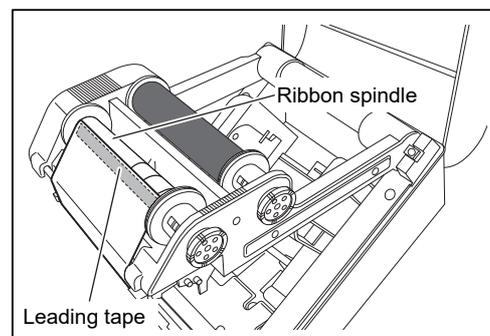
Install the ribbon roll in the ribbon supply area in the same way as described in step 4 for the ribbon spindle.

Be sure to pass the ribbon between the label retaining roller and the thermal head.



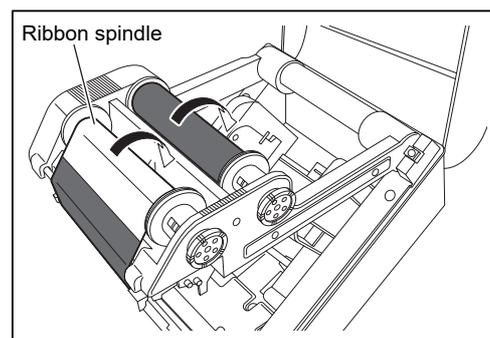
- 6** Remove the leading tape from the end of the ribbon and attach it to the ribbon spindle.

Attach the leading tape to the ribbon spindle, aligning it with the guide line on the spindle. The ribbon spindle should match the width of the ribbon.

**CAUTION**

Wind the thermal transfer ribbon until the carbon side comes to the front. Make sure the ribbon advances sufficiently. If any printed characters or graphics apply to the leading tape, it may cause the tape to "dissolve" and adhere to the thermal head. This will inhibit accurate printing.

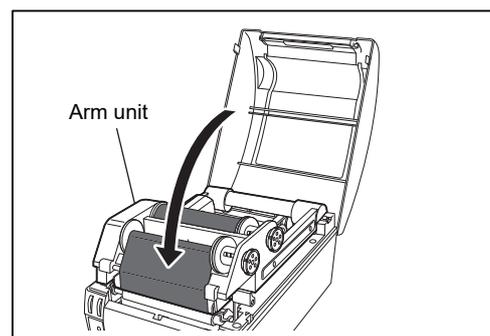
- 7** Rotate the ribbon spindle clockwise, winding the ribbon until the carbon side comes to the front.

**CAUTION**

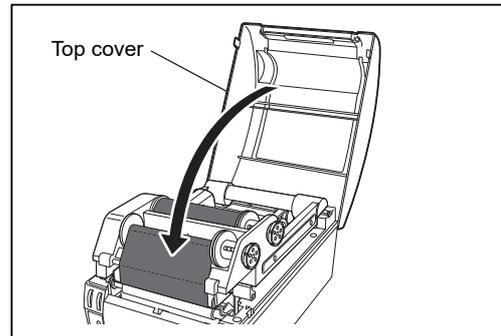
Wind the ribbon so that it is taut. A slack ribbon may cause a printing failure.

- 8** Lock the arm unit.
Lower the arm unit. Then press where it says "PUSH" on either side to lock the arm unit.

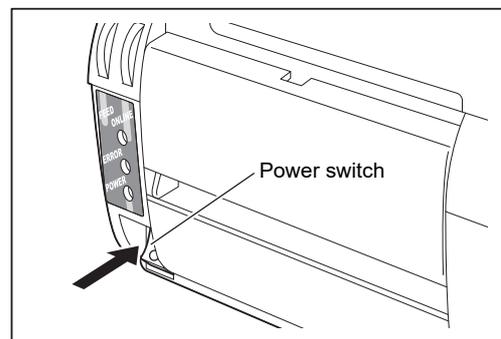
If the arm unit does not lock the first time, press "PUSH" again to lock it.



- 9** Close the top cover.



- 10** Press the power switch to turn on the printer.
The POWER and ONLINE lights come on;
the printer is now online.



1.5 Installing the Label Roll

1.5.1 Installing the label roll

This section explains the procedure for installing the label roll.

CAUTION

This unit operates with label rolls which “unwind”, that is, the labels face toward the spindle rather than toward the outside.

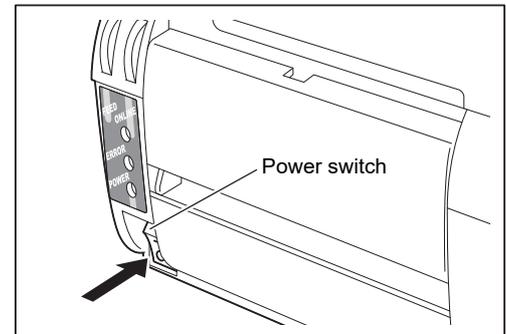
CAUTION

Be sure to turn off the power. Not doing so may result in personal injury or an equipment malfunction.

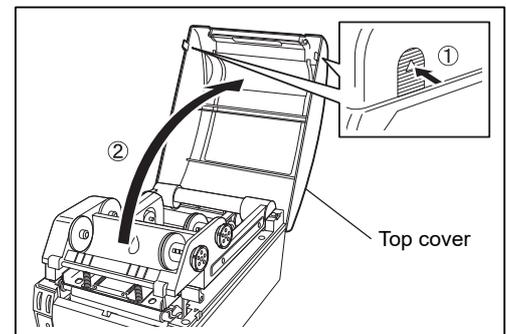
CAUTION

Open the top cover gently. Opening the cover abruptly or extending it beyond 90 degrees to the plane of the printer itself may cause the cover to come loose and fall.

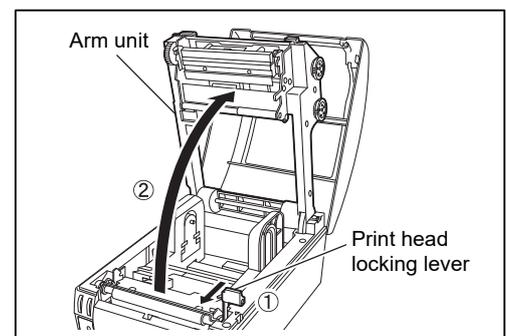
- 1 Press the power switch to turn off the printer.
The POWER light goes off and the power shuts off.



- 2 Open the top cover.
Press the left and right triangle marks on the top cover to unlock and open the cover.

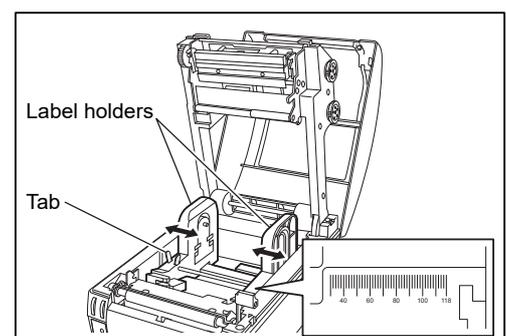


- 3 Pull the print head locking lever toward you and then raise the arm unit.



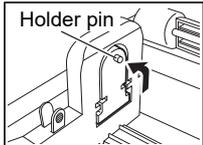
- 4 Specify the label width.
Squeeze the label holder tabs to release them. Then slide the tabs to the correct position, depending on the label width. Refer to the scale to find the correct position.

- 5 Check the platen roller.
For backing paper less than 63 mm wide, use a narrow platen roller.
To replace the platen roller, refer to “Section 4.3 Replacing the Platen Roller”.



POINT

If any holder pin is protruding toward the inside, the label roll cannot be held in position. Before positioning the roll, lift the holder pin and tilt it outwards.



CAUTION

Be sure to pass the labels under the roller and then between the label sensors.

CAUTION

Be careful not to touch the blade of the simplified cutter unit.

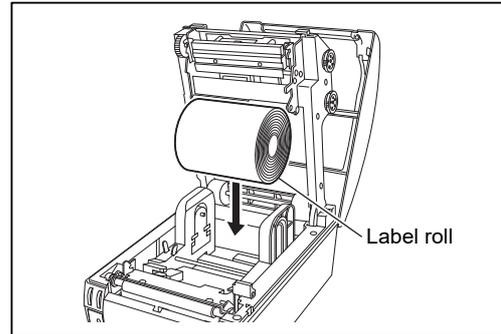
CAUTION

If the gap between the label holder and the label roll is too large, the labels may drift, resulting in abnormal printing.

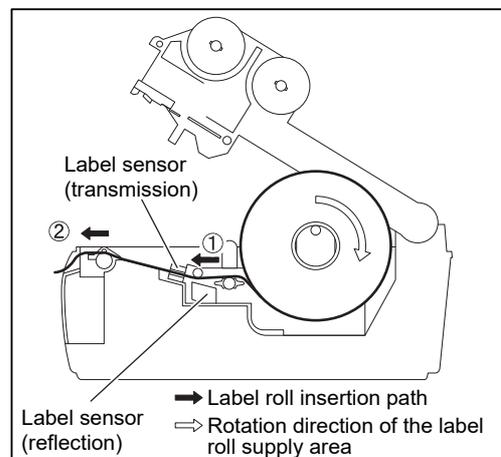
CAUTION

If the label guides are positioned closer than the width of the label, the labels may jam.

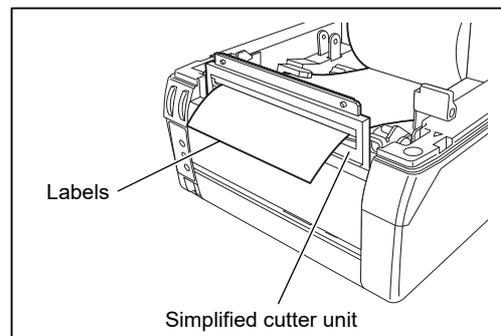
6 Install the label roll, positioning it between the label holders on either side.



7 Pass the front end of the label roll through the printer as shown in the illustration.

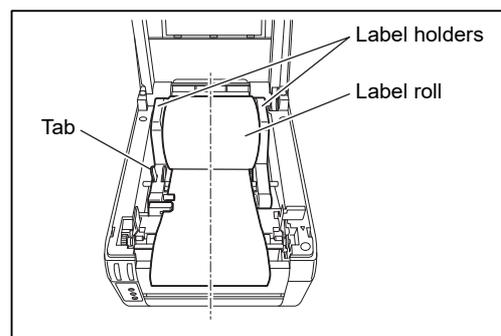


If the optional simplified cutter unit has been installed:
Also pass labels through the simplified cutter unit following the path shown in the illustration above.



8 Check that the label roll is held in position snugly and that there is not an excessive gap between the holders on either side and the roll itself.

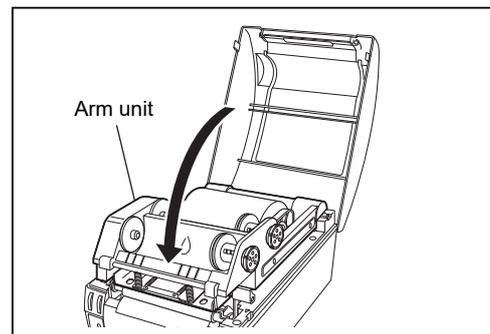
If the holders are not close enough to the roll, squeeze the label holder tabs, bringing the holders closer to the roll and eliminating the gap.
Now check that the labels advance smoothly and in a straight path.



9 Lock the arm unit.

Lower the arm unit. Then press where it says "PUSH" on either side to lock the arm unit.

If the arm unit does not lock the first time, press "PUSH" again to lock it.

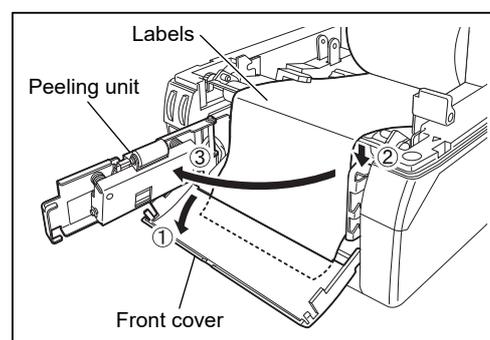
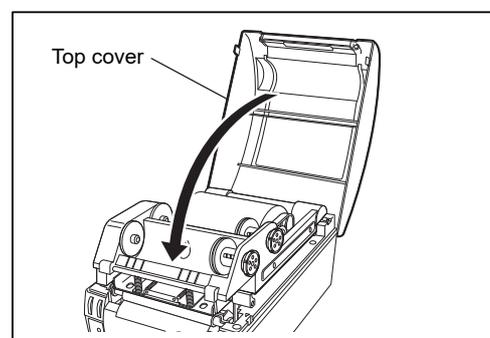
**CAUTION**

If the discharge port of the label backing paper under the front cover becomes blocked, the paper may become wound around the platen roller.

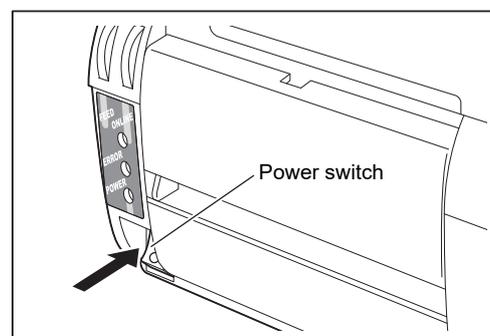
10 If the optional peeling unit has been installed:

(This step is required only if the peeling unit has been installed.) If yours is the standard configuration unit or is equipped with the simplified cutter unit, skip this step.

Open the front cover and unfold the peeling arm. Pass the backing paper under the front cover and reposition the peeling arm as it was. Gently pull the backing paper so that it is taut.

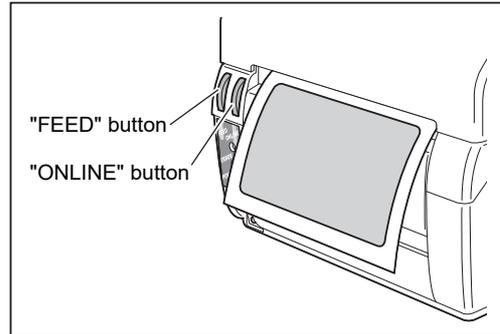
**11** Close the top cover.**12** Press the power switch to turn on the printer.

The POWER and ONLINE lights come on; the printer is now online.



13 The uptake point of the label roll is located.

Press the "ONLINE" button to make the printer go offline. Then press the "FEED" button several times.



*Check that the labels advance smoothly.

* If a label size error occurs, automatically adjust the label sensor.

For information on automatic adjustment of the label sensor, refer to the "DURA PRINTER SL Setting Tool" manual.

1.5.2 Label sensor automatic adjustment

This section explains how to have the printer automatically adjust its own label sensor sensitivity.

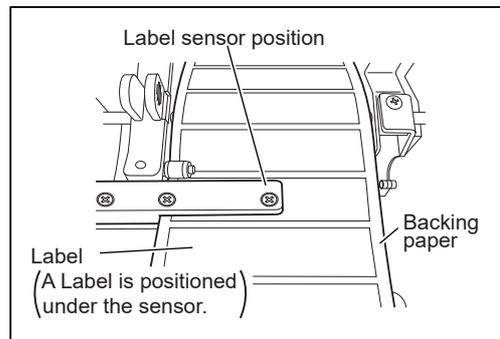
This adjustment is carried out when a label roll with a different type of backing paper is used, the print position is not adjusted correctly, or a label size error occurs repeatedly.

(It is also possible to adjust the label sensor automatically via the Setup Utility.)

POINT

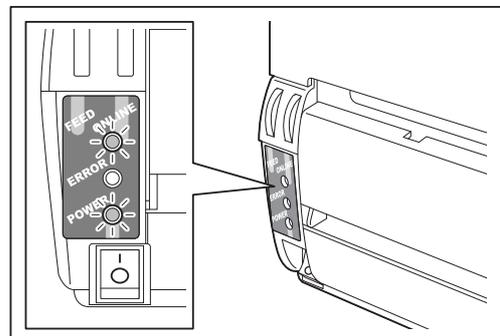
The label sensor shown in the right illustration is the example when the transmission sensor is selected according to the printer DIP switches.

1 Set the label roll so that a label is positioned under the label sensor.



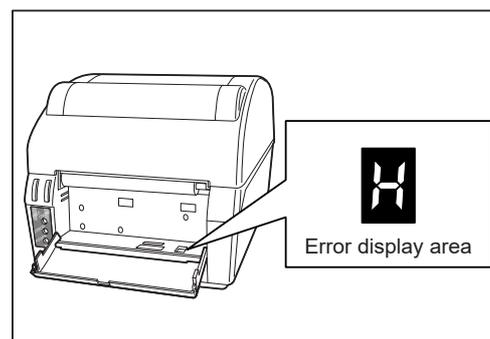
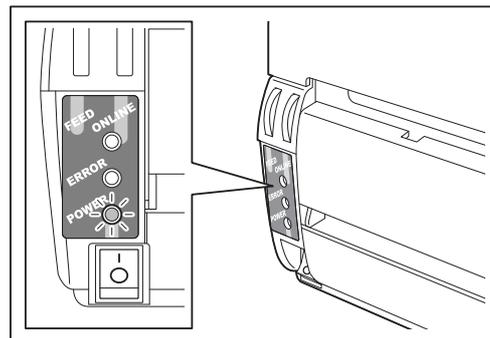
2 Check that the printer is in online mode, lock the arm unit, and then turn on the printer.

The ONLINE light illuminates when the printer is in online mode.



- 3** While pressing the “ONLINE” button, press the “FEED” button and then release both simultaneously.

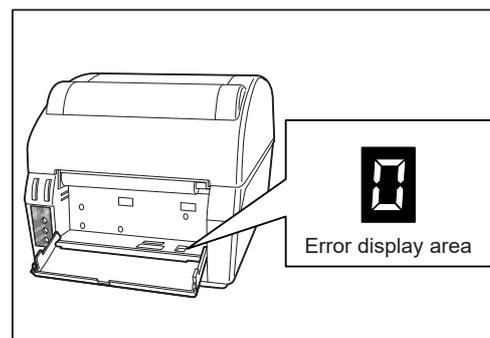
The ONLINE light goes off and “H” appears in the 7-segment LED of the error display area.



- 4** While pressing the “ONLINE” button, press the “FEED” button and release fingers at the same time.

A buzzer sounds twice after the button is pressed.

- 5** Press the “ONLINE” button.
“0” appears in the 7-segment LED of the error display area.



- 6** Press the “FEED” button to advance the label roll by a few labels. Verify that the roll stops at each label position.

To start printing, press the “ONLINE” button to make the printer go online.

1.5.3 Installing fan-folded paper

This section explains the procedure for installing “fan-folded” paper.

When this type of paper is used in the printer for the first time, the top cover must be modified.

See “Modifying the top cover”, below, for information on how to do this, then install the fan-folded paper referring to the section “Installing fan-folded paper”.

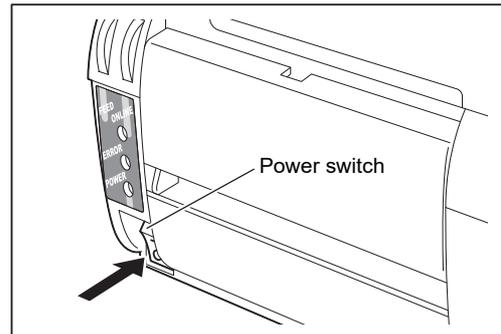
Modifying the top cover

CAUTION

Be sure to turn off the power. Not doing so may result in personal injury or an equipment malfunction.

- 1** Press the power switch to turn off the printer.

The POWER light goes off and the power shuts off.

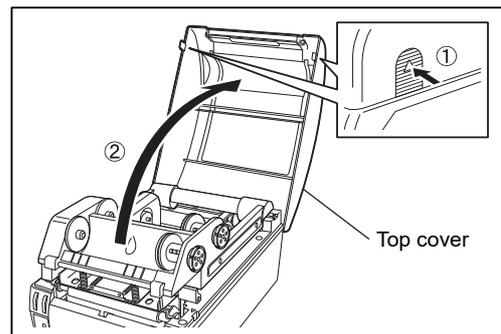


CAUTION

Open the top cover gently. Opening the cover abruptly may cause the cover to come loose and fall.

- 2** Open and remove the top cover.

Press the left and right triangle marks on the top cover to unlock the cover. Gently opening the cover beyond 90 degrees to the plane of the printer itself, as shown in the illustration, releases the top cover at hinged contact points.

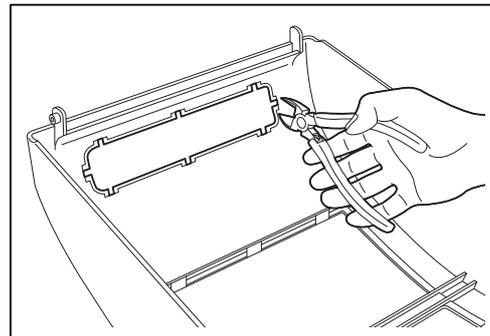


CAUTION

Be careful to avoid cutting your fingers.

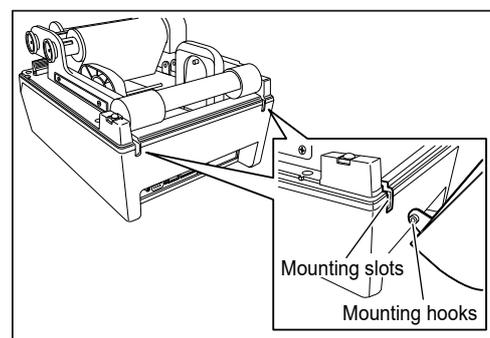
- 3** Cut fan-folded paper insertion notches in the top cover and remove the cuttings.

Cut eight notches in the top cover using a cutting pliers; remove the cuttings.



- 4** Replace the top cover.

Position the mounting hooks on the rear of the top cover in their corresponding slots on the printer to secure the cover.



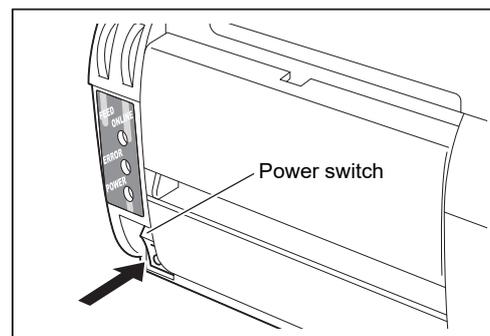
Installing fan-folded paper

CAUTION

Be sure to turn off the power. Not doing so may result in personal injury or an equipment malfunction.

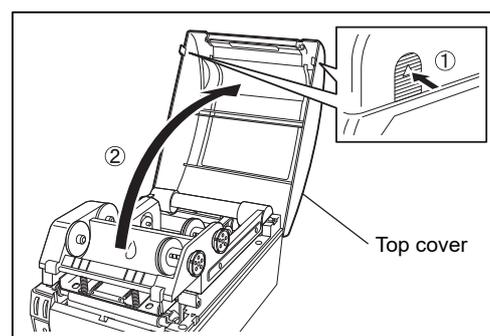
- 1** Press the power switch to turn off the printer.

The POWER light goes off and the power shuts off.

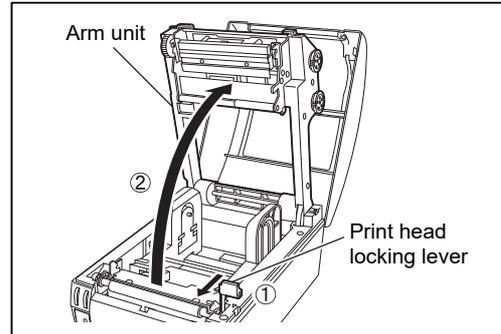
**CAUTION**

Open the top cover gently. Opening the cover abruptly or extending it beyond 90 degrees to the plane of the printer itself may cause the cover to come loose and fall.

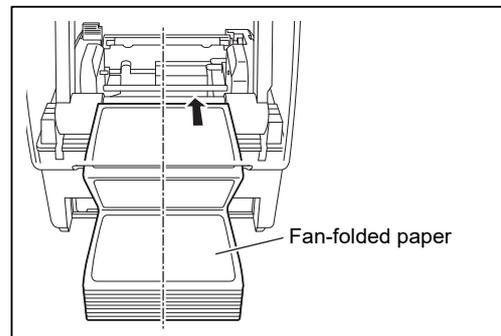
- 2** Open the top cover.
Press the left and right triangle marks on the top cover to unlock and open the cover.



- 3** Pull the print head locking lever toward you and then raise the arm unit.



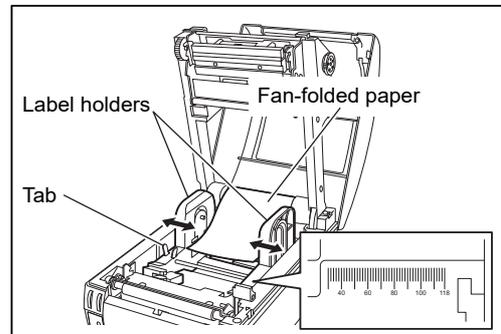
- 4** Pass the fan-folded paper from the slit in the rear of the top cover.
Position the paper behind the printer in such a way that the labels will advance straight through the printer during printing.



CAUTION

If the gap between the label holder and the label roll is too large, the labels may drift, resulting in abnormal printing.

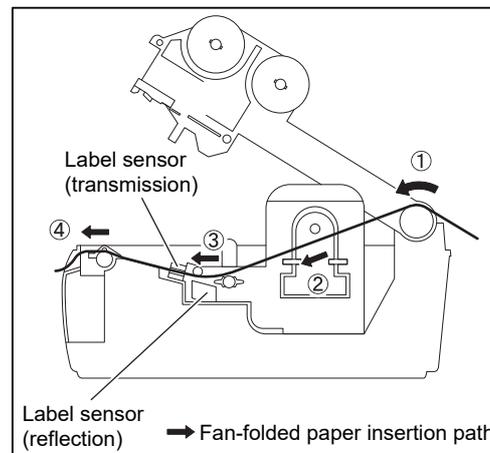
- 5** Adjust the label holders to match the width of the label roll.
Squeeze the label holder tabs to release them. Then slide the tabs to the correct position, depending on the label width. Refer to the scale to find the correct position.



CAUTION

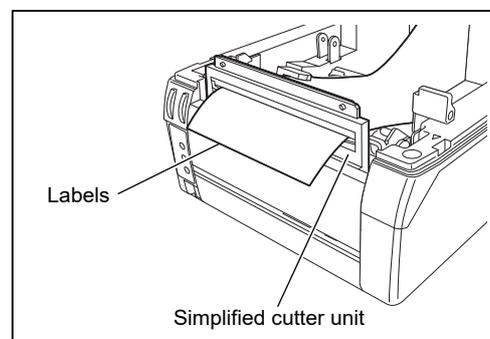
Be sure to pass the labels under the roller and then between the label sensors.

- 6** Pass the front end of the fan-folded paper through the printer as shown in the illustration.



If the optional simplified cutter unit has been installed:

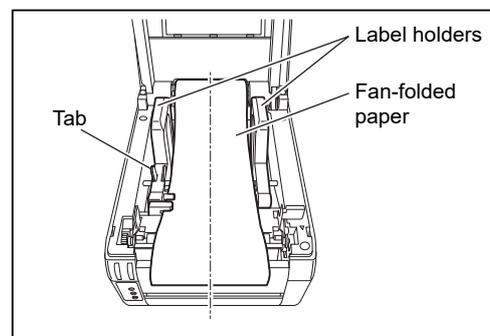
Also pass labels through the simplified cutter unit following the path shown in the illustration above.

**CAUTION**

If the gap between the label holder and the label roll is too large, the labels may drift, resulting in abnormal printing.

- 7** Check that there is not an excessive gap between the holders on either side and the paper itself.

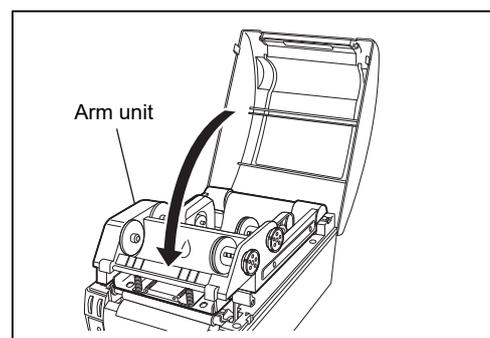
If the holders are not close enough to the fan-folded paper, squeeze the label holder tabs to release them, and slide the holders closer to the paper to eliminate the gap. Now check that the labels advance smoothly and in a straight path.



- 8** Lock the arm unit.

Lower the arm unit. Then press where it says "PUSH" on either side to lock the arm unit.

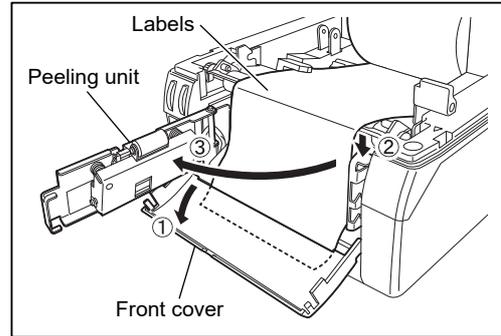
If the arm unit does not lock the first time, press "PUSH" again to lock it.



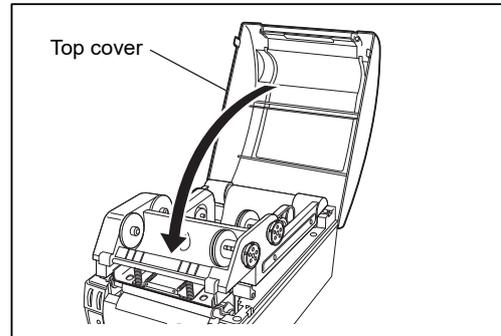
CAUTION

If the discharge port of the label backing paper under the front cover becomes blocked, the paper may become wound around the platen roller.

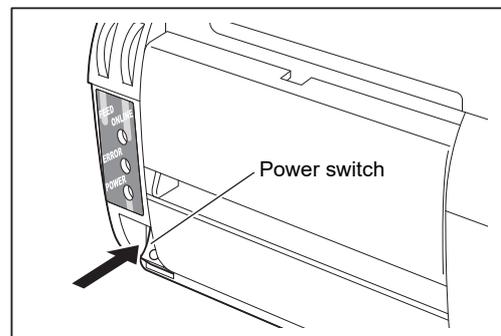
9 If the optional peeling unit has been installed:
(This step is required only if the peeling unit has been installed.) If yours is the standard configuration unit or is equipped with the simplified cutter unit, skip this step. Open the front cover and unfold the peeling arm. Pass the backing paper under the front cover and reposition the peeling arm as it was. Gently pull the backing paper so that it is taut.



10 Close the top cover.



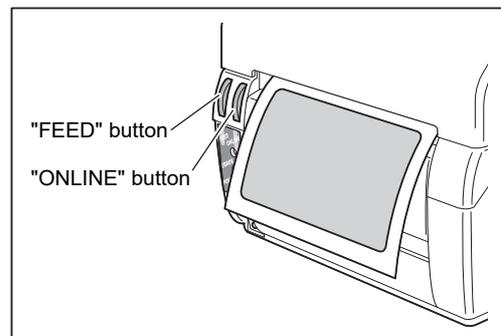
11 Press the power switch to turn on the printer.
The POWER and ONLINE lights come on; the printer is now online.



12 The uptake point of the label roll is located.

Press the "ONLINE" button to make the printer go offline. Then press the "FEED" button several times.

*Check that the labels advance smoothly.



Chapter 2

BASIC OPERATIONS

This chapter explains the various procedures necessary to operate the printer.

2.1 Before Starting Work.....	2-2
2.1.1 Checks before operation	2-2
2.2 Online and Offline.....	2-3
2.2.1 Operating in online mode	2-4
Switching to online mode	2-4
2.2.2 Operating in offline mode.....	2-5
Switching to offline mode	2-5
Locating the uptake point of the label roll	2-6

2.1 Before Starting Work

This section provides information on how to check the printer before operation, and on how to toggle between online and offline modes.

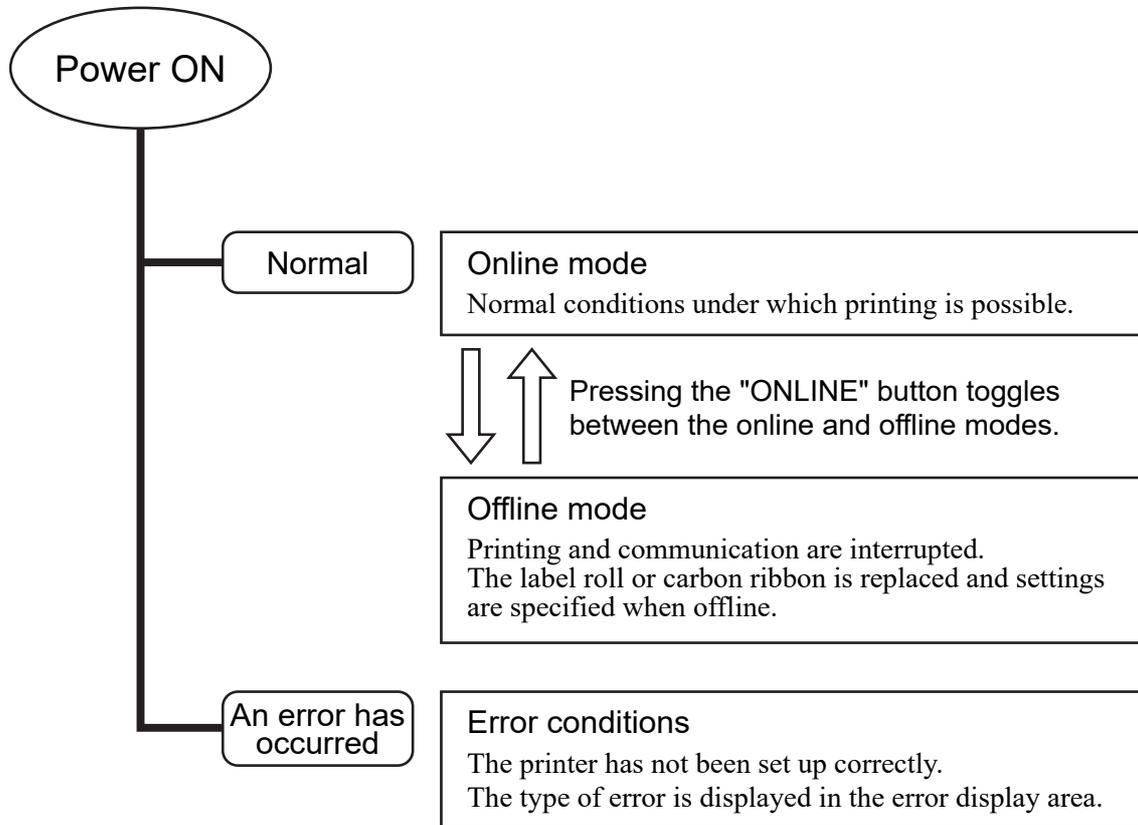
2.1.1 Checks before operation

To ensure that the printer will always be in optimum condition, be sure to carry out the following daily checks before use.

Check point	Measures
Check the exterior of the printer for dust.	Remove any accumulated dust using a soft cloth dampened with water.
Check the thermal head for dust or grime.	After removing any residual dust or grime (which may have accumulated from the labels passing through the printer), wipe the thermal head using a cotton swab dipped in cleaning solution. For further information, refer to “Cleaning the Thermal Head and Platen Roller” on page 4-2.
Check the platen roller for dust or grime.	After removing dust or label grime, wipe the platen roller using a cloth dampened with cleaning solution. For further information, refer to “Cleaning the Thermal Head and Platen Roller” on page 4-2.
Check that the labels feed correctly into the printer.	Press the “ONLINE” button to make the printer go offline. Then press the “FEED” button to adjust the printing position.

2.2 Online and Offline

When the printer is online, data can be transmitted from the computer to the printer and be printed. On the other hand, if the printer is offline, it is effectively disconnected from the computer and, consequently, data cannot be transmitted or printed. If, for whatever reason, troubleshooting is necessary, or when a few labels must be fed into the printer before printing, ensure that the printer is “offline”.



2.2.1 Operating in online mode

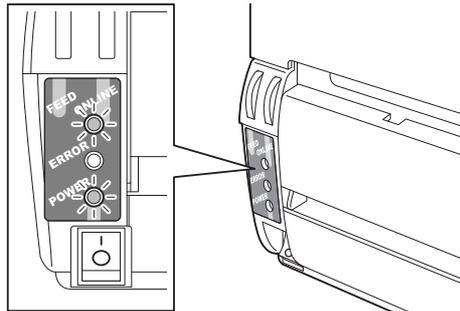
Turning on the power automatically brings the system online.
When the printer is “online” the following procedures are possible.



Make sure that the printer is online before starting to print.

- Data transmitted from the computer to the printer can be printed.
- The “ONLINE” button can be pressed to toggle to "offline" mode and deliberately interrupt printing if printing is in process.

Online mode

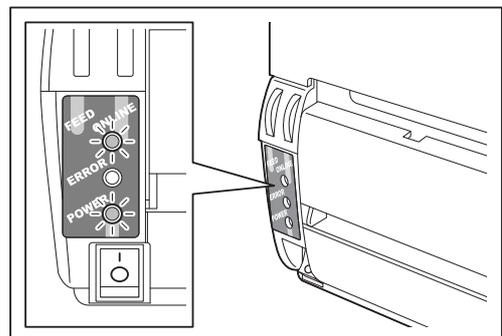
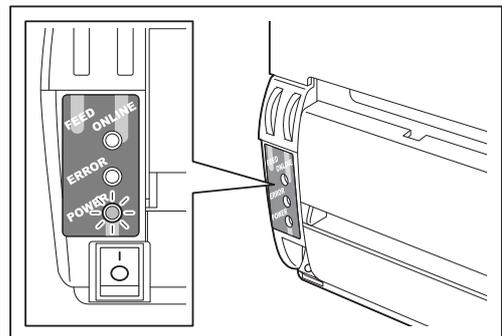


To enter online mode, proceed as follows:

Switching to online mode

- 1** Press the “ONLINE” button.
The ONLINE light comes on.
If print data still remains in the printer’s memory, printing resumes.

* If an error occurs, the ERROR light illuminates and a number other than “0” appears in the error display area. The printer can return to online mode only after the error has been cancelled and when the ONLINE button is pressed. Cancel the error before bringing the printer online.

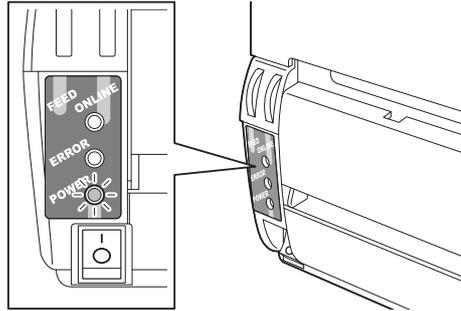


2.2.2 Operating in offline mode

When the printer is “offline”, the following procedures are possible.

- The “ONLINE” button can be pressed to bring the printer online.
If printing has been interrupted, printing resumes.
- Press the “FEED” button to feed the labels so that the uptake point of the label roll comes front.

Offline mode



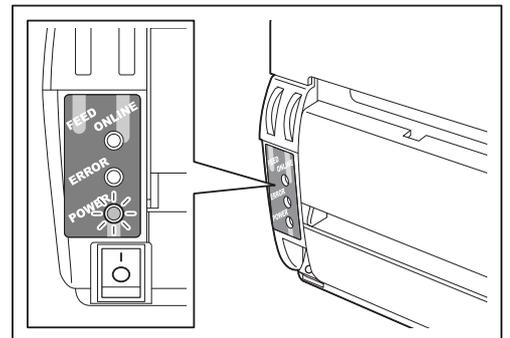
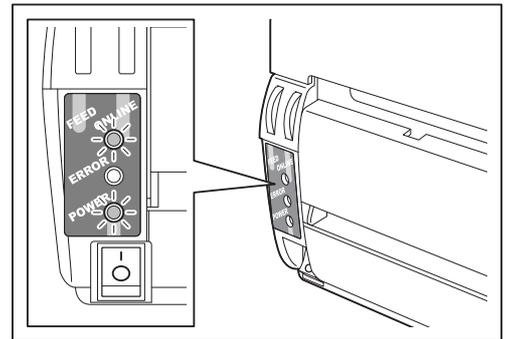
To make the printer go “offline”, proceed as follows:

Switching to offline mode

- 1** Press the “ONLINE” button.

The ONLINE light goes off, signifying that the printer is now in offline mode.

If print data still remains in the printer’s memory, printing stops.



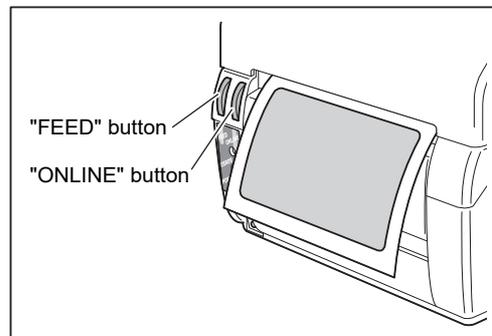


The "FEED" button only operates when the printer is offline.

Locating the uptake point of the label roll

If label printing is interrupted, or when labels run out and need to be replaced, follow the procedure below to resume printing.

- 1** Press the "FEED" button several times.
Labels advance, as necessary, to determine the label start point.



Chapter 3

SETUP PROCEDURE

This chapter explains how to set up the printer.

3.1 Operation Checks During Installation	3-2
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3.1 Operation Checks During Installation

This section explains operation checks when installing the printer.

Printing without first carrying out these checks may result in the printer not operating normally. When using the printer for the first time, follow the procedure below. For information on advanced setup, refer to the "DURA PRINTER SL Setting Tool" manual on the accompanying CD-ROM.

POINT

If one or more units are connected to the computer, this setting cannot be carried out. Carry out the settings individually, referring to the manual on the accompanying CD-ROM.

CAUTION

Be sure to turn off the power. Not doing so may result in personal injury or an equipment malfunction.



When installing "DURA PRINTER SL Setting Tool", refer to the "DURA PRINTER SL Setting Tool" manual on the accompanying CD-ROM.

CAUTION

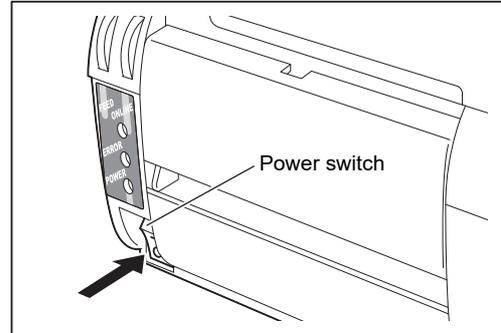
Open the front cover gently. Opening the cover abruptly may cause the cover to come loose.

CAUTION

The left end of the film strip is secured by the tape. The strip may become distorted if it is bent excessively.

- 1 Press the power switch to turn off the printer.

The POWER light goes off and the power shuts off.



- 2 Start the computer and launch the "DURA PRINTER SL Setting Tool".

[After the "DURA PRINTER SL Setting Tool" has been installed]

Start the computer. From the "Start" menu, select "Program", and then "Setting Tool" or double-click the "Setting Tool" icon on the desktop if this shortcut icon is available.

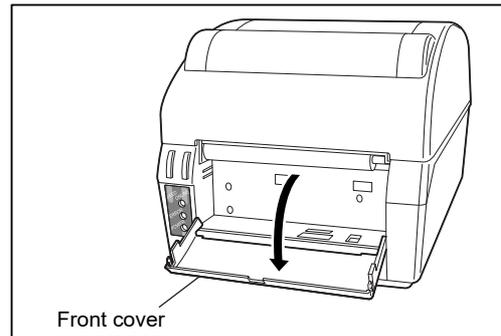


[If the "DURA PRINTER SL Setting Tool" has not yet been installed]

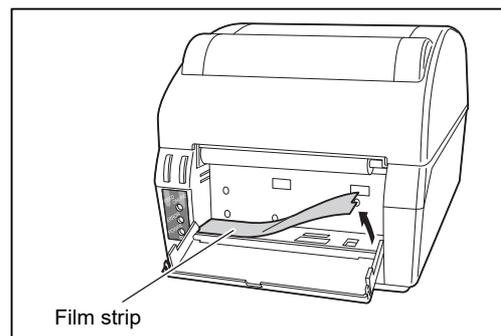
Start the computer and insert the accompanying disk, containing the "DURA PRINTER SL Setting Tool" into the CD drive.

The "DURA PRINTER SL Setting Tool" launches and the menu screen appears.

- 3 Open the front cover.



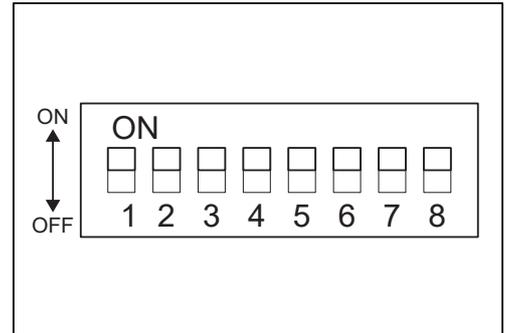
- 4 Lift the right end of the film strip.



5 Set the DIP switches.

Set each switch according to the following table.

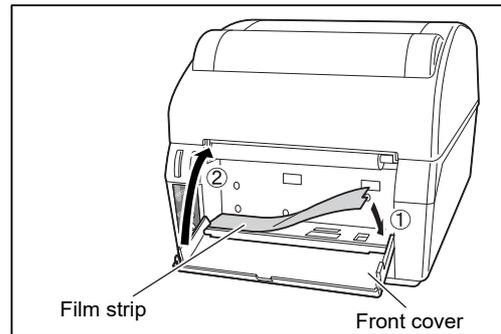
Then replace the film strip and front cover in their original positions.



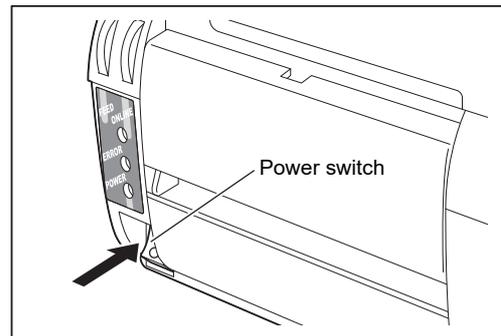
Switch	Functions and switch positions			Default
1	This specifies the interface to be used.			OFF
	ON	Select this setting when connecting the printer to a computer using an optional interface (LAN or RS-232C).		
	OFF	Select this setting when using the standard interface (USB).		
2	Not used. Be sure this is set to OFF.			OFF
3	This specifies the type of the label sensor.			OFF
	ON	Reflection sensor (which detects an eyemark on the rear of the backing paper)		
	OFF	Transmission sensor (which detects a label depending on the amount of light transmitted.)		
4	This specifies either thermal transfer mode or direct thermal mode.			ON
	ON	Specifies thermal transfer mode.		
	OFF	Specifies direct thermal mode.		
5	This allows detection of broken pins on the thermal head.			ON
	ON	Detects broken pins.		
	OFF	Does not detect broken pins. In this case, if there are, in fact, broken pins on the head, no error appears in the 7 segment display.		
6 - 8	Printing or label feeding operations can be specified.			
	Switch			Operation mode (Sensor)
	6	7	8	
	OFF	OFF	OFF	Continuous printing (Active)
	ON	OFF	OFF	Cutter (Active)
	OFF	ON	OFF	Peeling (Active)
	ON	ON	OFF	Tear-off (Default setting) (Active)
	OFF	OFF	ON	Continuous printing (*) (Inactive)
	ON	OFF	ON	Cutter (*) (Inactive)
	OFF	ON	ON	Damp (*) (Inactive)
ON	ON	ON	Spare	

* The label sensor does not detect labels. Continuous-form labels are used for printing.

- 6** After the DIP switches have been set, replace the film strip and front cover in their original positions.



- 7** Press the power switch to turn on the printer.
The POWER and ONLINE lights come on; the printer is now online.



Chapter 4

MAINTENANCE

This chapter provides information on how to clean and replace each component.

4.1	Cleaning the Thermal Head and Platen Roller	4-2
4.2	Replacing the Thermal Head	4-6
4.3	Replacing the Platen Roller	4-10
4.4	Replacing the Label Guide	4-13
4.5	Cleaning the Optional Unit.....	4-16
4.5.1	Peeling unit.....	4-16
4.5.2	Simplified cutter unit	4-19
4.6	Checking the Label Sensor	4-22
4.7	Checking the Peeling Sensor	4-23

4.1 Cleaning the Thermal Head and Platen Roller

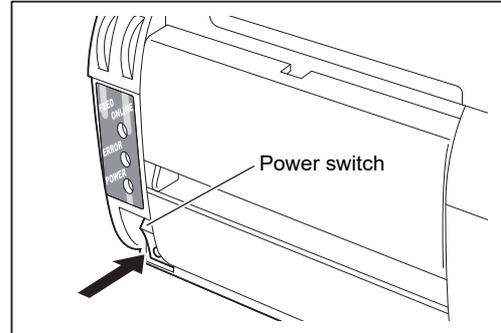
If dust or grime has accumulated on any component, this will prevent clear and accurate printing, and may cause labels to be fed incorrectly, resulting in a malfunction.

Clean the components regularly.

CAUTION

Be sure to turn off the power. Not doing so may result in personal injury or an equipment malfunction.

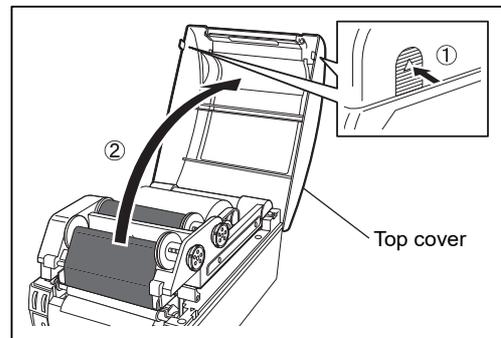
- 1** Press the power switch to turn off the printer.
The POWER light goes off and the power shuts off.



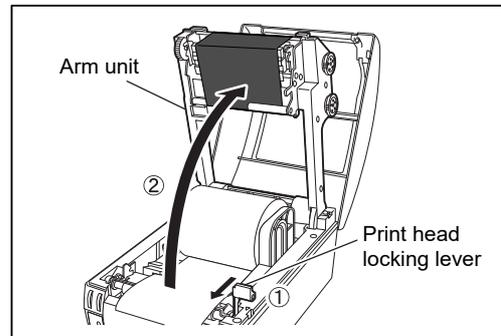
CAUTION

Open the top cover slowly. Opening the cover abruptly or extending it beyond 90 degrees to the plane of the printer itself may cause the cover to come loose and fall.

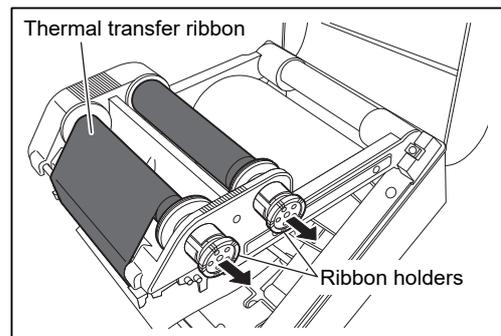
- 2** Open the top cover.
Press the left and right triangle marks on the top cover to unlock and open the cover.



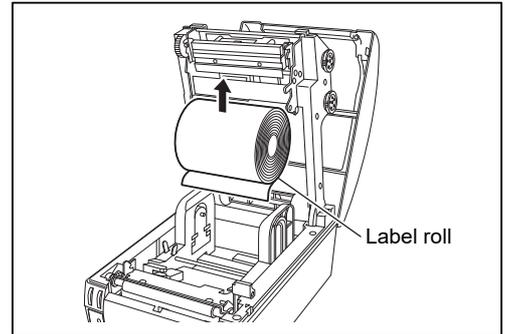
- 3** Pull the print head locking lever toward you and then raise the arm unit.



- 4** Remove the thermal transfer ribbon.



- 5** After winding any unwound labels back onto the roll, remove the roll.



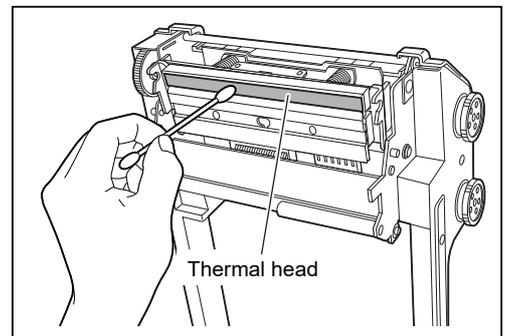
CAUTION

Do not touch the thermal head with bare hands. This may cause a printing failure.

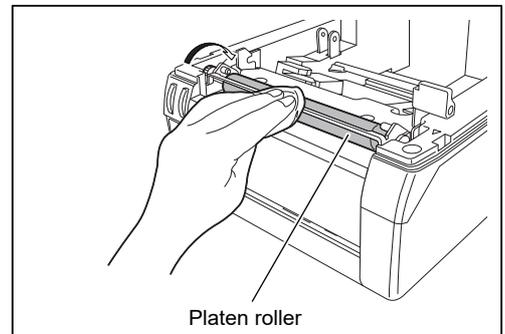
- 6** Wipe a thermal head with the cotton swab which let isopropyl alcohol soak.

CAUTION

Cleaning solution is inflammable. After use, close the cap securely to avoid the possibility of fire.



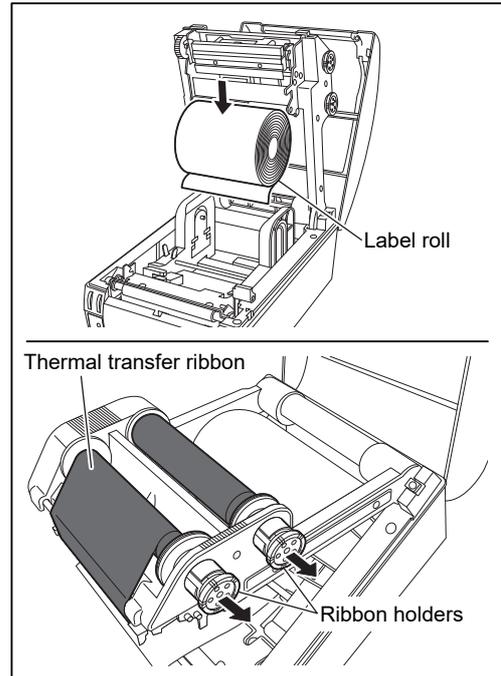
- 7** While rotating the platen roller, wipe it with the cloth which let isopropyl alcohol soak.





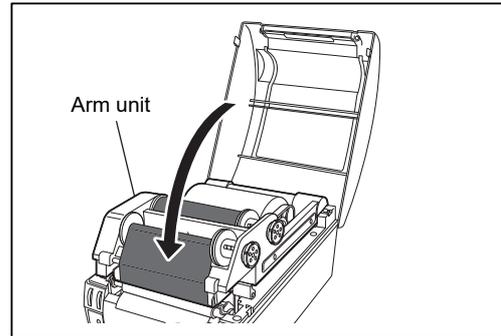
For information on how to install the thermal transfer ribbon, refer to “Installing the Thermal Transfer Ribbon” on page 1-8; and for information on how to install the label roll, refer to “Installing the Label Roll” on page 1-11.

8 After cleaning, replace the label roll and thermal transfer ribbon.

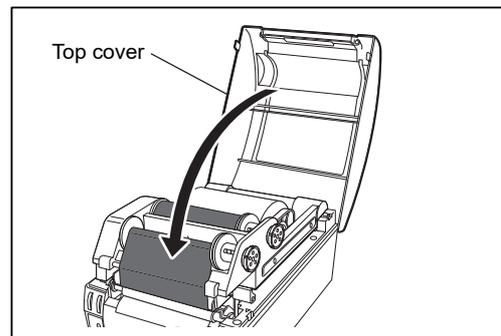


9 Lock the arm unit.
Lower the arm unit. Then press where it says "PUSH" on either side to lock the arm unit.

If the arm unit does not lock the first time, press "PUSH" again to lock it.

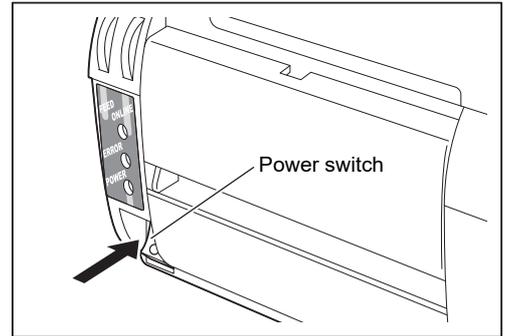


10 Close the top cover.



11 Press the power switch to turn on the printer.

The POWER and ONLINE lights come on; the printer is now online.



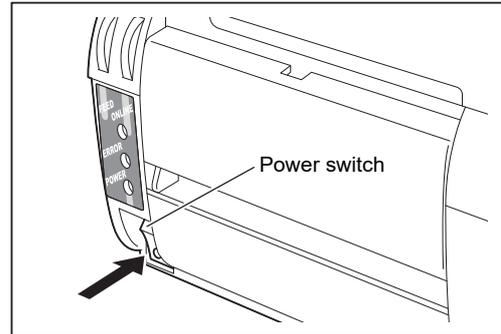
4.2 Replacing the Thermal Head

This section explains the procedure for replacing the thermal head.

CAUTION

Be sure to turn off the power. Not doing so may result in personal injury or an equipment malfunction.

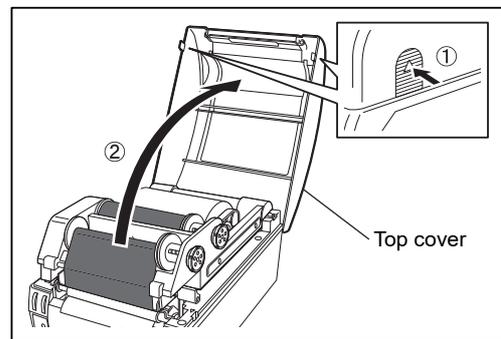
- 1** Press the power switch to turn off the printer.
The POWER light goes off and the power shuts off.



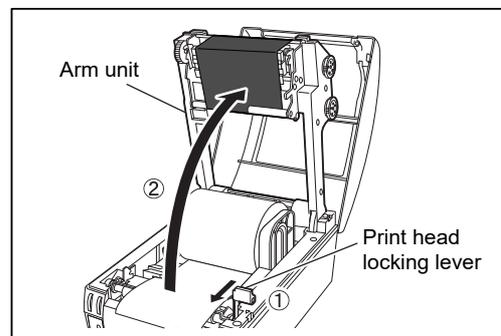
CAUTION

Open the top cover gently. Opening the cover abruptly or extending it beyond 90 degrees to the plane of the printer itself may cause the cover to come loose and fall.

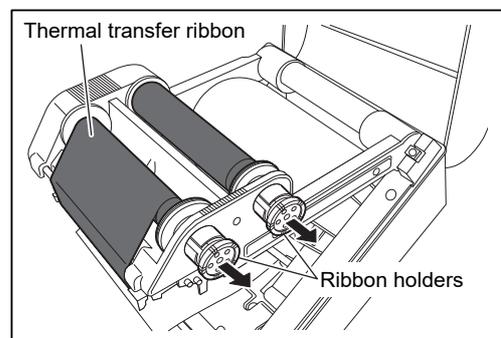
- 2** Open the top cover.
Press the left and right triangle marks on the top cover to unlock and open the cover.



- 3** Pull the print head locking lever toward you and then raise the arm unit.



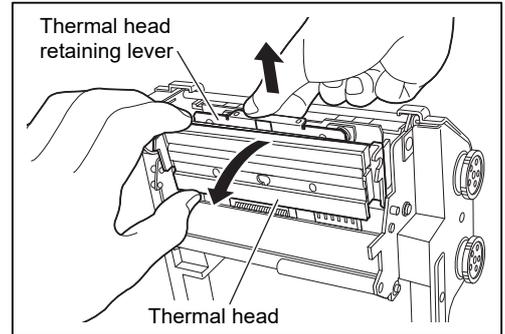
- 4** Remove the thermal transfer ribbon.



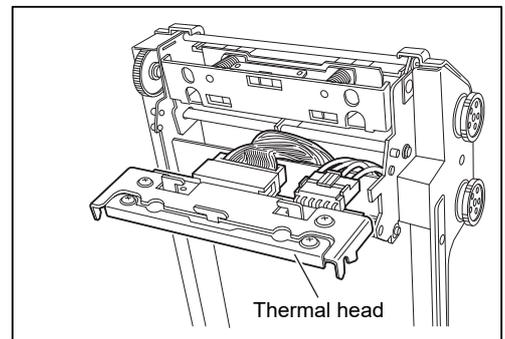
CAUTION

Do not touch the thermal head with bare hands. This may cause a printing failure.

5 While supporting the thermal head with your hand, pull the thermal head retaining lever toward you.



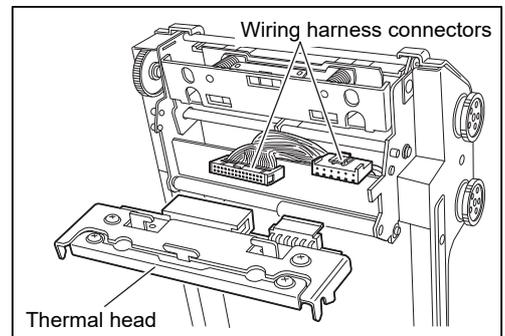
6 This releases the thermal head.



CAUTION

Do not exert excessive force on the connectors (harnesses) or cables.

7 Remove the connectors (harnesses). Then install a new thermal head.

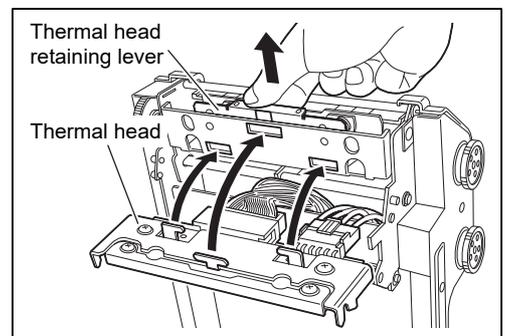


CAUTION

Return the connectors (harnesses) to their original positions, ensuring that they do not make contact with the thermal transfer ribbon.

8 Pull the thermal head retaining lever toward you, and insert the hooks as shown while supporting the thermal head with your hand.

After inserting the hooks, move the thermal head retaining lever back in position.

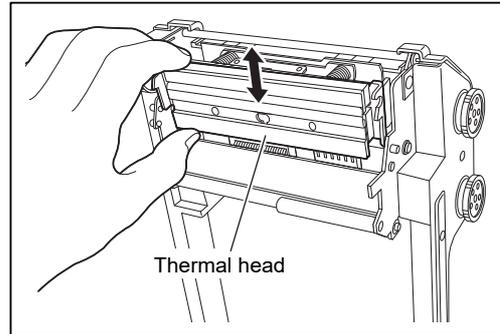


CAUTION

Do not touch the thermal head with bare hands. This may cause a printing failure.

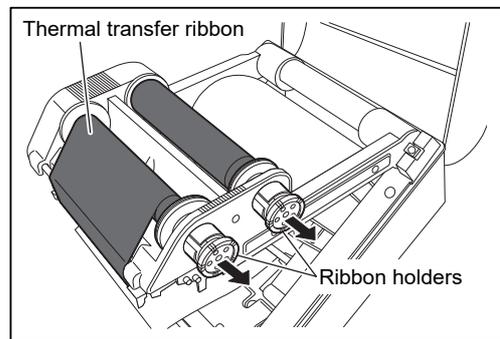
9 Move the thermal head up and down.

Move the thermal head up and down until it clicks. Then make sure that the thermal head operates smoothly.



For information on how to install the thermal transfer ribbon, refer to “Installing the Thermal Transfer Ribbon” on page 1-8.

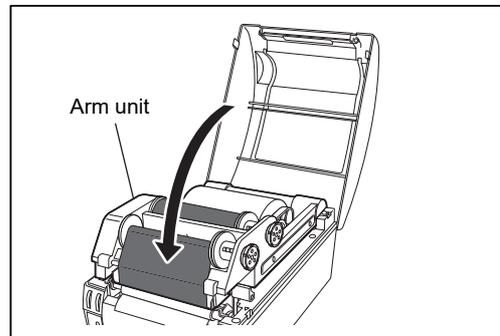
10 Install the thermal transfer ribbon.



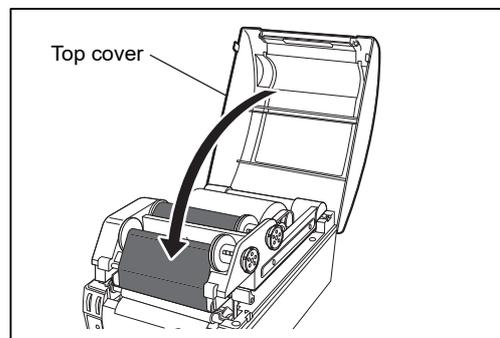
11 Lock the arm unit.

Lower the arm unit. Then press where it says "PUSH" on either side to lock the arm unit.

If the arm unit does not lock the first time, press "PUSH" again to lock it.

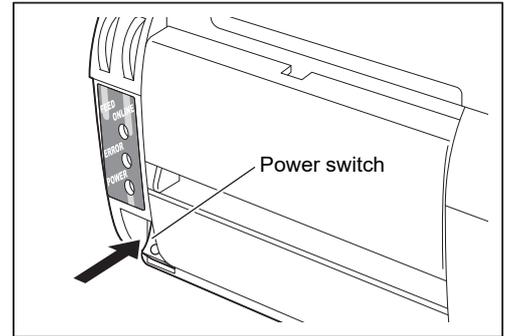


12 Close the top cover.



13 Press the power switch to turn on the printer.

The POWER and ONLINE lights come on; the printer is now online.

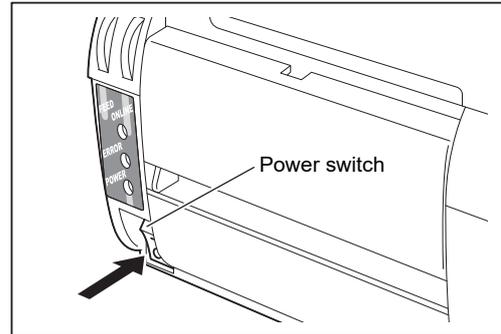


4.3 Replacing the Platen Roller

This section explains the procedure for replacing the platen roller.

- 1 Press the power switch to turn off the printer.

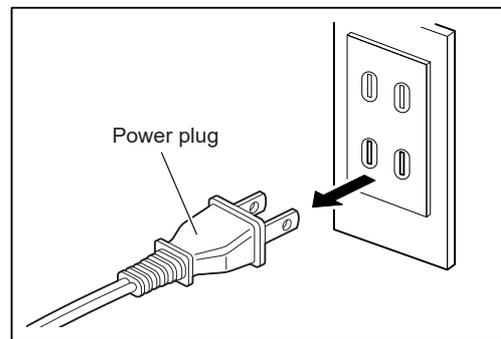
The POWER light goes off and the power shuts off.



⚠ WARNING

Be sure to unplug the printer from the power outlet. Not doing so may result in personal injury or an equipment malfunction.

- 2 Unplug the printer from the power outlet.

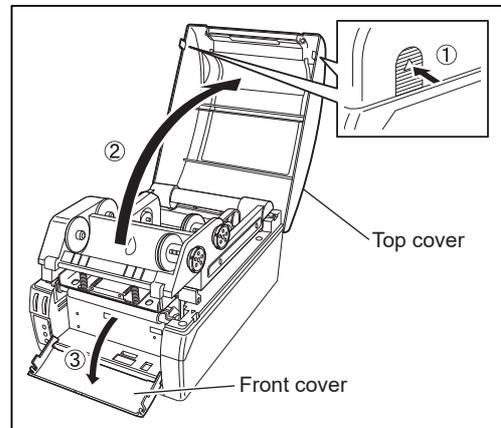


⚠ CAUTION

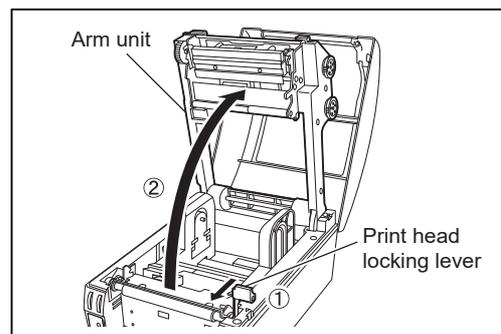
Open the top and front covers gently. Opening the cover abruptly or extending it beyond 90 degrees to the plane of the printer itself may cause the cover to come loose and fall.

- 3 Open the top and front covers.

Press the left and right triangle marks on the top cover to unlock and open the cover. Then, pull the upper part of the front cover toward you to open the cover.

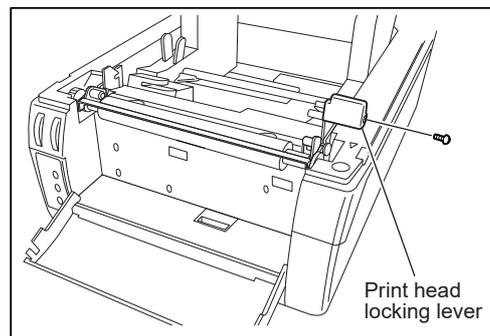


- 4 Pull the print head locking lever toward you and then raise the arm unit.



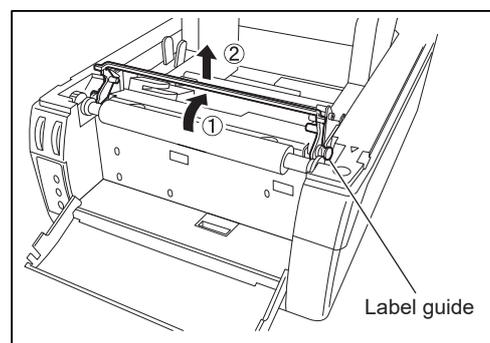
5 Remove the print head locking lever.

Remove the screw and then the print head locking lever.



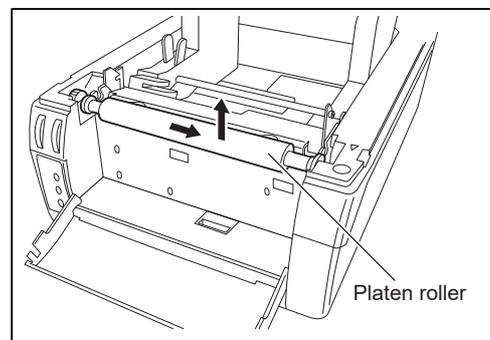
6 Remove the label guide.

Tilt the front of the label guide backwards. Then lift the guide to remove it.



7 Change the platen roller.

Move the platen roller to the right and pull it upward when the metal bushing is released.

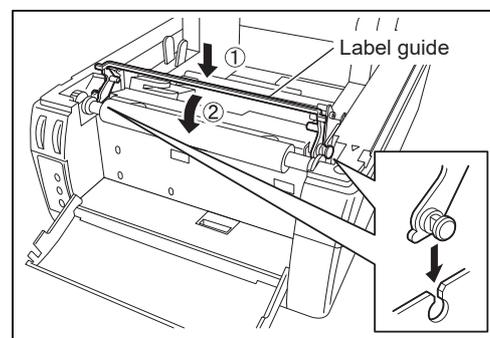


CAUTION

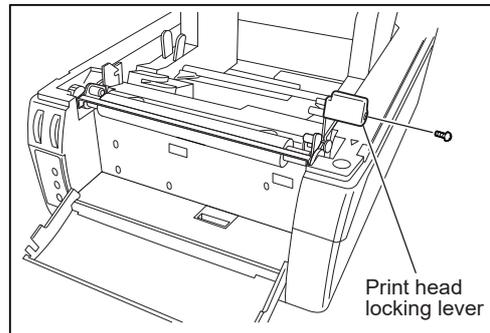
Be careful not to catch your fingers in the unit.

8 Install the label guide.

Insert the mounting tab on either side of the label guide into the notch and then tilt the guide toward you.

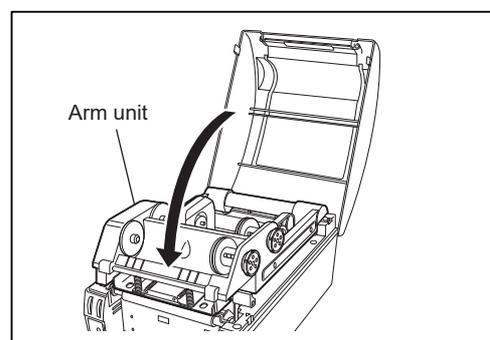


-
- 9** Replace the print head locking lever.

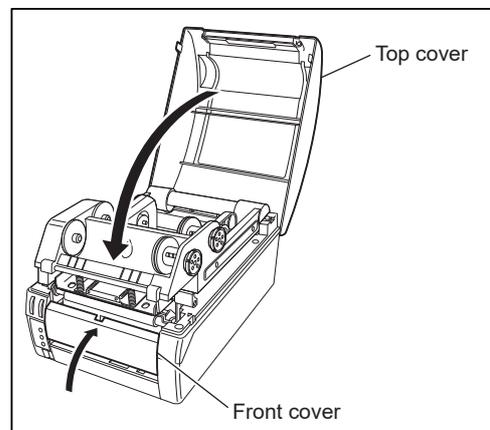


-
- 10** Lock the arm unit.
Lower the arm unit. Then press where it says "PUSH" on either side to lock the arm unit.

If the arm unit does not lock the first time, press "PUSH" again to lock it.



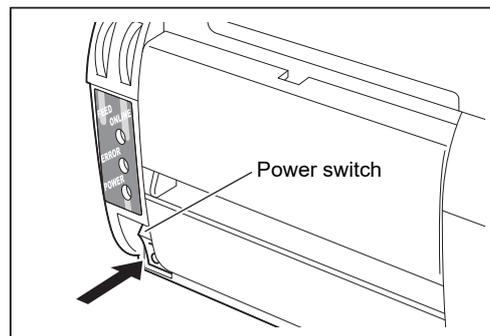
-
- 11** Close the top and front covers.



4.4 Replacing the Label Guide

This section explains the procedure for replacing the label guide.

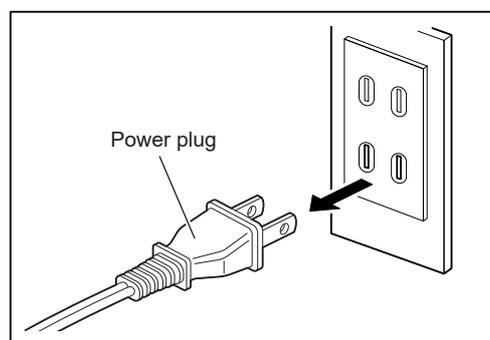
- 1 Press the power switch to turn off the printer.
The POWER light goes off and the power shuts off.



⚠ WARNING

Be sure to unplug the printer from the power outlet. Not doing so may result in personal injury or an equipment malfunction.

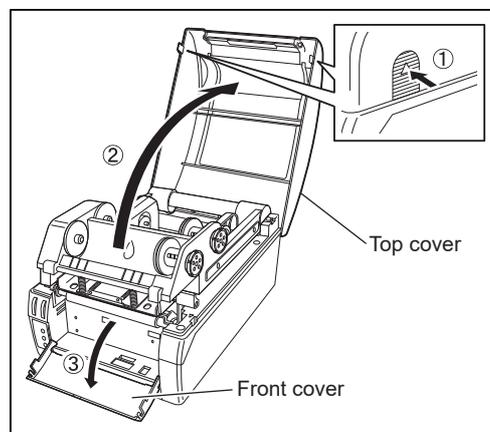
- 2 Unplug the printer from the power outlet.



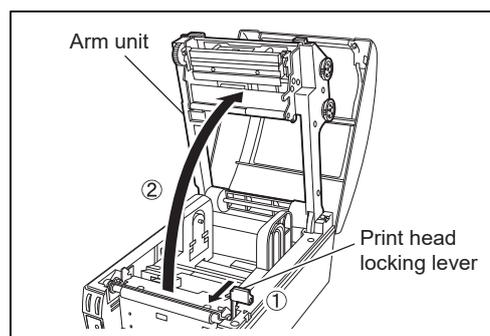
⚠ CAUTION

Open the top and front covers gently. Opening the cover abruptly or extending it beyond 90 degrees to the plane of the printer itself may cause the cover to come loose and fall.

- 3 Open the top and front covers.
Press the left and right triangle marks on the top cover to unlock and open the cover. Then, pull the upper part of the front cover toward you to open the cover.

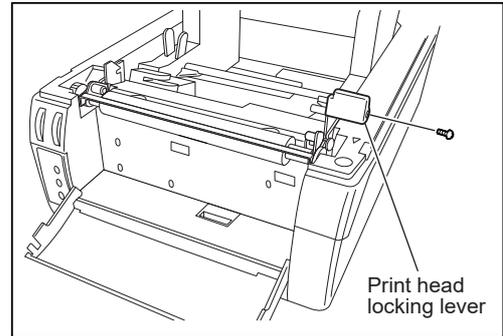


- 4 Pull the print head locking lever toward you and then raise the arm unit.



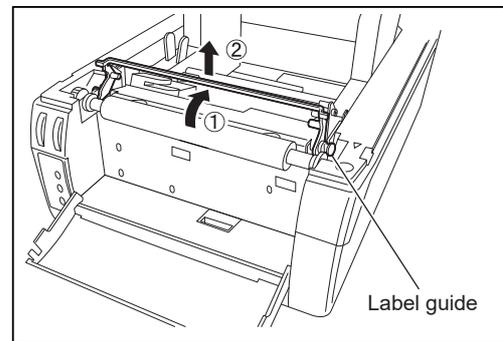
5 Remove the print head locking lever.

Remove the screw and then the print head locking lever.



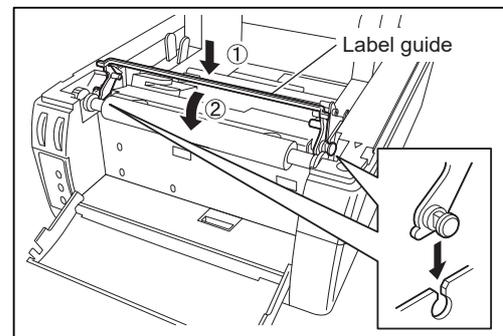
6 Remove the label guide.

Tilt the front of the label guide backwards. Then lift the guide to remove it.



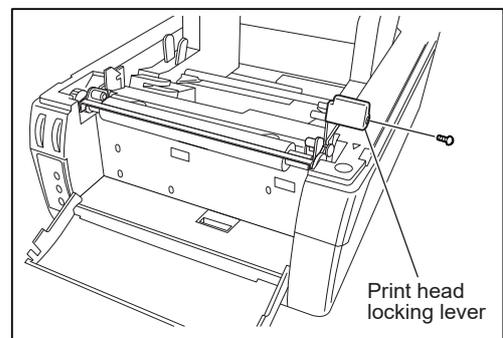
7 Install the new label guide.

Insert the mounting tab on either side of the label guide into the notch and then tilt the guide toward you.



8 Replace the print head locking lever.

Replace the print head locking lever.



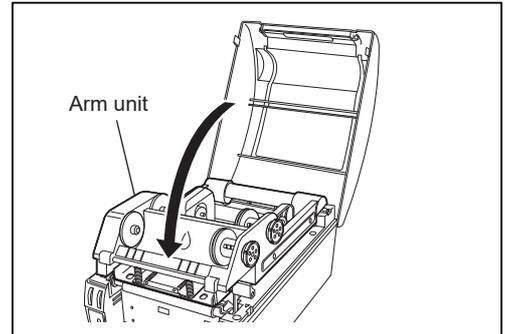
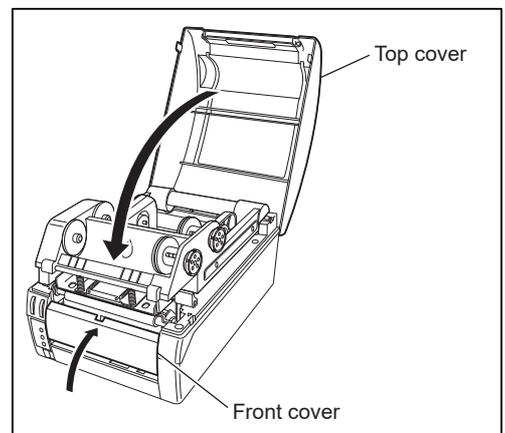
注意

誤って指などはさまないように注意してください。

9 Lock the arm unit.

Lower the arm unit. Then press where it says "PUSH" on either side to lock the arm unit.

If the arm unit does not lock the first time, press "PUSH" again to lock it.

**10** Close the top and front covers.

4.5 Cleaning the Optional Unit

If the peeling roller (in the peeling unit) or the cutter blade (in the simplified cutter unit) is grimy, the printer may not operate properly, resulting in a malfunction. Clean the components regularly.

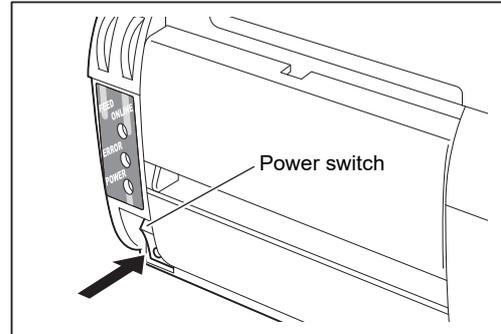
4.5.1 Peeling unit

This section explains how to clean the peeling roller.

CAUTION

Be sure to turn off the power. Not doing so may result in personal injury or an equipment malfunction.

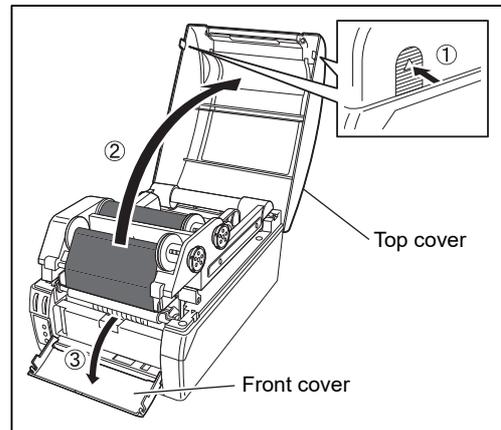
- 1 Press the power switch to turn off the printer.
The POWER light goes off and the power shuts off.



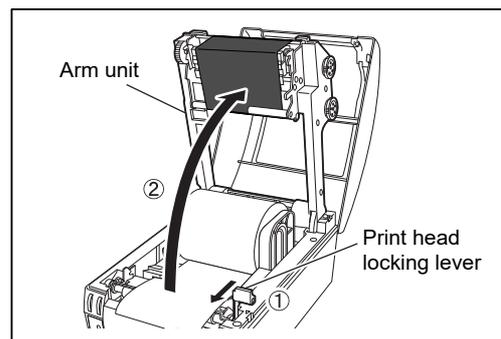
CAUTION

Open the top and front covers gently. Opening the cover abruptly or extending it beyond 90 degrees to the plane of the printer itself may cause the cover to come loose and fall.

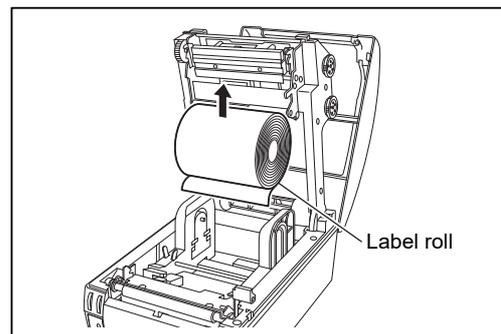
- 2 Open the top and front covers.
Press the left and right triangle marks on the top cover to unlock and open the cover. Then, pull the upper part of the front cover toward you to open the cover.



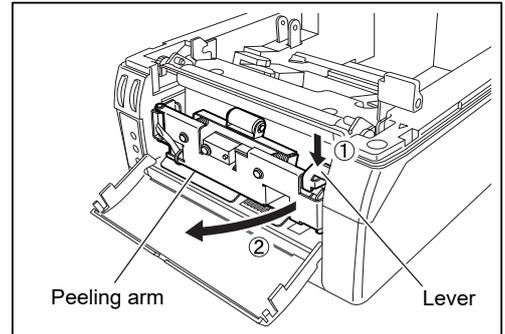
- 3 Pull the print head locking lever toward you and then raise the arm unit.



- 4 After winding any unwound labels back onto the roll, remove the roll.



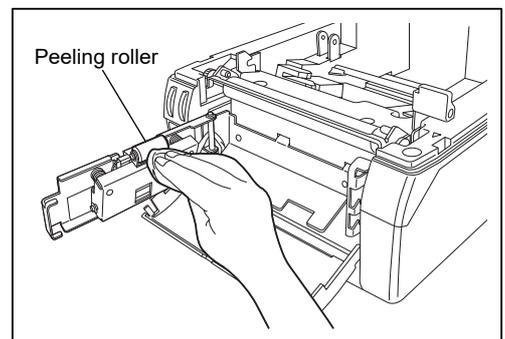
- 5** **Unfold the peeling arm.**
 Press the right-hand lever of the peeling unit to unfold the peeling arm.



CAUTION

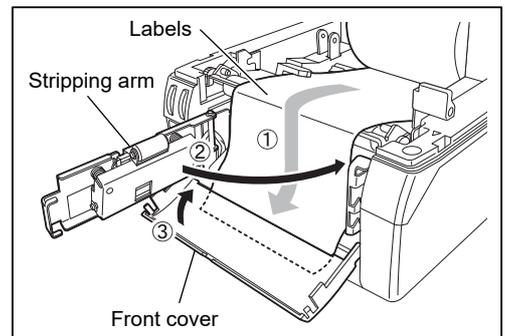
Cleaning solution is flammable. After use, close the cap securely to avoid the possibility of fire.

- 6** **While rotating the peeling roller, remove any residual dust or grime using with the cloth which let isopropyl alcohol soak.**



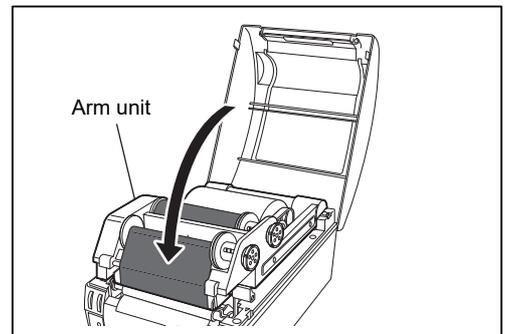
REFERENCE
 For information on how to install the label roll, refer to "Installing the Label Roll" on page 1-11.

- 7** **After cleaning, replace the label roll, reposition the peeling arm, and close the front cover.**

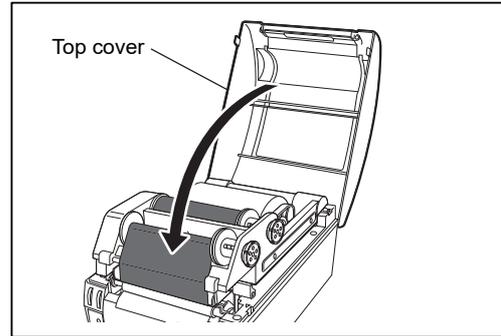


- 8** **Lock the arm unit.**
 Lower the arm unit. Then press where it says "PUSH" on either side to lock the arm unit.

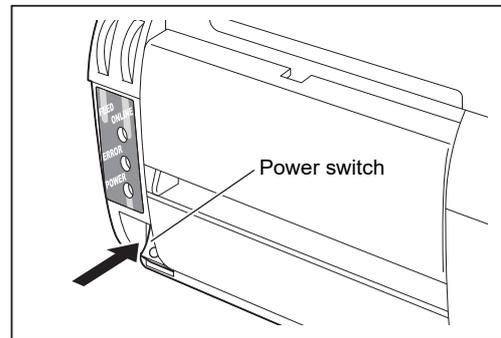
If the arm unit does not lock the first time, press "PUSH" again to lock it.



9 Close the top cover.



10 Press the power switch to turn on the printer.
The POWER and ONLINE lights come on; the printer is now online.



4.5.2 Simplified cutter unit

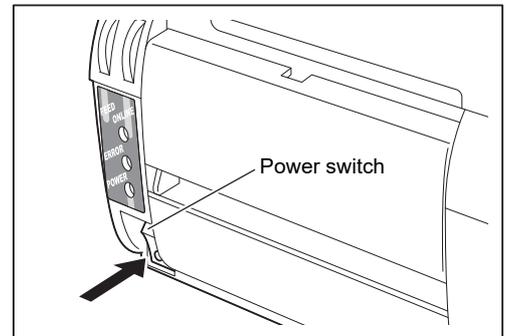
This section explains how to clean the cutter blade.

CAUTION

Be sure to turn off the power. Not doing so may result in personal injury or an equipment malfunction.

- 1 Press the power switch to turn off the printer.

The POWER light goes off and the power shuts off.

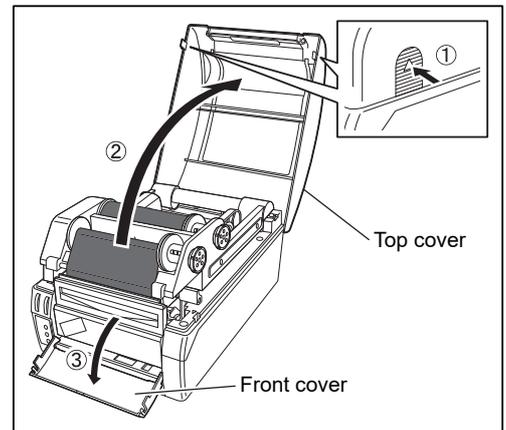


CAUTION

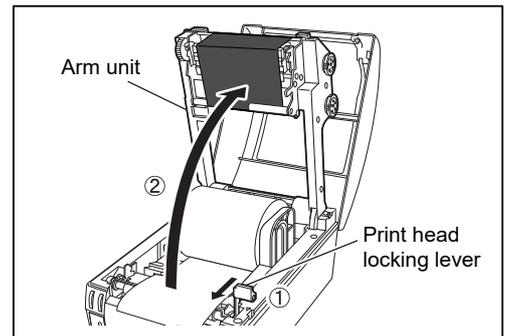
Open the top and front covers gently. Opening the cover abruptly or extending it beyond 90 degrees to the plane of the printer itself may cause the cover to come loose and fall.

- 2 Open the top and front covers.

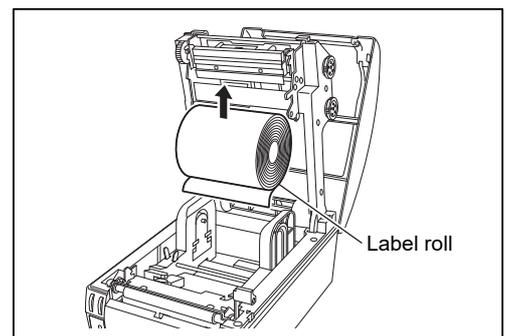
Press the left and right triangle marks on the top cover to unlock and open the cover. Then, pull the upper part of the front cover toward you to open the cover.



- 3 Pull the print head locking lever toward you and then raise the arm unit.



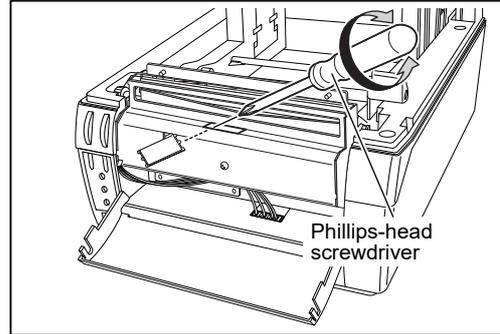
- 4 After winding any unwound labels back onto the roll, remove the roll.



CAUTION

Be careful not to touch the blade of the simplified cutter unit. Be sure to rotate the shaft gear clockwise. Rotating it counterclockwise may damage the simplified cutter unit.

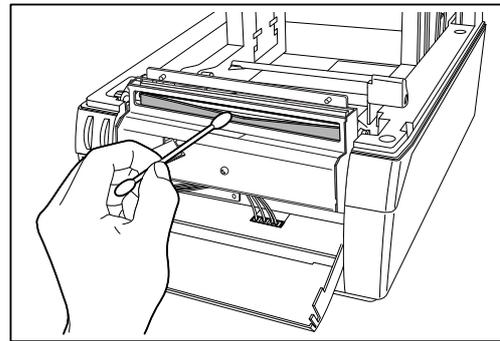
5 Insert a Phillips-head screwdriver in the shaft gear and rotate the gear clockwise to raise the lower blade of the cutter.



CAUTION

Cleaning solution is inflammable. After use, close the cap securely to avoid the possibility of fire.

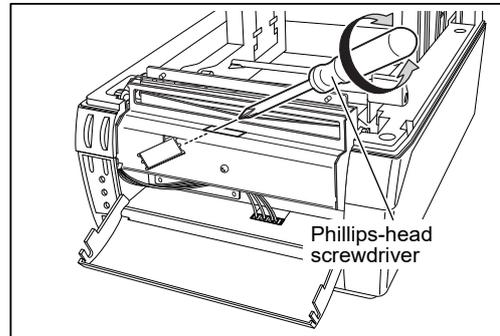
6 Wipe the upper and lower blades of the cutter using with the cloth which let isopropyl alcohol soak. Clean both sides of the blades.



CAUTION

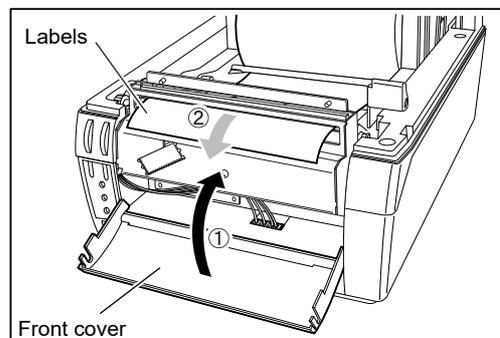
Be sure to rotate the shaft gear clockwise. Rotating it counterclockwise may damage the simplified cutter unit.

7 Insert a Phillips-head screwdriver in the shaft gear and rotate the gear clockwise to lower the lower blade of the cutter so that the labels advance easily.



For information on how to install the label roll, refer to "Installing the Label Roll" on page 1-11.

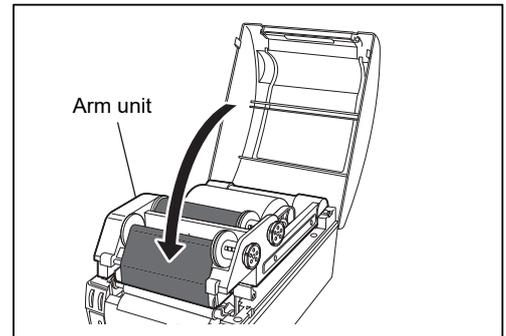
8 After cleaning, close the front cover and replace the label roll.



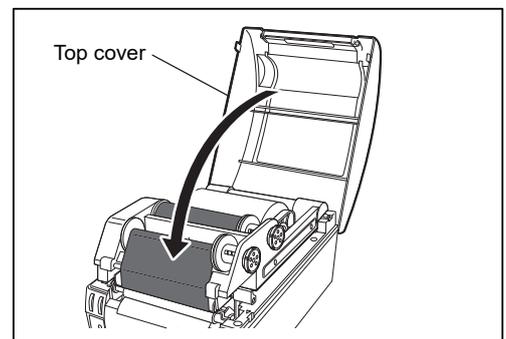
9 Lock the arm unit.

Lower the arm unit. Then press where it says "PUSH" on either side to lock the arm unit.

If the arm unit does not lock the first time, press "PUSH" again to lock it.

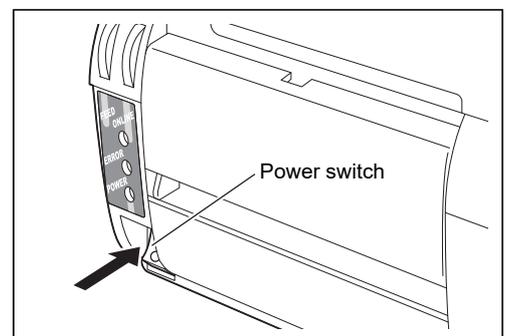


10 Close the top cover.



11 Press the power switch to turn on the printer.

The POWER and ONLINE lights come on; the printer is now online.

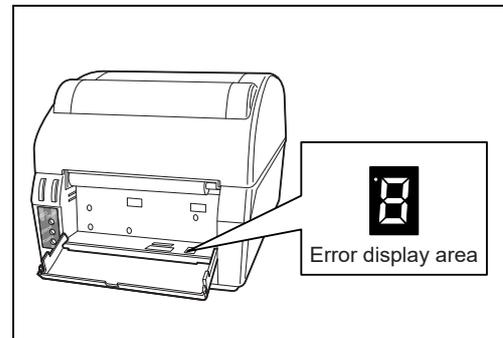
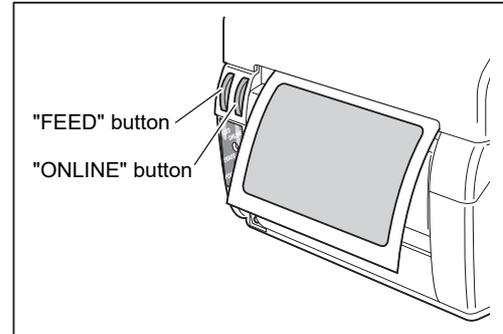


4.6 Checking the Label Sensor

This section explains how to check the position of the label sensor.

- 1** Check that the printer is online.
When the printer is online, the ONLINE light is on.
-

- 2** While pressing the "ONLINE" button, press the "FEED" button.
"H" appears on the 7 segment LED in the error display area.



- 3** Place a label in the label sensor area.
Align the white area of the label with the sensor area.
-

- 4** Press the "FEED" button.
After pressing the button, wait until the buzzer sounds.
-

- 5** Press the "ONLINE" button.
"0" appears on the 7 segment LED in the error display area.
-

- 4** Press the "FEED" button to advance the roll by three labels or so. Check whether or not the roll stops after feeding each label.

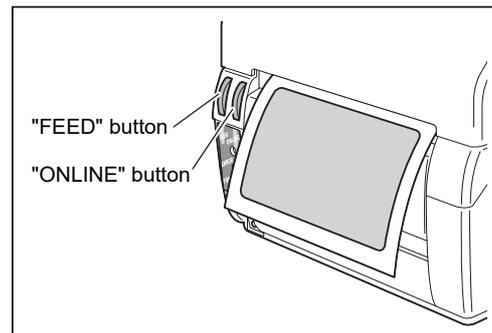
4.7 Checking the Peeling Sensor

This section explains how to check the position of the peeling sensor.

1 Check that the printer is offline.

When the printer is offline, the ONLINE light is off.

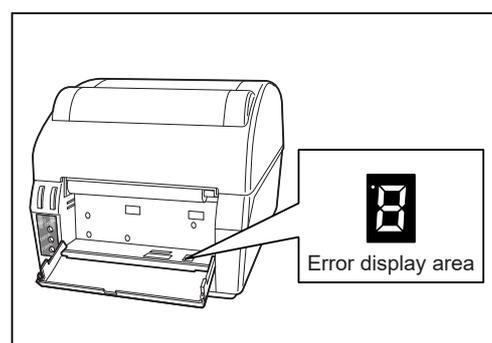
When the printer is online, press the "ONLINE" button to make it go offline.



2 Check the position of the peeling sensor.

Check the position of the sensor by checking the 7 segment LED in the error display area.

- When "-" is displayed on the LED, this means that a label is present.
- When "0" is displayed on the LED, this means that no label is present.





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

Chapter 5

INSTALLING AND REMOVING THE OPTIONAL UNIT

This chapter provides information on how to install and remove the optional unit.

- 5.1 Installing and Removing the Optional Interface 5-2
 - 5.1.1 Installing and removing the LAN board 5-2
 - 5.1.2 Installing and removing the RS-232C board 5-4
- 5.2 Installing and Removing the Simplified Cutter Unit ... 5-7
- 5.3 Installing and Removing the Peeling Unit 5-11

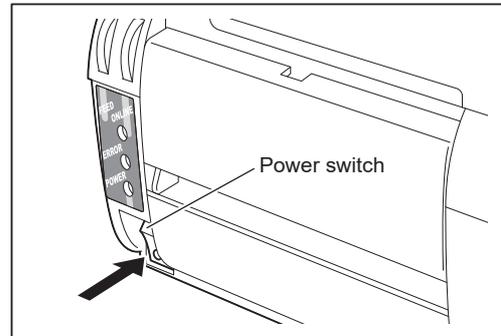
5.1 Installing and Removing the Optional Interface

This section explains installation and setup of the optional interface.
There are two types of interface; namely LAN and RS-232C.

5.1.1 Installing and removing the LAN board

This section explains installation and removal of the LAN board.

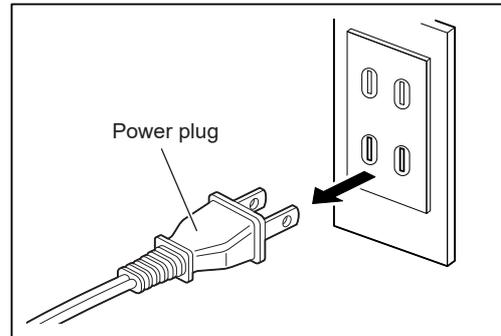
- 1** Press the power switch to turn off the printer.
The POWER light goes off and the power shuts off.



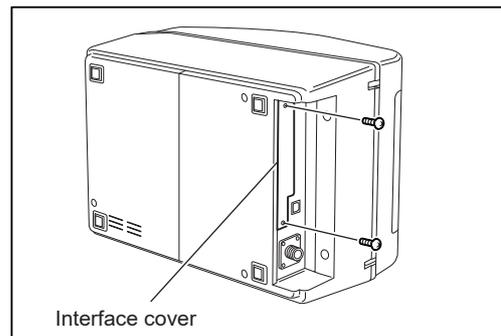
⚠ WARNING

Be sure to unplug the printer from the power outlet. Not doing so may result in personal injury or an equipment malfunction.

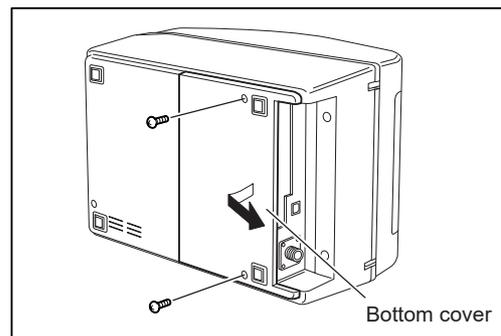
- 2** Unplug the printer from the power outlet.



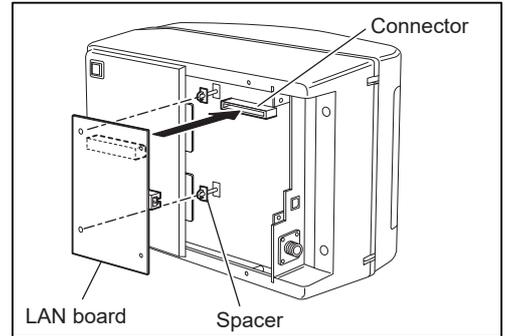
- 3** Turn the printer on its side and remove the interface cover by removing two screws.



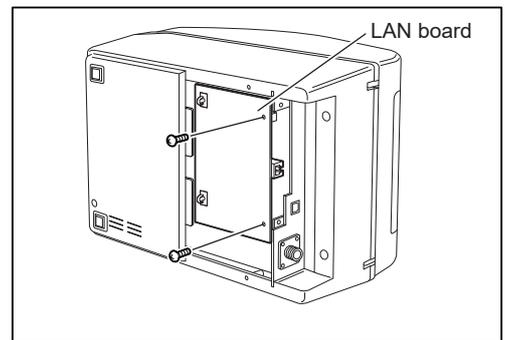
- 4** Now remove the two screws which hold the bottom cover in place; remove the cover.



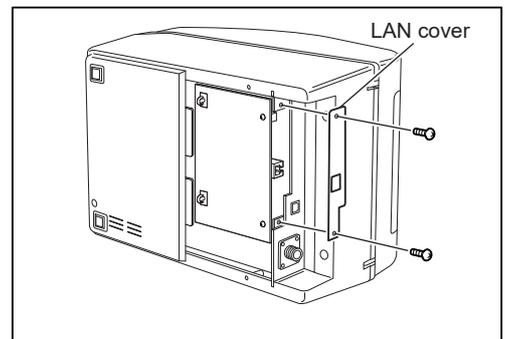
- 5** Mount the LAN board on the main board, pushing the board's connector all the way home into the receiving connector and aligning the two spacers.



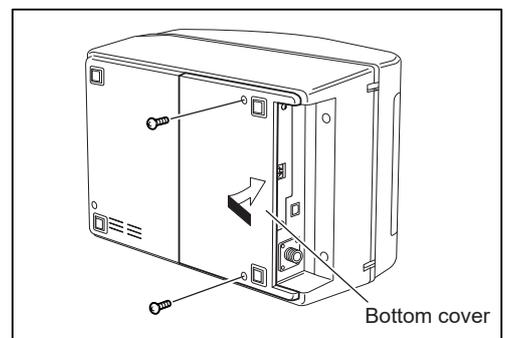
- 6** Secure the LAN board in position with the two screws supplied.



- 7** Secure the LAN cover with the two screws.



- 8** Replace the bottom cover, securing it with the two screws removed earlier. Now put the printer back in its normal position, on a level surface.

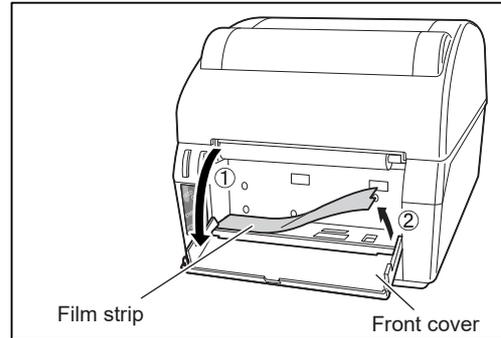


9 Open the front cover and set the DIP switches.

For information on the DIP switch settings, refer to step 6 in “3.1 Operation Checks During Installation” on page 3-2.

<Removing components>

Remove components by following the steps for installation in reverse order from step 8.

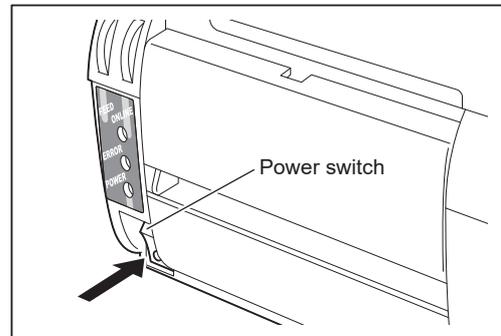


5.1.2 Installing and removing the RS-232C board

This section explains installation and removal of a RS-232C board.

1 Press the power switch to turn off the printer.

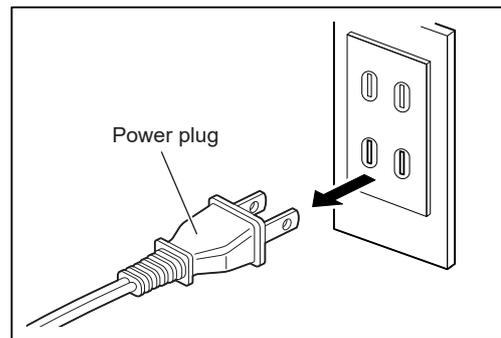
The POWER light goes off and the power shuts off.



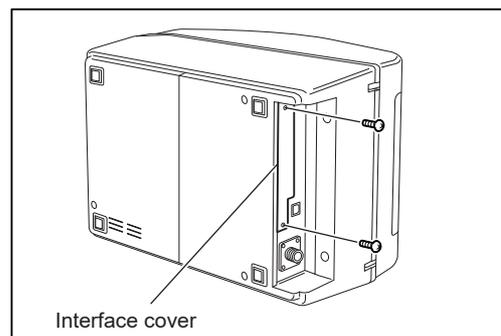
⚠ WARNING

Be sure to unplug the printer from the power outlet. Not doing so may result in personal injury or an equipment malfunction.

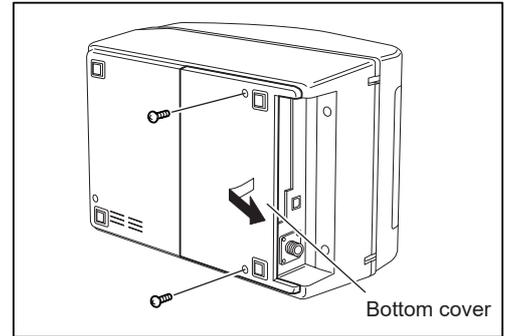
2 Unplug the printer from the power outlet.



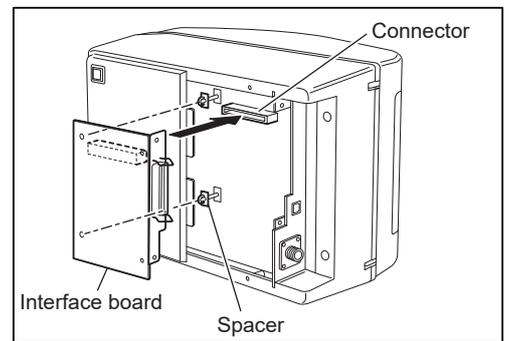
3 Turn the printer on its side and remove the interface cover by removing the two screws.



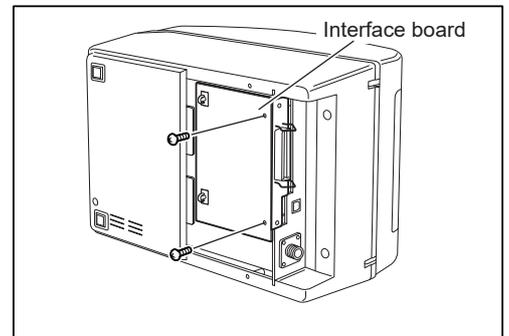
- 4** Remove the two screws and remove the bottom cover.



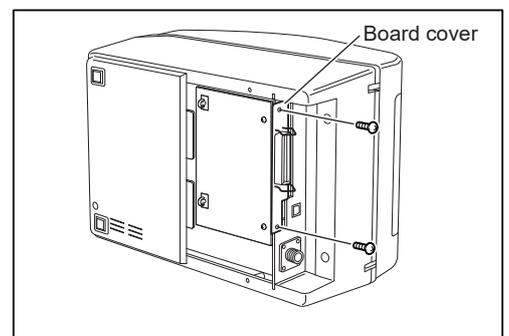
- 5** Mount the interface board on the main board, pushing the board's connector all the way home into the receiving connector and aligning the two spacers.



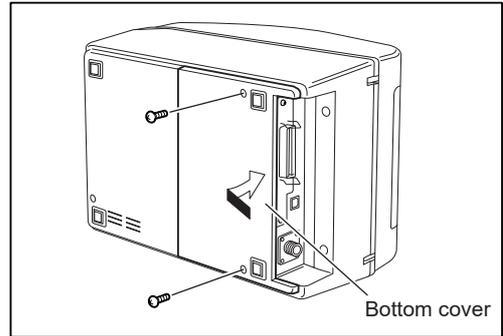
- 6** Secure the interface board in position with the two screws supplied.



- 7** Secure the board cover with the two screws.



- 8** Replace the bottom cover, securing it with the two screws removed earlier. Now put the printer back in its normal position, on a level surface.

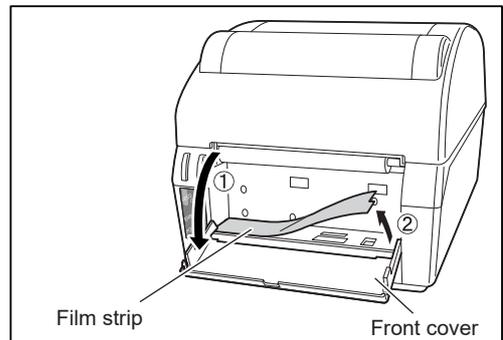


- 9** Open the front cover and set the DIP switches.

For information on the DIP switch settings, refer to step 6 in "3.1 Operation Checks During Installation" on page 3-2.

<Removing components>

Remove components by following the steps for installation in reverse order from step 8.

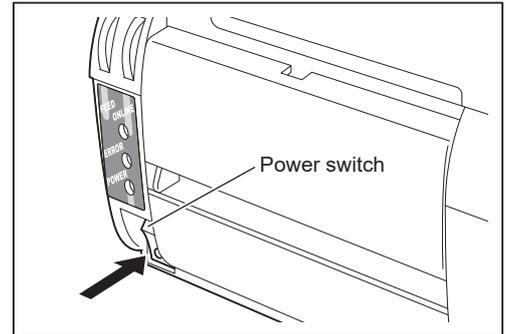


5.2 Installing and Removing the Simplified Cutter Unit

This chapter explains installation and removal of the simplified cutter unit.

- 1 Press the power switch to turn off the printer.

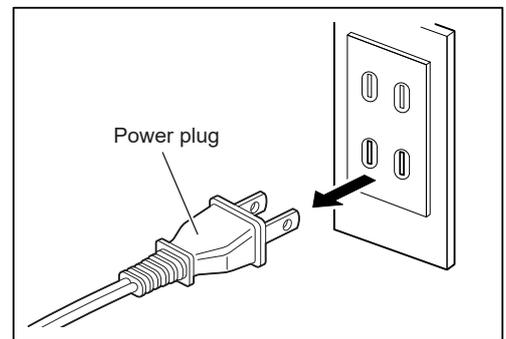
The POWER light goes off and the power shuts off.



⚠ WARNING

Be sure to unplug the printer from the power outlet. Not doing so may result in personal injury or an equipment malfunction.

- 2 Unplug the printer from the power outlet.



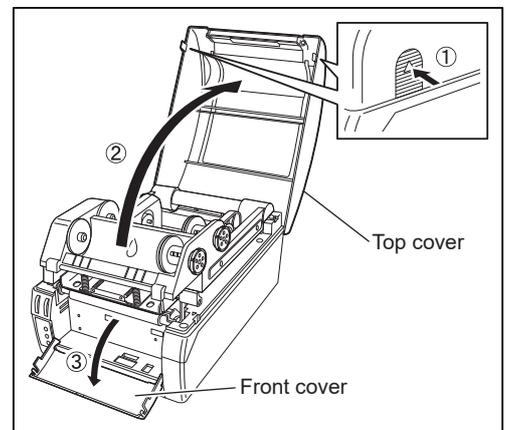
⚠ CAUTION

Open the top and front covers gently. Opening the cover abruptly may cause the cover to come loose and fall.

- 3 Open the top and front covers, and remove the top cover.

Press the left and right triangle marks on the top cover to unlock the cover. Gently opening the cover beyond 90 degrees to the plane of the printer itself, as shown in the illustration, releases the top cover at hinged contact points.

Then, pull the upper part of the front cover toward you to open the cover.

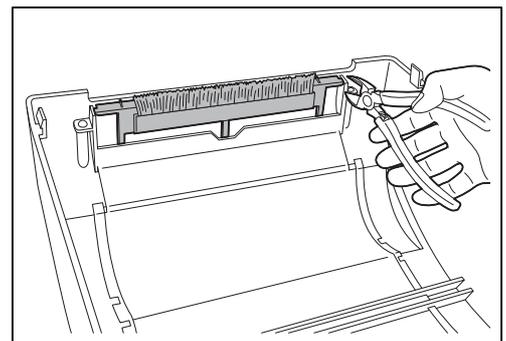


⚠ CAUTION

Be careful to avoid cutting your fingers.

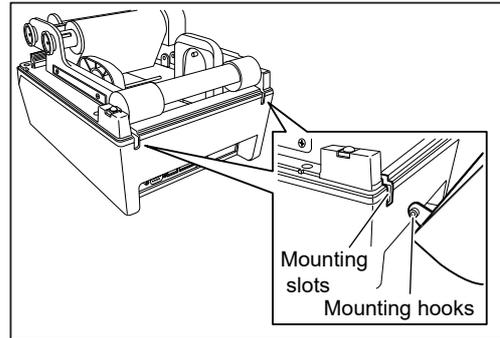
- 4 Remove the plastic part from the rear of the top cover.

Cut five notches in the plastic part on the rear of the top cover using a cutting pliers.

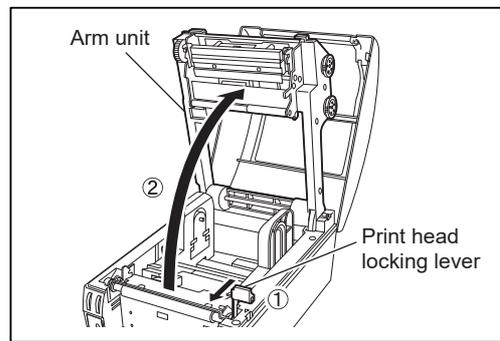


5 Replace the top cover but keep it open for the time being.

Position the mounting hooks on the rear of the top cover in their corresponding slots on the printer to secure the cover.



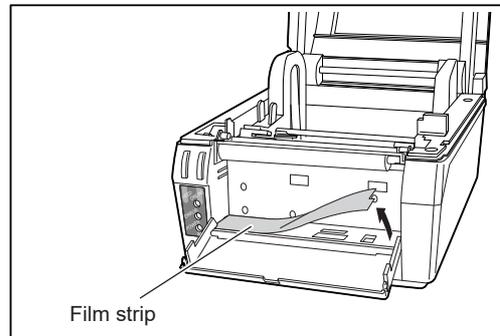
6 Pull the print head locking lever toward you and then raise the arm unit.



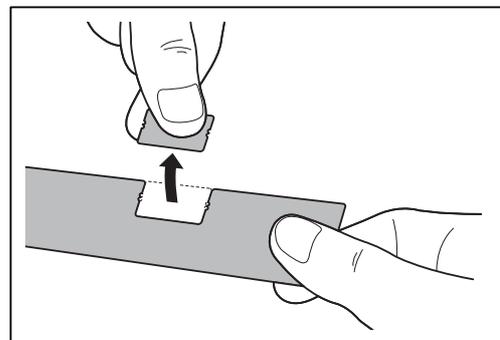
CAUTION

The left end of the film strip is secured by the tape. The strip may become distorted if it is bent excessively.

7 Raise the right end of the film strip.

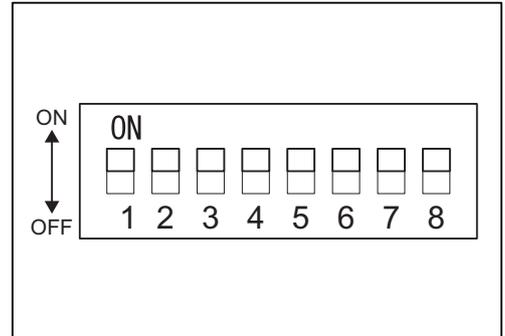


8 Gently remove a notch from the film strip for the optional unit connector.



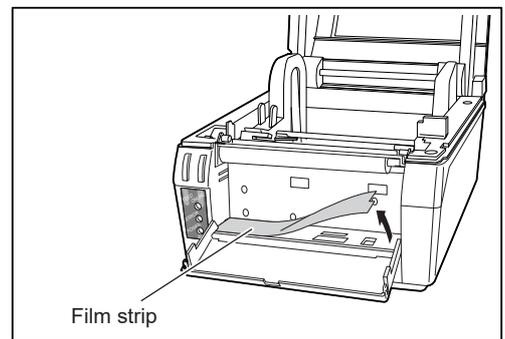
9 Change the DIP switch settings of the printer.

Change the settings as they apply to cutter mode, referring to step 6 in “3.1 Operation Checks During Installation” on page 3-2.



10 Replace the film strip in its original position.

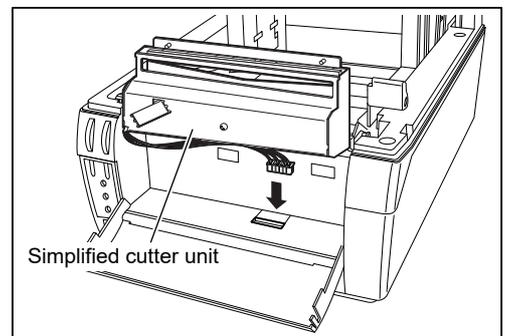
Position the film strip, aligning it to the groove.



CAUTION

Be careful not to touch the blade of the simplified cutter unit.

11 Connect the simplified cutter unit's connector to the printer.

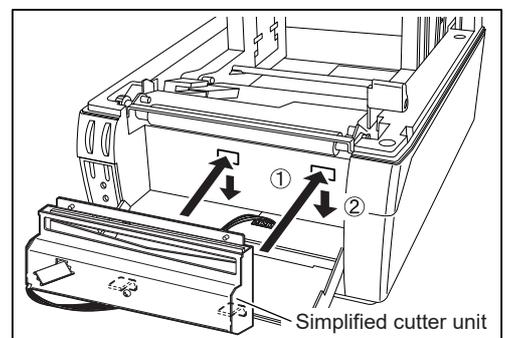


CAUTION

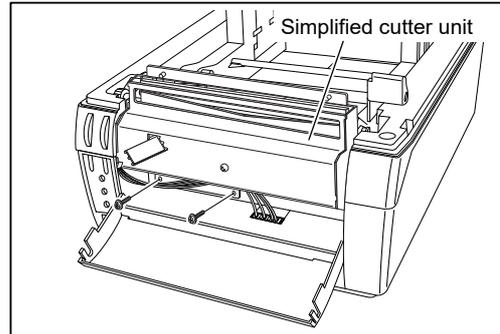
Be careful not to compress the cable of the simplified cutter unit.

12 Install the simplified cutter unit on the printer, inserting the hooks into the two slots and pushing the unit downward as shown in the illustration.

Install the simplified cutter unit so that there is no gap between the left and right stoppers on the simplified cutter unit and the label guide.

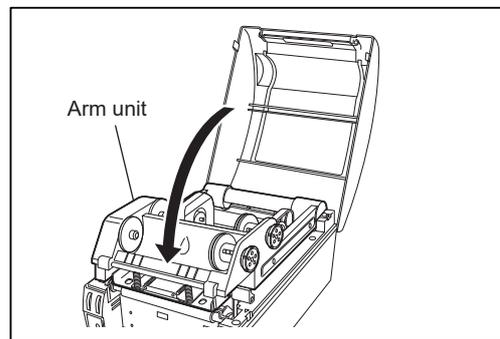


- 13** Secure the simplified cutter unit with the two screws.



- 14** Lock the arm unit.
Lower the arm unit. Then press where it says "PUSH" on either side to lock the arm unit.

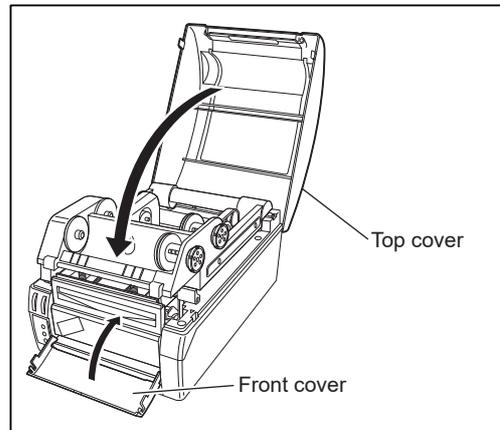
If the arm unit does not lock the first time, press "PUSH" again to lock it.



- 15** Close the front and top covers.

<Removing components>

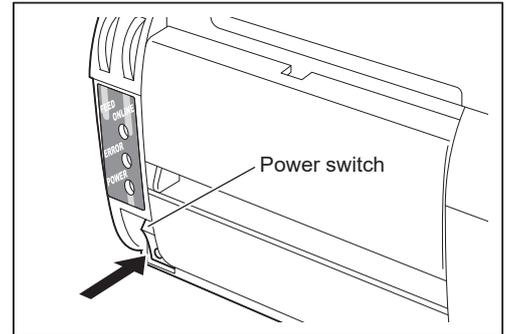
Remove components by following the steps for installation in reverse order from step 15.



5.3 Installing and Removing the Peeling Unit

This chapter explains installation and removal of the peeling unit.

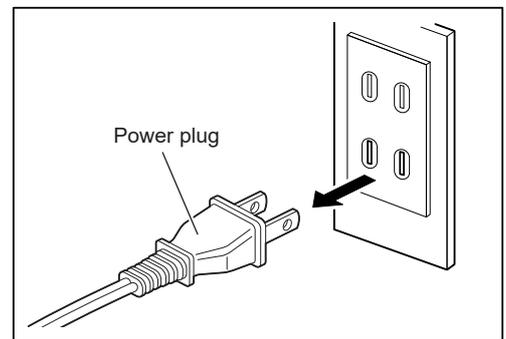
- 1 Press the power switch to turn off the printer.
The POWER light goes off and the power shuts off.



⚠ WARNING

Be sure to unplug the printer from the power outlet. Not doing so may result in personal injury or an equipment malfunction.

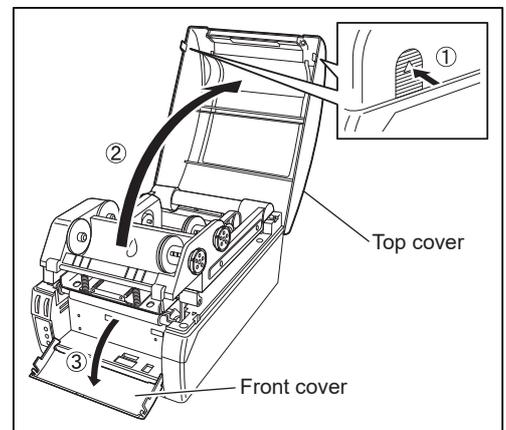
- 2 Unplug the printer from the power outlet.



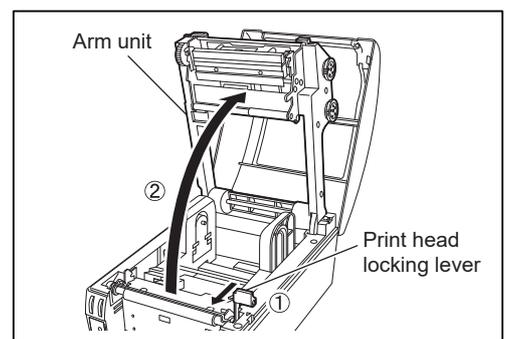
⚠ CAUTION

Open the top and front covers gently. Opening the cover abruptly or extending it beyond 90 degrees to the plane of the printer itself may cause the cover to come loose and fall.

- 3 Open the top and front covers.
Press the left and right triangle marks on the top cover to unlock and open the cover. Then, pull the upper part of the front cover toward you to open the cover.



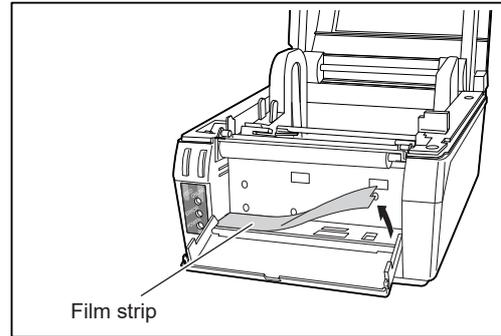
- 4 Pull the print head locking lever toward you and then raise the arm unit.



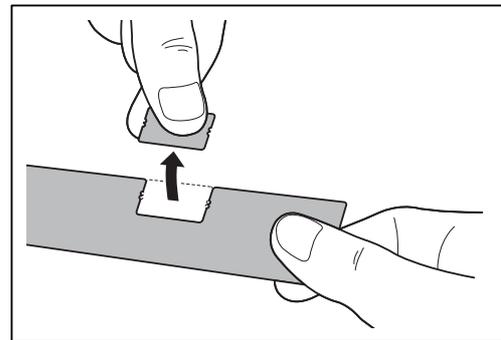
CAUTION

The left end of the film strip is secured by the tape. The strip may become distorted if it is bent excessively.

5 Lift the right end of the film strip.

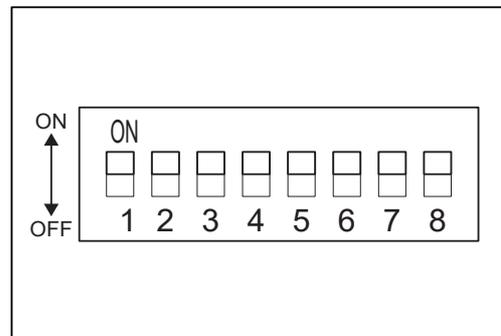


6 Gently remove a notch from the film strip for the optional unit connector.



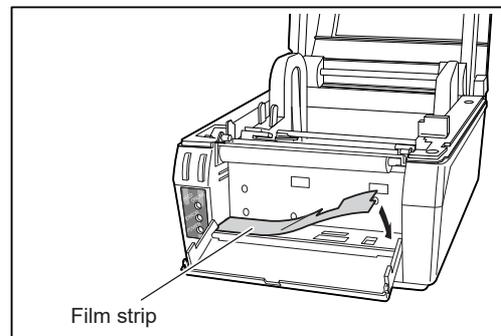
7 Change the DIP switch settings of the printer.

Change the settings as they apply to peeling mode, referring to step 6 in "3.1 Operation Checks During Installation" on page 3-2.

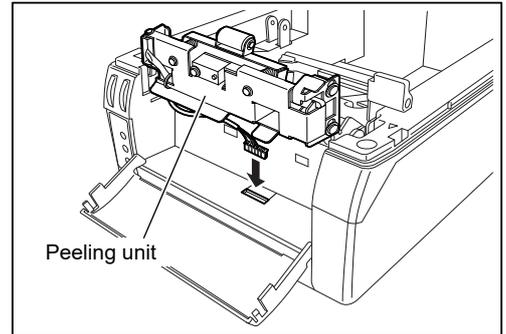


8 Replace the film strip in its original position.

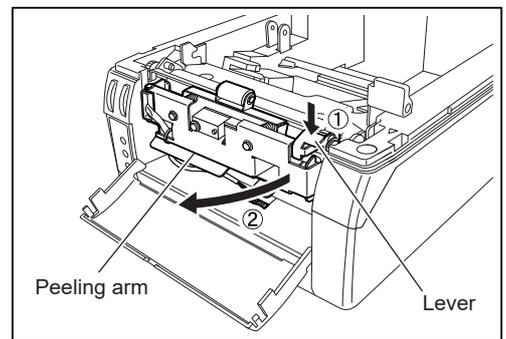
Position the film strip, aligning it to the groove.



- 9** Connect the peeling unit's connector to the printer.



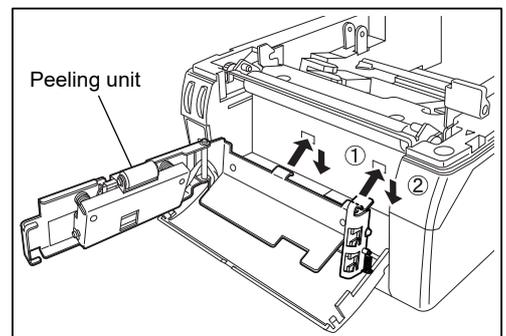
- 10** Unfold the peeling arm.
Press the right-hand lever of the peeling unit to unfold the peeling arm.



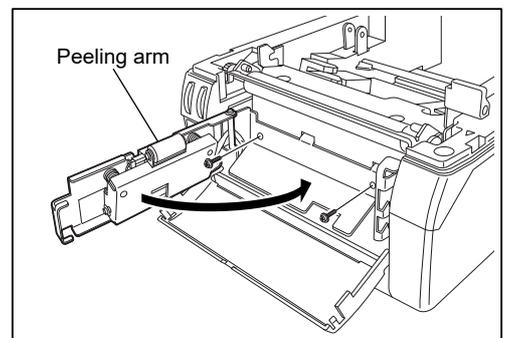
CAUTION

Be careful neither to compress the cable of the peeling unit nor to position the peeling unit in the front of the main unit.

- 11** Install the peeling unit on the printer, inserting the hooks into the two slots and pushing the unit downward as shown in the illustration.

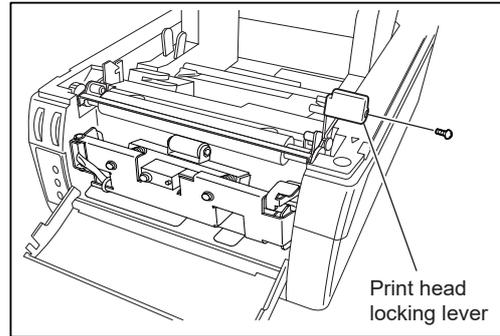


- 12** After the peeling unit has been secured with the two screws, reposition the peeling arm. Then push the arm into the unit to lock it.



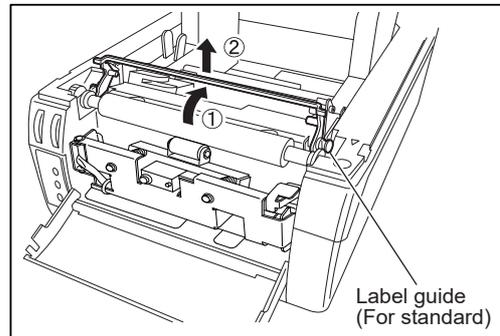
13 Remove the print head locking lever.

Remove the screw and then the print head locking lever.



14 Remove the label guide. (For standard unit)

Tilt the front of the label guide (For standard unit) backwards. Then lift the guide to remove it.

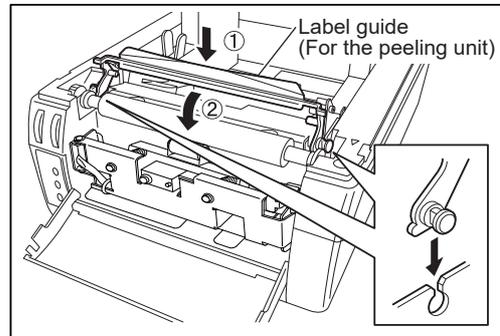


CAUTION

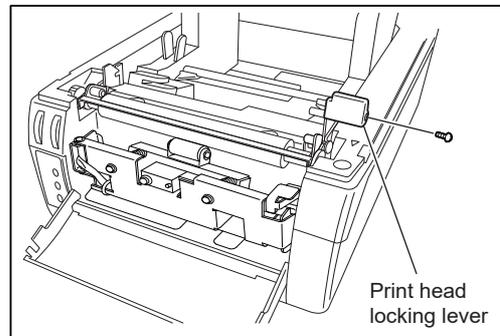
Be careful not to catch your fingers in the unit.

15 Install the label guide supplied with the peeling unit. (For the peeling unit)

Insert the mounting tab on either side of the label guide (For the peeling unit) into the notch and then tilt the guide toward you.



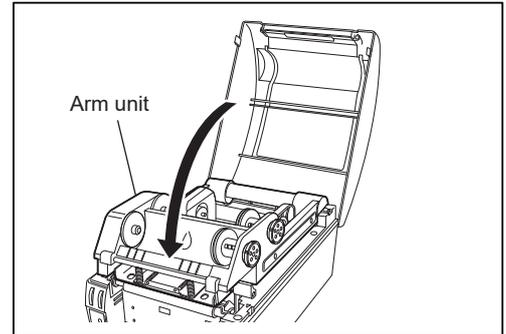
16 Replace the print head locking lever.



17 Lock the arm unit.

Lower the arm unit. Then press where it says "PUSH" on either side to lock the arm unit.

If the arm unit does not lock the first time, press "PUSH" again to lock it.



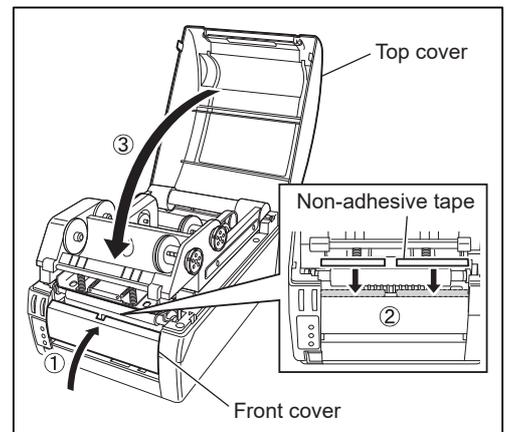
CAUTION

If the square notch of the front cover is incorrectly aligned with the notch in the non-adhesive tape, the peeling sensor may malfunction. Make sure that these are aligned correctly.

18 Close the front cover and apply the non-adhesive tape to the upper part of the cover. Then close the top cover.

<Removing components>

Remove components by following the steps for installation in reverse order from step 18.





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Chapter 6

DURA PRINTER SL SETTING TOOL

This chapter provides an overview of the “DURA PRINTER SL Setting Tool” and explains how it is launched.

- 6.1 Launching the DURA PRINTER SL Setting Tool ..6-2
- 6.2 Information on the DURA PRINTER SL Setting Tool 6-3
 - 6.2.1 DURA PRINTER SL Setting Tool menu screen.. 6-3
 - 6.2.2 Manuals menu screen..... 6-4
 - 6.2.3 Installation menu screen 6-5

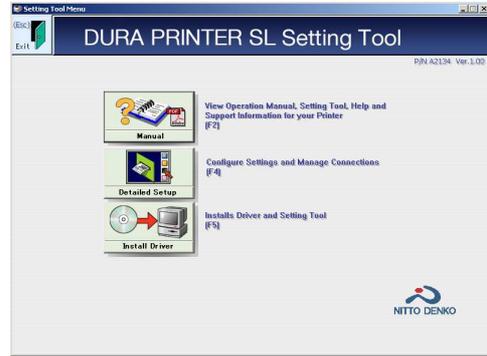
6.1 Launching the DURA PRINTER SL Setting Tool

This chapter explains how to launch the DURA PRINTER SL Setting Tool.

1 Start the computer.

2 Insert the accompanying disk, containing the “DURA PRINTER SL Setting Tool” into the CD drive.

After a few moments, the “DURA PRINTER SL Setting Tool” starts and the menu screen appears.



6.2 Information on the DURA PRINTER SL Setting Tool

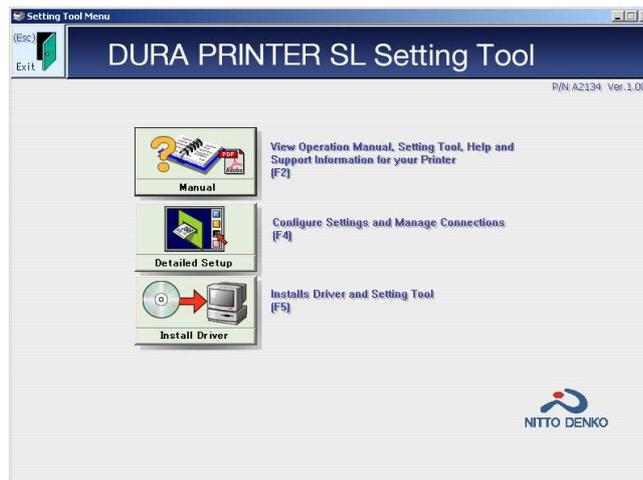
The DURA PRINTER SL label printer does not have its own operating panel. Use the DURA PRINTER SL Setting Tool to carry out advanced settings.

For further information on the “DURA PRINTER SL Setting Tool”, refer to the “DURA PRINTER SL Setting Tool” manual on the accompanying CD-ROM.

6.2.1 DURA PRINTER SL Setting Tool menu screen

This section explains the “DURA PRINTER SL Setting Tool” menu and how it is operated.

When the “DURA PRINTER SL Setting Tool” launches, the menu screen appears.



Each button is explained below.

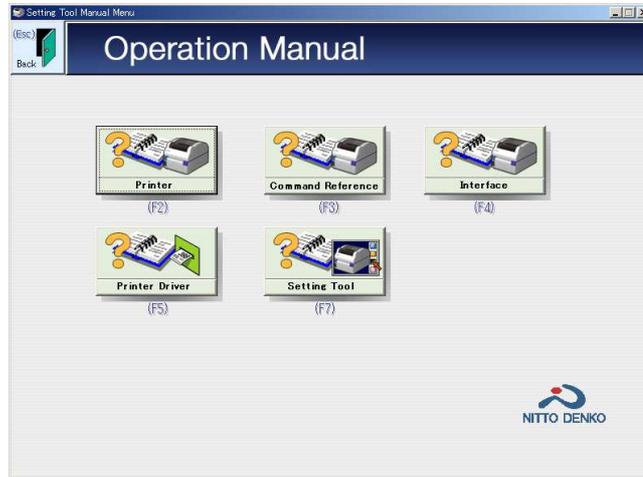
Button	What happens when a button is clicked
 <p>Manual</p>	When this button is clicked or the “F2” key on the keyboard is pressed, the manual selection screen appears. It is possible to read operating instructions for the DURA PRINTER SL and various explanations and instructions for other software that accompanies the “DURA PRINTER SL Setting Tool”. Refer to “6.2.2 Manuals menu” on page 6-4 for further details of this screen.
 <p>Detailed Setup</p>	When this button is clicked or the “F4” key on the keyboard is pushed, the printer selection screen appears. This allows settings of the DURA PRINTER SL, connected to the computer, to be carried out. Refer to the “DURA PRINTER SL Setting Tool” manual on the accompanying CD-ROM for further details on how to proceed after clicking this button.
 <p>Install Driver</p>	When this button is clicked or the “F5” key on the keyboard is pressed, the installation screen appears. The DURA PRINTER SL printer driver and software that come with the “DURA PRINTER SL Setting Tool” can be installed using this button. Refer to “6.2.3 Installation menu” on page 6-5 for further details of this screen.
 <p>Back</p>	Clicking this button or pressing the “Esc” button on the keyboard quits the “DURA PRINTER SL Setting Tool”.

6.2.2 Manuals menu screen

It is possible to refer to/read a particular manual by clicking the appropriate manual button on this screen.



The instruction manuals are in electronic PDF format.

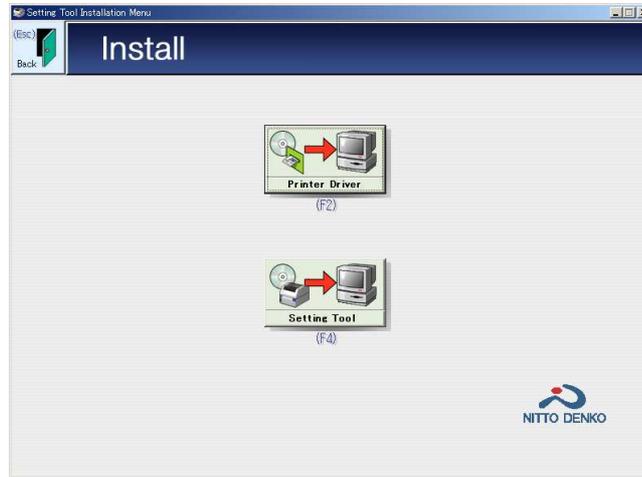


Each button is explained below.

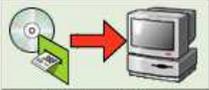
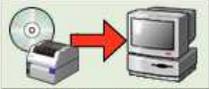
Button	What happens when a button is clicked
 <p>Printer</p>	When this button is clicked or the “F2” key on the keyboard is pressed, the DURA PRINTER SL Instruction Manual, in PDF format, opens. This manual describes various DURA PRINTER SL operations, settings, and maintenance procedures, etc.
 <p>Command Reference</p>	When this button is clicked or the “F3” key on the keyboard is pressed, the Command Reference Instruction Manual, in PDF format, opens. This manual describes commands used in the DURA PRINTER SL.
 <p>Interface</p>	When this button is clicked or the “F4” key on the keyboard is pushed, the Interface Instruction Manual, in the PDF format, opens. This manual describes the DURA PRINTER SL interfaces.
 <p>Printer Driver</p>	When this button is clicked or the “F5” key on the keyboard is pressed, the Printer Driver Instruction Manual, in PDF format, opens. This manual describes the “DURA PRINTER SL Printer Driver” installed on the computer.
 <p>Setting Tool</p>	When this button is clicked or the “F7” key on the keyboard is pressed, the DURA PRINTER SL Setting Tool Manual, in PDF format, opens. This manual describes how to use the “DURA PRINTER SL Setting Tool”.
 <p>Back</p>	Clicking this button will revert to the menu screen.

6.2.3 Installation menu screen

The DURA PRINTER SL printer driver and various other software programs can be installed via this screen.



Each button is explained below.

Button	What happens when a button is clicked
 <p>Printer Driver</p>	<p>When this button is clicked or the “F2” key on the keyboard is pressed, the printer driver installation screen appears. Refer to the “DURA PRINTER SL Setting Tool” manual on the accompanying CD-ROM for details on how to proceed after clicking this button.</p>
 <p>Setting Tool</p>	<p>When this button is clicked or the “F4” key on the keyboard is pressed, the “DURA PRINTER SL Setting Tool” installation screen appears. Refer to the manual on the accompanying CD-ROM for details on how to proceed after clicking this button.</p>
	<p>Clicking this button will revert to the menu screen.</p>



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Chapter 7

APPENDIX

This chapter explains troubleshooting in the event of an error message or other problem.

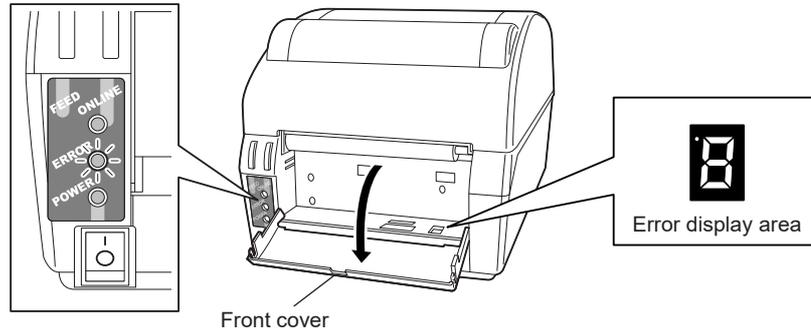
The chapter also contains the index and specifications lists.

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7.3	Label Restrictions.....	7-5
7.4	Index.....	7-6

7.1 Troubleshooting

If an error occurs, the ERROR light comes on. A number other than “0” appears in the error display area, indicating the type of error which has occurred.

The table below shows the various error displays and explains how to resolve the problems associated with those errors.



7 segment display	Cause	Measure
	Head-up (Head held up) The print head lock has become unlocked in standby mode or during printing.	After locking the print head, press the “FEED” button three times or more to locate the uptake point of the label roll. When the uptake point is correctly located, press the “ONLINE” button.
	Out of labels Labels have run out in standby mode or during printing.	After loading labels, press the “FEED” button three times or more to locate the uptake point of the label roll. When the uptake point is correctly located, press the “ONLINE” button.
	Label size Labels are due to be printed and the label sensor is active; however a label cannot be detected at the determined position.	Press the “FEED” button three times or more to locate the uptake point of the label roll. When the uptake point is correctly located, press the “ONLINE” button. If the uptake point is not correctly located, have the label sensor adjust itself automatically. If non-standard labels are to be used, it is necessary to adjust the sensor separately. Contact your dealer in this case.
	Out of ribbon The ribbon has run out during thermal transfer printing.	After loading a ribbon, press the “FEED” button three times or more to locate the uptake point of the label roll. When the uptake point is correctly located, press the “ONLINE” button. NOTE If DIP switch 4 is set to “OFF”, the printer will be in direct thermal mode. In this mode, the absence of a ribbon is not detected.
	Simplified cutter The optional simplified cutter unit stops while cutting labels (for example if the label is too thick or the cutter blade has become blunt).	Turn off the power. If a label jam occurs, remove any jammed labels and then turn on the power. CAUTION If an error occurs while labels are being cut and the simplified cutter unit stops halfway, cutting will resume automatically when the power is turned on. Extreme care should be taken when turning back on the power after a label jam. If a cutter error recurs frequently, use thinner labels or replace the cutter blade.

7 segment display	Cause	Measure
	<p>Head broken</p> <p>In standby mode, a broken pin is detected on the thermal head.</p>	<p>Pressing the “ONLINE” button brings the printer online automatically.</p> <p>Once it is detected that a particular pin is broken or missing, the pin will not be detected again until the power is turned on.</p> <p>If a number of pins are broken or missing, turn off the power and replace the thermal head.</p> <p> NOTE Other pins will be detected if broken.</p>
	<p>Head overheating</p> <p>The temperature of the thermal head exceeds 65°C while printing labels.</p>	<p>Wait until the temperature of the thermal head drops below 60°C. Printing will then resume automatically.</p>
	<p>Buffer overload</p> <p>The number of commands transmitted to the printer exceeds memory capacity, or the computer does not control the communication correctly.</p>	<p>Turn off the power and specify the correct printing command via the computer’s application. Then restart printing.</p>
	<p>Thermal head not yet installed</p> <p>The thermal head has not yet been installed in the printer.</p>	<p>Turn off the power and install the thermal head.</p>
	<p>RS-232C interface communication error</p> <p>The printer cannot communicate with the computer via the optional RS-232C interface.</p>	<p>Turn off the power of the printer and correct the communication settings in the computer.</p>

7.2 Specifications

■ Standard specification of the printer

As of December in 2005

Printer model		DURA PRINTER SL
Printing method		Thermal transfer or direct thermal
Print density		16 dot/mm
Print width (Max)		109 mm
Print length (Max)		300 mm
Print speed (Max)		25 to 150 mm/sec (In units of 25 mm)
Paper thickness		0.14 to 0.2 mm (including backing paper)
Label size		Label width 17 to 115 mm Backing paper width 20 to 118 mm Max. label length 510 mm Min. label length Continuous print: 8 mm, peeling: 20 mm, cutter: 20 mm, tear-off: 27 mm Label gap 3 to 10 mm Label eye mark 5 to 10 mm
Type of paper		Paper roll : Max. OD 98 mm, paper core ID 52 mm, Labels face toward the spindle. Fan-folded paper : Max. height of folded stack (supplied by third-party supplier)
Characters (When an exclusive command is used)	Font	IF1 5 × 9 dots (alphanumeric/symbol/katakana phonetic script) IF2 27 × 17 dots (alphanumeric/symbol/katakana phonetic script) IF3 24 × 24 dots (alphanumeric/symbol/katakana phonetic script) IF4 48 × 48 (bold) dots (alphanumeric/symbol/katakana phonetic script) IF5 48 × 48 (fine) dots (alphanumeric/symbol/katakana phonetic script)
	Kanji character font	Kanji character: 16 × 16 dots JIS levels I and II Gothic letters 24 × 24 dots JIS levels I and II Gothic letters
	Outline font	Gothic letters (alphanumeric/symbol/katakana phonetic script)
	OCR-B	40 × 48 dots
Character magnification (When an exclusive command is used)		1 to 12 times (It is possible to specify both height and width of a character using individual magnifications.)
Barcode (When an exclusive command is used)		JAN/EAN-8, JAN/EAN-13, UPC, Code39, Code93, Code128, ITF, and NW-7
Two-dimensional code (When an exclusive command is used)		OR code, Micro QR, PDF417, Maxi code, and Data matrix
Interface		USB Ver2.0 1ch
Error detection		Out of labels, Label size, Out of ribbon, Head-up, Cutter, and Head broken
Outside dimensions		W210 × D290 × H190 mm
Weight		Approx. 4 kg (not including the power supply, labels, ribbon, or optional units)
Power	Input power	AC adapter supplied: AC100 V±10 % 50/60 Hz DC power supply: DC24 V±0.5 V
	Power consumption	Max. value Print mode: 120 W, Standby mode: 25 W or less
Environment		Temperature: 5 to 35°C, humidity: 20 to 85 % (no condensation)
Option	Hardware	Simplified cutter unit (paper thickness: 0.08 mm or less, label length: 20 mm or more) Peeling unit
	Interface	LAN board (10BASE-T/100BASE-TX), RS-232C board (Max. 115.2 Kbps)

■ Support utilities (accompanying disk)

DURA PRINTER SL Setting Tool	Compatible OS: Windows 2000/XP
Printer driver	

7.3 Label Restrictions

Label print density: below 30 % (Except for ruled lines)

- * When the label print density is 100%, this means that all dots (e.g. 16 dot/mm x 109 mm = 1744 dots) are printed.
- * Ruled lines are defined as lines between 4 dots (= 0.25 mm) and 10 dots (= 0.625 mm) in width.

In cases where the label pitch has a value obtained by the following equation, label error or skips may occur.

$$P = \left(\frac{56 \pm 1}{N} \right) \text{ mm} \quad (N=1 \text{ to } 7)$$

N	NG pitch P (mm)
1	55 to 57
2	27.5 to 28.5
3	18.3 to 19
4	13.7 to 14.3
5	11 to 11.4
6	9.1 to 9.5
7	7.8 to 8.2

Please select a label pitch not within this range.

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