Operation Manual

Mimaki™

INKJET PRINTER
TS200-1600

Operation Manual

MIMAKI ENGINEERING CO., LTD.

TABLE OF CONTENTS

Chapter 1 Before Use

Chapter 2 Printing

Chapter 3 Setup

Chapter 4 Maintenance

Chapter 5 Troubleshooting

Chapter 6 Appendix

Introduction

Thank you for purchasing the Inkjet printer TS200-1600.

Read this operating manual ("this document" hereinafter) thoroughly and make sure you understand its contents to ensure safe and correct use of the product.

Please note that the illustrations contained in this manual are intended to show functions, procedures, or operations and may sometimes differ slightly from the actual machine.

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- MIMAKI ENGINEERING REJECTS ALL LIABILITY FOR DAMAGE ARISING DIRECTLY OR INDIRECTLY FROM THE USE OF THE TS200-1600("THIS MACHINE" HEREINAFTER), WHETHER OR NOT THE PRODUCT IS FAULTY.
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● TV and radio interference

⚠ • The machine emits high-frequency electromagnetic radiation while operating. Under certain circumstances, this may result in TV or radio interference. We make no guarantee that this machine will not affect special radio or TV equipment.

If radio or TV interference occurs, check the radio or TV reception after turning off the machine. If the interference disappears when the power is turned off, the machine is likely to be the cause of the interference.

Try any of the following solutions or combinations of these solutions:

- Change the orientation of the TV or radio antenna to find a position where interference does not occur.
- Move the TV or radio away from this machine.
- Plug the TV or radio into a power outlet on a power circuit other than the power circuit to which this machine is connected.

● FCC (Federal Communications Commission) regulations

The machine has been tested and certified to comply with restrictions applying to Class A digital devices under Part 15 of the FCC regulations. These restrictions are designed to provide suitable protection from harmful interference when the printer is used in commercial environments.

This product may generate, use, or emit radio frequency energy and may cause harmful interference with radio communications if not installed or used in accordance with the operating manual.

Use of this product in residential areas may cause harmful interference. If so, the user is responsible for rectifying such interference.

⚠️	• Use only the cables recommended by Mimaki Engineering when connecting to the machine. Use of other cables may cause the product to exceed the restrictions stipulated by FCC regulations. To maintain compliance with FCC regulations, use the cables recommended by Mimaki Engineering.

To Ensure Safe Use

Symbol Marks

This document uses symbol marks to explain precautions when operating the machine. Make sure you fully understand the meaning of each mark to ensure safe and correct use of the machine.

	Explanation	
⚠WARNING	Warning	Indicates a potential hazard that may result in death or serious injury if handled improperly or if instructions are disregarded.
⚠CAUTION	Caution	Indicates a potential hazard that may result in minor or moderate injury if handled improperly or if instructions are disregarded.
NOTICE	Notice	Indicates a potential hazard that may result in property damage if handled improperly or if instructions are disregarded.
⚠	Warning sign	Indicates something that requires attention. Warning specifics are drawn inside the symbol.
❗	Mandatory action sign	Indicates an action that must be carried out. The specifics of the mandatory action are drawn inside the symbol.
🚫	Prohibition sign	Indicates a prohibited action. The specifics of the prohibited action are drawn inside the symbol.
(Important!)	Important	Indicates important information related to use of this machine.
💡	Tip	Indicates useful reference information.
☞	Reference information	Indicates the corresponding page for related information.

Usage Precautions

● **In the event of abnormal conditions**

⚠ WARNING

- In the event of abnormal conditions such as smoke or unusual odor, turn off the main power immediately and unplug the power cable. Continuing to use the machine under these conditions may result in failure, electric shock, or fire. Once you have confirmed that smoke is no longer being emitted, contact your local dealer or our service office. Never attempt to repair the machine yourself, which is hazardous.

⚠ CAUTION

- Immediately wipe off any ink, maintenance liquid, waste ink, or other liquid used with the product that comes into contact with your skin. Then wash using soap, and rinse with plenty of water. Failure to wash off ink may result in skin inflammation. If your skin becomes irritated or painful, seek medical attention immediately.
- If ink, maintenance liquid, waste ink, or any other liquid used in the product comes into contact with your eyes, rinse immediately with plenty of clean water. Rinse for at least 15 minutes. If you wear contact lenses and they can be easily removed, remove after rinsing for at least 15 minutes with clean water. Be sure to also rinse the undersides of your eyelids. Failure to rinse off ink may result in blindness or impaired vision. If your eyes become irritated or painful, seek medical attention immediately.
- If ink, maintenance liquid, waste ink, or any other liquid used in the product enters your mouth or is swallowed, gargle with water immediately. Do not induce vomiting. Seek medical attention promptly. Inducing vomiting may cause liquid to enter the airway.
- If a large amount of vapor is inhaled, move to a well-ventilated area, keep warm, and rest in a posture that allows easy breathing. If the condition does not improve, seek medical attention promptly.

NOTICE

- If an ink leak occurs, turn off the main power immediately and unplug the power cable. Then, contact your local dealer or our service office.

● **Power supply precautions**

⚠ WARNING

⚠
- Use the power cable provided. Otherwise there is a risk of failure, electric shock, or fire. The power cable provided is exclusive for the machine, and must not be used for other electrical equipment.
- Always hold the plug when removing the power cable. Pulling out the power cable may damage the cable, leading to failure, electric shock, or fire.
- Do not use the machine with dust accumulated on the power plug. Otherwise there is a risk of failure, electric shock, or fire.
- Take care to prevent metals from touching the power plug blades. Otherwise there is a risk of failure, electric shock, or fire.
- Do not damage or modify the power cable. Do not place heavy objects on, heat or stretch it. Doing so may damage the cable, leading to electric shock or fire.
- Do not use extension cords or power strips. Otherwise there is a risk of failure, electric shock, or fire.
- Do not use the power cable if it is damaged or broken or if the core wire is exposed. Otherwise there is a risk of failure, electric shock, or fire.
- Do not handle the power plug with wet hands. Disregarding this precaution may result in electric shock.

⏚
- Plug the power cable plug into a grounded power outlet. Otherwise there is a risk of failure, electric shock, or fire.
- When installing electrical outlets, perform grounding work to prevent electric shock. All electrical work (Class C grounding work; formerly Type 3 grounding work) must be handled by a licensed electrician.

NOTICE

🚫
- Do not turn off the main power supply. Turning off the main power supply will disable the automatic maintenance function (including nozzle clogging prevention function and ink discharge channel cleaning function). This increases the risk of ejection failures (such as nozzle clogging or deflection).
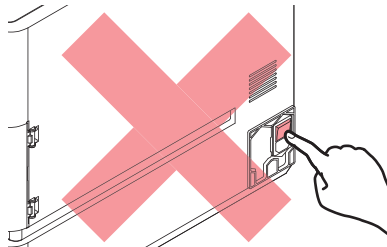
❗
- Use the machine with a power supply that meets specifications.
- Be sure to plug the power cable into a power outlet close to the machine. Insert the power plug blade securely.
- When connecting the power cable, check the input voltage of the power outlet and the capacity of the breaker. Also, connect each cable to a separate power source with an independent breaker. Connecting to power outlets linked with the same breaker will cause the breaker to trip.

● Caution regarding moving parts

⚠ CAUTION

• Keep parts of the body such as the face and hands away from moving parts. Also keep clothing (e.g., loose clothing and accessories) that may impede work away from the machine. Failure to do so may result in injury.

• Long hair should be tied back. Failure to do so may result in injury.

● Do not disassemble or repair

⚠ WARNING

• Do not attempt to disassemble or repair this machine. Otherwise there is a risk of failure, electric shock, or fire.

● Handling the cutter

⚠ CAUTION

• Avoid touching the cutter blade. Failure to do so may result in injury.
• Do not shake or swing the cutter holder. Doing so may cause the blade to come off.

● Other usage precautions

⚠ WARNING

• Keep children away from the machine.

NOTICE

• Do not pull the media when the clamp lever is lowered (the media is clamped). Doing so may damage the machine.

(Important!) • The underside of the media may be soiled depending on how the printed media has been stored (due to weight when laying printed media rolls horizontally, for example) and the media type. Perform a test beforehand to check that the media does not transfer ink to the underside of the adjacent media.

● Disposing of the product

⚠ CAUTION

• Please contact your local retailer or service agent.
• When disposing of the product yourself, contact an industrial waste disposal operator or dispose of the product in accordance with local laws and regulations.

Notes on Handling Ink or any Other Liquid Used with the Machine

Precautions regarding ink, maintenance liquid, or other liquids used with this machine are included with the containers. Thoroughly read them and make sure you understand the contents.

- Be sure to read the safety data sheet (SDS) before use. https://mimaki.com/supply/sds/

⚠CAUTION

- Pay close attention to ventilation and be sure to wear safety glasses, gloves, and a mask when handling ink, maintenance liquid, waste ink, or other solutions used with the machine. Leaking ink may adhere to the skin or get into the eyes or mouth.

- Do not subject cases containing ink to strong shock or violent shaking. Do not attempt to refill the ink. Leaking ink may adhere to the skin or get into your eyes or mouth.

- Do not disassemble cases containing ink. Leaking ink may adhere to the skin or get into your eyes or mouth.

- Do not store ink, maintenance liquid, or other liquids used with the machine in locations where children may enter.

- When disposing of ink, maintenance liquid or other liquid used with the product, or containers or non-woven fabric contaminated with ink or other liquid, contact an industrial waste disposal operator or dispose of the product in accordance with the local laws and regulations.

NOTICE

- Do not store ink, maintenance liquid, or other liquids used with the machine in locations exposed to direct sunlight.
- Do not store ink, maintenance liquid, or other liquids used with the machine in environments where cutting fluid or other volatile substances (such as amines or modified amine alcohol) are present in significant quantities. Storage in such places increases the risk of failure or ejection failures (e.g., nozzle clogging or deflection).
- Do not use ink, maintenance liquid, or other liquids used with this machine with other printers. Doing so may cause failure.

- Be sure to store them in a low place no higher than 1 m above the floor. Otherwise there is a risk of scattering if the containers fall.
- Store in tightly sealed containers.
- Store in a cool, dark place.

  (1) Store ink in a place where ink does not freeze. Using defrosted ink may deteriorate ink constituents and reduce print quality.

  (2) When ink is moved from a cold place to a warm place, leave it in the environment where the machine is installed for at least three hours before using it.

  (3) Open the container just before installing it, and use it up as quickly as possible. If it is opened and left for an extended period of time, print quality may be reduced.

- Do not touch the metal parts of the ink IC chip. Static electricity may damage the ink IC chip, and dirt or damage may cause the ink IC chip read error.

- Printing is disabled if a different ink IC chip is used.

Ink Specifications

Item		Details
Type		Special sublimation transfer ink (Mimaki Engineering product)
Color[1]		Magenta (M) Blue (B) Yellow (Y) Black (K) Violet (Vi) Orange (Or) Fluorescent yellow (Fy) Fluorescent pink (Fp)
Form		Aluminum pack
Ink capacity[1]		2L(MBIS)
Expiration date		As indicated on the ink bottle However, after opening, it should be consumed within three months, even if before the expiration date.
Storage temperature	When stored	10 to 35 °C (daily mean temperature) • However, not more than 1 month at 30 °C • Ink quality may deteriorate if stored outside these conditions.
	During transportation	1 to 40 °C • However, not more than 120 hours at 60 °C, and not more than 1 month at 40 °C • Where possible, avoid storing in cold locations below 0 °C and hot locations above 40 °C. • Ink quality may deteriorate if stored outside these conditions.

*1. Depending on ink type

Restrictions Concerning the Expiration Date of Ink Used in the Machine

Example: When the expiration date is April 20xx

- May 20xx: Replace with new ink or use up as quickly as possible. Printing is possible.
- June 20xx: Replace with new ink or use up as quickly as possible. Printing is possible.
- July 20xx: Printing is not possible.

	• The message appears on the display.

(Important!)	• The ink expiration date is indicated on the ink container. Expired ink may cause ejection failures or alter the color tone. Printing is possible even if the ink has passed its expiration date. Nevertheless, we recommend replacing with new ink or using up as quickly as possible.

Installation Precautions

⚠ WARNING

- Do not install the machine in a place close to fire. Doing so may result in inflammation of solvent ink.
- Do not place flower vases, pots, cups, containers containing cosmetics, chemicals or water, or small metal items on or close to the machine. If they enter the machine, there is a risk of failure, electric shock, or fire.

- Do not install this machine in humid locations or locations where it may be exposed to splashing water. Otherwise there is a risk of failure, electric shock, or fire.

- Do not install the machine in a place where children may enter.

⚠CAUTION

- A ventilation system must be provided if the machine is installed in a poorly ventilated area or sealed room.
- Be sure to observe the following points regarding exhaust port installation:

  (1) Exhaust port installation must conform to local environmental, health, and safety (EHS) guidelines.

  (2) If the exhaust port is fitted with a shutoff valve, the valve must be open when the machine is in use.

NOTICE

- Do not install this machine in locations where dust or powder is present. Failure or printing defects may result (e.g., nozzle clogging, deflection) if dust gets inside this machine.
- Do not install this machine in locations exposed to drafts (e.g., from air conditioning). Disregarding this precaution may result in dust or powder getting inside this machine.
- Do not install this machine in unstable locations or locations subject to vibration. This will increase the risk of failure or printing defects (e.g., nozzle clogging, deflection).
- Do not install this machine in locations exposed to direct sunlight.
- Do not install this machine in locations subject to sudden temperature changes. This will increase the risk of failure or printing defects (e.g., nozzle clogging, deflection).
- Do not install this machine in locations exposed to excessive noise from large machinery.
- Do not install this machine in locations where photographic fixing agents generate vapor or acid gas (e.g., acetic acid, hydrochloric acid) or locations filled with metal working fluids or highly volatile substances (e.g., amines, amine-modified alcohols). Malfunctions or printing defects may result (e.g., nozzle clogging, deflection) as print head ink is more likely to harden under such environments.

- Operating environment: 20 to 30 °C (68 to 86 °F), 35 to 65 %RH (no condensation)
- Temperature range in which accuracy is guaranteed: 20 to 25 °C (68 to 77 °F)

Installation Space

Provide the following space around the machine to allow safe and proper replacement of ink and media:
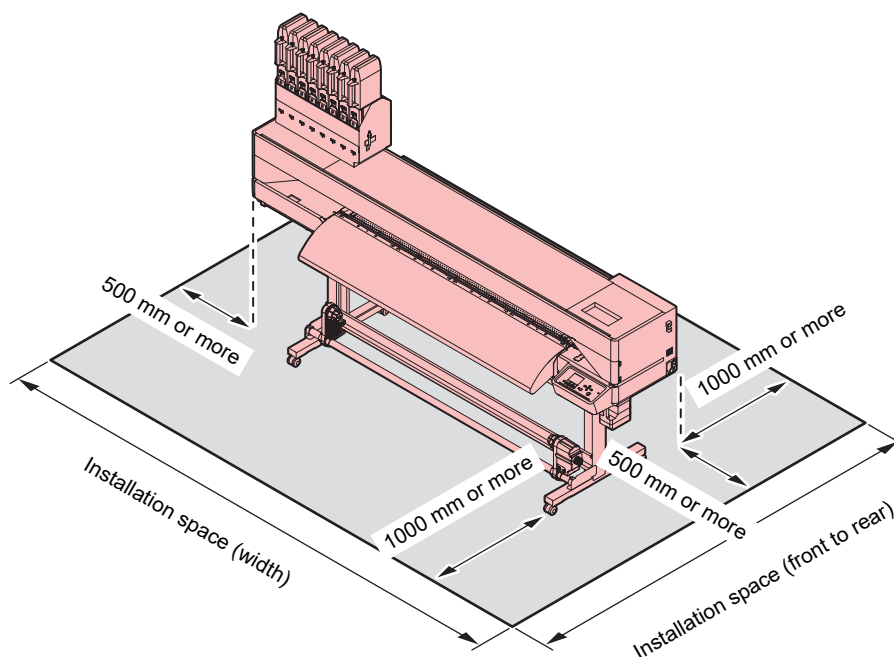
Size	TS200-1600
Width[*1]	At least 3,770 mm (2,770 mm)
Depth[*1]	At least 2,748 mm (748 mm)
Height[*1]	(1,623 mm)[*2]
Weight	155 kg

*1. The figures in parentheses indicate machine dimensions.

*2. The ink eco-cases are mounted here.

When Relocating This Machine

Contact your local dealer or our service office. Attempting to handle relocation yourself may result in failure or damage.

Safety Interlocks

The machine is equipped with interlocks to ensure safety during use.

Printing will abort if you open the covers while printing is underway. The RIP data will need to be resent.

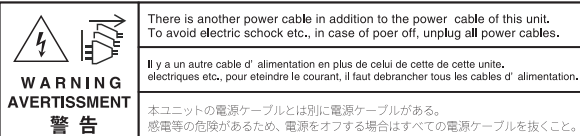- Safety interlock locations

Interlock cover
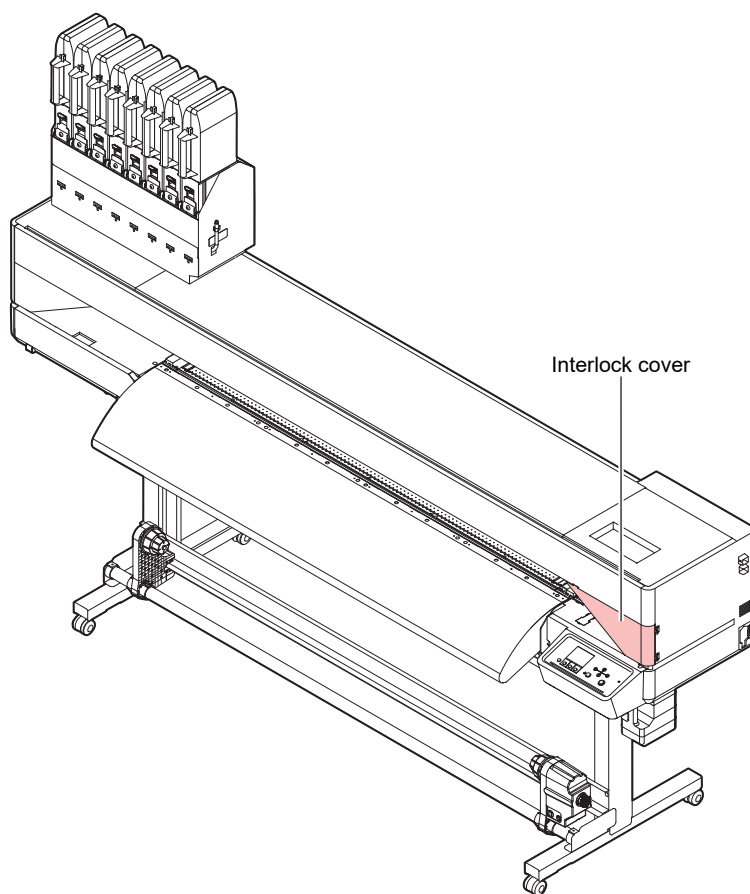
Warning Label

Make sure you fully understand the details indicated on the various warning labels.

If any of the warning labels becomes dirty and illegible or peel off, contact your local dealer or our service office to request new warning labels.
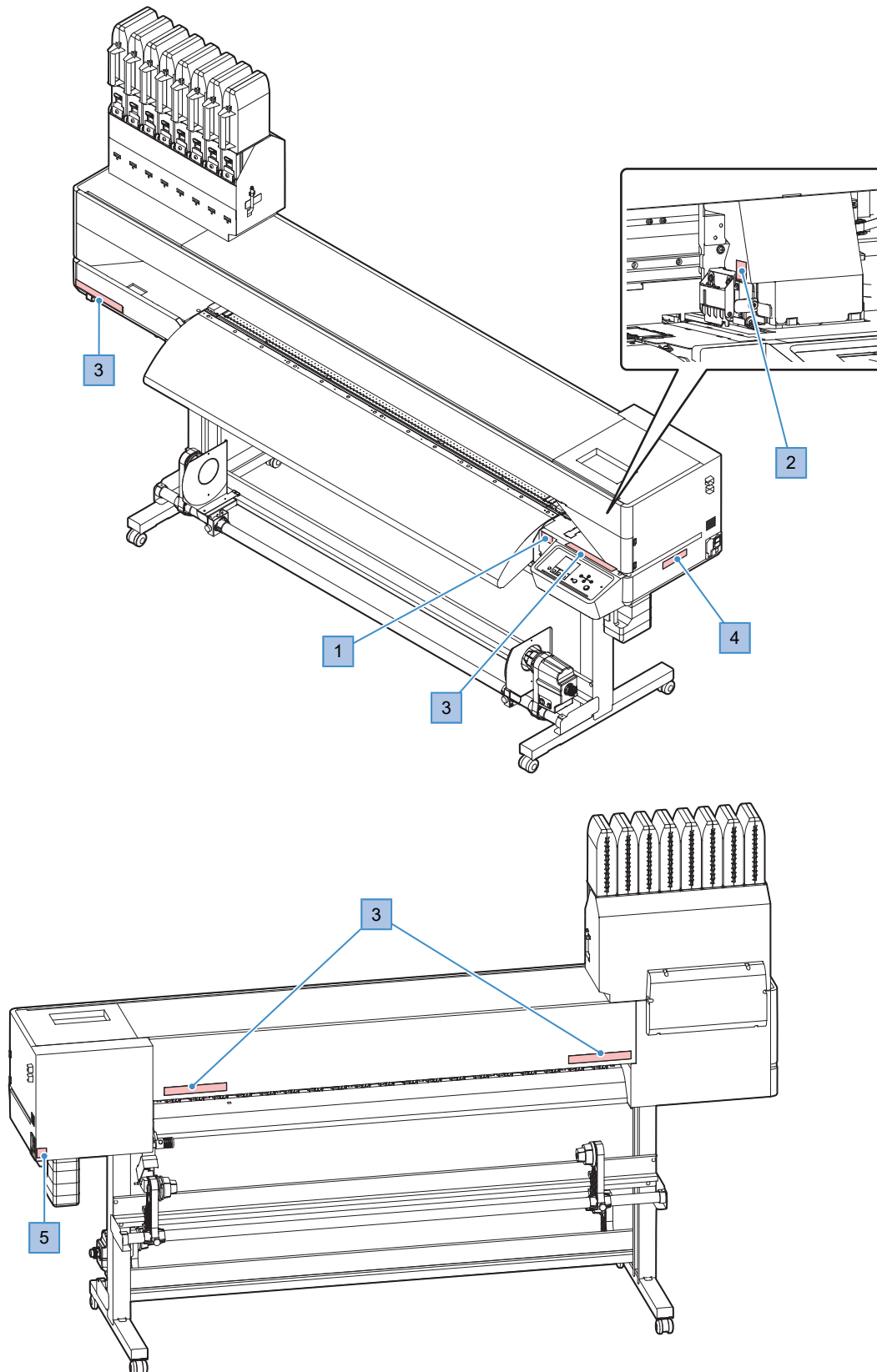
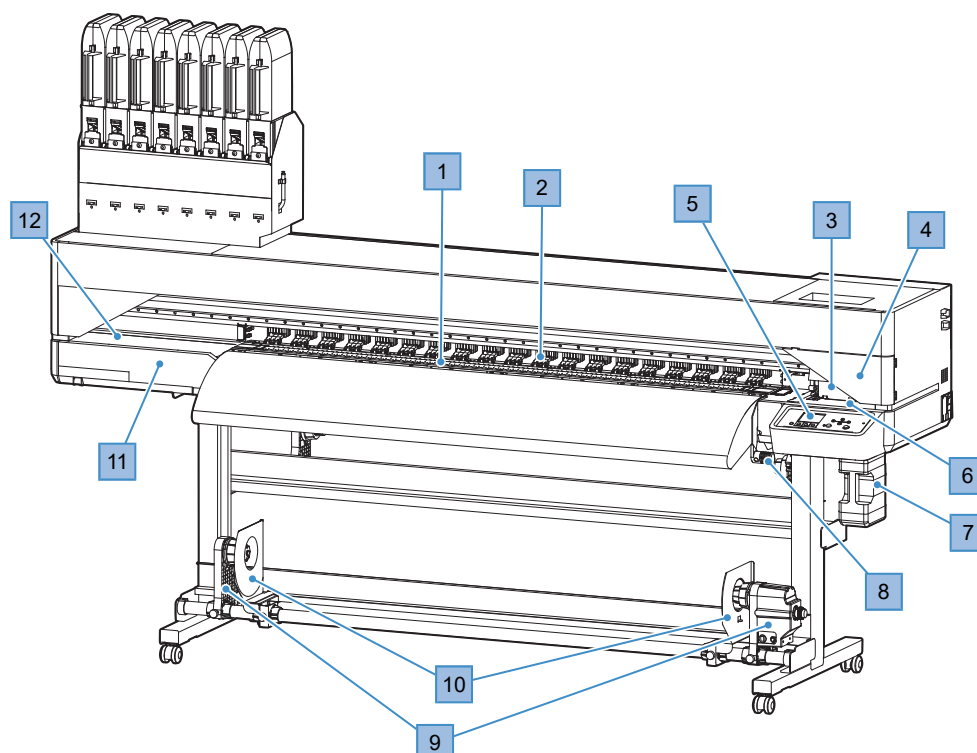| No.	Order code	Label	Details
1	M903330		Wear safety glasses and gloves while working.
2	M903405		Beware of the cutter.
3	M905811		Indicates dangerous moving parts.
4	M916035		Describes the power cable.
5	M907935		Indicates dangerous live parts.

Chapter 1 Before Use

This chapter

This chapter describes information essential before use, such as part names.

1.1 Part Names and Functions

Front

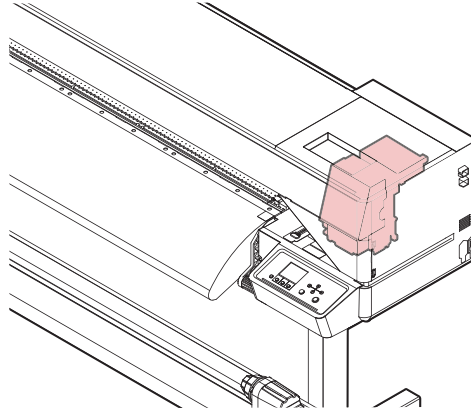| No.	Name	Overview
1	Platen	Print area. ☞ "Platen"(P. 24)
2	Pinch roller Grit roller	The pinch rollers and grit rollers are used to grip and feed the media. ☞ "Pinch Rollers and Grit Rollers"(P. 25)
3	Carriage	Consists of a print head, the jam sensor, and the media cutter. ☞ "Carriage"(P. 24)
4	Maintenance cover (right side)	Open the cover to perform maintenance on the station, etc. Printing and automatic maintenance are not possible while the covers are open.
5	Operating Panel	Includes operating keys and displays indicating various settings and other items. ☞ "Operating Panel"(P. 27)
6	Station	Includes caps for protecting the print head, wipers, and an NCU (option) for monitoring print head nozzle conditions. ☞ "Station"(P. 24)
7	Waste Ink Tank	Contains the container for waste ink. ☞ "Waste Ink Tank Replacement"(P. 113)
8	Clamp lever	Lowering the clamp lever secures the media. Raising the clamp lever releases the media. Linked to the clamp lever at the rear.
9	Take-up unit	Rolls up the printed roll media. ☞ "Take-up unit"(P. 52)
10	Media Edge Guides	Prevents the roll media from shifting sideways as it is taken up. Using the media edge guides prevents the roll media from becoming offset.
11	Maintenance cover (left side)	Open the cover to perform maintenance on locations such as the carriage underside. Keep the cover closed, except during maintenance.
12	Maintenance cover (upper left side)	Open the cover to perform maintenance on locations such as the carriage underside. Keep the cover closed, except during maintenance.

Rear and Right Side View

No.	Name	Overview
1	Clamp lever	Linked to the clamp lever at the front.
2	Media Sensor	Detects whether media is present. ☞ "Media Sensor"(P. 25)
3	Feeding unit	Compatible with 2-inch and 3-inch paper cores. ☞ "Loading the Roll Media"(P. 56)
4	AC inlet	Use the included power cable for the inlet (INLET1). ☞ "Connecting the Power Cable"(P. 30)
5	Main power switch	The main power supply for the machine. To prevent ejection failures attributable to the print head (e.g., nozzle clogging or deflection), do not turn off the main power supply. ☞ "Power Supply Switch"(P. 26)☞ "Turning On the Power"(P. 30)☞ "Turning Off the Power"(P. 31)
6	LAN port	Connects to PC via a LAN cable. ☞ "Using a LAN Cable"(P. 33)
7	USB port	Connects to PC via a USB interface cable. ☞ "Using a USB Cable"(P. 34)

Carriage

The carriage includes a print head for ejecting ink, and a jam sensor for stopping the carriage when media clogs. Printing occurs as ink is ejected while traversing left and right.

Station

The station includes caps for keeping the print head nozzle surface from drying out, a wiper required for print head maintenance, and an NCU (option) for monitoring print head nozzle conditions.

The NCU (Nozzle Check Unit) automatically checks whether the nozzle is clogged. Setting various functions enables automatic print head cleaning or printing using other nozzles.

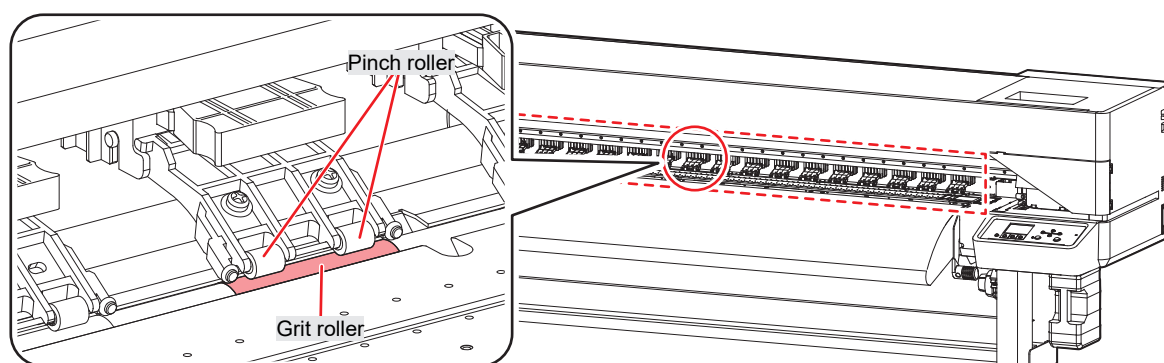also be Periodically ejects ink to the flushing unit to prevent head ink clogging.
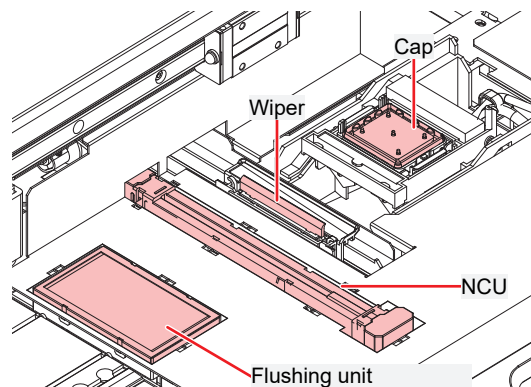
Platen

Print area. The platen secures the media under vacuum pressure. This also features a cutting slot for cutting the media.
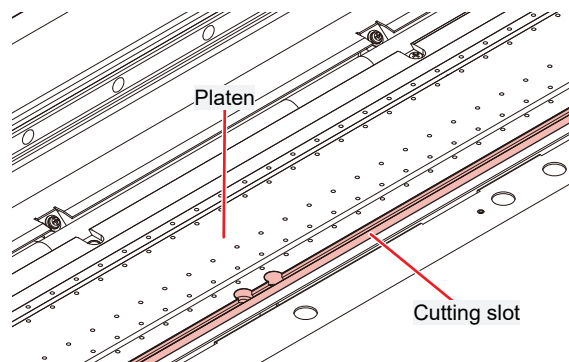
Pinch Rollers and Grit Rollers

The pinch rollers and grit rollers are used to grip and feed the media.


When the machine is not in use, raise the clamp lever to <u>separate the pinch rollers from the grit rollers</u>.
  - Leaving the pinch rollers lowered may cause them to become deformed and prevent media from being fed correctly.
  - Leaving media loaded will subject it to force from the pinch rollers, which may leave pinch roller marks on it.
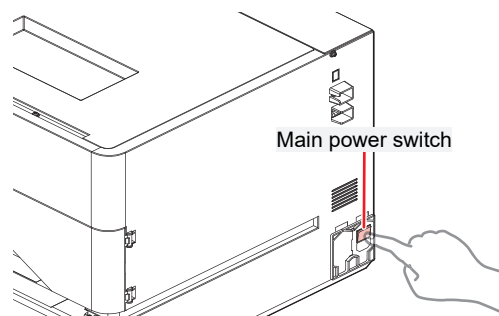
Media Sensor

The media sensor detects the presence/absence of media. The sensor must be covered by the media to detect the media width.


[Rear view]

Media Sensor
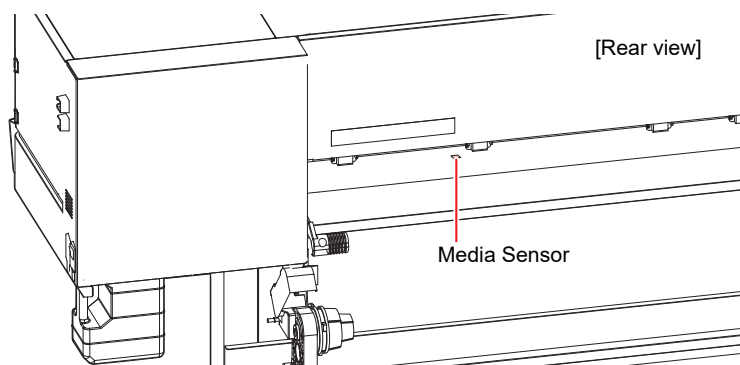
Power Supply Switch

● **Main power switch**

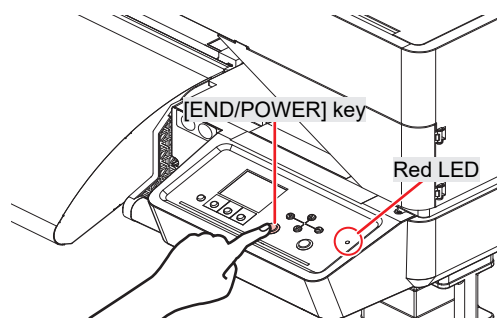This is located at the rear on the right-hand side of the product.

Main power switch

> 🚫 • Do not turn off the main power supply. Turning off the main power supply will disable the automatic maintenance function (including nozzle clogging prevention function and ink discharge channel cleaning function). This increases the risk of ejection failures (such as nozzle clogging or deflection).
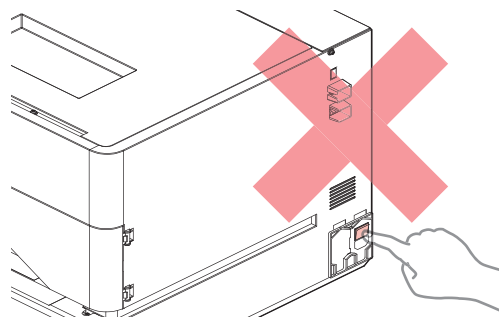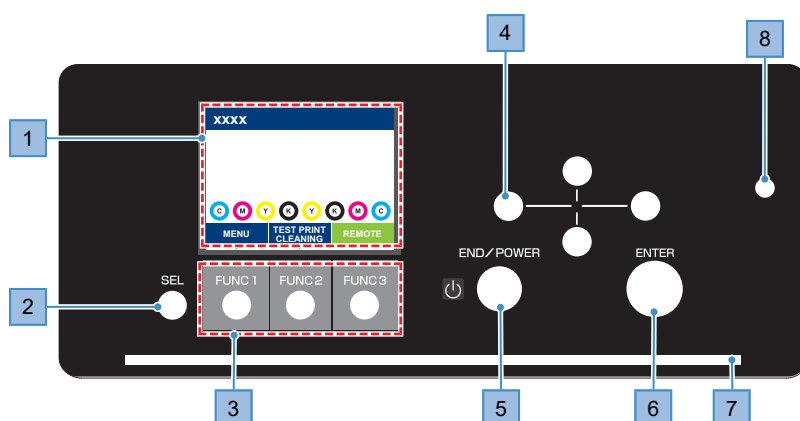

● **[END/POWER] key**

The [END/POWER] key is the key normally used to turn the power on and off.

To turn off the power, hold down the [END/POWER] key. Press the [ENTER] key once the instructions appear on the display.
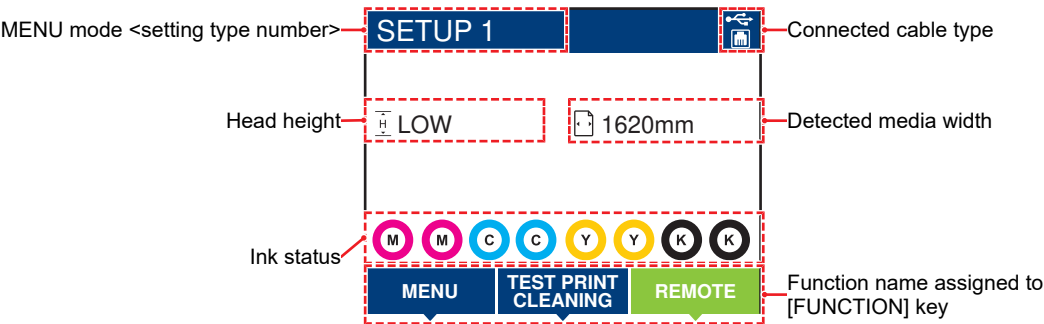

[END/POWER] key

Red LED

Operating Panel

This is used to control the product and make/change settings.

No.	Name	Overview
1	Display	☞ "Display"(P. 28)
2	[SEL] key	Selects the function for the corresponding [FUNCTION] key.
3	[FUNCTION] key	Used for test printing, head cleaning, and editing settings. ☞ "[FUNCTION] key"(P. 29)
4	[JOG] key ⊙⊙⊙⊙	Used to move the carriage, feed media, and select settings
5	[END/POWER] key	Used to cancel the last setting entered, return to the previous level of the setting menu, or to turn power on and off • Illuminates in blue when the power is on. ☞ "Turning On the Power"(P. 30) • To turn off the power, hold down the key. ☞ "Turning Off the Power"(P. 31)
6	[ENTER] key	Used to move to the next level menu and to confirm settings. This can also be used to display product information. ☞ "Displaying Machine Information (Local Guidance)"(P. 29)
7	Status lamp	This lamp indicates the machine status.

<table>
<tr><td colspan="2">Off</td><td>Indicates LOCAL mode. Used for test printing, maintenance, and settings</td></tr>
<tr><td rowspan="2">Light blue</td><td>Illuminated</td><td>Indicates REMOTE mode. The product is in standby to receive print data.</td></tr>
<tr><td>Flashing</td><td>Indicates that printing is in progress. This also flashes to indicate test printing—for example, when printing built-in patterns.</td></tr>
<tr><td>Blue</td><td>Illuminated</td><td>Indicates that data remains to be printed. Switch to REMOTE mode and start printing</td></tr>
<tr><td>Green</td><td>Flashing</td><td>Indicates that automatic maintenance is underway. Some functions will be limited until maintenance has ended.</td></tr>
<tr><td>Yellow</td><td>Flashing</td><td>Ink Near End status (very little ink remains).☞ "When Ink Near End is Displayed"(P. 42)</td></tr>
<tr><td>Red</td><td>Flashing</td><td>An error has occurred. Refer to the error code list and take appropriate action. ☞ "Error Message"(P. 127)</td></tr>
<tr><td></td><td>Illuminated</td><td>A system error (SYSTEM HALT) has occurred. Contact our service office. ☞ "SYSTEM HALT"(P. 132)</td></tr>
</table>

No.	Name	Overview
8	LED	To turn on power, press the [END/POWER] key until the red LED illuminates, then release the key.

Display

MENU mode <setting type number> — SETUP 1 — Connected cable type

Head height — ⬛LOW   📄1620mm — Detected media width

Ink status — M M C C Y Y K K

MENU   TEST PRINT CLEANING   REMOTE — Function name assigned to [FUNCTION] key

MENU mode

Four menu modes are available.

Name	Overview
LOCAL mode	Used for test printing, maintenance, and settings
REMOTE mode	Prints the print data received from a PC.
MENU mode	Press the [MENU] on the LOCAL mode screen to switch to MENU mode. This is used to set various functions.
NOT-READY mode	Status before media is detected

Ink status

The ink pack status such as remaining ink levels and ink errors are indicated by icons.

Icon	Overview							
M	Displays remaining ink levels using a 9-stage icon.							
	M	M	M	M	M	M	M	M
	Full	1/8 used	1/4 used	3/8 used	1/2 used	5/8 used	3/4 used	7/8 used
M	Very little ink remains. Prepare fresh ink.							
⊖	Printing is not possible. Displayed when ink is depleted or an ink error has occurred. ☞ "Ink error"(P. 126)							

[FUNCTION] key

This section describes the functions and roles assigned to the [FUNCTION] key.

Icon	Overview
MENU	Displays the various menu screens. ☞ "Setup"(P. 77)
TEST PRINT CLEANING	Displays maintenance functions such as test printing and cleaning.
REMOTE	Switches from LOCAL mode to REMOTE mode.
ADJUST	Displays adjustment functions such as feed adjustment and drop position adjustment.
DATA CLEAR	Clears received data.
LOCAL	Used to switch from REMOTE mode to LOCAL mode
CUT	Used to cut media
<<	Used to move to the previous menu screen
>>	Used to move to the next menu screen
OK	Used to close the confirmation screen in response to prompts or other messages
OFF	Used to disable functions
⤓	Indicates that the function is assigned. Displays settings and functions.
⌄	Used to enable or disable multiple items

Displaying Machine Information (Local Guidance)

Press the [ENTER] key on the LOCAL mode screen to display the following information.

- Ink information: Displays ink type, remaining ink levels, and ink errors.
- Information: Displays information such as media width, head height, product serial number, firmware version, command version, and LAN connection status.
- Nozzle check: Displays the number of nozzles detected as clogged in the nozzle check.

1.2 Connecting the Power Cable

1 Check to confirm that the main power supply is turned off.

2 Connect the cable band to the machine.

3 Connect the power cable to the inlet of the machine.

4 Secure the power cable to the cable band.

• Pass the power cable through the clamp and clamp until it clicks into place.

Power cable

Cable band
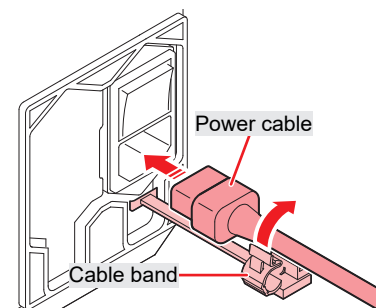
5 Plug the power plug into the power outlet.
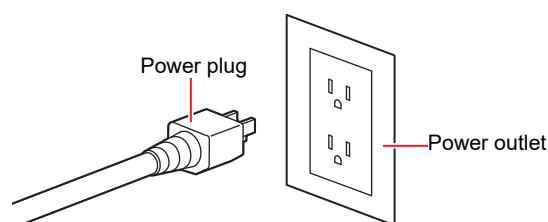
Power plug

Power outlet

⚠ • Do not handle the power plug with wet hands. Disregarding this precaution may result in electric shock.

Turning On the Power

1 Check to confirm that the main power supply is turned on.

• If the main power supply switch is not turned on, set to "I".

Main power switch
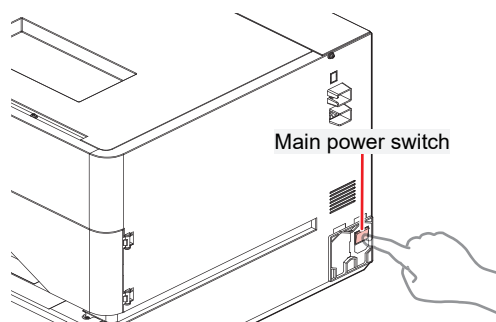
2 Hold down the [END/POWER] key to turn on power. (Press the key until the red LED on the upper right side illuminates.)

- The firmware version appears on the display, and the initial operation is executed. The machine will then enter the Media Select mode, and is ready for use.

[END/POWER] key

Red LED
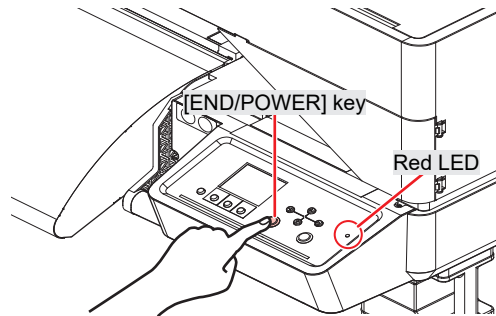
3 Turn on the power for the connected PC.

- Close the maintenance cover. Leaving any of the covers open will disable the automatic maintenance function (including nozzle clogging prevention function and waste ink draining channel cleaning function). This will increase the risk of failure or ejection failures (e.g., nozzle clogging or deflection).

Turning Off the Power

- Check the following when turning off power:
  - (1) The front cover is closed.
    - Leaving any of the covers open will disable the automatic maintenance function (including nozzle clogging prevention function and waste ink draining channel cleaning function).
  - (2) The carriage has returned to the capping station.
    - If not, the print head nozzle may dry out, resulting in ejection failures (such as nozzle clogging or deflection).
  - (3) Data is not being received
  - (4) No errors have occurred.
    - Problems Causing Messages to Appear

1 Turn off the power to the PC connected.

2 Hold down the [END/ POWER] key.

- A power off confirmation screen appears. Press the [ENTER] key to turn the power off.
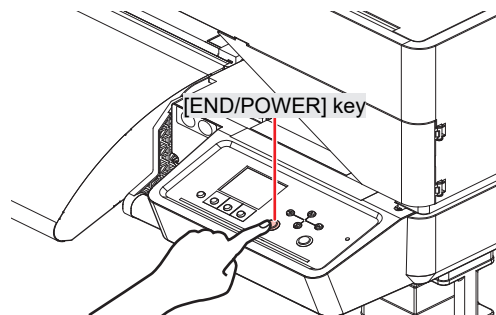
[END/POWER] key

🚫 • Do not turn off the main power supply. Turning off the main power supply will disable the automatic maintenance function (including nozzle clogging prevention function and ink discharge channel cleaning function). This increases the risk of ejection failures (such as nozzle clogging or deflection).
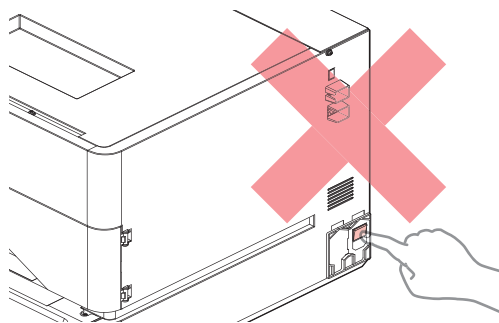
1.3 Connecting a PC to the Product

Connect the machine to the RIP PC. The following cables can be used:

1. ☞ "Using a LAN Cable"(P. 33)**(recommended)**

2. ☞ "Using a USB Cable"(P. 34)

(Important!) **When using the USB cable**
- Data may be transferred to the machine too slowly, <u>causing the carriage to pause at the left-hand or right-hand end</u> during printing.

Using a LAN Cable

Connect a PC to this product using a LAN cable. Insert a LAN cable until it engages with a click.

🚫　• Do not unplug the cable while data is being transferred.

● **Network Connection Precautions**

Make sure the network is set up as follows: Printing is not possible if the network is not set up correctly.

- Use a Category 6 or 6A LAN cable.
- The PC used to transfer print data must be located on the same network as this product. This product cannot be connected via a router.
- Use a 1000BASE-T compatible computer or switching hub. Printing requires 1000BASE-T support.

Switching hub
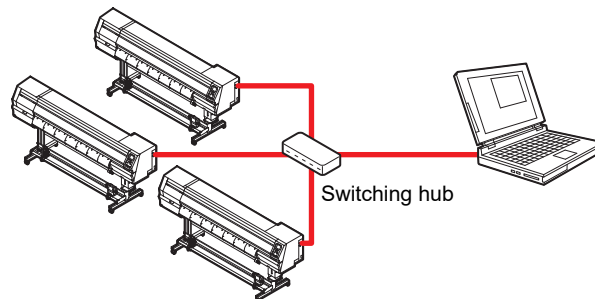
● **Checking the LAN connection**

1 **Check the display on this product.**

- Local guidance can be used for checking.☞ "Displaying Machine Information (Local Guidance)"(P. 29)Printing is not possible if "100Mbps", "10Mbps", or "No Connect" is displayed.

INFORMATION	
LAN Status	1000Mbps
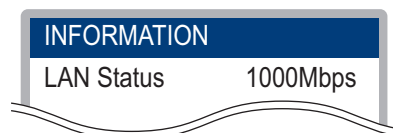
2 **Check the lamp on the LAN connector.**

- The LAN connector lamp illuminates when the machine is running.

Color	Status	Overview
Green	Illuminated	Connected via 1000BASE-T
	Off	Connected via a network other than 1000BASE-T • 1,000 Mbps is not supported if only the orange lamp is illuminated or flashing. Check the specifications for the PC, peripheral devices, and cable.
Orange	Illuminated	Linked up (connected).
	Flashing	Data being received
	Off	Link down (not connected)

Using a USB Cable

Connect a PC to this product using a USB interface cable.

> • Do not unplug the cable while data is being transferred.

> • Use RIP software that supports the USB interface.

> • If the computer has no USB port, contact your local dealer or our service office.

(Important!) **When using the USB cable**
• Data may be transferred to the machine too slowly, **causing the carriage to pause at the left-hand or right-hand end** during printing.

● **USB Connection Precautions**

• When connecting more than one TS200 to one PC

– If the PC has more than one USB port, try connecting to a different USB port to check whether the product is correctly recognized. If the product is still unrecognized even when connected to a different USB port, use a commercially-available USB active repeater cable.

• When extending the USB cable

– Use a commercially-available USB active repeater cable. However, make sure that the combined length of the USB cable and the USB active repeater cable does not exceed 20 m.

– If the USB cable is extended, this may reduce the data transfer speed to the machine, causing the carriage to pause at the left-hand or right-hand end during printing.

• USB high-speed mode peripheral devices

– It may not be possible to recognize USB peripheral devices if USB high-speed mode peripheral devices (e.g., USB memory, 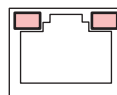USB HDD devices) are connected to the PC to which the product is connected. If external USB hard disk drives or other similar devices are connected, this may reduce the data transfer speed to the machine, causing the carriage to pause at the left-hand or right-hand end during printing.

• Unplugging USB memory devices

– When unplugging USB memory devices from the PC to which this product is connected, use "Stop" in "Safely removing hardware" before unplugging. Otherwise, an [ERROR 201 Command Error] will occur.

1.4 System Configuration

Use RIP software to request to print data created using applications like Illustrator or Photoshop.

[Ethernet connection]

RIP-PC

Receiving Print Data
Generating RIP Data

[Local network]

Preparing RIP Data
Print request
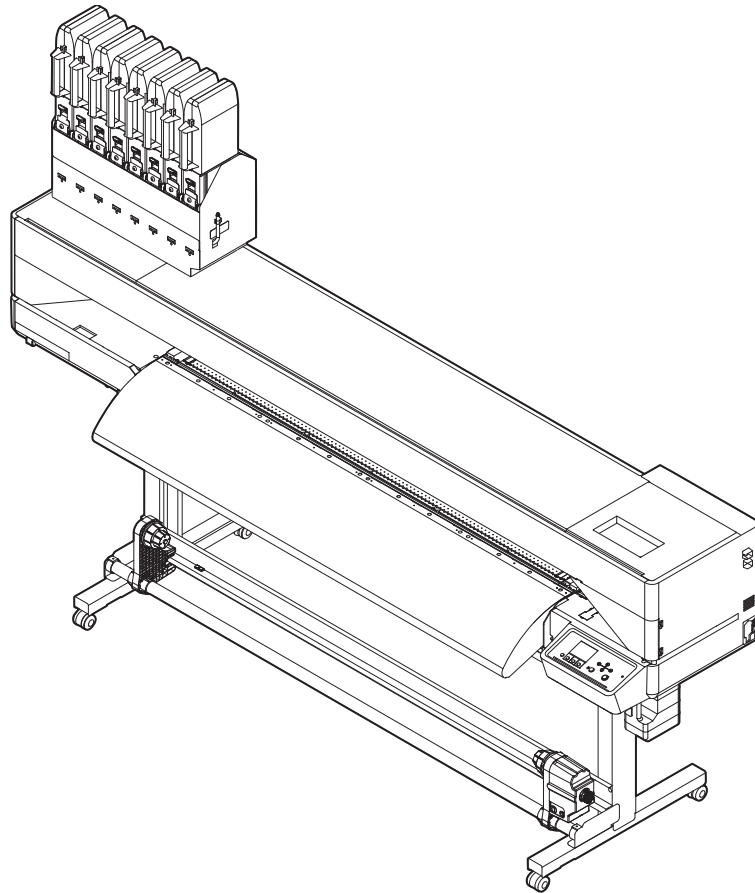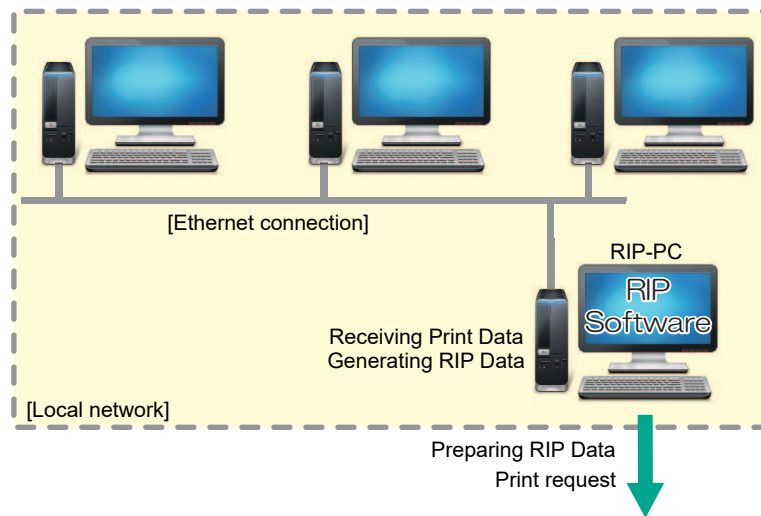
Installing the Mimaki Driver

1 **Download the Mimaki driver from our website.**

- https://mimaki.com/download/inkjet.html
  [(Example: TS200-1600)] > [Driver/Utility]

2 **Install the MIMAKI driver.**

Installing RIP Software

The explanation here applies to MIMAKI RIP software (RasterLink).

1 **Install RasterLink.**

- The following icon appears on the PC desktop once the software has been installed.

- For more information, refer to the RasterLink installation guide. https://mimaki.com/download/software.html

- Once installed, activate the license for Rasterlink. Otherwise, "Profile Update" will not start.

Obtaining Color Profiles

Print quality (e.g., tone, bleeding) will vary depending on the media and ink set. To maintain consistent print quality, select a color profile that suits the media and ink set.

- The RasterLink Series includes a function allowing color profiles to be downloaded and installed directly from the Internet. For more information, refer to "Installing Profiles" in the RasterLink Series installation guide.
  https://mimaki.com/download/software.html
  [RasterLink Series used] > [Manuals]
- Color profiles for Mimaki RIP software (RasterLink) are available on the Mimaki website.
  https://mimaki.com/download/inkjet.html
  [(Example: TS200-1600)] > [Profile]

Setting Up RIP Software

The explanation here applies to MIMAKI RIP software (RasterLink).

1 **Launch RasterLink.**

- The [Printer Management] screen appears.
- To add a new model, launch RasterLink, then select [Environment] > [Printer Management].

2 **Register the machine name (Example: TS200-1600).**

(1) Click [Add].
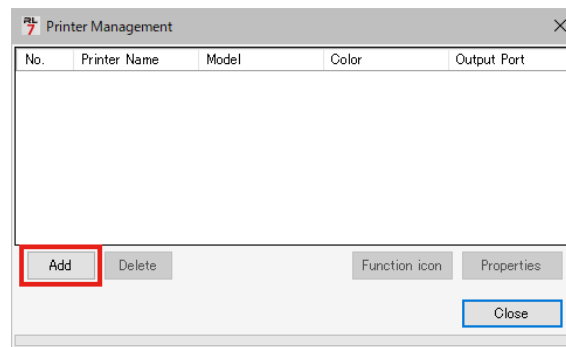
(2) Set the specifics for the machine.
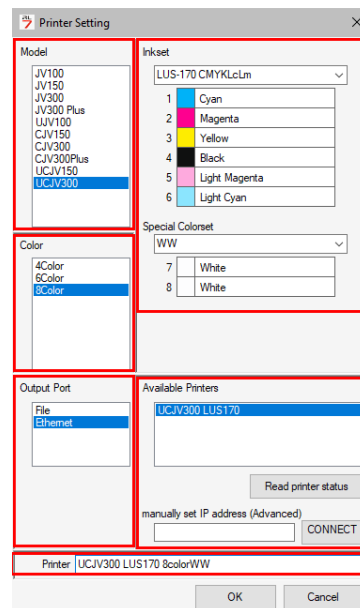
- Model: Select the model.
- Color: Select the ink set filled.
- Output Port: Select the cable connected.
- Available Printers: Select TS200-1600 connected.
- Printer: Enter a name as required.

(3) Click [OK].

- A confirmation screen appears.

(4) Click [Yes].

- Printer registration starts.

- For more information, refer to the RasterLink installation guide. https://mimaki.com/download/software.html

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1.5 Mounting the ink

1 **2L Connect the ink pack.**

- Remove the ink pack and IC chip from the small cardboard box.

2 L ink pack
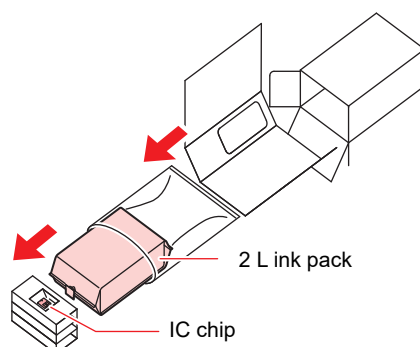
IC chip

2 **Attach chip the IC.**
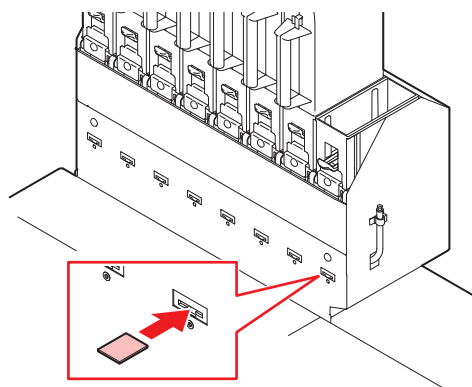
- Be sure to set the IC chip in the correct orientation.
- If the IC chip is not set correctly, ink will not be supplied properly.
- Insert it with the side with the metal attached on the left side.
- When setting up the IC chip, be sure not to touch the metal parts.When setting up the device, be sure not to touch the metal parts. (There is a risk of IC chip destruction due to static electricity.)
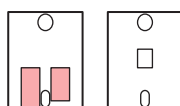
3 **2L Shake the ink pack to the left and right , slowly at least 20 times.**

- When using a used ink pack, to prevent ink from leaking out when shaking, hold the connector of the ink pack with a paper towel or the like and shake it from side to side at least 20 times so that the ink flows out slowly.

- Be sure to wear gloves while working.

- Shaking too hard may cause ink leakage, so please do so carefully.
- Since the ink pack may not be able to print sufficiently if the ink level is low, tilt the ink pack until it is vertical.

Repeat
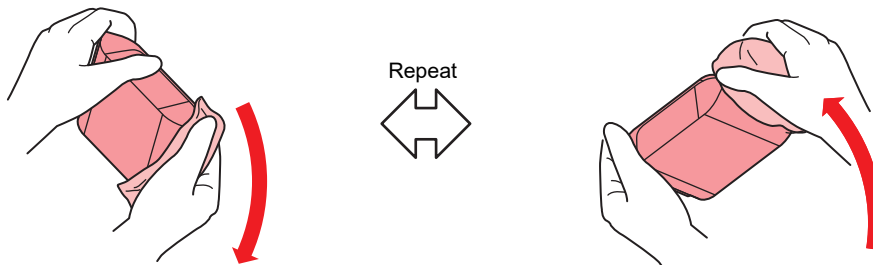
4 **Place the 2L ink pack in the 2L EcoCase.**

- Open the 2L Eco case as shown in the figure.

(1) While pressing the knob

(2) Open left and right

1
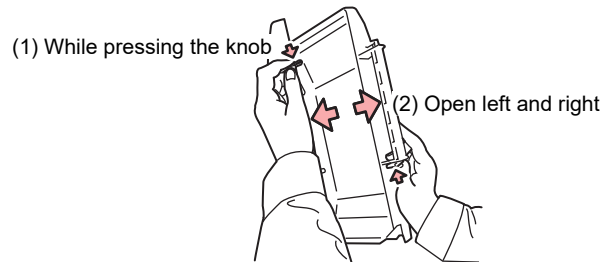
5 **Peel off the seal attached to the connector part of the 2L ink pack.**
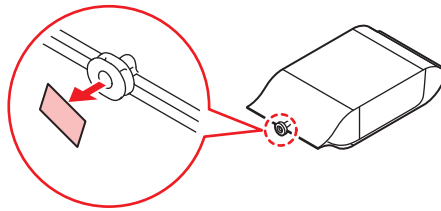
- Remove the seal completely. If any parts of the seal remain, ink may leak when the ink eco-case is removed from the base.

OK

No good
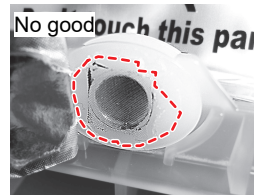
6 **Insert the 2L ink pack with the connector part down and close the 2L EcoCase.**
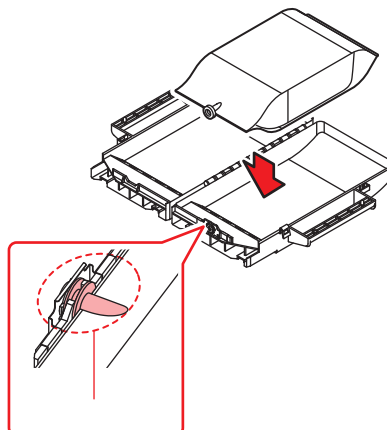
> - When inserting the 2L ink pack, follow the label inside the 2L EcoCase to shape it. If you insert an ink pack without shaping it, you may not be able to use up all the ink.
> - Before closing the 2L EcoCase, please make sure that the connector of the ink pack is aligned with the groove of the 2L EcoCase. If the connector is not aligned with the groove, ink supply may not be possible.

7 **Attach the 2L EcoCase to the base.**
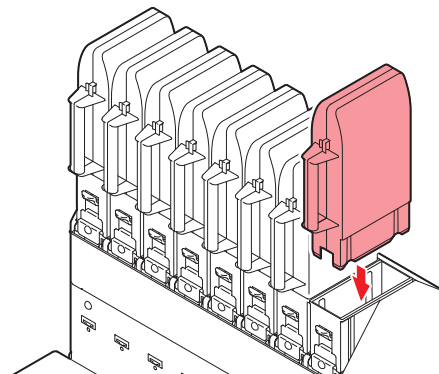
- 2L Eco case supplies ink to the connected printer.
- After 1 to 2 minutes, the EMPTY light of the connected printer will turn off.

> - Push the 2L Eco-Case firmly into the back. If not pushed in far enough, ink may not be supplied.

● IC chips

> - The IC chip stores information such as the ink color, remaining amount, and expiration date.
> - The IC chip is marked with a mark that represents color information.
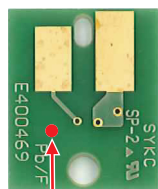
Marking location

Ink Color	Marking
Magenta	🔴 (One red circle)
Blue	🔵🔴 (One blue circle/one red circle)
Yellow	🟡 (One yellow circle)
Black	⚫ (One black circle)
Violet	🔵🔴🔴 (one blue circle/two red circles)
Orange	🟠 (One orange circle)
Fluorescent yellow	🟡🟡 (Two yellow circles)
Fluorescent pink	🟠🟠 (Two orange circles)

Replace the 2L ink pack

 • Wear eye protection when replacing 2L ink packs. There is a possibility that ink may accidentally get into the eyes.

 • After use, about 10 cc of ink remains in the ink pack, but the pack is filled so that the actual amount used is 2 liters.

1 **Push down the lever on the pedestal, and remove the 2L ink Eco-case.**
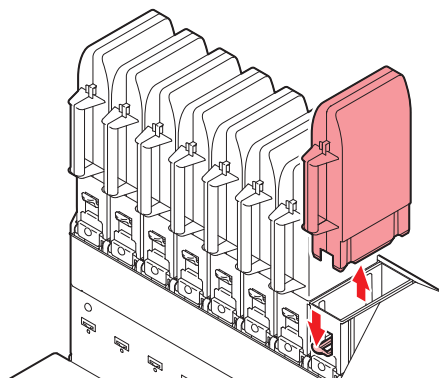
 • When replacing the 2L ink pack, the male connector absorber (accessory) can be replaced periodically to prevent contamination of the inside of the base.
• Replace the absorbent every 5 to 10 2L ink pack replacements.
• Always wear the supplied protective glasses and gloves when replacing the absorbent.
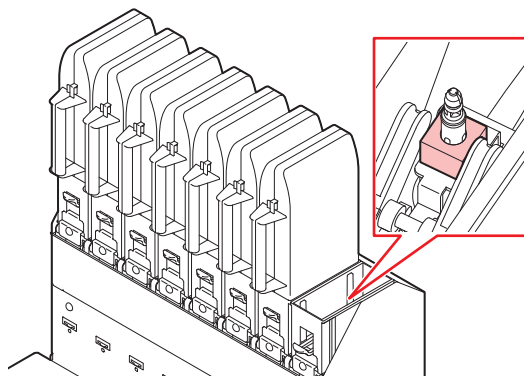
2 **Remove the IC chip.**
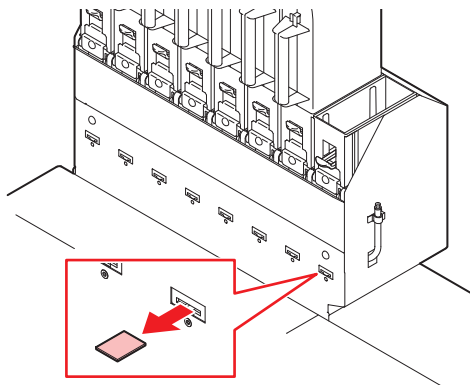
3 **2L Open the eco-case, then Replace the the 2L ink pack.**

• Keep the IC chip removed in step 2 with the used 2L ink pack. (to avoid confusing the IC chip in the new 2L ink packs)

4 **Install the IC chip supplied with the 2L ink pack to be replaced.**

🚫 • Please be careful not to touch the metal part of the IC chip. Static electricity may be generated and the IC chip may be destroyed.
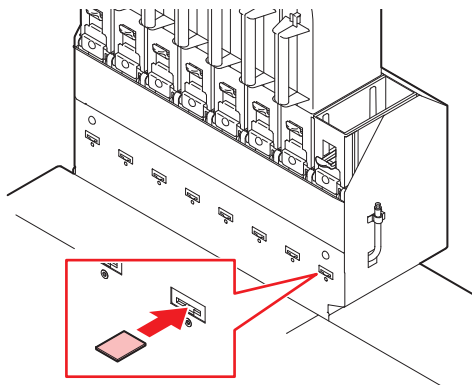
❗ • Empty 2L ink packs should be disposed of by an industrial waste disposal company.
 • When removing a 2L ink pack from a used pack, do the following.
   It will not be possible to accurately control the amount of ink remaining.

  (1) Remove the used 2L ink pack from the 2L eco-case.

  (2) Using a cotton swab, wipe off any ink adhering to the inside of the connector of the 2L ink pack.

Ink pack Connector
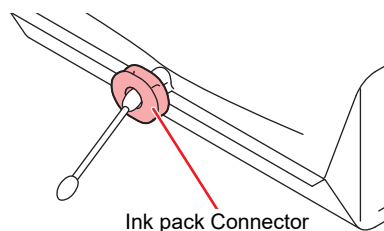
  (3) Remove the IC chip and store it with the 2L ink pack.

  (4) To use the printer again, load the 2L ink pack and the IC chip that was stored with it.

When Ink Near End is Displayed

Ink levels are low. We recommend replacing with new ink as soon as possible, because the ink packs are nearly empty. Printing is still possible but continuous printing is not, and some maintenance functions such as cleaning are disabled. Note that ink may run out during printing.

To check which color ink needs to be replaced, press the [ENTER] key on the LOCAL mode screen. ☞ "Displaying Machine Information (Local Guidance)"(P. 29)

When Ink End is Displayed

The ink has run out. Replace with new ink.

Thoroughly read the following and make sure you understand its contents.
☞ "Notes on Handling Ink or any Other Liquid Used with the Machine"(P. 11)

- Pay close attention to ventilation and be sure to wear safety glasses, gloves, and a mask when handling ink, maintenance liquid, waste ink, or other solutions used with the machine. Leaking ink may adhere to the skin or get into the eyes or mouth.

Precautions for handling ink packs

- Please use the dedicated ink packs for this machine. The machine recognizes and operates with a dedicated ink pack. Failure due to modification of ink packs or other components will not be covered by the warranty, even if the product is still within the warranty period.
- If the ink pack is moved from a cold to a warm place, it should be left in a room temperature environment for at least 3 hours before use.
- Ink packs should be used up within 3 months after opening. Print quality will deteriorate if the package has been opened for a long time.
- Store ink packs in a cool, dark place.
- Keep ink packs out of the reach of children.
- Empty ink packs should be disposed of by an industrial waste disposal company.

● Cautions for new installation and replacement of spout rubber

- Thoroughly moisten the spout rubber surface with maintenance fluid before inserting it. Inserting the spout rubber into the EcoCase without moistening it may damage the rubber.
- At this time, use a maintenance fluid appropriate for the ink type.

utside rubber

Spout rubber

nside rubber

Spout rubber
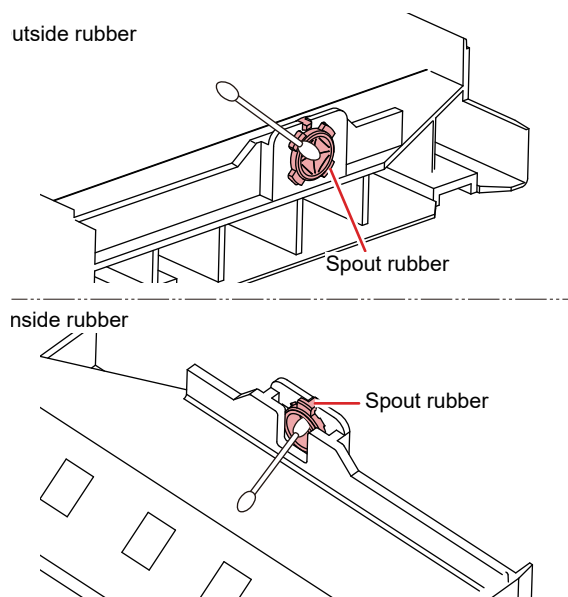
● Cautions for using used ink packs

- Wipe off any ink adhering to the inside of the ink pack's connector with a cotton swab Inserting an ink pack with ink remaining inside the connector may cause ink leakage when the ink pack is used again.

⚠ • Do not insert the cotton swab too deeply. Ink may start leaking from the ink pack and not stop.

Ink pack Connector
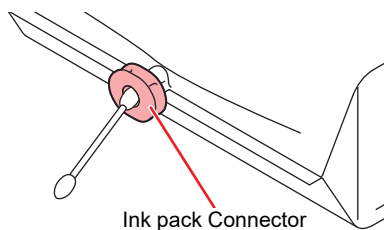
● **Points to note when setting the EcoCase in the main unit**

❗ • Insert the Eco-Case fully to the base of the case. Check the gap between the pedestal and the Eco-Case, and if there is a gap, reinsert the Eco-Case.

Eco-case

Pedestal

No gap   Gap
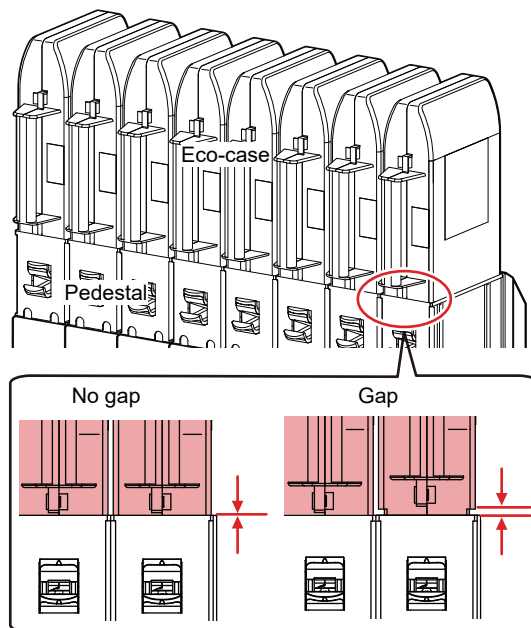
● **How to agitate ink packs in the Eco-Case**

For stirring with the pack removed (recommended method)

• Wipe the ink from the connector of the ink pack and the inside of the spout rubber before reinserting it.
• Agitation should be done after covering the connector part of the ink pack with a non-woven cloth (e.g., cloth).

When stirring the entire Eco-Case

• cover the spout rubber with a non-woven cloth (e.g., cloth) before agitating.

Repeat
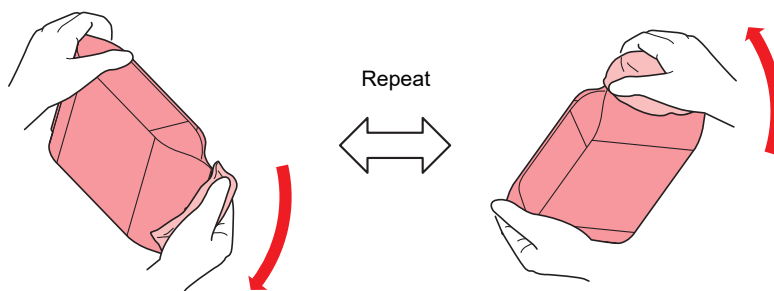
🚫 • Do not shake the ink pack strongly. Shaking the ink pack strongly or swinging it around may cause ink to leak from the ink pack.
• Never refill the ink packs with ink.Doing so may cause failure. We are not responsible for any problems caused by using refilled ink.

	• Do not disassemble the ink pack.

Chapter 2 Printing

This chapter

This chapter describes printing procedures and settings.

2.1 Print Process

1. Turn on the power.

☞ "Turning On the Power"(P. 30)

2. Connect a RIP PC to the machine.

☞ "Using a USB Cable"(P. 34)
☞ "Using a LAN Cable"(P. 33)

3. Setting Up RIP Software

☞ "Installing RIP Software"(P. 36) (required first time only)
☞ "Obtaining Color Profiles"(P. 36)
☞ "Setting Up RIP Software"(P. 36) (required first time only)

4. Adjusting Print Head Height

Adjust the height adjustment lever to suit the media. ☞ "Adjusting Print Head Height"(P. 50)

High

Height adjustment lever

Low
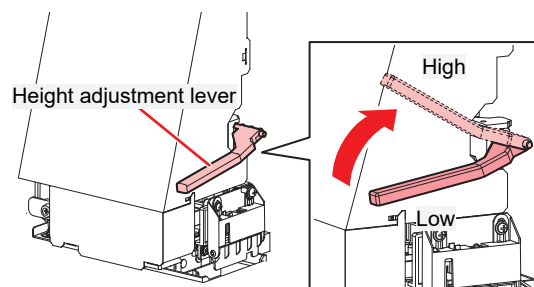
5. Loading the Media

This machine can be used with roll media and leaf media. ☞ "Loading the Media"(P. 51)

Paper core

Take-up unit
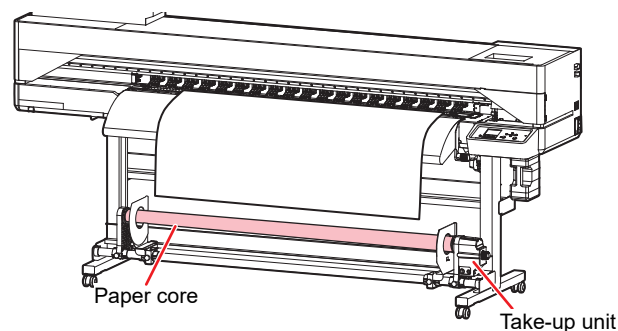
6. Check the state of the print head nozzles.

☞ "Test Printing"(P. 63)

Good example   Bad example

Nozzle Deflection   Nozzle clogging
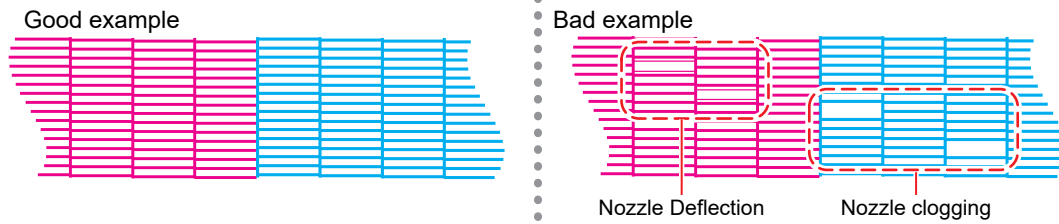
7. Clean the head to clear malfunctioning nozzles.

There are three different head cleaning methods. Choose the head cleaning method based on test print results. ☞ "Head Cleaning"(P. 65)

8. Adjust the media feed amount.

☞ "Feed Correction"(P. 67)

Second band

Good example   Bad example

First band
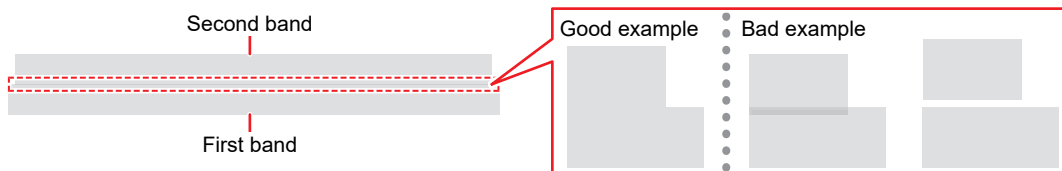
9. Adjust the drop position for bi-directional printing.

☞ "Correcting the Drop Position"(P. 69)

+ ← 0 → −

Media feed direction

In this case, the drop position correction value will be "+4
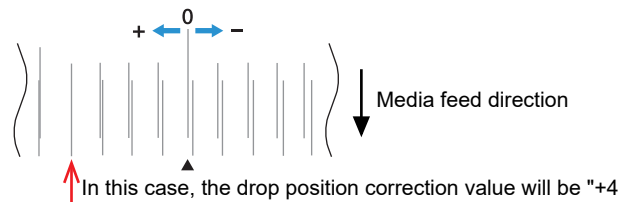
10. Preparing RIP data

☞ "Preparing RIP data"(P. 71)

11. Printing RIP data

☞ "Printing"(P. 73)

12. Cutting the media

☞ "Cutting the media"(P. 76)

2

2.2 Adjusting Print Head Height

Adjust the height of the print head according to the thickness of the media you are using.

Range	Gap between print head and platen
Low (recommended)	3.0 mm (default setting)
High	3.5 mm

> ⚠ • Be sure to correct the dot position after altering the print head height. ☞ "Correcting the Drop Position"(P. 69)

> (Important!) • With inkjet printers, if the gap between the print head and media increases, the ink droplets tend to vaporize before they reach the media. Vaporized ink may adhere to the print head nozzle surface and media, affecting print quality and causing failure of the print head. Adjust the print head height to suit the media.

1 **On the LOCAL mode screen, select [MENU] > [Maintenance], then press the [ENTER] key.**

   • The Maintenance menu is displayed.

2 **Select [Station Maint.] > [Head height switching], then press the [ENTER] key.**

   • The carriage moves over the platen.

3 **Use the height adjustment lever to adjust the height.**

   • Adjust the height adjustment lever so that it is at the desired height. If the lever is not set to the correct position, problems such as media jamming and misting may occur, resulting in impaired print quality.
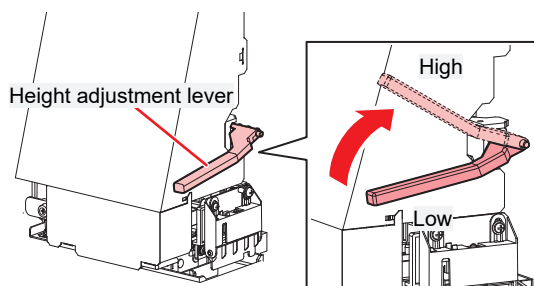
4 **Press the [ENTER] key.**

5 **Select [LOW/HIGH] on the screen, then press the [ENTER] key.**

2.3 Loading the Media

	• Adjust the head height before loading media. Moving the carriage after the media has been loaded may result in the print head coming into contact with the media and being damaged.

Media

● **Media handling precautions**

	• Use Mimaki-approved media to ensure consistent high-quality printing.

⚠ WARNING

	• Assign at least two persons to load roll media. Disregarding this precaution may result in low back pain due to the weight of media.

NOTICE

	• Protect media from dust when stored. Otherwise print quality may be reduced. • When storing standard-size media rolled up, store with the coated surface facing out.
	• Do not leave the media in the machine when not in use. Otherwise dust may accumulate on the media. Do not use media that has been wiped free of dust. Wiping media can generate static electricity, possibly affecting print quality. • Do not use media immediately after removing it from the package. The media may expand or contract depending on the temperature and humidity of the location in which it was stored. Allow the media to stand for at least 30 minutes in the same indoor environment as the machine before loading it. • Do not use media if it is curled. Curled media may not only damage the print head, but may also affect print quality.
(Important!)	• The underside of the media may be soiled depending on how the printed media has been stored (due to weight when laying printed media rolls horizontally, for example) and the media type. Perform a test beforehand to check that the media does not transfer ink to the underside of the adjacent media.

2

Take-up unit

Use the switch on the take-up unit to change the media take-up direction.

ON/OFF button

Direction selector switch

Name		Overview
Direction selector switch	Up	To take up media with printed surface on the inside
	Down	To take up media with printed surface on the outside
ON/OFF button		Press the button to start/stop the take-up unit. The setting can be altered so that the take-up unit operates only while the button is depressed. ☞ "Function Setting Menu"(P. 85)

Adjusting the Torque Limiter

The take-up unit (right side) is fitted with a torque limiter.

Turn the torque limiter adjustment nut to adjust take-up tension.

Min	Mid	Max (recommended)
Adjustment nut Torque scale		
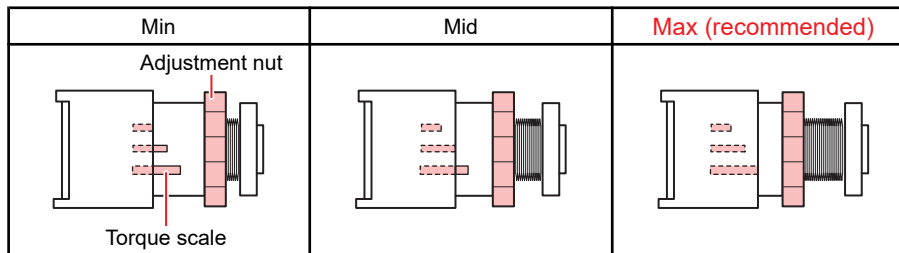
- • For normal printing: Adjust the torque to "**MAX**".
- • Depending on the media, increasing the torque may cause image defects due to the pinch roller and grit rollers failing to grip the media. Reduce the torque if the media slips.

- • Do not tighten beyond the maximum torque setting. Overtightening may damage the take-up unit.

● Increase tension (clockwise)

Increase tension when using with heavy or thick media, such as tarpaulin. Perform adjustments manually.
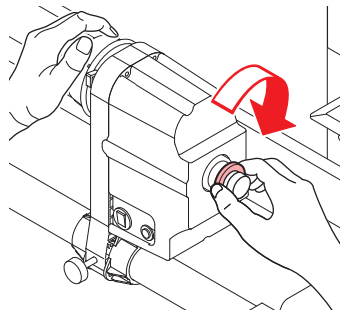
- • Do not use the torque adjustment handle. Using the torque adjustment handle will cause overtightening. Overtightening may damage the take-up unit.

● Decrease tension (counterclockwise).

Decrease tension when using lightweight media. Use the "torque adjustment handle" provided.

2
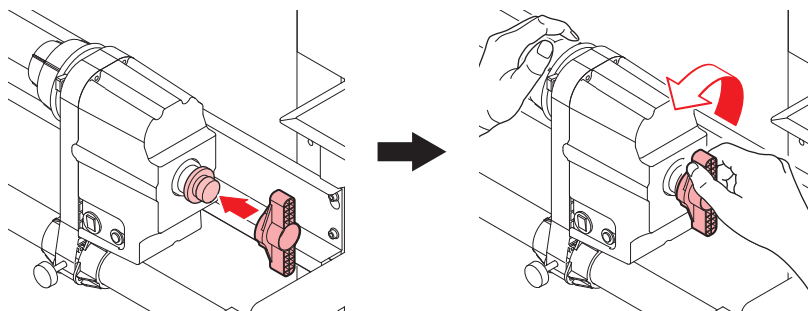
Feeding unit

Using the Media Stopper

When pulling out a fixed length of media by hand, the roll holder locks, stopping the media from being pulled out.

● **Lock the media stopper**

Push the side pin while pressing on the media stopper. Releasing the media stopper in this state locks the roll holder.
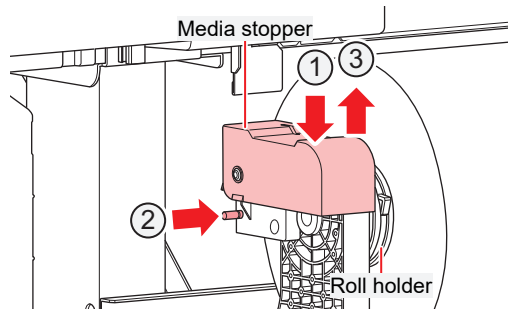
> • Be sure to lock the media stopper when loading roll media or printing.

● **Release the media stopper**

Press the media stopper to release the roll holder.
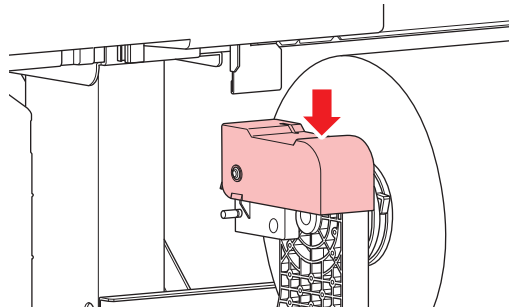
Roll Holder Setting Position

Loosen the knob screw on the rear left roll holder, then move it.

The leg stay has a label showing roll holder mounting positions. Use it as a reference to move the roll holder, then secure using the knob screw.

Set the roll holder reference line within the area indicated by the arrows as shown below.

| Roll Holder Set Position | 3 Inch Roll Media ▷ | ◁ |
| | 2 Inch Roll Media ▷ | ◁ |

Setting position for 3-inch paper core

Setting position for 2-inch paper core

Reference
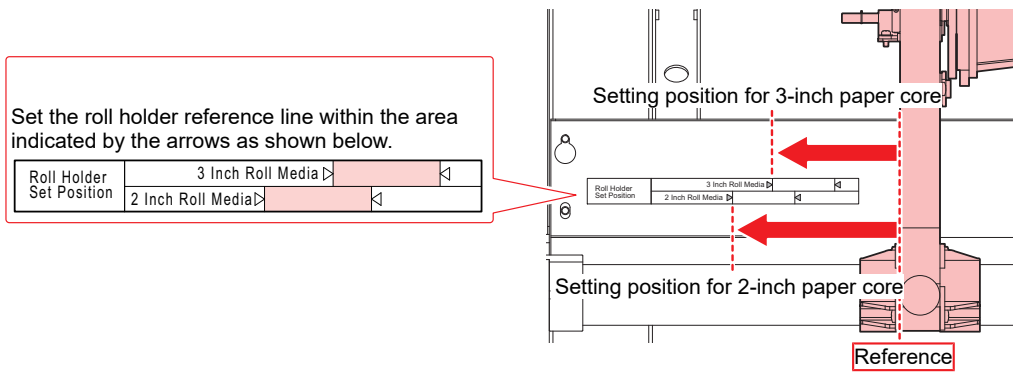
Loading the Roll Media

1   **Raise the clamp lever.**
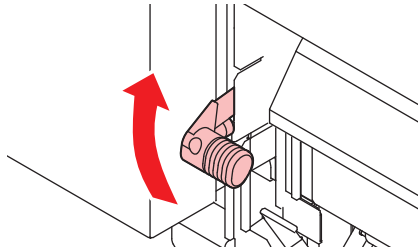
2   **Move the rear left roll holder to the roll setting position.**

- Unscrew the roll holder retaining screw, move the roll holder, then retighten the retaining screw.
☞ "Roll Holder Setting Position"(P. 55)

3   **Insert the paper core of the roll media on to the rear left roll holder.**

- Push in until the paper core moves no farther.
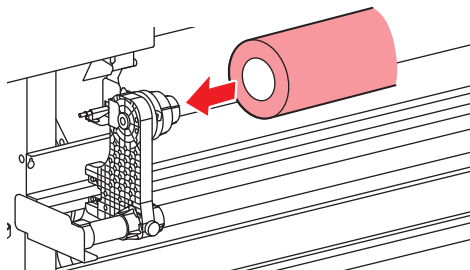
4   **Insert the rear right roll holder into the paper core.**

- Unscrew the roll holder retaining screw, move the roll holder, then retighten the retaining screw.
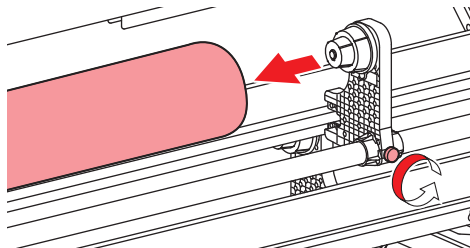
5   **Insert the media between the pinch rollers and the grit rollers.**

- Inserting the media at an angle allows smooth insertion without catching or sticking.

6   **Lower the clamp lever.**

- Hold the media with the pinch roller and grit rollers.
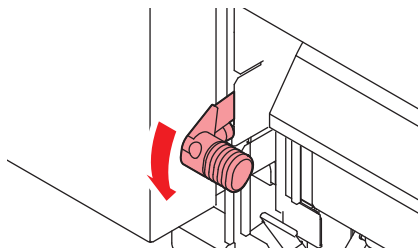
7 **Lock the media stopper.**

- Push the side pin while pressing on the media stopper. Releasing the media stopper in this state locks the roll holder.
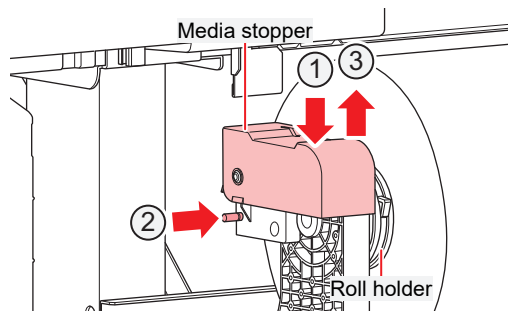
8 **Move to the front of the machine, raise the clamp lever and pull out the media.**

- Make sure the media does not fall to the rear.

- Adjust the rear roll holder position so that the media does not cover the right-hand slit line on the platen. Movement at an angle may result in damage to the print head.
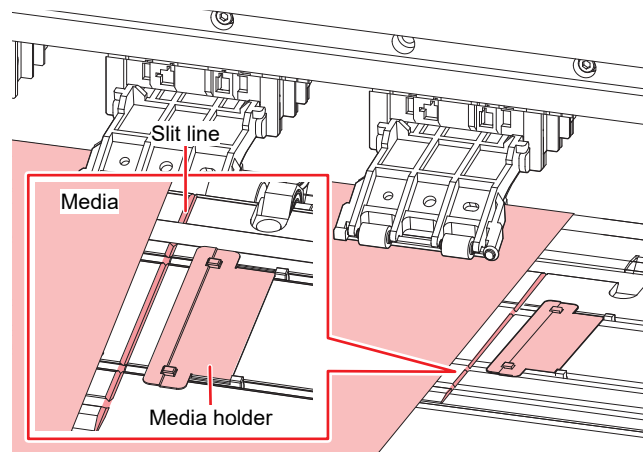

- The areas extending 5 mm from both sides of the media are margins.

9 **Gently pull out the media and stop at the position where it is gently locked in place.**
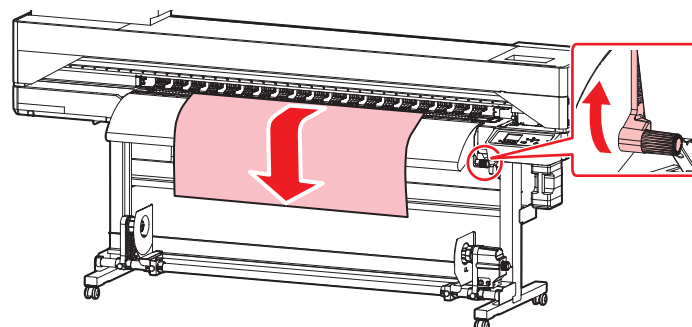
10 **Check how far the media was pulled out.**

- Pull the front edge of the media gently at several points to confirm that the media was pulled out by the same amount.

11 **Lower the clamp lever.**
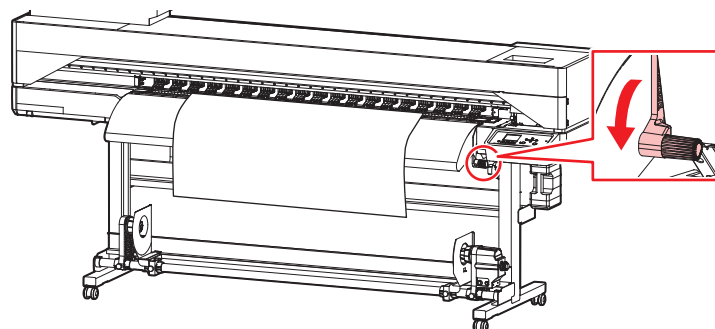
> • After lowering the clamp lever, check that the tension on the feed side media is even.

> • Do not pull the media when the clamp lever is lowered (the media is clamped). Doing so may damage the machine.

> When the machine is not in use, raise the clamp lever to **separate the pinch rollers from the grit rollers**.
> • Leaving the pinch rollers lowered may cause them to become deformed and prevent media from being fed correctly.
> • Leaving media loaded will subject it to force from the pinch rollers, which may leave pinch roller marks on it.

12 **Secure the media in the media holder.**
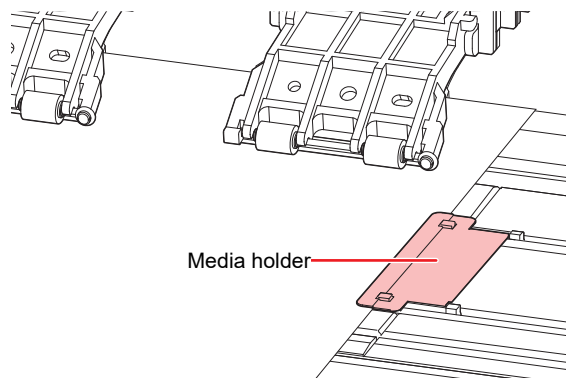
Media holder

> • Do not use the media holder when printing on thicker media.
> • Use the media holder when detecting media.

13 **Select the media to be used.**

Media selection	1/2
● Transfer paper	1300 mm
○ Unregistered	
○ Unregistered	

> • To use unregistered media, select [Unregistered] to register the media. ☞ "Registering the Media"(P. 61)

14 The media width is detected.

- No change: Only the right side of the media holder is detected.
- Media width re-detection: The media width is detected.

Transfer paper	
Media Width	1300 mm
	No change
	Media width

- Media width may not be detected correctly for certain colors or types of media. When media width cannot be detected correctly, set the media width detection method to "MANUAL".
- If the media width detection method is set to "MANUAL", set the media width manually ([MENU] > [Media Setting] > [Media Information] > [Media Width] > [Detection Type] Media Setting Menu).
- A notification reading "Media Set Position R" will appear after media width detection if the media is too far to the right of the specified position. Reload media in the specified position.
- If Media Remain Manage is set to "ON", the Input Media Length screen will be displayed. ([MENU] > [Media Setting] > [Media Information] > [Media Remain] > [Media Remain Manage] Media Setting Menu).

15 Load an empty paper core on the take-up unit.

Paper core
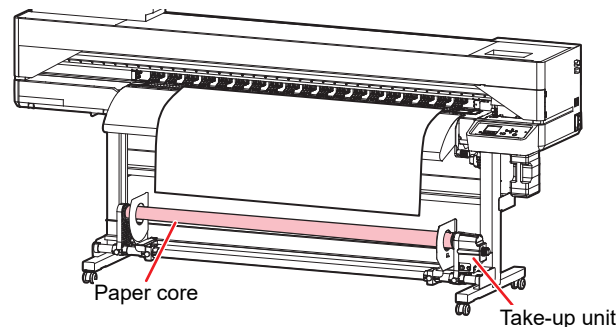
Take-up unit

- Use the take-up unit for media with low stiffness. If not, the media may rise up on the platen and damage a print head.
- Do not use paper tubes that are damaged, such as those that are deformed or worn, as they may prevent proper winding.

16 Press ⟱ to feed the media until it reaches the paper core on the take-up unit, then press the [ENTER] key.

17 Secure the middle of the media to the paper core with adhesive tape, then secure the left and right sides of the media.

- Pull the lower edge of the media evenly on both the left and right sides, check to confirm that it is free of sagging and creasing, then affix the tape.
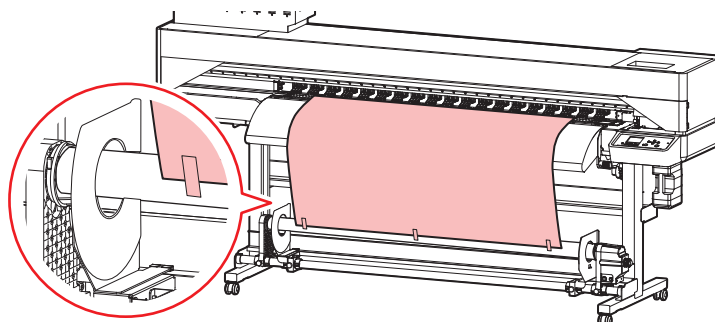
18 **Press ⊽ and wrap the media around the paper core about three times.**

- Check to confirm that the media does not lift up.If there is slack, please rewind it again.

No Good | OK
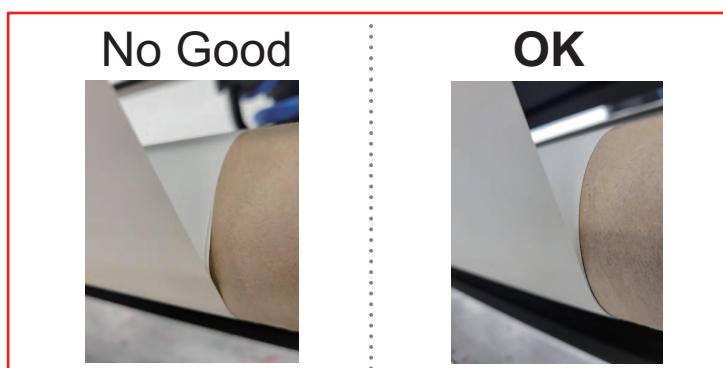
19 **Press the [ENTER] key.**

- Move the take-up unit to the left or right when it is not in use. Print quality may be affected if the front edge of the media hits the take-up unit.
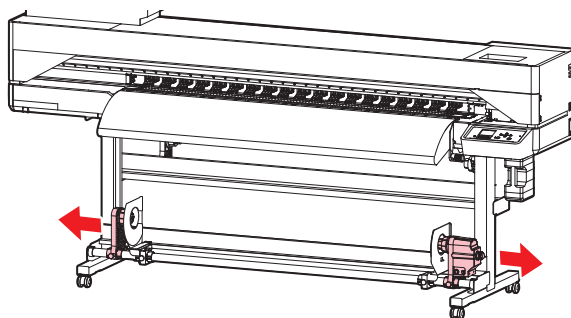
Registering the Media

When the clamp lever is lowered with media being loaded, the Select Use Media screen is displayed. Registration is required to use media that is not registered on the machine.

1 Select [Unregistered].

```
Media selection                    1/2
● Transfer paper            1300 mm
○ Unregistered
○ Unregistered

```

2 Select the media type.

```
Media Type
● Transfer paper (thin)
○ Transfer paperr (mid)
○ Transfer paper (thick)

```

3 Select the media width detection type.

- AUTO: The media width is automatically detected.
- MANUAL: The media width is manually set.

```
Media Registration
Media Detection Type
Please Select.
                              AUTO
                            MANUAL
```

- Media width may not be detected correctly for certain colors or types of media. When media width cannot be detected correctly, set the media width detection method to "MANUAL".

4 Select the method for managing the media remaining amount.

- Select whether or not to manage the media remaining amount with the machine.

```
Media Registration
Media Remain Manage
Please Select.
                                 ON
                                OFF
```

5 Enter the name to be displayed.

- If you do not register the name, press the [ENTER] key.

```
Media Name Change
Media 3
will be changed
(maximum 10 characters)
```

6 **Select whether or not to register the set information.**

do you optimize setting?
Execute
Do not

- You can change the settings later. ☞ "Media Setting Menu"(P. 78)

2.4 Test Printing

Print a test pattern to confirm that the ink prints correctly. Perform head cleaning if you observe any ejection failures (e.g., nozzle clogging or deflection). ☞ "Head Cleaning"(P. 65)
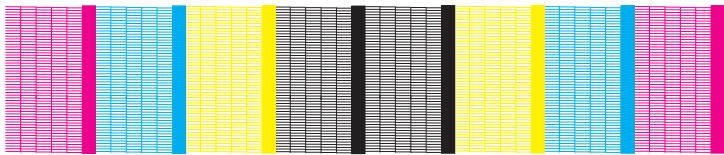
Check beforehand
• Was the print head adjusted? ☞ "Adjusting Print Head Height"(P. 50) • Is media loaded? ☞ "Loading the Media"(P. 51)

> • Load media at least 500 mm wide. You cannot print the entire pattern if media less than 300 mm wide is used.

> • Select [Maintenance] > [Nozzle Recovery] > [Test Print], then select "ON" to perform nozzle recovery and test printing.
> Registration is required to perform nozzle recovery. ☞ "Registering Nozzle Recovery Manually"(P. 83)

Changing the Layout Direction for Test Printing

You can change the layout direction for test printing.

☐ : Scan direction
(Prints repeatedly in the horizontal direction.)

☐ : Feed direction
(Feeds the medium and prints repeatedly in the longitudinal direction.)
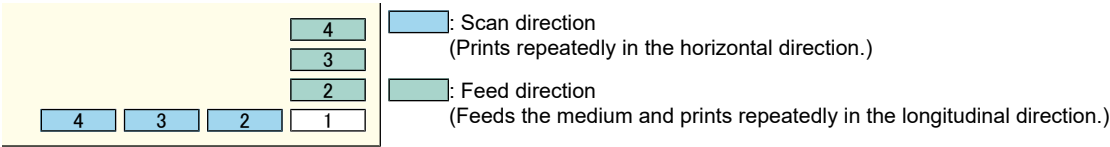
1 On the LOCAL mode screen, select [TEST PRINT/CLEANING] > [Test Print], then press the [ENTER] key.

• The Test Print menu is displayed.

2 Select [Scan Dir.] or [Feed Dir.], then press the [ENTER] key.

• Test printing starts.

Good example

Bad example

Nozzle Deflection   Nozzle clogging
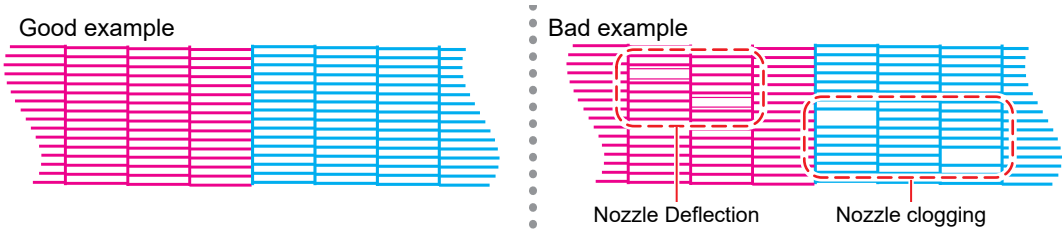
3 Check the print results.

Ejection Failures

Typical examples of ejection failures (e.g., nozzle clogging, deflection) are as shown below. In order to prevent printing in such a state, check whether the ink has been properly ejected regularly before printing.
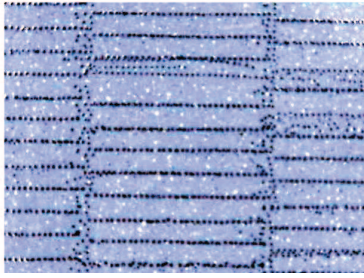
Nozzle Deflection

Nozzle clogging

Ink drips

Mist
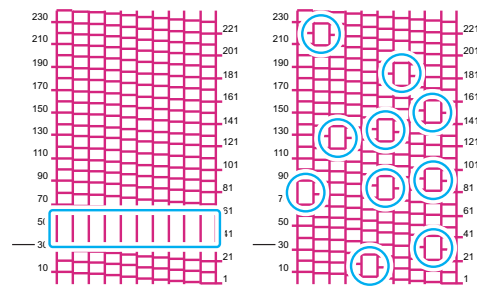
Mixed air

2.5 Head Cleaning

The following head cleaning methods are available. Choose the method based on test results. Cleaning is not possible when the [Ink Near End] or [Ink End] errors are displayed. Replace with new ink. ☞ "Replace the 2L ink pack"(P. 41)

Item	Details
Soft	If the print shows a bent line (Nozzle deflection)
Normal	If the print shows a missing line (nozzle clogging)
Hard	If soft cleaning and normal cleaning fail to resolve ejection failures (e.g., nozzle clogging or deflection).

1 On the LOCAL mode screen, select [TEST PRINT/CLEANING] > [Cleaning], then press the [ENTER] key.

• The Cleaning menu is displayed.

2 Select the cleaning type, then press the [ENTER] key.

3 Run another test print and check the print results.

• Repeat the cleaning and test printing process until the print results appear normal.

• Do the following if head cleaning fails to resolve the ejection failures (e.g., nozzle clogging or deflection).
☞ "Cap Rubber Cleaning"(P. 92)
☞ "Print Head Nozzle Washing"(P. 122)
☞ "Wiper Cleaning"(P. 94)
☞ "Perform a Fill Up Ink"(P. 84)

2

2.6 Auto Correction

The auto-correction function (DAS: Dot Adjustment System) detects a correction pattern with the sensor and automatically corrects the drop position.

1 **On the LOCAL mode screen, select [ADJUST].**

```
LOCAL

⯭ LOW            ▱ 0.0mm

M  M  C  C  Y  Y  K  K
ADJUST              DATA CLEAR
```
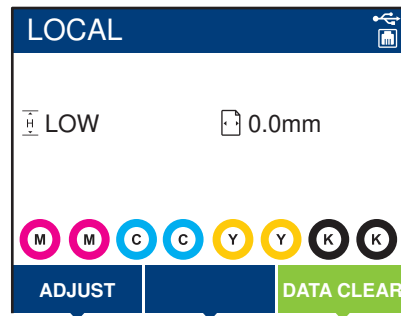
2 **Select [Auto-correction], then press the [ENTER] key.**

3 **Select a setting item, then press the [ENTER] key.**

- The following three items can be configured:
  [All]: Automatically performs feed and dot position correction.
  [Feed Comp.]: Automatically performs feed correction.
  [Drop.PosCorrect]: Automatically performs dot position correction.

- Dot position correction can also be performed for each printing condition. In this case, select [Media Setting] > [Auto-correction] > [Drop.PosCorrect] > [Printing conditions], then press the [ENTER] key.

- Check to confirm that the media does not lift up.
- Load white and clean media.
- Do not send RIP data from the PC during pattern printing.
- If automatic correction is unsuccessful, correct the position manually. [MENU] > [Media Setting] > [Feed Comp.] or [Drop.PosCorrect] ☞ "Feed Correction"(P. 67)☞ "Correcting the Drop Position"(P. 69)

2.7 Feed Correction

Changing the media may affect the feed amount due to various factors, including the weight and thickness of the media and whether the take-up unit is used. Correct the drop position to suit the type of media used. Image defects (e.g., dark or light streaks) will result if the feed is not properly corrected.

Check beforehand
• Is media loaded? ☞ "Loading the Media"(P. 51) • For roll media, is the rear roll media free of sagging? • When using the take-up unit, is the media mounted on the paper core of the take-up unit? ☞ "Loading the Roll Media"(P. 56)

Feed Correction Procedure

Print a correction pattern, then enter the correction value. The value corrected here will also be updated on the Media Setting menu.

> • When using the take-up unit, load media on the take-up unit before correcting.

1 On the LOCAL mode screen, select [ADJUST].

```
LOCAL
▯ LOW          ▯ 0.0mm

M M C C Y Y K K
ADJUST              DATA CLEAR
```
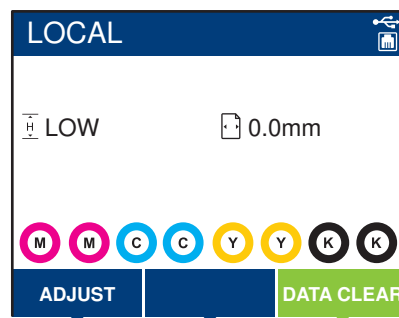
2 Select [Feed Comp.], then press the [ENTER] key.

- Correction pattern printing starts.

3 Check the print results.

- A correction value input screen appears.
- Adjust the bands so that the region between them is evenly colored.

Second band
First band
Good example | Bad example
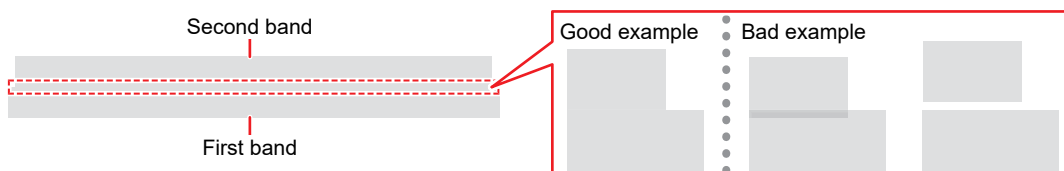
4 Enter the correction value, then press the [ENTER] key.

- "+" input: Increases the separation between bands.
- "-" input: Reduces the separation between bands.
- Increment the correction value by "30" to move the bands by approximately 0.1 mm.

5 Press the [ENTER] key.

- Print another correction pattern to check.

> • Once adjustment is complete, the medium will be fed to the print origin. Sagging may occur in the rear roll medium. Rewind roll media by hand to eliminate any sagging.

Correcting the Media Feed During Printing

You can also correct the media feed amount in REMOTE mode or during printing.

1 **Press [ADJUST] in REMOTE mode or during printing.**

2 **Enter the correction value, then press the [ENTER] key.**

  • Correction value: -9999 to 9999

  • The value entered here will be updated immediately.

2.8 Correcting the Drop Position

Changing the media and print head height and temperature changes around the print head will also alter the drop positions. Correct the drop position to suit the type of media used. Image defects (e.g., overlaid lines or blurred images) will result if the drop position is not properly corrected.

Check beforehand
• Was the print head adjusted? ☞ "Adjusting Print Head Height"(P. 50) • Is media loaded? ☞ "Loading the Media"(P. 51)

> • Load media at least 500 mm wide. You cannot print the entire pattern if media less than 500 mm wide is used.

Drop Position Correction Procedure

Print a correction pattern, then enter the correction value. The value corrected here will also be updated on the Media Setting menu. This must be adjusted for each print resolution.

1 **On the LOCAL mode screen, select [ADJUST].**

```
LOCAL
 LOW              0.0mm

  M  M  C  C  Y  Y  K  K
ADJUST            DATA CLEAR
```
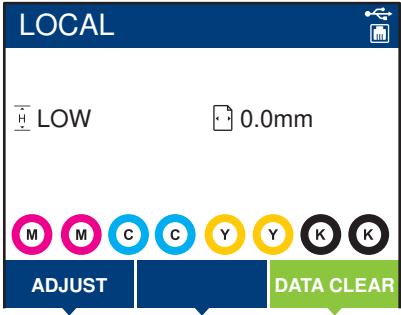
2 **Select [Drop.PosCorrect], then press the [ENTER] key.**

3 **Select the resolution, then press the [ENTER] key.**

• Select the resolution to be adjusted. When "All" is selected, correction patterns for all resolutions will be printed. ☞ "Media Setting Menu"(P. 78)

> • The indicated resolutions are those in the scan direction.

4 **Check the print results.**

• A correction value input screen appears.

• Enter the position where the two upper and lower lines coincide.

Media feed direction

In this case, the drop position correction value will be "+4
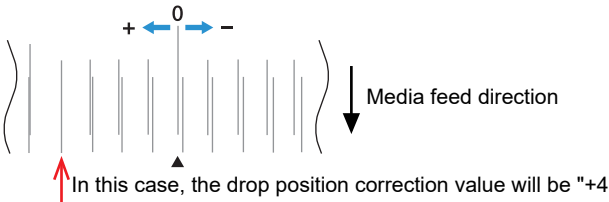
5 **Enter the correction value, then press the [ENTER] key.**

• Correction value: -40 to 40

• If the lines do not coincide when the correction value is within the range -40 to 40, the print head height may have been improperly adjusted. Adjust the print head height.
☞ "Adjusting Print Head Height"(P. 50)

2.9 Preparing RIP data

The explanation here applies to MIMAKI RIP software (RasterLink).

> • Prepare suitable image data for printing.

1 **Launch RasterLink.**

• Click the icon on the PC desktop.

2 **Select the image data to print.**

(1) Select [File] > [Open].

(2) Select the desired image data, then click [Open].

• If multiple printers are registered, select TS200-1600 from "Printer Name".
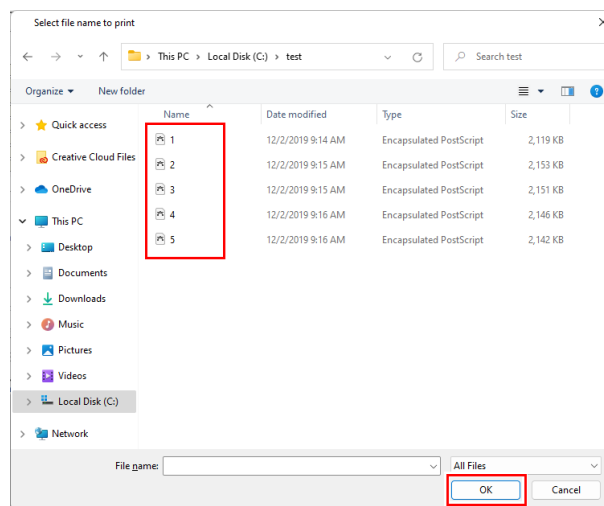
3 **Select the image data imported.**

• The image data is added in the tab for TS200-1600 selected in "Printer Name".
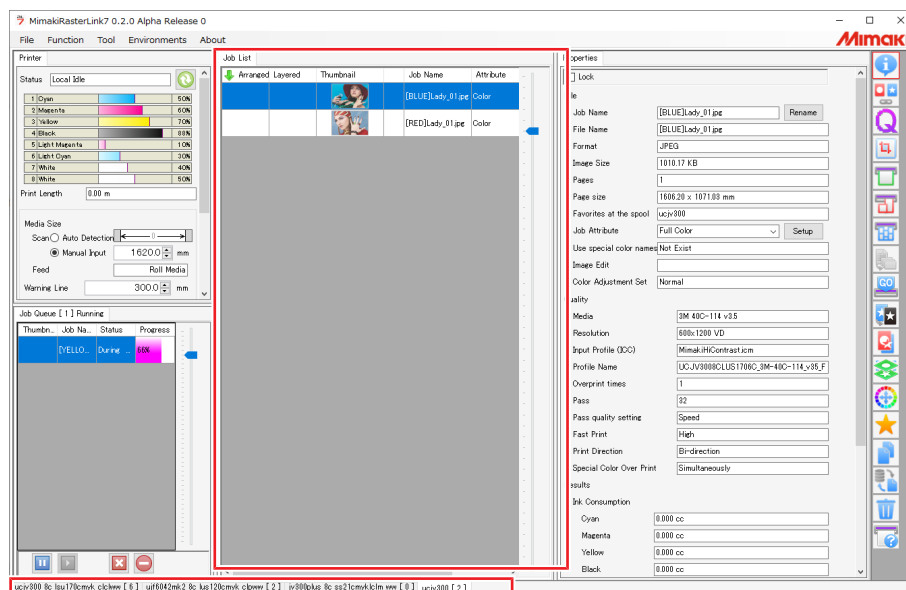
4 **Edit the image.**

- Specify the following settings by clicking the function icons shown on the right-hand side of the screen:

  (General Print): Specifies settings like enlargement/reduction and rotation.

  (Quality): Selects a color profile for the media and ink set loaded in this machine.

- For more information, refer to the RasterLink reference guide. https://mimaki.com/download/software.html

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5 **Print image data.**

- ☞ "Starting Printing"(P. 74)

  (1) Click (Execution) from the function icons on the right-hand side of the screen.

  (2) Select "Immediate Print" or "RIP and Print", then click [Start].

- Media width must be reacquired after replacing media.

  (1) Select the tab for, for example, TS200-1600 in the main window.

  (2) Click (Update the printer status) in the Printer tab.

2.10 Printing

Check beforehand
• Was the print head adjusted? ☞ "Adjusting Print Head Height"(P. 50) • Is media loaded? ☞ "Loading the Media"(P. 51) • For roll media, is the rear roll media free of sagging? • When using the take-up unit, was the media mounted on the paper core of the take-up unit? ☞ "Loading the Roll Media"(P. 56)

💡 • Condensation may form on the print head nozzle surface depending on the ambient temperature and humidity. The formation of condensation may cause ejection failures (e.g., nozzle clogging or deflection). Perform head cleaning if any ejection failures (e.g., nozzle clogging or deflection) occur during printing. ☞ "Head Cleaning"(P. 65)

Changing the origin

The print start position can be altered. Use the LED pointer to set the origin.

- Print origin default value
  - Feed (longitudinal, X') direction: Approx. 75 mm to rear from platen cutting slot
  - Scan (lateral, Y') direction: 15 mm from right edge of media
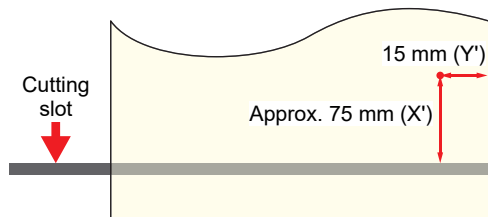
1 On the LOCAL mode screen, press ▲▼◄►.

- The Origin Setup screen appears.

2 Press ▲▼◄► to move the origin to the desired position.

- The carriage moves left and right and feeds the medium.

3 Press the [ENTER] key.

- The origin is updated.

Starting Printing

1 **Send the RIP data from the PC.**

- ☞ "Preparing RIP data"(P. 71)

💡 • If the message "Attention20A Driver version" appears, install the latest Mimaki driver.
https://mimaki.com/download/inkjet.html

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2 **Start printing.**

- Printing starts once RIP data is received.

[Number of passes]   [Scan speed] (Std: standard, Hi: high speed)

[Resolution]   [Dot type]
     VD: Variable dot
     ND: Normal dot

[Nozzle Recovery]

REMORT
600x600   16p / Bi / Hi / Vd
NRS   0.0m

NRS: All nozzles can be recovered
NRS: A part of nozzles can be recovered
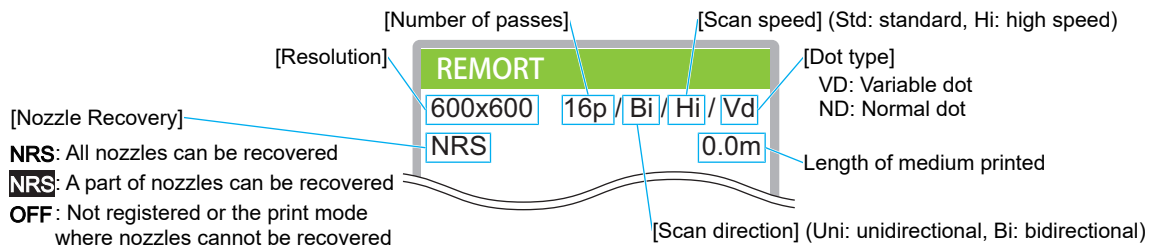**OFF**: Not registered or the print mode
      where nozzles cannot be recovered

Length of medium printed

[Scan direction] (Uni: unidirectional, Bi: bidirectional)

💡 • Print speeds may differ for the same image data, depending on the width of the medium loaded, print origin position, and resolution.
- If an error occurs, the machine switches to LOCAL mode once printing is completed. Further printing is not possible.
- If there are nozzles that cannot be recovered, "Nozzle recovery not possible" will be displayed at the start of printing. If nozzle clogging is noticeable, try increasing the number of passes or changing the resolution.

Pausing Printing

1 **Press [LOCAL] while printing is in progress.**

- Printing is paused.
- If data is being sent from a PC, data transmission is paused at the PC.

2 **Press [REMOTE].**

- Printing resumes.

💡 • No other functions can be used when printing is paused.

Stopping Printing (Data Clear)

1 On the LOCAL mode screen, select [DATA CLEAR].

LOCAL

🔲 LOW   ⬚ 1340mm

M M C C Y Y K K

ADJUST   DATA CLEAR
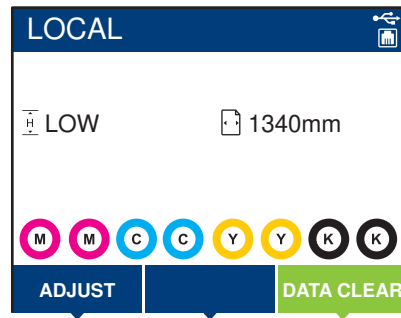
2 Press the [ENTER] key to clear the received data.

• The receive buffer is cleared.

2

2.11 Cutting the media

1 **On the LOCAL mode screen, press** ⒜⒥⒧⒭**.**

   • The Origin Setup screen appears.

2 **Press** ⒜⒥ **to feed the media to the position required for cutting.**

3 **Select [CUT].**

4 **Press the [ENTER] key.**

   • The media is cut.

Chapter 3 Setup

This chapter

This chapter describes the [MENU] functions.

3.1 Media Setting Menu

When you use the machine for the first time, the Select Use Media screen is displayed. Registering the Media The media Information and correction value can be saved in advance for specific media.

The user can select to prioritize the settings on the machine or the settings on the PC. Setting individual menus to "Host" prioritizes PC settings. To prioritize settings for this machine, select a setting other than "Host".

- For more information on how to specify RIP software, refer to the RIP software operating manual.

● Menu List

Item	Setting		Details
	*1	*2	
Feed Comp.	-9999 to **0** to 9999	-	Corrects the media feed amount. Print a pattern and enter the correction amount. ☞ "Feed Correction"(P. 67)
Drop.PosCorrect	-	-	Corrects the drop position for bi-directional printing. ☞ "Correcting the Drop Position"(P. 69)
(Resolution)	*	-	Select the resolution to be corrected. When "All" is selected, correction patterns will be printed for all resolutions. * The available resolutions vary according to the model.
(Correction Value)	-40.0 to **0** to 40.0	-	Check the pattern and enter correction values.
Auto-correction	-	-	The auto-correction function (DAS: Dot Adjustment System) detects a correction pattern with the sensor and automatically corrects the drop position.
All	-		When "All" is selected, "Feed Comp." and "Drop.PosCorrect" are corrected.
Feed Comp.	-	-	• Check to confirm that the media does not lift up.

Drop.PosCorrect	-	-	• Load white and clean media.
			  • Do not send RIP data from the PC during pattern printing.
			  • If automatic correction is unsuccessful, correct the position manually. [MENU] > [Media Setting] > [Feed Comp.] or [Drop.PosCorrect]

(Resolution)	*	-	Select the resolution to be corrected. When "All" is selected, correction patterns will be printed for all resolutions, and the drop position is corrected automatically. * The available resolutions vary according to the model.
MAPS4*	-	-	MAPS4: Mimaki Advanced Pass System This function disperses the boundaries between passes to make feed streaks between passes less visible. Altering MAPS4 may alter the color. This function may be less effective with certain types of images.
MAPS4*	**AUTO**/ MANUAL	-	This should normally be set to "AUTO". When set to "MANUAL", the following items are displayed:
Speed	50 to 100 %	-	Reducing speed will make streaks less visible. However, printing will be slower.

| Item		Setting		Details
		*1	*2	
	Smoothing Level (Color)	0 to 100 %	-	Increasing smoothing makes streaks less visible. Make separate settings for color and spot color (white).
	Smoothing Level (Spot)			
Media Information		-	-	Enter the media information.
	Media Type	-	-	Select the media type to be used. The available media types vary depending on the model.
	Media Width	-	-	Sets the media width detection method.
	Detection Type	**AUTO**/ MANUAL		• AUTO: The media width is automatically detected with the sensor. • MANUAL: ◀ Press ▶ to set the media width manually. – When media width cannot be detected correctly, set the media width detection method to "MANUAL".
	Media Remain	-	-	The remaining roll media amount can be displayed and printed out in REMOTE mode.
	Media Remain Manage	ON/**OFF**	-	• ON: An input screen appears once the media width is detected. ▲ Press ▼ to set the media length. Press the [FUNC3] key on the "Origin Setup" screen to print the date and remaining media amount. • OFF: The remaining media amount is not displayed.
	Length	0 to 500 m	-	Enter the roll media length.
Detail Setting		-	-	This is used to set various functions.
	Vacuum Fan	**Host**/Weak/ Standard/ Strong	Strong	Sets the force with which the medium is held down. • This can be used to prevent media jamming and print head damage caused by the media lifting up.
	Continuous Running	ON/OFF		• ON: The media is constantly held down under vacuum. • OFF: The media is held down by vacuum only when required, such as during printing and feeding.
	Feed Speed	**Host**/10 to 100 to 200 %	100	Sets the media feed speed. • Depending on print conditions, the speed may not vary for certain settings. • Setting to 100 % or more reduces the time required to complete printing but may affect print quality due to insufficient drying time.
Media Name Change		-	-	You can change the name of a setting type. The name can include alphanumeric characters or symbols.
Delete MediaInfo		-	-	Delete the set media information.

*1. The default settings are shown underlined.

*2. Settings applied if no settings can be made in the RIP software (host) or if this machine is prioritized.

3

3.2 Maintenance Menu

This menu is used for maintenance actions. It also lets the user perform nozzle recovery if nozzle clogging persists even after cleaning and nozzle washing.

● **Menu List**

Item			Setting *1	Details
Station Maint.			-	This moves the carriage to allow station and print head maintenance.
	Carriage Out		-	
		Move To Platen Right End	-	Cleans around the station, including the cap, wiper, and NCU. ☞ "Cap Rubber Cleaning"(P. 92) ☞ "Cleaning the NCU (Option)"(P. 96)
		Move To Maint. Space	-	Cleans around the print head. ☞ "Carriage Underside Cleaning"(P. 93) ☞ "Media Sensor Cleaning"(P. 99) ☞ "DAS (automatic correction function) / Sheet width sensor cleaning"(P. 97)
	Head height switching		-	Adjusts the height of the print head according to the thickness of the media. ☞ "Adjusting Print Head Height"(P. 50)
	Nozzle Wash		1 to 99 min	Washes the print head nozzle surface with maintenance liquid to resolve ejection failures (e.g., nozzle clogging or deflection). ☞ "Print Head Nozzle Washing"(P. 122)
	Pump Tube Cleaning		**OFF** / 1 to 168 h	Sets the interval for washing the suction pump tube (below the cap). ☞ "Ink Discharge Channel Cleaning"(P. 98)
	Custody Wash		1 to 99 min	Perform this step if the machine will not be used for extended periods. The function washes nozzles and drainage channels to maintain the machine in optimal condition. ☞ "When this Printer is Left Unused for a Long Time"(P. 102)
	Replace Wiper		-	Use this function when replacing the wiper. Replacing the wiper resets the wiper usage counter. ☞ "Wiper Replacement"(P. 106)
	Cap Replacement		-	Use this function when replacing the cap. Replacing the cap resets the cap usage time stored in the machine. ☞ "Cap Replacement"(P. 107)
Test Printing			-	Print a test pattern to confirm that the ink prints correctly. Perform head cleaning if you observe any ejection failures (e.g., nozzle clogging or deflection). ☞ "Test Printing"(P. 63)
Cleaning			-	Several head cleaning methods are available. Choose the head cleaning method based on test print results. ☞ "Head Cleaning"(P. 65)
Nozzle Recovery			-	Allows other nozzles to be used for printing if maintenance actions like nozzle washing fail to resolve print defects (e.g., nozzle clogging, deflection).
	Print		-	Prints a pattern to check nozzle condition and register the nozzle. ☞ "Registering Nozzle Recovery Manually"(P. 83)
	Entry		-	Registers the nozzle without printing a pattern.
	Reset		-	Initializes the details set.
	Test Printing		ON/**OFF**	Sets whether to perform nozzle recovery before test printing.
Nozzle Check (Option)			-	☞ "Nozzle Check (Option)"(P. 83)

Item			Setting [*1]	Details
Printing Check			ON/**OFF**	Performs nozzle clogging detection before printing starts.
	Check Interval		-	Sets the nozzle clogging detection timing.
		Length	0.1 to **30.0** to 100.0 m	Performs nozzle clogging detection after the length set is reached and before the next print starts.
		File	1 to **30** to 1,000 files	Performs nozzle clogging detection after the preset number of files has been printed and before the next print starts.
	Continuation Print		**Stop**/ Continuous	Select whether to stop or continue printing if "Nozzle clogging" is detected.
	Action		Off/1 to **10** to 100	Performs nozzle recovery (cleaning followed by nozzle checking) if "nozzle clogging" is detected.
		Cleaning	**Soft**/Normal/ Hard	Sets the cleaning type.
		Retry Count	**0** to 3 times	Performs nozzle recovery (cleaning followed by nozzle checking) for the specified number of times.
	Auto Nozzle Recovery[2]		ON/**OFF**	Performs nozzle recovery automatically if "nozzle clogging" is detected. See below if you wish to perform nozzle recovery manually. ☞ "Registering Nozzle Recovery Manually"(P. 83)
	Judgment Condition[2]		OFF / **1** to 32 nozzles	Set the number of nozzles to be detected as clogged before "nozzle clogging" is detected. Up to 16 nozzles per row can be set. The next print will not start if "nozzle clogging" is detected during continuous printing.
Auto Maint.			-	Sets various maintenance actions to be performed automatically. Set the interval between individual maintenance actions. • If the warning message "Replace Wasteinktank" appears, the automatic maintenance function is disabled. ☞ "Waste Ink Tank Replacement"(P. 113)
	Refresh		0.5/**1.0** h	Sets the refresh interval (when a small amount of ink is ejected from the print head nozzles).
	Cleaning Interval		1 to **48** h	Sets print head cleaning intervals. This will help prevent nozzle clogging.
	Type		**Normal**/Soft/ Hard	Sets the cleaning type for head cleaning.
Print Maint.			-	Sets the maintenance to be performed automatically midway during printing.
	Auto Cleaning		-	Sets the conditions to perform head cleaning after the preset number of files are printed.
		Setup	File/Length/ Time/**OFF**	Sets the conditions to perform head cleaning.
		Interval	-	Sets head cleaning intervals.
		(File)	1 to 1,000	Cleaning starts when the set number of files is exceeded.
		(Length)	0.1 to 100.0 m	Cleaning starts after the length set is reached and before the next print starts.
		(Time)	10 to 240 min	Cleaning starts after the print time set is reached and before the next print starts.

3

Item		Setting*1	Details
	Type	**Normal**/Soft/Hard	Sets the cleaning type for head cleaning.
	Cleaning Check	ON/**OFF**	Sets whether nozzle checking is performed after head cleaning is completed.
	Interval Wiping	**OFF**/3 to 255 min	Wiping starts when the set print time is exceeded.
	Refresh	Weak/Standard/**Strong**	Select the refresh (flushing) time during printing.
Waste Ink Tank		-	Resets or corrects the waste ink tank usage count. ☞ "Waste Ink Tank Replacement"(P. 113)
	Reset Waste Ink Volume	-	Resets the waste ink tank usage count. ☞ "Waste Ink Tank Replacement"(P. 113)
	Adjust Waste Ink Volume	-	Corrects the waste ink tank usage count. ☞ "When "Check Waste Ink Tank" message appears"(P. 113)
	Tank Capacity	-	Displays the waste ink tank capacity.
Fill Up Ink		-	Used to resolve ejection failures that cannot be restored even with cleaning.☞ "Perform a Fill Up Ink"(P. 84)

*1. The default settings are shown underlined.

*2. Displayed only when an optional NCU is installed.

Registering Nozzle Recovery Manually

Allows other nozzles to be used for printing if maintenance actions like nozzle washing fail to resolve ejection failures (e.g., nozzle clogging or deflection).

- Nozzle recovery can be specified for up to 20 nozzles per row. The time taken for printing remains unchanged even when nozzle recovery is set.

- Load media at least 500 mm wide. You cannot print the entire pattern if media less than 500 mm wide is used.

1 Position the media.

2 On the LOCAL mode screen, select [MENU] > [Maintenance], then press the [ENTER] key.

- The Maintenance menu is displayed.

3 Select [Nozzle Recovery] > [Print], then press the [ENTER] key.

- Print a nozzle recovery pattern.
- The Select Entry Nozzle screen appears once printing is complete.

4 Select the "head number and nozzle row" for nozzle recovery, then press the [ENTER] key.

5 Enter the "nozzle number" for nozzle recovery, then press the [ENTER] key.

- Select the entry number before entering the nozzle number.
- Nozzle recovery is set.

6 Press the [ENTER] key once entry is complete.

- Select [Maintenance] > [Nozzle Recovery] > [Test Print], then select "ON" to perform nozzle recovery and test printing.

3

Nozzle Check (Option)

This is used to check for nozzle clogging before printing starts. Sets whether to perform maintenance functions automatically if nozzle clogging is detected.
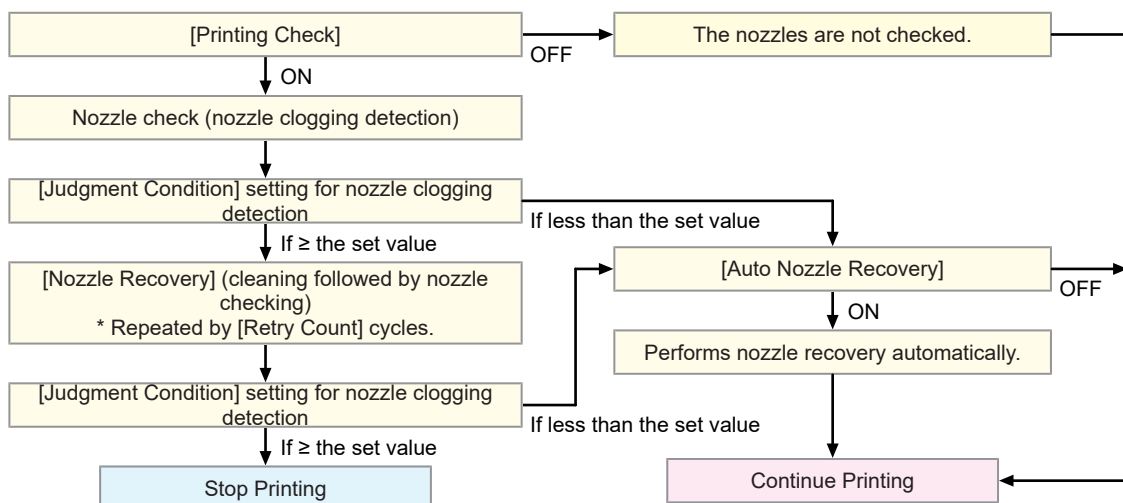
Perform a Fill Up Ink

Use this when nozzle clogging or deflection occurs that cannot be resolved by cleaning.

	• This operation may not be possible depending on the remaining ink level or waste ink volume.Follow the error message to replace the ink pack and reset the waste ink tank.

3.3 Function Setting Menu

This is used to set various operations to ensure optimal machine performance.

● **Menu List**

Item	Setting[*1]	Details
Logical Seek	**Host**/OFF/ON	Sets the range of carriage movement. • OFF: Machine size area Unidirectional printing Bi-directional printing Carriage movement • ON: Print data area Unidirectional printing Bi-directional printing Print data Carriage movement
Take-up Unit	-	Sets the take-up unit operation.
Take-up Unit	**ON**/OFF	Set to "OFF" if the take-up unit is not used.
Take-up SW	**Continuous**/Temporary	Sets the function performed by the ON/OFF button on the take-up unit. Take-up unit • Continuous: Press the button to start/stop the take-up unit. • Temporary: The take-up unit operates only while the button is pressed. The unit stops when the button is released.
Drying Time	-	Sets the time for ink to dry.
Scan	**Host**/0.0 to 9.9 sec	Sets the stop time of the carriage after each scan. • The MIMAKI RIP software (RasterLink) indicates this as "Pause Time per Scan".
Print End	**Host**/0 to 120 min	Sets the stop time after printing. The next data is printed once the set time has elapsed. • The Mimaki RIP software (RasterLink) does not allow the user to specify Print End. If the machine is set to "HOST", the time will be "0".
Power Setting	-	Sets the times to turn the power on and off automatically.
Auto Power-off	5 to **15** to 60 min	Sets the time until the power is automatically turned off.
Auto Power-on	-	Sets the time to automatically turn on the power.
Setup	ON/**OFF**	Sets whether to turn on or off the power.
Time	**0:00** to 23:59	Sets the time to turn on the power.

3

Item			Setting[1]	Details
	Day		Monday to Sunday	Sets whether to turn on or off the power on each day of the week.
	Nozzle Check		**ON**/OFF	Automatically executes the nozzle check function when the machine is started with auto power-on. Performs nozzle recovery (cleaning followed by nozzle checking) if "nozzle clogging" is detected.
		Cleaning	**Soft**/Normal/ Hard	Sets the cleaning type.
		Retry Count	**0** to 3 times	Performs nozzle recovery (cleaning followed by nozzle checking) for the specified number of times.
WhiteSpace Setting			-	Sets the offset value from the media left and right standard margins (15 mm).
	Margin		-	• The left and right margins should be set to at least -5 mm when using the media holder. This eliminates the risk of printing on top of the media holder.
		Margin/Left	**Host**/-10 to 85 mm	• The Mimaki RIP software (RasterLink) does not allow the user to specify margins. If the machine is set to "Host", the offset value will be "0 mm" for the left and right margins.
		Margin/Right		
	Space Btwn PP.		**None**/10 to 500 mm	The space between prints can be eliminated for continuous printing. • Reducing the space length may cause media sagging, resulting in discrepancies in the distance the media is fed. • The actual space may be wider than set, depending on the size of image data and number of passes in the feed direction.
	Space Feed Mode		**Intermittent**/ Continuous	Alters the feed method for blank space included in the image data. • Intermittent: Uses intermittent feeding based on the timing of a fraction of the pass. • Continuous: Feeds forward by skipping blank parts.
View Feed			**ON**/OFF	Sets whether or not to feed the media forward to view the print results—for example, during test printing.
Feeding Before Cut			**ON**/OFF	Sets whether to feed media before cutting the media.
Auto Remote			**ON**/OFF	Sets whether to automatically switch to REMOTE mode and start printing if data is received locally.

*1. The default settings are shown underlined.

3.4 Machine Status Menu

This is used to check machine information.

● **Menu List**

Item		Details
Usage	WIPING	Displays the wiping count.
	Waste Ink Tank	Displays the approximate level of waste ink in the waste ink tank as a percentage. • To reset waste ink levels, press the [FUNC1] key while the level is displayed.
	Print Length	Displays the total length printed.
	Print Area	Displays the total area printed.
	Use Time	Displays the total time the power has been turned on.
	Capping Use Days	Displays the number of days since the cap was replaced.
Version		Displays the machine firmware and other versions.
Error History		Displays the error and warning history. • These are listed in chronological order. Use the keys to cycle through occurrence time/date and error/warning information.
List		This is used to print machine information.

Chapter 4 Maintenance

This chapter

To ensure years of precise performance, maintain the machine periodically based on frequency of use.
Read the maintenance precautions thoroughly before maintaining this product.

4.1 Maintenance Precautions

• This machine includes parts that must be replaced periodically. We therefore recommend taking out a maintenance contract. Carry out maintenance periodically and replace consumable items to prevent quality defects and accidents.

⚠ WARNING

• Clean periodically. Debris and dust will accumulate on electrical components when the machine is used for extended periods. There is a risk of failure, electric shock, or fire due to current leakage.
• Do not clean by blowing—e.g., avoid using air blowers. Doing so may lead to failure, electric shock, or fire involving the machine if airborne debris or dust gets inside electrical components. Wipe using a soft cloth soaked in diluted neutral detergent and thoroughly wrung out. A vacuum cleaner may also be used for cleaning.

• Be careful to prevent liquids from getting inside the machine. Otherwise there is a risk of failure, electric shock, or fire.

⚠ CAUTION

• For heavy soiling, wipe using a soft cloth soaked in diluted neutral detergent and thoroughly wrung out.

• Pay close attention to ventilation and be sure to wear safety glasses, gloves, and a mask when handling ink, maintenance liquid, waste ink, or other solutions used with the machine. Leaking ink may adhere to the skin or get into the eyes or mouth.

NOTICE

• Never touch the print head nozzle surface. Do not allow water or alcohol to come into contact with the print nozzle surface. This will increase the risk of machine failure or ejection failures (e.g., nozzle clogging or deflection).
• Do not use cotton swabs to clean around the head or carriage. Fibers from cotton swabs may adhere to the head nozzle surface and lead to ejection failures (e.g., nozzle clogging or deflection).
• Do not splash ink or maintenance liquid on the covers. Exposure to splashing ink or maintenance liquid may damage or deform the cover.
• Do not use benzine, thinner, or any chemical agent containing abrasives. Use of these chemicals may result in damage to or deformation of parts.
• Do not move the carriage by hand. To move the carriage, use the carriage out function on the menu.

4.2 Maintenance Methods

Maintenance Items and Timing

Timing	Item
Once a week, when you start working	Shake the ink. ☞ "Ink Maintenance"(P. 92)
At the end of the week's work	Clean the cap rubber. ☞ "Cap Rubber Cleaning"(P. 92)
	Clean the underside of the carriage. ☞ "Carriage Underside Cleaning"(P. 93)
	Check the waste ink levels in the waste ink tank. ☞ "When "Check Waste Ink Tank" message appears"(P. 113)
	Clean around the wiper. ☞ "Wiper Cleaning"(P. 94)
Every month	Clean the NCU. (NCU is optional.) ☞ "Cleaning the NCU (Option)"(P. 96)
	Clean the DAS sensor. ☞ "DAS (automatic correction function) / Sheet width sensor cleaning"(P. 97)
	Clean the ink discharge channel. ☞ "Ink Discharge Channel Cleaning"(P. 98)
	Clean the media sensor. ☞ "Media Sensor Cleaning"(P. 99)
	Clean the media cutter. ☞ "Media Cutter Cleaning"(P. 99)
	Clean the media holder. ☞ "Media Holder Cleaning"(P. 100)
	Clean the jam sensor detecting plate. ☞ "Jam Sensor Detecting Plate Cleaning"(P. 101)
	Clean the platen. ☞ "Platen Cleaning"(P. 101)
	Clean the cover (exterior). ☞ "Cover (Exterior) Cleaning"(P. 102)
When not used for more than a week	Clean the cap and wash the ink discharge channels. After cleaning, store without turning off the main power supply. ☞ "When this Printer is Left Unused for a Long Time"(P. 102)

Items Required for Maintenance

To order replacement consumable items, contact your local dealer or our service office. For more information on consumable items, refer to our website (https://mimaki.com/supply/inkjet.html).

• Do not store consumable items in locations where children may enter.

4

Ink Maintenance

If ink constituents are sedimented, the ink density may become uneven. We recommend shaking the Ink eco-case periodically to keep printing consistent.

Sublimation transfer ink: once a week.

Orange ink: once a week.

● **Orange ink**

Every 24 hours, the display will show "Shake the orange ink cartridge. Shake the appears, select the orange ink cartridge.

● **Shaking the Ink eco-case**

(Important!)   • Shake taking care that the ink eco-cases do not become detached from the ink supply unit. Ink may leak out if the ink eco-cases become detached.

1 **Shake the ink eco-cases slowly approximately 10 times.**

   • Shake the ink eco-cases back and forth while holding the top.
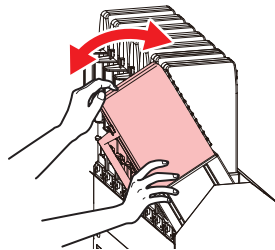
   • Be sure to shake the ink eco-case back and forth by holding its top. Ink may leak out if the top is not held and the ink eco-cases become detached.

Cap Rubber Cleaning

The cap prevents the print head nozzle surface from drying out. Continuing to use a dirty cap may affect ink take-up and lead to ejection failures (such as nozzle clogging or deflection).

   • Be careful to avoid leaving fragments from the cleaning stick behind when cleaning. These fragments will increase the risk of ejection failures (e.g., nozzle clogging or deflection).

1 **On the LOCAL mode screen, select [MENU] > [Maintenance], then press the [ENTER] key.**

   • The Maintenance menu is displayed.

2 **Select [Station Maint.] > [Carriage Out] > [Move To Platen Right End], then press the [ENTER] key.**

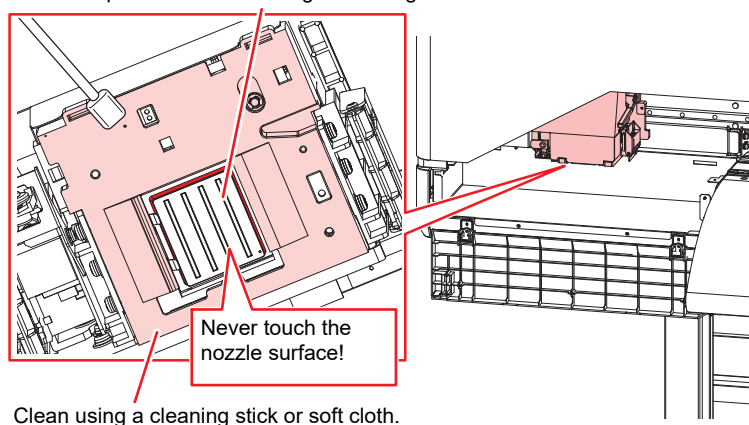   • The carriage moves over the platen.
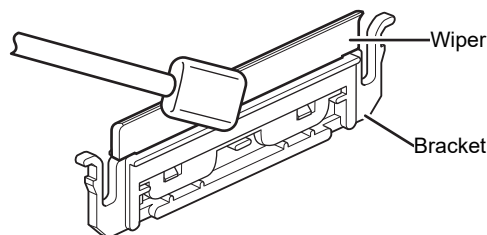
3 **Open the maintenance cover (right side).**

4 **Clean the cap rubber.**

- Wipe off any ink and dust adhering using a cleaning stick moistened with maintenance liquid. Wipe off the maintenance liquid. Make sure none remains.
- Clean the areas indicated in red (the entire interior and exterior of the cap rubber and the tabs) in the diagram.
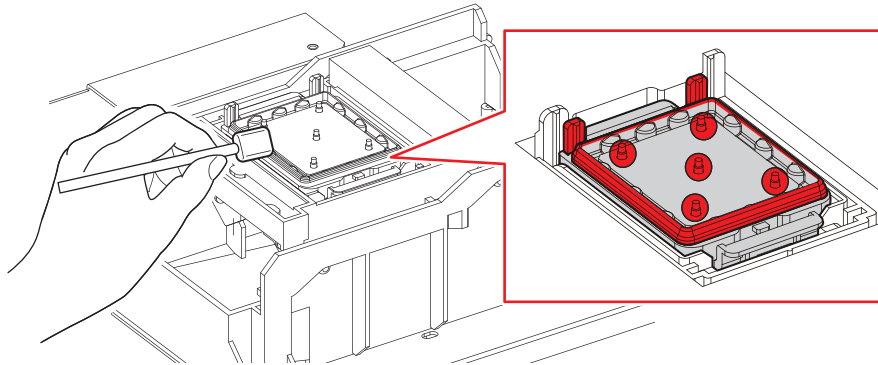
5 **Once cleaning is complete, close the cover, then press the [ENTER] key.**

Carriage Underside Cleaning

The underside of the carriage becomes coated with ink wiped off by the wiper. Continuing to use the dirty carriage underside will rub dried ink and attached dust on to the media, resulting in contaminated prints.

The print head uses an extremely delicate mechanism. Take great care when handling it.

> ⊘ • Be careful to avoid leaving fragments from the cleaning stick behind when cleaning. These fragments will increase the risk of ejection failures (e.g., nozzle clogging or deflection).

1 **Remove the maintenance cover (upper left side).**
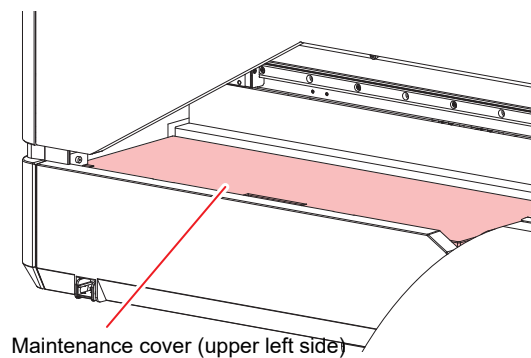
Maintenance cover (upper left side)

2 **On the LOCAL mode screen, select [MENU] > [Maintenance], then press the [ENTER] key.**

- The Maintenance menu is displayed.

3 **Select [Station Maint.] > [Carriage Out] > [Move To Maint. Space], then press the [ENTER] key.**

- The carriage moves to the maintenance space.

4   **Open the maintenance cover (left side).**
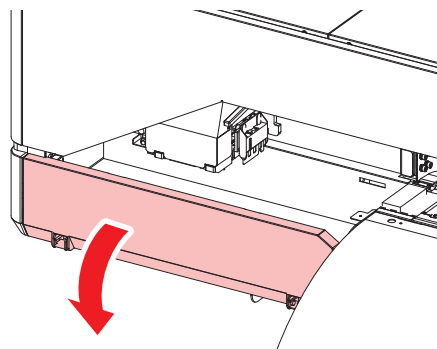
5   **Clean around the print head.**

- Wipe off any ink and dust adhering using a cleaning stick moistened with maintenance liquid. Wipe off the maintenance liquid. Make sure none remains.

Clean the print head sides using a cleaning stick.

Never touch the nozzle surface!

Clean using a cleaning stick or soft cloth.

🚫   • Never touch the print head nozzle surface.

6   **Once cleaning is complete, press the [ENTER] key.**

- The carriage moves back to its original position.

7   **Close the maintenance cover (left side), then attach the maintenance cover (upper left side).**

Wiper Cleaning

The wiper wipes off ink adhering to the print head nozzle surface. Using a dirty wiper with dried ink or dust on it may cause the wiper to rub against the nozzle surface and lead to ejection failures (such as nozzle clogging or deflection).

⓵   • Be careful to avoid leaving fragments from the cleaning stick behind when cleaning. These fragments will increase the risk of ejection failures (e.g., nozzle clogging or deflection).

1   **On the LOCAL mode screen, select [MENU] > [Maintenance], then press the [ENTER] key.**
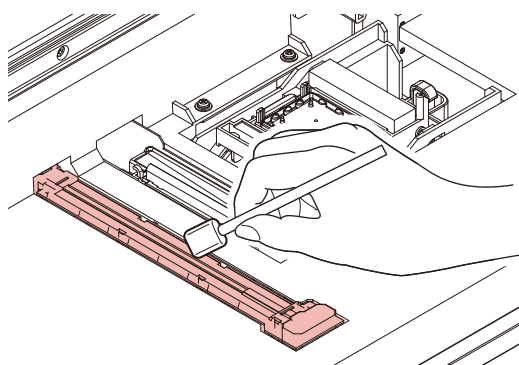
- The Maintenance menu is displayed.

2   **Select [Station] > [Carriage Out] > [Move To Platen Right End], then press the [ENTER] key.**

- The carriage moves over the platen.

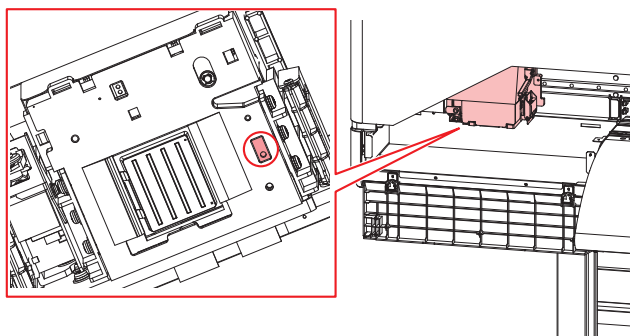**3** **Open the maintenance cover (right side).**

4 **Remove the wiper.**
  - Hold the lug at the rear of the wiper bracket, then pull out the wiper.

Lug
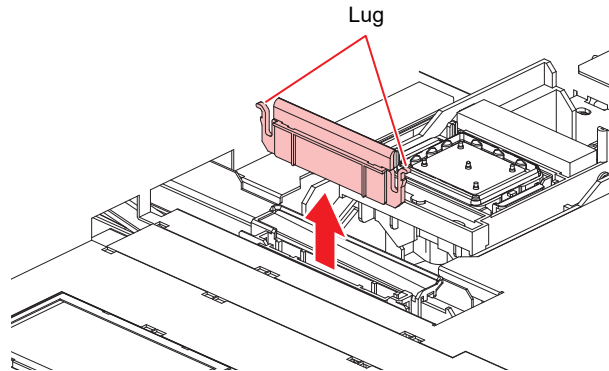
5 **Clean the wiper and bracket.**
  - Wipe off any ink and dust adhering using a cleaning stick moistened with maintenance liquid. Wipe off the maintenance liquid. Make sure none remains.

Wiper

Bracket

> • Replace dirty or warped wipers with new ones. ☞ "Wiper Replacement"(P. 106)

6 **Clean the wiper slider.**
  - Wipe off any ink and dust adhering using a cleaning stick moistened with maintenance liquid. Wipe off the maintenance liquid. Make sure none remains.

4
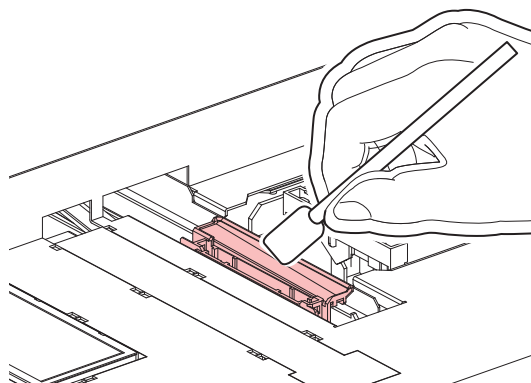
7 **Reattach the wiper at the original position.**

Lug
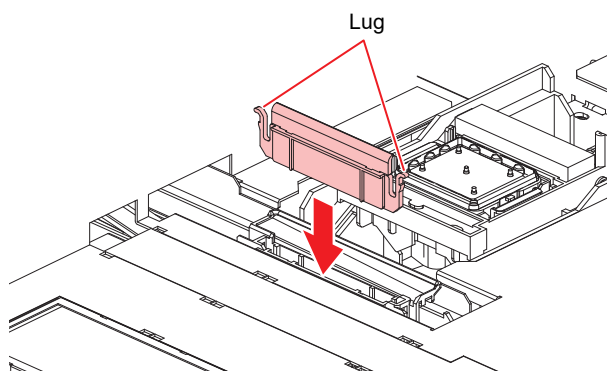
🚫 • Do not remove the absorber pad in the pad case. Doing so may result in leaking ink.

8 **Once cleaning is complete, close the cover, then press the [ENTER] key.**

Cleaning the NCU (Option)

The NCU uses a sensor to monitor the ink droplets ejected from the print head nozzles. Continuing to use the dirty NCU may prevent the nozzle check function from operating correctly.

❗ • Be careful to avoid leaving fragments from the cleaning stick behind when cleaning. These fragments will increase the risk of ejection failures (e.g., nozzle clogging or deflection).

1 **On the LOCAL mode screen, select [MENU] > [Maintenance], then press the [ENTER] key.**

• The Maintenance menu is displayed.

2 **Select [Station Maint.] > [Carriage Out] > [Move To Platen Right End], then press the [ENTER] key.**

• The carriage moves over the platen.

**3** **Open the maintenance cover (right side).**

4 **Clean the NCU.**

• Wipe off any ink and dust adhering using a cleaning stick moistened with maintenance liquid. Wipe off the maintenance liquid. Make sure none remains.

> • Insert the cleaning stick as far as the line shown in the illustration.
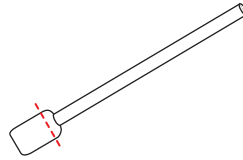
5 **Once cleaning is complete, close the cover, then press the [ENTER] key.**

DAS (automatic correction function) / Sheet width sensor cleaning

The DAS sensor is located on the carriage underside. If dust or debris accumulates on the sensor, DAS (Media Setting Menu) may not function.

1 **Remove the maintenance cover (upper left side).**
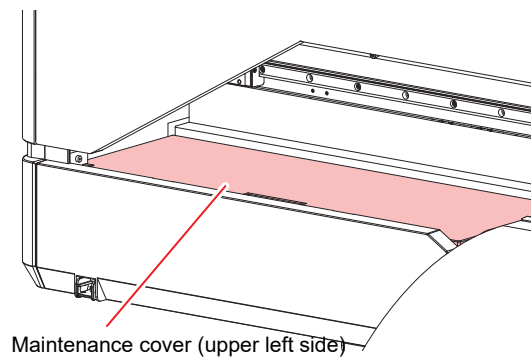
Maintenance cover (upper left side)

2 **On the LOCAL mode screen, select [MENU] > [Maintenance], then press the [ENTER] key.**

  • The Maintenance menu is displayed.

3 **Select [Station Maint.] > [Carriage Out] > [Move To Maint. Space], then press the [ENTER] key.**

  • The carriage moves to the maintenance space.

4 **Open the maintenance cover (left).**

4
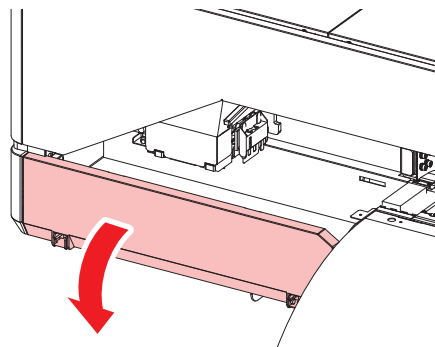
5 **Clean the DAS sensor.**

- Wipe clean using cotton swabs or a soft cloth.

> ⊘ • For heavy soiling, wipe using a soft cloth soaked in diluted neutral detergent and thoroughly wrung out.

6 **Once cleaning is complete, press the [ENTER] key.**

7 **Close the maintenance cover (left side), then attach the maintenance cover (upper left side).**

Ink Discharge Channel Cleaning

Clean the ink discharge channel regularly to prevent clogging of the ink discharge channel below the cap.

1 **On the LOCAL mode screen, select [MENU] > [Maintenance], then press the [ENTER] key.**

- The Maintenance menu is displayed.

2 **Select [Station Maint.] > [Pump tube cleaning], then press the [ENTER] key.**

3 **Open the maintenance cover (right side).**

4 **Fill the cap with maintenance liquid.**

> 💡 • Use a syringe to draw up some maintenance liquid and fill until it almost overflows from the cap.
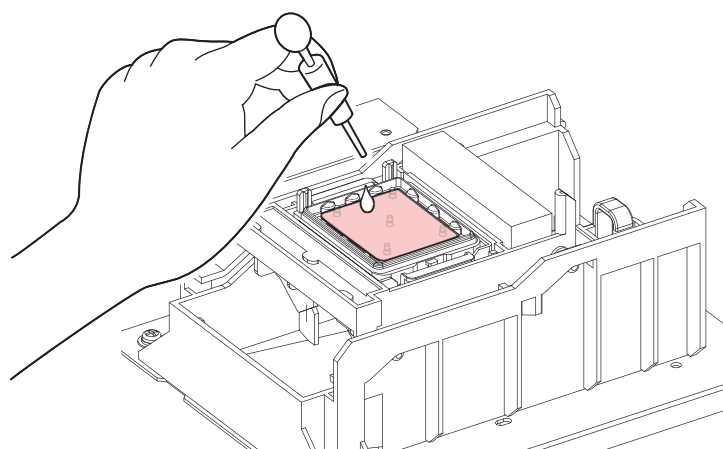
5 **Close the maintenance cover (right side), then press the [ENTER] key.**

- Pump tube (ink discharge channel below the cap) washing starts.

Media Sensor Cleaning

There is a media sensor located on the rear cover. The media cannot be detected correctly if dust or debris accumulates on the sensors. Remove any debris using cotton swabs or a soft cloth.

Rear of product
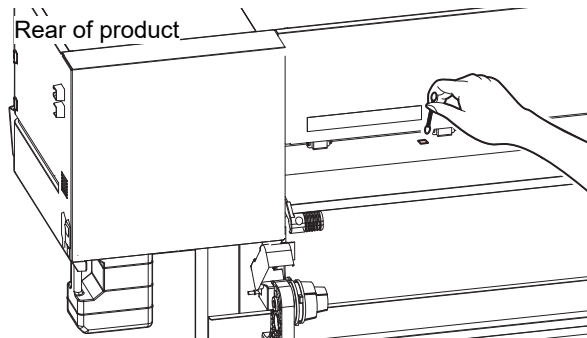
Media Cutter Cleaning

Continuing to use a dirty media cutter may cause dust to collect on the head nozzle surface or the cutter blade to grow dull.

⚠ • Avoid touching the cutter blade. Failure to do so may result in injury.

---

1 **On the LOCAL mode screen, select [MENU] > [Maintenance], then press the [ENTER] key.**

• The Maintenance menu is displayed.

2 **Select [Station Maint.] > [Carriage Out] > [Move To Platen Right End], then press the [ENTER] key.**

• The carriage moves over the platen.

3 **Open the maintenance cover (right side).**

💡 • The carriage can be moved by hand. Move the carriage slowly to a position allowing easy access while working.

---

4 **Remove the media cutter.**

Screw

4
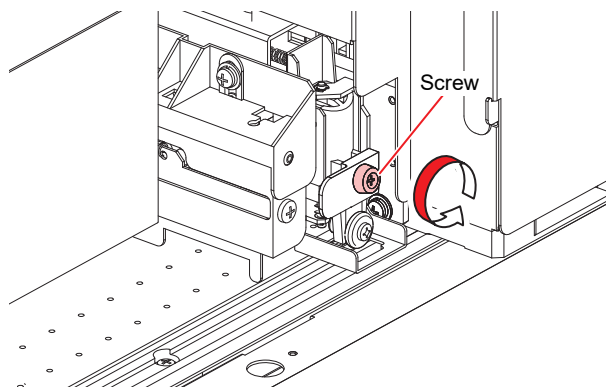
5 **Clean both sides of the media cutter.**

- Wipe off any adhesive paste, ink and dust adhering using a cleaning stick moistened with industrial alcohol. Wipe off any industrial alcohol so that none remains.
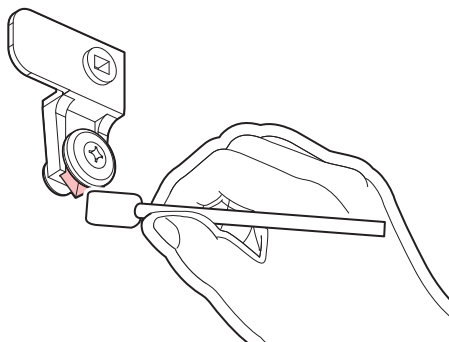
6 **Return the media cutter to its original position.**

- Tighten the screw securely. A loose screw may cause cutter or platen damage.

7 **Check the position of the media cutter.**

- Lift up the media cutter by hand if it has dropped down.

Good example

Bad example
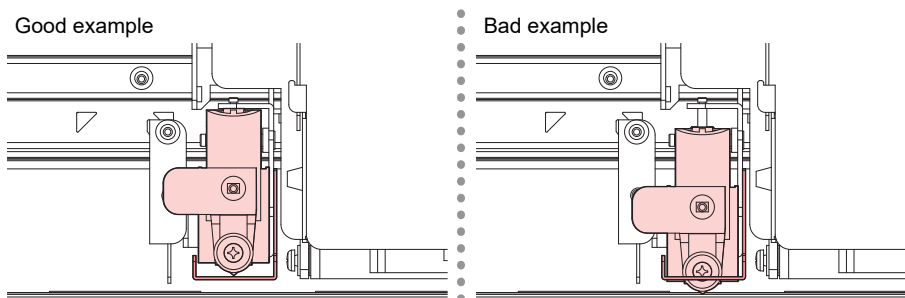
8 **Once cleaning is complete, close the cover, then press the [ENTER] key.**

Media Holder Cleaning

Continuing to use a dirty media holder will prevent correct media detection or proper feeding of the media. It will also cause dried ink and attached dust to rub against the head nozzle surface and lead to ejection failures (e.g., nozzle clogging or deflection).

Media holder
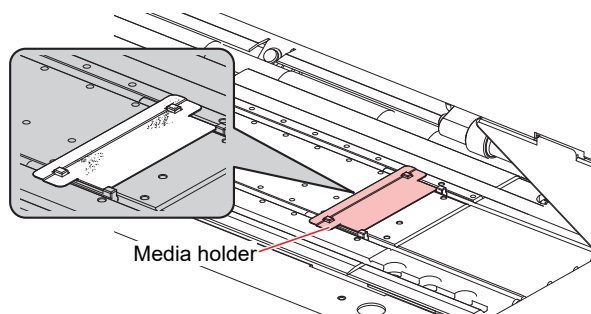
- Turn off the main power supply and unplug the power cable before carrying out maintenance.

	• Be careful to prevent liquids from getting inside the machine. Otherwise there is a risk of failure, electric shock, or fire.
	• For heavy soiling, wipe using a soft cloth soaked in diluted neutral detergent and thoroughly wrung out.

Jam Sensor Detecting Plate Cleaning

Continuing to use the dirty carriage underside will rub dried ink and attached dust on to the media, resulting in contaminated prints.

1 **On the LOCAL mode screen, select [MENU] > [Maintenance], then press the [ENTER] key.**

   • The Maintenance menu is displayed.

2 **Select [Station Maint.] > [Carriage Out] > [Move To Maint. Space], then press the [ENTER] key.**

   • The carriage moves to the maintenance space.

3 **Clean the jam sensor detecting plate.**

   • Clean the jam sensor detecting plate underside at the left and right sides of the carriage.

   • Wipe off any ink and dust adhering using a cleaning stick moistened with maintenance liquid. Wipe off the maintenance liquid. Make sure none remains.

4 **Once cleaning is complete, press the [ENTER] key.**

Platen Cleaning

Continuing to use the dirty platen will prevent proper feeding of the media. It will also cause dried ink and attached dust to rub against the head nozzle surface and lead to ejection failures (e.g., nozzle clogging or deflection).

	• Turn off the main power supply and unplug the power cable before carrying out maintenance.
	• Be careful to prevent liquids from getting inside the machine. Otherwise there is a risk of failure, electric shock, or fire.
	• The grooves in which the media holder slides and the media is cut are susceptible to dust accumulation. Remove any debris carefully.
	• For heavy soiling, wipe using a soft cloth soaked in diluted neutral detergent and thoroughly wrung out.

4

Cover (Exterior) Cleaning
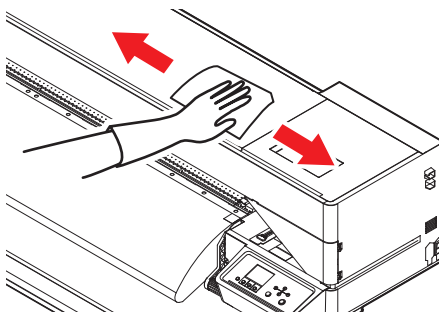
| | • Be careful to prevent liquids from getting inside the machine. Otherwise there is a risk of failure, electric shock, or fire. |

| | • For heavy soiling, wipe using a soft cloth soaked in diluted neutral detergent and thoroughly wrung out. |

When this Printer is Left Unused for a Long Time

Clean as follows if the product is not used for one week or longer:

Check beforehand
Is [Near End] or [Ink End] displayed?   • Ink is aspirated during the cleaning operation. Washing is not possible if an error occurs during this process. Replace with new ink.
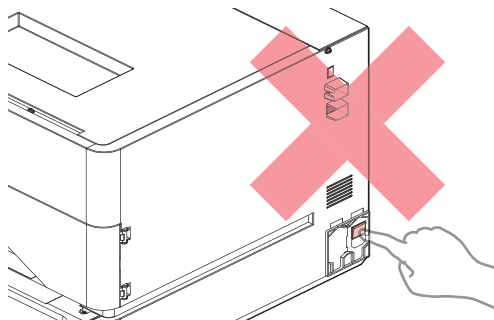
| | • Do not turn off the main power supply. Turning off the main power supply will disable the automatic maintenance function (including nozzle clogging prevention function and ink discharge channel cleaning function). This increases the risk of ejection failures (such as nozzle clogging or deflection). |

| | • Do not leave media loaded on the platen. This may leave irregularities or ripples in the media. |

| | When the machine is not in use, raise the clamp lever to **separate the pinch rollers from the grit rollers**.
 • Leaving the pinch rollers lowered may cause them to become deformed and prevent media from being fed correctly.
 • Leaving media loaded will subject it to force from the pinch rollers, which may leave pinch roller marks on it. |

| | • Perform the following if the "Check Waste Ink Tank" message appears on the display.
 ☞ "Waste Ink Tank Replacement"(P. 113) |

1 On the LOCAL mode screen, select [MENU] > [Maintenance], then press the [ENTER] key.

- The Maintenance menu is displayed.

2 Select [Station Maint.] > [Custody Wash], then press the [ENTER] key.

- The carriage moves over the platen.

3 Open the maintenance cover (right side).

4 Clean the wiper.

- ☞ "Wiper Cleaning"(P. 94)

5 Clean the cap rubber.

- ☞ "Cap Rubber Cleaning"(P. 92)

6 Once cleaning is complete, press the [ENTER] key.

**7** Fill the cap with maintenance liquid.

- Use a syringe to draw up some maintenance liquid and fill until it almost overflows from the cap.
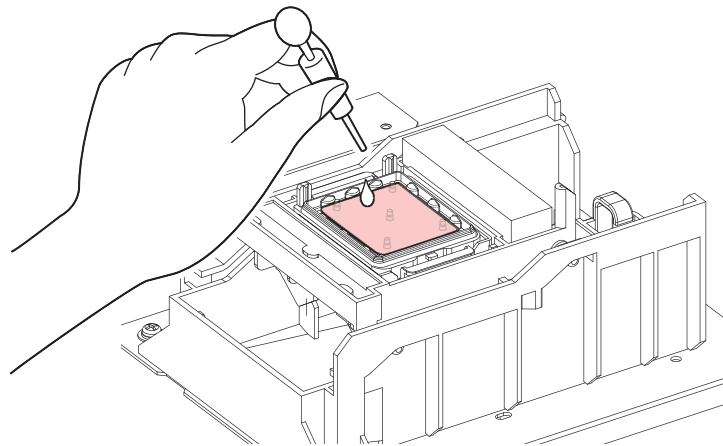
8 Close the maintenance cover (right side).

9 Set the exposure time, then press the [ENTER] key.

- Cleaning is performed automatically once print nozzle washing has ended.
- [Please wait] is displayed.

10 When [Maintenance liquid Fill the liquid.] appears again, open the maintenance cover (right side), and fill the cap with cleaning solution as in step 7.

11 Close the maintenance cover (right side).

4

Flushing unit cleaning
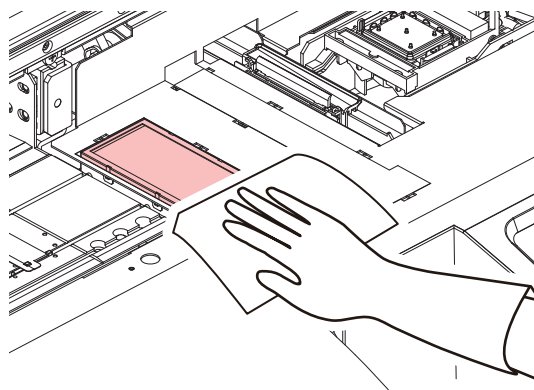
	• Be careful to prevent liquids from getting inside the machine. Otherwise there is a risk of failure, electric shock, or fire.
	• For heavy soiling, wipe using a soft cloth soaked in diluted neutral detergent and thoroughly wrung out.

4.3 Replacement of Consumable Item

To order replacement consumable items, contact your local dealer or our service office. For more information on consumable items, refer to our website (https://mimaki.com/supply/inkjet.html).

	• Do not store consumable items in locations where children may enter.
	• When disposing of consumable items, contact an industrial waste disposal operator or dispose of the product in accordance with the local laws and regulations.
	• Pay close attention to ventilation and be sure to wear safety glasses, gloves, and a mask when handling ink, maintenance liquid, waste ink, or other solutions used with the machine. Leaking ink may adhere to the skin or get into the eyes or mouth.

Consumable Item Replacement Timing

Timing	Item
When dirty	☞ "Replacing the Absorber Around the Station"(P. 108)
When ejection failures cannot be remedied	☞ "Cap Replacement"(P. 107) ☞ "Wiper Replacement"(P. 106)
When damaged	☞ "Cap Replacement"(P. 107) ☞ "Pinch Roller Replacement"(P. 109) ☞ "Media Holder Replacement"(P. 110) ☞ "Media Cutter Replacement"(P. 112)
When "Check Waste Ink Tank" appears on the display	☞ "Waste Ink Tank Replacement"(P. 113)

4

Wiper Replacement

The machine maintains a count of the number of wiping cycles. The "Replace Wiper" message appears when a preset count is reached. Replace dirty or warped wipers with new ones.

1 **"Replace Wiper" appears on the display.**

2 **On the LOCAL mode screen, select [MENU] > [Maintenance], then press the [ENTER] key.**

• The Maintenance menu is displayed.

3 **Select [Station Maint.] > [Replace Wiper], then press the [ENTER] key.**

• The carriage moves over the platen.

4 **Open the maintenance cover (right side).**

5 **Remove the wiper.**

• Hold the lug at the rear of the wiper bracket, then pull out the wiper.
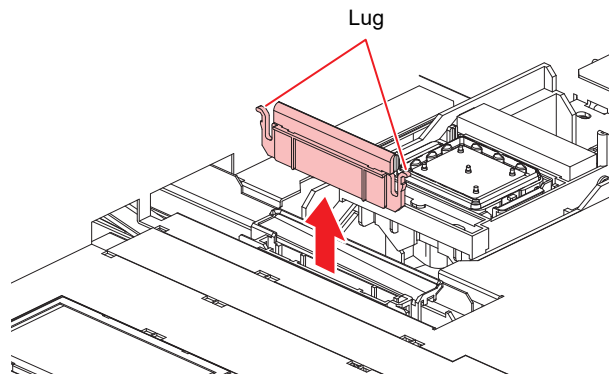
Lug

6 **Clean the wiper slider.**

• Wipe off any ink and dust adhering using a cleaning stick moistened with maintenance liquid. Wipe off the maintenance liquid. Make sure none remains.

7 **Mount a new wiper.**

Lug
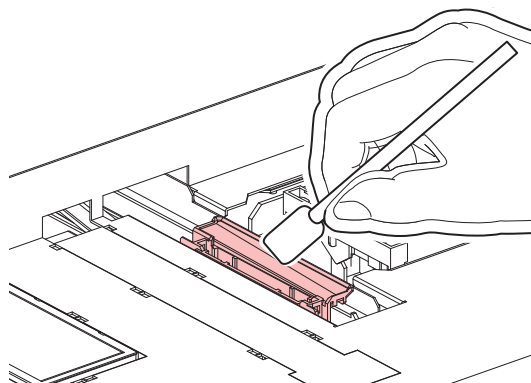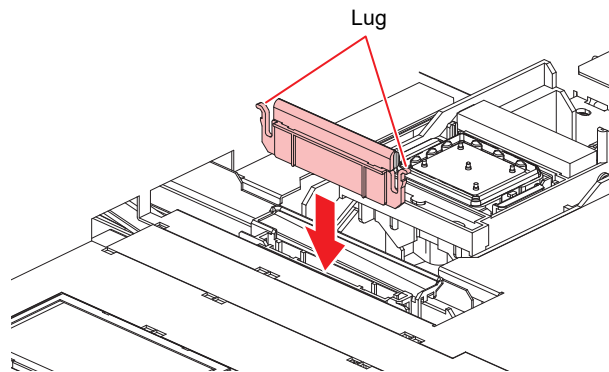
8 **Once replacement is complete, close the cover, then press the [ENTER] key.**

• The wiper usage count is reset.

9 **Once replacement is complete, close the cover, then press the [ENTER] key.**

Cap Replacement

If ejection failures (e.g., nozzle clogging or deflection) remain unresolved even after cleaning, replace with a new cap.

• Be sure to replace the cap if you observe any scratches or other damage on the rim.
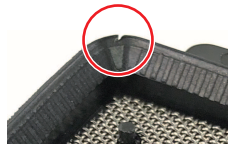
• We recommend replacing the cap every six to twelve months.

1 **On the LOCAL mode screen, select [MENU] > [Maintenance], then press the [ENTER] key.**

• The Maintenance menu is displayed.

2 **Select [Station Maint.] > [Replace Cap], then press the [ENTER] key.**

• The carriage moves over the platen.

3 **Open the maintenance cover (right side).**

4

4 **Remove the cap.**

- Squeeze the lugs on either side of the cap and pull off.
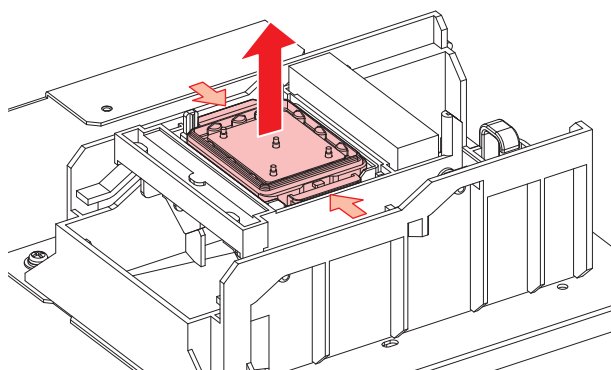
5 **Apply maintenance liquid.**

- Use a syringe to apply two or three drops of maintenance liquid to the hole at the front.
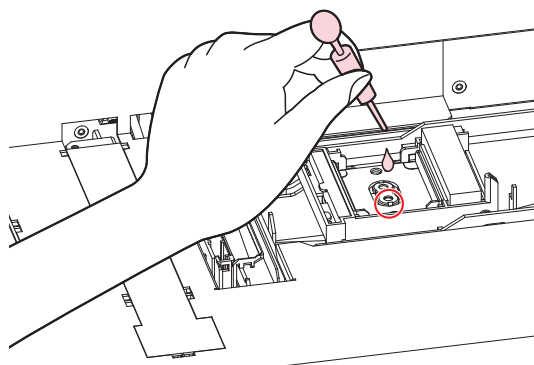
6 **Mount a new cap.**

- Position with the slot at the front and push in until it clicks.

7 **Once replacement is complete, close the cover, then press the [ENTER] key.**

Replacing the Absorber Around the Station

If the cap absorber or maintenance liquid absorber is very dirty or if ink drips on to the media, replace with a new cap absorber.

1 **On the LOCAL mode screen, select [MENU] > [Maintenance], then press the [ENTER] key.**

- The Maintenance menu is displayed.

2 **Select [Station Maint.] > [Carriage Out] > [Move To Platen Right End], then press the [ENTER] key.**

- The carriage moves over the platen.

3 **Open the maintenance cover (right side).**

4 **Remove the cap absorber.**
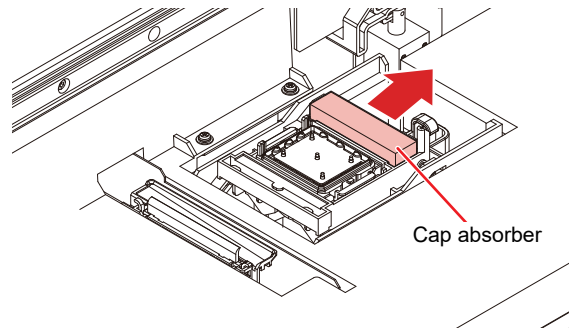
Cap absorber

> • Avoid ink dripping when removing the cap absorbers.

5 **Clean the station cover.**
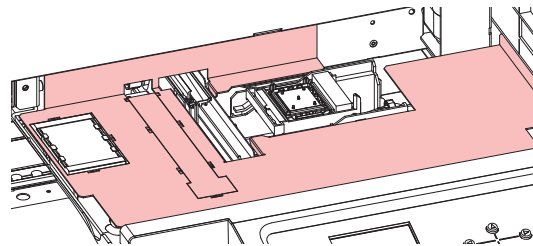
> • For heavy soiling, wipe using a soft cloth soaked in diluted neutral detergent and thoroughly wrung out.

6 **Mount a new cap absorber.**

> • As shown in the figure, mount the absorber with the narrow side on top and the wide side at the bottom.

Up

Down

Up

Narrow

Wide
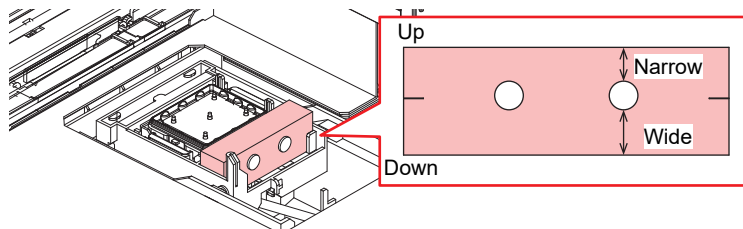
7 **Once replacement is complete, close the cover, then press the [ENTER] key.**

Pinch Roller Replacement

Replace worn or dirty pinch rollers with new ones.

> • Turn off the main power and unplug the power cable before replacement.

1 **Raise the clamp lever.**

2 **Remove the O-ring retaining the pinch rollers.**

O-ring
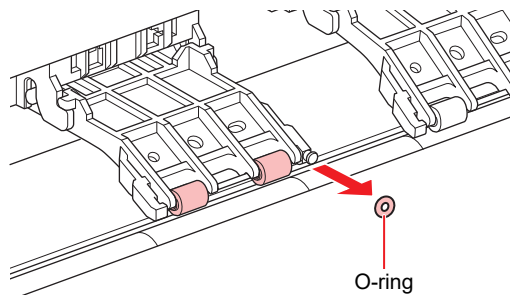
> • The pinch rollers are small. Be careful to avoid dropping them into the product interior.Leaving the media attached makes it less likely to get stuck in gaps.

3 **Remove the pinch roller spindle.**
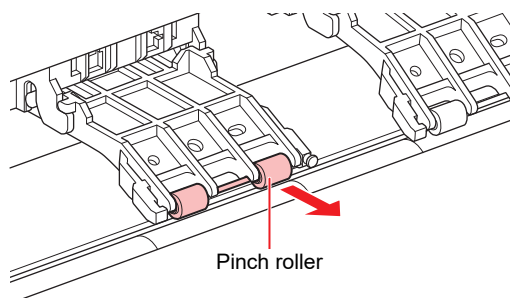
Pinch roller

4 **Mount new pinch rollers, and secure them using the O-ring.**

Media Holder Replacement

If the media holder becomes deformed and touches the carriage or print head, replace with a new media holder.

> • Turn off the main power and unplug the power cable before replacement.

1 **Remove the maintenance cover (upper left side).**

Maintenance cover (upper left side)
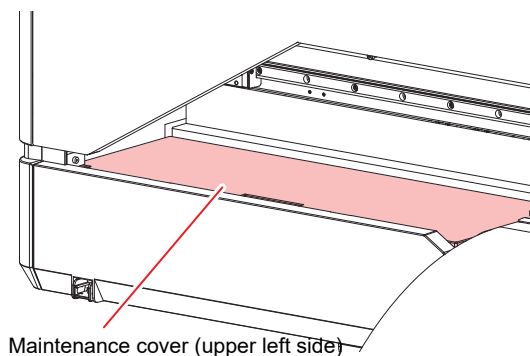
2 Remove the side screw, and detach the media holder stopper.
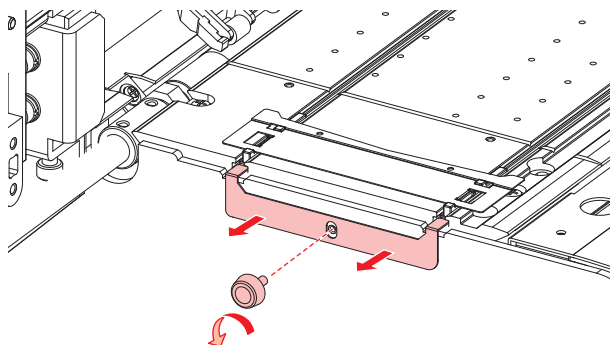
3 Remove the media holder.
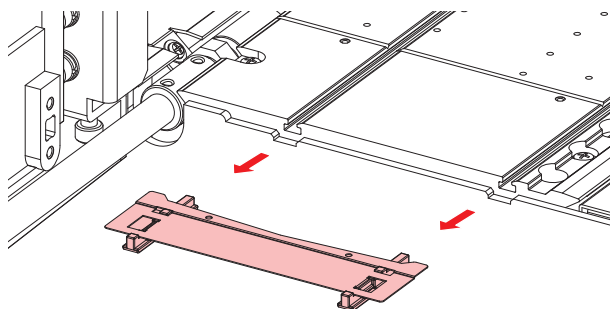
4 Mount the new media holder on to the platen.
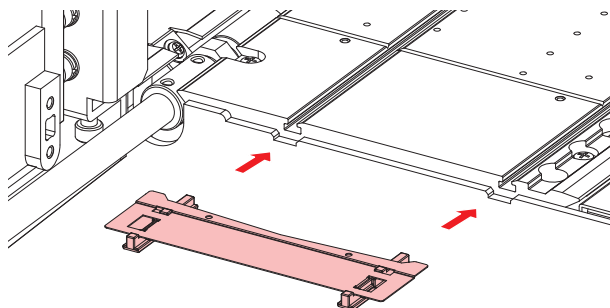
5 Secure the media holder stopper with the screw.
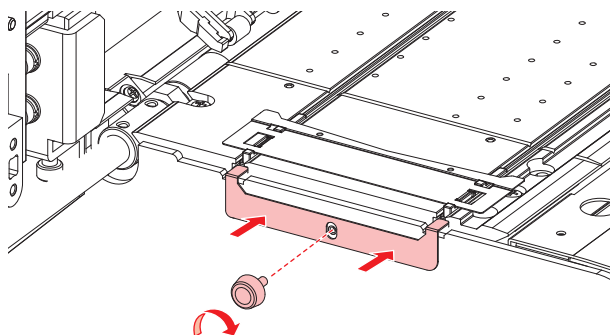
6 Attach the maintenance cover (upper left side).

Media Cutter Replacement

Replace cutters when blades are chipped or blunt.

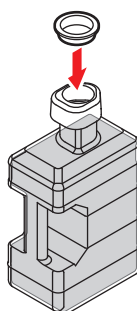⚠️ • Avoid touching the cutter blade. Failure to do so may result in injury.

1 **On the LOCAL mode screen, select [MENU] > [Maintenance], then press the [ENTER] key.**

  • The Maintenance menu is displayed.

2 **Select [Station Maint.] > [Carriage Out] > [Move To Platen Right End], then press the [ENTER] key.**

  • The carriage moves over the platen.

  💡 • The carriage can be moved by hand. Move the carriage slowly to a position allowing easy access while working.

3 **Replace the media cutter.**

  (1) Unscrew the cutter screw.
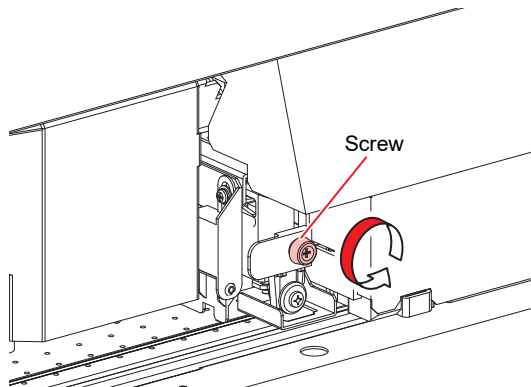
Screw

  (2) Remove the cutter.
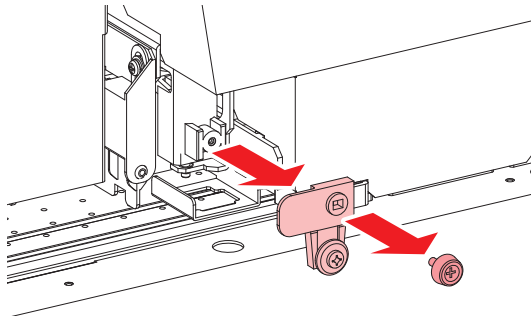
  (3) Mount a new cutter.
  (4) Tighten the screw to clamp the cutter.

4 **Check the position of the media cutter.**

- Lift up the media cutter by hand if it has dropped down.

Good example   Bad example
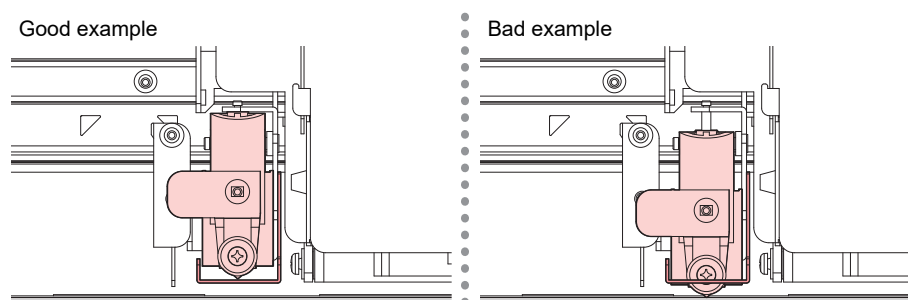
5 **Once replacement is complete, press the [ENTER] key.**

Waste Ink Tank Replacement

Ink used during head cleaning and other processes is collected in the waste ink tank at the lower right of the machine.

This product keeps track of the waste ink level. A "Check Waste Ink Tank" message appears when the preset level is reached. Use this a guide for replacing the waste ink tank.

- For a 2-liter tank, the preset level is 80 % (1.6 L).
- Continuing to use the product without disposing of the waste ink may result in waste ink overflowing from the waste ink tank. Visually check ink levels in the waste ink tank about once a week.

- Pay close attention to ventilation and be sure to wear safety glasses, gloves, and a mask when handling ink, maintenance liquid, waste ink, or other solutions used with the machine. Leaking ink may adhere to the skin or get into the eyes or mouth.

When "Check Waste Ink Tank" message appears

1 **The "Check Waste Ink Tank" message appears on the display.**

2 **Check the waste ink levels in the waste ink tank.**

- If you note any discrepancies from actual levels, proceed to the next step.
- If there is no discrepancy, replace (dispose of) the waste ink tank referring to ☞ "Replacing the Waste Ink Tank"(P. 114).

3 **On the LOCAL mode screen, select [MENU] > [Maintenance], then press the [ENTER] key.**

- The Maintenance menu is displayed.

4 **Select [Waste Ink Tank], then press the [ENTER] key.**

5 **Select [Adjust Waste Ink Volume], then press the [ENTER] key.**

6 **Press ⊙⊙ to adjust the level.**

7 Press the [ENTER] key once adjustment is complete.

Replacing the Waste Ink Tank

1 On the LOCAL mode screen, select [MENU] > [Maintenance], then press the [ENTER] key.

- The Maintenance menu is displayed.

2 Select [Waste Ink Tank], then press the [ENTER] key.

3 Select [Reset Waste Ink Volume], then press the [ENTER] key.

4 Pull the waste ink tank stopper forward.
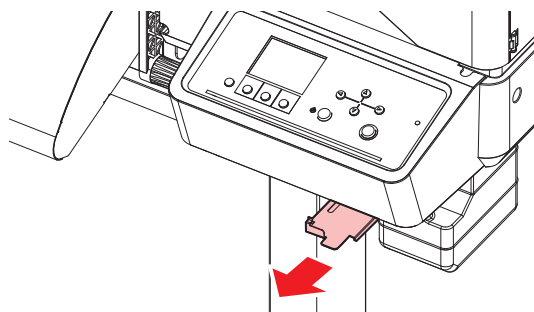
5 Hold the handle on the waste ink tank and slide out.
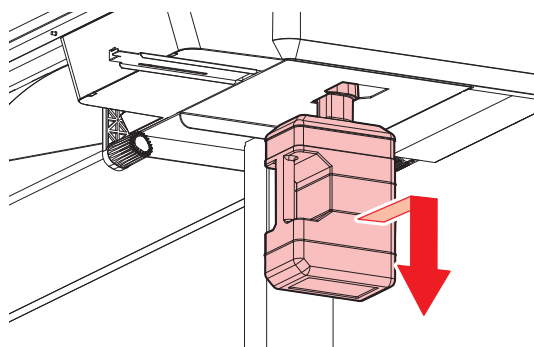
6 Attach the cap to the removed waste ink tank, and use tape to prevent leakage of waste ink.

> ⚠ • When disposing of ink, maintenance liquid or other liquid used with the product, or containers or non-woven fabric contaminated with ink or other liquid, contact an industrial waste disposal operator or dispose of the product in accordance with the local laws and regulations.

7 **Mount a new waste ink tank.**
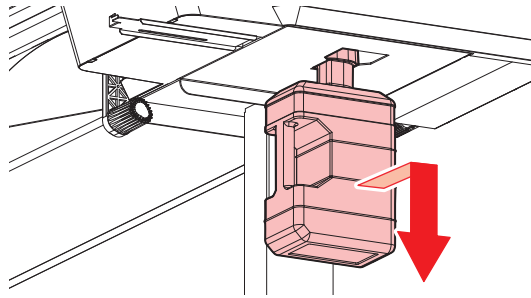
8 **Close the waste ink tank stopper.**
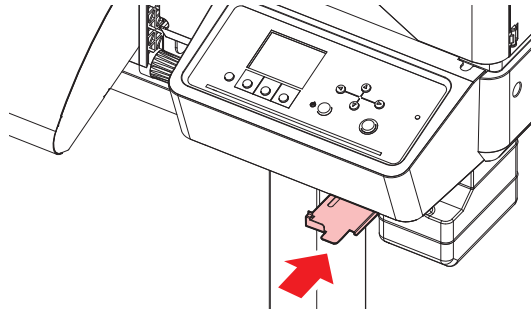
9 **Press the [ENTER] key.**

- The waste ink level will be reset.

4

Flushing Unit Absorber Pad Replacement

Replace the absorber pads on the flushing units with new ones When they are Heavily soiled.

1 **On the LOCAL mode screen, select [MENU] > [Maintenance], then press the [ENTER] key.**

• The Maintenance menu is displayed.

2 **Select [Station Maint.] > [Carriage Out] > [Move To Platen Right End], then press the [ENTER] key.**

• The carriage moves over the platen.

3 **Open the maintenance cover (right side).**

4 **Remove the Absorber Pad from the flushing box.**

> • When removing the Absorber Pad, take care not to soil the surrounding area.

Absorber

Flushing box
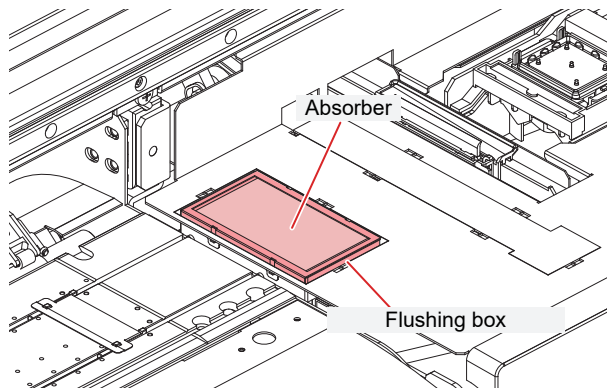
5 **Insert the new Absorber Pad.**

6 **Once replacement is complete, close the Maintenance cover, then press the [ENTER] key.**

Spout Rubber Replacement

Install the spout rubber in an eco case in order to reduce ink leakage from the 2L ink pack. The spout rubber is a supplied part. (SPA-0317 : Set of 8 Rubber stopper 2L for case) If the gap in the center widens as shown in the photo, please replace it.

> • Replace all eight spout rubber. as a set at the same time.

The beginning of spout rubber   It is available to use   It is necessary to replace
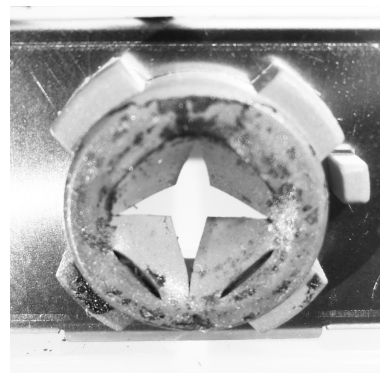
1   **Open the 2L eco case.**

2   **Remove the 2L ink pack.**
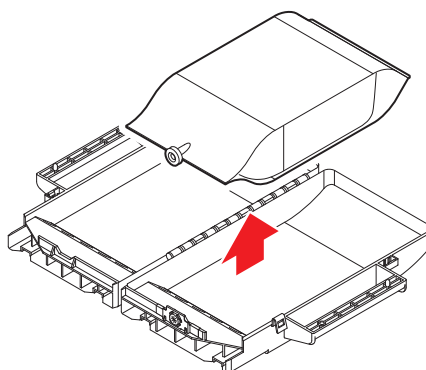
3   **Remove the spout rubber.**

• Press against the top of the spout rubber and pull it out vertically.
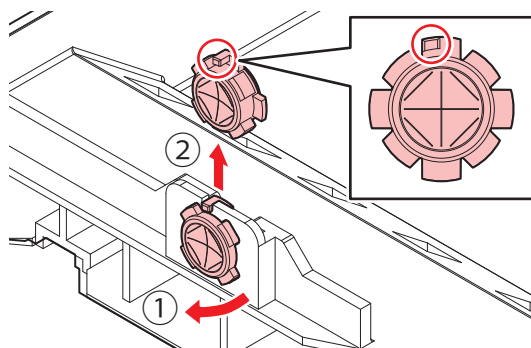
4 **Attach the new spout rubber from outside of the eco-case.**

- Insert it aligning the positioning protrusion of the spout rubber to the concave position of the ecocase.
- Be careful of the direction of the rubber when installing.
- Push the entire rubber into groove until the spout rubber fits evenly.

- Bending the entire spout rubber makes it easier to insert from the outside of the case.

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① concave position   protrusion   ②

OK   **No Good**

The ribs don't fit.
If it is not seated in the groove correctly, the spout rubber will be damaged.
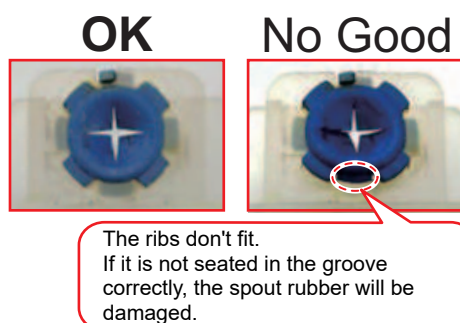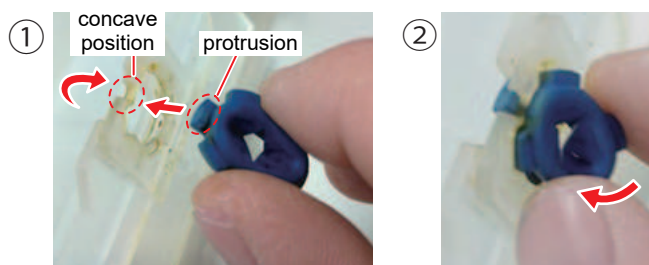
5 **Thoroughly moisten the spout rubber surface with the maintenance solution.**

- Moisten the surface of the spout rubber with maintenance solution sufficiently before inserting. Inserting the rubber into the eco-case without moistening may damage the rubber.
- In that case, use a maintenance solution that is suitable for the ink type.

utside rubber

Spout rubber

nside rubber

Spout rubber
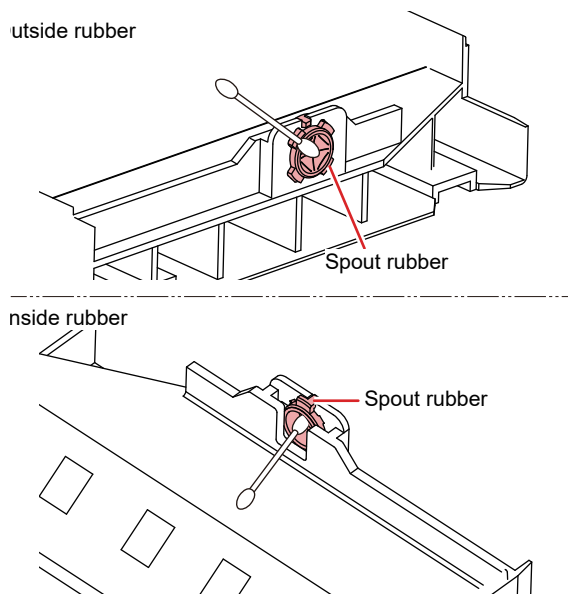
Chapter 5 Troubleshooting

This chapter

This chapter describes corrective actions for troubleshooting and messages on the display.

5.1 Troubleshooting

For information on troubleshooting, refer to this chapter. Refer to our website (https://mimaki.com/support/) for frequently asked questions (FAQs) about this product and customer support videos.

If the recommended corrective action does not resolve the problem, contact your local dealer or our service office.

The power does not turn on.

Points to check	Corrective action
Is the machine connected to the power outlet by the power cable?	Connect the power plug securely to the power outlet. ☞ "Connecting the Power Cable"(P. 30)
Are you using the power cable provided?	Use the power cable provided.
Is the main power supply turned on?	Turn on the main power supply. ☞ "Turning On the Power"(P. 30)
Is the [END/POWER] key on the operating panel turned on?	Turn the power on. ☞ "Turning On the Power"(P. 30)

Printing is not possible.

Points to check	Corrective action
Is a USB interface cable connected?	Connect the cable securely to the USB 2.0 port. ☞ "Using a USB Cable"(P. 34)
Is a LAN cable connected?	Connect the cable securely to the LAN port. ☞ "Using a LAN Cable"(P. 33)
Are you using a LAN cable approved by Mimaki?	Check the LAN cable type. ☞ "Using a LAN Cable"(P. 33)
Is the status lamp on the operating panel illuminated or flashing red?	An error has occurred. Check the message on the display. ☞ "Operating Panel"(P. 27)

The media jams or the media is dirty.

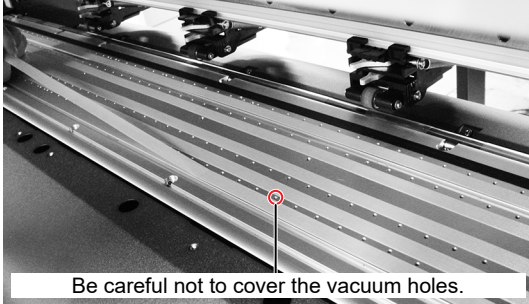| Points to check	Corrective action
Are you using the recommended media?	Make sure you are using the recommended media. https://mimaki.com/supply/inkjet.html
Are you using curled media?	Do not use curled media or media with folded ends.
Is the media skewed?	Use the take-up unit to adjust the media or reload the media. ☞ "Loading the Media"(P. 51)

Points to check	Corrective action
Does the media have ripples/surface irregularities or lift up?	If you are using roll media, use a smooth section of the media for initial feeding. You can also improve this problem by attaching the NITOFLON® tape provided on the platen. Be careful not to cover the vacuum holes. For more information, refer to the description on transporting media on the platen. https://mimaki.com/download/inkjet.html

Image defects occur.

Symptom	Corrective action
White streaks, blurriness, and dark streaks occur. (Carriage scan direction)	1. Remove any paper scraps or other debris adhering to areas over which the head passes (e.g., media holders). ☞ "Media Holder Cleaning"(P. 100)☞ "Platen Cleaning"(P. 101). 2. Perform the procedure described in ☞ "Head Cleaning"(P. 65). 3. Perform the procedure described in ☞ "Feed Correction"(P. 67). 4. Perform the procedure described in ☞ "Cap Rubber Cleaning"(P. 92). 5. Perform the procedure described in ☞ "Carriage Underside Cleaning"(P. 93).
Text is double- or triple-printed in the media feed direction.	1. Perform the procedure described in ☞ "Feed Correction"(P. 67).
Offsetting occurs during bidirectional printing.	1. Perform the procedure described in ☞ "Correcting the Drop Position"(P. 69).
Ink droplets drip during printing.	1. Perform the procedure described in ☞ "Cap Rubber Cleaning"(P. 92). 2. Perform the procedure described in ☞ "Carriage Underside Cleaning"(P. 93). 3. Perform the procedure described in ☞ "Head Cleaning"(P. 65). 4. Set auto maintenance. ☞ "Maintenance Menu"(P. 80)
Nozzles are clogged.	1. Perform the procedure described in ☞ "Head Cleaning"(P. 65). 2. Perform the procedure described in ☞ "Print Head Nozzle Washing"(P. 122). 3. Perform the procedure described in ☞ "Registering Nozzle Recovery Manually"(P. 83). 4. Perform the procedure described in ☞ "Perform a Fill Up Ink"(P. 84).
Are the print heads too high?	Adjust the print head height. ☞ "Adjusting Print Head Height"(P. 50) If the print heads cannot be lowered, increase the refresh level during printing (☞ P. 80) or perform regular test printing to check for nozzle clogging.
Are there any ink colors that aren't used much?	Discharge from infrequently used nozzles tends not to be consistent. Although increasing the refresh level during printing (Maintenance Menu) will enable more frequent nozzle use, note that this will also increase ink consumption.

5

Symptom	Corrective action
Are you using media easily affected by static electricity?	Increase the refresh level during printing (☞ P. 80) or perform regular test printing to check for nozzle clogging.
Is the machine installed in a location with low humidity?	Increase the humidity by installing a humidifier or similar equipment. When printing continuously, also increase the refresh level during printing (☞ P. 80) or perform regular test printing to check for nozzle clogging.
Is the machine installed in a location where dust or powder is present?	Install the machine in a location free of dust or powder (office equivalent: dust level 0.15 mg/m^3).

Print Head Nozzle Washing

If ejection failures (e.g., nozzle clogging or deflection) remain unresolved even after head cleaning (Head Cleaning), apply nozzle wash to the print head.

1 **On the LOCAL mode screen, select [MENU] > [Maintenance], then press the [ENTER] key.**

- The Maintenance menu is displayed.

2 **Select [Station Maint.] > [Nozzle Wash], then press the [ENTER] key.**

- The carriage moves over the platen.

3 **Open the maintenance cover on the right side.**

- ☞ "Wiper Cleaning"(P. 94)

4 **Clean the cap rubber.**

- ☞ "Cap Rubber Cleaning"(P. 92)

5 **Fill the cap with maintenance liquid.**

- Use a syringe to draw up some maintenance liquid and fill until it almost overflows from the cap.
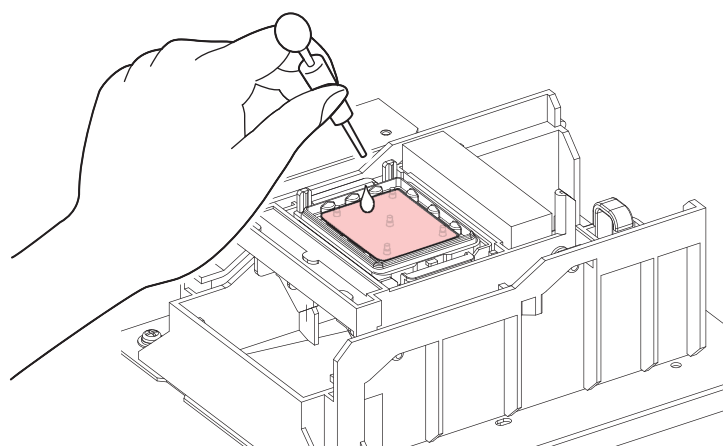
6 **Close the maintenance covers.**

7 **Set the exposure time, then press the [ENTER] key.**

- Cleaning is performed automatically once print nozzle washing has ended.

- If ejection failures (e.g., nozzle clogging or deflection) remain unresolved even after washing the nozzles several times, contact your local dealer or our service office.

The ink has leaked out

- If an ink leak occurs, turn off the main power immediately and unplug the power cable. Then, contact your local dealer or our service office.

The media cannot be wound up.

Images with varying density in the media transport direction, as shown below, may be difficult to roll up over long lengths.
Adjusting the ink concentration may enable winding

< Ink Density Adjustment Example >

Change the color replacement settings from C:100, M:100, Y:100, K:100 to approximately C:80, M:80, Y:80, K:80 under the following conditions.

- Media: TRS95-1620 (Our genuine transfer paper)
- RIP software: RasterLink7

Drawing quality

- Input Profile: Mimaki_Expand_Color
- Device Profile: Mimaki TRS95 [MTW110]
- Resolution: 900×600 VD
- Passes: 4 (Default)
- Print Direction: bi-directional (Default)

5

5.2 Problems Causing Messages to Appear

If a problem arises, the buzzer sounds and a message appears on the display.

Local guidance can be at for checking. ☞ "Displaying Machine Information (Local Guidance)"(P. 29)

Take the appropriate action in accordance with the content of the message. If a message reappears even after taking the prescribed action, contact your local dealer or our service office.

Warning Messages

Message	Cause	Corrective action
Replace NCU[1] Ink Pad	• The ink absorber needs to be replaced.	• The NCU[1] ink absorber must be replaced. Contact your local dealer or our service office.
Replace NCU[1]	• A problem was detected with the nozzle clogging assessment.	• Clean the NCU[1]. ☞ "Cleaning the NCU (Option)"(P. 96) • Replace the NCU[1] if the error is not cleared. Contact your local dealer or our service office.
NCU[1] Sensor Lv Low	• The sensor's sensitivity is impaired.	• Clean the NCU[1]. ☞ "Cleaning the NCU (Option)"(P. 96) • Replace the NCU[1] if the error is not cleared. Contact your local dealer or our service office.
NCU[1] Sens Adj Err H	• Sensor sensitivity adjustment failed.	
NCU[1] Sens Adj Err L		
NCU[1] Connect	• A problem was detected with the NCU[1] connection.	• Turn off the main power and wait a while before turning back on. ☞ "Turning Off the Power"(P. 31)
Ink Error	• An ink error occurred.	• Check the ink error details. ☞ "Ink error"(P. 126)
COVER OPEN	• The cover is open.	• Close the cover.
Lower the clamp lever	• The clamp lever is raised.	• Lower the clamp lever. ☞ "Front"(P. 22)
Data Remain	• Print (RIP) data was received.	• Switch to REMOTE mode and start printing or clear the data and abort printing.
Temporary Suspension	• Printing has been paused.	• Switch to REMOTE mode and resume printing or clear the data and abort printing.
Printing not possible/ink IC	• An unusable ink IC chip is used.	• Replace with new ink and a new ink IC chip. ☞ "Mounting the ink"(P. 38)
No Media	• No media is loaded, or the sensors are faulty.	• Load the media. ☞ "Loading the Media"(P. 51) • Clean the media sensor. ☞ "Media Sensor Cleaning"(P. 99)
Please load media	• No media is loaded, or the sensors are faulty.	• Load the media. ☞ "Loading the Media"(P. 51)

Message	Cause	Corrective action
Media Undetected	• The media width has not been detected.	• Detect the media width. ☞ "Loading the Media"(P. 51)
Wiper Move Failure	• The wiper is not operating correctly.	• Turn off the main power and wait a while before turning back on. ☞ "Turning Off the Power"(P. 31)
Replace Wasteinktank	• The waste ink tank count exceeded the preset value (90%).	Automatic maintenance is not possible while the covers are open. Perform the following steps: 1. Check the waste ink levels in the waste ink tank. ☞ "When "Check Waste Ink Tank" message appears"(P. 113) 2. Replace the waste ink tank, then reset the waste ink level. ☞ "Replacing the Waste Ink Tank"(P. 114)
Check Waste Ink tank	• The waste ink tank count exceeded the preset value (80%).	1. Check the waste ink levels in the waste ink tank. ☞ "When "Check Waste Ink Tank" message appears"(P. 113) 2. Replace the waste ink tank, then reset the waste ink level. ☞ "Replacing the Waste Ink Tank"(P. 114)
High ambient temp ** ˚ C	• Ambient temperatures are too high.	• Adjust ambient temperatures to temperatures within the specified range. Optimum print quality may not be possible unless ambient conditions are within the specified range. ☞ "Installation Precautions"(P. 15)
Low ambient temp ** ˚ C	• Ambient temperatures are too low.	
Auto-correction failed	• White media is not used. • The media is dirty. • The media lifts up. • There is dirt around the sensor.	• Load white and clean media. • Load media so it does not lift up. • Clean the area around the sensor. ☞ "DAS (automatic correction function) / Sheet width sensor cleaning"(P. 97) • If automatic correction fails repeatedly, correct the position manually. ☞ "Feed Correction"(P. 67)☞ "Correcting the Drop Position"(P. 69)

*1 NCU is optional.

5

Ink error

Message	Cause	Corrective action
Ink End	• The ink has run out.	• Replace with new ink. ☞ "When Ink End is Displayed"(P. 42) • If you use UISS, you may perform cleaning.
Ink Near End	• Ink levels are low.	• The ink will run out soon. Have new ink ready. ☞ "When Ink Near End is Displayed"(P. 42)
Non Ink IC	• No ink IC chip was detected.	1. Insert the ink IC chip. ☞ "Mounting the ink"(P. 38) 2. Check to confirm the ink IC chip was inserted correctly. ☞ "Mounting the ink"(P. 38) 3. Turn off the main power and wait a while before turning back on.
Wrong Ink IC	• An error occurred with the information on the ink IC chip.	1. Check to confirm the ink IC chip was inserted correctly. ☞ "Mounting the ink"(P. 38) 2. Turn off the main power and wait a while before turning back on. 3. Replace with new ink. ☞ "Replace the 2L ink pack"(P. 41)
Ink Color	• The ink color registered on the IC chip is different from the ink color filled.	• Insert an ink IC chip for the correct ink color. ☞ "Mounting the ink"(P. 38)
Ink Type	• The ink type registered on the IC chip is different from the ink type filled.	• Insert an ink IC chip for the correct ink type. ☞ "Mounting the ink"(P. 38)
Expiration Near	• The ink has expired.	• Replace with new ink or use up as quickly as possible. Printing is possible. ☞ "Precautions for handling ink packs"(P. 43)☞ "Replace the 2L ink pack"(P. 41)
Expiration Over	• The ink is two months past its expiration date and cannot be used.	• Replace with new ink. Printing is not possible. ☞ "Replace the 2L ink pack"(P. 41)
Wrong Cartridge	• The amount of ink used exceeded the specified value.	• Replace with new ink. ☞ "Replace the 2L ink pack"(P. 41) • Check to confirm the nozzle is not clogged.

Error Message

Error number	Message	Cause	Corrective action
04	PARAM ROM	• A problem was detected with the main PCB.	• Turn off the main power and wait a while before turning back on. ☞ "Turning Off the Power"(P. 31)
108	HD THERMIS[1]	• A problem was detected with print head temperature control.	
108	HD CONNECT[1]	• A problem was detected with the print head connection.	
108	HD MEM EMP[1]	• A problem was detected with the print head.	
10e	FROM CLEAR	• A problem was detected with the main PCB.	
10f	FROM WRITE		
122	CHECK:SDRAM	• A problem was detected with the SDRAM.	
123	PRAM DATA	• A problem was detected with the main PCB.	
124	PRAM ADDR		
127	POWER OFF		
128	HDC FIFO OVER	• A problem was detected with the print head control PCB.	
128	HDC FIFO UNDER		
129	Battery Exchange	• The internal clock battery is spent and must be replaced.	• Contact your local dealer or our service office.
12a	HDC SPEED	• A problem was detected with the print head control.	• Turn off the main power and wait a while before turning back on. ☞ "Turning Off the Power"(P. 31)
130	HD DATA SEQ	• A problem was detected with the print head control.	
147	DS-IC BUSY	• Ink IC control abnormality detected.	
148	E-LOG SEQ	• A log control abnormality was detected.	
154	Main PCB V05	• A problem was detected with the main PCB 5V power supply.	
155	Main PCB V42-1	• A problem was detected with the main PCB 42V power supply.	
171	NEW HEAD CONNECT	• A new print head connection was detected.	
186	HDC OVERFLOW/HDC UNDERFLOW	• A problem was detected with the print head control.	
187	HDC SLEW RATE		
188	HDC MEMORY		

5

127

Error number	Message	Cause	Corrective action
18e	FLS NOT COMP	• A problem was detected with the print head control.	
18f	OFFSET START [1]		
18f	OFFSET END [1]		
1b8	HEAD XHOT	• A problem was detected with the print head.	
201	Command Error	• Data other than print (RIP) data was received, or a problem was detected with the print (RIP) data received.	1. Clear the data and resend. 2. Check the USB/Ether cable connection. Connecting a PC to the Product 3. Use a compatible cable. Connecting a PC to the Product 4. Turn off the main power and wait a while before turning back on. ☞ "Turning Off the Power"(P. 31)
202	Parameter Error	• A problem was detected with the print (RIP) data received.	
206	Print Mode Error	• Print (RIP) data was received with print parameters that do not allow printing.	• Change the output parameters and profile using RIP software.
20A	Driver Version	• Printing is not possible because the Mimaki driver version is old.	• Install the latest Mimaki driver available from: https://mimaki.com/download/inkjet.html
303	PCB MAIN ET	• A problem was detected with the main PCB.	1. Turn off the main power and wait a while before turning back on. ☞ "Turning Off the Power"(P. 31)
304	USB INIT ERR	• A problem was detected with the USB cable connection.	1. Check the USB cable connection. ☞ "Using a USB Cable"(P. 34) 2. Use a compatible cable. ☞ "Using a USB Cable"(P. 34) 3. Turn off the main power and wait a while before turning back on. ☞ "Turning Off the Power"(P. 31)
305	USB TIME OUT		
401	Motor X	• The X motor was overloaded.	1. Check to confirm the media is loaded correctly. ☞ "Loading the Media"(P. 51) 2. Check for anything that may obstruct carriage movement. 3. Turn off the main power and wait a while before turning back on. ☞ "Turning Off the Power"(P. 31)
402	Motor Y	• The Y motor was overloaded.	
403	X Current	• An overcurrent error was detected in the X motor.	
404	Y Current	• An overcurrent error was detected in the Y motor.	
406	Wiper Move Failure	• The wiper origin could not be detected.	• Turn off the main power and wait a while before turning back on. ☞ "Turning Off the Power"(P. 31)
44f	Take-up Roll Sns Err	• A problem was detected with the take-up unit sensor spindle.	1. Check to confirm the [Function Setting] > [Take-up Unit] setting is "ON". 2. Check to confirm the media is loaded correctly. ☞ "Loading the Roll Media"(P. 56) 3. Check to confirm the take-up unit switch functions properly. ☞ "Take-up unit"(P. 52)

Error number	Message	Cause	Corrective action
47f	Take-up Diameter Max	• The take-up unit media diameter has reached the maximum value.	1. Replace the paper core in the take-up unit.
48a	Detect winding failure	• A problem was detected with the take-up unit.	1. Check to confirm the [Function Setting] > [Take-up Unit] setting is "ON". 2. Check to confirm the media is loaded correctly. ☞ "Loading the Roll Media"(P. 56) 3. Check to confirm the take-up unit switch functions properly. ☞ "Take-up unit"(P. 52)
504	CLAMP UP	• The clamp lever is lifted.	• Lower the clamp lever.
505	Media Jam	• The media jam sensor was triggered.	1. Remove the media in contact with the carriage and reload with fresh media. ☞ "Loading the Media"(P. 51) 2. Check for anything that may obstruct carriage movement.
509	HDC POSCNT	• A problem was detected with position control.	• Turn off the main power and wait a while before turning back on. ☞ "Turning Off the Power"(P. 31)
50a	Y Org Detect Error	• A problem was detected with Y origin detection (initialization).	
50c	Check Media With Sensor	• A problem was detected with media width detection.	1. Check the media loading position. ☞ "Loading the Media"(P. 51) 2. Clean the media Width sensor. ☞ "DAS (automatic correction function) / Sheet width sensor cleaning"(P. 97)
50f	L-SCALE BLACK	• A problem was detected with the linear scale.	• Turn off the main power and wait a while before turning back on. ☞ "Turning Off the Power"(P. 31)
516	Media Set Position R (L)	• The media was loaded outside the range of valid positions.	1. Check the media loading position. ☞ "Loading the Media"(P. 51) 2. Clean the media Width sensor. ☞ "Media Sensor Cleaning"(P. 99)
54b	Media Press	• Media retainer detection failed.	1. Check the media loading position. ☞ "Loading the Media"(P. 51) 2. Clean the media Width sensor. ☞ "Media Sensor Cleaning"(P. 99)
54c	Vacuum Fan Err	• A problem was detected with the vacuum fan.	• Turn off the main power and wait a while before turning back on. ☞ "Turning Off the Power"(P. 31)
602	Ink End	• The ink has run out.	• Replace with new ink. ☞ "When Ink End is Displayed"(P. 42)
604	Check Waste Ink tank	• The waste ink tank count exceeded the preset value (80%).	1. Check the waste ink levels in the waste ink tank. ☞ "When "Check Waste Ink Tank" message appears"(P. 113) 2. Replace the waste ink tank, then reset the waste ink level. ☞ "Replacing the Waste Ink Tank"(P. 114)

5

129

Error number	Message	Cause	Corrective action
605	Replace Wiper	The wiper needs to be replaced.	1. Perform [Maintenance] > [Station Maint.] > [Replace Wiper], then replace the wiper (the wiper usage count will be reset).
608	Wrong Ink IC	• An error occurred with the information on the ink IC chip.	1. Check to confirm the ink IC chip was inserted correctly. ☞ "Mounting the ink"(P. 38) 2. Turn off the main power and wait a while before turning back on. ☞ "Turning Off the Power"(P. 31)P 3. Replace with new ink. ☞ "Mounting the ink"(P. 38)
60a	Excess Ink Usage	• The ink usage amount stored in the ink IC chip exceeded the preset value. • The ink IC chip was not replaced during ink replacement. (The same chip continued to be used.) • The machine was used with nozzle clogging.	• Replace with new ink. ☞ "Mounting the ink"(P. 38)
60c	Ink Type	• The ink type registered on the IC chip is different from the ink type filled.	• Insert an ink IC chip for the correct ink type. ☞ "Mounting the ink"(P. 38)
627	Set Eco-cases	• The ink IC chip could not be read for a certain period of time.	1. Check to confirm the ink IC chip was inserted correctly. 2. Turn off the main power and wait a while before turning back on. ☞ "Turning Off the Power"(P. 31)
629	Expiration Near	• The ink has expired.	• Replace with new ink or use up as quickly as possible. Printing is possible. ☞ "When Ink End is Displayed"(P. 42)
62a	Expiration Over	• The ink is two months past its expiration date and cannot be used.	• Replace with new ink. Printing is not possible. ☞ "When Ink End is Displayed"(P. 42)
631	Ink Color	• The ink color registered on the IC chip is different from the ink color filled.	• Insert an ink IC chip for the correct ink color. ☞ "Mounting the ink"(P. 38)
650	NCU[1] Connect	• A problem was detected with the NCU[1] connection.	• Turn off the main power and wait a while before turning back on. ☞ "Turning Off the Power"(P. 31)
651	Replace NCU[1]	• A problem was detected with the nozzle clogging assessment.	• Clean the NCU[1]. ☞ "Cleaning the NCU (Option)"(P. 96) • Replace the NCU if the error does not clear. Contact your local dealer or our service office.
652	NCU[1] Nzk Chk (Hw)	• A problem was detected with the nozzle clogging assessment.	• Clean the NCU[1]. ☞ "Cleaning the NCU (Option)"(P. 96)
653	NCU[1] Nzk Chk (Mark)		

Error number	Message	Cause	Corrective action
654	NCU[*1] Center Pos	• Printing position adjustment failed.	
655	NCU[*1] Flush Pos		
656	NCU[*1] SN Adjst	• Sensor sensitivity adjustment failed.	
657	Replace NCU[*1] Ink Pad	• The NCU[*1] ink absorber is full.	• The NCU[*1] ink absorber must be replaced. Contact your local dealer or our service office.
658	NCU[*1] Sensor Lv Low	• The sensor's sensitivity is impaired.	• Clean the NCU[*1]. ☞ "Cleaning the NCU (Option)"(P. 96)
65b	NCU[*1] Sens Adj Err H	• Sensor sensitivity adjustment failed.	• Replace the NCU (option) if the error does not clear. Contact your local dealer or our service office.
65c	NCU[*1] Sens Adj Err L		
702	Thermistor Connect	• A problem was detected with the thermistor connection.	• Turn off the main power and wait a while before turning back on. ☞ "Turning Off the Power"(P. 31)
801	(C) OPCODE	• A problem was detected with the main PCB.	
802	(C) SWI		
803	(C)PFTCHABRT		
804	(C)DATAABRT		
806	FW/SIO bit	• A communication error was detected between the boards.	
808	FW/STP-MTR**	• A problem was detected with the main PCB.	
80f	FW/SIO Vch	• A communication error was detected between the boards.	
811	FW/SIO read	• A communication error was detected between the boards.	
81b	FW/STACK OV	• A problem was detected with the main PCB.	
828	PRG ERR L*****		
901	Operation Error	• The function is disabled due to an error.	• Check the error details. – Media Undetected – Ink error – Waste ink tank, etc.
902	Data Remain	• Print (RIP) data was received.	• Switch to REMOTE mode and start printing or clear the data and abort printing.
90f	Print Area Short	• The media is too small for the print.	• Replace with wider or longer media. • If the printable area is reduced due to a shift in the origin, move the origin to increase the size of the printable area.

5

131

Error number	Message	Cause	Corrective action
b49	PCB VHVFET[1]	• A problem was detected with the PCB power supply.	Turn off the main power and wait a while before turning back on. ☞ "Turning Off the Power"(P. 31)
C10	Command	• Received a code other than a COMMAND code.	1. Clear the data and resend. 2. Check the USB/Ether cable connection. ☞ "Connecting a PC to the Product"(P. 33) 3. Use a compatible cable. ☞ "Connecting a PC to the Product"(P. 33) 4. Turn off the main power and wait a while before turning back on. ☞ "Turning Off the Power"(P. 31)
C11	Parameter	• Received parameter outside numerical value range	
C12	Device	• Received an invalid device control command.	
d1b	COM VOLT[1]	• A problem was detected with the main PCB voltage.	• Turn off the main power and wait a while before turning back on. ☞ "Turning Off the Power"(P. 31)
b	PCB MAIN-F*	A fuse has blown on the main PCB.	
b5c	Main PCB V05U	A problem was detected with the main PCB 5V power supply.	
b5d	Main PCB V3R3U	A problem was detected with the main PCB 3.3V power supply.	
b5e	Main PCB V1R5D	A problem was detected with the main PCB 1.5V power supply.	
b5f	Main PCB V1R2U	A problem was detected with the main PCB 1.2V power supply.	
b60	Main PCB V24	A problem was detected with the main PCB 24V power supply.	

*1. NCU is optional.

SYSTEM HALT

> • If a SYSTEM HALT number is displayed, turn off the main power and wait a while before turning back on.

Chapter 6 Appendix

This chapter

This chapter describes the machine specifications.

6.1 Specifications

Item			Details
Print head	Type		On-demand piezo head
	Specifications		One head with 400 nozzles × 8 rows each
	Resolution	Y	300 dpi, 600 dpi, 900 dpi,
		X	600 dpi
Ink set	4-color		M, B, Y, K (UISS)
	8-color		M, B, Y, K, Vi, Or, Fy, Fp
Media	Type		Transfer paper
	Maximum printing width[1]		1,610 mm
	Maximum width		1,620 mm
	Minimum width		210 mm
	Thickness		Max. 1.0 mm
	Roll external diameter[2]		Max. 180 mm
	Roll weight[2, 3]		Max. 25 kg
	Paper core internal diameter[4]		2 inches or 3 inches
	Printing face		Exterior/interior
	Roll end		Taped or loosely affixed to paper core
Print margins	Left/right		15 mm (default), minimum: Left/right 5 mm
	Top end		70 mm (default), minimum: Left/right 10 mm
	Bottom end		70 mm (default), minimum: Left/right 10 mm
Distance accuracy[5]	Absolute accuracy		±0.3 mm or ±0.3 % of specified distance, whichever is greater
	Duplicability		±0.2 mm or ±0.1 % of specified distance, whichever is greater
Perpendicularity			±0.5 mm/1,000 mm
Media skew			Not more than 5 mm/10 m
Printing gap			Manual, two settings (3.0, 3.5 mm)
Media cutting			Cutting precision (steps): Not more than 0.5 mm
Origin alignment			LED pointer
Ink supply			MBIS Eco Cartridge (2 L ink pack)
Waste Ink Tank			Bottle type (2,000 ml)
Take-up unit			Selectable inside/outside winding
NCU (Nozzle clogging detection)			Options

Item		Details
DAS (Automatic correction function)		DAS1 equipped
Interior lighting		-
UV unit		-
Interface	Data transfer function	Ethernet 1000BASE-T [6, 7], USB 2.0 Hi-speed [7, 8]
Command		MRL-V
Languages		English, Japanese, Chinese, Turkish, Portuguese, Spanish, Italian, Korean
Noise levels	During standby	Not more than 45 dB (FAST-A, 1 m on all sides)
	Continuous operation	Not more than 59 dB (FAST-A, 1 m on all sides)
	Non-continuous operation	Not more than 70 dB (FAST-A, 1 m on all sides)
Compliance with standards		VCCI Class A, FCC Class A, IEC 62368-1 ETL compliance, CE marking (EMC Directive, Low Voltage Directive, Machinery Directive, RoHS Directive), CB certified, REACH, EnergyStar, RCM marking, KC certified, UKCA marking
Power supply specifications [9]		Single-phase 100 to 120 V AC ±10 %/11 A, single-phase 200 to 240 V AC ±10 %/5.5A, 50/60 Hz ±1 Hz ×2
Power consumption	Maximum [10]	Inlet 1	100 to 120 V AC: Max. 250 W, 200 to 240 V AC: Max. 250 W
	Standard	Inlet 1	150 W
	Minimum [11]	Inlet 1	4.5 W or less
Installation environment [12]	Permissible ambient temperature	20 to 30 °C
	Relative humidity	35 to 65 %RH (no condensation)
	Temperature range in which accuracy is guaranteed	20 to 25 °C
	Temperature gradient	Not more than ±10 °C/h
	Dust	0.15 mg/m^3 (typical office)
	Maximum operating altitude	2000 m
External dimensions [13]	Width	2,770 mm (2910 mm)
	Depth	748 mm (750 mm)
	Height	1,623 mm [14] (1,092 mm)

Item	Details
Weight[*13]	155 kg

*1. With setup menu margins set to the minimum (5 mm) on either side.

*2. External diameter and weight after winding media.

*3. Free of sagging due to weight.

*4. 3 inch only for high-speed printing.

*5. Excluding media size variation and initial loading fluctuations.

*6. Printing is not possible if local guidance shows any speed other than "1000Mbps". ☞ "Using a LAN Cable"(P. 33)

*7. The print speed may be decreased depending on the connection environment or print data.

*8. Data may be transferred to the machine too slowly, causing the carriage to pause at the left-hand or right-hand end during printing. ☞ "Connecting a PC to the Product"(P. 33)

*9. Excluding options.

*10. Varies depending on print mode.

*11. In sleep.

*12. Ink ejection consistency may decrease in conditions outside this range.

*13. The figures in parentheses indicate package dimensions.

*14. When the ink eco case is installed

Index

MEMO

OperationManual