

DNP

DIGITAL PHOTO PRINTER

DP-QW410

User Guide

Version 1.0.1

Table of Contents

Introduction	7
For Safe Operation	7
Caution for installation	10
Printer Installation	11
Checking the contents	11
Name of components.....	12
Connecting the power cord and a computer	13
Media (ribbon, paper)	14
Setting the media (ribbon, paper)	15
Paper tray installation	20
Assembling the paper tray	21
Disposing of paper scrap	22
Troubleshooting	23
Error display	23
Solving errors	24
The printer is jammed with paper	24
The paper cannot be pulled out toward you (paper holder side).....	26
The ribbon is caught in the printer	26
Work was continued while the printer unit's ON/OFF switch is OFF ...	27
The printer stopped with the paper partially cut.....	27
The power has been cut during printing	27
Cleaning	28
Platen roller	28
Thermal print head	29
Repacking	30
Specifications	31

Introduction

Thank you for purchasing this product.

This document explains how to handle and operate this product.

Please read this document carefully before use.

Be sure to read "For Safe Operation" (P.7-9), and operate the product correctly.



For Safe Operation

Be sure to read this document before using the product. After reading, keep it in a safe place where it can be easily accessed as needed.

The warnings listed here are to ensure proper use of the close up, to prevent physical injury to the customer or other persons, and to prevent property damage. Please follow these warnings.




Warnings and Cautions

The possible levels of injury or damage due to misuse are categorized below as Warnings and Cautions, according to the degree of danger involved.






 Warning	Accidents caused by failure to heed the warnings accompanying this symbol may lead to serious or fatal injury.
 Caution	Accidents caused by failure to heed the cautions accompanying this symbol may lead to physical injury or property damage.

Symbols

The symbols shown have the following meanings:







	This symbol indicates warning and caution messages. The warning content is indicated in or near the symbol.
	This symbol indicates prohibited actions. The prohibited action is indicated in or near the symbol.
	This symbol indicates necessary actions or instructions. The action is indicated in the symbol.

Warning

	<ul style="list-style-type: none"> • Use the product only with the designated voltage and frequency. Improper connection may cause electric shock or fire. • Avoid connecting too many devices to the outlet used for this product and using extension cords. The outlet may overheat and cause a fire. • Do not damage, cut, bundle, or alter the power cord. Also, the cord may be damaged if heavy objects are placed on it, or if pulled or bent with excessive force, and it may cause a fire. • Do not install the product in places with salinity or corrosive gases in the air. This may cause a fire. • Do not block the vents of the product. Heat may build up in the product and cause a malfunction or fire. • Do not stand on or place heavy objects on the product. Also, do not apply excessive force on the buttons, switches, terminals, etc. This may damage the product and cause injury to the user or other people. • Store the bag of the product out of the reach of children. It may cause suffocation if placed over the head. • Be careful not to injure yourself or damage other things on the edges of the product. • Do not use this product for applications involving human life (such as medical, space, aeronautic, or other applications that require extreme reliability).
	<ul style="list-style-type: none"> • The DP-QW410 weight 5.8 kg (12.76 lbs.). When moving it, lift it in a way that avoids excessive physical stress. Lifting recklessly or dropping the product may cause physical injury. • Place the product as close to an outlet as possible to be able to easily unplug the power cord in case of problem. • If there is dust on the plug, clean it off thoroughly. It may cause an electric shock or a short circuit. • If metal objects or liquids have fallen into the product, or if there is smoke, a strange odor, or any other abnormality, immediately unplug the power cord, and then contact a service representative. Do not continue using the product if it is damaged or not operating properly. This may cause an electrical shock, a short circuit, a fire, or damage the product. • For the AC input, use a sine wave input within the range of 100 to 240 V AC. Using a square wave input or pseudo-sine wave input will damage the internal circuit and result in significant shortening of the product life.
	<ul style="list-style-type: none"> • Be sure to ground the product. Otherwise, a short circuit may occur, causing an electric shock or fire.
	<ul style="list-style-type: none"> • Do not plug or unplug the cord with wet hands. This may cause an electric shock.
	<ul style="list-style-type: none"> • Do not open the product, disassemble internal parts, or modify the product. It may cause an electric shock, fire, or injury, or a product malfunction. For internal check-ups, adjustments, or repair, please contact a service representative.



Caution

	<ul style="list-style-type: none"> • Do not install the product in dusty or humid places. This may cause fire or an electric shock, or damage the product. • Do not install the product on an unstable surface. It may fall and cause injury to the user or other people. • Do not allow foreign objects to enter into the product. They may cause an electric shock, a short circuit, a fire, or damage the product. If something falls into the product, immediately unplug the power cord, and then call a service representative. • Do not open the top door or remove the trash box during printing. This may damage the product. • Do not spill or spray liquids or chemicals onto the product. • When cleaning the cover, do not use thinner, trichloroethane, benzene, ketone-based cleaners, or chemically treated cloths. They could discolor or deteriorate the cover.
	<ul style="list-style-type: none"> • Take care to not cut, scratch, or hurt your hands the edges of the paper or on any sharp edges within the printer. • When putting your hands into the printer for removing the jammed paper or cleaning, use safety lint-free gloves or other proper protective clothing to prevent injury. • At least once a year, unplug the power cord, and clean the prongs and the plug. If dust accumulates, it may cause a fire. • When printing continuously for long periods in a small room, be sure to ventilate the room properly. • If you intend to use the product on a transportation vehicle (train, truck, ship, etc.), please talk to a representative in advance. • When disposing of the product, accessories, packaging materials, or media (paper, ribbon), please abide by local waste removal ordinances. For details, contact your local government offices.
	<ul style="list-style-type: none"> • When unplugging the cord, always grip the plug. Do not pull on the cord as it may damage the cord and cause an electric shock or fire. • When moving the product, be sure to unplug the power cord. Otherwise, the cord may be damaged, which may cause fire or an electric shock. • For safety, when not using the product for an extended period of time, be sure to unplug the power cord. Otherwise, it may cause an electric shock, fire, or a malfunction.
	<ul style="list-style-type: none"> • Parts with this warning get extremely hot. Do not touch these parts after printing. There is a danger of burns.
	<ul style="list-style-type: none"> • Do not touch the gear mechanisms. There is a danger of injury if fingers get caught in spinning gears.
	<ul style="list-style-type: none"> • There is a cutter inside the paper output port. Do not insert hands inside the paper output port regardless of whether or not the printer is operating. • Do not look into the paper output port during printing. The edge of the paper may poke your eye and cause injury. • Do not touch the paper during printing. The edge of the paper may cause injury.

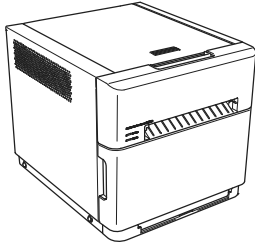
Caution for installation

- Before using the product, read “For Safe Operation” carefully and observe the instructions therein.
- Do not use or store the product near a fire, humid places, in direct sunlight, near an air conditioner or heater, or any other location with unusually high or low temperature, strong humidity, or excessive dust.
- Do not place the product where chemical reactions occur, such as in a laboratory.
- Do not install the product where there is salinity or corrosive gas in the air.
- The product must be installed on a firm, level surface where there is ample ventilation.
- Do not put anything on top of the product.
- Do not use the product near a radio or television, and do not use the same wall outlet for the product and a radio or television. Otherwise radio or television reception may be adversely affected.
- Do not use a power voltage or a frequency other than those specified.
- Do not put anything on the power cord or step on it.
- Do not drag or carry the product by the power cord or the USB cable.
- Avoid plugging the power cord into an outlet with many other cables connected.
- Do not bundle the power cord.
- Always grip the plug housing, not the cord, to plug or unplug the power cord.
- Always unplug the power cord before connecting or disconnecting the USB cable.
- Avoid using a long USB cable or connecting it to any noise-producing device. If it is unavoidable, use a shielded cable or twisted pair for each signal.
- Use a shielded USB cable compatible with the USB 2.0 specifications.
- Place the product near the outlet where the power cord can be unplugged easily to shut the power off.
- Use an AC outlet that accepts a three-pronged plug. Otherwise, there may be a danger of electric shock.
- For regions where the power cord is supplied with the product, use this included power cord set for the product. Do not use the power cord set with other devices.
- When using a portable power source, be sure to read the user guide of the portable power source, and be sure to ground the portable power source. Otherwise, there may be a danger of electric shock.
- This product is not intended for use in the immediate/direct visual field of the display work place. To avoid disturbing reflections on the display work place, this product shall not be placed in the immediate/direct field of vision.
- Use as a network printer is not anticipated. Any use in conjunction with a network will be the customer’s sole responsibility.
- This device is not appropriate to be used where a child may be present. Install, store, or use the device where it cannot be reached by a child.

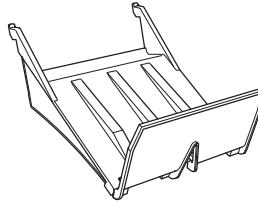
Printer Installation

Checking the contents

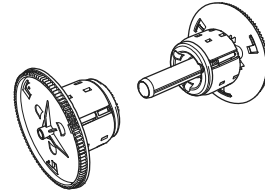
Check that the printer and all the following accessories are included in the package.



Printer unit

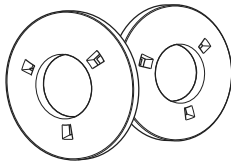


Paper tray for (4 x 6")



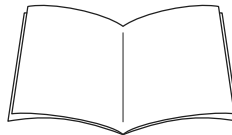
Paper holder

* Set in the printer.



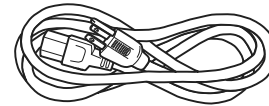
4-inch spacer

* Set in the paper holder.



Explanation booklet

For Safe Operation
Start up guide



Power cord

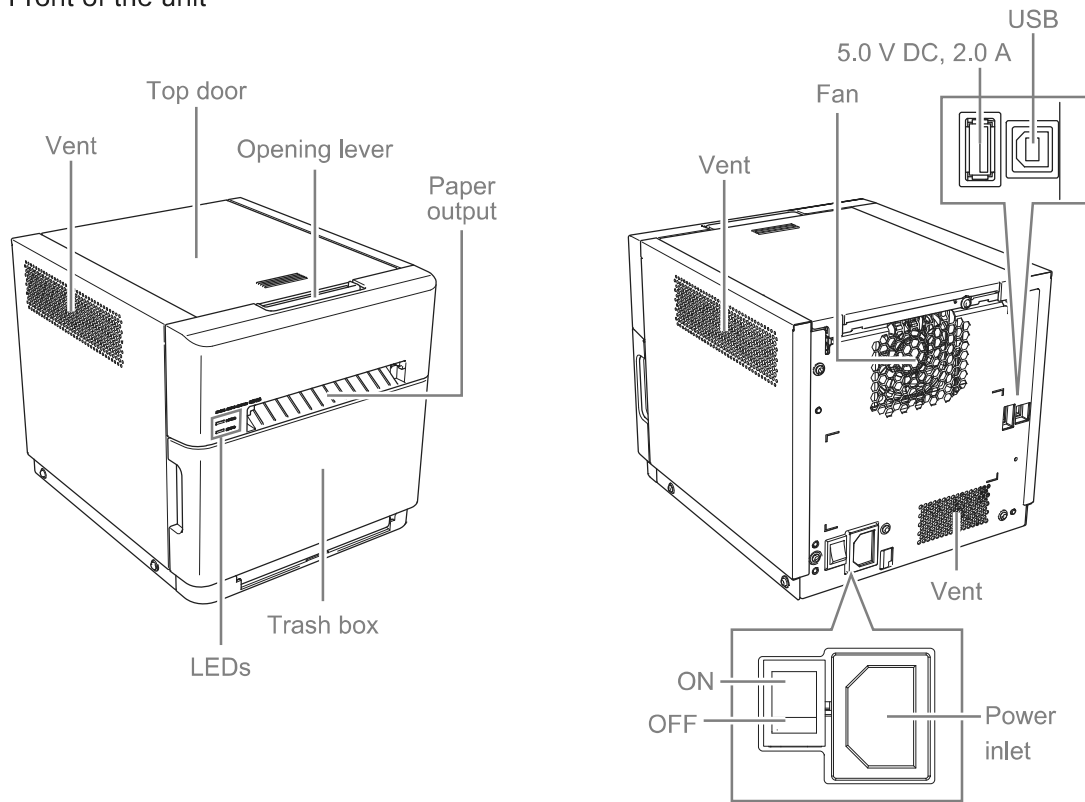
* Whether a power cord is included depends on the country or region.

Caution

- Pay particular attention when removing the product from its package, carrying it, or moving it. Dropping the printer may result in personal injury or property damage.
- Do not lift the printer by grasping the wrapping materials. The materials may break and cause the printer to fall.
- Do not put your fingers between the paper holders and spacers. Otherwise, you may get injured.

Name of components

Front of the unit

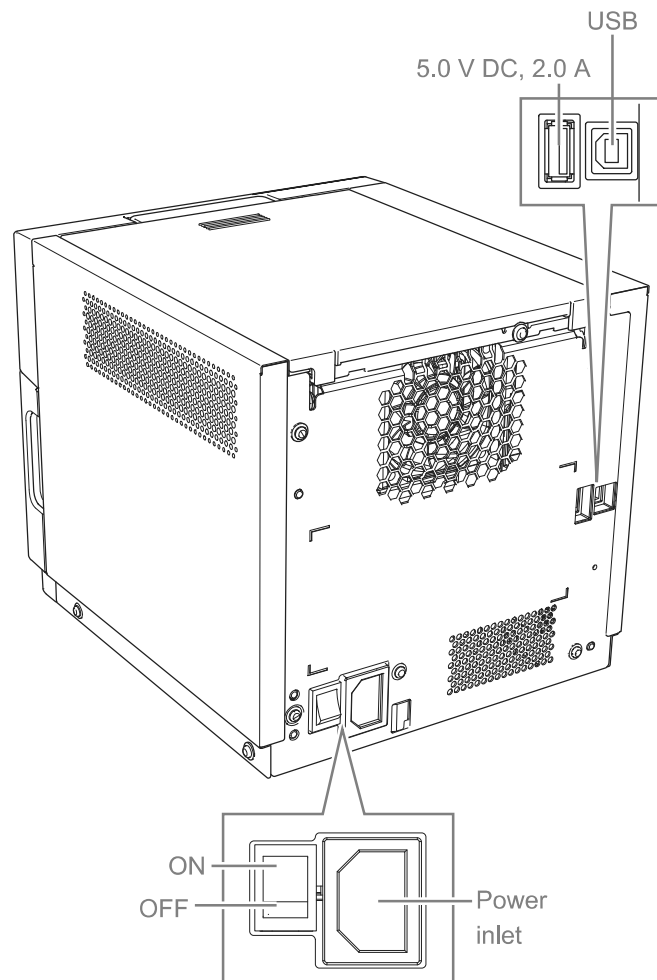


Caution

- Be careful not to hurt yourself or damage anything on the edges of the printer.

Connecting the power cord and a computer

- 1** Make sure that the ON/OFF switch of the printer unit is set to OFF.
- 2** Make sure that the power switch of the computer is set to OFF.
- 3** Plug the connector of the power cord (supplied) into the printer power inlet.
- 4** Plug the power cord into an outlet.
- 5** Connect the printer unit's USB connector and the computer with a USB cable.
- 6** Set the ON/OFF switch of the printer unit and the power switch of the computer to ON.

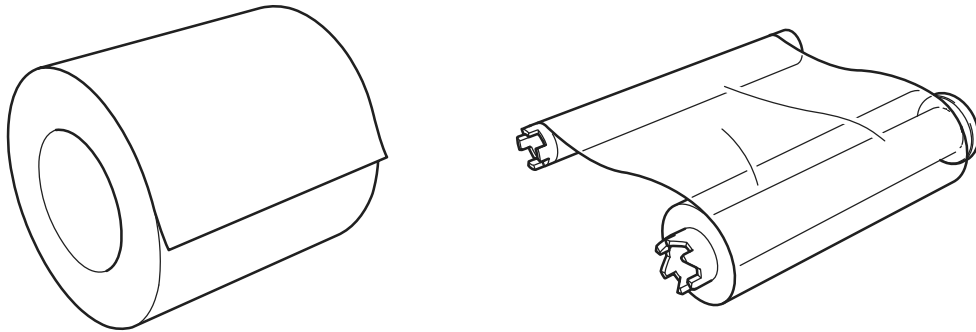


Caution

- Use a shielded USB cable compatible with the USB 2.0 specifications. Otherwise unexpected troubles may arise.

Media (ribbon, paper)

Prepare the media (paper, ribbon) with the following widths.



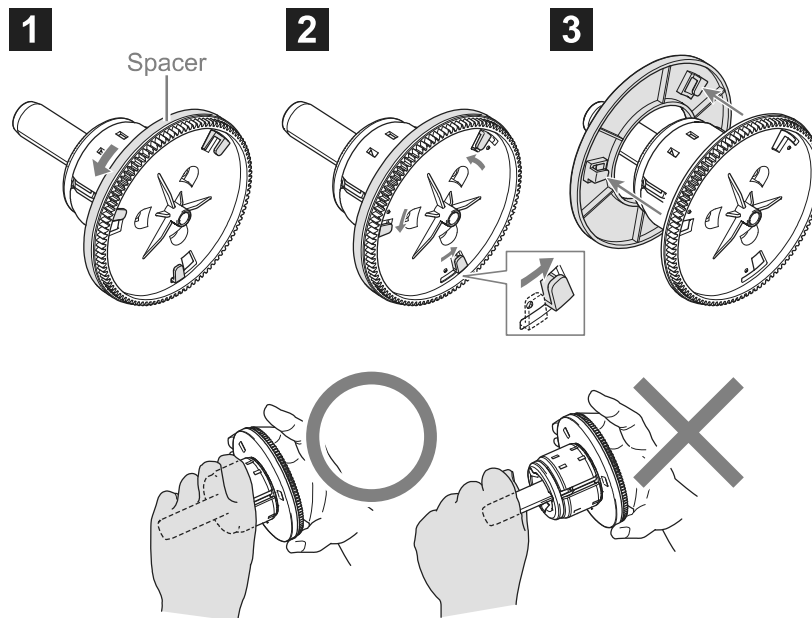
Size	Paper	Ribbon
4-inch	Width : 102 mm	Width : 109 mm
4.5-inch	Width : 114 mm	Width : 121 mm

Caution

- Set the paper and ribbon without putting them directly on the work surface. If dust or dirt adheres to the media when setting it inside the printer unit, it may adversely affect the print quality.

Removing the spacers

When using 4.5-inch paper, remove the spacers attached to the paper holder.

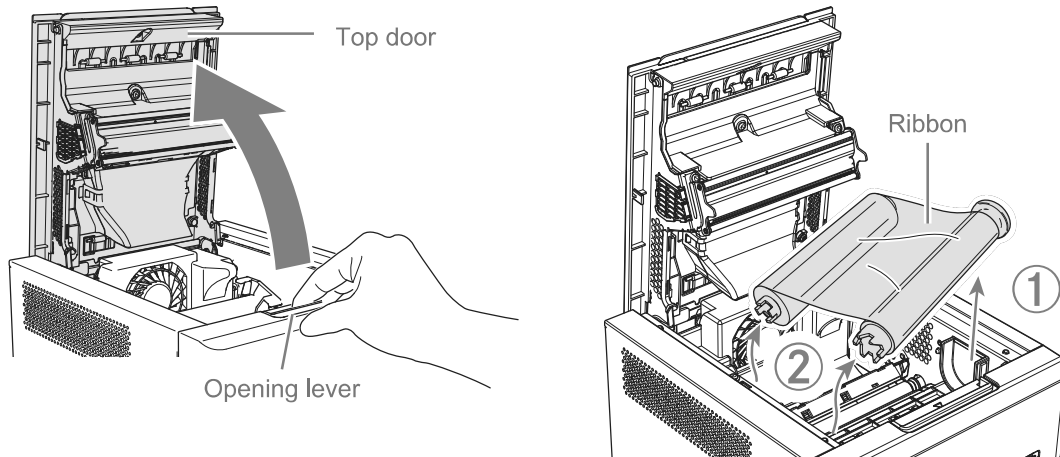


Caution

- Do not put your fingers between the paper holders and spacers. Otherwise, you may get injured.

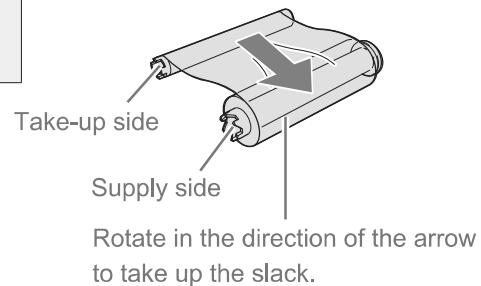
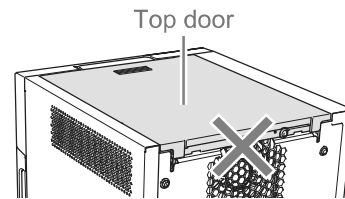
Setting the media (ribbon, paper)

- 1** Pull the opening lever toward you to open the printer unit's top door. Remove the ribbon.

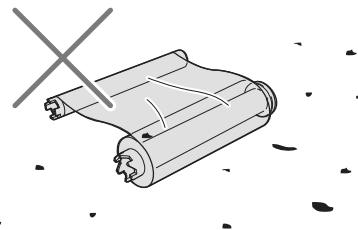
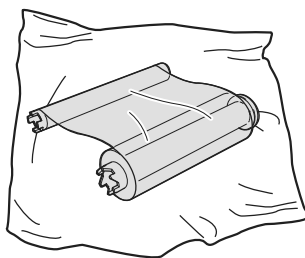


Caution

- When the top door is opened, take care that a hand does not get caught in the gap between the back of the top door and the printer (see the figure on the right). Otherwise, you may get injured.
- The thermal head will be hot for some time after printing. Do not touch the thermal head as there is a danger of burns.
- When setting or removing the ribbon, be careful not to let the thermal print head come into contact with your wristwatch, accessories, etc. This may damage the thermal print head.



- 2** Set the new ribbon.

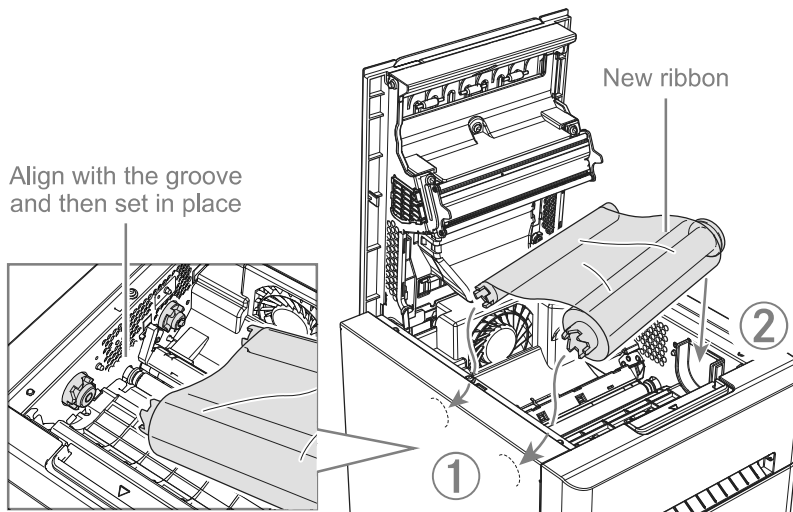


Caution

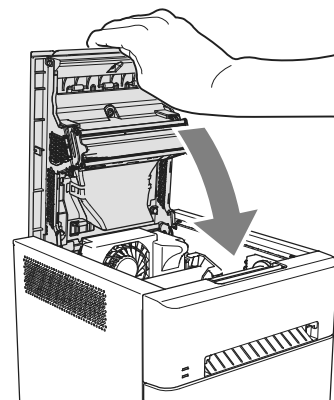
- When setting the media, make sure to use the plastic bag or sheet covering the media. Never put it directly on the table, floor or work spaces.

3 Install the ribbon to the printer unit.

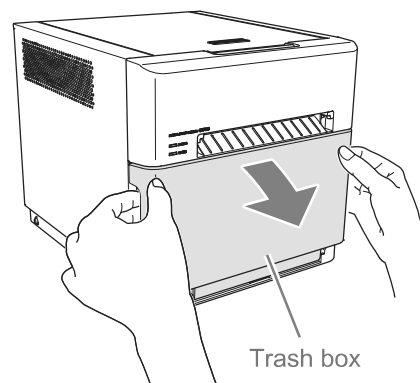
Align left side (1) of the ribbon shaft with the groove and then lower right side (2) of the ribbon shaft.



4 Close the printer unit's top door.



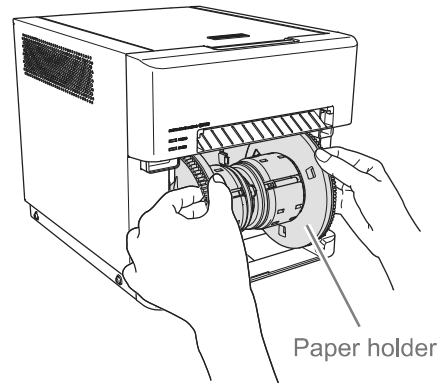
5 Remove the printer unit's trash box.



⚠ Caution

- When the trash box has been removed, do not touch the cutter on the upper part or you may be cut.
- In order to facilitate color adjustment, media type recognition, and print quantity management, an IC chip is included in the ink ribbon. Note that a ribbon with an IC chip that has not been evaluated and approved may not function properly. (If correct data cannot be read from the IC chip, an alarm will sound. In such a case, ink concentration levels will be lowered in order to protect the product.)

6 Remove the paper holder from the printer.



Caution

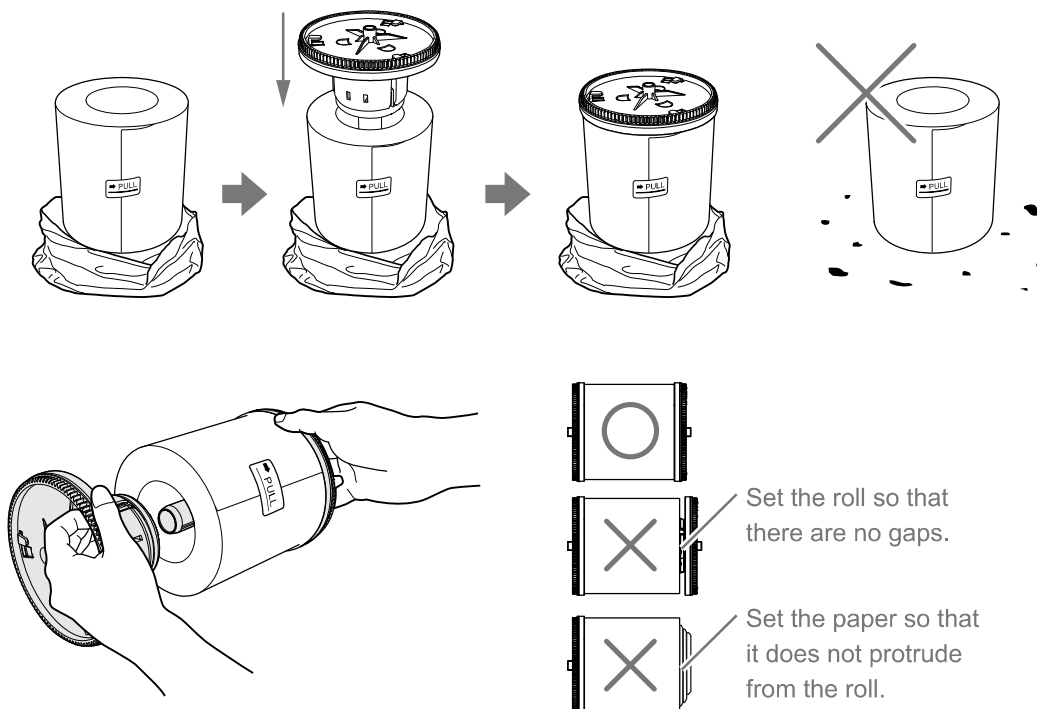
- When removing the paper holders to change the paper roll etc., make sure to place them on the clean surface. Never place them directly on the table or work spaces. If dust or dirt adheres to the media when setting the paper holder inside the printer unit, it may adversely affect the print quality.

7 Remove the old paper roll from the paper holder, and then set the new paper roll ensuring there are no gaps.

If the paper protrudes, remove the roll from the paper holder and set the edge face of paper flat.

Caution

- When setting the media, make sure to use the plastic bag or sheet covering the media. Never put it directly on the table, floor or work spaces.

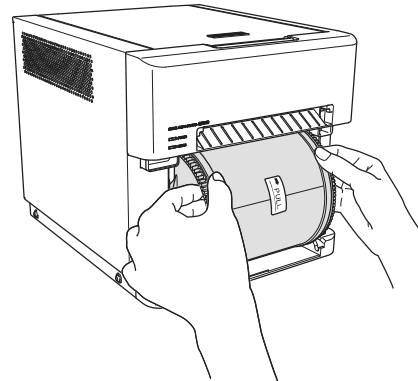


⚠ Caution

- The paper holders with a new paper roll set on it weigh approximately 1 kg. Do not let them fall as they may cause physical injury or damage to the paper holders.

8 Set the paper holder into the printer.

Set the seal on the paper (→PULL) in the same direction as shown on the right.

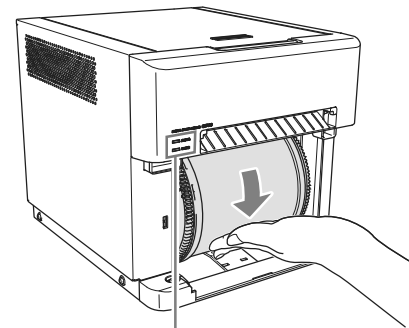


9 Remove the seal, place a hand on the paper, and rotate the paper holder in the direction of the arrow to insert the paper leading edge until the buzzer beeps.

The ERROR LED changes from flashing red and orange alternately to flashing red.

⚠ Caution

- If the paper is slack, such as when the paper holder is rotated without supporting the paper with your hand, paper initialization may fail.



LEDs

10 Attach the printer unit's trash box.

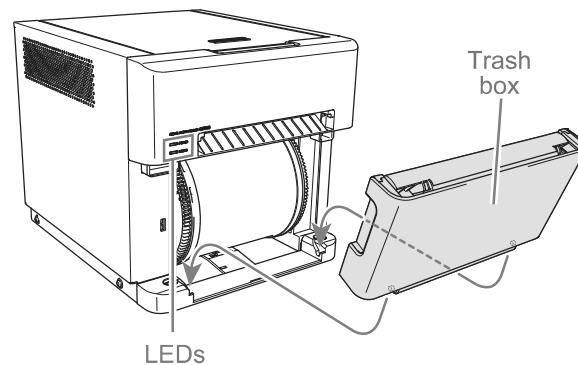
Perform paper initialization. (Three blank sheets are output.)

Paper initialization cuts off the outer edges of the paper that may be dirty.

However, paper initialization will not be carried out if the printer unit's ON/OFF switch is set to ON after the paper is replaced.

⚠ Caution

- If the trash box is not closed, the ERROR LED flashes red.
Make sure to close the trash box, ensuring that there is no gap between it and the printer unit.
A gap between the trash box and the printer unit can result in malfunctions.
It can also result in foreign objects or dust getting into the printer unit, adversely affecting print quality.



Printing is not possible with the trash box removed.

⚠ Caution

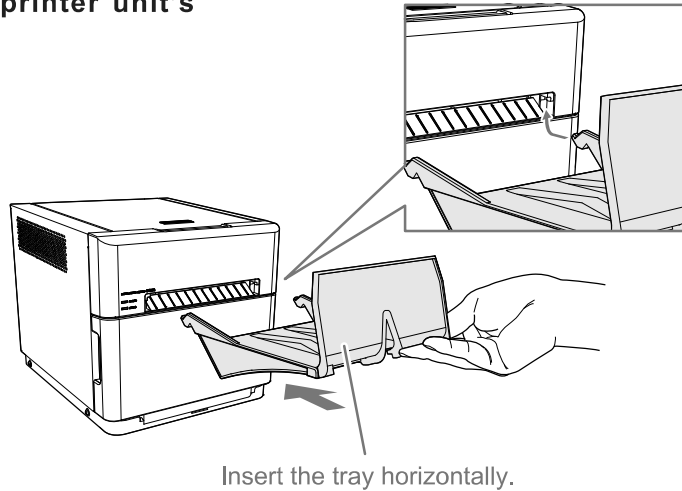
- Make sure that the trash box is installed when printing. If not installed, your fingers may get caught in the moving parts and be injured.
- If different width media, for example 4-inch and 4.5-inch, are used on the same printer, problems with the print quality such as lines on the print could arise. Therefore, do not mix the use of different width media on one printer.
- Make sure to perform paper initialization during paper replacement. If paper initialization is not performed, problems with the print quality could arise.
- Do not touch the paper during printing. The edge of the paper may cause injury, and problems with the print quality could arise.
- Do not apply force to or place items on the top door during printing. Problems with the print quality could arise.

Paper tray installation

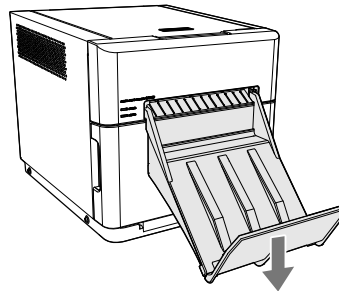
You can use the paper tray when printing.

Up to 20 sheets can be stored, however it is recommended to remove the sheets regularly.

- 1** Insert the paper tray into the attachment parts on the sides of the printer unit's paper output port.



- 2** Lower the paper tray to set it.



Caution

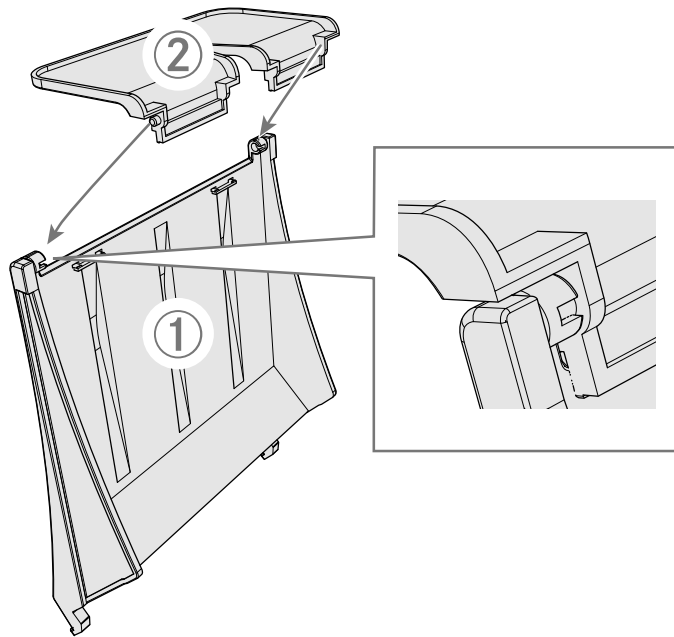
- Storing too many sheets in the paper tray may cause a malfunction.
- Do not apply too much strength on the paper tray. Otherwise, it may be damaged.
- The paper tray is specifically for 4 x 6" paper. It cannot store paper of any other print sizes.
- Make sure that printed paper does not get caught in the paper output port. This may cause a paper jam.

Assembling the paper tray

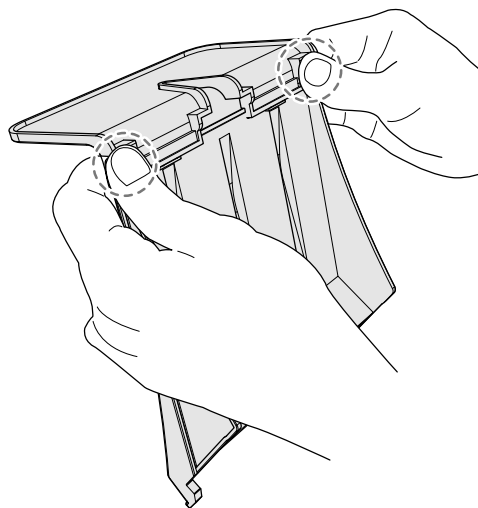
If trays (1) and (2) (refer to the illustration below) have come apart due to the paper tray falling or for any other reason, reassemble the paper tray according to the following procedure.

1 Align the pegs on both sides with the hooks.

Take note of the orientations of trays (1) and (2) at this time.



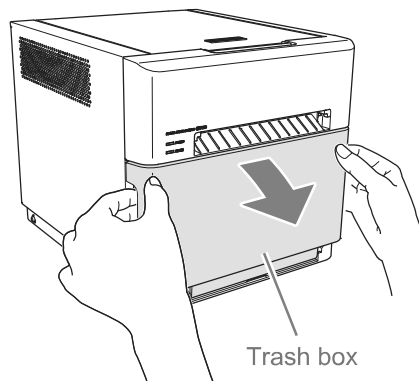
2 Insert and push the pegs into the hooks.



Disposing of paper scrap

Paper scraps generated when the paper is cut are collected in the trash box. Be sure to empty the trash box when replacing the paper.

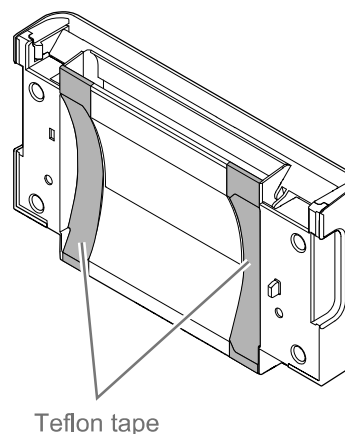
- 1 Remove the printer unit's trash box.**
After removing the trash box, paper scraps may be stuck to the printer unit.
If this happens, remove the paper scraps.



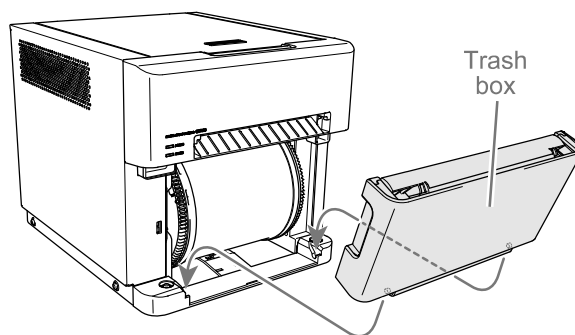
- 2 Dispose of paper scraps.**
(Several sheets of paper scraps may remain in the trash box.)

 **Caution**

- Please do not remove the tape.



- 3 Attach the printer unit's trash box.**



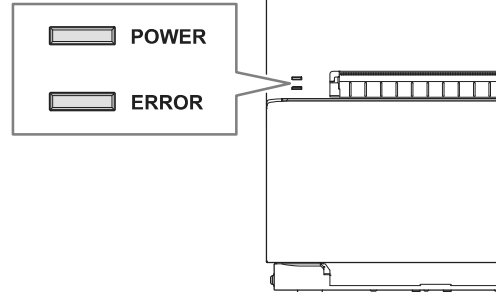
 **Caution**

- Do not remove the trash box during printing. Doing so may cause trouble.
- When the trash box has been removed, do not touch the cutter on the upper part or you may be cut.
- Troubles may occur if the printer is used when the trash box is full.

Troubleshooting

Error display

The LEDs condition (lit, flashing, off) indicates the product status.



lit,
 flashing,
 off.

LED display	Status	Condition	Refer to
 POWER ERROR	Head cool down	The print heads are being cooled. This error is cleared automatically.	-
 POWER ERROR	Trash box is open	There is paper	P.19
 POWER ERROR ERROR ERROR * Flashes red and orange alternately	/ Top door is open * An error occurs if either one of them is open.	No paper	P.16
 POWER ERROR	Paper end	Set a new roll of paper.	P.17
 POWER ERROR	Ribbon end	Set a new ribbon.	P.15
 POWER ERROR	Paper error	Set the paper properly.	P.17
 POWER ERROR	Ribbon error	Set the ribbon properly.	P.15
 POWER ERROR	Media size error	Send data with a size that matches the media size that has been set on the printer.	P.14
 POWER ERROR	System error	Reset the ON/OFF switch. If the system does not recover, contact your dealer.	-

Solving errors

- 1** Open the printer unit's top door.
- 2** Remove the ribbon from the printer unit.
- 3** Perform the action corresponding to the error.

"The printer is jammed with paper" (see this page),

"The paper cannot be pulled out toward you (paper holder side)" (see P.26)

"The ribbon is caught in the printer" (see P.26),

"Work was continued while the printer unit's ON/OFF switch is OFF" (see P.27)

"The printer stopped with the paper partially cut" (see P.27),

"The power has been cut during printing" (see P.27)

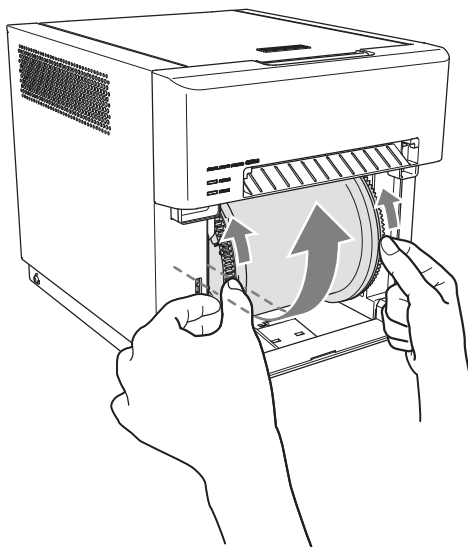
The printer is jammed with paper

Caution

- Take care to not cut, scratch, or hurt your hands the edges of the paper or on any sharp edges within the printer. Use safety lint-free gloves or other proper protective clothing.

- 1** **Pull out the jammed paper toward you (paper holder side).**

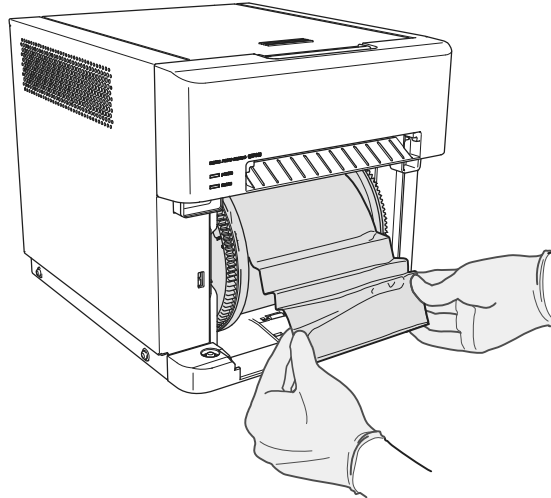
Rotate the paper holder by hand in the paper take-up direction to pull out the paper using the take-up force.



2 Pull out the paper end toward you.

When pulling out the paper, pull it out slowly.

If a strong force is applied, the printer may be damaged.

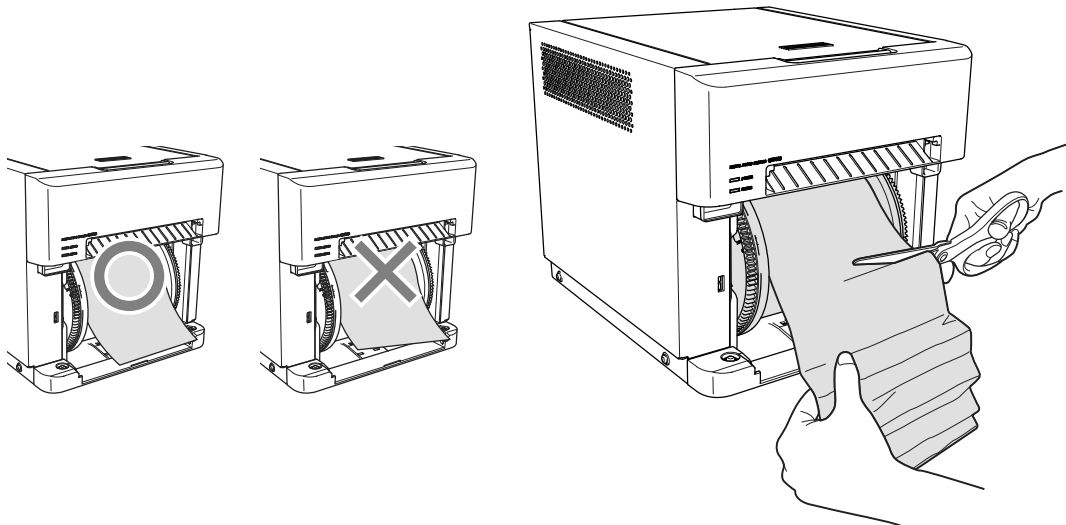


⚠ Caution

- Use caution when reaching into the printer unit. If the jammed paper cannot be removed without using strong force, contact technical support for further instructions. Use of excessive force can damage the printer.
- Take care to not cut, scratch, or hurt your hands the edges of the paper or on any sharp edges within the printer. Use safety lint-free gloves or other proper protective clothing.

3 Cut off the problem section, such as a wrinkled or partially printed area, with a pair of scissors.

If wrinkled or partially printed areas remain, they may jam the printer again. Furthermore, if the paper is not cut evenly, the printer does not operate correctly.

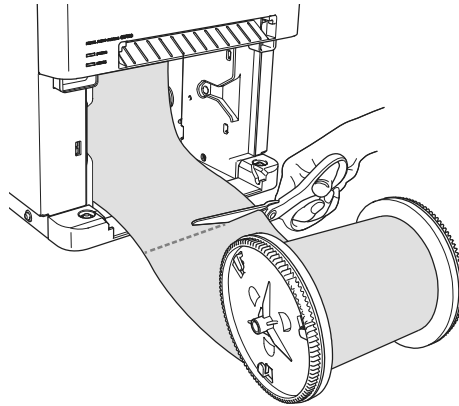


Next, refer to “Setting the media (ribbon, paper)” (P.15).

The paper cannot be pulled out toward you (paper holder side)

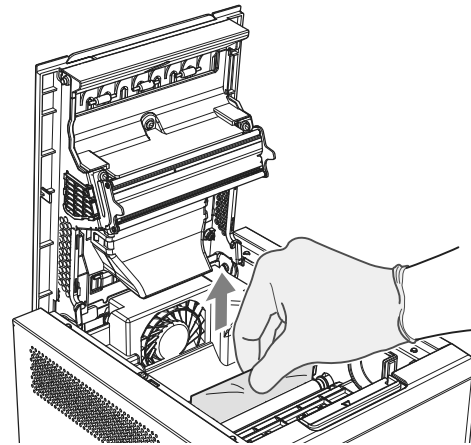
- 1** If the paper cannot be pulled out toward you (paper holder side), open the printer unit's top door and then pull out the paper with the following procedure.

First remove the paper holder in the forward direction and then cut off the part of the paper that is jammed.



- 2** Remove the ribbon, insert a hand, and then grip the leading edge of the paper and pull it out toward you (direction of the arrow in the figure on the right).

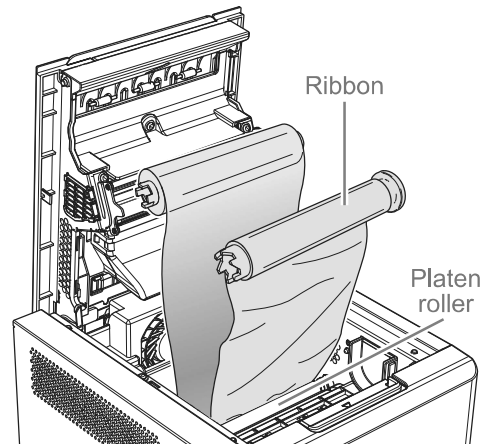
Wear a glove (without any fluff or powder on it) to prevent injury to your hand.



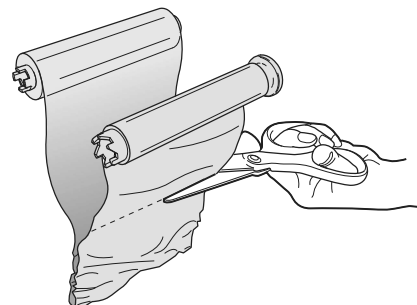
The ribbon is caught in the printer

- 1** Pull the opening lever toward you to open the printer unit's top door.

- 2** Pull out the ribbon.

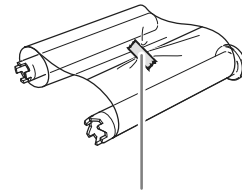


- 3** Cut the ribbon.
Carefully remove the ribbon that remains inside the printer unit.



4 Reattach the ribbon with tape or similar material.

5 Rotate the take-up roller until the part attached with tape cannot be seen anymore.



Fix with tape.

6 Insert the ribbon in the printer unit.

7 Close the printer unit's top door.

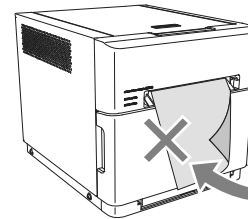
Work was continued while the printer unit's ON/OFF switch is OFF

⚠ Caution

- Set the printer unit's ON/OFF switch to ON before setting the paper again. When the trash box is closed, the printer unit performs paper initialization. (Any matter printed when the error occurred will be output.) The error is not cleared until initialization is performed.

The printer stopped with the paper partially cut

1 Set the ON/OFF switch to OFF and then ON again. The paper jam is released and the cutter blade returns to its standby position.



⚠ Caution

- If the paper jam is not released, do not forcefully pull out or tear off the paper. Contact a service representative. Pulling the paper with force may damage the cutter.

2 Remove the partially printed part of paper from the printer.

Next, refer to "The printer is jammed with paper" (see P.24).

The power has been cut during printing

If the power is cut during printing, you will not be able to open the top door.

1 Set the ON/OFF switch to OFF and then ON again. The partially printed paper is cut into scrap-size pieces and removed. After this, you can open the top door.

⚠ Caution

- Do not remove the trash box at this time. This may cause a paper jam.

2 Check that no partially printed paper remains in the printer.

If partially printed paper remains, refer to "The printer is jammed with paper" (see P.24).

⚠ Caution

- Do not set the ON/OFF switch to OFF during printing. This may cause a malfunction.

Cleaning

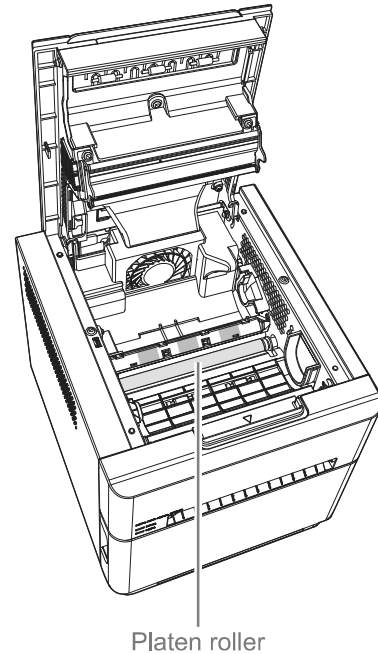
Platen roller

If indentations or lines appear in regular intervals (approximately 38 mm) and in the same place on printouts, or if the back of the printout (white side) is dirty, clean the platen roller. There may be dust, dirt, adhesive, etc. from the ribbon or paper on the platen roller.

- 1** Prepare a piece of gauze or other soft cloth moistened with ethyl alcohol.
- 2** Perform the steps **1** of “Setting the media (paper, ribbon)”.
- 3** Wipe off all the dirt while turning the platen roller.

Caution

- Do not touch parts other than cleaning target when cleaning.
- Take care to not cut, scratch, or hurt your hands on any sharp edges within the printer. Use safety lint-free gloves or other proper protective clothing.



Thermal print head

If stains adhere to the thermal print head, unevenness or gaps may appear during printing.

1 Prepare a piece of gauze or other soft cloth moistened with ethyl alcohol.

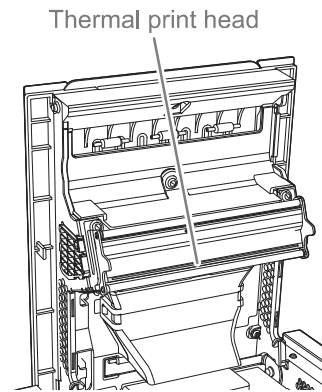
2 Gently wipe the thermal head without touching it directly with your hands.

Wipe only cleaning target after visual observation of it.

3 If the problem persists, wipe with a polishing sheet.

Recommended polishing sheet :

Mipox polishing sheet GC10000-75 FEY-A



Caution

- Do not use benzene or thinners, which may damage plastic materials.
- The thermal head is hot for a while after printing. To avoid burning yourself, wait some time before cleaning.
- For your safety, always unplug an electronic devices before cleaning.
- When cleaning, be careful not to let the thermal print head come into contact with your wristwatch, accessories, etc. This may damage the thermal print head.

Repacking

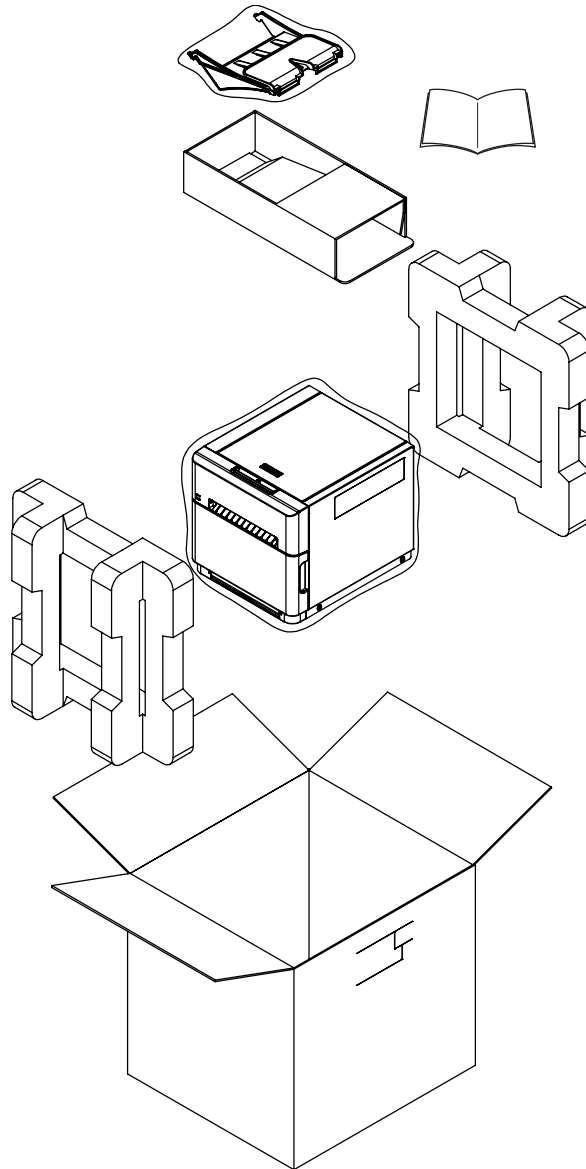
Transporting the printer requires the reuse of the original packing materials. The printer must be packed in the same way it was at the time of purchase. If the original packaging materials are not used and the printer is not packed correctly, the printer may be broken during transport.

Remove all Accessories and Attachments from the printer (print media ink ribbon, paper roll, USB cable, power cable and paper tray) and store or transport them separately.

Please save the Print Head Protective Pad and do not throw away any packaging as you will need them to safely transport the printer.

Empty the trash box before transporting the printer.

Otherwise, trash may enter the printer during transport, resulting in damage.



* Place the attachments in the accessories box.

Specifications

Model		DP-QW410	
Print method		Thermal dye sublimation transfer	
Resolution	Width direction	11.8 dot/mm (300dpi)	
	Paper feed direction	11.8 dot/mm (300dpi)	
Print size		102 mm × 102 mm (4 × 4")	
		102 mm × 152 mm (4 × 6")	
		114 mm × 114 mm (4.5 × 4.5")	
		114 mm × 203 mm (4.5 × 8")	
Paper/ ink ribbon set capacity		(4 × 6")	150 sheets
		(4.5 × 8")	110 sheets
Interface		USB2.0 (max 480 Mbps) TYPE B connector	
Dimensions (W) × (D) × (H)		208 mm × 240 mm × 198 mm *The shape differs depending on the country, region or the application.	
Weight		Approx. 5.8 kg (printer unit only)	
Rated Voltage		AC100 V to 240 V 50 Hz/60 Hz	
Rated Current		100 V 1.7 A 240 V 0.8 A	
Operating environment		Temperature 5 °C to 35 °C in natural convection conditions	
		Humidity 35 % to 80 % with no condensation	

* The specifications and appearance of the printer may be changed without prior notice.

Customer service

For information about the product operation or repair, contact your dealer or a service center.